Local Alcohol Policy Research Report

Information to support the development of a local alcohol policy

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EXECUTIVE SUMMARY

This report identifies and discusses Auckland's alcohol-related issues. It has been prepared in anticipation of the Alcohol Reform Bill (the Bill) being enacted, and will be used to help Auckland Council understand and prioritise the issues to be addressed through the development of a local alcohol policy.

The report is based on clause 77A of the Bill (as currently drafted), which sets out information requirements for developing a local alcohol policy (i.e. matters that local authorities must consider). Accordingly, the report presents information relating to the following:

- the objectives and policies of Auckland Council's seven operative District Plans (the District Plans) and the alcohol-related issues being considered as part Auckland's new Unitary Plan
- the number, location and licensed hours of Auckland's licensed premises
- Auckland Council's liquor bans[1]
- Auckland's demographic profile, as well as information about the people who visit Auckland as tourists or holidaymakers
- the overall health indicators of Auckland
- various other indicators, including crime, safety and traffic data, to help understand the nature and severity of Auckland's alcohol-related problems.

Data collection involved three key components. First, officers collated and analysed internal Council data, including licence information from each of the district licensing agencies (DLAs). Second, officers engaged with a range of organisations to gather existing research and data. And finally, three pieces of primary research were conducted.

The primary research involved:

- an investigation of public opinions relating to the role of alcohol in Aucklanders' lives, its consequences and how it could be managed (the Nielsen research)
- a survey of Police on the enforcement of Auckland's liquor bans
- a survey of Police on their perceptions of the role of alcohol in crime and disorderly behaviour, and how this is managed.

The results and findings confirm that Auckland is experiencing a range of alcohol-related issues, including:

- patterns of heavy alcohol consumption, particularly among youth
- acute and chronic health problems
- safety concerns such as high proportions of alcohol-related traffic accidents, water and fire safety issues and diminished perceptions of safety
- incidents of anti-social behaviour (including large numbers of liquor ban breaches)
- other alcohol-related criminal issues such as alcohol-related violent offending
- some compliance issues regarding the sale of alcohol.

The report contains preliminary recommendations about the policy development process required for addressing these issues. In particular, the report recommends further research, analysis and extensive consultation be undertaken as part of the development of a local alcohol policy.

[1] The Alcohol Reform Bill introduces the term "alcohol control" bylaw to replace what were previously called "liquor control" or "liquor ban" bylaws. Throughout this report, the term liquor ban is used (except when quoting from the Bill) as this is more widely understood.

1. INTRODUCTION

1.1 Purpose

The purpose of this report is to identify and discuss the key trends and challenges for Auckland in relation to alcohol. It has been prepared in anticipation of the Alcohol Reform Bill (the Bill) being enacted, and will be used to help Auckland Council understand and prioritise the alcohol-related issues to be addressed through the development of a local alcohol policy.

1.2 Scope

The scope and structure of the report largely align with the information requirements for developing a local alcohol policy, as currently set out in clause 77A of the Bill. Once the Bill is passed and the information requirements are confirmed, officers will review the report to ensure that its content fully complies with all statutory requirements, as part of a formal local alcohol policy development process.

The report includes the following:

- a review of selected professional and academic literature on alcohol consumption and alcohol-related issues
- a summary of the research procedures followed in working toward the information requirements of the Bill
- an overview of Auckland's demographic profile, as well as information about the people who visit Auckland as tourists or holidaymakers
- a review of the objectives and policies of Auckland Council's seven operative District Plans (the District Plans), and a summary of the key alcohol-related issues being considered as part of the development of Auckland's new Unitary Plan
- analysis of the number, location and licensed hours of Auckland's licensed premises
- information about Auckland Council's liquor bans and analysis of the issues associated with the consumption of alcohol in public places
- a section on the overall health indicators of Auckland
- analysis of various other indicators, including crime, safety and traffic data, to help understand the nature and severity of Auckland's alcohol-related problems.

The report also examines how these issues relate to one another and makes initial recommendations about the policy development process required to influence the level of alcohol-related harm in Auckland.

Whilst the report contains preliminary recommendations, it does not assess the merits of different policy levers or mechanisms for addressing each issue. Officers will undertake this part of the policy development process once the Bill is passed and the mechanisms available to Council for inclusion in a local alcohol policy have been confirmed. Council officers will also engage in extensive consultation and meet all other statutory requirements as part of the policy development process.

2. BACKGROUND

2.1 Context

In August 2008, the Law Commission (the Commission) commenced a comprehensive review of New Zealand's alcohol laws. As part of this process, the Commission engaged in extensive public consultation, resulting in almost 3000 public submissions.

In April 2010, the Commission published its final report, entitled 'Alcohol In Our Lives: Curbing the Harm'. The report summarised the key issues raised through the submission process and presented the Commission's final recommendations to the Government.

The Alcohol Reform Bill, which was introduced to Parliament on 8 November 2010, is the Government's legislative response to the Commission's work. Once passed, the Bill will repeal and replace the Sale of Liquor Act 1989 (SOLA) with the Sale and Supply of Alcohol Act.

It will empower territorial authorities to develop local alcohol policies, which licensing decision-makers will be required to consider when making licensing decisions. This will provide Auckland Council with a significant opportunity to develop new policy to address the widespread concerns about alcohol-related harm, whilst also contributing to the Mayor's vision to make Auckland the world's most liveable city.

2.2 Legislative framework

2.2.1 Sale of Liquor Act 1989

Until the new legislation is passed, Council is required to operate within the parameters of the SOLA. The key object of the SOLA is to:

> "establish a reasonable system of control over the sale and supply of liquor to the public with the aim of contributing to the reduction of liquor abuse, so far as that can be achieved by legislative means."

Under the Act, liquor licence applications are assessed on a case-by-case basis against statutory criteria. Unopposed applications are determined by the relevant District Licensing Agency (DLA) whilst opposed applications are determined by the Liquor Licensing Authority (LLA).

Other key features of the SOLA are summarised below:

- sets out mandatory and discretionary conditions for the granting of liquor licences, including the days and hours that liquor can be sold
- provides for limited objections to licence applications. Persons who have "a greater interest in the application than the public generally" may object to the granting of a licence.

2.2.2 Alcohol Reform Bill

The Alcohol Reform Bill would enable territorial authorities to adopt a policy relating to the sale, supply, or consumption of alcohol within its district. The relevant provisions are summarised below.

Clause 77 sets out the matters that can be addressed through a local alcohol policy. These are limited to the following licensing matters:

- location of licensed premises by reference to broad areas
- location of licensed premises by reference to proximity to premises or facilities of particular kinds
- whether further licences (or licences of a particular kind or kinds) should be issued for premises in the district concerned, or any stated part of the district
- maximum trading hours
- the issue of licences, or licences of a particular kind or kinds, subject to discretionary conditions

- one-way door restrictions.

The policy must be produced, adopted, and brought into force, in accordance with the Bill. Clause 77A states that territorial authorities must first produce a draft policy. It also states that when producing a draft policy, a territorial authority must have regard to:

- the objectives and policies of its district plan
- the number of licences of each kind held for premises in its district, and the location and opening hours of each of the premises
- any areas in which bylaws prohibiting alcohol in public places are in force
- the demography of the district's residents
- the demography of people who visit the district as tourists or holidaymakers
- the overall health indicators of the district's residents
- the nature and severity of the alcohol-related problems arising in the district.

The Bill has been through the Select Committee process and passed its second reading on 13 September 2011. However, it did not reach its third and final reading before Parliament was dissolved for the General Election, held in November 2011. The Bill has been carried forward for consideration by the new Government in 2012 but it is unclear (at the date of publication) when this is likely to occur. As currently drafted, the provisions in the Bill relating to local alcohol policies will not come into force until 12 months after the date of Royal Assent.

2.3 Strategic and policy links

2.3.1 Alcohol Programme: Policy and Planning to Promote Safe, Healthy and Strong Communities

In March 2011, the Regional Development and Operations Committee approved the Alcohol Programme: Policy and Planning to Promote Safe, Healthy and Strong Communities (the Alcohol Programme).

The purpose of the Alcohol Programme is to provide a consistent, region-wide approach to alcohol and community safety issues, whilst preparing for the enactment of the Alcohol Reform Bill. In addition to the Local Alcohol Policy Research Project, the Alcohol Programme also includes the following key projects:

- development of the Auckland Council Alcohol Harm Reduction Strategy (the Strategy), which will establish overarching policy guidelines to ensure consistency in Council's approach to alcohol policy and planning. It will also outline Council's broad alcohol-related responsibilities. The draft Strategy is due to be presented to the Regional Development and Operations Committee in June 2012
- development of a liquor ban policy and bylaw to enable Council to create, amend and revoke liquor bans across the region.

2.3.2 Mayor's vision

The Mayor is responsible for setting and promoting a vision for Auckland. The Mayor's vision for Auckland is to "create the world's most liveable city."

The Local Alcohol Policy Research Project, aligns with and supports the Mayor's vision by providing an evidence base to inform Council's policy direction.

2.3.3 Auckland Plan 2012

The Auckland Plan (the Plan) is a strategic document, designed to assist Auckland Council in achieving the Mayors vision of creating the world's most liveable city. The Plan sets out the social, economic, environmental and cultural objectives for Auckland and its communities. The plan identifies six transformational shifts and 13 strategic directions.

The transformational shifts describe the level of change required to achieve the plan's outcomes. These are:

- dramatically accelerate the prospects of Auckland's children and young people
- strongly commit to environmental action and green growth
- move to outstanding public transport within one network
- radically improve the quality of urban living
- substantially raise living standards for all Aucklanders and focus on those most in need
- significantly lift Maori social and economic well-being.

The strategic directions are the specific areas of focus that will drive the development strategy and the outcomes that define the vision. These are:

- create a strong, inclusive and equitable society that ensures opportunity for all Aucklanders
- enable Maori aspirations through recognition of the treaty of Waitangi and customary rights
- Auckland's arts and culture
- protect and conserve Auckland's historic heritage for the benefit and enjoyment of present and future generations
- promote individual and community well-being through participation in recreation and sport.
- develop an economy that delivers opportunity and prosperity for all Aucklanders and New Zealand
- acknowledge that nature and people are inseparable
- contribute to tackling climate change and increasing energy resilience
- keep rural Auckland productive, protected and environmentally sound
- create a stunning city centre, with well- connected quality towns, villages and neighbourhoods
- appropriately house all Aucklanders
- plan, deliver and maintain quality infrastructure to make Auckland liveable and resilient
- create better connections and accessibility within Auckland, across New Zealand, and to the world.

The Local Alcohol Policy Research Project, will assist in the delivery of these by providing information about health indicators and alcohol-related issues in our communities and by ensuring that any new policy directions are well-researched and evidence based.

2.3.4 Local board plans

The table below identifies the local boards that have identified alcohol-related issues as a focus for the board in their local board plan.

Table 2.3 Local boards that identify alcohol-related issues as a priority area

Local Board	Summary of local board plan
Albert-Eden	• Wants to reduce alcohol-related harm
Devonport-Takapuna	(none)
Franklin	(none)
Great Barrier	(none)
Henderson-Massey	• Supports programmes that prevent and reduce harm caused by alcohol and other drugs
Hibiscus and Bays	• Plans to work with central and local government agencies to identify local solutions to alcohol issues
Howick	• Supports initiatives to reduce the negative impacts of alcohol
Kaipatiki	• Supports programmes that address alcohol related problems
Mangere-Otahuhu	• Has identified that its community has high rates of alcohol abuse that cause many of the communities' social and medical ills, which impact both the families of problem drinkers and the wider community
Manurewa	• Wants a reduction in the number of local liquor outlets • In the short-term, the board will monitor compliance of outlets and support objectors to licence renewals and new applications • The board is planning to develop a local alcohol policy[2]
Maungakiekie-Tamaki	• Has identified alcohol and alcohol-related problems as an issue and plans to develop a local alcohol policy to manage these issues[3]
Orakei	(none)
Otara-Papatoetoe	• Has identified alcohol abuse as the cause of many negative medical conditions and injuries leading to death • Wants a sinking lid on the number of liquor outlets to reduce harm from alcohol abuse
Papakura	(none)
Puketapapa	• Plans to reduce the harm caused by alcohol by developing a local alcohol policy that influences accessibility to alcohol through controlling the hours of operation and the number of outlets[4]
Rodney	• Plans to advocate to the Council for restrictions on any future liquor outlets
Upper Harbour	• Has identified the harm associated with alcohol abuse as an issue and plans to support and promote responsible alcohol consumption
Waiheke	(none)
Waitakere Ranges	(none)
Waitemata	• Recognises that excessive alcohol consumption can cause harm and disruption, and supports policies that are consistent with harm minimisation
Whau	• Plans to partner with key stakeholders to prevent and reduce alcohol and other drug related harm

2.4 The alcohol industry

New Zealand's alcohol industry is a "multi-billion dollar sector, spanning a wide range of economic activities from growers, who produce the raw inputs… to the wineries, breweries and distillers who manufacture the alcohol; right through to the liquor retailers and the thousands of cafes, restaurants, bars and clubs which make up the hospitality sector" (Law Commission, 2009, p. 18).

[2] While some local boards have indicated intent to develop a local alcohol policy, the Alcohol Reform Bill provides for the development of one local alcohol policy for the district. However, the Bill does allow for area-based differences to be included in the policy.
[3] See footnote 2.
[4] See footnote 2.

The alcohol industry also employs a significant number of people, particularly in the manufacturing, hospitality and retail sectors. Of these, the hospitality sector is the biggest employer. In 2006, 71,820 people (many part-time) across the country were employed at pubs, cafes, restaurants and clubs (Law Commission, 2009).

Table 2.4 below, provides information about the performance of Auckland's hospitality sector. It shows how the sector has performed relative to the rest of the region's economy in terms of economic output, employment and business unit growth. The sector is based on three Australian and New Zealand Standard Industrial Classification (ANZIC) level industries: Cafes and Restaurants; Pubs, Taverns and Bars; and Clubs (hospitality).

Table 2.4 Auckland's hospitality sector, March 2010 to March 2011

	To March 2011	% of region total	% of national sector	Growth (2010 to 2011)	
				Auckland	New Zealand
Gross Domestic Product (GDP): $ million[5]	$745	1.1%	37.4%	1.5%	-1.9%
Employment	27,073	3.8%	33.7%	1.9%	-0.8%
Business units	3,433	2.1%	34.7%	6.2%	2.2%

Source: Auckland Annual Economic Profile developed by Infometrics Ltd (Informetrics)

The table shows that between March 2010 and March 2011:

- The hospitality sector generated $745 million in economic output in Auckland.
- The sector contributed 1.1 percent to the region's economic output.
- Auckland's hospitality sector economic output grew by 1.5 percent compared with a decline of 1.9 percent in the sector nationally.
- Auckland's hospitality sector employed an average of 27,073 people, an increase from 26,568 in 2010.

The following technical notes apply to the information provided above:

- GDP is estimated by Infometrics. A top down approach breaks GDP down to an industry level by applying GDP to Auckland's share of industry output is based on the number of people employed and their productivity (approximated by output per employee).
- Regional employment is estimated by Infometrics' Regional Industry Employment Model (RIEM). The model draws heavily on quarterly and annual Linked Employer Employee Data (LEED) and Business Demography (BD) series published by Statistics New Zealand. The RIEM includes owner-operators, in contrast to the Business Demography series.

The alcohol industry also contributes to the community in the form of sponsorship and funding of various community and sporting groups and events.

[5] GDP is specified in 2011 dollars.

3. LITERATURE REVIEW

This section identifies the key alcohol consumption patterns and associated issues documented in the literature. It also briefly discusses different policy mechanisms aimed at reducing alcohol-related harm, particularly those likely to be available to Council once the Bill is enacted.

3.1 Consumption behaviour

There are two important dimensions to consider in relation to alcohol consumption: the quantity of, and frequency with which, alcohol is consumed (Law Commission, 2009). How much people drink in a single occasion, especially when drinking to intoxication, influences the risk of immediate harms such as accident, acute health trauma or injury, whereas the overall volume consumed (i.e. how often and how much someone drinks) determines the cumulative effects, particularly from a health perspective (Law Commission, 2009; Babor et al., 2010).

3.1.1 Measuring consumption

The ways in which consumption is measured varies throughout the literature. The Alcohol Advisory Council of New Zealand (ALAC) for example, is concerned with "binge drinking," which it defines as the consumption of seven or more standard drinks in one session (Fryer et al., 2011)[6]. (A standard drink contains 10 grams of pure alcohol). ALAC estimates that 86 percent of New Zealand's adult population drink at least occasionally, and that of these, a quarter can be categorised as binge drinkers (ALAC, 2006 cited in Law Commission, 2009).

The Alcohol Use in New Zealand Survey (Ministry of Health, 2007 cited in Law Commission, 2009) also measures consumption using standard drinks, but differentiates between males and females. The survey defines someone who drinks large amounts as a man that drinks more than six standard drinks in one session, and a woman who drinks more than four standard drinks in one session. The 2004 survey found that 25 percent of New Zealand drinkers aged 12 to 65 years and 54 percent of 18 to 24 year old drinkers drink large quantities when they drink (Ministry of Health, 2007 cited in Law Commission, 2009).

Other researchers chose not to use standard drinks as a measure, as the concept is not well understood by consumers (Law Commission, 2009). Research conducted by the Centre for Social and Health Outcomes Research and Evaluation (SHORE) for example, focuses on consumers' own definitions of a drink, such as a can of beer or a glass of wine. SHORE defines a "heavier drinking session" as including six or more drinks for a woman, or eight or more drinks for a man (Habgood et al., 2001 cited in Law Commission, 2009). SHORE estimates that 44 percent of all alcohol available for consumption in 2004 was consumed in heavier drinking occasions (Law Commission, 2009).

3.1.2 General patterns of consumption

The World Health Organisation (WHO) estimates that annual consumption in New Zealand equates to 12 litres of pure alcohol per head of the drinking population (aged 15 years and over) (WHO, 2011)[7]. This compares with Australia (11.9), Canada (12.6), France (14.0), Germany (13.4), Ireland (19.3), Netherlands (13.8), Norway (8.7), Sweden (12.5), Switzerland (13.4), United Kingdom (15.6), and United States of America (14.4) (WHO, 2011).

Notwithstanding the different approaches to measuring consumption, the cumulative findings of this research indicate that about half of drinkers under 25 years, and about 25 percent of all adult drinkers, drink large quantities when they drink (Law Commission, 2009). Accordingly, heavy, 'episodic' drinking is one of the key themes documented in the literature (Law Commission, 2009).

[6] This measure was used as part of the quantitative research commissioned by Auckland Council in 2011. The results are discussed further in section 5 of this report.

[7] This estimate is the average of the 2003–2005 consumption levels recorded by WHO.

3.1.3 Age, gender and ethnic differences in consumption patterns

The literature also focuses on age, gender and ethnic-based differences in consumption patterns. Research shows that these, as well as other individual factors such as socio-economic status and personality-type can influence consumption behaviour (Law Commission, 2009).

Generally, younger people tend to drink higher volumes of alcohol, with less frequency, while older people tend to drink lower volumes but at a greater frequency (Law Commission, 2009).

A survey reported by ALAC (2005), showed that of all young people aged 12 to 17 years:

- 48 percent were non-drinkers
- 21 percent were "supervised drinkers" (i.e. drink fortnightly or less often, typically at home with their families)
- 16 percent were "social binge drinkers" (i.e. drink at least once every two weeks and binge with their friends mainly during weekends and holidays)
- 16 percent (typically male) were "uncontrolled binge drinkers" (i.e. drink more regularly than social binge drinkers, for the main intention of getting drunk).

For many young people, getting drunk is pre-meditated (McEwan et al., 2011) and commonly involves "pre-loading" (Law Commission, 2009). Pre-loading involves drinking in private venues, where consumption is not regulated (e.g. at home, in a car) before visiting licensed premises. Licensed premises are then enjoyed for their entertainment value (e.g. dancing, meeting people), but not necessarily to buy drinks (Law Commission, 2009; McEwan et al., 2011). There is evidence to suggest that the price differential between on-licences and off-licences is contributing to the prevalence of 'pre-loading' (Law Commission, 2009)[8].

In terms of gender differences, men are more likely to be drinkers than women are, however, the literature is increasingly concerned with changing consumption patterns among women. Many studies have observed increased consumption among women, especially young women (Law Commission, 2009). The Ministry of Health (2008) for example, analysed consumption patterns over time (1996/97 compared to 2007/08) and found that there has been a change in the age of uptake, whereby younger people, especially young females, started drinking at a younger age than in previous generations, and moreover were drinking larger amounts.

Research shows that Maori are significantly less likely to be drinkers than non-Maori, and that those Maori who do drink, do so less frequently than non-Maori. However, Maori are more likely to drink large volumes of alcohol when they do drink (Law Commission, 2009; Bramley et al., 2003). Consumption behaviour among Pacific drinkers seems to follow a similar pattern to Maori (Huakau et al., 2005).

3.1.4 Socio-economic status

Socio-economic status is also a determinant of drinking behaviour (independent to differences based on age, gender or ethnicity). Drinkers among lower socio-economic groups tend to drink more on a typical occasion (Law Commission, 2009). By comparison, drinkers among higher socio-economic groups tend to drink more frequently (Law Commission, 2009).

3.2 Alcohol-related issues

The excessive consumption of alcohol can cause harm directly to drinkers themselves, to people around drinkers, and to wider society, which has to cope with the consequences. Research shows that alcohol-related issues are widespread and varied, and contribute significantly to a range of costs including injury and death, other medical problems, crime (including property damage, violence and assaults), traffic accidents, absenteeism, unemployment, public disorder and treatment costs (Babor

[8] It should be noted that territorial authorities are unable to control the pricing of alcohol. Any changes to pricing in New Zealand would need to be introduced by central government.

et al., 2010; Matheson, 2005; ALAC, 2008; Anderson and Baumberg, 2006). In its 2009 issues paper, the Law Commission stated:

> "The misuse of alcohol does not result in one single problem, but a whole set of problems, some of which affect the health and wellbeing of the individual drinker, some of which impact on those with whom the drinker comes in contact, and some of which impact on the community at large" (p. 7).

Babor et al. (2010) categorise these various alcohol-related harms into two broad classes:

- issues affecting illness, injury and poor health
- social problems.

These are discussed in further detail below.

3.2.1 Health and injury outcomes

Many studies show a link between alcohol misuse and negative health and injury outcomes. From a health and safety perspective, the nature and extent of the issues arising from alcohol will depend on the way that alcohol is consumed (Law Commission, 2009; Babor et al., 2010). For example, a person that drinks heavily once a month, has an increased risk of immediate harm, such as injury, whereas a person who drinks more moderately, but more often has an increased risk of longer-term health issues (Law Commission, 2009).

Babor et al. (2010) identify three distinct mechanisms of harm, each producing different types of health problems:

- Physical toxicity can result from either drinking very high volumes of alcohol (i.e. binge drinking) even occasionally, or sustained heavy drinking over time. This can lead to alcohol poisoning, acute tissue damage, or if consumption is heavy over time, liver failure.
- Drinking to intoxication can result in a variety of acute medical and social problems including accidents, injuries, certain types of acute tissue damage, and interpersonal violence.
- Sustained heavy drinking, which does not lead to evident intoxication can lead to dependence issues. This can result in chronic medical problems due to the cumulative effect of alcohol, such as cirrhosis of the liver, as well as acute and chronic social problems.

Section 5.5 of the report provides further detail about alcohol-related health issues, both generally, and for Auckland.

3.2.2 Social outcomes

A significant feature of the social harms derived from alcohol misuse is that people other than the drinker become involved (Babor et al., 2010; Law Commission, 2009). For example, Babor et al. (2010) found in both individual level and population level studies that there is a clear link between alcohol and violence, particularly against intimate partners. The risk of violence is low with light drinking, rises slightly with moderate drinkers, and increases strongly with heavy drinkers. Heavy drinkers are also more likely to be victims (Babor et al., 2010).

Patterns are also emerging which suggest that alcohol can be associated with marital problems, child abuse, work-related problems (including absenteeism, lateness, early leaving, disciplinary problems, inappropriate behaviour, theft/dishonesty, and poor co-worker relations). However, direct causal links can be difficult to prove in individual cases because of the complexity of social issues and the possibility of other causes being involved ("causal density"). In most cases, a single study is not sufficient to confirm causal links. Nonetheless, as stated by Babor et al. (2010):

> "Even if direct causality between alcohol and social harm is not established unequivocally, conclusions for alcohol policy are the same, whether alcohol is a causative factor for a direct consequence, a cause amongst many others, or a factor mediating the influence of another causative factor. In all cases, alcohol contributes to social burden, and social policy is needed to reduce this burden."

3.2.3 Perceptions of alcohol-related harm

The literature also documents the differences between actual alcohol-related harms and the way that people perceive and understand them. Alcohol's role as a social lubricant or relaxant are commonly cited as explanations for people's drinking patterns. For many, alcohol is "associated with sociability, enjoyment and for some, even a sense of cultural and national identity" (Law Commission, 2009, p. 43) and this can influence the way people perceive alcohol-related harm.

Section 6.6 of the report discusses perceptions of alcohol-related harm in Auckland.

3.3 Addressing alcohol-related issues

3.3.1 Harm reduction

Alcohol policy in Australia and New Zealand has tended to focus on reducing 'problem' drinking and alcohol-related harm, targeting interventions to high-risk populations and settings (ALAC, 2008; 2005; Stewart, 1997). This can be contrasted with the approach many governments have adopted in relation to tobacco policy, where the overall prevalence of tobacco use is targeted at a population level (Stewart, 1997).

Some commentators argue that alcohol's contribution to health and social costs warrants a policy approach aimed at reducing average alcohol consumption, with a view to reducing harm (e.g. Babor et al., 2003). However, given the widespread cultural acceptability of drinking in New Zealand, as well as the role of the alcohol industry in contributing to the economy, a harm reduction approach is seen as more politically acceptable (Stewart, 1997).

It is also seen as more appropriate because the relationship between per capita consumption and harms is modified by a number of factors, including the social norms around patterns of drinking and factors about the drinking environment (ALAC, 2008; Babor et al., 2003). In addition, the distribution of drinking within populations is generally uneven, with heavy drinkers consuming a disproportionate share of the total consumption and causing a disproportionate share of problems (Babor et al., 2003).

3.3.2 Policy mechanisms

A number of comprehensive reviews of alcohol policies have been undertaken in recent years, most notably by the New Zealand Law Commission. The Commission concluded that a comprehensive approach to reducing alcohol-related harm is required and recommended changes in relation to:

- supply control (e.g. liquor licensing matters)
- demand reduction (e.g. price and advertising promotion)
- problem limitation (e.g. enforcement issues).

Further detail is provided below, with particular focus on supply controls. (Council is involved in a number of projects and initiatives for reducing alcohol-related harm. However, demand reduction and problem limitation initiatives fall outside the scope of a local alcohol policy, as currently proposed by the Bill.)

3.3.3 Supply controls

'Supply based' policies seek to reduce alcohol consumption by restricting the physical availability of alcohol to consumers, for instance by restricting the hours of trading or the location and density of alcohol outlets (Babor et al., 2010; Matheson, 2005). Such approaches argue that reducing the supply of alcohol will increase the cost and inconvenience of accessing alcohol, which will in turn reduce alcohol consumption and alcohol-related harm (Babor et al., 2003; Ragnarsdóttir et al., 2002; Livingston et al., 2007).

The weight of evidence supports this theory and suggests that supply controls can be effective in helping reduce alcohol-related problems (Sewel, 2002; Babor et al., 2010; Anderson and Baumberg 2006). This is clearly illustrated in cases when bans or restrictions were introduced, lifted and then re-introduced (Babor et al., 2010).

Minimum purchase age

While total prohibitions on alcohol sales are effective in reducing alcohol-related harms, the public are reluctant to support total prohibition as an approach because it is accompanied by rises in criminality and other social problems. However, targeted bans (e.g. aimed at specific population groups such as children or adolescents) show success (Babor et al., 2010, Anderson and Baumberg, 2006).

A number of studies reviewed by Anderson and Baumberg (2006) show that a rise in minimum legal purchase age was followed by decreases in road accidents, death and injuries. They also report on a study in Denmark, which showed that when a 15-year age limit was imposed, drinking above as well as below the age limit was affected.

Babor et al. *(*2010) report that when the New Zealand minimum purchase age was lowered to 18, it was accompanied by increases in traffic-related hospital admissions for 15 to 19 year-olds, and increases in prosecutions for disorder offences for 14 to 15 year olds. Larsh (2005), however, cautions that, although there are rises in indicators of negative outcomes, some of the difference may be attributable to other factors, such as changes in Police practices or recording practices.

In New Zealand, the minimum purchase age for alcohol is set by central government (i.e. it is outside Council's control). The Alcohol Reform Bill currently proposes a "split-purchase age," whereby the minimum purchase age would be 18 years at on-licences and 20 at off-licences. Alcohol purchased at an on-licence must be consumed at the place of purchase (e.g. restaurants, bars, taverns); whereas off-licences are licensed to sell alcohol for consumption elsewhere (e.g. bottle stores, or supermarkets).

Reducing opening hours

There is much debate over policy relating to opening hours. The recent policy direction in New Zealand and internationally has been to increase the licensed hours and days of trading (Babor et al., 2010; Casswell and Maxwell, 2005). However, studies have tended to find that large increases in opening times (particularly night hours) are associated with an increase in alcohol sales and related harms (Chisholm et al., 2003), while large reductions in trading hours tend to result in a number of benefits for communities. It is less clear how smaller changes in opening hours influence alcohol-related harms (Trolldal, 2005; Chikritzhs and Stockwell, 2002).

Babor et al. *(*2010) report clear patterns of increased rates of alcohol-related problems with increased trading hours, in the form of higher assault frequencies, alcohol-impaired driving, other injuries, and increased Police work. In places where restrictions were introduced, problems such as violent offending were reduced.

Although some studies fail to support these conclusions, Babor et al. (2010) argue that the weight of evidence suggests that policies restricting the hours of opening have the potential to reduce alcohol-related harm. In restricting licence hours, however, policy makers should be mindful of the risks associated with migratory drinking patterns, whereby patrons move between areas with different closing times.

Regulating licence density

Alcohol-related harm is often linked to the availability of alcohol, based on the assumption that easier access to alcohol leads to higher consumption and hence to negative outcomes (Babor et al. 2010). This may arise when clustering leads to shorter travel distances to outlets, price competition or longer opening hours, particularly amongst off-licences and in poorer areas (Cameron et al., 2010). Similarly, clusters of on-licences can become entertainment precincts in the minds of patrons,

collectively attracting more people and problems than each venue would in isolation (ALAC, 2008; Livingston et al., 2007).

Anderson and Baumberg (2006), Babor et al. (2010), and Cameron et al. (2010) report outlet density studies employing a variety of methodologies (including long-term time series analyses, panel analyses, cross-sectional analyses and short-term natural experiments involving temporary closures). These studies suggest that patterns have been found between outlet density and alcohol-related harms, particularly violence, but also including outcomes as varied as child maltreatment, car crashes, pedestrian injuries, and sexually transmitted infections (STIs).

In some studies, however, alcohol-related harms did not appear to be related to outlet density. For example, there is research suggesting that in areas where outlet density is reduced, people may be prepared to travel outside their local area to purchase alcohol (Anderson and Baumberg, 2006).

An extensive review by Cameron et al. (2009), which includes New Zealand research, showed similarly mixed results regarding outlet density and harms. They suggest the differences between studies may reflect differences in local context and confounding variables, such as volume of alcohol sales and socio-economic level (Cameron et al. 2009). Their review also contains a content analysis of coverage of alcohol issues in the popular press. They conclude that media reports presented a strongly negative view of alcohol, and that these may be affecting the public's views of outlet density unduly.

Opponents argue that restricting outlet density is anti-competitive and gives an unfair advantage to certain retailers (Livingston et al., 2007; Donnelly et al., 2006). Others consider that there are advantages to the clustering of licensed premises, such as containing alcohol-related problems in a confined area and the ability to target resources, such as Police and public transport (Babor et al. 2003). There are also substantial commercial benefits for establishments in being located within entertainment precincts.

However, the additional harms associated with clustered premises can increase the costs of enforcement and can create neighbourhood problems with noise, public disorder and vandalism, and increase young people's exposure to advertising. This is particularly problematic in the case of unintentional clustering where there are not appropriate buffers for residents or sufficient enforcement resources (Livingston et al., 2007).

