

MEASUREMENT OF DRINK DRIVING ON THE AUCKLAND ROAD NETWORK

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1 BACKGROUND

1.1 THE SAFE SYSTEM APPROACH TO ROAD SAFETY

Auckland Transport (AT) is the body responsible for road safety in Auckland. AT has a Safe System approach to road safety. In the alcohol space this includes working with partners and community groups like Safety Collective Tamaki Makaurau the ACC, the New Zealand Transport Agency (NZTA), the Health Sector and the Police.

According to NZTA¹:

A Safe System recognises that people make mistakes and are vulnerable in a crash. It reduces the price paid for a mistake, so crashes don't result in loss of life or limb.

Such measures include reducing speeds so that impacts do not produce serious injury or death, reducing the aggressivity of the road environment through measures like crash barriers and making vehicles more crashworthy and less aggressive towards vulnerable road users.

A Safe System approach also seeks to reduce the level of mistakes made by drivers by taking measures to reduce the likelihood of such mistakes. These may be infrastructural measures which reduce the complexity of the road system like removing out of context curves or measures to directly improve driver performance like reducing the amount of alcohol or drug impaired driving,

An integral part of this approach is being able to measure potentially dangerous road user behaviours on the network. If such behaviours are not measured, it becomes more difficult to assess the impact of countermeasures. One of these dangerous behaviours is drink driving,

1.2 THE IMPORTANCE OF DETERRING DRINK DRIVING

Drink driving, along with unsafe speed are key road safety related behaviours. Drink driving related crashes² are an important contributor to road crashes. Of the 545 fatal and serious crashes in Auckland in FY20/21, 70 (13%) involved drivers who tested over the limit or refused a test. Drink driving is also related to speeding, Of the 70 fatal and serious crashes above, 31 or 42% were deemed speed related by the Police.

Job and Brodie (2022) estimate that around 70% of serious and fatal crashes occur at speeds greater than safe system speeds, indicating that had speeds been lower the crash may have not occurred or been less severe. This figure includes crashes where speed is a factor in crash severity rather than crash occurrence, Alcohol will also be involved in a proportion of these crashes,

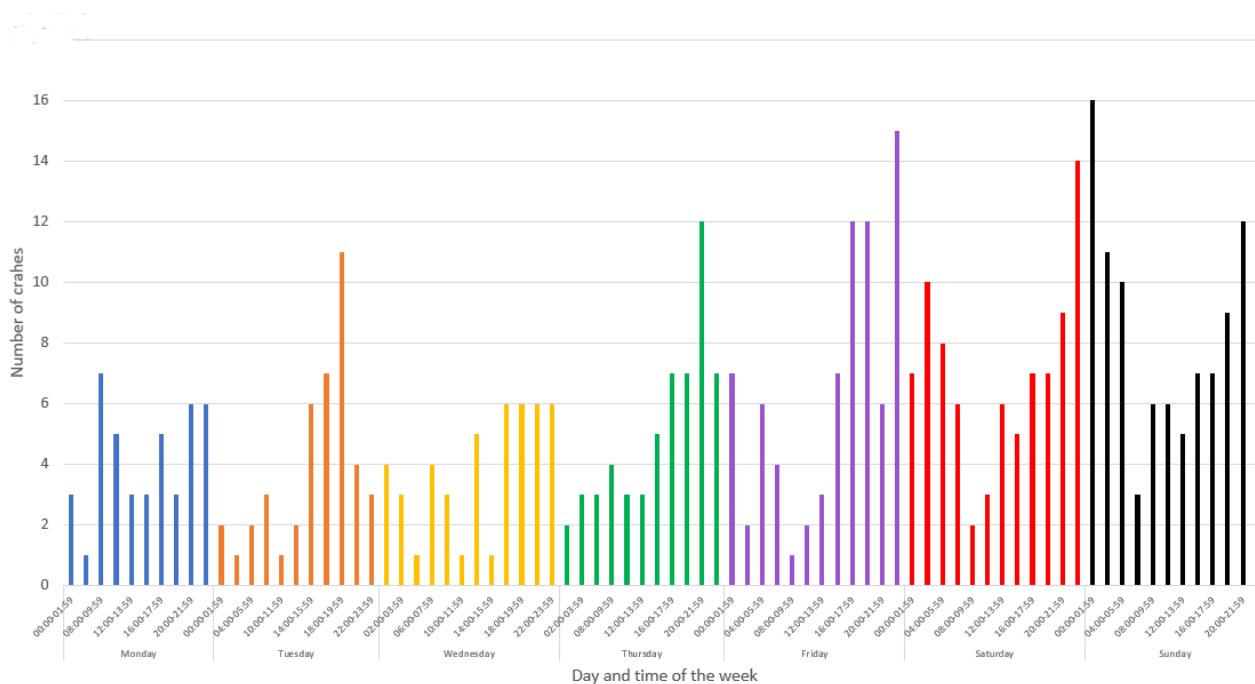
Figure 1 depicts Auckland's total number of minor, serious, and fatal crashes on each day of the week with CAS code 103 (alcohol over the limit) between 01/07/2020 and 30/06/2021 by two-hour blocks. The highest crash rates are in the late evening and early hours of the morning between Friday night and Sunday morning, with the crashes building up to this figure as the week progresses. The time periods 10pm to midnight, midnight to 1am and 1am to 2am from Friday

