Assessment of the overprovision of licensed premises in the Highland Council area

Directorate of Public Health and Policy
May 2023

Authors

Elisabeth Smart, Consultant in Public Health,
Directorate of Public Health and Policy, NHS Highland

Carolyn Hunter-Rowe, Public Health Intelligence Manager,
Directorate of Public Health and Policy, NHS Highland

Acknowledgements

Thank you to the following colleagues for providing advice and input to the development of this report:
Dr Owen McDonald, Public Health Specialist Registrar
Sara Huc, Public Health Intelligence Officer
Ian Douglas, Senior Public Health Intelligence Specialist

We would also like to thank the Highland Alcohol and Drugs Partnership for their support and guidance.

For further information about this report please contact:



elisabeth.smart@nhs.scot



Directorate of Public Health and Policy
NHS Highland
Larch House
Stoneyfield Business Park
Inverness
IV2 7PA

Contents

1. Situation....4
2. Background....4
2.1. Harms related to alcohol....4
2.1.1. Harm to health....5
2.1.2. Crime and disorder....6
2.1.3. Accidental dwelling fires....7
2.1.4. Economic harm....9
2.2. Alcohol retail sales....10
3. Assessment....12
3.1. Alcohol-related hospital admissions....12
3.2. Alcohol-specific deaths....13
3.3. Alcohol-specific mortality in context....14
3.4. Inequalities in health harm....15
3.5. Alcohol consumption....16
3.5.1. Adults exceeding weekly drinking guidelines....16
3.5.2. Children and young people....18
3.6. Community partnerships....18
3.7. Alcohol premise licenses in Highland....20
3.8. Alcohol outlet availability in Highland....22
3.9. Views of the public....25
4. Summary....31
5. Recommendations....33
Appendix 1....35
References....37

1. Situation

This paper provides background evidence and recommendations to inform the Highland Licensing Board's adoption of a policy statement on the overprovision of alcohol sales capacity in the Highland Council area in accordance with section 7 of the Licensing (Scotland) Act 2005.

This paper builds upon public health reports submitted to the Highland Licensing Board in 2013 and 2018 that informed the Board's current policy statement (including the overprovision statement). The Board's next Statement of Licensing Policy will cover the five-year period from November 2023 to November 2028.

This paper assesses:

- Alcohol-related health harm in the Highland Council area
- Population access to off-sales and on-sales licensed premises
- Crime and disorder data
- Public safety and house fires
- Views of the public.

Section 5 makes recommendations for the Highland Licensing Board to consider in preparation of the statement on alcohol overprovision to be included in the 2023 - 2028 Statement of Licensing Policy.

2. Background

The Licensing (Scotland) Act 2005 has five central objectives[1]:

- Preventing crime and disorder
- Securing public safety
- Preventing public nuisance
- Protecting and improving public health
- Protecting children from harm.

The Act stipulates that each Licensing Board must publish a statement of its policy with respect to the exercise of the Board's functions under the Act, in advance of each five year period. The Act was last updated in March 2018.

2.1. Harms related to alcohol

Alcohol is an integral part of Highland life. Alcohol production and associated businesses provide work for thousands of people and bring a source of income into the Highland economy. It can make a positive contribution to an individual's social life and mental wellbeing when used sensibly. Alcohol can make a positive contribution to social interactions and gatherings in communities.

Alcohol is also a toxic, psychoactive substance that can create dependence and causes serious health and social problems. An increasing body of international and national evidence demonstrates the harmful effect of alcohol on health, social and economic outcomes across the life course. Alcohol, if not used in moderation, has great potential to cause harm leading the way to a range of social, physical and mental health problems (Table 1).