3.3.4 Demand reduction

Demand reduction strategies are the domain of central government rather than local government and tend to focus on:

- pricing and taxation
- advertising and marketing.

Price controls

The role of prices and taxes as a means of curbing consumption and reducing alcohol-related problems has been extensively investigated, with many studies concluding that this is one of the most effective ways to reduce alcohol-related harm (Babor et al., 2003; Chisholm et al., 2003). Furthermore, price effects apply to all groups of drinkers, including heavy drinkers and young drinkers.

Selective price controls, however, produce mixed results, as summarised below:

- Partial price controls such as bans on discounted sales in on-license premises do not appear to be effective
- Minimum pricing on the cheapest beverages does seem to be effective with heavy drinkers
- A minimum price on ready-to-drink alcoholic beverages suggests a deterrent effect among young drinkers, but further work is needed to remove uncertainties, such as the substitution of other beverages (Babor et al., 2010).

Advertising

Evidence reviewed by Babor et al. *(*2010) suggests the exposure of young people to alcohol marketing speeds up the onset of drinking and increases the amount consumed by those already drinking.

3.3.5 Problem limitation

Problem limitation measures focus on reducing the incidence of alcohol misuse and the level of alcohol-related harm (Law Commission, 2009). Key approaches include:

- host responsibility
- licensing enforcement
- liquor bans
- education.

Host responsibility (managing the drinking context)

Good evidence for the effectiveness of interventions such as host responsibility is provided by the STAD[9] alcohol and drug prevention programme in Sweden, which ran for 10 years (Babor et al., 2010). Refusals to serve drunk people in project areas (550 licensed premises) demonstrated a drop in violent crime compared to rates in control areas (270 licensed premises).

A similar project in Surfers Paradise demonstrated marked decreases in violent crime over a two-year period, but this outcome was not sustained over a longer period.

The Rhode Island Community Alcohol Abuse/Injury Prevention Project found declines in injuries, assaults and motor vehicle accidents in areas served by participating liquor outlets (both on-licence and off-licence) compared with outlets in control areas. However, these gains were not maintained over time (Babor et al., 2010).

Importance of enforcement

Further investigation is required of the lack of long term success of programmes aimed at modifying the drinking context. One factor suggested by Babor et al. *(*2010) to account for the lack of sustained positive outcomes might lie in the levels of policing and enforcement. In the STAD project, policing remained vigorous throughout. In the others, there were indications that levels of enforcement were not maintained (Babor et al., 2010). A study on random breath testing in Australia concluded that people have to believe that there is a high risk of getting caught before they modify their behaviour (Homel, 1988).

New Zealand studies provide further support for the role of enforcement in achieving positive outcomes. Sim et al. (2005) found no sustained gains outside the time period of enhanced policing. Informal investigations using pseudo-patrons in the Waitakere City Council area also showed that in the period outside of concerted campaigns for effective implementation, many sales people lapsed into providing minors with alcohol without conducting the required age checks.

Another key domain of enforcement is in controlling drink-driving (Babor et al., 2010). Approaches including sobriety checkpoints, random breath testing, lower legal limits of blood alcohol concentration, "zero-tolerance" rules for young drivers, administrative licence suspension, and graduated licensing for young drivers all contribute to positive outcomes. Babor et al. (2010) conclude that overall "enhanced enforcement of laws and regulations by Police, liquor licensing, municipal authorities and others has been shown to be a powerful approach to reducing harms in the commercial drinking environment".

[9] This acronym is translated as "Stockholm Prevents Alcohol and Drug Problems".

Education

ALAC argues that the main underlying driver of excessive drinking in New Zealand is a culture that tolerates and supports drinking, binge drinking in particular (ALAC, 2005). ALAC concludes that, whilst all other types of intervention are useful, changing the drinking culture is fundamental to achieving lower rates of alcohol-related harms. ALAC provides evidence in favour of this approach in relation to reduced tolerance of the public to drink-driving (ALAC, 2005; Cagney, 2006).

However Babor et al. *(*2010), Caswell et al. (2005) and Giesbrecht (2011) conclude that overall, compared to other intervention strategies, education is least effective in achieving behavioural changes. They argue that strategies based on pricing, raising the minimum legal drinking age, lowering the legal blood-alcohol limit for driving, restrictions on hours of trading and on the density of liquor outlets are likely to be the most effective, and enforcement of these is essential.

4. METHODOLOGY

This section outlines the procedures followed in conducting the research, both generally and in relation to each of the information requirements set out in the Bill.

4.1 Overview

The methodology has been dictated to a large extent by clauses 77 and 77A of the Alcohol Reform Bill (the details of which are outlined in section 3.2.2 of this report), and in particular the requirements to have regard to:

- the objectives and policies of Auckland's district plans (clause 77A(2)(aa))
- the number of licences of each kind held for the premises in the district, and the location and opening hours of each of the premises (clause 77A(2)(a))
- any areas in which bylaws prohibiting alcohol in public places are in force (clause 77A(2)(b))
- the demography of the district's residents and of people who visit the district as tourists or holiday-makers (clauses 77A(2)(c)and (d)).

Other aspects of clause 77A(2) are more open to interpretation, including the requirements to have regard to the:

- overall health indicators of the district (clause 77A(2)(e))
- nature and severity of alcohol-related problems arising in the district (clause 77A(2)(f)).

The procedures followed in gathering information to support these latter requirements have therefore, been informed by the literature review and through primary research. Specifically, the literature has assisted in identifying key topics and data sources for investigation within each of these areas.

4.2 Data collection

Data collection involved three key components. First, officers collated and analysed internal Council data, including from each of the district licensing agencies (DLAs).

Second, throughout 2011, officers engaged with a range of organisations, to inform them about the Alcohol Programme and to invite them to provide input into the research project. The purpose of this process was to gather existing research and data.

The table below lists the organisations contacted within each relevant sector.

Table 4.1 Organisations contacted during data collection phase

Sector	Organisations
Government departments and agencies	• New Zealand Police • Ministry of Education • New Zealand Transport Agency • Ministry of Justice • Accident Compensation Corporation • Ministry of Health • Ministry of Economic Development • Statistics New Zealand • Alcohol Advisory Council New Zealand (ALAC)
Advocacy groups and organisations	• Alcohol Healthwatch • New Zealand Drug Foundation • Waterwise
Health sector	• Medical Officers of Health • District health boards • Community Alcohol and Drug Services • Mental Health Foundation • Institute of Environmental Science and Research Ltd (ESR)

Industry-related organisations	• Hospitality Association of New Zealand (HANZ) • Restaurant Association of New Zealand • Clubs New Zealand • Sports Clubs Association New Zealand
Academic institutions	• University of Waikato • University of Auckland • University of Otago • Social and Health Outcomes Research and Evaluation (SHORE)/Whariki – Massey University

Third, three pieces of primary research were conducted:

- an investigation of public opinions, attitudes and beliefs relating to the role of alcohol in Aucklanders' lives, its consequences and how it could be managed (the Nielsen research)
- a survey of Police on the enforcement of Auckland's liquor bans
- a survey of Police on their perceptions of the role of alcohol in crime and disorderly behaviour, and how this is managed.

4.3 Specific procedures

The paragraphs below summarise the processes followed for each of the information requirements of the Bill.

4.3.1 Objectives and policies of Auckland Council's District Plans

Council officers completed an environmental scan of the Auckland's seven operative District Plans (the District Plans), as well as the draft Auckland Regional Policy Statement.

This was conducted using key definitions from each plan to inform a keyword search. Where keywords appeared, a closer review of the activity status and development control provisions was undertaken. Where alcohol-related activities were provided for, the supporting policy framework was also reviewed. Results were summarised and recorded in a single matrix. The results were then analysed for key themes.

4.3.2 Number of licences of each kind held for the premises in the district, and the location and opening hours of each of the premises

Number and location of licences

Officers followed the below process in completing the liquor licence stock-take:

1. In June 2011, raw liquor licence data was gathered in Excel format from each of the Auckland DLAs.
2. Licence types were generalised to on, off, and club licences. In some cases, sub-categories of these had to be aggregated (depending on the DLA).
3. All temporary authorities and conveyances (e.g. boats, aircraft, busses etc) were removed from the spreadsheet. The analysis focuses on fixed licensed premises.
4. Licences were geo-located and mapped to the number of licences of each kind with each local board area. Officers also extracted data from the Geographic Information System (GIS) to complete the spatial analysis.

Because of the complexity of the geo-location process, it is inevitable that some errors may exist in the data. The number and locations of licences may also have changed since June 2011. However, the data provides a useful overview of the distribution of licences across Auckland.

Licence hours

As each of the previous Auckland DLAs used different systems and processes for recording licence information prior to the establishment of Auckland Council, the procedures followed in examining opening hours of licensed premises differed across the region.

The following table summarises the process followed for each area.

Table 4.2 Summary of process followed for extracting licence hours information

Legacy council	Summary of process
Auckland City Council Manukau City Council	• Hours information was extracted from the DLA systems and exported electronically into a spreadsheet • This information was then manually converted into a useable format
Waitakere City Council North Shore City Council	• Hours information was extracted from the system by viewing the electronic file of each premises • Opening and closing times were entered into a spreadsheet
Papakura District Council Franklin District Council Rodney District Council	• Officers reviewed the hard copy files of each premises and entered the opening and closing times into a spreadsheet

In all cases, the information available was limited to the maximum licensed hours for each premises. In practice, some licensees may choose to open for shorter hours than those recorded on the licence, but this varies at the licensee's discretion, and is therefore not systematically recorded by Council.

4.3.3 Areas in which bylaws prohibiting alcohol in public places are in force

Officers developed a database to record the location and operating hours of all permanent liquor bans inherited by Auckland Council in November 2010. New bans implemented by Auckland Council (i.e. since November 2010) were also recorded. Officers then developed maps to show the bans within each local board area.

In April 2011, officers gathered liquor ban breach data from the New Zealand Police, including:

- the number of recorded liquor ban breaches at station and district level for the 2006 – 2010 calendar years
- location of recorded liquor ban breaches (street level) for the 2010 calendar year
- basic demographic profile of those breaching liquor bans (i.e. age and gender)
- temporal analysis of liquor ban breaches, including information about the time of day and day of the week that breaches typically occur.

When providing this data, the Police noted the following limitations:

- differences in enforcement, resourcing issues, and the ability for Police to use their discretion influences the reliability of liquor ban breach data for providing an estimate of the true level of offending
- the enforcement of liquor bans is one of many policing activities, meaning the level of enforcement will be influenced by a variety of factors such as other operational demands on Police.

In light of these limitations, in July 2011, questionnaires were sent to representatives from each of the Auckland Police areas. The purpose was to clarify:

- liquor ban enforcement practices
- key locations and times when problems are highest
- how liquor bans impact on policing.

Survey results were treated as indicative only, and were used to help interpret the quantitative Police data outlined above.

4.3.4 Demography of the district's residents and of people who visit the district as tourists or holiday-makers

Information about Auckland's demographic profile was sourced from the 2006 Census. Information about Auckland's tourists was sourced from the Ministry of Economic Development. No further analysis of this information was required.

4.3.5 Overall health indicators of the district

Officers gathered a range of health data to provide an indication of the overall health implications alcohol has on the Auckland region. In particular, officers focused on the following:

- alcohol-related presentations to Auckland's emergency departments
- in-patient alcohol-related chronic disease statistics
- alcohol and mental health
- alcohol and sexual health.

Alcohol-related presentations to emergency departments

Officers worked with staff from the Auckland, Counties-Manukau and Waitemata district health boards (DHBs) to gather emergency department statistics.

Alcohol-related accidents, presentations and admissions into Auckland hospitals for the year July 2010 to July 2011 were identified by completing a 'wild card' search of hospital records, using the term "alcohol." Data was then extracted with additional information such as date of incident, basic demographic profile, domicile grouping, whether the case was an in-patient or out-patient type and the diagnosis description type. Temporal information was also provided.

Data included a wide range of diagnosis description types so these were grouped into larger diagnosis categories for the purpose of the statistical analysis. For example all minor orthopaedic injuries such as fractures to fingers, feet, hands were categorised into one injury type and all respiratory-related illnesses and injuries were grouped together in one category.

The limitations associated with the data are outlined in the table below.

Table 4.3 Limitations associated with emergency department statistics

Limitation	Detail
Data recording issues	• Where alcohol is identified as a factor in a particular presentation, DHB staff record this information as a free text field on the medical record. This method of data recording may create some limitations to the consistency of the data • The diagnosis of patients that are in hospital for less than three hours is not fully coded. For the purposes of this research, these are noted as "not recorded"
Scope of data	• The data gathered represents the number of alcohol-related presentations to Auckland's emergency departments. It does not reflect patient numbers. A patient can attend a hospital on several occasions in one year. Each occasion would be recorded in the data as a separate presentation • The data gathered represents hospital presentations only and does not include presentations at local doctors' surgeries or general practitioners (GPs)
Comparing data across the three DHBs	• Although data from each of the three DHBs is compared throughout the report, each DHB serves different populations (i.e. of different sizes and with different characteristics) and provides different medical specialties. This means it is difficult to draw definitive conclusions when comparing the data • Additionally, if a patient presents at one hospital it does not necessarily mean the incident occurred in, or that the patient is from, that particular DHB area

In-patient alcohol-related chronic disease statistics

In order to ascertain the longer-term health effects alcohol is having on the Auckland region, officers also gathered information about alcohol-related chronic disease. Data was gathered from each DHB

for the years January 2007 to January 2012 and was extracted using the following fields: year, age, gender, ethnicity, domicile grouping, diagnosis description type.

This data reflects hospital admission numbers and does not include chronic disease cases dealt with by local doctors' surgeries or GPs.

Additional health data and literature

Officers also gathered and analysed literature and additional data relating to each of the following:

- disease
- mental health
- suicide
- addiction
- sexual health.

4.3.6 Nature and severity of alcohol-related problems arising in the district

Data on the nature and severity of Auckland's alcohol-related problems was collected from a range of sources. Council also commissioned new research to understand perceptions of alcohol-related harm in Auckland. The relevant details are outlined below.

Information gathered

Table 4.4 Summary of information gathered about alcohol-related problems

Source	Information gathered	Method
New Zealand Police	• Recorded Apprehensions for selected Sale of Liquor Act (SOLA) Offences • Drink driving statistics • Information about Police monitoring and enforcement activities (e.g. visits to licensed premises, incidents where Police need to take custody of drunk people)	• Officers reviewed the Police National Alcohol Assessment 2009 and requested similar data for the Auckland region • Data was then analysed by Council's Research, Investigation and Monitoring Unit (RIMU) • Officers also conducted a survey in January – February 2012 to gain an overview of Police perspectives on the nature and severity of Auckland's alcohol-related problems. o Representatives from each of Auckland's ten Police areas were given the opportunity to complete the survey o Survey responses assisted in the interpretation of statistical data provided by the Police.
Ministry of Justice	• Number of convictions for alcohol-related-offences within the Auckland region (specifically offences under the Land Transport Act 1998 and the SOLA)	• This information was sourced directly from the Ministry of Justice • The data was analysed by RIMU
New Zealand Transport Agency	• Traffic crash data for the period of 2006 to 2010, including percentage of crashes related to drugs and alcohol	• This information was gathered from publicly available documents
Ministry of Social Development	• Information about the impact of alcohol on perceptions of safety	• This information was gathered from Quality of Life reports, which are publicly available documents
Auckland Transport	• Information about public transport availability	• This information was gathered from publicly available sources (Maxx) and was analysed by RIMU

Nielsen research

In 2011, Council commissioned Nielsen to undertake a research project to support the Alcohol Programme. The purpose of the research was to:

- investigate community perceptions of alcohol in Auckland's communities (both positive and negative)
- gain feedback on how the public believes Council should address issues relating to alcohol-related harm.

The research was conducted in three phases, as outlined in the following table.

Table 4.5 Summary of Nielsen research procedures

Phase	Overview	Sample characteristics	Other details
Scoping	• Reviewed relevant documentation and data • Surveyed 504 Auckland residents between 1 and 10 June 2011 • This part of the research was treated as a scoping exercise for the main qualitative and quantitative phases of the research	• The survey involved a sample of Auckland's population aged 16 and over	• Nielsen researchers reviewed literature and council documents to inform the research design • The survey was conducted online
Qualitative research	• Conducted six focus groups and five in-depth interviews between 31 May and 20 June 2011 • Main purpose was to clarify: o perceptions of alcohol; its benefits and detriments, issues and concerns, o who is perceived to be affected by alcohol o potential approaches to harm reduction, including the role Council might have	• Participants were recruited on the basis of their level of concern, their level of knowledge and engagement with alcohol-related harm, and by age • Participants included: o a cross-section of citizens aged 18 or older from nine broad areas of Auckland, as identified by Council o a mix of males and females, and of different ethnicities and cultures	• All fieldwork was audio-taped • Participants were given a cash koha for participating in the research • The survey was conducted online
Quantitative research	• Surveyed 2,125 Auckland residents between 28 July and 10 August 2011 • The main purpose was to understand public perceptions about: o the place of alcohol in Aucklanders' lives o the perceived nature, degree and location of alcohol-related harms o how these harms should be addressed o what Auckland Council's role should be in the management of alcohol	• Respondents were aged 18 years or older from across all local board areas • Quotas were set by age and ethnicity to reflect the make up of Auckland's adult population • Quotas of 70 to135 people were also set for 19 of the 21 local board areas to ensure sufficient sample sizes. The exceptions were Waiheke and Great Barrier islands where numbers were insufficient to ensure a reliable sample	• Data was weighted to population figures from the 2006 census to ensure the best possible representation of Auckland's adult population • Questions were mainly pre-coded (rather than open-ended) with rating scales used to record attitudes

The limitations associated with the Nielsen research are outlined in the table below:

Table 4.6 Limitations associated with Nielsen research

Limitation	Detail
Seasonality	The quantitative survey was conducted during winter, which may have affected respondents' attitudes and reported drinking patterns
Online survey methodology	Online surveys are not fully representative of the total population • Currently around 82 percent of the population have access to the Internet, meaning 18 percent of the population is not available to be surveyed online • Online surveys tend to exclude lower income and older people
Self-reporting of drinking	The main quantitative phase of the research asked questions about residents' drinking patterns (e.g. how many times they had a drink in the previous month). Answers to these questions may be inaccurate for the following reasons: • Sometimes people have difficulty recalling what they did over the previous full month • People may have attempted to provide more socially acceptable answers
Response rate	Response rate, which accounts for the number of those who were invited to participate but declined, was not reported

5. RESULTS AND FINDINGS

The following sections present the results and findings as they relate to each of the information requirements set out in clause 77A(2) of the Alcohol Reform Bill.

5.1 District plan review

This section summarises the objectives and policies of Auckland Council's district plans and the Auckland Regional Policy Statement (ARPS). It also summarises the alcohol-related outcomes being considered as part of the development of the new Unitary Plan.

5.1.1 Overview

Auckland Council has seven operative district plans, which it inherited from each of the previous Auckland-based councils ("legacy councils"). Council also inherited the ARPS from the former Auckland Regional Council. These documents are mandated by the Resource Management Act 1991 (the RMA).

The district plans give effect to the ARPS. Both the ARPS as well as the district plans must give effect to the purpose of the RMA, which is to "promote the sustainable management of natural and physical resources" (section 5 RMA).

5.1.2 Objectives of the Auckland Regional Policy Statement

Table 5.1.1 below summarises objectives of the ARPS.

Table 5.1.1 Auckland Regional Policy Statement

Section	Reference	Relevant objectives
Urban Environment	5.2.1	To maintain and enhance the overall quality of the environment of the Auckland region, including its maritime setting, volcanic features, significant landscapes, cultural and natural values and public open space
	5.2.6	To encourage sustainable economic development by enabling commercial activities in appropriate locations within urban areas
Open Space	8.2.3	To protect and enhance the quality of the region's open space by managing the adverse effects of activities on, or near, the areas of open space

Source: ARPS

5.1.3 Objectives and policies of the district plans

Table 5.1.2 below summarises the general focus of the objectives and policies of the district plans, for the residential, business and open space zones.

Table 5.1.2 Summary of objectives and policies of the district plans

Zone	Summary of objectives	Summary of policies
Residential zones	Focus on maintaining and enhancing amenity and character of residential areas	Permitted activities, other than residential activities, are limited (e.g. home occupation is the only commercial activity allowed)
Business zones	Greater range of activities permitted Focus on managing the impact on neighbouring land uses (e.g. managing the impact of business zone activities on residential areas through a 'buffer zone') Focus on maintaining the scale of development and amenity values within business zones	Generally, business zones allow for a mix of commercial activities (e.g. entertainment, health, offices, taverns, restaurants etc) Policies set out scale of development to maintain business amenity and character (the methods to achieve this policy might focus on restricting hours of operation or noise limits) Policies might include a buffer zone between business and other land uses such as residential zones. Buffer zones have limited activities (e.g. might exclude entertainment facilities)
Open space zones	Further to ARPS Objective 8.2.3, the objectives in legacy district plans are concerned with managing adverse effects of activities on open space Focus on protecting the amenity and landscape values of open space In some cases, open space is protected to enhance amenity values of residential spaces	Focus on controlling the adverse effects on open space as well as to surrounding land uses (e.g. residential neighbourhoods)

Source: Auckland Council district plans

Details about each zone are summarised below:

- Residential zones range from intensive residential development zones to less densely developed zones where the residential character needs to be preserved.
- Activities within business zones range from light commercial activities such as retail or service provision, to heavy industrial activities such as manufacturing.
- Mixed-use zones have been considered under business zones. They include more than one dominant activity (e.g. residential, commercial, open space, schools). Mixed-use zones can vary in character (e.g. from dominantly residential activity or commercial activity).
- In the above table, open space refers primarily to parks. Some of these spaces have club licences that sit on the parkland.

5.1.4 Unitary Plan

Council is currently developing the Unitary Plan, which will apply across the whole region. The Unitary Plan will repeal and replace the existing district plans.

The Unitary Plan will adopt an outcomes-based approach to regulating land use. The purpose of this new approach is to shift the focus away from mitigating negative environmental effects towards achieving desired outcomes.

The Unitary Plan is still in the early stages of development, however, outcomes being considered in relation to alcohol-related issues include:

- enhanced safety
- enhanced residential amenity (especially in the evenings)
- enhanced connectivity with public transport
- greater recognition of the different environmental effects of alcohol outlets
- a balance of land use activities, without particular dominance from one activity (this outcome would apply in business-type zones).

5.2 Licence information

This section provides information about the number, location and licensed hours of Auckland's licensed premises.

5.2.1 Number and location of licences

As at June 2011, there were 3,346 licensed premises within the Auckland region (including the trust areas). This number includes on, off and club licensed premises, but excludes other licence types as outlined in the table below[10].

Table 5.2.1 Excluded licence types

Excluded	Reason for exclusion
Conveyances (e.g. busses, aeroplane and boats)	• These types of licences do not operate in a fixed location or at consistent times
Caterers and endorsed off-licences	
Special licences	• These are not permanent licences
Temporary authorities	

Sixty-one percent of the licensed premises were on-licences (2,052), 26 percent were off-licences (874) and 13 percent were club licences (420).

Heat maps showing the distribution of licences across the region are attached in Appendix 1 (the heat scale is based on the number of licences per census area unit). The table below provides information about the distribution of licences by local board.

Table 5.2.2 Number of liquor licences by licence type and local board

Local board	On-licences		Off-licences		Club licence		Total	% of region's licences
	No. of licences	% of board's licences	No. of licences	% of board's licences	No. of licences	% of board's licences		
Albert-Eden	157	66%	49	21%	31	13%	237	7.1%
Devonport-Takapuna	102	64%	34	21%	23	14%	159	4.8%
Franklin	60	41%	45	31%	42	29%	147	4.4%
Great Barrier	9	50%	6	33%	3	17%	18	0.5%
Henderson-Massey	61	56%	23	21%	24	22%	108	3.2%
Hibiscus & Bays	103	60%	44	26%	24	14%	171	5.1%
Howick	111	61%	56	31%	16	9%	183	5.5%
Kaipatiki	79	58%	42	31%	15	11%	136	4.1%
Mangere-Otahuhu	48	44%	42	39%	18	17%	108	3.2%
Manurewa	19	32%	28	47%	13	22%	60	1.8%
Maungakiekie-Tamaki	62	44%	53	38%	25	18%	140	4.2%
Orakei	88	58%	36	24%	27	18%	151	4.5%
Otara-Papatoetoe	59	52%	42	37%	13	11%	114	3.4%
Papakura	30	41%	28	38%	15	21%	73	2.2%
Puketapapa	17	35%	22	45%	10	20%	49	1.5%
Rodney	88	42%	82	39%	39	19%	209	6.2%
Upper Harbour	95	65%	43	29%	9	6%	147	4.4%
Waiheke	42	51%	36	44%	4	5%	82	2.5%
Waitakere Ranges	26	52%	8	16%	16	32%	50	1.5%
Waitemata	759	82%	144	15%	28	3%	931	27.8%
Whau	37	51%	11	15%	25	34%	73	2.2%
Total	**2,052**	**61%**	**874**	**26%**	**420**	**13%**	**3,346**	**100.0%**

Source: Internal council data

Note: Percentages that are significantly higher than the regional percentages are highlighted in orange. Percentages that are significantly lower are highlighted in blue.

[10] Further information about the processes followed is provided in section 4 of this report.

The table shows that as at June 2011, the Waitemata Local Board had the greatest number of liquor licences across the region at 931 (or 27.8 percent of the total). Waitemata also had the greatest number of on-licences (759) and off-licences (144) compared to the other local boards. The Great Barrier Local Board area had the least number of licences at 18 (less than 1 percent of the total).

Further information about the distribution of licences will be provided to each local board in separate summary reports.

Number and location of licences relative to population

The following figures show the number of licences relative to population for each local board, both generally and for each licence type.

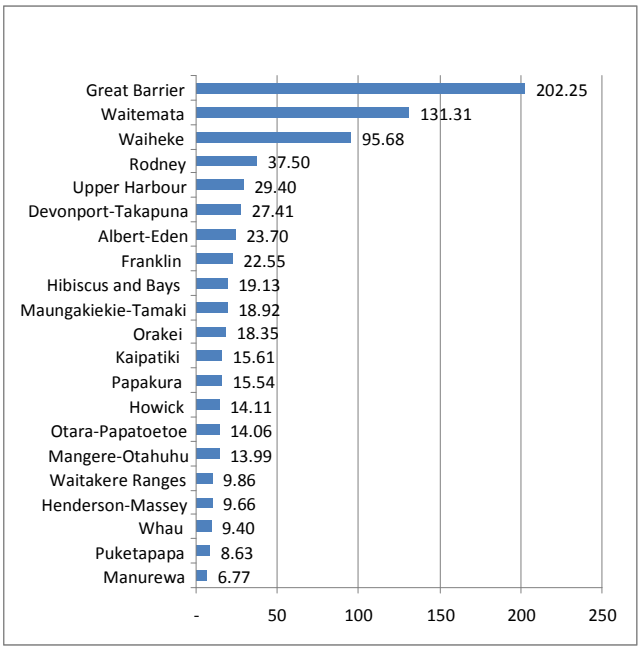


Figure 5.2.1 Number of liquor licences (all types) per 10,000 population, by local board

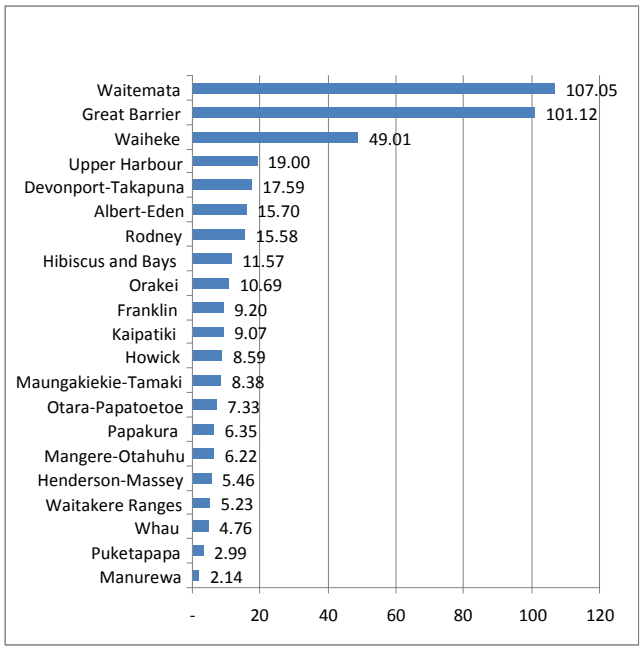


Figure 5.2.2 Number of on-licences per 10,000 population, by local board

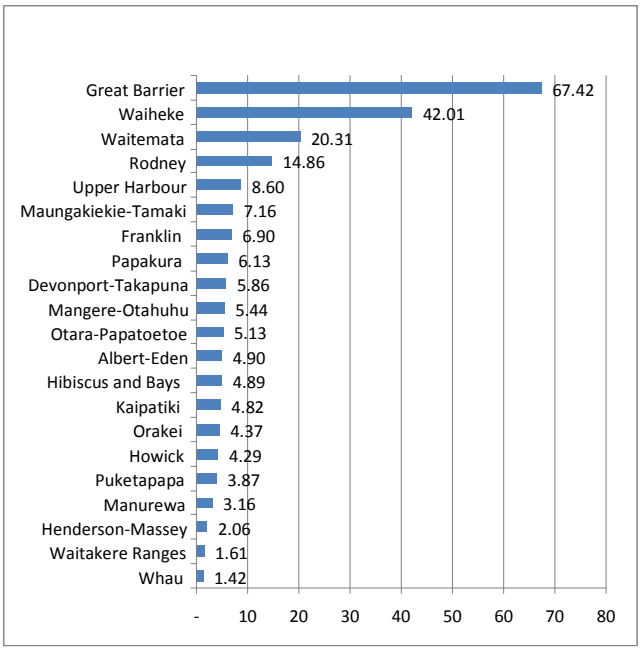


Figure 5.2.3 Number of off-licences per 10,000 population, by local board

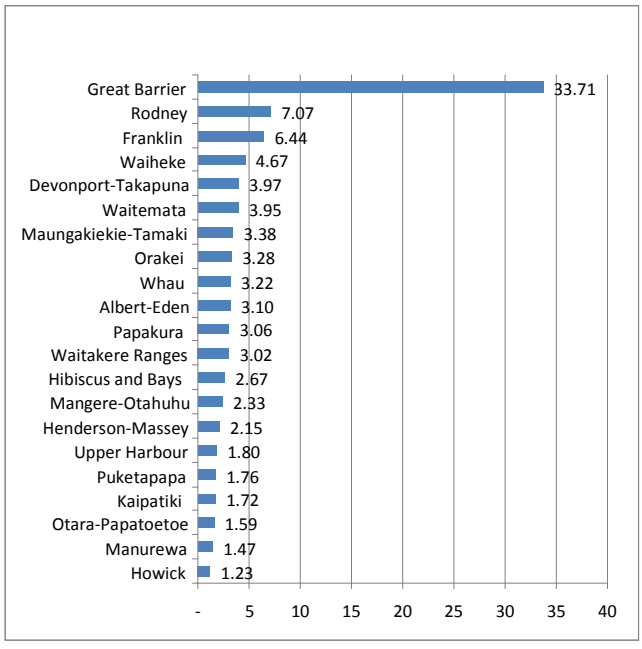


Figure 5.2.4 Number of club licences per 10,000 population, by local board

Source: Internal council data

The Waitemata Local Board ranks highly in terms of the total number of licences (second highest), the number of on-licences (highest) and the number of off-licences (third highest) relative to population. However, this is to be expected as many of the outlets within the Waitemata area, particularly on-licences, have catchment areas that are much greater than the Waitemata Local Board area. For example, outlets within the CBD and Ponsonby draw patrons from both across the region and Auckland's tourist populations. The Waiheke Local Board area showed similar results, which may also be due to the high volume of tourists that visit the island (e.g. vineyards).

The Great Barrier Local Board also ranks highly both generally (highest score for total number of licences) and for on (second highest), off (highest) and club licences (highest). However, as outlined above, Great Barrier has the least number of licences overall (i.e. raw count). This appears to be a pattern for Auckland's more rural areas, particularly for off and club licences.

Areas that are perceived to have a higher density of off-licences did not score as highly as expected. For example, the Nielsen research found that respondents considered the Manurewa (83 percent), Otara-Papatoetoe (72 percent) and Mangere-Otahuhu (64 percent) local board areas have too many off-licences. Results shows that whilst these areas had more off-licences compared to other types of licences (see Table 5.2.2), the numbers of off-licences relative to population within these board areas were average and below average.