¹ <https://www.nzta.govt.nz/assets/Safety/docs/safe-system-for-designers-leaflet.pdf>

² CAS code 103 (alcohol over the limit)

night to Sunday morning are commonly called the high drinking hours and drink driving rates during these hours are used by NZTA to monitor drink driving.

Figure 1: Auckland's total number of minor, serious, and fatal crashes on each day of the week with CAS code 103 (alcohol over the limit) between 01/07/2020 and 30/06/2021 by two-hour blocks



1.3 THE KEY ROLE OF POLICE ENFORCEMENT AND ACOMPANYING DETERRANCE

Law breaking is inversely related to the perceived certainty, severity and swiftness of apprehension and punishment (Davey and Freeman 2011). To reduce alcohol offending we must increase the above perception. This is called deterrence. Deterrence takes two forms — general deterrence and specific deterrence.

- **General deterrence** — impact of enforcement on those not directly affected by the enforcement, like those who hear about a campaign by word of mouth, observing enforcement, through public education campaigns, the media, etc.
- **Specific deterrence** — impact on those directly affected and including drivers who have been tested at a checkpoint or by an officer on patrol, their passengers and those who go past a checkpoint without being tested.

To be successful we need to aim at impacting everyone. Therefore, general deterrence is a crucial component of alcohol enforcement. The major method used to deter people from drink driving is Police Compulsory Breath Testing (CBT) checkpoints, aimed at general deterrence supplemented by Police patrols breath testing drivers where their driving arouses suspicion, aimed at specific deterrence. The key elements of a checkpoint programme were first outlined by Homel (1990) when a variety of State Based Random Breath Testing (RBT) programmes, broadly similar to our

CBT, were current in Australia. These varied in their modes of execution and the most successful was that of New South Wales. This was based on the following key elements according to Homel (1990):

1. "threatening" visibility of enforcement (for example, drivers should not believe that RBT operations can be evaded easily once in sight)
2. unpredictability of location
3. continuous feedback to police on the goals and effectiveness of RBT, to counter inevitable trends for apprehension-based enforcement policies to displace RBT
4. intensive media publicity, particularly in the early stages of the law
5. a mix of RBT (a preventive approach) with enforcement strategies which maximize the number of arrests; and
6. relatively lenient penalties (fines of a few hundred dollars and three to six months license disqualification) applied with one hundred percent certainty to apprehended offenders.

These key elements still apply now.