Table 1: Summary of the harms caused by alcohol consumption

Harm to health	Harm to the family	Harm to society
Death	Fetal Alcohol Spectrum Disorders	Crime and disorder
Acute poisoning and intoxication	Child protection	Employment issues
Alcohol use disorders	Child neglect and trauma	Absenteeism
Long term conditions (e.g. cancer, heart disease, stroke)	Relationship and social issues	House fires
Falls and injuries	Intimate partner violence	Road accidents
Mental health conditions (e.g. depression and anxiety)	Underage drinking	Violence and assault
Sexually transmitted diseases	Financial pressures/Gambling	
Unwanted pregnancy	Underachievement in education	

Source: Public Health England[2] [3]

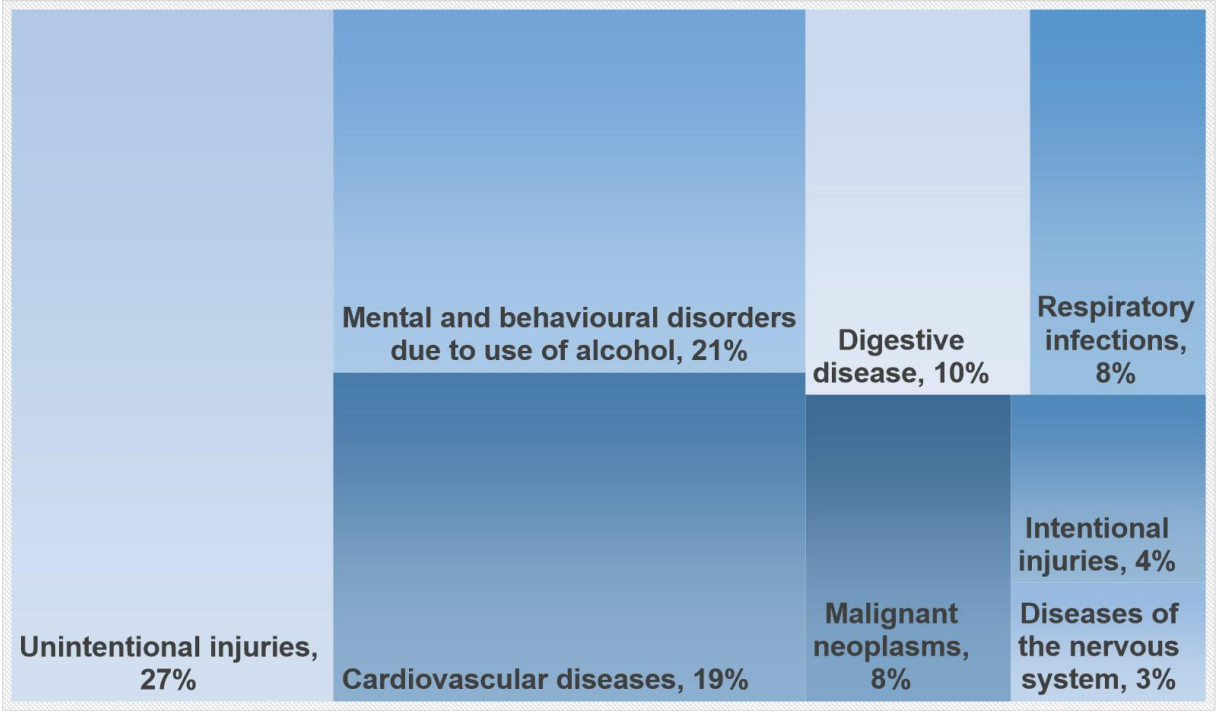
Alcohol causes harm beyond the physical and psychological health of the drinker. This can have a negative impact upon the health and wellbeing of families, people around them, including relationship partners, children, relatives, friends, co-workers and within communities.

2.1.1. Harm to health

The impact of alcohol consumption in terms of risks to health is well evidenced, with a research study estimating that alcohol accounts for 8% of the overall burden of disease in Scotland[4]. This figure includes the years of life lost through early death and the years of healthy life lost through living with the consequences of a range of conditions including various cancers, strokes, heart disease, stroke, diabetes, epilepsy, pneumonia, pancreatitis, gallstones, falls, accidents and injuries.