Number and location of licences relative to land area

Officers have also analysed the number of liquor licences within each local board area, relative to land area[11]. This will assist Council in understanding patterns of licence density from a spatial perspective (Pollack et al., 2005).

Table 5.2.3 Number of liquor licences, by licence type, per 10,000 hectares

Local board	No. of on-licences per 10,000 hectares	No. of off-licences per 10,000 hectares	No. of club licences per 10,000 hectares	Total no. of licences per 10,000 hectares
Waitemata	3,936.64	746.87	145.23	**4,828.73**
Albert-Eden	554.05	172.92	109.40	**836.37**
Devonport-Takapuna	507.70	169.23	114.48	**791.41**
Orakei	270.99	110.86	83.14	**464.99**
Kaipatiki	232.35	123.53	44.12	**399.99**
Maungakiekie-Tamaki	170.20	145.49	68.63	**384.31**
Otara-Papatoetoe	161.70	113.19	35.03	**309.92**
Whau	138.30	41.12	93.44	**272.86**
Howick	160.72	80.36	22.96	**264.05**
Puketapapa	90.84	117.56	53.44	**261.84**
Mangere-Otahuhu	97.80	85.57	36.67	**220.05**
Upper Harbour	136.48	61.78	12.93	**211.18**
Henderson-Massey	114.73	43.26	45.14	**203.12**
Papakura	72.03	69.55	34.77	**176.35**
Manurewa	51.19	75.44	35.03	**161.66**
Hibiscus and Bays	96.54	40.84	22.28	**159.66**
Waiheke	27.16	23.28	2.59	**53.02**
Waitakere Ranges	8.75	2.69	5.05	**16.48**
Franklin	5.02	3.76	3.51	**12.30**
Rodney	3.83	3.65	1.74	**9.21**
Great Barrier	2.81	1.87	0.94	**5.62**

Source: Internal data

[11] For the purposes of this analysis, "land area" refers to the total land area of the relevant local board, including both inhabited and uninhabited land. For some local board areas, such as those that include Department of Conservation land (e.g. Waitakere Ranges or Waiheke), this may influence the results.

The results show that Waitemata had the greatest number of licences (total) per 10,000 hectares (approximately 4,829). This result is as expected, as Waitemata is one of the smallest boards geographically, yet it contains 27 percent of the region's liquor licences.

The Great Barrier, Waiheke and Rodney local boards, which all ranked highly in terms of number of licences per 10,000 people, had the least licences per 10,000 hectares. Franklin Local Board also had low licence numbers compared to its land area.

Number and location of licences relative to deprivation

As outlined in section 3 of this report, research shows a positive relationship between licence density, (particularly off-licences) and deprivation.

Maps showing the distribution of licences across Auckland relative to deprivation at the CAU level are attached as Appendix 2. Off-licences appear to be more concentrated in areas of greater deprivation whereas on-licences and club licences seem to be more evenly dispersed. Research indicates that the distribution of on-licences is more likely to be influenced by factors such as amenity and accessibility (from a transport perspective).

Officers have analysed these relationships at the mesh block level. The following figures show the number of liquor licences (all types) located within mesh blocks for each deprivation score. Figure 5.2.5 shows the licence counts for each deprivation score, and Figure 5.2.6 shows the number of licences per 1,000 residents for each deprivation score. In both cases, only the mesh blocks with licences are included (i.e. mesh block areas that do not contain any licences are excluded).

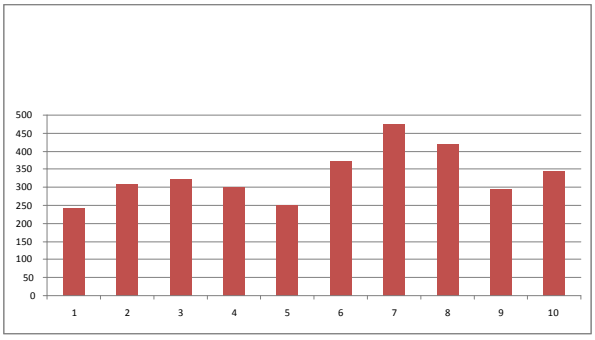
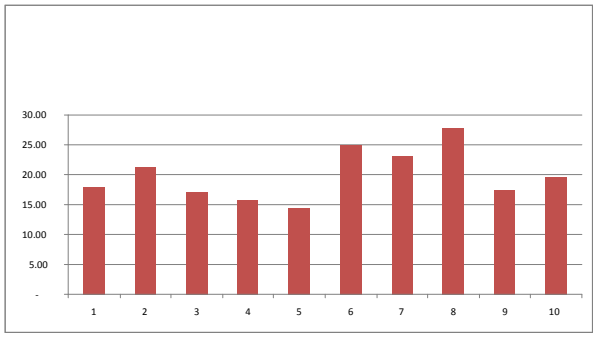


Figure 5.2.5 Number of licences (all types) within mesh blocks at each deprivation level



5.2.6 Number of licences (all types) per 1,000 population within mesh blocks at each deprivation level

Taken together, these figures confirm that licence density is higher in Auckland's more deprived mesh block areas (i.e. deprivation scores 6 – 10). However, the exact distribution differs slightly when adjusted for population density. Both graphs are included as the catchment area for each licence will not be confined to its immediate mesh block.

The research indicates that this relationship is likely to be more pronounced for off-licensed premises. The figures below, therefore, show the number of off-licences, and the number of off-licences relative to population for mesh blocks of each deprivation score. As above, only those mesh blocks with licences are included.

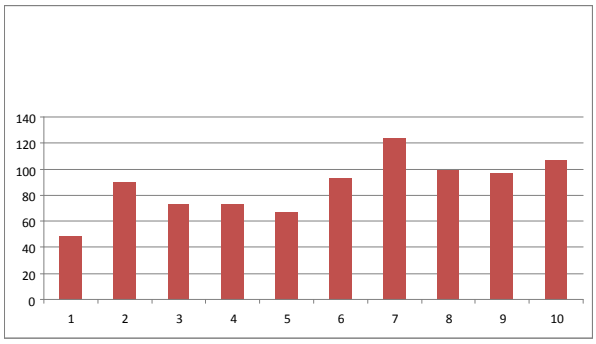
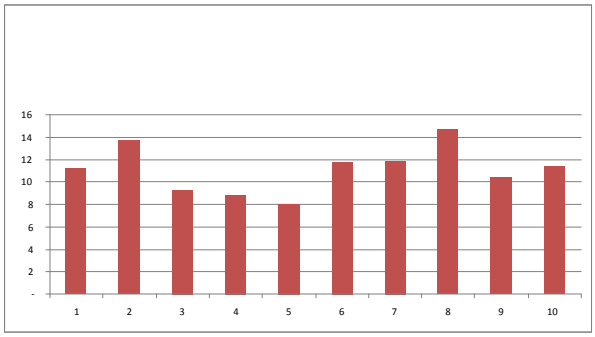


Figure 5.2.7 Number of off-licences within mesh blocks at each deprivation level



5.2.8 Number of off-licences per 1,000 population within mesh blocks at each deprivation level

Approximately 40 percent of licences are located in less deprived mesh blocks (scores 1 – 5) and 60 percent in the more deprived areas (scores 6 – 10).

5.2.2 Licensed hours

The following sections contain information about the maximum licensed hours for Auckland's licensed premises. In practice, some licensees may choose to open for shorter hours than those recorded on the licence, but this varies at the licensee's discretion (for example, some premises may be licensed to open from 7am but choose not to open until 9am).

Opening hours

Figures 5.2.9 – 5.2.11 below, show the opening times for on, off and club licensed premises within the Auckland region for each day of the week (i.e. the number of premises that are licensed to open at each one-hour interval).

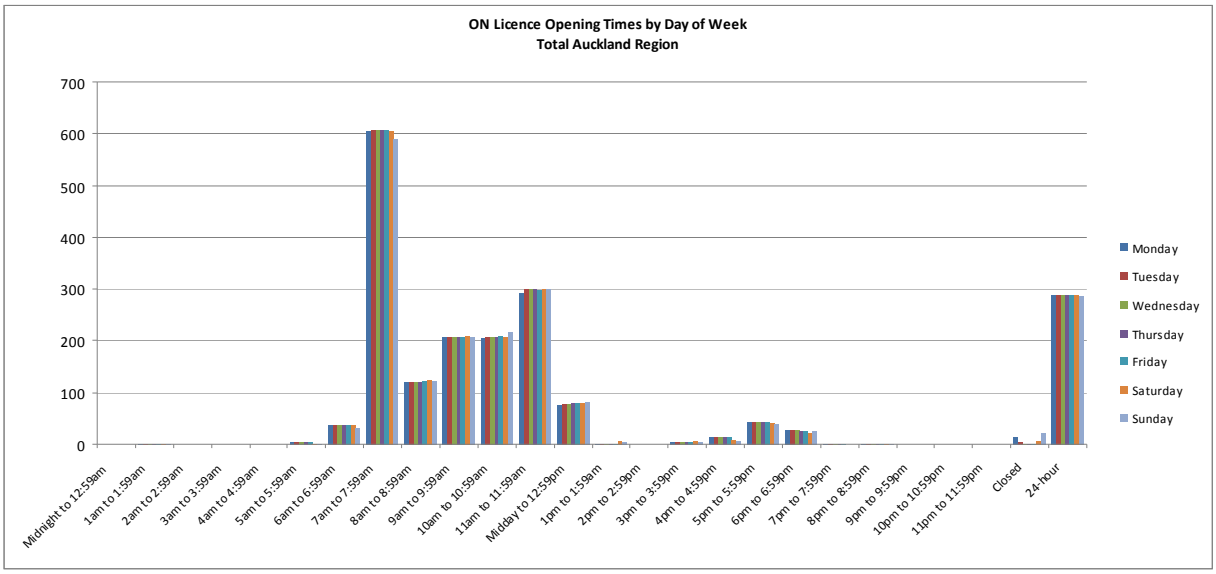


Figure 5.2.9 On-licence opening times for Auckland region by day of week

Source: Internal data

Figure 5.2.9 shows that opening times for on-licences are relatively consistent throughout the week. The most common opening time is between 7am and 7.59am. It also shows the majority of on-licences are licensed to open before midday.

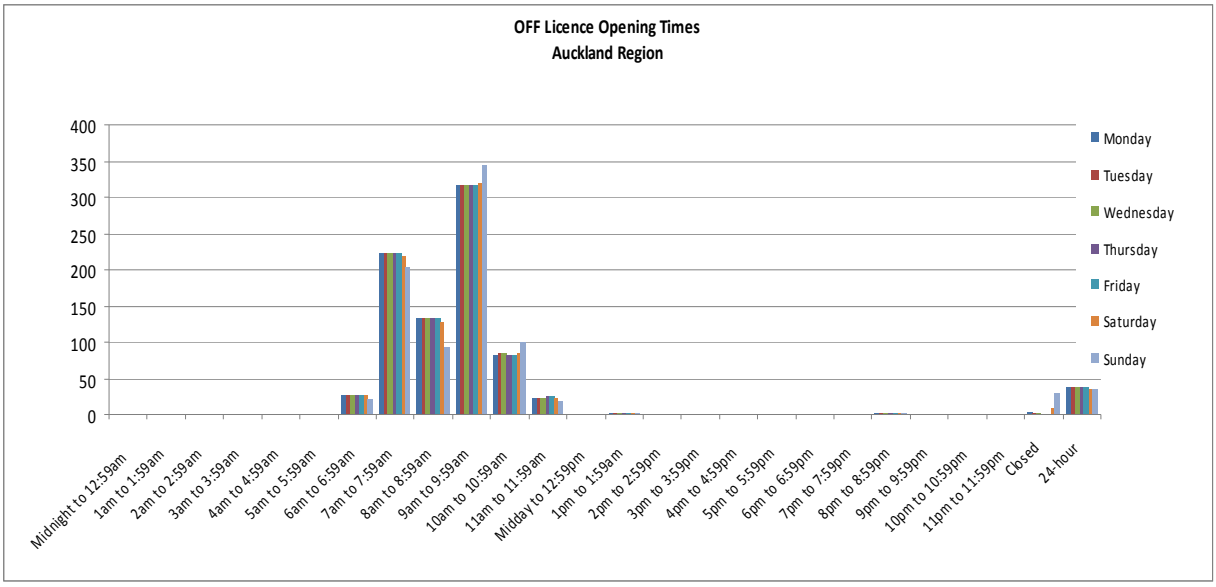


Figure 5.2.10 Off-licence opening times for Auckland region by day of week

Source: Internal data

Figure 5.2.10 shows that off-licence opening times are also consistent throughout the week. The most common opening time is between 9am and 9.59am, particularly on Sunday where there is a slight peak. Almost all off-licensed premises are licensed to open before midday.

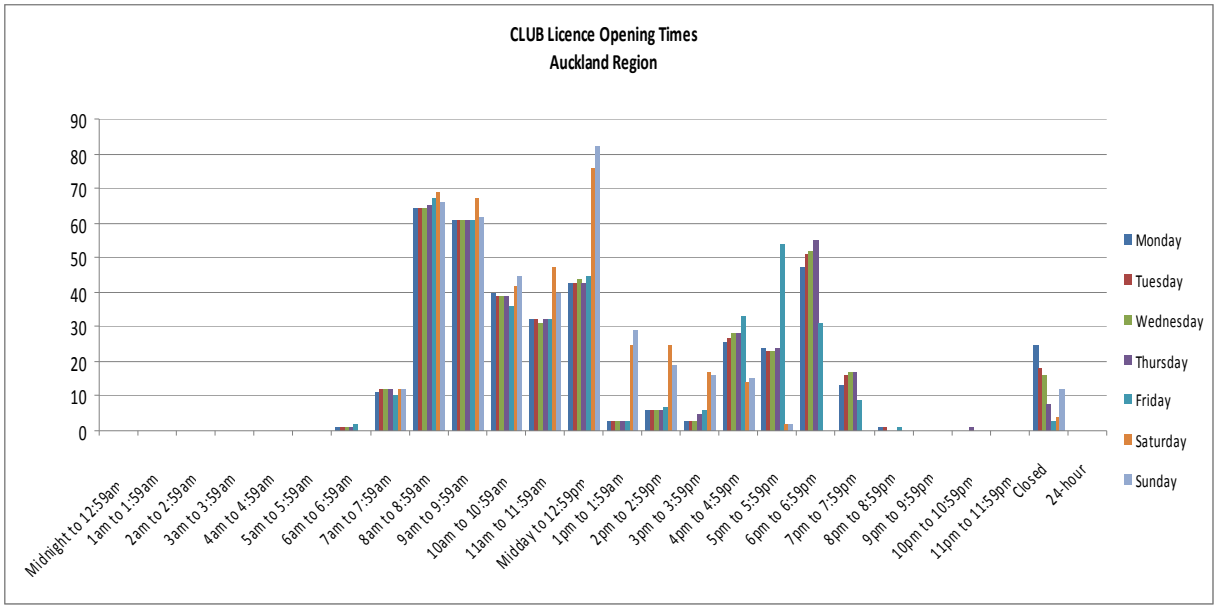


Figure 5.2.11 Club licence opening times for Auckland region by day of week

Source: Internal data

Figure 5.2.11 shows more variance in the opening times of club licences throughout the week, with the main distinction being weekdays compared to the weekends. The figure also shows that club licences have more closed days than on and off-licences, particularly earlier in the week (Monday to Wednesday).

Closing times

Figures 5.2.12 – 5.2.14 below, show the closing times for on, off and club licensed premises within the Auckland region for each day of the week.

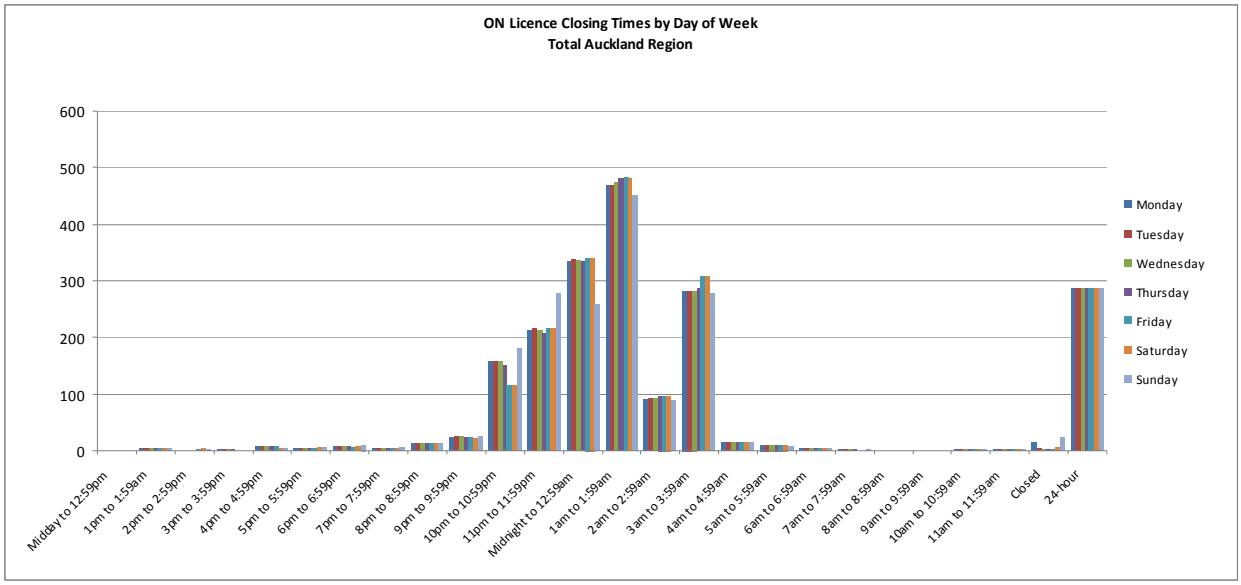


Figure 5.2.12 On-licence closing times for Auckland region by day of week

Source: Internal data

Figure 5.2.12 shows that:

- there is a slight increase in the number of premises closing between 3am and 3.59 on Friday and Saturday nights, compared to the rest of the week i.e. there are slightly more premises open later on Friday and Saturday nights (technically the early hours of Saturday and Sunday mornings)
- more premises close earlier on Sunday evenings.

However, overall closing times for on-licences are more consistent than might be expected throughout the week. This may be because the data reflects maximum licensed hours rather than exact operating hours. For example, in practice some premises may choose to close earlier during the week if there is no demand to stay open for their full maximum licensed hours. This would not be captured in the data.

The figure also shows that:

- the most common closing time for on-licences is between 1am and 1.59am
- almost all premises are closed by 4am
- approximately 288 on-licence premises (14.7 percent) are licensed for 24 hour trading.

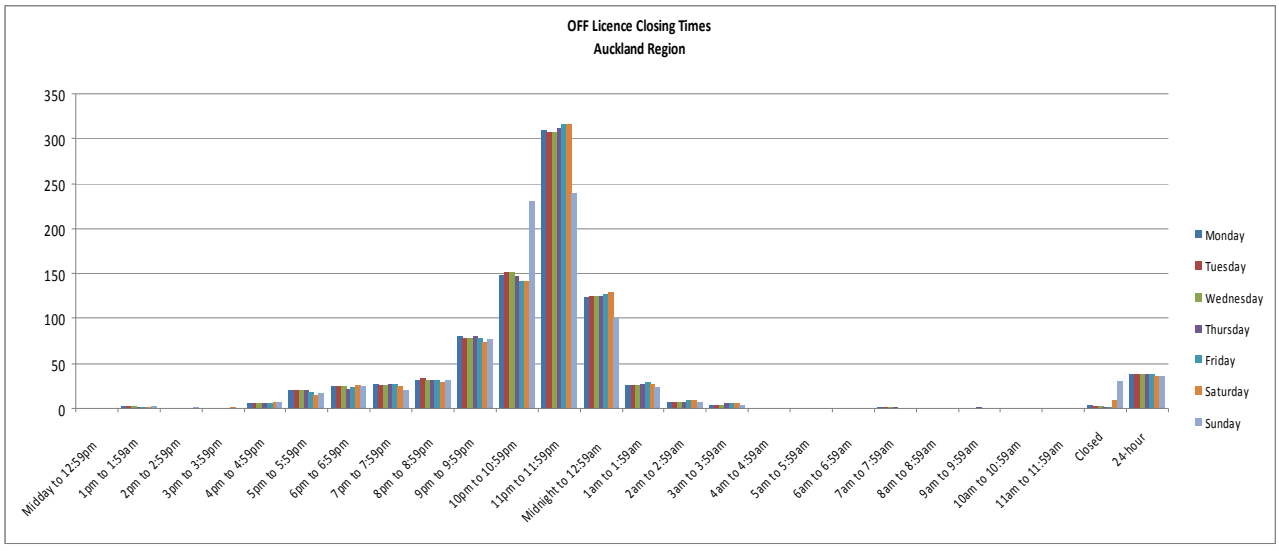


Figure 5.2.13 Off-licence closing times for Auckland region by day of week

Source: Internal data

Figure 5.2.13 shows that the most common closing time for off-licences across the region is between 11pm and 11.59pm, although on Sundays more premises tend to close earlier between 10pm and 10.59pm. The number of premises that are closed is also higher on Sundays (31 compared to between 1 and 9 during the rest of the week).

Approximately 37 off-licences (4.3 percent) are licensed to operate for 24 hours. These include hotels (approximately 16 percent), supermarkets (approximately 11 percent) and across the bar sales (approximately 27 percent). Please note these percentages are estimates based only on the names of the premises.

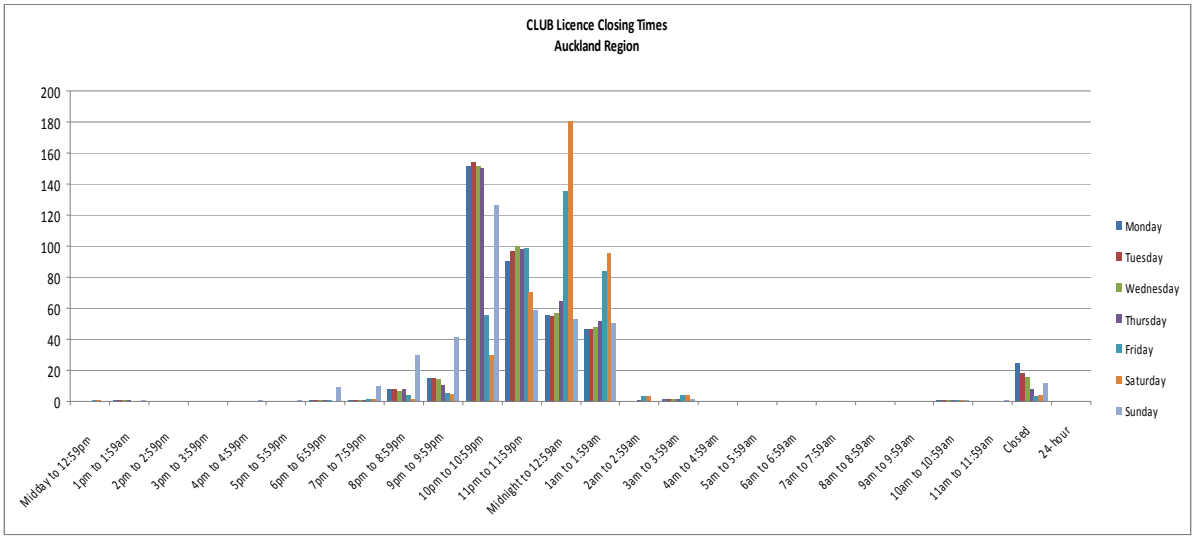


Figure 5.2.14 Club licence closing times for Auckland region by day of week

Source: Internal data

Figure 5.2.14 shows that club licence closing times tend to vary throughout the week. This is as expected because the licensing hours for clubs generally relate to days and hours where the predominant purposes of the club are being conducted.

In completing the data entry and analysis for club licences, officers also noted a level of seasonal variation in licensed hours. For the purposes of this analysis, if the hours were consistent for the majority of the year, the licence was included. However, if the hours varied too significantly or if the club was only open for a small portion of the year, it was excluded.

5.3 Liquor bans

This section provides a brief overview of the current framework for making liquor bans, discusses the number and type of bans in place across Auckland, outlines the key issues associated with drinking in public places, and presents liquor ban breach data.

5.3.1 Overview

Liquor bans prohibit people from possessing or consuming alcohol in specified public places. They do not apply to private property or licensed premises (including outdoor areas subject to a liquor licence). They are implemented by territorial authorities and enforced by the Police.

Territorial authorities are entitled to make liquor ban bylaws under the Local Government Act 2002 (LGA). Auckland Council has seven liquor ban bylaws. The majority of these bylaws allow for the Council to make new liquor bans by passing a resolution. However, in the former Franklin District Council area, liquor bans can only be made by amending the bylaw, which requires full public consultation using the special consultative procedure.

5.3.2 Current liquor bans

Number of bans

There are approximately 2,342 permanent liquor bans in the Auckland region. Maps showing the distribution of these bans compared to the location of licensed premises by local board will be provided to each local board. Copies will also be made available in the Councillors' Lounge and on request.

Only three permanent bans have been implemented by Auckland Council (as at April 2012). The remainder were implemented by the previous Auckland councils (legacy councils) and were transferred over to Auckland Council by the Local Government (Auckland Transitional Provisions) Act 2010. The table below outlines the approximate number of bans implemented in each local board area.

Table 5.3.1 Number of permanent liquor bans by local board

Local Board	Approx. no. of bans	Bylaw	Description
Rodney	12	Rodney District Council (RDC) Liquor Ban Bylaw 2009	• Individual bans • Mostly beach and coastal areas. Also includes shopping/business areas
Hibiscus and Bays	13	RDC Liquor Ban Bylaw 2009	• Individual bans • Mostly beach and coastal areas. Also includes shopping and business areas, and parks and reserves
		North Shore City Council (NSCC) Liquor Control in Public Places Bylaw 2009	
Kaipatiki	7	NSCC Liquor Control in Public Places Bylaw 2009	• Individual bans • Mostly parks and reserves, and shopping and business areas
Devonport-Takapuna	18	NSCC Liquor Control in Public Places Bylaw 2009	• Individual bans • Mostly beach and coastal areas, and shopping and business areas • One blanket ban on all former-NSCC park-and-ride bus stations
Upper Harbour	6	NSCC Liquor Control in Public Places Bylaw 2009	• Individual bans • One blanket ban on all former-NSCC park-and-ride bus stations
		Waitakere City Council (WCC) Control of Liquor in Public Places Bylaw 2008	• Individual bans
Waitakere Ranges	9	WCC Control of Liquor in Public Places Bylaw 2008	• Individual bans • Mostly park and reserve areas
Henderson-Massey	23	WCC Control of Liquor in Public Places Bylaw 2008	• Individual bans • Mostly park and reserve areas
Whau	91	WCC Control of Liquor in Public Places Bylaw 2008	• Small number of park and reserve bans
		Auckland City Council (ACC) Liquor Control in Public Places Bylaw 2004	• Blanket ban on all former-ACC parks and reserves • Individual bans on select shopping and business areas
Albert-Eden	173	ACC Liquor Control in Public Places Bylaw 2004	• Recurring major event liquor ban in vicinity of Eden Park • Blanket ban on all former-ACC parks and reserves and associated car parks • Individual bans for select shopping and business areas

Puketapapa	95	ACC Liquor Control in Public Places Bylaw 2004	• Blanket ban on all former-ACC parks and reserves and associated car parks • Individual bans for select shopping and business areas
Orakei	160	ACC Liquor Control in Public Places Bylaw 2004	
Maungakiekie-Tamaki	183	ACC Liquor Control in Public Places Bylaw 2004	• Blanket ban on all former-ACC parks and reserves and associated car parks (including a 24/7 ban on Otahuhu parks and reserves within the Counties-Manukau Police District) • Individual bans for select shopping and business areas
Waiheke	154	ACC Liquor Control in Public Places Bylaw 2004	• Includes the following bans made pursuant to ACC Liquor Control in Public Places Bylaw 2004 o Blanket ban on all former-ACC parks and reserves and associated car parks, and former-ACC beaches o Individual ban for Oneroa shopping and business area
Great Barrier Island	0	ACC Liquor Control in Public Places Bylaw 2004	• No liquor bans
Waitemata	148	ACC Liquor Control in Public Places Bylaw 2004	• Major CBD liquor ban[12] • Blanket ban on all former-ACC parks and reserves and associated car parks • Individual bans for select shopping and business areas
Howick	297	Manukau City Council (MCC) Liquor Control Bylaw 2010	• Individual bans for select parks and reserves and shopping and business areas • Blanket ban on all former-MCC children's playgrounds, skateparks, public reserve car parks (including the adjoining public road within 50 metres) and restricted roads under the MCC Parking and Traffic Bylaw 2008
Mangere-Otahuhu	210	MCC Liquor Control Bylaw 2010	
Manurewa	173	MCC Liquor Control Bylaw 2010	
Otara-Papatoetoe	176	MCC Liquor Control Bylaw 2010	
Franklin	241	MCC Liquor Control Bylaw 2010	• Individual bans for select parks and reserves, beaches and shopping and business areas • Blanket ban on all former-MCC children's playgrounds, skate parks, public reserve car parks (including the adjoining public road within 50 metres) and restricted roads under the MCC Parking and Traffic Bylaw 2008
		Franklin District Council Liquor Control Bylaw 2008	• Individual bans for select parks and reserves, beaches and shopping and business areas
Papakura	153	Papakura District Council Liquor Control in Public Places Bylaw 2008	• Blanket ban on all former-Papakura District Council parks and reserves • Individual bans for select parks and reserves, and shopping and business areas
Total	2342[13]		

Source: Internal Council data

Ban locations

The majority of Auckland's liquor bans apply to parks and reserves, however, approaches vary across the region. In some areas (e.g. the former Auckland City Council area) bans apply to all public parks and reserves whilst in other areas, bans only operate in select parks and reserves. In the former

[12] This liquor ban is currently under review.

[13] This number is indicative only. Officers are undertaking on-going work to improve the accuracy of Council's liquor ban data, particularly in relation to the number of areas affected by blanket bans.

Manukau City Council area, liquor bans apply to portions of parks and reserves, such as those associated with children or young people (i.e. playgrounds and skate parks), and vehicles (e.g. reserve car parks and parts of the adjoining road).

Other areas typically covered by liquor bans include:

- town centres or shopping and business areas
- public car parks
- beaches or beach reserves.

The Nielsen research (outlined in section 4) found that respondents generally approved of using liquor bans in a range of public spaces. The main areas where respondents approved of using liquor bans were playgrounds (85 percent), carparks (80 percent) and skate parks (79 percent) (Nielsen, 2011).

Ban times

Given that the majority of Auckland's liquor bans were implemented by the seven legacy councils, there is no strong pattern in relation to the hours that the bans operate. Time periods range from 24 hours a day, seven days a week (24/7), to night-time or weekend bans, to limited bans for specific holiday periods. In some areas, liquor ban hours also vary seasonally to account for daylight savings.

5.3.3 Key issues

The types of issues typically associated with drinking in public places include vandalism, litter, negative effects on business, noise, violence and disorder (Webb et al., 2004).

Consumption of alcohol in public places is also widely considered to be a factor that influences people's perceptions of safety (Webb et al., 2004; Office of Crime Statistics and Research, 2004). The 2010 Quality of Life Survey found that in Auckland, 67 percent of respondents perceived alcohol and drugs to be a problem in their local area in the 12 months prior to the survey (Ministry of Social Development). Alcohol and drug problems also featured in the top nine reasons of those who felt 'a bit unsafe' or 'very unsafe' in their city centre after dark (Ministry of Social Development, 2011).

The Nielsen research commissioned by Council found that the main venue where negative impacts of drinking are perceived to occur is at parks and other public places, with 64 percent of respondents perceiving an "extremely negative" or "negative" impact (Nielsen, 2011).

The Nielsen research (2011) also showed that liquor bans are considered effective in reducing a wide range of negative impacts caused by alcohol, including:

- offensive behaviour (71 percent)
- safety (feeling unsafe in public areas 70 percent; threats to personal safety 67 percent)
- excessive noise (66 percent)
- littering and property damage (68 percent)
- crime (64 percent).