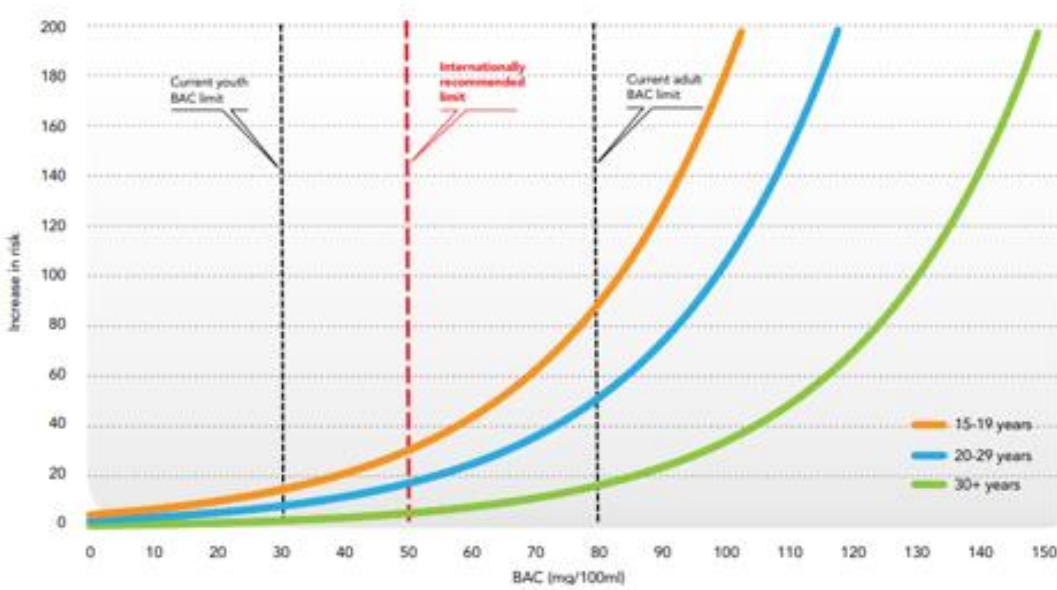
1.4 DRINK DRIVING LIMITS³

Since 2013 New Zealand has had a two-tier breath alcohol limit. Drivers with a breath alcohol concentration (BrAC), between 251 and 400mcg/L incur an infringement fee of \$200 and 50 demerit. For drivers over 400mcg/L their offence is dealt with by the courts. The two-tier system relates to the levels of risk posed by drink driving between 250mcg/L and 400mcg/L, in relation to the New Zealand -derived risk curve in Figure 2.

Figure 2 relates to blood alcohol concentration (BAC). A BAC of 50mg/100ml of blood corresponds to a BrAC of 250mcg/L of breath and a BAC of 80mg/100ml of blood corresponds to a BrAC of 400mcg/L. It is apparent that the level of risk increases exponentially. At 250mcg/L it is considerably higher than at zero, and at 400mcg/L it is considerably higher than at 250mcg/L

³ <https://www.beehive.govt.nz/release/bill-lowering-drink-drive-limits-passes>

Figure 2: Increase in fatal crash risk with blood alcohol concentration for 3 age-groups



1.5 THE IMPORTANCE OF REGULAR INFORMATION ON THE PREVALENCE OF DRINK DRIVING

A key use of information about drink driving on the network is to provide the feedback to the Police mentioned by Homel. It is important to know how much drink driving is going on throughout the network and where and when this drink driving is occurring. It is also important to be able to gauge how this is changing over time. Therefore, periodic monitoring is important. This has been difficult to carry out in the past as to gain a network wide insight expensive roadside surveys of driver alcohol were necessary. These came with problems related to refusal bias. Such surveys were necessary, as simple direct use of Police testing rates is inappropriate. This is because the Police testing is justifiably biased towards more well trafficked roads for reasons of visibility. They thus tend to under- sample those who use “rat-runs” to evade the Police.

1.6 HOW SUCH INFORMATION CAN BE GATHERED

These days, with a very large number of tests carried out each year by the Police, there are enough tests carried out on the less trafficked roads to provide estimates using weighted means based on the amount of traffic on the road types on which the testing was carried out.