Alcohol is linked to many health conditions that can be explained either wholly or partially by alcohol consumption (Figure 1). Examples of conditions where alcohol is wholly attributable include alcoholic liver disease and mental and behavioural disorders due to the use of alcohol. Partially attributable conditions include cancer of the lip, oral cavity and pharynx, coronary heart disease and stroke.

Figure 1: Proportion of hospital admissions wholly or partial attributable to alcohol



Source: Scottish Burden of Disease Study[4]
Estimates of the number of people admitted to hospital in Scotland with a condition wholly or partial attributable to alcohol in 2015

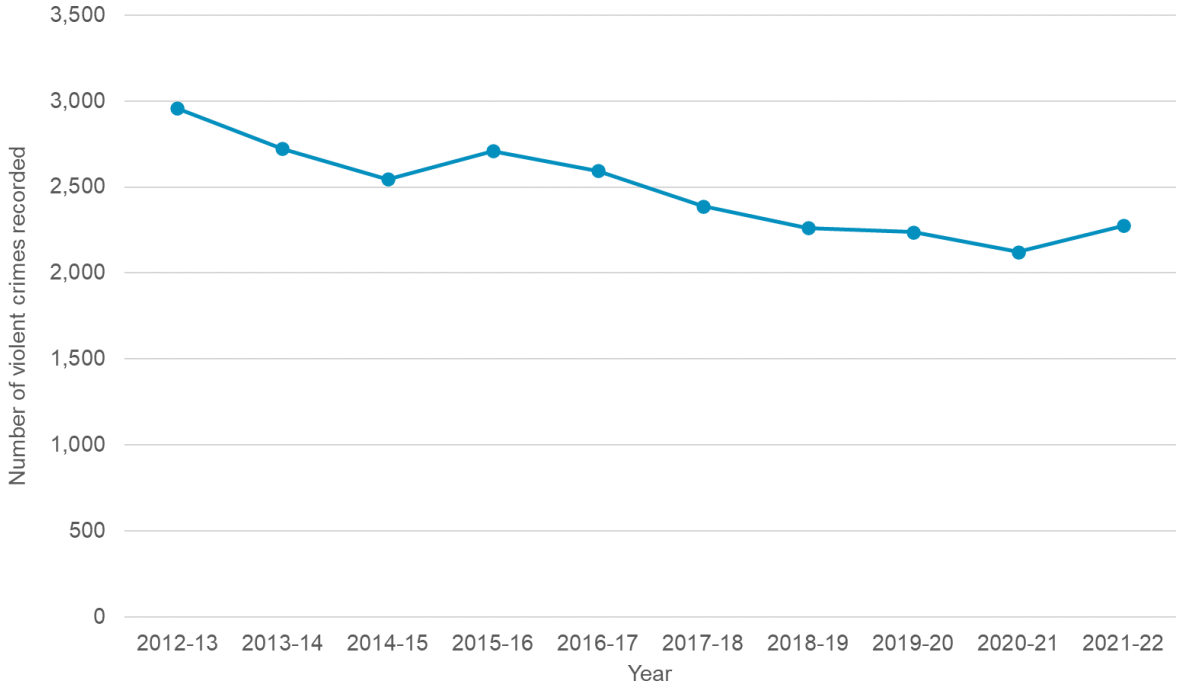
2.1.2. Crime and disorder

Preventing crime and disorder is an important factor in alcohol licensing policy. A number of studies highlight the relationship between alcohol and crime, reporting a strong association between alcohol and a person's risk of being a perpetrator or victim of crime[5]. Research has found a significant relationship between alcohol outlet availability and crime rates in Highland[6]. The neighbourhoods with more places to buy alcohol have higher crime rates than neighbourhoods with the least.

There is a strong link between violent crime and alcohol. Alcohol was a factor in a sizeable proportion of violent crimes in Scotland in 2019/20. Over two-fifths (44%) of violent crimes involved offenders under the influence of alcohol. In addition, one fifth (20%) of victims reported having consumed alcohol immediately before the incident of violent crime[7].