However, liquor bans can also create problems of displacement, whereby drinkers move to areas with fewer restrictions. Moreover, the actual effectiveness of liquor bans depends heavily on the ability of the Police to enforce them. The following section discusses liquor ban breach data and Police enforcement patterns.

5.3.4 Liquor ban breaches

Number of breaches

Table 5.3.2 below shows the number of recorded offences for breaching a liquor ban by Police district within the Auckland region over the last five calendar years. These figures only represent the number

of breaches officially recorded by Police and are therefore, conservative indicators for problem behaviour.

Table 5.3.2 Number of recorded offences for breach of liquor ban, by Police district, for calendar years 2006 – 2010

Police district	2006	2007	2008	2009	2010
Auckland	570	1,397	1,759	2,026	1,915
Counties-Manukau	729	823	703	1,070	1,656
Waitemata	7	48	187	204	164
Total	**1,306**	**2,268**	**2,649**	**3,300**	**3,735**

Source: NZ Police

In the 2006 calendar year, Police recorded a total of 1,306 liquor ban breaches within the Auckland region. This number has increased over time with 3,735 breaches recorded in 2010. In particular, there was a significant increase (74 per cent) in the number of recorded breaches between 2006 and 2007.

This trend is likely to be influenced by the increased use of liquor bans by territorial authorities over the years, particularly since the LGA was amended (Webb et al., 2004). For example, in 2008, Papakura District Council introduced over 150 new liquor bans within its district. Similarly, in 2009 Auckland City Council adopted a city-wide approach to liquor bans including all day bans (i.e. 24/7) for shopping and business areas and car parks, and night-time bans for all parks and reserves.

Geographic variation

Table 5.3.2 indicates that there is significant variation in the number of recorded offences between the three districts, with Waitemata consistently recording the lowest numbers of offences. There is also variation between the different Police areas within each of the districts. Figure 5.3.1 shows the number of recorded offences for breach of a liquor ban for the 2010 calendar year, by Police area.

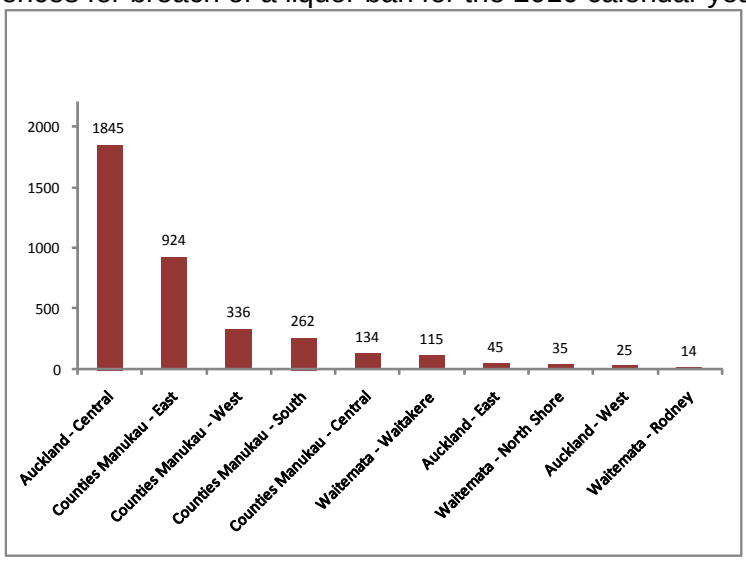


Figure 5.3.1 Number of recorded offences for breach of liquor ban, by Police area, for the 2010 calendar year

Source: NZ Police

The graph shows that in 2010, 1,845 liquor ban breaches were recorded in the Auckland City: Central Area, representing almost half (49 percent) of all recorded breaches across the region. The Counties-Manukau: East Area recorded the second highest number of breaches at 924 (25 percent of all recorded breaches).

The Rodney Area recorded the lowest number of breaches at 14 offences. However, this area has less liquor bans than other Police areas across the region, with approximately 22 operative liquor bans (based on the former Rodney District Council boundary). By comparison, the former Auckland

City Council area (which encompasses the Auckland City: Central, West and East Police areas) has over 900 liquor bans in operation.

Enforcement

Whilst numbers of recorded breaches provide an indication of the prevalence of public drinking, it is important to note that differences in enforcement and the ability for Police to use their discretion significantly limits the reliability of this data for measuring the effect of liquor bans, at least as an independent measure. As the enforcement of liquor bans is one of many policing activities, the level of enforcement will be influenced by a variety of factors such as other operational demands.

Feedback from the Police indicates that the main way liquor ban breaches are detected is through proactive policing. This generally includes patrols of liquor ban areas, particularly those known to be trouble spots. The public also play a role by alerting the Police to areas where there are persistent breaches.

Incidental policing (i.e. where a breach is detected in the course of other Police work) plays a very minor role in encountering breaches. For example, responses from both the Counties-Manukau South and North Shore Police areas indicate that incidental encounters play no role in the identification of liquor ban breaches.

It should be noted that the three categories of action are not mutually exclusive. For example, complaints from the public are significant to identifying key trouble spots for more regular attention.

Discretion

As outlined above, the Police frequently exercise discretion in enforcing liquor bans. Once a breach is detected, Police actions can be broadly classified as follows:

- issue of warning with no further action
- take into custody but released without charge
- taken into custody and charged.

Feedback received through the questionnaire indicates that the majority of detected breaches are addressed under the first two categories, both of which involve the use of discretion. Warnings are generally issued when people comply (such as being asked to tip out their liquor and leave the area). The test for more serious action is whether there is likelihood of violence, aggression or disorder, as shown by the person's demeanour. Repeat offences also result in more serious action.

Most questionnaire responses estimate that offenders are taken into custody and formally charged only about 10 – 15 per cent of the time. For Auckland City: Central Area, which had the highest number of offences recorded in 2010, and Counties-Manukau: East Area, which had the second highest, the responses indicate that formal charges represent 10 per cent of detected breaches. The Rodney Area had the lowest level of recorded offences for 2010 at 14, but the responses indicate that approximately 60 per cent of detected breaches are dealt with by taking the offender into custody and charging them.

Whilst these responses are estimates only, they indicate that the quantitative data showing the number of recorded breaches represents only a small portion of the total number of actual breaches occurring across the region.

Offence location

Feedback from the Police indicates that liquor ban hot spots (i.e. those areas that are frequently breached) tend to be in the vicinity of on-licence and off-licence premises, mainly bars and nightclubs, including surrounding carparks. Some beaches are also problematic but have responded well to proactive policing.

Table 5.3.3 shows the key "hot spots" for liquor ban breaches based on geographic analysis of the breach data over the 2010 calendar year.

Table 5.3.3 Liquor ban hot spots identified through quantitative data

Waitemata	Auckland City	Counties-Manukau
• No strong 'hot spots' but highest numbers of breaches recorded in Glen Mall, Glen Eden	The top five hotspots are all streets in Auckland Central: • Queen Street • Karangahape Road • Galatos Street • Fort Street • East Street	• Bairds Road, Otara • Fair Mall, Otara • Great South Road, Papakura • Maraetai Coast Road, Maraetai

Source: NZ Police

Figures 5.3.2 and 5.3.3 below provide an indication of the level of offending that occurs within the Auckland CBD and the Karangahape Road (K Road) areas.

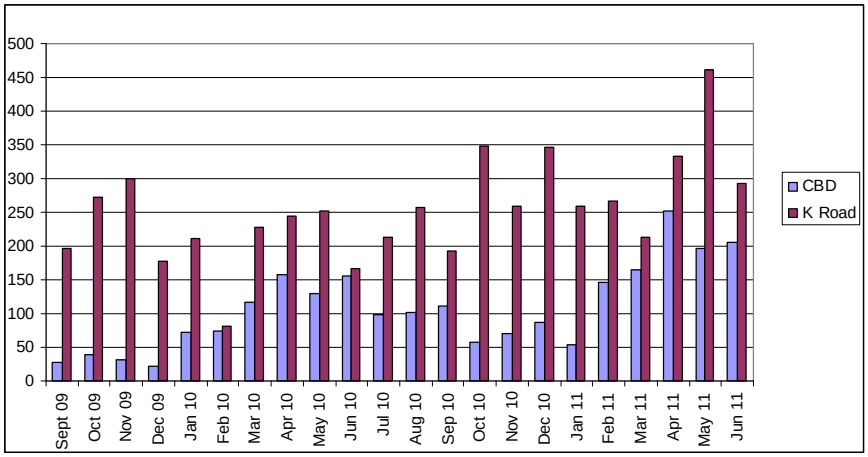


Figure 5.3.2 Number of breach of liquor ban incidents recorded by Council contractors as part of City Watch Patrols, by month of year (September 2009 to June 2011)

Source: Internal Council data

Note: Between September 2009 and December 2009, the supplier for the City Watch Patrol changed. In March 2010, the number of staff undertaking the patrol increased.

Figure 5.3.2 shows the number of breach of liquor ban incidents recorded by Council contractors as part of the City Watch Patrol for each month between September 2009 and June 2011. City Watch staff do not have enforcement powers. However, when breaches are detected the incident is recorded and offenders are advised that they are breaching a liquor ban. In some instances, the Police are notified.

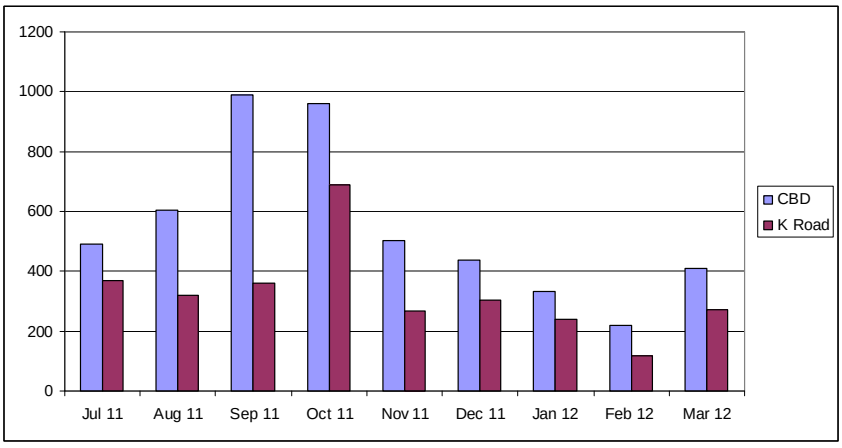


Figure 5.3.3 Number of people warned for breaching a liquor ban as part of City Watch Patrol, by month of year (July 2011 to March 2012)

Figure 5.3.3 shows the number of people warned for breaching a liquor ban (rather than the number of incidents) as part of Council's City Watch Patrol.

Taken together with the number of breaches recorded by Police, these figures demonstrate that the level of offending within the inner city is high. This data also emphasises that the effectiveness of liquor bans depends on the ability of the Police to enforce them.

Offence times

The questionnaire asked Police whether there are any links between the above location types and the time that breaches usually occur. Responses indicate that specific times associated with each type of location are difficult to specify, however officers have identified the following key points from the responses:

- in urban areas, offending tends to occur in the vicinity of bars, nightclubs and other liquor outlets at times when these are in operation
- for beaches and parks, problems tend to occur more in daylight hours, particularly in the summer months. However, offending also occurs in these places (though less so the beaches) into evening and night, peaking from 8pm to 3am. The proximity of nearby liquor outlets also increases the risk
- for all areas, the availability of seating, lighting and shelter creates further likelihood for offending.

Figure 5.3.4 shows the number of liquor ban breaches for all liquor ban types recorded for the 2010 calendar year, by day of week. It shows that most offences occur from Thursday through to Sunday, and particularly Friday and Saturday.

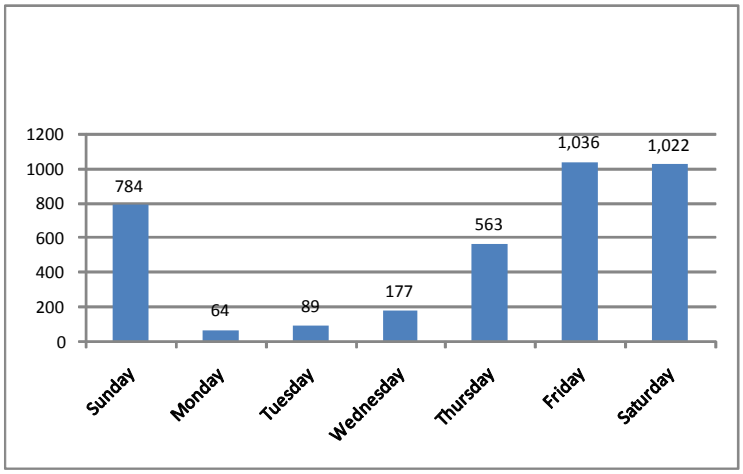


Figure 5.3.4 Number of liquor ban breaches recorded for the 2010 calendar year, by day of week

Source: NZ Police

Figure 5.3.5 below, shows the time of day that liquor ban breaches most frequently occur. It shows a peak of breaches between midnight and 12.59am and a general increase between 9pm and 2.59am.

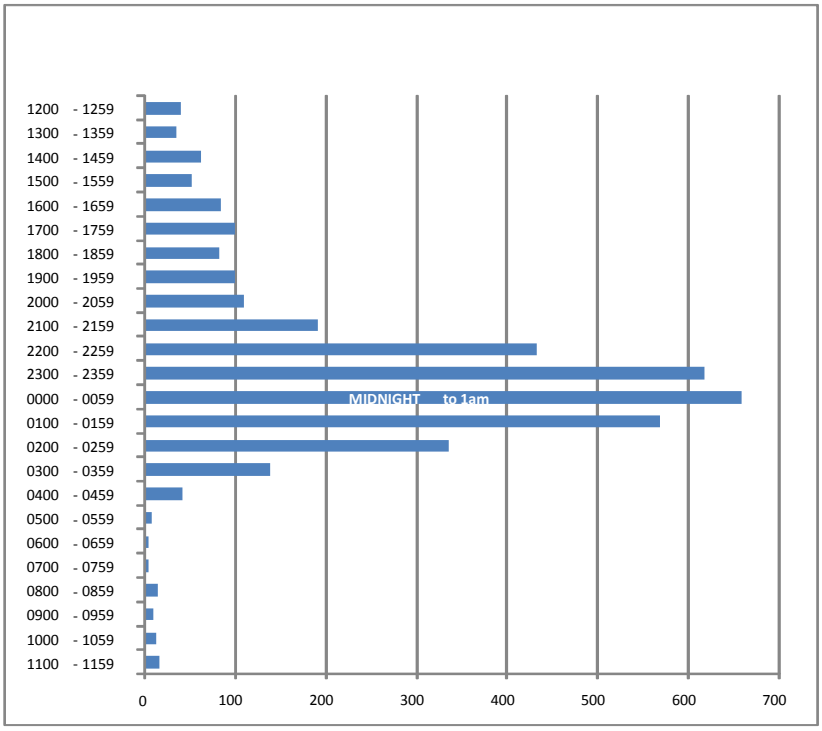


Figure 5.3.5 Number of liquor ban breaches recorded for the 2010 calendar year, by time of day

Source: NZ Police

Sex and age

During the 2006 – 2010 calendar years, more than three quarters (84 per cent) of liquor ban breaches were committed by males.

Figure 5.3.6 below, shows the age distribution for liquor ban breaches recorded for the 2006 – 2010 calendar years within the Auckland region. The inset shows the age distribution for recorded breaches for the 12 to 30 year age group.

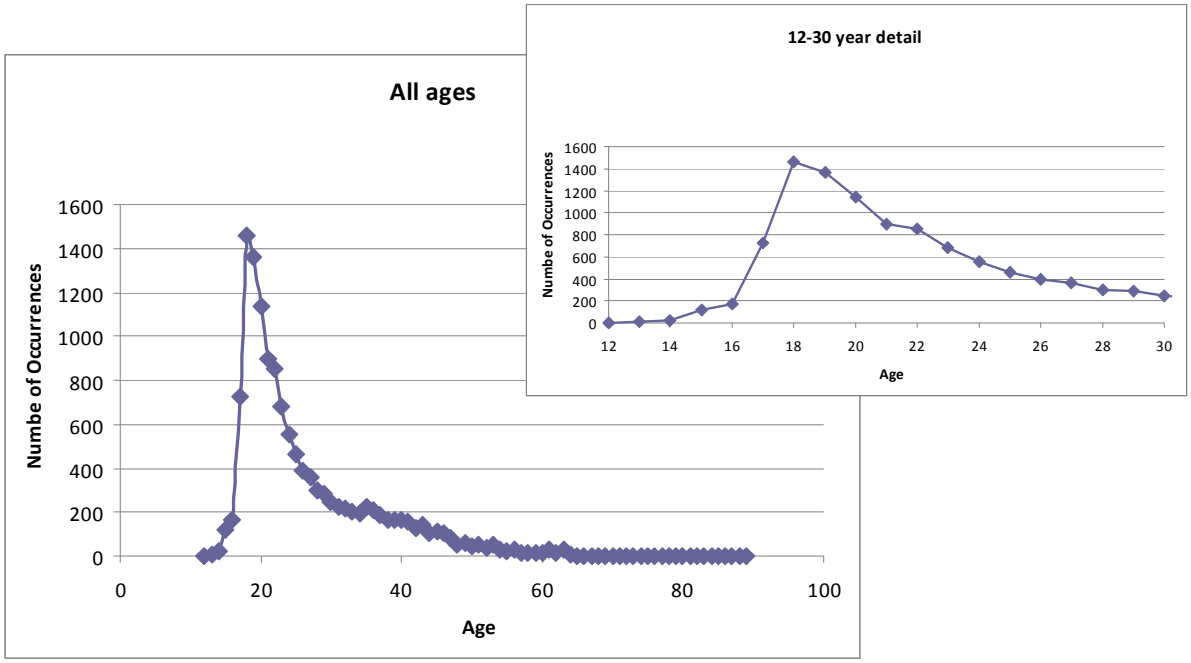


Figure 5.3.6 Age distribution for all liquor ban breaches recorded in the Auckland region, calendar years 2006 – 2010

Source: NZ Police

The figure shows offences were recorded for a range of ages, from 12 years to 89 years. It also shows a peak at the age of 18 years, with a total of 1,461 breaches over the last five years. This represents approximately 11 percent of all breaches recorded in the Auckland region during that period.

Those aged 12 – 30 represent 75 percent of all breaches. Those aged between 18 – 20 are the most frequent offenders, representing 30 percent of all recorded breaches.

Whilst the questionnaire did not directly ask about the age of those breaching liquor bans, a few comments were raised that are consistent with this pattern. For example, a comment about the Rodney area indicated that most breaches involve youth. Others noted that youth frequently breach carpark liquor bans for the purposes of pre-loading (i.e. drinking before they enter licensed premises).

5.4 Demographic information

This section summarises the demography of both Auckland's residents, and of the people who visit Auckland as tourists or holidaymakers.

5.4.1 Regional demographic profile

Population

The Auckland region is New Zealand's most populous and accounts for a third of the country's population (Statistics New Zealand, 2011). It was estimated to have reached 1,500,000 in February 2012 (Statistics New Zealand Website). At the time of the 2006 Census, Howick was the most populous (113,508) while Great Barrier the least (894).

Between 2001 and 2006, Auckland's population grew 12.4 percent. Two thirds of the population increase was from immigration. It is expected to reach 1,719,200 by 2021 (estimated using a medium projection rate) (Statistics New Zealand, 2011).

Between 2001 and 2006, Howick had the biggest population increase (20,412) while Upper Harbour had the biggest percentage population increase (33.1 percent). Great Barrier was the only board to experience a population decrease (168 or 15.8 percent).

Sex and Age

In the 2006 Census 48.7 percent of Auckland's population were male, and 51.3 percent were female (Statistics New Zealand, 2006).

The Census showed that Auckland has a relatively young population. The median age for the region is 33.9 years, compared to 35.9 years for New Zealand (Statistics New Zealand, 2006).

Auckland is over-represented in all age groups between 15 and 49 years, particularly those aged between 15 and 29 years. Approximately 22 percent of Auckland's population is aged between 15 – 29 years. Of the local boards, Mangere-Otahuhu has the youngest average age (27.4), while Great Barrier has the oldest average age (48.9).

Auckland's age profile is expected to change over the next decade, with the 65 years and over age group projected to experience the most growth.

Ethnicity

In 2006, 56.5 percent of Auckland's population was European: 18.9 percent Asian; 14.4 percent Pacific and 11.1 percent Maori (Statistics New Zealand, 2006).

Waiheke had the highest percentage of Europeans (82 percent); Papakura had the highest percentage of Maori (28.2 percent), Mangere-Otahuhu the highest percentage of Pacific Peoples (58.6 percent) and Puketapapa the highest percentage of Asians (39.9 percent).

Households and families

The average household size in Auckland was 2.9 people (Statistics New Zealand, 2006). One-family households made up 70.3 percent of all households in the region, while one-person households account for 19.6 percent. The remainder consist of households with two or more families, or other multi-person situations (e.g. flatting) (Statistics New Zealand, 2006).

Deprivation

The Deprivation Index indicates the relative social and economic wellbeing of neighbourhoods. It is calculated using Census Data including benefit dependence, income, home ownership, single parent families, unemployment, qualifications, overcrowding, access to a phone and access to a car. Every mesh block (census block) in the country is ranked from one (least deprived) to ten (most deprived).

At the time of the 2006 census, approximately 293,000 people in Auckland, including 80,000 children, were living in Deprivation Index areas nine and ten (the most deprived). This is 22 percent of the total population. Areas of high deprivation are concentrated in South Auckland (Department of Public Health)

5.4.2 Tourists and holidaymakers

Of the 1,801,248 international visitors to Auckland to the year ended December 2010; 248,737 (13.8 percent) were youth (16-24); 1,367,301 (75.9 percent) were adults and 185,210 (10.3 percent) were older adults (65 and older). Under the age of 30 years, there were more female visitors than males while between 30 and 60 male visitors predominated (International Visitor Survey Data). Please note there were a further 15,055 visitors for which there was no information.

Important markets for international tourists include Australia, Europe and China. Forty-four percent of international visitors were on holiday while one-third (33 percent) were visiting friends and relations (Ministry of Economic Development, 2011).

Of the 3,457,771 domestic visitors to Auckland to the year ended December 2010; 637,453 (16.6 percent) were youth; 2,247,507 (65 percent) were adults and 637,453 (18.4 percent) were older adults. While the gender mix of domestic visitors was evenly balanced up to 29, over this age female visitors predominate (Ministry of Economic Development, 2011). Please note there were a further 380 visitors for which there was no information.

Based on a projected increase in global international travel over the next decade, Auckland Tourism Events and Economic Development (ATEED) is expecting growth in international visitors to Auckland. By contrast, domestic tourism is expected to decline in part because of low cost international airfares (ATEED, 2011).

5.5 Health indicators

This section provides an overview of Auckland's alcohol-related health issues. Specifically, it presents data regarding alcohol-related:

- presentations at hospital emergency departments (EDs)
- chronic disease
- mental and sexual health issues.

It also provides supporting information and literature to illustrate the severity of harm on the population.

5.5.1 Background

Most of the data presented in this section was sourced from the Auckland District Health Board (ADHB), Counties-Manukau District Health Board (CMDHB) and Waitemata District Health Board (WDHB).

In 2011, the population for the ADHB area was 456,600 people. The estimated population for CMDHB, which includes portions of Auckland as well as Waikato and Hauraki district councils, was 499,900 people. The estimated population for WDHB was 545,700 people[14].

5.5.2 Alcohol and health generally

Drinking responsibly is key to reducing alcohol-related health impacts. Alcohol used in moderation, has been associated with reduced rates of certain illnesses for some groups. However, within the health sector, alcohol is seen as a major contributor to preventable diseases, injury and accident.

When alcohol is misused the resulting harms can be considerable. These harms include physical and mental health problems, injuries and death while under the influence of alcohol (including on the roads), drowning, violence (including family violence), unplanned pregnancies and foetal abnormalities (Ministry of Health, 2009).

Alcohol is medically classified as a group one carcinogen (along with tobacco and asbestos) and contributes directly to over 60 different disorders and diseases (Ministry of Health, 2009).

5.5.3 Alcohol and emergency departments in Auckland

The statistics below provide an indication of the level of alcohol-related harm, as presented in emergency departments in Auckland. However, the following must be considered when interpreting the data:

- Due to different data recording and coding practices across the three District Health Boards (DHBs) there may be some limitations in the consistency of the data.
- Diagnosis details for patients who presented at the hospital for less than three hours are not coded. These incidents are noted as '"not recorded" in this data.
- These presentations are from hospitals only and do not include accidents or injuries attended to at other facilities. (A list of the facilities and hospitals included in the data is provided in Appendix 3).
- Numbers reflect presentations to ED, not patient numbers. A patient can attend a hospital on several occasions in one year. Each incident is recorded as a new presentation.
- Each DHB serves quite different population sizes. Therefore, conclusions should not be drawn based on the difference in the number of presentations between DHBs. Moreover, the area in which a patient is treated is not always an indicator of where the patient lives. The type of care required and the facilities available also plays a significant role in determining where the patient is treated.

Further information about the data is provided in section 4 of this report.

Number of presentations

In the 2010/11 fiscal year, there were approximately 3,600 alcohol-related presentations to EDs across the Auckland region. The total number of ED presentations for the same period was 292,000. There were six recorded deaths where alcohol use was reported as the main contributing factor.

Figure 5.4.1 below shows the distribution of these presentations across the three DHBs.

[14] For geographic boundaries of each DHB please see Appendix 3.

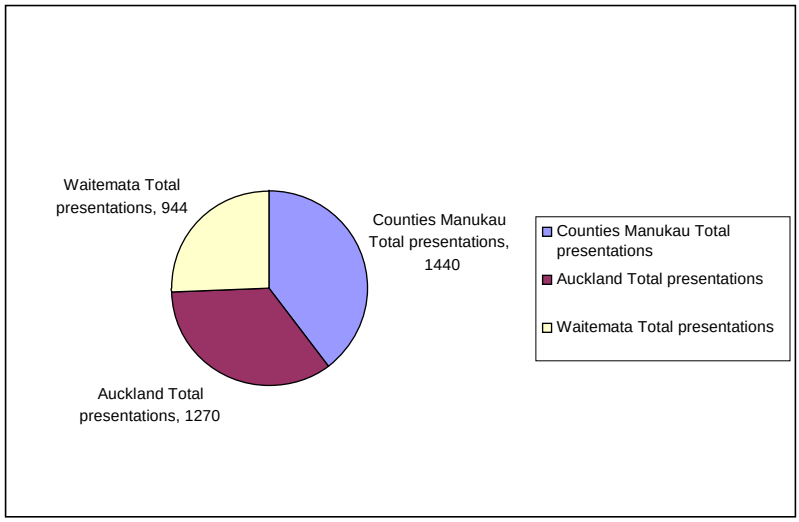


Figure 5.5.1 Number of alcohol-related presentations to ED by DHB, 2010/11 fiscal year

Source: Auckland DHBs

The figure shows that:

- WDHB had 944 alcohol-related presentations to ED (out of 97,697 general presentations)
- ADHB had 1,270 alcohol-related presentations (out of 97,855 general presentations)
- CMDHB recorded 1,440 alcohol-related presentations (out of 96, 483 general presentations).

Type of presentations

Table 5.5.1 shows the top ten diagnoses for alcohol-related presentations to ED in the Auckland region for the 2010/11 fiscal year[15]. There were also 1,614 presentations not coded into a diagnosis category (i.e. for patients that presented for less than three hours).

Table 5.5.1. Auckland region top ten alcohol-related diagnoses for ED presentations, 2010/11 fiscal year

Diagnosis Type	Description	No. of presentations
1. Intoxication	Comprised of 23 diagnosis types including intoxication, alcohol use disorders, withdrawal, dependence, poisoning and toxic effect diagnosis	882
2. General injury	Comprised of 28 injury types including hand procedures, leg, arm and other injuries to the limbs	314
3. Assorted head injuries	Includes cranial and peripheral nerve disorder, craniotomy, intracranial injury, other head injuries and skull fractures	219
4. Skin / Tissue damage / injury	Comprised of 13 different injury types including skin grafts, trauma to skin, soft tissue procedures and other connective tissue procedures	97
5. Gastro / digestive issues	Includes gastrocopy, oesophageal issues and disorders, and general digestive system diagnoses	93
6. Eyes, nose, facial injury or issue	Includes eyelid procedures, hyphema and trauma, maxillo surgery and nasal trauma and deformity	62
7. Chest Pain / trauma	Includes general chest pain and chest trauma	35
8. Syncope or fainting	Includes syncope, collapse, fainting, minor to severe	33
9. Back, neck or spine injury / issue	Includes non-surgical back, spinal and neck conditions, other back and spinal disorders, spinal fusion, back and neck sprains and dislocations / displacement	26
10. Mental health	Includes anxiety, paranoia, psych disorders, affective disorder and assorted same-day mental health treatments	26

Source: Auckland DHBs

[15] For the purposes of this report, diagnoses have been categorised into larger groups. (For further information, see section 4 of this report.)

The table shows that the most common cause for alcohol-related ED presentations during the 2010/11 fiscal year was intoxication followed by general injury.

Inpatient and outpatients

Presentations that result in the need to move the patient from an emergency ward to an inpatient ward provide an indication of the severity of the presentation. The number of inpatients recorded for alcohol-related presentations varied greatly between the DHBs, as seen in Figure 5.5.2 below.

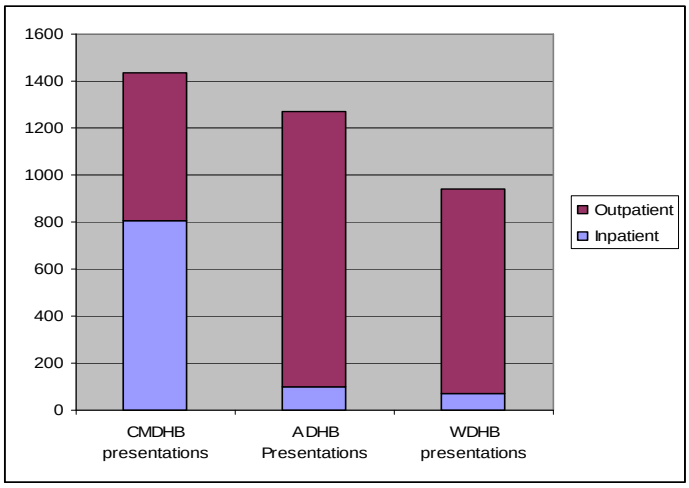


Figure 5.5.2 Comparison of inpatient and out-patient numbers for alcohol-related presentations to ED by DHB, fiscal year 2010/11

Source: Auckland DHBs

CMDHB had a significantly higher in-patient number than both ADHB and WDHB. This may indicate that the nature of the injuries presented were more severe or that there were other reasons requiring full admission. However, this may also be due to different hospital practices in the three regions.

Sex

Across the Auckland region, males accounted for well over half of the presentations to ED for the 2010/11 fiscal year. The following figure compares the number of male presentations to the number of female presentations for each DHB.

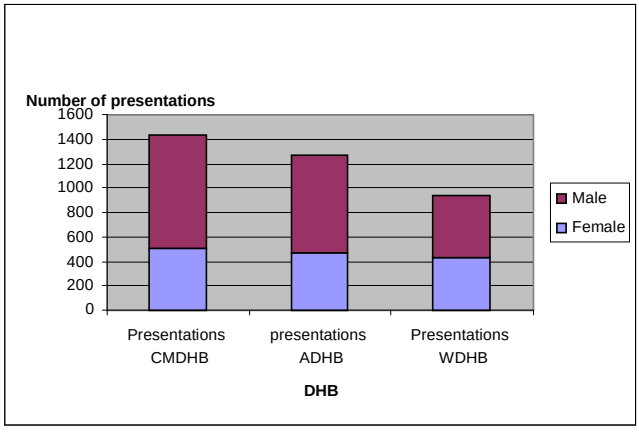


Figure 5.5.3 Number of alcohol-related presentations to ED by DHB and sex, 2010/11 fiscal year

Source: Auckland DHBs

CMDHB and ADHB had significantly more male than female presentations, whilst WDHB had almost even numbers of male and female presentations.

Age

Table 5.5.2 shows the number of alcohol-related presentations for the Auckland region by age group for the 2010/11 fiscal year, compared to the sample population (i.e. the age distribution across Auckland's general population for the same period). Of the total presentations, 42 percent were under the age of 24 years old. The 35-59 year old age bracket had the second highest recorded number of presentations.