It has only recently become possible to access this information easily due to the ability to download testing data from Police Draeger breath testing machines. These machines (as well as providing test results) provide the grid reference to the test and the date and time of the test. The grid reference of the test may be matched to road network data to tell us where on the road network the test occurred.

1.7 HOW ESTIMATES OF NETWORK DRINK DRIVING ARE MADE

The estimation uses test results, the position of each test on the network in terms of the One Network Road Classification (ONRC)⁴ road types and estimates of vehicle kilometres of travel (VKT) for those road types. VKT estimates are available for these road types⁵ on a day of week and hour of day basis except for low volume roads. The road types are⁶:

- National — link major population centres and transport hubs. National includes a high-volume sub-network for which separate records are kept.
- Arterial — link regionally significant places and industries.
- Regional — major connectors between and within regions (often public transport routes).
- Primary collector — link significant local populations and industries.
- Secondary collector — provide secondary routes, can be the only route to some places.
- Access — small roads facilitating daily activities.
- Low volume.

Refer to the cited web reference⁷ for a more detailed description of the ONRC. No Auckland roads are classified as “National”. Instead, the highest volume category used is “High volume”; a subset of “National” roads with a typical daily traffic of at least 35,000 vpd (vehicles per day) or a typical heavy vehicle volume of greater than 1,200 vpd.

1.8 THE ROLE OF THE ONRC IN THE ESTIMATES

The ONRC is the motor vehicle (freight and other vehicles) classification underlying the ONF (One Network Framework)⁸ which is NZTA’s multi-modal travel and place framework. The ONF is underpinned by several modal frameworks of which the ONRC is one. The estimates of VKT on a day of week and hour of day basis⁹ are produced by adjusting overall VKT figures by road type. This is achieved using day of week / hour of day adjustment factors supplied by NZTA . Low volume roads are not included in the analysis as the total VKT per annum is not available for these roads. This is not material to the analysis as the breath test volume (by the very nature of the road) was very low.

The VKT estimates by ONRC road type were carried out by using link length figures and link volume estimates from the RAMM (Road Assessment and Maintenance Management) databases of Auckland City and NZTA . The figures for local roads were from Auckland City’s RAMM. The figures for State Highways within the boundaries of Auckland City were from NZTA’s RAMM. The

⁴ <https://www.nzta.govt.nz/planning-and-investment/planning/transport-excellence-partnership/transport-insights/data-quality/onrc/>

⁵ Except for low volume roads

⁶ <https://www.nzta.govt.nz/assets/Road-Efficiency-Group/docs/ONRCMsgeneralguide.pdf>

⁷ <https://www.nzta.govt.nz/assets/Road-Efficiency-Group/docs/functional-classification.pdf>

⁸ <https://www.nzta.govt.nz/planning-and-investment/planning/one-network-framework/>

⁹ Except for low volume roads

analysis was done for all tests over the 250 mcg/L infringement limit and for all tests over the higher court offence limit of 400 mcg/L.

1.9 THE PRODUCTION OF THE ESTIMATES

A weighted average proportion of positive tests by road type was produced for the relevant time period. The weighting was done using the proportion of total VKT in the period for each road type. The sum was done over all road types.

Weighted average = \sum (Number of positive tests / Total number of tests) x (Road type VKT / Total VKT)

Averages were computed for the high drinking hours 10pm to midnight, midnight to 1am and 1am to 2am from Friday night to Sunday morning. The three sub-periods are used because they have previously been shown by NZTA measurements to have different drink driving propensities. The proportion of the traffic stream over the limit increases, while the overall traffic flow decreases, as time moves on from 10pm to 2am. Once these averages have been computed they are combined into a grand mean for the high alcohol period as a whole by weighting each by the VKT in its time period divided by the VKT between 10pm and 2am and summing the results.

Grand Mean = \sum (Number of positive tests / Total number of tests) x (Road type VKT / Total VKT 22:00-02:00)

The sum is taken over the three periods 10pm to midnight, midnight to 1am and 1am to 2am from Friday night to Sunday morning.