While there has been a decrease in the number of violent crimes in Highland over the last ten years, over 2,000 incidents still take place in Highland each year (Figure 2).

Figure 2: Number of violent crimes recorded by the police in Highland, 2012-13 to 2021-22



Source: Scottish Government, Recorded Crime in Scotland, 2021-22[8]

Data from the annual Highland Council Performance Survey outlines the extent to which the public feel concerned about alcohol misuse in their local neighbourhoods. The survey is sent to members of the Citizens' Panel, designed by The Highland Council to be able to generalise the panel results to the adult population of Highland. Two thirds of respondents regularly report feeling concerned about alcohol use in their local area, and that these trends have been consistent over time (Table 2).

Table 2: Extent to which Highland Council residents feel concerned about alcohol misuse in their local area, 2012 to 2019

Question	2012	2013	2014	2015	2016	2017	2018	2019
Concerned about alcohol misuse in their neighbourhood	65%	63%	69%	69%	70%	66%	66%	69%

Source: Highland Council Performance Survey

2.1.3. Accidental dwelling fires

Preventing and reducing accidental house fires where impairment due to suspected alcohol use was a contributory factor is an important indicator of public safety. Table

3 shows the trend in accidental dwelling fires where alcohol or drugs use was considered a contributory factor in Highland from 2011-12 to 2022-23. There have been 211 alcohol-related fires in this period and the range is between 11 in 2018-19 and 27 in 2021-22. On average there were 18 accidental dwelling fires a year in Highland where alcohol/drugs use was a contributory factor. It is of note that in 2021-22, when COVID-19 restrictions were in place and more people spent time at home, the number of accidental dwelling fires related to alcohol use reached 27, almost one in five (18%) of all accidental fires.

Table 3: Accidental dwelling fires where impairment due to suspected alcohol/drugs use was a contributory factor, Highland, 2011/12 to 2022/23

Measure	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Number of accidental dwelling fires	18	20	18	15	15	24
Percentage of accidental dwelling fires	13%	16%	13%	9%	12%	16%
	2017-18	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Number of accidental dwelling fires	12	11	13	15	27	23
Percentage of accidental dwelling fires	8%	8%	12%	12%	18%	16%

Source: Scottish Fire and Rescue Service

A breakdown of accidental dwelling fires where impairment due to suspected alcohol and/or drugs use was a contributory factor by Highland Area Committee is shown in Table 4. The areas where the greatest numbers of fires occur regularly are the City of Inverness Area and Ross and County Area.

Table 4: Accidental dwelling fires where impairment due to suspected alcohol/drugs use was a contributory factor by Highland Area Committee, 2017-18 to 2022-23

Committee Area	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Badenoch and Strathspey	0	0	1	1	2	3
Caithness	4	3	1	0	2	1
City of Inverness	4	2	7	11	15	9
Lochaber	0	0	2	0	0	1
Nairn	2	2	0	0	1	2
Ross and County	1	4	2	2	4	5
Skye	0	0	0	0	3	1
Sutherland	1	0	0	0	0	2

Source: Scottish Fire and Rescue Service

2.1.4. Economic harm

Putting a monetary value on the harm caused by alcohol is complicated, and sensitive to a range of methodological judgements. In 2010, the Scottish Government commissioned the York Health Economics Consortium to estimate the societal cost of alcohol in Scotland, which they calculated to be £3.6 billion in 2007. This information was presented in the 2018 alcohol overprovision evidence. With over a decade since the last systematic analysis of the societal cost of alcohol in Scotland, an update is long overdue.

Table 5 is an updated table based on two studies: York method in 2010 and Aberdeen method in 2012[9] [10]. The figures present the estimates from these studies, uprated in line with inflation. They do not account for changes in drinking patterns or levels of harm. Regardless of these challenges about calculating the economic cost this translates to substantial economic costs within Highland.