Table 5.5.2 Number of alcohol-related presentations to ED by age across the Auckland region, 2010/11 fiscal year compared to sample population

Age group	Population by age group[16]	Proportion of total population	Number of alcohol-related presentations by age group	Proportion of presentations
0-14 years	309,800	20.85%	68	1.86%
15-24 years	226,970	15.27%	1,465	40.09%
25-34 years	224,520	15.11%	641	17.54%
35-59 years	499,070	33.59%	1,163	31.83%
60+ years	225,570	15.18%	317	8.68%
Total	**1,485,930**	**100%**	**3,654**	**100**

Source: Based on data from Statistics New Zealand and Auckland DHBs

Note: Percentages that are significantly higher than the regional the sample population are highlighted in orange.

The results show that the 15-24 years age group was over-represented in the ED data, representing only 15 percent of the total population but accounting for almost 41 percent of the region's alcohol-related ED presentations (shaded in orange).

Figure 5.5.4 below shows the age distribution of presentations by DHB for the same period.

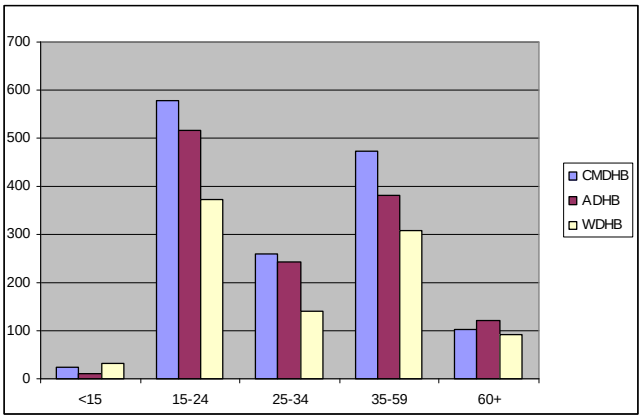


Figure 5.5.4 Number of alcohol-related presentation to ED by DHB and age group, 2010/11 fiscal year

Source: Auckland DHBs

CMDHB had the largest volume of ED presentation for the region for patients under 25 years of age (at 603). This may be influenced by the demographic profile of the Counties-Manukau area (e.g. large population of young people). However, patients do not necessarily present at an ED within their own DHB area.

Ethnicity

Table 5.5.3 below compares the four main ethnic groups represented in the alcohol-related ED presentations data to the sample population.

[16] Based on Statistics New Zealand population estimates as at 30 June 2011.

Table 5.5.3 Number of alcohol-related presentations to ED by ethnic group across the Auckland region, 2010/11 fiscal year compared to sample population

Ethnic group	Population by ethnicity	Proportion of total population	Number of alcohol-related presentations by ethnic group	Proportion of alcohol-related presentations within each ethnic group
European	698,622	64.5%	2,069	56.6%
Maori	137,136	11.1%	708	19.4%
Pacific peoples	177,933	14.4%	540	14.8%
Asian	234,219	18.9%	302	8.3%
Other	648	0.1%	35	1.0%

Source: Based on data from Statistics New Zealand and Auckland DHBs

Note: Percentages that are significantly higher than the regional the sample population are highlighted in orange. Percentages that are significantly lower are highlighted in blue.

These figures are indicative only and the following limitations should be considered:

- the sample population data is based on the former Auckland Regional Council boundary whereas the ED data is sourced from the three DHBs. There may be some discrepancies in the boundaries for data collection
- the ED data is for the period 2010/11 whereas the sample population data is based on the 2006 Census
- the DHB data records one ethnicity per presentation whereas the Census allows individuals to choose more than one ethnicity. However, given the small proportion of people that select more than one ethnicity (i.e. less than one in ten), officers have assumed that these can be taken as indicative
- for the purposes of this analysis, each "presentation" was taken to be a different individual
- officers have assumed that aggregations of ethnicity by both Statistics New Zealand and the District Health Boards are comparable.

However, the differences between the groupings are large enough to suggest it is likely that they do reflect the overall pattern. The results suggest that Maori are over-represented when compared to the sample population whereas the European and Asian ethnic groups are under-represented. presentation numbers for Pacific people appear proportionate to the sample population.

Temporal analysis

Figure 5.5.5 below shows the busiest times of the year for alcohol presentations to ED for each DHB.

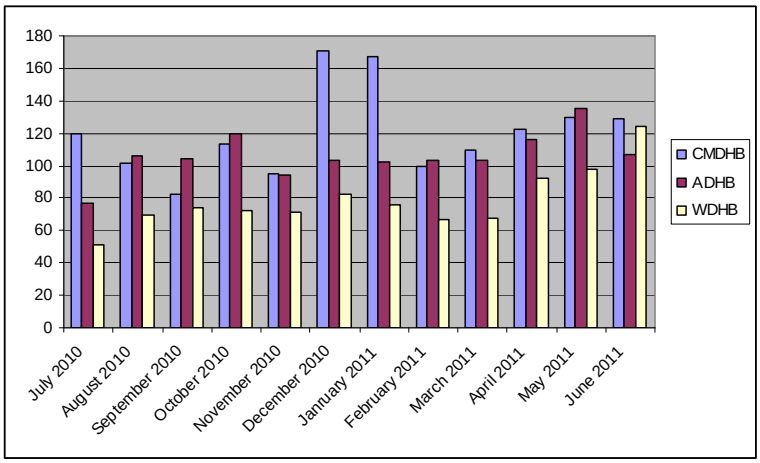


Figure 5.5.5 Number of alcohol-related presentations to ED by DHB and month, 2010/11 fiscal year

Source: Auckland DHBs

CMDHB showed a clear increase in presentation numbers during the December and January months. Presentation numbers at ADHB and WDHB were more consistent throughout the year.

Tables 5.5.4 and 5.5.5 below, illustrate the busiest times of the day and busiest days of the week for alcohol-related presentations to ED for each DHB.

Table 5.5.4 Number of alcohol-related presentations to ED by day of week for the Auckland region, 2010/11 fiscal year

	WDHB	ADHB	CMDHB	Total
Monday	84	89	89	**262**
Tuesday	89	104	127	**320**
Wednesday	92	117	122	**331**
Thursday	116	178	171	**465**
Friday	135	164	182	**481**
Saturday	232	292	349	**873**
Sunday	196	327	400	**923**

Table 5.5.5 Number of alcohol-related presentations to ED by time of day for the Auckland region, 2010/11 fiscal year

Admit Hour	WDHB	ADHB	CMDHB	Total
00:00-3:59	278	472	524	**1,274**
04:00-7:59	69	162	182	**413**
08:00-11:59	62	55	91	**208**
12:00-15:59	113	105	105	**323**
16:00-19:59	159	177	184	**520**
20:00-23:59	263	300	354	**917**

Source Auckland DHBs

All DHBs were busiest late in the evenings from 8pm, particularly on Saturday evening moving into the early hours of Sunday morning. The highest volume of admissions occurred between midnight and 4am, meaning that high attendances on Sunday are mostly due to Saturday night drinking. For example, of the 327 attendances recorded for Sunday in the ADHB area, 258 occurred before 8am.

5.5.4 Alcohol and disease

There are over 60 diseases associated with the misuse of alcohol (Ministry of Health, 2009).

Alcoholism

Alcoholism is a recognised disease that is chronic and progressive. The disease is caused by altered brain structure, environmental and genetic factors and can be treated through a range of medical and psychological interventions. Alcoholic dependency can be defined as a physical and mental dependency on alcohol, with symptoms that include a high level of tolerance to the effects of alcohol and potential withdrawal symptoms.

Alcoholism can lead to many secondary health problems including brain damage, alcoholic liver disease, psychiatric conditions and organ damage. Chronic Alcoholism causes major liver damage and a person can then develop cancer of the liver or cirrhosis.

There are no official statistics for the number of alcoholics in New Zealand. However, Alcoholics Anonymous (AA), estimates it has 4,000 members and 420 groups currently active (2011). AA state that alcohol dependency is one of the most common drug problems worldwide and one in 13 people are believed to be alcoholics.

Alcoholic liver disease

Alcoholic Liver Disease is the leading cause of death among people who drink alcohol. It contributes to up to 50 percent of the total burden of liver disease and is a factor in up to 15 percent of liver transplants worldwide (Alcohol Rehab, 2012).

Alcoholic Liver disease is preventable. It is caused directly by regular and excessive alcohol consumption and causes other secondary conditions including Steatrosis, Alcoholic Hepatitis, Liver Fibrosis and Cirrhosis. Cirrhosis is the result of Chronic Liver Disease due to Chronic Alcoholism (Cape, 1964).

Alcohol and cancer

Alcohol increases the risk of developing mouth cancer. It is the second most common cause of this disease after tobacco smoking. Excessive alcohol consumption causes heartburn, can damage the lining of the stomach and can increase the risk of stomach cancer and small intestine cancer (Cape, 1964).

5.5.5 Auckland alcohol-related chronic disease statistics

The table below shows presentations to in-patient wards for each DHB for alcohol-related chronic disease for the period 1 July 2007 to 30 January 2012. Eighteen distinct diagnoses were considered and statistics are summarised below.

Table 5.5.5 Alcohol-related chronic disease diagnosis numbers by DHB, July 2007 to January 2012[17]

Diagnosis	Total CMDHB	Total ADHB	Total WDHB	Regional Totals
Liver Cell Carcinoma	226	-	147	373
Wernicke's Encephalopathy	31	-	31	62
Niacin Deficiency [Pellagra]	38	-	-	38
Mental and behavioural disorders due to use of alcohol	66	2,187	103	2,356
Degeneration of nervous system due to alcohol	15	27	45	87
Polyneuropathy in nutritional deficiency (E40-E64+)	2	28	3	33
Oesophageal varices without mention of bleeding in diseases classified elsewhere	174	-	140	314
Alcoholic Gastritis	497	387	242	1,126
Alcoholic Fatty Liver	29	28	25	82
Alcoholic Hepatitis	141	123	119	383
Alcoholic Fibrosis and Sclerosis of Liver	3	5	1	9
Alcoholic Cirrhosis of Liver	428	541	533	1502
Alcoholic Hepatic Failure	98	146	85	329
Alcoholic liver disease, unspecified	87	91	112	290
Alcohol-induced Acute Pancreatitis	145	125	144	414
Foetal Alcohol Syndrome (dysmorphic)	12	21	4	37
Alcoholic Myopathy	-	2	-	2
Alcoholic Cardiomyopathy	-	109	-	109
Total	**1,992**	**3,820**	**1,734**	**7,546**

Source: Auckland DHBs

The table shows that there were 7,546 distinct admissions for alcohol-related chronic disease in the Auckland region during that period. The most frequently recorded chronic diseases across the region were: mental and behavioural disorders, Alcoholic Cirrhosis of the liver, and Alcoholic Gastritis. Admission numbers are likely to be for these diseases as they each constitute the beginning stages of other more severe chronic diseases that would develop over time as more alcohol is consumed.

Age

Table 5.5.6 below shows the age distribution for alcohol-related admissions from 1 July 2007 to 30 January 2012 compared to the age distribution of the sample population.

[17] Numbers include inpatient admissions only. Outpatient and primary care consultation associated with alcohol-related chronic disease are not included.

Table 5.5.6 Alcohol-related chronic disease diagnosis numbers by age for Auckland region, July 2007 – January 2012 compared to sample population

Age group	Population by age group	Proportion of total population	Number of alcohol-related chronic disease diagnoses by age group	Proportion of diagnoses
0-14 years	309,800	20.85%	25	0.33%
15-44 years	668,890	45.01%	2,095	27.76%
45-64 years	350,620	23.60%	3,869	51.27%
65-74 years	90,140	6.07%	1,041	13.80%
75+ years	66,480	4.47%	516	6.84%
Total	**1,485,930**	**100%**	**7,546**	**100%**

Source: Based on data from Statistics New Zealand and Auckland DHBs

Note: Percentages that are significantly higher than the regional percentages are highlighted in orange. Percentages that are significantly lower are highlighted in blue.

The 45-64 years age group had the greatest number of alcohol-related chronic disease admissions and was over-represented when compared to the sample population. However, this is to be expected, as many chronic diseases take years to develop.

Contrary to this, there were 25 alcohol-related admissions for the 0-14 years age group.

Sex

During the same period, there were 2,091 female admissions and 5,455 male admissions in the Auckland region.

Ethnicity

Table 5.5.7 shows the number of alcohol-related admissions for chronic disease by ethnicity for the period 1 July 2007 to 30 January 2012.

Table 5.5.7 Auckland region alcohol-related chronic disease numbers by ethnicity 2007-2012

Ethnic group	Population by ethnicity	Proportion of population within each ethnic group	Number of alcohol-related chronic disease diagnoses by ethnic group	Proportion of diagnoses within each ethnic group
European/ New Zealander	698,622	64.5%	5,018	67.2%
Māori	137,136	11.1%	943	12.6%
Pacific peoples	177,933	14.4%	642	8.6%
Asian	234,219	18.9%	786	10.5%
Middle Eastern/Latin American/African	18,555	1.5%	72	1.0%
Other ethnicity	648	0.1%	6	0.1%

Source: Based on data from Statistics New Zealand and Auckland DHBs

Note: Percentages that are significantly lower than the regional percentages are highlighted in blue.

Europeans had the greatest number of alcohol-related admissions, accounting for over 60 percent of the total. However, Europeans are the largest population group in the Auckland region.

Maori had the second highest number of alcohol-related admissions (943 admissions) but this appears to be proportionate to the sample population.

The Pacific people and Asian ethnic groups appear to be under-represented in the chronic disease data.

The limitations outlined in relation to Table 5.5.3, also apply to this data.

5.5.6 Alcohol and mental health

There are strong links between potentially hazardous drinking patterns and mental illness and suicide (Conner and Ilgen, 2001). Groups within the population that have a higher prevalence of mental illness or hazardous drinking are Maori, Pacific people, young people and people from the most deprived neighbourhoods (Mental Health Commission, 2011)

Outcomes by gender are mixed, with females having a greater rate of high or very high probability of an anxiety or depressive disorder, but males were more than twice as likely as females to have a potentially hazardous drinking pattern. DHB statistics show that there were approximately 2,350 admissions into hospital for alcohol-related mental health issues in the Auckland region between 2007-2012.

Suicide

Alcohol abuse is considered a key factor in suicide, AA estimate that alcohol consumption is linked to 80 percent of suicides and 50 percent of murders worldwide. (AA, 2011). Those who abuse alcohol are more likely to kill themselves than the general population. Evidence suggests that a high proportion of people who commit suicide are intoxicated at the time of their death (AA, 2011).

Mood disorders, anxiety disorders, eating disorders and substance use disorders were all associated with suicidal ideation, suicide plan and suicide attempt in studies completed nationally and internationally. Substance use disorders make a significant contribution to suicidal behaviour. After depression, substance use disorders (including alcohol, cannabis and other drug abuse and dependence) are the most common mental disorders associated with vulnerability to suicidal behaviour (Conner et al., 2003).

Substance use disorders were associated with about a three-fold increase in risk of suicidal ideation, suicide plan and suicide attempt, even after taking account of co-morbidity with other disorders and socio demographic correlations and ethnicity. Of individual disorders, major depressive episode had the strongest association with suicidal ideation, suicide plan and suicide attempt (Conner et al., 2003).

The suicide death rate has improved since the mid-1990s and, in 2008, was lower than it was in the mid-1980s. While New Zealand's overall suicide rate was towards the middle of OECD countries, the female youth suicide rate is higher than any other OECD country, and the male youth rate is the third highest (Conner, Beautrais and Conwell , 2003).

Officers were unable to obtain specific statistics about alcohol-related suicide in Auckland.

Substance abuse

Substance abuse can involve significant adverse consequences, including:

- repeated failure to fulfil major role obligations at work, school or home
- recurrent substance use in situations in which it is hazardous (e.g. driving or operating machinery)
- recurrent substance-related legal problems
- continued substance use despite recurrent social or interpersonal problems (e.g. arguments with spouse about consequences of intoxication or fights while intoxicated).

Alcohol and drugs can cause harm to the user through the following mechanisms:

- intoxication, dependence and toxicity (World Health Organisation, 2007).

- The types of harmful effects that may be caused by alcohol or drug use include on friendships or social life, home life, work/study/employment opportunities, financial position, legal problems, difficultly learning things and injuries (ALAC, 2006).

In 2007/08, 16 percent of New Zealand's population aged 16–64 years had experienced at least one harmful effect in the last year due to their alcohol or drug use. Males (19 percent) were significantly more likely than females (13 percent) to experience at least one harmful effect in that last year due to their alcohol or drug use (Mental Health Commission, 2011).

Younger people experienced a higher level of harmful effects in the last year (2007-2008) due to their alcohol or drug use than people in the older age groups

Mental disorder co-morbidity

People with substance use disorder commonly experience other disorders: 40 percent experienced an anxiety disorder and 29 percent experienced a mood disorder. Co-morbidity between substance use disorders was common with 45.3 percent of those with a drug use disorder also meeting criteria for alcohol abuse and 30.7 percent meeting criteria for alcohol dependence In New Zealand (ALAC, 2006).

5.5.7 Sexual Health

Alcohol consumption has a number of effects on sexual behaviour. In particular, it can suppress psychological inhibitions, increasing the desire for sex and in turn, the likelihood of risk taking behaviour (Santelli et al., 2001).

Alcohol can be associated with having more sexual partners, unprotected sex leading to higher levels of STIs (Tarpet et al., 2001), unwanted pregnancies and terminations (Naimi et al., 2003). Excessive alcohol consumption can also lead to other unwanted outcomes such as date rape or violent sexual experiences (Scott-Ham and Burton, 2005).

New Zealand currently has the third-highest teenage pregnancy rate in the OECD, with rates among young Maori and Pacific women comprising a significant component of this statistic (Statistics New Zealand, 2001). The increasing rate of adolescent abortions among young women suggests that a significant number of these pregnancies are unwanted (Singh and Darroch, 2000).

Auckland region STI statistics

Currently there is national concern about the reproductive health status of New Zealand youth. Data suggests there is a Chlamydia epidemic (particularly in the 15-19 years age group), and that rates of Gonorrhoea are also high and increasing (Ministry of Health, 2011).

In New Zealand, STIs are not notifiable, meaning surveillance efforts rely upon laboratories and clinics voluntarily providing data. Moreover, the data does not record whether alcohol was a factor. However, as outlined above the literature indicates that there is a correlation between alcohol use and STI rates.

The statistics discussed in this section are from several different sources, including sexual health clinics (SHCs), family planning clinics, student and youth health clinics and laboratories. Population and disease coverage varies with the data source (Public Health Surveillance, 2012).

Laboratories in the Auckland region from April – June 2009 tested 37,678 specimens for Chlamydia, of which 2,708 (7.2 percent) specimens tested positive from 2,562 patients. Sixty-six percent of all positive patients were aged 15 to 24 years. The highest rates of Chlamydia in both males and females were found in the 20 to 24 years age group (Institute of Environmental Science & Research Ltd, 2010).

The latest statistics for Chlamydia and Gonorrhoea in Auckland (2010) are summarised in the following table.

Table 5.5.7 STI counts from testing laboratories in Auckland area for 2011

STI	ADHB	CMDHB	WDHB	Total
Chlamydia	10,211	696	157	11,064
Gonorrhea	1,074	43	Not recorded	1,117
Total	**11,285**	**739**	**157**	**12,181**

Source: ESR

From 2009 to 2010, sexual health clinics reported a decrease in genital herpes, genital warts and n on-specific urethritis (NSU) clinic visit rates (by 2.7 percent, 15.8 percent and 4.7 percent, respectively). In contrast, the five-year trend for genital herpes, genital warts and NSU showed an increase of 37.4 percent, 1.4 percent, and 28 percent, respectively (Ministry of Health, 2011).

5.5.8 Foetal Alcohol Syndrome

Exposing the foetus to alcohol can cause birth defects known as Foetal Alcohol Syndrome (FAS). Infants with FAS are usually born small. The direct toxic effects on the developing brain and other organs result in birth defects, cognitive impairment and memory problems and secondary disabilities such as mental health disorders, educational and social failure. In serious cases a child may need medical care all their lives (Foetal Alcohol Network New Zealand).

There are no conclusive statistics regarding the prevalence of FAS in New Zealand. Estimates range from 600 to 3,000 New Zealand children being born with FAS each year (Foetal Alcohol Network New Zealand).

Between 2007 and 30 January 2012, ADHB had 23 recorded admissions of FAS, CMDHB had 12 admissions and WDHB four. However, these statistics only include hospital inpatient cases and does not include incidents of FAS identified at other medical facilities (e.g. private maternity units).

5.6 Nature and severity of alcohol-related problems

This section provides information about the nature and severity of Auckland's alcohol-related problems. In particular, it outlines information on:

- alcohol consumption behaviour
- offences under the SOLA
- drink/driving offences and alcohol-related crashes
- alcohol's role in crime, particularly violence and disorder
- the hours that public transport is unavailable to exit the CBD
- alcohol-related safety issues, including water safety and fire safety
- perceptions of alcohol-related harm.

5.6.1 Consumption of alcohol

In 2011, Auckland Council commissioned Nielsen to undertake research about alcohol consumption patterns and perceptions of alcohol-related harm. This section of the report highlights some of the key findings about the consumption of alcohol from that research.

Number of drinkers (incidence)

Around two-thirds of respondents (68 percent) drank alcohol in the month prior to the survey. The remainder were drinkers who had not drunk in the past month (15 percent) or non-drinkers (18 percent).

Frequency

"Occasional drinkers" (defined as drinking weekly or less often during the past month) represent 50 percent of surveyed drinkers. This equates to 34 percent of the total sample. The remaining 50 percent of surveyed drinkers drink regularly (i.e. every 2-6 days, 31 percent) and very regularly (i.e. at least every second day, 17 percent). Together these comprise 32 percent of the total sample.

Volume

Around half of all respondents (52 percent) and two-thirds (63 percent) of surveyed drinkers were "light drinkers", consuming one or two standard drinks on a typical drinking occasion. Twenty-one percent of respondents and 25 percent of surveyed drinkers were "medium drinkers," consuming three or four drinks on a typical drinking occasion. Nine percent of respondents and 11 percent of surveyed drinkers were "heavy drinkers" (five or more drinks).

Combining results for incidence of drinking, drinking frequency, and number of drinks consumed on a typical occasion, provides the following estimate of total drinking volume for the month prior to the survey.

Table 5.6.1 Total number of drinks consumed in month prior to survey

Total number of drinks consumed in month prior to survey	**Percent of respondents** (Base: all respondents excluding 21 who refused)
None	33%
Under 5 drinks	18%
Between 5 and 10 drinks	12%
Between 10 and 20 drinks	16%
Between 20 and 30 drinks	6%
Over 30 drinks	15%
Total	**100%**

Source: Based on Nielsen, 2011

Age and ethnic-based differences in consumption patterns

The Nielsen research showed that drinkers are not a homogenous group:

- Significantly more New Zealand European respondents (79 percent) drank alcohol in the month prior to the survey (i.e. significantly more than the average of 68 percent).
- Asian/Indian (74 percent), Maori (67 percent) and Pacific (64 percent) respondents were significantly more likely to be occasional drinkers (compared to the average 50 percent).
- Those more likely to be very regular drinkers were aged 65 and over (45 percent) or middle aged/older couples with no children at home (32 percent), compared to the average 17 percent.

Differences in consumption levels (i.e. the number of drinks consumed in a typical drinking occasion) were also evident:

- Pacific respondents (35 percent) and respondents aged 18 to 24 years (29 percent) are significantly more likely to be heavy drinkers (compared to the average of 11 percent).
- Those more likely to be light drinkers were Asian/Indian respondents 73 percent) and middle age/older couples with no children at home (73 percent).

Consumption locations

The Nielsen research found that the most common place respondents consumed alcohol was in their own home (83 percent of those who had consumed alcohol in the month prior to the survey), followed by friends' and family's houses (53 percent).

More respondents reported drinking at cafes and restaurants (40 percent) than bars and night clubs (28 percent). Very few respondents reported drinking in public places such as parks or beaches (2 percent).

5.6.2 Sale of alcohol

The sale and supply of alcohol is currently regulated by the Sale of Liquor Act 1989 (SOLA). This Act is administered by district licensing agencies (DLAs). DLAs are also responsible for enforcing the Act, in partnership with the Police.

Offences under the Act can be sanctioned through the district courts or the Liquor Licensing Authority (LLA).

A specific group of offence codes are used by the Police to record breaches of the Act. Offences address the following matters:

- breaches in operating hours
- alcohol and minors
- specific licensee or manager obligations
- unlicensed sale of alcohol.

Number of recorded apprehensions

The table below shows the number of recorded apprehensions for SOLA offences (excluding "miscellaneous liquor offences" (code 3980)) in the Auckland, Counties-Manukau and Waitemata Police districts, for calendar years 2006 to 2010.

Police employ a range of approaches in dealing with breaches, usually depending on the level of risk posed by a particular premises (New Zealand Police, 2006). Feedback from the Police indicates that a considerable proportion of breaches are dealt with through low-level educative actions (e.g. a letter, phone call or meeting with the concerned licensee and/or duty manager).

Serious and/or repeat offences are dealt with more formally, usually resulting in an application for licence suspension or cancellation being lodged with the LLA. The Police estimate that less than half of all detected breaches result in formal action. This means that the data related to recorded apprehensions provides a conservative estimate of the level of offending.

Recorded apprehensions within the miscellaneous liquor offences type are excluded from the data below, as these primarily consist of liquor ban breaches, which are instead reported in section 6.3 of this report. Miscellaneous offences account for approximately 92 percent of the total recorded SOLA offences (i.e. for the 2006 to 2010 calendar years combined).

Table 5.6.2 Recorded apprehensions for SOLA offences (excluding miscellaneous) by Police district, 2006 – 2010

Police district	2006	2007	2008	2009	2010
Auckland	64	117	104	144	91
Counties-Manukau	20	29	19	42	58
Waitemata	72	79	72	68	142
Total	**156**	**225**	**195**	**254**	**291**

Source: NZ Police

The table shows a general increase in recorded apprehensions over time. It also shows that, except in 2006, the Auckland Police District has consistently recorded the greatest number of apprehensions. This is likely to be influenced by the high number of liquor licences within the district, particularly within the CBD.

Types of offences

Figure 5.6.1 below shows the types of offences that make up the recorded apprehensions outlined in Table 5.6.1. It shows the proportion of apprehensions recorded for each offence type for the 2006 to 2010 calendar years (combined).

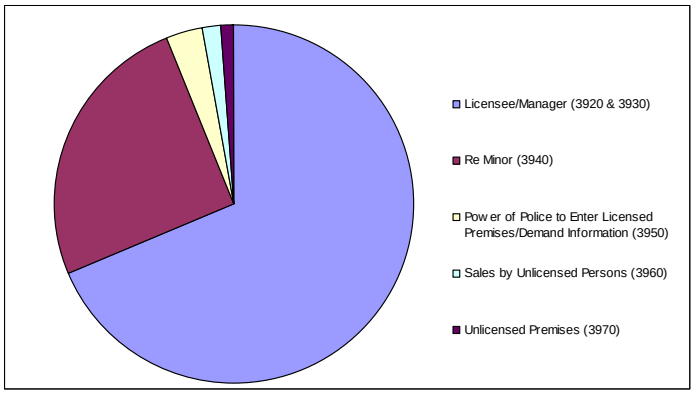


Figure 5.6.1 Number of recorded apprehensions for SOLA offences by offence type, Auckland region, 2006 to 2010 calendar years

Source: NZ Police

Apprehensions within the "licensee/manager" offence type (codes 3920 and 3930) are the most common, accounting for 68 percent of the total recorded apprehensions outlined in table 5.6.2. Offences re: minor" (code 3940) are the second most common, accounting for 25 percent of the total.

Feedback from the Police confirms this result. Survey responses indicated that the most common types of offence encountered when dealing with licensed premises are licensee/manager offences and offences involving minors.

The figure below shows the number of recorded apprehensions for these offence types across the region for calendar years 2006 to 2010.

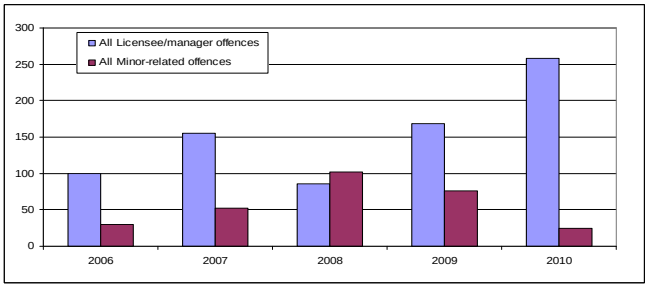


Figure 5.6.2 Recorded apprehensions for "Licensee/Manager" and "Re-Minor" Offences for Auckland region, 2006 – 2010

Source: New Zealand Police

The sections below provide further detail about the specific offences included within these two offence types.

Licensee and manager offences

Figure 6.6.3 shows that the most frequently detected offence within the licensee/manager category is allowing an intoxicated person to remain on licensed premises. For the calendar years 2006 to 2010, over 300 apprehensions were recorded across the region for this specific offence, which represents approximately 40 percent of all recorded apprehensions within the licensee/manager category. This is consistent with national data, which shows that over half of all licensee/manager offences between the 1998/99 and 2007/2008 fiscal years were recorded for the same offence (New Zealand Police, 2009).

Feedback from the Police indicates that this offence is particularly an issue with on-licences, however, the data does not differentiate between different licence types.

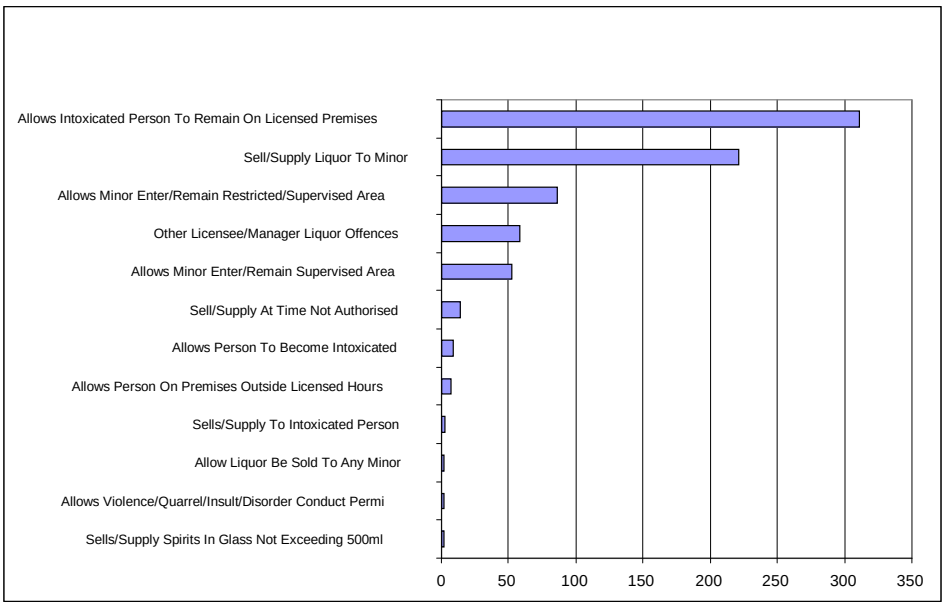


Figure 5.6.3 Recorded apprehensions for "Licensee/Manager" offences for Auckland region, 2006 – 2010 combined

Source: New Zealand Police

Offences regarding minors

Figure 5.6.4 shows the number of recorded apprehensions for offences within the Re Minor offence type for the 2006 to 2010 calendar years (combined).