This method provides drink driving estimates which account for the network traffic flows on the parts of the road network where Police are carrying out testing. It can also provide results by ONRC road type which may assist Police in planning their breath testing tactics.

The time period covered by this report included some covid-19 lockdowns which may have impacted on the total number of breath tests carried out by Police. However, the lockdowns are unlikely to have markedly impacted traffic flows when the Police were breath testing, as Police target their testing to times when traffic is out on the road.

2 RESULTS

:Table 1

Table 2: Auckland drivers testing with a positive BrAC of **under 250 mcg/L** of alcohol by ONRC road category for financial years 2020/21 and 2021/22

ONRC class	FINANCIAL YEAR 2020/2021			FINANCIAL YEAR 2021/2022			% of relevant VKT
	Tests under 250	Total tests	% under 250	Tests under 250	Total tests	% under 250	
10 PM–MIDNIGHT, FRIDAY & SATURDAY							
High volume	167	4,942	3.4%	103	3,417	3.0%	77.8%
Arterial	282	12,165	2.3%	398	19,493	2.0%	9.4%
Primary collector	80	2,435	3.3%	70	2,242	3.1%	3.7%
Secondary collector	69	681	10.1%	71	557	12.7%	1.8%
Regional	237	10,993	2.2%	317	14,037	2.3%	6.8%
Access	15	252	6.0%	22	169	13.0%	0.5%
MIDNIGHT–1 AM, SATURDAY & SUNDAY MORNING							
High volume	20	632	3.2%	38	1,342	2.8%	80.9%
Arterial	90	2,491	3.6%	76	3,087	2.5%	7.9%
Primary collector	18	707	2.5%	13	283	4.6%	3.2%
Secondary collector	22	355	6.2%	9	164	5.5%	1.6%
Regional	89	3,559	2.5%	97	3,376	2.9%	6.0%
Access	10	94	10.6%	7	93	7.5%	0.4%
1 AM–2 AM, SATURDAY & SUNDAY MORNING							
High volume	13	220	5.9%	30	617	4.9%	81.1
Arterial	33	833	4.0%	21	627	3.3%	7.5%
Primary collector	10	160	6.3%	4	106	3.8%	3.2%
Secondary collector	10	176	5.7%	1	68	1.5%	1.6%
Regional	40	1,437	2.8%	39	701	5.6%	6.0%
Access	0	41	0.0%	2	40	5.0%	0.4%

Table 3: Auckland drivers testing with a BrAC of **between 250–400 mcg/L** by ONRC road category for financial years 2020/21 and 2021/22

ONRC class	FINANCIAL YEAR 2020/2021			FINANCIAL YEAR 2021/2022			% of relevant VKT
	Tests between 250–400	Total tests	% between 250–400	Tests between 250–400	Total tests	% between 250–400	
10 PM–MIDNIGHT, FRIDAY & SATURDAY							
High volume	37	4,942	0.7%	25	3,417	0.7%	77.8%

Arterial	87	12,165	0.7%	135	19,493	0.7%	9.4%
Primary collector	19	2,435	0.8%	16	2,242	0.7%	3.7%
Secondary collector	21	681	3.1%	30	557	5.4%	1.8%
Regional	54	10,993	0.5%	93	14,037	0.7%	6.8%
Access	6	252	2.4%	8	169	4.7%	0.5%
MIDNIGHT-1 AM, SATURDAY & SUNDAY MORNING							
High volume	10	632	1.6%	14	1,342	1.0%	80.9%
Arterial	38	2,491	1.5%	51	3,087	1.7%	7.9%
Primary collector	6	707	0.8%	12	283	4.2%	3.2%
Secondary collector	9	355	2.5%	8	164	4.9%	1.6%
Regional	42	3,559	1.2%	37	3,376	1.1%	6.0%
Access	2	94	2.1%	8	93	8.6%	0.4%
1 AM-2 AM, SATURDAY & SUNDAY MORNING							
High volume	6	220	2.7%	10	617	1.6%	81.1
Arterial	14	833	1.7%	17	627	2.7%	7.5%
Primary collector	7	160	4.4%	7	106	6.6%	3.2%
Secondary collector	11	176	6.3%	3	68	4.4%	1.6%
Regional	10	1,437	0.7%	14	701	2.0%	6.0%
Access	2	41	4.9%	1	40	2.5%	0.4%

depicts the percentage of drivers with a BrAC over the 250mcg/L limit (including those over 400 mcg/L) by the 3 time periods discussed in Section 1.21.9 and by ONRC road type.