Table 5: Social and economic costs of alcohol in Scotland, 2021/22

Total Costs, 2021/22	York method	Aberdeen method
Intangible costs e.g. value of lost life	£2.0bn	£7.2bn
Health & social care costs	£0.7bn	£0.5bn
Labour & productivity costs	£1.2bn	£1.2bn
Crime costs	£1.0bn	£0.1bn
Total	£4.9bn	£9.6bn[1]

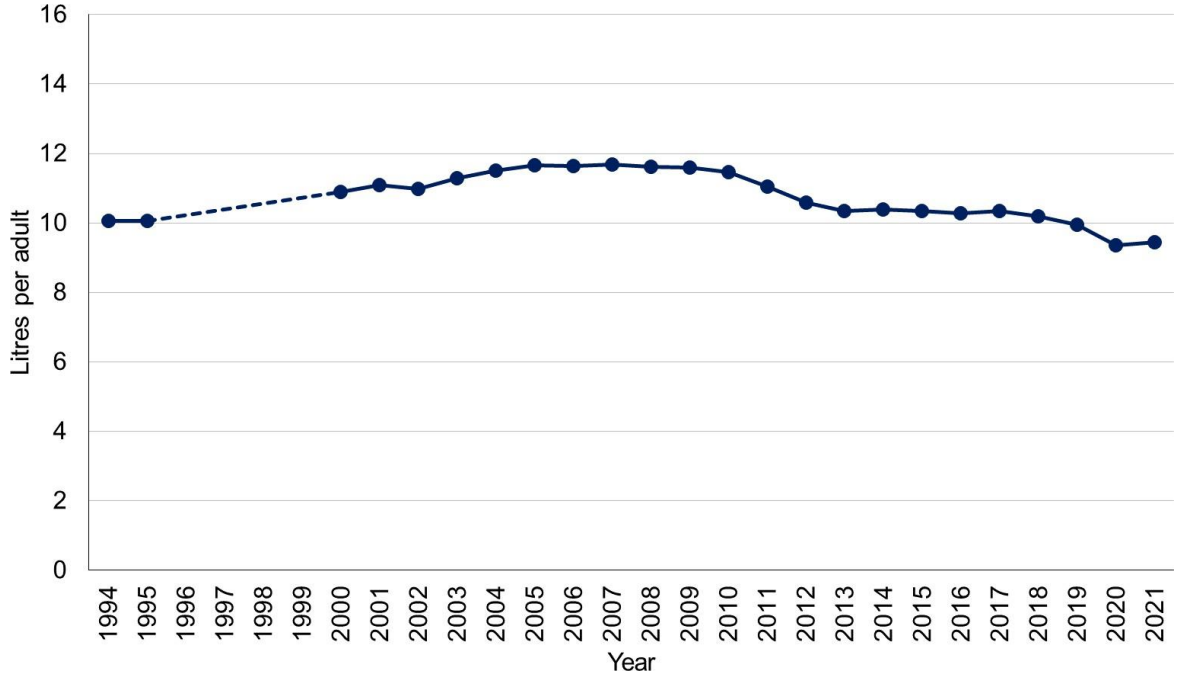
Source: Social Market Foundation[11]
[1] Does not sum to total because of unattributed costs

2.2. Alcohol retail sales

Alcohol retail sales data are commonly recognised as the most accurate way of measuring population-level alcohol consumption[12]. In 2021, 9.4 litres of pure alcohol were sold per adult aged 16 years and over in Scotland (Figure 3). This is equivalent to 18.1 units of alcohol per adult per week[13].

Alcohol retail sales were lower in 2020 and 2021 due to the COVID-19 pandemic[14]. National restrictions implemented to control its spread directly affected on-trade premises (pubs, clubs, and restaurants) sales. On-trade restrictions included: no on-sales alcohol sales, alcohol outdoors only, alcohol with a meal only, restricted hours and social distancing.