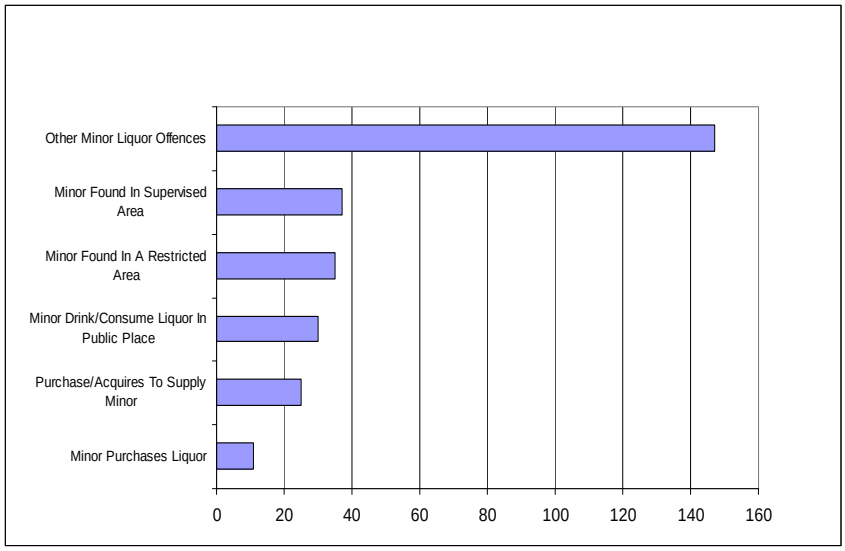


Figure 5.6.4 Recorded apprehensions for "Re Minor" offences for Auckland region, 2006 – 2010 combined

Source: New Zealand Police

More than half (51.5 percent) of the total apprehensions recorded over that time period were for "other minor liquor offences" (offence code 3949). A quarter (25.2 percent) of apprehensions were for minors being found in licensed premises (in either a supervised or restricted area).

Feedback from the Police indicates that offences involving minors tend to be more of an issue with off-licences than on-licences, and that independent bottle stores are particularly problematic. Table 5.6.3 shows that each year between the 2006 and 2009 calendar years at least five percent of off-licences across each of the three Police districts have failed controlled purchase operations (CPOs)[18]

[18] CPOs involve supervised volunteers aged between 15 and 17 years attempting to buy alcohol from licensed premises. If successful, the operator of the premises (licensee and/or manager) and staff member are liable to prosecution (ALAC,

by selling alcohol to a minor. The data also shows the proportion of on-licences that have failed CPOs, with results ranging from five percent in Auckland (2007) to 100 percent in Counties-Manukau (2007). Cells with no information indicate an absence of data.

Table 5.6.3 Percentage of licensed premises visited as part of a CPO that sold to a minor

Year	District	On-licences	Off-licences	Club licences	Special licences
2006	Auckland	33% (20/60)	17% (14/82)		
	Counties-Manukau	-	29% (15/51)		
	Waitemata	16% (6/37)	20% (5/25)		
2007	Auckland	5% (2/44)	14% (21/147)		
	Counties-Manukau	100% (1/1)	14% (19/139)		
	Waitemata	25% (7/28)	20% (32/159)	0% (0/3)	
2008	Auckland	40% (4/10)	18% (36/204)		10% (1/10)
	Counties-Manukau		12% (8/69)		
	Waitemata	57% (4/7)	3% (1/30)		
2009	Auckland	11% (1/9)	12% (19/163)		0% (0/9)
	Counties-Manukau		9% (8/85)		
	Waitemata		5% (3/57)		

Source: New Zealand Police

Note: The figures in brackets show the number of premises that sold to a minor and the total number of premises visited .

Further information about CPOs is provided in the enforcement section below. Table 5.6.4 provides information about the number of recorded CPOs for each year, and the average number of premises visited.

Enforcement

The Police and Council's licensing inspectors work in partnership to monitor Auckland's licensed premises and to enforce the requirements of the SOLA.

Feedback from the Police indicates that most breaches of the SOLA are identified through monitoring, both routine and targeted (e.g. monitoring of particular premises due to appearances in alco-link data[19]). The significant number of licensed premises across the region (see section 5.2 of this report) means Police have to prioritise their monitoring and enforcement efforts. Monitoring tends to be focused towards high-risk premises known to Police (New Zealand Police, 2006).

CPOs are important for detecting breaches. The table below shows the number of recorded CPOs for each Police district over calendar years 2006 to 2009, as well as the average number of premises visited per operation.

Table 5.6.4 Number of recorded CPOs and average number of premises visited by Police district

		Auckland	Counties-Manukau	Waitemata
2006	No. of recorded CPOs	8	6	4
	Average no. of premises visited per CPO	18	9	16
2007	No. of recorded CPOs	7	12	13
	Average no. of premises visited per CPO	27	12	15
2008	No. of recorded CPOs	8	7	4
	Average no. of premises visited per CPO	28	10	9
2009	No. of recorded CPOs	8	8	4
	Average no. of premises visited per CPO	23	11	14

Source: New Zealand Police

The DLA and its licensing inspectors also play an important role in ensuring that licensees comply with the requirements of SOLA and the conditions of their licence.

2011).

[19] Alco-link data records information about where offenders had their last drink prior to offending, and their level of intoxication. The Police were unable to release alco-link data to Council.

Where breaches are detected, inspectors are empowered to apply to the LLA for a licence to be suspended or cancelled. However, as with the Police, inspectors tend to follow an enforcement approach that corresponds with the risk that a licensee or manager poses to their patrons and to the wider community.

Feedback from the DLA indicates that overall, the majority of licensed premises in Auckland comply with the requirements of the SOLA. Accordingly, enforcement efforts are mostly focussed on high-risk premises at the highest risk times. Lower-level or first offences, are usually dealt with through an educative approach (e.g. the inspector will meet with the licensee). The filing of applications for suspension or cancellation is usually reserved for repeated or serious breaches.

The table below provides further information about the enforcement activities performed by the DLA. It outlines details about the number of inspections conducted and the enforcement approaches followed for the 2006 to 2011 calendar years.

Table 5.6.5 Enforcement data from Auckland's DLA

	2006	2007	2008	2009	2010	2011
No. of inspections conducted	6,221	6,363	6,102	6,085	6,131	6,971
No. of after-hours compliance inspections (after 6pm)	863	1004	1002	1121	1117	2450
No. of applications to suspend or cancel a licence	59	25	34	44	59	55
No. of applications to suspend a manager's certificate	45	20	25	28	44	50
No. of applications opposed	536	674	790	1,008	976	1,023
No. of interventions (meetings about a licensee's conduct)	217	359	448	443	505	165

Source: Internal Council data

A recent example of the DLA's enforcement activities is the Rugby World Cup. During the event, the DLA conducted 3,168 inspections. Of these, seven required intervention and only two involved formal action (e.g. prosecution).

Convictions for SOLA offences

Given the discretionary approach applied to enforcement, data for the number of convictions under the SOLA also provides only a conservative estimate of the level of offending.

The table below shows the number of SOLA convictions within the Auckland region, for calendar years 2005 to 2010. The numbers are relatively low, peaking at 19 convictions in 2007

Table 5.6.6 Number of SOLA convictions in Auckland region, calendar years 2005 to 2010

	2005	2006	2007	2008	2009	2010
Number of convictions under SOLA	18	9	19	5	6	7

Source: Ministry of Justice

Table 5.6.7 below shows the number of convictions by district court area. Charges are laid in the court closest to where the offence occurred.

Table 5.6.7 Number of SOLA convictions by district court, calendar years 2005 to 2010 (combined)

District court	Auckland	North Shore	Papakura	Pukekohe	Waitakere	Manukau
Number of convictions under SOLA	12	23	1	3	5	20

Source: Ministry of Justice

The figure below provides a breakdown of the number of convictions by offence type for the calendar years 2005 to 2010 (combined). The offence type for which there was the greatest number of convictions is for selling/supplying alcohol to a minor (17).

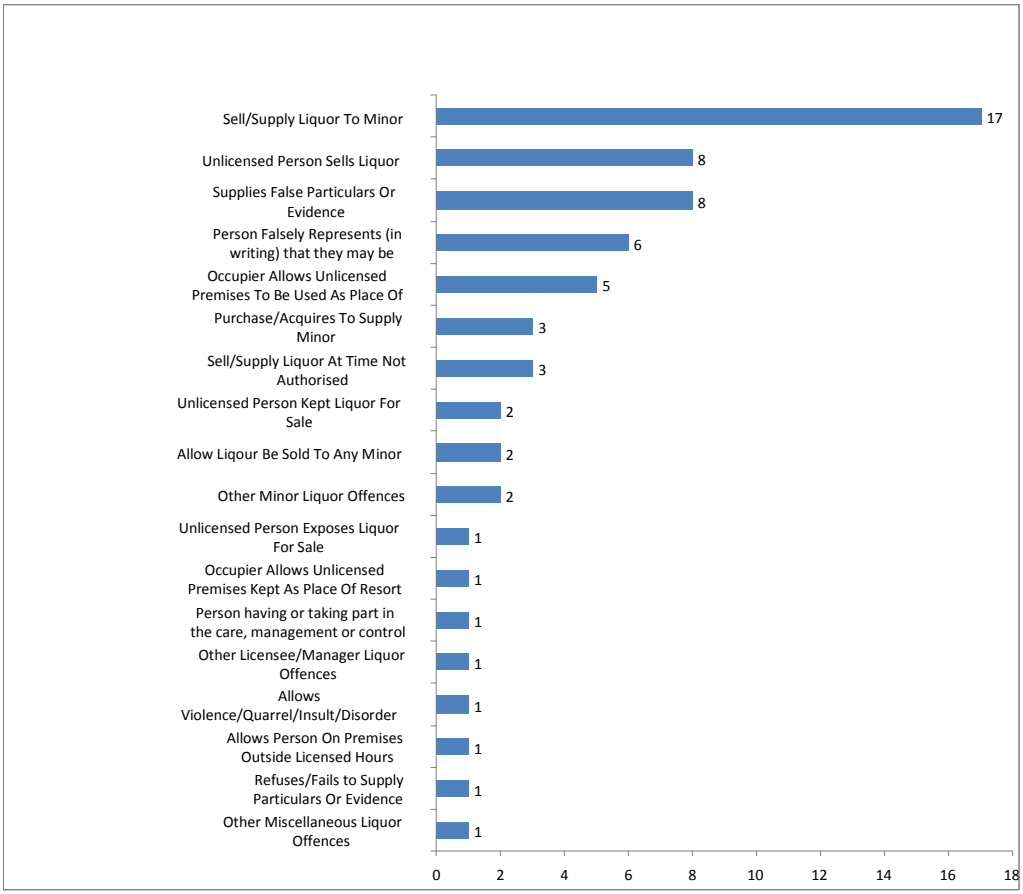


Figure 5.6.5 Number of convictions under the SOLA in the Auckland region by offence type for calendar years 2005 to 2010

Source: Ministry of Justice

5.6.3 Alcohol-related traffic issues

Alcohol-related crashes

The national road safety strategy, 'Safer Journeys 2020,' identifies alcohol and drugs as an issue of high concern for New Zealand road users.

For Auckland, between 2006 and 2010, alcohol was a factor in:

- 29 percent of fatal and serious injury crashes and 17 percent of all injury crashes on Auckland's local roads
- 26 percent of fatal and serious injury crashes and 12 percent of all injury crashes on Auckland's state highways (NZTA, 2011).

The following table provides a breakdown of the percentage of crashes where alcohol was a factor at a sub-regional level.

Table 5.6.8 Percentage of crashes where alcohol was a factor, 2006 to 2010

Area[20]	Local roads		State highways	
	Percentage of all injury crashes where alcohol was a factor	Percentage of fatal and serious crashes where alcohol was a factor	Percentage of all injury crashes where alcohol was a factor	Percentage of fatal and serious crashes where alcohol was a factor
Rural north	21%	38%	15%	25%
Urban north	15%	24%	9%	28%
Urban west	16%	27%	14%	31%
Urban central	14%	25%	11%	29%
Rural South	21%	33%	11%	12%
Urban South	21%	34%	13%	26%
Gulf Islands	44%	40%	N/A	N/A

Source: NZTA, 2011

The results show that alcohol-related crashes are generally more prevalent in Auckland's rural areas (including the Hauraki Gulf Islands).

Drink driving offences

The data presented in this section was obtained from the Police. However, the Police noted the following limitations when releasing the data:

- The data is provisional and is drawn from a dynamic operational database. Statistics from it are therefore not stable, and are subject to change.
- The data has not undergone full quality assurance processes that are applied to official statistics.

The table below shows the offender count for drink driving by Police district for calendar years 2006 to 2010. The data also includes offenders apprehended on Auckland's motorways.

Table 5.6.9 Offender count for drink/drive offences by Police district, 2006 – 2010 calendar years

Police district	2006	2007	2008	2009	2010
Auckland	3,200	3,369	3,309	2,957	2,774
Counties-Manukau	3,033	3,748	3,842	3,883	3,883
Waitemata	2,471	2,858	3,362	3,433	3,202
Motorways	477	619	1,014	930	272
Total	**9,181**	**10,594**	**11,527**	**11,203**	**10,131**

Source: New Zealand Police

With the exception of 2006, the Counties-Manukau Police District has consistently recorded the largest number of offenders, and accounts for approximately 35 percent of all recorded offenders (i.e. for 2006 to 2010 combined).

Analysis by Police area level however, shows that Auckland Central has consistently recorded the greatest number of offenders (see Figure 5.6.6 below).

[20] A map showing how the region has been divided into these areas is provided in the 2011 NZTA report.

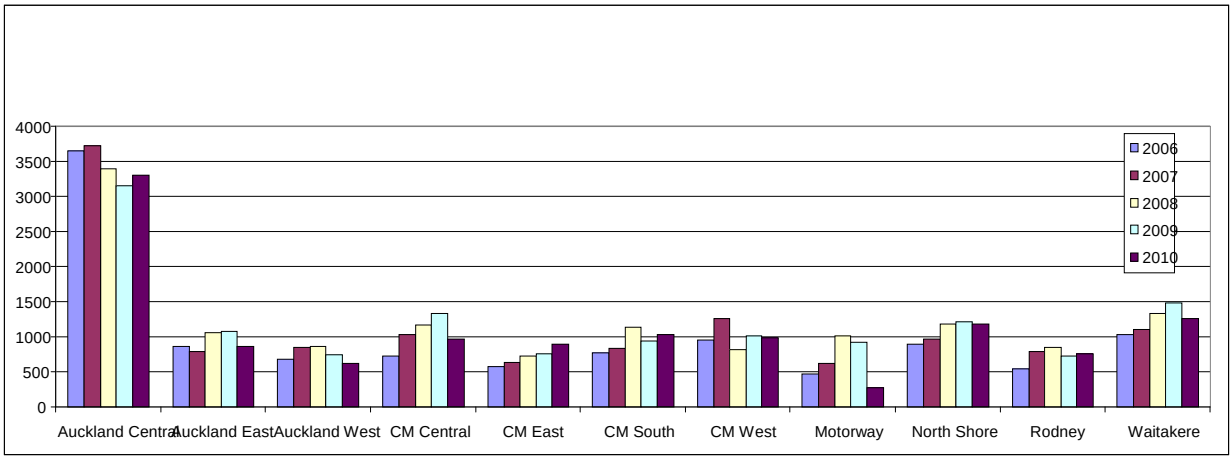


Figure 5.6.6 Offender count for drink/drive offences by Police area, 2006 – 2010 calendar years

Temporal analysis

Temporal analysis of the data for the 2010 calendar year shows that offender counts were relatively consistent throughout the year. The figure below shows a slight peak in May 2010 at 11,275 offenders.

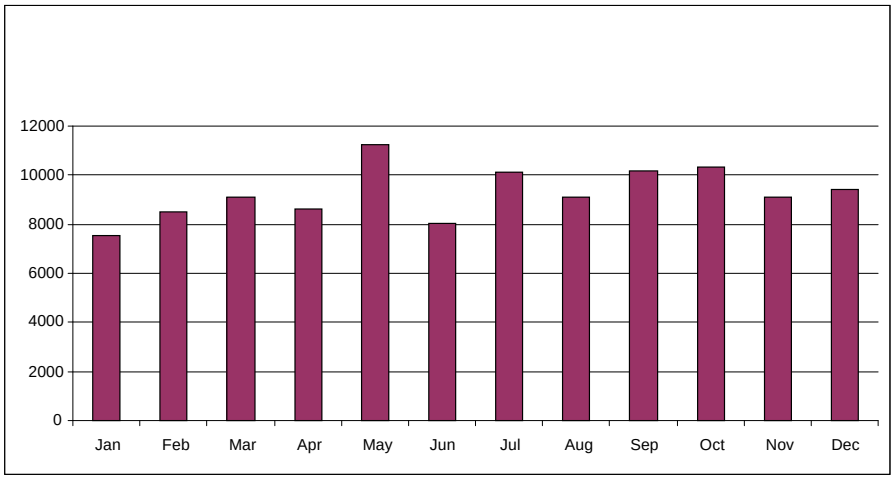


Figure 5.6.7 Offender count for drink drive offences across the Auckland region by month for the 2010 calendar year

Analysis by day of week, however, shows a clear peak in offender numbers over the weekend, particularly on Saturday. However, it is likely that the Police also increase enforcement during weekend times (e.g. compulsory breath-testing stops).

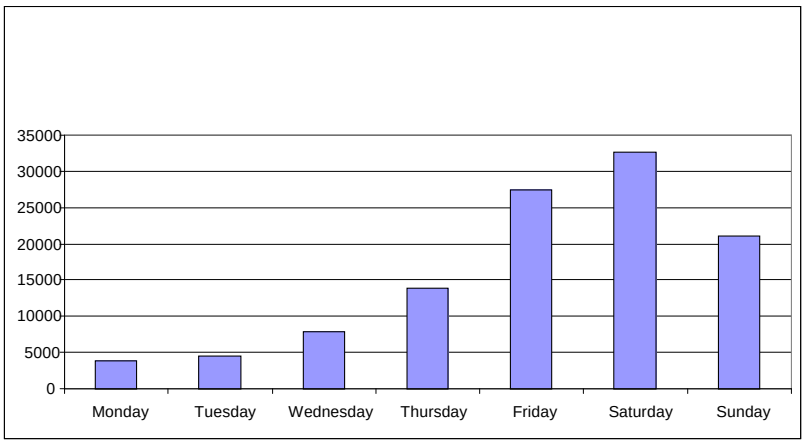


Figure 5.6.8 Offender count for drink drive offences for the Auckland region by day of week for 2010 calendar year

Moreover, the figure below shows that the majority of offences were detected:

- between 9pm (2100) and 11.59pm (2359) on Friday and Saturday nights
- between midnight (0000) and 2.59am (0259) on Saturday and Sunday mornings.

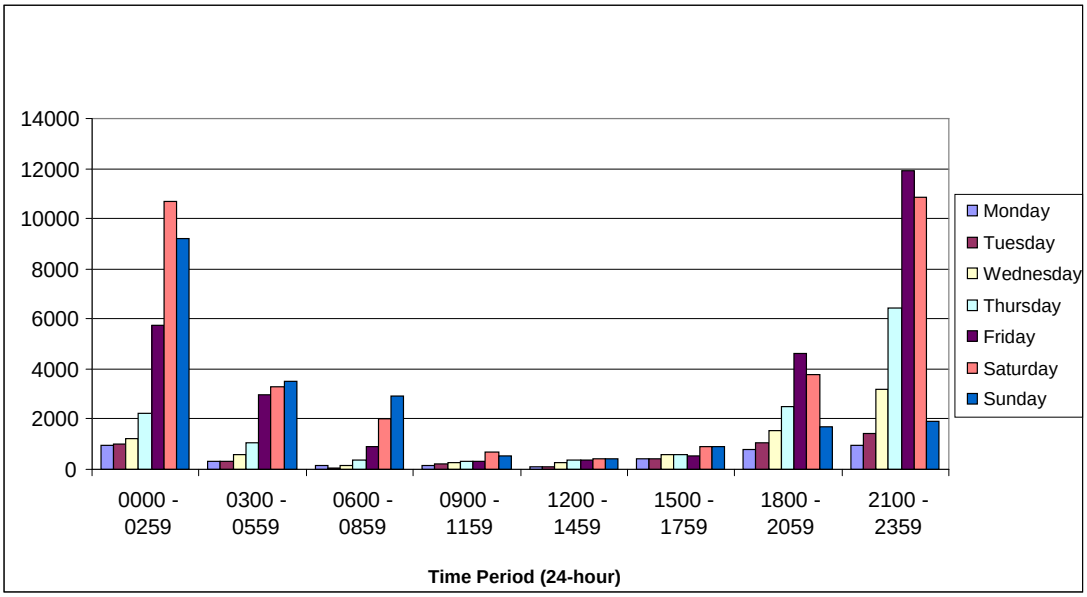


Figure 5.6.9 Offender count for drink drive offences for the Auckland region by day of week and time of day for the 2010 calendar year

Sex and age

The figure below shows the offender count for drink drive offences across the region by sex and age for the 2010 calendar year. The majority of offenders were males aged between 21 and 50 years.

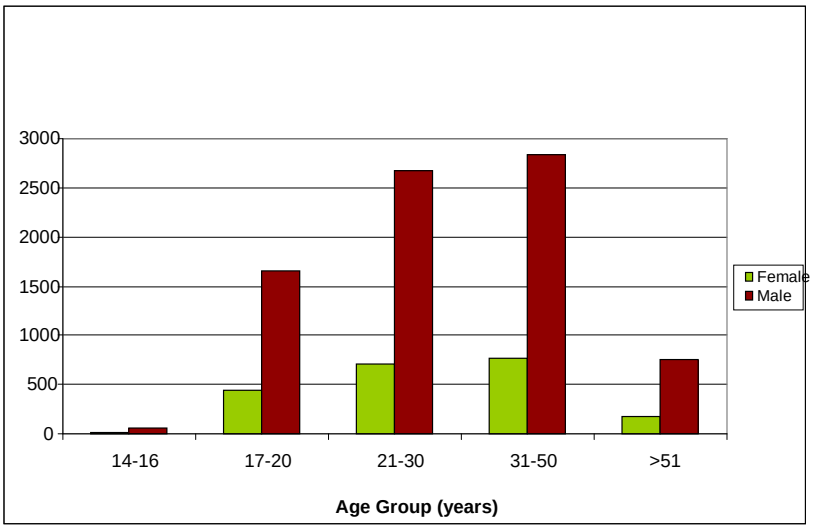


Figure 5.6.10 Offender count for drink drive offences for the Auckland region by sex and age group for the 2010 calendar year

The total distribution of offenders by age (i.e. without splitting by sex) shows that age group with the highest offender count is the 31 to 50 years group, which accounts for approximately 35 percent. However, the age groupings used by the Police for recording this data are not consistently sized. By way of comparison, combing the 17 to 20 years, and 21 to 30 years age groups shows that those aged 17 to 30 accounted for approximately 54 percent of the total offenders in 2010.

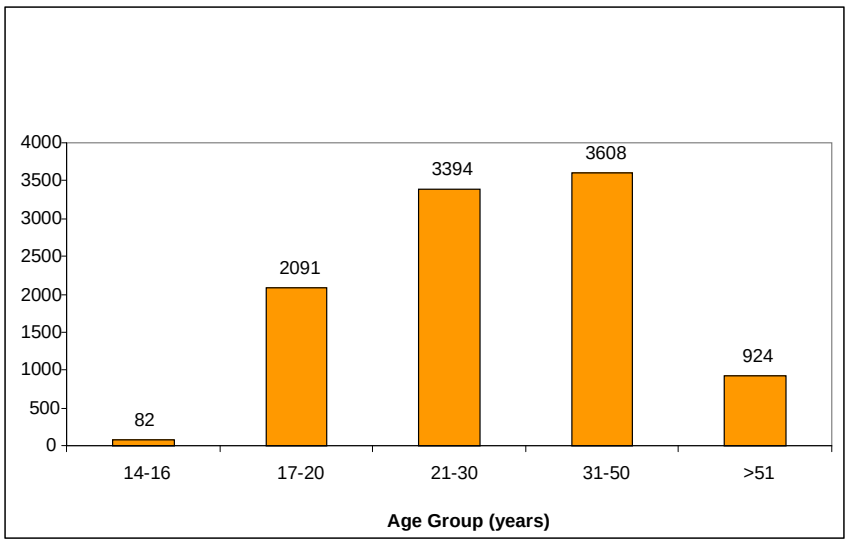


Figure 5.6.11 Offender count for drink drive offences for the Auckland region by age group for the 2010 calendar year

Drink driving convictions

The table below shows the number of convictions recorded within the Auckland region for alcohol-related offences under the Land Transport Act 1998 for calendar years 2005 to 2010.

Table 5.6.10 Number of alcohol-related convictions under the LTA within Auckland region for calendar years 2005 to 2010

	2005	2006	2007	2008	2009	2010
Alcohol-related convictions under Land Transport Act 1998	6,741	7,030	8,225	9,439	10,338	10,018

There are a range of alcohol-related offences under the Land Transport Act. The figure below shows the offences with the six largest numbers of convictions over the 2005 to 2010 period.

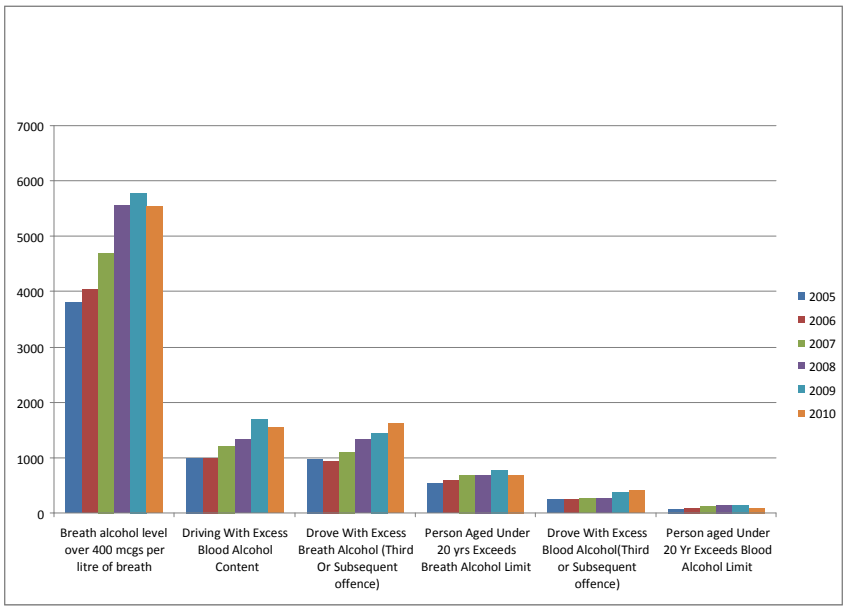


Figure 5.6.12 Most common convictions for alcohol-related offences under the LTA

Source: Ministry of Justice

5.6.4 Alcohol-related crime

Violent offending

Research shows a strong correlation between the misuse of alcohol and violent offending (Babor et al., 2009). In New Zealand, the Police are concerned that despite an overall decrease in recorded crime, the number of recorded violence offences has increased (New Zealand Police, 2009).

Many of these violence offences involve alcohol. In 2009, the Police undertook a National Alcohol Assessment, which found the following:

- During the 2007/08 fiscal year, at least 33 percent of violence offences in New Zealand were committed when the alleged offender was identified as having consumed alcohol prior to the offending.
- From 2005/06 to 2007/08, the proportion of alleged offenders where alcohol was recorded as present in a family violence incident (where violence was recorded as the most serious offence) was between 33 and 34 percent.
- Approximately half (49.5 percent) of recorded homicides involved either a suspect or victim being under the influence of alcohol at the time of the incident.

The Police also found that Saturday and Sunday have the highest numbers of recorded violence offences over the ten-year period to 2007/08. On average 37 percent of all recorded violence offences were recorded on those days. Higher numbers were also recorded for Fridays (15 percent) compared to other weekdays (11 – 13 percent).

In terms of the time that offences occur, in the 2007/08 fiscal year, the largest number of violence offences were recorded between:

- 9pm Friday and 3am Saturday
- 6pm Saturday and 3am Sunday.

The Police report that these peaks in violence-related offences correspond closely with trends in alcohol-related apprehensions (NZ Police, 2009).

The Police were unable to release specific data about the proportion of offences involving alcohol at the Auckland level. However, the above national data provides an indication of the extent of this issue for Auckland. Moreover, feedback from the Police indicates that a high proportion of offenders in Auckland are under the influence of alcohol when they commit offences such as assaults and violent attacks, sexual assaults, family violence and disorder.

The Police have also indicated that the types of alcohol-related problems encountered over the course of a typical week include:

- violence offences such as assaults, family violence and sexual assaults
- other anti-social behaviour such as wilful damage, disorder
- drink driving.

Police enforcement

Under the current law, it is not an offence to be drunk or intoxicated in a public place. However, section 36 of the Policing Act 2003 gives Police the power to intervene when someone is found in public place intoxicated to the point where they are a risk either to themselves or others. The Police may either place the person in custody or drive them home (recorded as “drunk home” or “drunk custody” events). These events are not recorded as offences, as the person is not arrested.

The Law Commission (2009) raised concerns about the extent of Police time and resources spent fulfilling this custodial role.

The following table outlines the number of drunk home and drunk custody events recorded for the 2006 to 2010 calendar years.

Table 5.6.11 Number of 'drunk home' and 'drunk custody' events by Police district, 2006 – 2010

Police district	2006	2007	2008	2009	2010
Auckland	1,742	1,951	1,922	1,923	1,819
Counties-Manukau	1,608	1,960	1,920	1,857	2,447
Waitemata	1,045	980	996	1,184	1,052
Motorways	47	32	30	26	33
Total	**4,442**	**4,923**	**4,868**	**4,990**	**5,351**

Source: NZ Police

Feedback from Police through the questionnaire confirms that this is a significant issue for Auckland.

5.6.5 Public transport availability

Feedback from the Police indicates that there are significant problems in the Waitemata area with drunk people loitering, particularly in the early hours of the morning whilst waiting for public transport. Officers have reviewed train, bus, and ferry timetables for routes departing the CBD to identify the time periods for which public transport is unavailable, both during the week and on weekends.

Officers found the following:

- Public transport hours tend to be more limited during the weekdays, finishing before 6pm for some areas and restarting between 5.30 – 6am the following day.
- Generally, there is no public transport available between 11pm and 6am.
- Apart from the Britomart to Albany bus service, which runs to 3am, no other bus services run between midnight and 5.30am.

Full results are included in Appendix 5.

5.6.6 Alcohol and safety

The impact of alcohol on perceptions of safety

Research shows the presence of alcohol or drug affected people is a common determinant of perceptions of safety (Office of Crime Statistics and Research, 2004). For example, the Quality of Life Survey 2010 found the following:

- The most commonly perceived crime issue by Auckland respondents over the 12 months prior to the survey was dangerous driving (78 percent), followed by alcohol or drugs problems (67 percent). The presence of unsafe people was the fifth most commonly perceived issue at 51 percent.
- The two most frequently mentioned reasons for respondents feeling unsafe (very unsafe or a bit unsafe) in their city centre after dark were people who feel dangerous to be around (32 percent) and alcohol and drug problems in the area (20 percent).

Alcohol and water safety issues

Current Water Safety New Zealand figures show that between 2007 and 2011, there were 121 fatal drownings in the Auckland region, with12 percent involving alcohol (Watersafe New Zealand website, retrieved 2012).

Other data suggests this percentage may be an underestimate, particularly as there are no standardised processes for data collection in New Zealand. Accordingly, several researchers state that the number of alcohol-related drownings can only be estimated within a range (Chellew et al., 2009, Driscoll et al., 2003).

Analysis of blood-alcohol concentrations (BAC) can produce relatively accurate results (Warner, 2000). However, such analysis must be conducted within 48 hours of death (e.g. to avoid contamination from alcohol naturally produced in the decomposition process). Warner et al. (2000)

reviewed New Zealand coroners' reports for drownings of persons aged 10 years and over from 1992 to 1994. Of 320 cases, BAC analysis was possible in 115 cases (36 percent). Fifty percent showed a positive result for the presence of alcohol but since it is unlikely that the cases tested represent all the cases in which alcohol was involved, Warner estimates between 30-40 percent of cases have a positive BAC.

There are indications that although heavy drinking and high BAC are implicated in drownings, relatively low levels of alcohol may also have negative effects. Connor et al. (2007) found that in the Auckland region between 1980 and 1997, 40 percent of all drownings amongst adults aged 15-64 years had a positive blood alcohol reading and 31 percent exceeded the criterion for drink driving (80mg%). They also point out that controlled studies from the US show that a BAC as low as 10mg% elevates the risk of having a boating accident.

Two groups stand out as being over-represented in drowning statistics, males, and young people (aged 15-24). Drownbase New Zealand figures for 2007-2011 show that of all drownings, victims tend to be predominantly male (75 percent). This relates to all cases of drowning, whether alcohol was involved or not.

Statistics from Drownbase cited by Purnell and McNoe (2008) show that 28 percent of drowning deaths in young adults aged 15-24 years were considered to be alcohol-related. This is around double the overall rate reported in Drownbase.

Alcohol and fire safety issues

Alcohol consumption has been linked as a contributory factor to fire. Fire fighters often attend alcohol-related crashes as well as incidents in the home caused by intoxication, and that result in death and injury.