Table 2 depicts the percentage of drivers with a positive BrAC under the 250mcg/L limit.

Table 3 depicts the percentage of drivers with a BrAC between 250–400 mcg/L.

Table 4 depicts the percentage of drivers with a BrAC over the 400mcg/L limit.

The same annual VKT estimates derived from the AT and NZTA RAMM databases were used for both financial years.

Table 5 summaries the information in :Table 1Error! Reference source not found., Table 2, Table 3, and Table 4 including overall network figures for all 3 time periods plus “grand means” covering the total period 10pm to 2am.

:Table 1: Auckland drivers testing with a BrAC of over 250 mcg/L (including those over 400 mcg/L) by ONRC road category for financial years 2020/21 and 2021/22

ONRC class	FINANCIAL YEAR 2020/2021			FINANCIAL YEAR 2021/2022			% of relevant VKT
	Tests over 250 (incl. over 400)	Total tests	% over 250 (incl. over 400)	Tests over 250 (incl. over 400)	Total tests	% over 250 (incl. over 400)	
10 PM-MIDNIGHT, FRIDAY & SATURDAY							
High volume	85	4,942	1.7%	75	3,417	2.2%	77.8%

Arterial	218	12,165	1.8%	320	19,493	1.6%	9.4%
Primary collector	61	2,435	2.5%	51	2,242	2.3%	3.7%
Secondary collector	68	681	10.0%	82	557	14.7%	1.8%
Regional	146	10,993	1.3%	219	14,037	1.6%	6.8%
Access	19	252	7.5%	38	169	22.5%	0.5%
MIDNIGHT-1 AM, SATURDAY & SUNDAY MORNING							
High volume	28	632	4.4%	43	1,342	3.2%	80.9%
Arterial	99	2,491	4.0%	128	3,087	4.1%	7.9%
Primary collector	25	707	3.5%	24	283	8.5%	3.2%
Secondary collector	37	355	10.4%	32	164	19.5%	1.6%
Regional	106	3,559	3.0%	87	3,376	2.6%	6.0%
Access	12	94	12.8%	14	93	15.1%	0.4%
1 AM-2 AM, SATURDAY & SUNDAY MORNING							
High volume	27	220	12.3%	40	617	6.5%	81.1
Arterial	56	833	6.7%	47	627	7.5%	7.5%
Primary collector	18	160	11.3%	27	106	25.5%	3.2%
Secondary collector	29	176	16.5%	15	68	22.1%	1.6%
Regional	38	1,437	2.6%	54	701	7.7%	6.0%
Access	5	41	12.2%	11	40	27.5%	0.4%

Table 2: Auckland drivers testing with a positive BrAC of under 250 mcg/L of alcohol by ONRC road category for financial years 2020/21 and 2021/22

ONRC class	FINANCIAL YEAR 2020/2021			FINANCIAL YEAR 2021/2022			% of relevant VKT
	Tests under 250	Total tests	% under 250	Tests under 250	Total tests	% under 250	
10 PM-MIDNIGHT, FRIDAY & SATURDAY							
High volume	167	4,942	3.4%	103	3,417	3.0%	77.8%
Arterial	282	12,165	2.3%	398	19,493	2.0%	9.4%
Primary collector	80	2,435	3.3%	70	2,242	3.1%	3.7%
Secondary collector	69	681	10.1%	71	557	12.7%	1.8%
Regional	237	10,993	2.2%	317	14,037	2.3%	6.8%
Access	15	252	6.0%	22	169	13.0%	0.5%
MIDNIGHT-1 AM, SATURDAY & SUNDAY MORNING							
High volume	20	632	3.2%	38	1,342	2.8%	80.9%
Arterial	90	2,491	3.6%	76	3,087	2.5%	7.9%
Primary collector	18	707	2.5%	13	283	4.6%	3.2%
Secondary collector	22	355	6.2%	9	164	5.5%	1.6%

Regional	89	3,559	2.5%	97	3,376	2.9%	6.0%
Access	10	94	10.6%	7	93	7.5%	0.4%
1 AM–2 AM, SATURDAY & SUNDAY MORNING							
High volume	13	220	5.9%	30	617	4.9%	81.1
Arterial	33	833	4.0%	21	627	3.3%	7.5%
Primary collector	10	160	6.3%	4	106	3.8%	3.2%
Secondary collector	10	176	5.7%	1	68	1.5%	1.6%
Regional	40	1,437	2.8%	39	701	5.6%	6.0%
Access	0	41	0.0%	2	40	5.0%	0.4%

Table 3:: Auckland drivers testing with a BrAC of **between 250–400 mcg/L** by ONRC road category for financial years 2020/21 and 2021/22

ONRC class	FINANCIAL YEAR 2020/2021			FINANCIAL YEAR 2021/2022			% of relevant VKT
	Tests between 250–400	Total tests	% between 250–400	Tests between 250–400	Total tests	% between 250–400	
10 PM–MIDNIGHT, FRIDAY & SATURDAY							
High volume	37	4,942	0.7%	25	3,417	0.7%	77.8%
Arterial	87	12,165	0.7%	135	19,493	0.7%	9.4%
Primary collector	19	2,435	0.8%	16	2,242	0.7%	3.7%
Secondary collector	21	681	3.1%	30	557	5.4%	1.8%
Regional	54	10,993	0.5%	93	14,037	0.7%	6.8%
Access	6	252	2.4%	8	169	4.7%	0.5%
MIDNIGHT–1 AM, SATURDAY & SUNDAY MORNING							
High volume	10	632	1.6%	14	1,342	1.0%	80.9%
Arterial	38	2,491	1.5%	51	3,087	1.7%	7.9%
Primary collector	6	707	0.8%	12	283	4.2%	3.2%
Secondary collector	9	355	2.5%	8	164	4.9%	1.6%
Regional	42	3,559	1.2%	37	3,376	1.1%	6.0%
Access	2	94	2.1%	8	93	8.6%	0.4%
1 AM–2 AM, SATURDAY & SUNDAY MORNING							
High volume	6	220	2.7%	10	617	1.6%	81.1
Arterial	14	833	1.7%	17	627	2.7%	7.5%
Primary collector	7	160	4.4%	7	106	6.6%	3.2%
Secondary collector	11	176	6.3%	3	68	4.4%	1.6%
Regional	10	1,437	0.7%	14	701	2.0%	6.0%
Access	2	41	4.9%	1	40	2.5%	0.4%

Table 4:: Auckland drivers testing with a BrAC of **over 400mcg/L** by ONRC road category for financial years 2020/21 and 2021/22

ONRC class	FINANCIAL YEAR 2020/2021			FINANCIAL YEAR 2021/2022			% of relevant VKT
	Tests over 400	Total tests	% over 400	Tests over 400	Total tests	% over 400	
10 PM–MIDNIGHT, FRIDAY & SATURDAY							
High volume	48	4,942	1.0%	50	3,417	1.5%	77.8%
Arterial	131	12,165	1.1%	185	19,493	0.9%	9.4%
Primary collector	42	2,435	1.7%	35	2,242	1.6%	3.7%
Secondary collector	47	681	6.9%	52	557	9.3%	1.8%
Regional	92	10,993	0.8%	126	14,037	0.9%	6.8%
Access	13	252	5.2%	30	169	17.8%	0.5%
MIDNIGHT–1 AM, SATURDAY & SUNDAY MORNING							
High volume	18	632	2.8%	29	1,342	2.2%	80.9%
Arterial	61	2,491	2.4%	77	3,087	2.5%	7.9%
Primary collector	19	707	2.7%	12	283	4.2%	3.2%
Secondary collector	28	355	7.9%	24	164	14.6%	1.6%
Regional	64	3,559	1.8%	50	3,376	1.5%	6.0%
Access	10	94	10.6%	6	93	6.5%	0.4%
1 AM–2 AM, SATURDAY & SUNDAY MORNING							
High volume	21	220	9.5%	30	617	4.9%	81.1%
Arterial	42	833	5.0%	30	627	4.8%	7.5%
Primary collector	11	160	6.9%	20	106	18.9%	3.2%
Secondary collector	18	176	10.2%	12	68	17.6%	1.6%
Regional	28	1,437	1.9%	40	701	5.7%	6.0%
Access	3	41	7.3%	10	40	25.0%	0.4%