International studies have illustrated that alcohol consumption is a contributory factor that affects the ignition of fire, responsiveness to fire, and effective escape behaviour. Canadian research established the fire mortality risk for alcoholics was 9.7 times higher than the rest of the population (Schmidt & De Lint, 1972).

Literature also indicates that deep sleep increases in the first two hours of sleep after drinking and decreased later in the night. This is an issue in terms of the correlation between deep sleep and the incidence of fire. The study found that fire fatalities peaked between midnight and 4am, which was also the time when deep sleep after drinking was most likely to occur, impacting arousal from sleep and responsiveness to the situation (Bruck, 2001).

In New Zealand, the amount of data captured regarding the role of alcohol in fire incidents is limited. However, the New Zealand Fire Service (NZFS) collects some information, and manages a database on fire fatalities. This database includes information on blood alcohol levels at the time of autopsy, and where available, any known history of alcoholism or drug taking.

The database does not capture statistics on fire-related injury due to alcohol or fatalities and injuries inflicted on third parties due to the drinking of others (e.g. children and other members of a household).

The table below shows the number of fire-related fatalities in New Zealand between 2000 and 2007, as well as the proportion of these fatalities that relate to alcohol consumption. More recent data was not available.

Table 5.6.12 Incidence of alcohol related fatalities nationally, 2000-2007

	2000	2001	2002	2003	2004	2005	2006	2007
Number of fire-related fatalities	15	16	26	26	20	16	16	15
Incidence of alcohol-related fatalities	40%	43.75%	46.15%	50%	25%	31.25%	31.25%	26.67%

The data shows that between 2000 and 2003, almost half of the fatalities recorded were alcohol-related, but that prevalence has generally decreased over time. The NZFS report alcohol is a factor in fires resulting from unattended cooking and inappropriately discarded cigarettes or smoking material (Stokes et al., 2011).

The NZFS recorded a total of 35 fire fatalities in Auckland between January 2000 and December 2008. Of these fatalities, eight were alcohol-related (approximately 23 percent). Feedback from the NZFS indicates that generally the proportion of fire-related fatalities in Auckland is lower than elsewhere in the country as the highly urbanised environment allows for earlier detection. However, this data relates only to fatalities and does not give an indication of the prevalence of alcohol as a factor in fire ignition.

5.6.7 Perceptions of alcohol-related harm in Auckland

The main purpose of the Nielsen research, outlined in section 5 of this report, was to investigate community perceptions of alcohol-related harm in Auckland.

Extent and scope of negative perceptions

The research found that two-thirds of respondents (66 percent) considered "the overall impact of drinking on life in Auckland" is negative (compared with 13 percent saying it is positive). Respondents agreed that:

- excessive drinking has a negative impact on individuals and families (92 percent)
- there is a problem with youth and drinking in Auckland (85 percent)
- drunk driving has a very negative impact on the community (89 percent)
- drinking has wider economic costs to society via spending on ACC, police and hospitals etc (84 percent)
- violence, assaults and fighting usually involves drunk people (82 percent).

Respondents considered the following should be responsible for addressing some of these alcohol-related harms:

- Police (74 percent)
- family members (68 percent)
- Auckland Council (66 percent)
- individuals/drinkers themselves (66 percent).

This indicates that not only are regulatory approaches important, but that Council should continue to address the wider issues associated with alcohol misuse through its non-regulatory functions, including the promotion of greater individual accountability.

Locations of perceived harm

The main venues where negative impacts of alcohol are perceived to occur include parks and public places (64 percent), bars and nightclubs (58 percent) and at public events (15 percent). The qualitative findings indicated that participants also associate alcohol-related harm with the inner city/CBD streets and car parks. Participants reported feeling intimidated by the atmosphere in the CBD late at night (e.g. because of drunk people wandering the streets, fights, brawls and verbal abuse).

Geographically, negative impacts are perceived to be higher in:

- south Auckland (74 percent)
- the CBD (66 percent)
- west Auckland (55 percent).

Perceptions about on-licences and club licences

Respondents were less likely to associate café's and restaurants with the negative impacts of alcohol; 15 percent perceived that negative impacts of drinking occur at cafes and restaurants but 20 percent considered that cafes and restaurants have no negative impact at all. This is consistent with the qualitative findings, which indicate that cafés and restaurants are highly acceptable and popular venues. Moreover, the research found that drinking generally is regarded as acceptable when associated with food.

Fifty-eight percent of respondents considered that the total number of drinking places (i.e. on and club licences) in their neighbourhood is about right. Twenty-eight percent considered the number is too high, and seven percent considered the number is too low.

Perceptions about off-licences

In terms of purchase locations (off-licences), the qualitative research indicated that supermarkets are highly popular and are valued for their convenience. Most participants tended not to associate supermarkets with alcohol-related harm and considered them unlikely to sell alcohol to minors. However, those participants that showed more concern about alcohol-related harm generally expressed concern about the low prices of alcohol at supermarkets.

The purchase locations most associated with harm through the qualitative research were the small stand-alone bottle stores and suburban grocery-type stores. Whilst these types of outlets were valued for their convenience, many participants considered that the risk of selling to minors is much higher with these types of premises.

Half of the respondents (49 percent) think that there are too many places to purchase alcohol in their neighbourhood (compared to 43 percent who considered the number of outlets was about right). Only six percent of respondents considered that the number of outlets is too low.

Positive perceptions of drinking in Auckland

Although the main purpose of the Nielsen research was to investigate perceptions of alcohol-related harm in Auckland, the research also covered the perceived benefits of alcohol.

Participants in the qualitative phase of the research identified a range of alcohol-related benefits, which appeared to underpin their drinking behaviour and views about the role of alcohol in personal and social settings. The most commonly perceived benefits can be categorised as follows:

- personal benefits, including both physical and emotional responses to alcohol
- social benefits (e.g. the role of drinking at social gatherings).

The quantitative research found that:

- 45 percent of respondents agreed that the support given to community and sporting groups through grants and funding from the alcohol industry is positive (23 percent disagreed)
- 45 percent agreed that having a drink enhances the experience of eating out (28 percent disagreed)
- 38 percent agreed that pubs, bars and clubs play a role in bringing communities together (29 percent disagreed).

The research also found that respondents' drinking behaviours tended to influence attitudes to the positive and negative impacts of alcohol. Respondents who had a drink in the month prior to the survey, regular drinkers and very regular drinkers were more likely to agree with a range of positive statements.

6. SUMMARY AND CONCLUSIONS

This section further discusses the results presented in section 5 of the report and compares the findings across the different data sets.

6.1 Overview

The results and findings confirm that there is a wide range of alcohol-related issues in Auckland and that Auckland Council faces a significant challenge in reducing alcohol-related harm for its communities.

The issues identified include:

- patterns of heavy alcohol consumption, particularly among youth
- acute and chronic health problems
- safety concerns such as high proportions of alcohol-related traffic accidents, water and fire safety issues and diminished perceptions of safety
- incidents of anti-social behaviour (including large numbers of liquor ban breaches)
- other alcohol-related criminal issues such as alcohol-related violent offending
- compliance issues regarding the sale of alcohol.

6.2 Key themes

Despite the breadth of these issues, the research identified some common themes. These are summarised below.

6.2.1 Perceptions of alcohol-related harm

Auckland's communities are becoming increasingly aware of Auckland's alcohol-related issues. The Nielsen research for example, showed that two-thirds of respondents agreed the overall affect of alcohol on life in Auckland is negative. Respondents appeared also to recognise that the misuse of alcohol not only causes harm at the individual level, but that it can also affect the wider community.

6.2.2 Temporal data

The results show that alcohol-related issues are more prevalent during the weekends, particularly during the hours of Friday night/Saturday morning and Saturday night/Sunday morning. Specifically, the data shows that in Auckland for the periods studied:

- liquor ban breaches were most frequently recorded during weekends, and in particular between the hours of midnight and 3am on Friday and Saturday nights
- alcohol-related ED presentation numbers were highest on weekends, particularly Friday and Saturday nights. The largest volume of presentations were recorded between the hours of midnight and 4am
- recorded apprehensions for drink driving were most common between the hours of 9pm and midnight on Friday and Saturday nights, and midnight and 3am on Saturday and Sunday mornings.

Moreover, the Police National Alcohol Assessment found that nationally, violent offending is most prevalent between the hours of 9pm Friday to 3am Saturday, and 6pm Saturday to 3am Sunday (NZ Police, 2009).

Unfortunately, temporal data regarding SOLA offences was not available within the project timeframes. As the project progresses further, it may be useful to compare such data with the above findings to understand whether compliance issues are contributing to the convergence of

alcohol-related issues during these weekend times. However, officers acknowledge that pre-loading behaviour is also prevalent in Auckland and that by definition this occurs in areas that are largely outside of the control of licensees.

6.2.3 Population groups

Young people and males were over-represented in many of the data sets:

- the most common offender age for liquor ban breaches was between 18 and 20 years old. Offenders were also typically male
- those aged under 24 years accounted for the most presentations to ED. Presentations were also most commonly by males
- drink driving statistics were higher among 17 to 30 year olds and males.

6.3 Other findings

Officers also found a significant amount of local variation across the region, specifically in terms of local licensing environments (i.e. the number, density and type of licences within each local board area), the nature and severity of the alcohol-related issues experienced and perceptions of alcohol-related harm.

For example, both central and south Auckland experienced greater levels of harm when measured against a range of indicators.

Auckland central, and particularly the Waitemata Local Board area is host to a significant proportion of Auckland's drinking activity. It has the largest concentration of licensed premises across the region. Feedback from the Police indicates that there are significant problems in the Waitemata area with drunk people loitering, particularly in the early hours of the morning whilst waiting for public transport. In line with this, officers found that greater numbers of liquor ban breaches and drunk home and drunk custody incidents were recorded for the Auckland central area. Police feedback suggests that these issues are most prevalent in the vicinity of licensed premises.

Large numbers of liquor ban breaches, drunk home/drunk custody incidents and drink driving incidents were also recorded in the Counties-Manukau Police District. Officers also found that the Counties-Manukau District Health Board area experienced a large number of alcohol-related presentations to emergency departments. Whilst this may not be a reflection on the Counties-Manukau population (as patients do not always present at the hospital closest to where they live), it does indicate that a significant proportion of resources are spent on addressing alcohol-related issues in this area.

Further detail about these differences will be provided as part of the local board summaries that are being developed to complement this report.

6.4 Conclusion

Whilst many of the issues identified in this report cannot be directly addressed through the development of a local alcohol policy (as currently drafted in the Bill), research suggests that regulating the sale and supply of alcohol can indirectly contribute to addressing such issues. Further investigation as to the merits of the different policy mechanisms will be required as part of the policy development process.

7. RECOMMENDATIONS

1. **That once the scope for local alcohol policies has been confirmed, officers begin investigating the merits of the different policy mechanisms available to Council, with particular emphasis on each mechanisms' ability to address the issues identified in this report.**

   Once the Bill is passed and the mechanisms available to Council for inclusion in a local alcohol policy have been confirmed, it will be necessary to undertake detailed analysis to determine which approaches can best address the issues identified in the report.

   The mechanisms currently proposed in the Bill include:
   - regulating the location of licensed premises (by reference to broad areas and/or in terms of to proximity to premises or facilities of particular kinds)
   - determining whether further licences should be issued across the region, or for particular parts of the region
   - maximum trading hours
   - the use of discretionary conditions
   - one-way door restrictions.

   The analysis should involve domestic and international environmental scans, as well as literature-based research. As part of this, officers should also ensure alignment with other Council projects and any relevant national strategies.

2. **That the policy development process should include a full regulatory impact assessment.**

   In addition to the research and analysis described in relation to recommendation one, officers consider that a regulatory impact assessment is necessary as part of any local alcohol policy development process. This would involve assessing the impacts of each provision proposed in the policy on key stakeholders (including the industry) and against a set of pre-determined criteria. This process would assist Council in understanding the likely outcomes of its decisions and should also help to identify any unintended consequences.

3. **That the policy development process should include extensive consultation and engagement with all relevant stakeholders including internal, external and political stakeholders.**

   Given the breadth of the issues that the local alcohol policy will need to address (whether directly or indirectly), there will be a need for a coordinated approach across Council's various alcohol-related roles (including within the CCOs). Officers will need to fully engage internal stakeholders.

   Officers will also need to engage with all external stakeholders including the New Zealand Police, social and health sector agencies, the industry, and other government agencies. To prepare for this, officers will consider various options for engagement, including the potential for an inter-agency working group. A recommended approach will be reported to the Regional Development and Operations Committee as part of a project scoping report.

   In terms of the political stakeholders, local boards will need to be heavily engaged throughout the policy development process. One of the key challenges in developing the policy will be to balance the need for regional consistency and coordination with the need to account for local variation.

   The Independent Maori Statutory Board, as well as the advisory panels should also be engaged.

4. **That the policy development process should include the development of a monitoring and evaluation framework.**

   In order to maintain the currency of the results and findings developed through this report, officers recommend that the policy development process include a monitoring and evaluation framework.

Glossary

Auckland Plan	The Auckland Plan is the overarching 30-year vision and strategy for Auckland. It will inform the long-term plan and will also give effect to other planning strategies include Area Spatial Plans and the Auckland Unitary Plan.
Blood alcohol content (BAC)	Blood alcohol content or concentration is the metric of alcohol intoxication for legal (e.g. drink driving) or medical purposes. Blood alcohol content is usually expressed as a percentage of alcohol in the blood. For instance, a BAC of 0.10 means that 0.10 percent (one tenth of one percent) of a person's blood, by volume, is alcohol.
Census Area Unit	Census area units are aggregations of mesh blocks. They are commonly known as a suburb or geographic area within a territorial authority, with a maximum population of approximately 5,000. (See also *mesh block*).
Club licence	Club licence describes a club or society that is licensed to sell and consume alcohol on its premises.
Co-morbidity	In medicine, co-morbidity is either the presence of one or more disorders (or diseases) in addition to a primary disease or disorder, or the effect of such additional disorders or diseases.
Deprivation index	Deprivation indices measure the level of deprivation in an area. The New Zealand Deprivation Index is a measure of the level of socioeconomic deprivation in small geographic areas of New Zealand (mesh blocks). It is created using Census data for the several variables for example car and telephone access, unemployment, educational qualifications etc. The index ranges from 1 to 10. A score of 1 indicates that people are living in the least deprived 10 percent (decile) of New Zealand and index 10 being the most deprived.
District Licensing Agency (DLA)	District Licensing Agencies (DLAs) are responsible administration, monitoring and enforcement of liquor licences and managers' certificates. In particular, DLAs issue liquor licences and managers' certificates when there is no opposition to the licence or certificate. For the Auckland region, Auckland Council is constituted as the Auckland DLA.
District plan	A district plan is a statutory planning document designed to manage land use and development in a particular area.
ED	Emergency department.
Endorsed off-licence	An endorsed off-licence authorises a caterer to sell or supply liquor at functions or events that are not held at on or club licensed premises. (See also *on-licence, off-licence* and *club licence*).
Licensing trust	Licensing trusts are community controlled organisations that have authority to exercise control over liquor in a community. Any excess proceeds made by the Trust are put back into the community.
Liquor ban/ alcohol control	Liquor bans prohibit the consumption of liquor in certain public places. Liquor bans are created by local authorities, and enforced by the Police. The terms alcohol control and liquor ban are interchangeable.
Liquor Licensing Authority (LLA)	The Liquor Licensing Authority (LLA) is a tribunal administered by the Ministry of Justice. The LLA determines applications relating to liquor licences and managers' certificates that have been referred to it by a district licensing agency. The LLA also determines applications for suspension and cancellation of a licence or manager's certificate.
Local board plans	Local board plans are three year planning documents specific to each of Auckland's 21 local boards.
Mesh block	A mesh block is the smallest geographic unit for which statistical data is collected and processed by Statistics New Zealand.
Off-licence	Off licences are licensed to sell or supply alcohol to the public for consumption elsewhere (e.g. bottle store, supermarket). (See also *on-licence* and *club licence*).

One-way door policy	If a one-way door policy is in place at a licensed premises, after a certain time customers can remain at the premises until they leave, but once they leave they will not be allowed to re-enter. During this period, new customers will not be able to enter the premises.
On-licence	The term on-licence describes an establishment that is licensed to sell or supply alcohol for consumption on the premises, such as a pub, bar, nightclub or café.
Pre-loading	Pre-loading involves drinking in private venues, where consumption is not regulated (e.g. at home, in a car) before visiting licensed premises.
SOLA	Sale of Liquor Act 1989.
STI	Sexually transmitted infection.
Special licence	A licence where one can sell and supply liquor on a premises or conveyance (e.g. boat, train) at an occasion or event (or series of occasions or events) and is only valid for a specific timeframe. (See also *on-licence, off-licence* and *club licence*).
Standard drink	A standard drink equals 10 grams of pure alcohol. One 330ml can of beer, a 100ml glass of table wine or a 30ml glass of straight spirits is generally regarded as a standard drink; however this is dependant on the alcohol percentage.
Unitary Plan	The Auckland Unitary Plan is the resource management plan and is the principal regulatory tool to implement the Auckland Plan.

References

Alcohol Advisory Council of New Zealand (2005) *The Way We Drink,* Alcohol Advisory Council Occasional Publication No. 27.

Alcohol Advisory Council of New Zealand (2006) *Substance Use Disorders in Te Rau Hinengaro: The New Zealand Mental Health Survey,* retrieved from: http://www.alac.org.nz/research-resources/research-publications/substance-use-disorders-te-rau-hinengaro-new-zealand-mental.

Alcohol Advisory Council of New Zealand (2008) *Briefing for Incoming Minister*, 21 November 2008, retrieved from http://www.alac.org.nz/sites/default/files/useruploads/StatementsofIntent/Briefing%20the%20Incoming%20Minister%20Nov2008.pdf.

Alcohol Rehab (2012) information retrieved from http://alcoholrehab.com/.

Alcoholics Anonymous (2011) information retrieved from http://www.aa.org.nz/.

Anderson, P. and Baumberg, B. (2006) *Alcohol in Europe: A public health perspective,* Institute of Alcohol Studies, London.

Auckland Tourism, Events and Economic Development Ltd. (2011) *Auckland Visitor Plan*, retrieved from http://www.aucklandnz.com/pdfs/AucklandVisitorPlan.pdf.

Babor, T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., Grube, J., Hill, L., Holder, H., Homel, R., Livingston, M., Osterberg, E., Rehm, J., Room, R., and Rossow, I. (2010) *Alcohol: No Ordinary Commodity - Research and Public Policy,* Oxford University Press, Oxford.

Bramley, D., Broad, J., Harris, R., Reid, P. and Jackson, R. (2003) *Differences in patterns of alcohol consumption between Maori and non-Maori in Aotearoa (New Zealand),* New Zealand Medical Journal 116(1184) retrieved from: http://www.nzma.org.nz/journal/116-1184/645/.

Bruck, D. (2001) *The Who, What, Where and Why of Waking to Fire Alarms: A Review,* Fire Safety Journal. 36. 623-639.

Cagney, P. (2006) *A healthy drinking culture: A search and review of international and New Zealand Literature,* Alcohol Advisory Council of New Zealand, Wellington.

Cameron, M., Cochrane, W., McNeill, K., Melbourne P., Morrison, S. and Robertson, N. (2009) *The impacts of liquor outlets - a review of the international academic literature and New Zealand media reports,* Population Studies Centre, University of Waikato.

Cameron, M., Cochrane, W., McNeill, K., Melbourne, P., Morrison, S. and Robertson, N. (2010) *A spatial econometric analysis of selected impacts of liquor outlet density in Manukau City*, University of Waikato, Population Studies Centre University of Waikato.

Cape, B. (1964) Bailliere's Nurses' Dictionary, Sixteenth Edition, London.

Casswell, S. and Maxwell, A. (2005) *What works to reduce alcohol-related harm and why aren't the policies more popular?* Social Policy Journal of New Zealand, 25, 118-141.

Chellew, C, Franklin, R. C. and Simmonds, E. (2009) *Swim safe, swim sober: A study examining drowning in NSW and the influence of alcohol*, Sydney: The Royal Life Saving Society Australia, NSW Branch

Chikritzhs T. and Stockwell T. (2002) *The impact of later trading hours for Australian public houses (hotels) on levels of violence, Journal of Studies on Alcohol,* 63: 591-599

Chisholm, D, Rehm, J., Van Ommeren, M, and Monteiro, M. (2003) *Reducing the Global Burden of Hazardous Alcohol Use: A Comparative Cost-Effectiveness Analysis*, World Health Organisation: Geneva.

Conner, K.R and Ilgen, M.A. (2011) *Substance use disorders and suicide behaviour*; In R.C. O'Connor, S. Platt and J. Gordon (eds.) International Handbook of Suicide Prevention: Research, Policy and Practice.

Conner, K., Beautrais, A. and Conwell, Y. (2003) Department of Psychiatry, Center for the Study and Prevention of Suicide, University of Rochester Medical Center, Rochester, New York 14642, USA. retrieved from; alcoholrehab.com/alcohol-rehab/alcoholic-liver-disease/).

Connor, J., Langley, J. and Cryer, C. (2007) *International comparison of injury deaths: Drowning,* A report to the New Zealand Injury Prevention Strategy Secretariat, retrieved from: http://www.acc.co.nz/preventing-injuries/injury-prevention-strategies/drowning-prevention-strategy/index.htm

Donnelly, N., Poynton, S., Weatherburn, D. Bamford, E. and Nottage, J. (2006). *Liquor Outlet Concentrations and Alcohol-related Neighbourhood Problems*, Alcohol Studies Bulletin. 8: 1-15.

Driscoll, T.R., Harrison, J.A. and Steenkamp, M. (2003) *Review of the role of alcohol in drowning associated with recreational aquatic activity,* Injury Prevention 10: 107-113

Environmental Institute of Science and Research Ltd (2010) *Sexually Transmitted Infections in New Zealand: Annual Surveillance Report 2010*; Porirua, New Zealand

Foetal Alcohol Network New Zealand (2011) information retrieved from: http://www.fan.org.nz/links

Fryer, K., Jones, O. and Kalafatelis, E. (2011) *ALAC Alcohol Monitor - Adults* and *Youth 2009-10 Drinking Behaviours Report*

Habgood, R., Casswell, S., Pledger, M., and Bhatta, K. (2001) *Drinking in New Zealand: National Surveys Comparison 1995 and 2000* (Alcohol and Public Health Research Unit, Auckland 2001) 23

Homel, R. (1988) *Random breath-testing in Australia: a complex deterrent,* Australian Drug and Alcohol Review (7) 231 244.

Huakau, J., Asiasiga, L., Ford, M., Pledger, M., Casswell, S., Suaalii-Sauni, T., and Lima, I. (2005) *New Zealand Pacific peoples' drinking style: too much or nothing at all?* New Zealand Medical Journal 118(1216) retrieved from: http://www.nzma.org.nz/journal/118-1216/1491/

Larsh, B. (2005) *Young People and Alcohol: Some Statistics to 2003 and 2004 on Possible Effects of Lowering the Purchase Age*, Ministry of Justice: Wellington

Livingston M., Chikritzhs, T., Room, R. (2007) *Changing the density of alcohol outlets to reduce alcohol-related problems*, Drug Alcohol Review, 26(5): 557-66

Matheson, A. (2005) *Alcohol in Auckland: Reducing Associated Harm*. Report prepared for the Auckland Regional Public Health Service.

McEwan, B., Swain, D., and Campbell, M. (2011) *Controlled intoxication: the self-monitoring of excessive alcohol use within a New Zealand tertiary student sample*, New Zealand Medical Journal 124(1336): 68-74.

McKenzie, K. and Haw, S. (2006) *Alcohol and alcohol-related problems in Scotland: Summary and 2006 update of evidence* National Health Service: Scotland.

Mental Health Commission (2011) *National indicators 201: Measuring mental health and addiction in NZ*, Wellington: New Zealand retrieved from: http://www.mhc.govt.nz/sites/mhc.govt.nz/files/National%20Indicators%20Report%20-%20Final.pdf.

Ministry of Health (2009) *Alcohol Use in New Zealand: Key results of the 2007/08 New Zealand Alcohol and Drug Use Survey.* Wellington: New Zealand pp 39-40.

Ministry of Health (2011) *Clinic surveillance of sexually transmitted infections in New Zealand.*

Ministry of Social Development (2011) *Quality of Life Auckland 2010*, retrieved from http://www.bigcities.govt.nz/pdfs/2010/Quality_of_Life_2010_Auckland.pdf.

Naimi, T.S., Lipscomb, L.E., Brewer, R.D. and Gilbert, B.C. (2003) *Binge drinking in the preconception preiod and the risk of unintended pregnancy: implications for the women and their children.* Pubmed Journal: Paediatrics 111:1136-1141.

Nielsen (2011) *Alcohol-related Harms Research* Report prepared for Auckland Council.

New Zealand Law Commission (2009) *Alcohol in Our Lives: An Issues Paper on the Reform of New Zealand's Liquor Laws,* NZLC IP15.

New Zealand Police (2009) *National Alcohol Assessment*, retrieved from http://www.police.govt.nz/sites/default/files/Police-National-Alcohol-Assessment.pdf.

New Zealand Transport Agency (2011) *Briefing notes: Crash analysis Auckland Region 2006 to 2010*, retrieved http://www.nzta.govt.nz/resources/briefing-notes-cas/docs/auckland-2011.pdf.

Office of Crime Statistics and Research (2004) *Monitoring the Adelaide Dry Area,* Report prepared for Attorney General's Department, Government of South Australia, Adelaide.

Public Health Surveillance (2012) *STI Clinic Surveillance: Quarterly Reports,* retrieved from: http://www.surv.esr.cri.nz/surveillance/NZPHSR.php.

Purnell, M. and McNoe, B. (2008) *Systematic review of drowning interventions and risk factors and an international comparison of water safety policies and programs: Report to the Accident compensation Corporation Injury Prevention Research Unit*, University of Otago. Retrieved from: http://www.acc.co.nz/preventing-injuries/injury-prevention-strategies/drowning-prevention-strategy/index.htm.

Ragnarsdóttir, P., Kjartansdóttir, A., Davíðsdóttir, S. (2002) *Effect of extended alcohol serving-hours in Reykjavík*, In R. Room (ed.) The Effects of Nordic Alcohol Policies. What happens to drinking and harm when alcohol controls change? Nordic Council for Alcohol and Drug Research, Helsinki.

Santelli, J., Robin, L., Brener, N. and Lowry, R. (2001) *Timing of alcohol and drug use and sexual risk taking behaviour among unmarried young adults.*

Schmidt, W. and De Lint, J.A. (1972) *Causes of Death in Alcoholics*, Quarterly Journal on Studies on Alcohol. 33(1): 171-185.

Scott-Ham, M. and Burton, F.C. (2005) *Toxicological findings in cases of alleged drug facilitated sexual assault in the UK over a 3 year period*, inical Forensic Medical Journal, 12: 175-786.

Sewell, K. (2002) International Alcohol Policies: *A selected Literature Review. Scottish Executive Central Research University,* Health and Community Research Programme. Research findings No. 15.

Sim, M., Morgan, E. and Batchelor, J. (2005) *The impact of enforcement on intoxication and alcohol related harm* Wellington: Accident Compensation Corporation.

Singh, S. and Darroch, J. (2000) *Adolescent pregnancy and childbearing: levels and trends in developing countries,* Family Plann Perspect 32: 14–23.

Statistics New Zealand (2001) *Teenage fertility in New Zealand,* information retrieved from: http://www.stats.govt.nz/browse_for_stats/population/births/teenage-fertility-in-nz.aspx.

Statistics New Zealand (2006) *Census of Population and Dwellings,* information retrieved from: http://www.stats.govt.nz/Census/2006CensusHomePage.aspx.

Statistics New Zealand (2011) *Sub-national Population Estimates: At 30 June 2011* retrieved 8 February 2011 from http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/subnational-population-estimates-info-releases.aspx.

Statistics New Zealand (2011) *Sub-national Population Projections: 2006 (base)–2031 update* retrieved 8 February 2011 from www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/SubnationalPopulationProjections_HOTP2031.aspx.

Stewart, L. (1997) *Approaches to preventing alcohol-related problems: the experience of New Zealand and Australia*, Drug and Alcohol Review, 16, 391-399.

Stokes, F., Molano, W., Nana, G. (2011) *Alcohol and Fire: A Strategic Review* Report prepared for the New Zealand Fire Service, retrieved from: http://www.fire.org.nz/Research/Publishsed-Reports/Documents/Report%20112%20Alcohol%20and%20fire.pdf.

Tapet, S.F., Aarons, G.A., Sedlar, G.R., Brown, S.A. (2001) *Adolescent substance use and sexual risk taking behaviour. PubMed Journal:* Adolesence Health 28: 181-189.

Trolldal, B. (2005) Availability and sales of alcohol in four Canadian provinces: a time-series analysis. Contemporary Drug Problems. 32(3): 343.

Warner, M., Smith, G.S. and Langley, J.D. (2000) *Drowning and alcohol in New Zealand: what do the coroner's files tell us?* Australian and New Zealand Journal of Public Health 24(4).

Webb, M., Marriot-Lloyd, P. and Grenfell, M. (2004) *Banning the bottle: Liquor bans in New Zealand*, Conference paper, Alice Springs, Australia.

World Health Organisation (2007) *Alcohol and injury in emergency departments* retrieved from: http://www.who.int/substance_abuse/publications/alcohol_injury_summary.pdf.

World Health Organisation (2011) *Global status report on alcohol and health*.