Table 5:: Auckland proportions of drivers with positive breath alcohol readings **over 250 mcg/L, under 250 mcg/L, between 250–400 mcg/L, and over 400 mcg/L** by time period

Percent over 250 mcg/L (incl. over 400)		Percent under 250 mcg/L		Percent between 250–400 mcg/L		Percent over 400 mcg/L	
FY 20/21	FY 21/22	FY 20/21	FY 21/22	FY 20/21	FY 21/22	FY 20/21	FY 21/22
10 PM–MIDNIGHT, FRIDAY & SATURDAY							
1.9%	2.4%	3.3%	3.1%	0.8%	0.8%	1.1%	1.6%
MIDNIGHT–1 AM, SATURDAY & SUNDAY MORNING							
4.4%	3.7%	3.2%	2.9%	1.5%	1.3%	2.9%	2.4%
1 AM–2 AM, SATURDAY & SUNDAY MORNING							
11.3%	7.6%	5.6%	4.7%	2.6%	1.9%	8.7%	5.7%
GRAND MEANS COVERING ALL 3 TIME PERIODS							
3.8%	3.4%	3.6%	3.3%	1.2%	1.1%	2.6%	2.3%

Delving into the above tables in more detail reveals that the percentage over the limit is greatest on secondary roads, in particular access roads and secondary collectors. These roads comprise around 2% of the VKT but produced 14.7% of those over the 250 mcg/L limit and 16.4% of those over the 400 mcg/L during the weekend high alcohol hours in the 2021/22 financial year.

The percentage between 250mcg/L and 400mcg/L is relatively small. This is not surprising, as impaired judgement occurring after 250mcg/L is reached (Drug and Alcohol Services South Australia (2014)) increases the likelihood of continued drinking before driving.

The drink driving percentage increases between 10pm and 2am during a time of decreasing VKT. In FY 2021/22 the percentage over 250 mcg/L between 1am and 2am was 7.6%, with 5.7% over 400 mcg/L. This compares to 2.4% and 1.6% respectively for midnight to 1am.

Overall, there is an encouraging improvement in the over 250mcg/L and the over 400mcg/L percentages between the financial years 2020/21 and 2021/22. Future measurements will determine how enduring this improvement proves.

The number of drivers exceeding the limit means there is considerable scope to improve road safety by reducing drink driving.

3 CONCLUSIONS

- Overall, there is an encouraging improvement in the over 250mcg/L and the over 400mcg/L percentages between 2020/21 and 2021/22, Future measurements will determine how enduring this improvement proves.
- The drink driving percentage increases between 10pm and 2am during a time of decreasing VKT.
- Access roads and secondary collectors comprise around 2% of VKT but produce around 14.7% of those over 250 mcg/L and 16.4% of those over 400 mcg/L during the weekend high alcohol hours (for 2021/22).
- During the weekend high alcohol hours, the drink driving percentage increases between 10pm and 2am during a time of decreasing VKT. In FY 2021/22 7.6% were over 250 mcg/L between 1am and 2am with 5.7% over 400 mcg/L. This compares to 2.4% and 1.6% respectively for midnight to 1am.
- The number of drivers exceeding the limit means there is considerable scope to improve road safety by reducing drink driving.

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