Appendices

1. Heat maps showing distribution of liquor licences
2. Maps showing liquor licence locations compared to deprivation
3. Information about Auckland's District Health Boards
4. Public transport analysis

Appendix 3 – Information about Auckland's District Health Boards

Table 3A – District Health Board (DHB) facilities and hospitals included in data

Counties-Manukau	Auckland	Waitemata
Middlemore Hospital	Auckland City Hospital	North Shore Hospital
Manukau Surgery Centre	Auckland City Surgical Services	Waitakere Hospital
Botany Downs Maternity Unit	Auckland Eye Hospital	Regional Alcohol and Drug Services
Papakura Maternity Unit	Auckland Hospital	
Pukekohe Hospital	Auckland Surgical Centre	
Ormiston Hospital	Avondale Resthome & Hospital	
Auckland Eye	Beechworth Home & Hospital	
MacMurray	Braemar Hamilton	
MH Crisis Respite	Buchanan Rehabilitation Centre	
Auckland City Surgical Services	Caughey Preston Rest Home	
Mercy Hospital	Eastcliffe Private Hospital	
Brightside	Elizabeth Knox Home & Hospital	
MHT	Ellerslie Gardens Retirement Home	
Eye Institute	Elmwood Private Hospital	
Eye Doctors Ltd	Epsom On The Park	
Spinal Unit	Everill Orr Rest Home	
Auckland Surgical Centre	Eye Institute	
Gillies	Fraser MacDonald Unit	
Franklin Memorial Hospital	Gillies Hospital Limited	
Endoscopy Auckland	Grace Joel Retirement Village	
Ascot	Greenlane Clinical Centre	
GP Special Interest Clinic	Jervois Private Hospital Ltd	
Tamaki Oranga	Lady Allum Village	
Southern Cross	Laparoscopy Auckland	
Ortho Interim Care	Laura Ferguson Rest Home	
Quay Park Surgery Centre	Lynton Lodge Hospital Limited	
Southern Cross North Harbour	Maygrove Rest Home	
City Eye Specialists	Meadowbank Village	
Naval Hospital	Mercy	
	Mercy Parklands Private Hospital	
	Northern Surgical Centre	
	NZ Respiratory and Sleep Institute	
	Oncology Surgery Ltd	
	Ormiston Hospital	
	Other External Facilities	
	Quay Park Surgical Centre	
	Ranfurly War Veterans Home	
	Regency Home & Hospital	
	Rehab+	
	Roskill Masonic Complex	
	Sarah Selwyn House Christs Hospital	
	Selwyn Heights Retirement Village	
	Skin Institute	
	Southern Cross Brightside	
	Southern Cross Hospital North Harbour	
	St Georges Hospital	
	St John's Hospital	
	St Margaret's Hospital	
	St Marks Road Surgical Centre	
	St. Andrews Home & Hospital	
	Starship	
	Sunset Lodge	
	Te Whetu Tawera	
	Waimarie Private Hospital	
	Wakefield Hospital	
	Warrengate Private Hospital Ltd	
	Wesley Village	

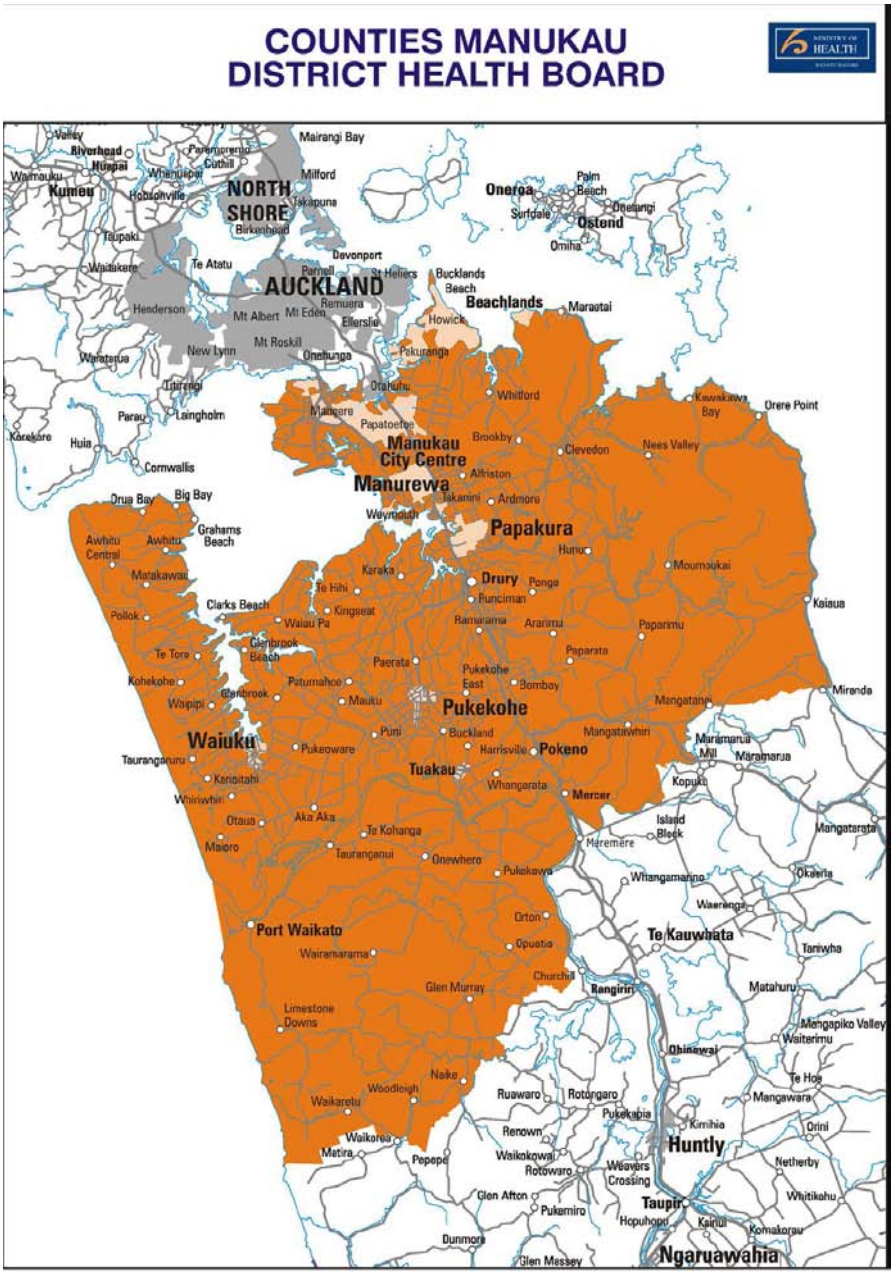


Figure 3A Boundary map of Counties-Manukau DHB

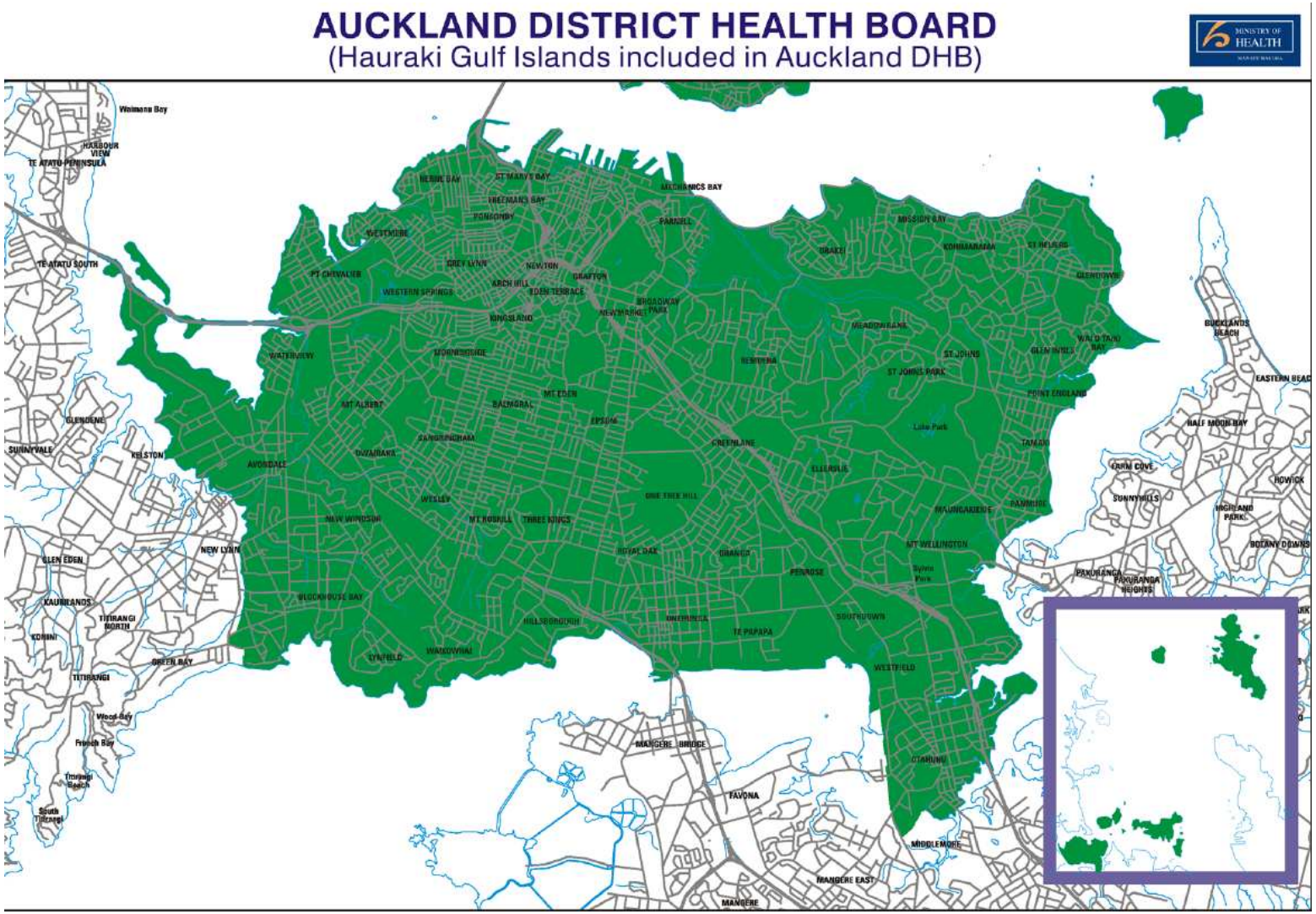


Figure 3B Boundary map of Auckland DHB

Figure 3C Boundary map of Waitemata DHB

Appendix 4 – Public transport analysis

The following key applies to Figures 4A to 4G:

Service unavailable for entire route

\+ Service not available for part of the route (outlying stations)

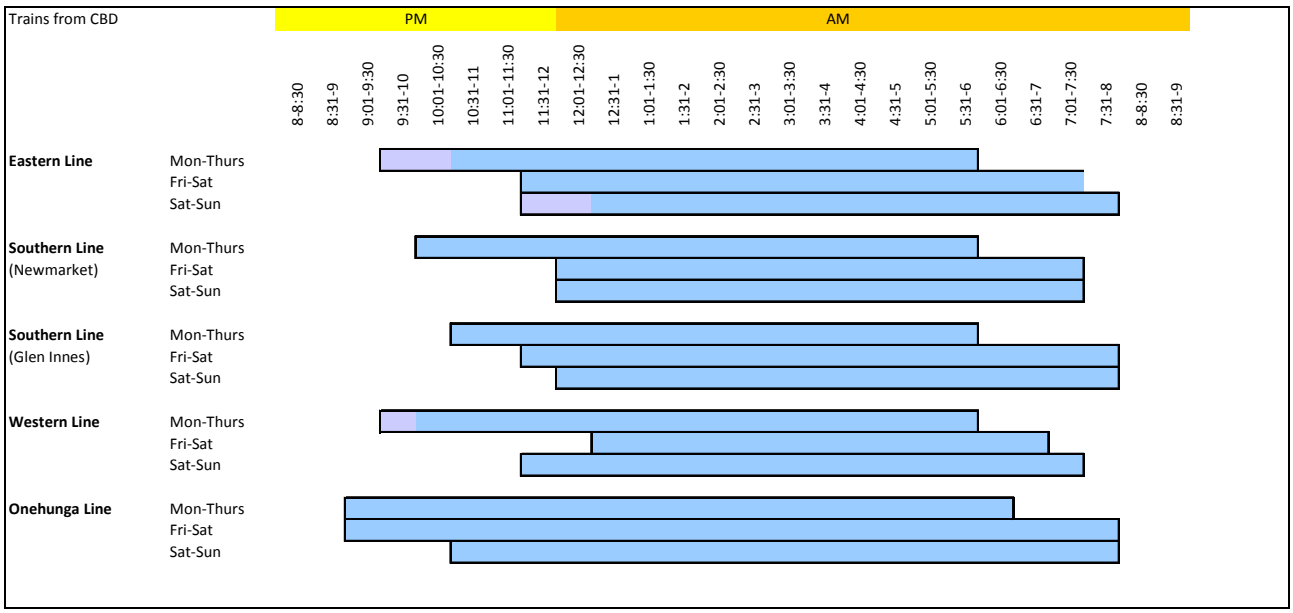


Figure 4A Times that train services are unavailable from the Auckland CBD

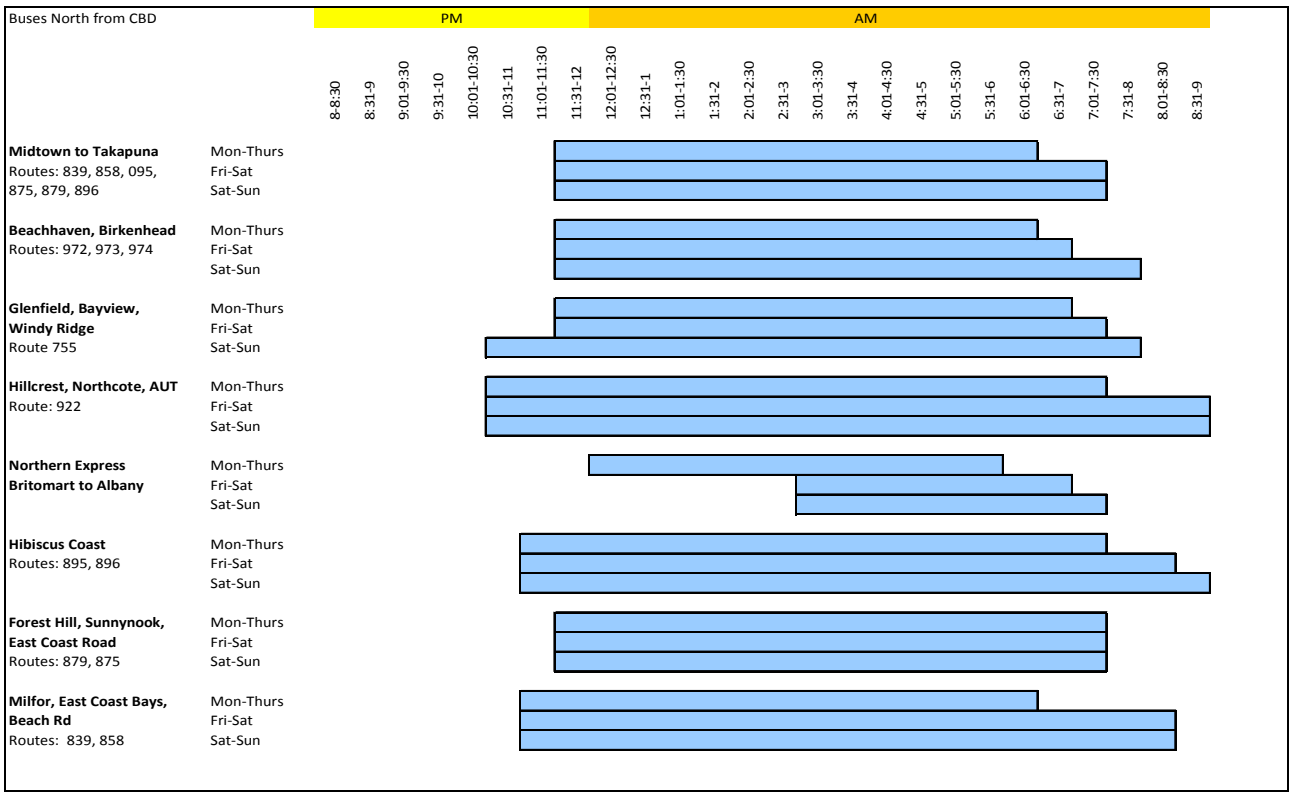


Figure 4B Times that northern bus services are unavailable from the Auckland CBD

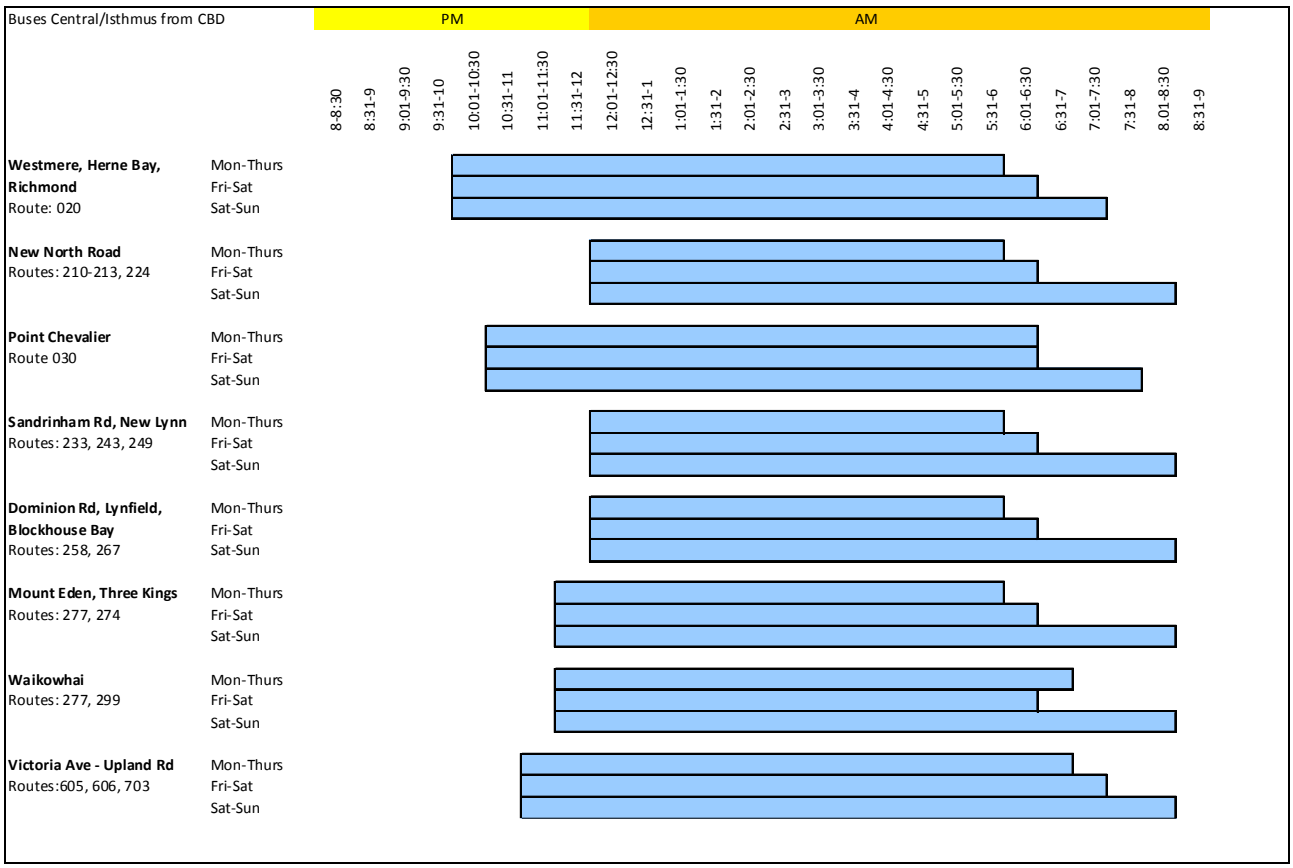


Figure 4C Times that central/isthmus bus services are unavailable from the Auckland CBD

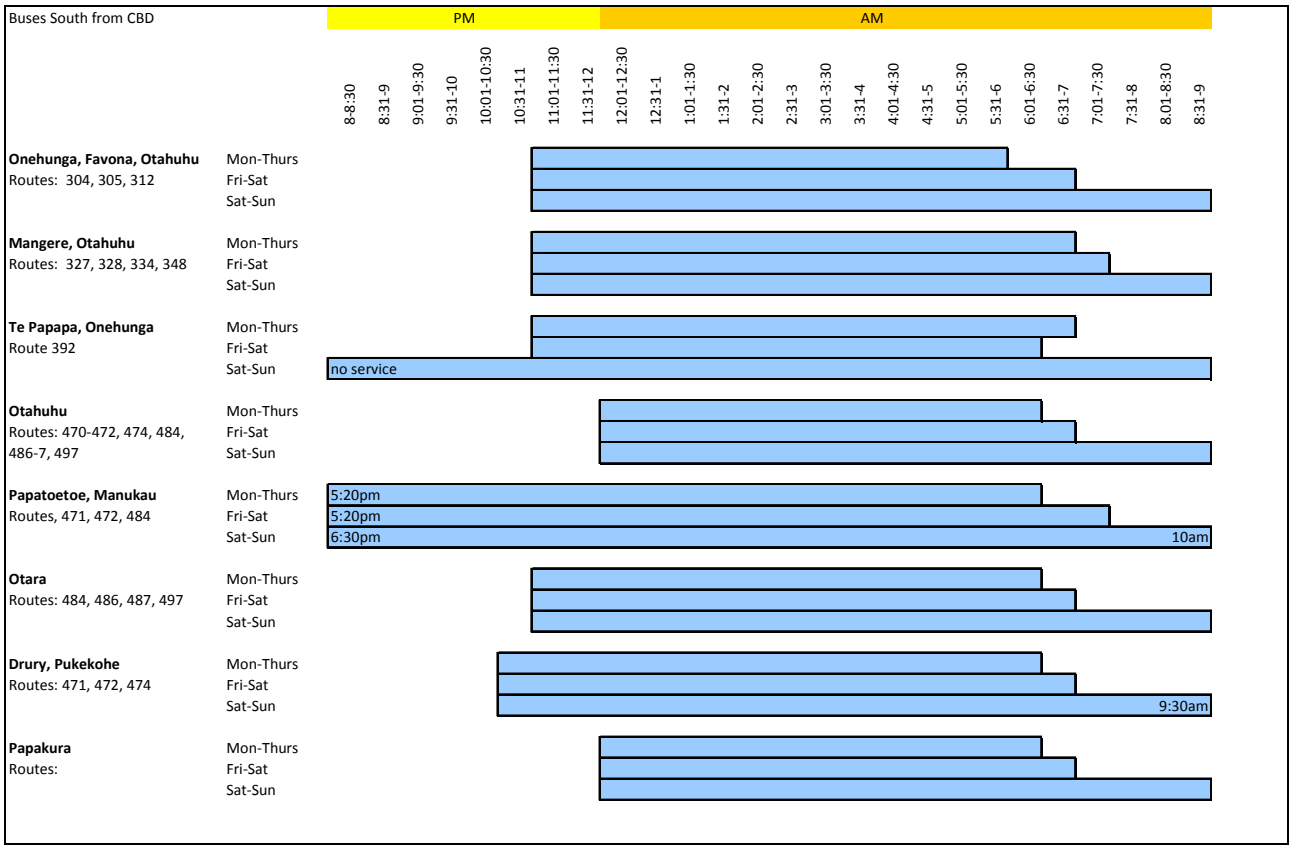


Figure 4D Times that southern bus services are unavailable from the Auckland CBD

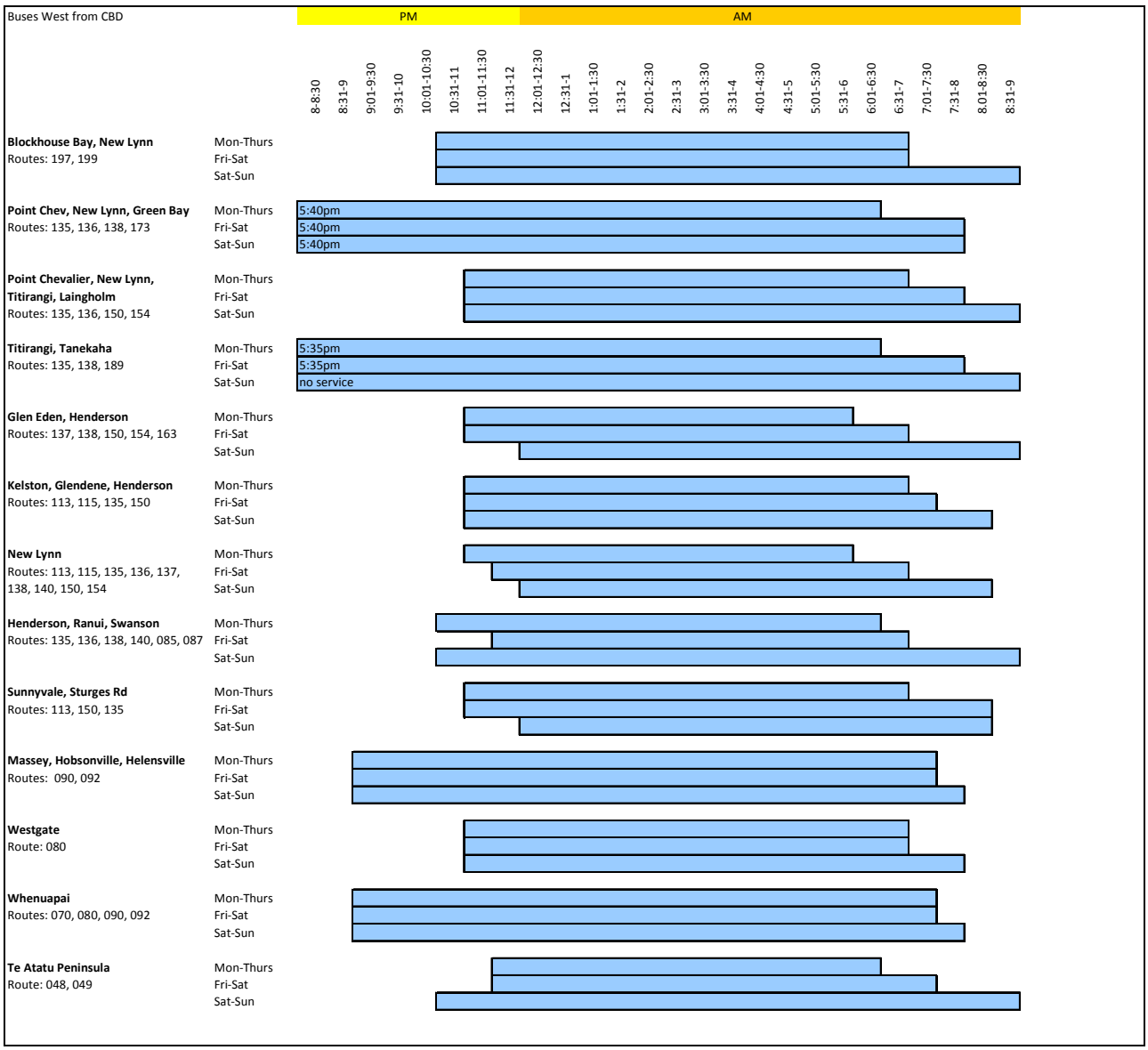


Figure 4E Times that western bus services are unavailable from the Auckland CBD

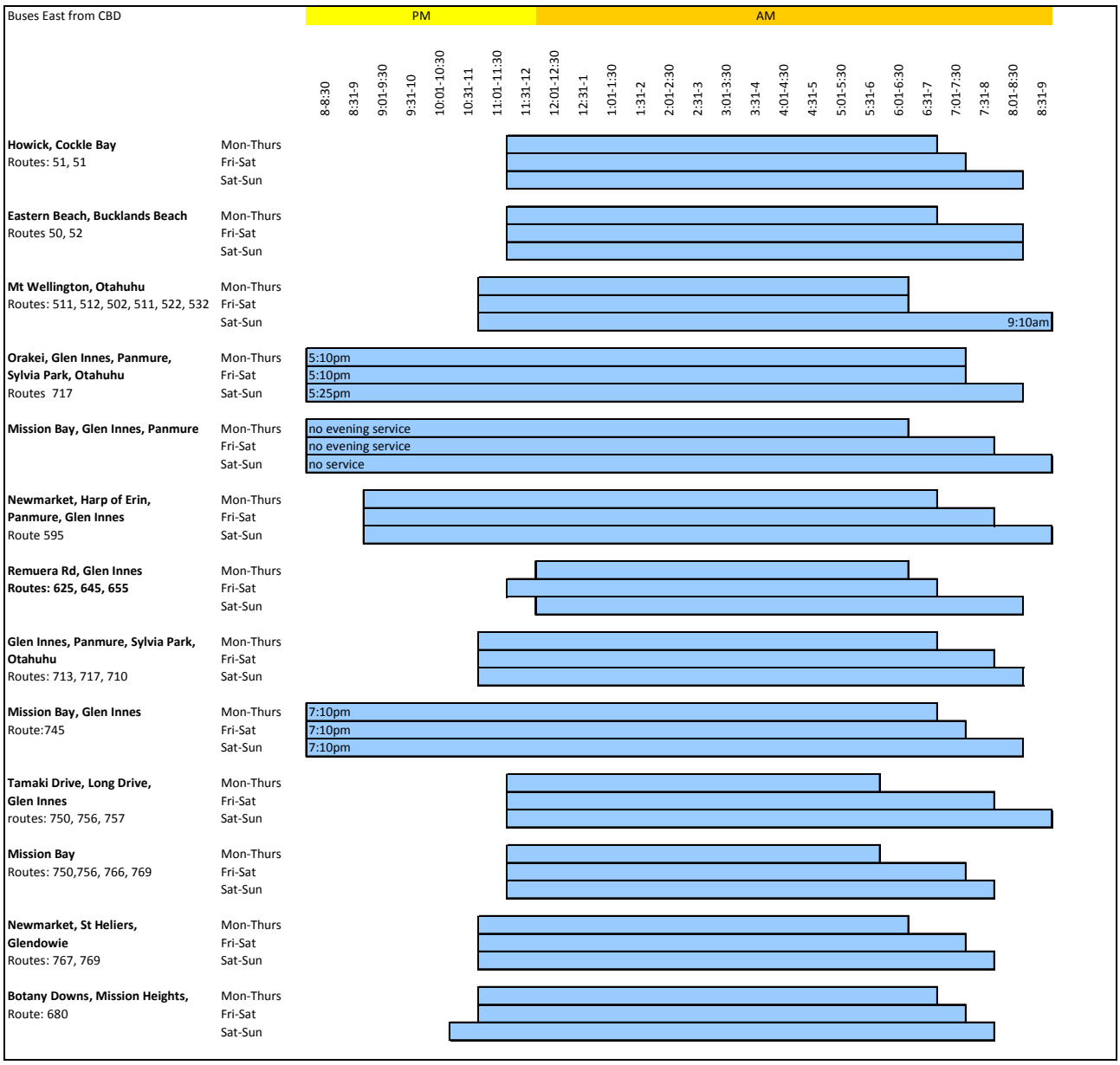


Figure 4F Times that eastern bus services are unavailable from the Auckland CBD

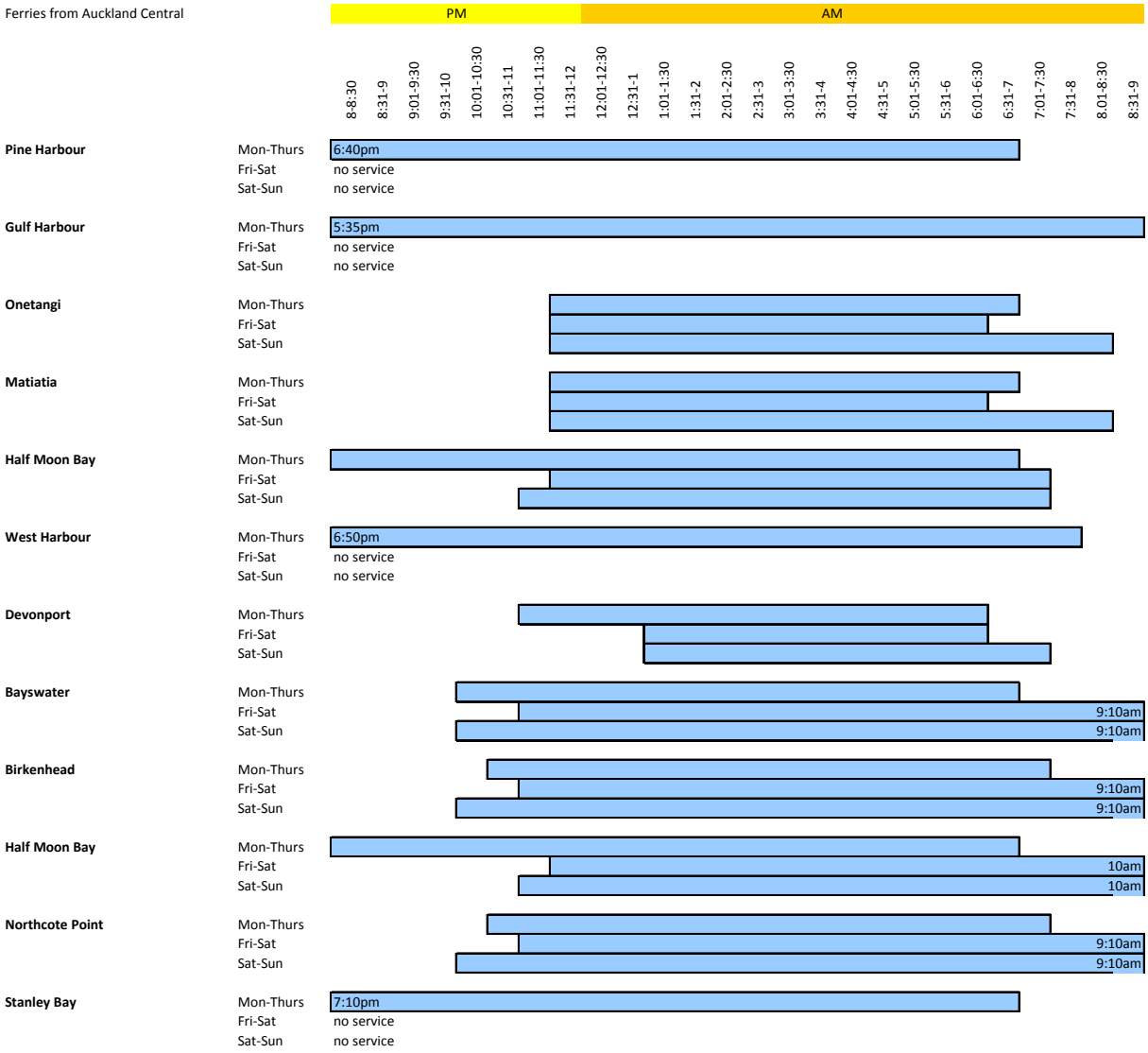


Figure 4G Times that ferry services are unavailable from the Auckland CBD