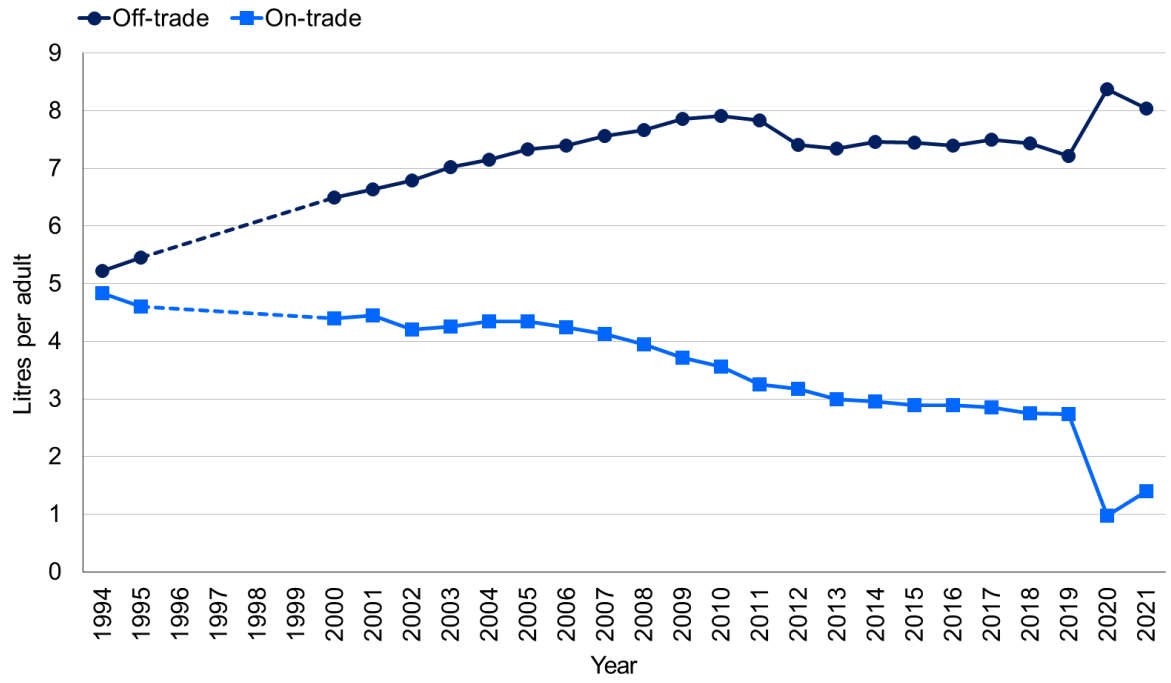
Figure 3: Alcohol sales (litres of pure alcohol per adult) in Scotland, 1994-2021



Source: Nielsen/CGA sales dataset, Public Health Scotland[15]
Litres of pure alcohol sold per adult (16+), with off-trade sales from 2011 onwards adjusted to account for the loss of discount retailer data.

In 2021, off-trade premises (supermarkets and other off-licenses) sold 8.0 litres of pure alcohol per adult, 85% of all alcohol purchased in Scotland (Figure 4). This was an increase from 73% in 2019 but a decrease from 90% in 2020. On-trade premises sold 1.4 litres of alcohol per adult in 2021, equivalent to 15% of all alcohol purchased.

Figure 4: Alcohol sales (litres of pure alcohol per adult) by trade sector in Scotland, 1994-2021



Source: Nielsen/CGA sales dataset, Public Health Scotland[15]
Litres of pure alcohol sold per adult (16+), with off-trade sales from 2011 onwards adjusted to account for the loss of discount retailer data.

Alcohol sales indicate that population-level consumption was above the UK Chief Medical Officers' low risk drinking guidelines of 14 units of alcohol per week[16]. Higher levels of population consumption are estimated when excluding the proportion of the population that does not drink alcohol. In 2021, this gives a consumption figure of 11.3 litres per adult drinker, equivalent to 21.7 units of alcohol per adult drinker per week.

Although sales data specific to the Highland council area are not available, the on-trade and off-trade sales trends observed for Scotland will likely reflect the local position.

3. Assessment

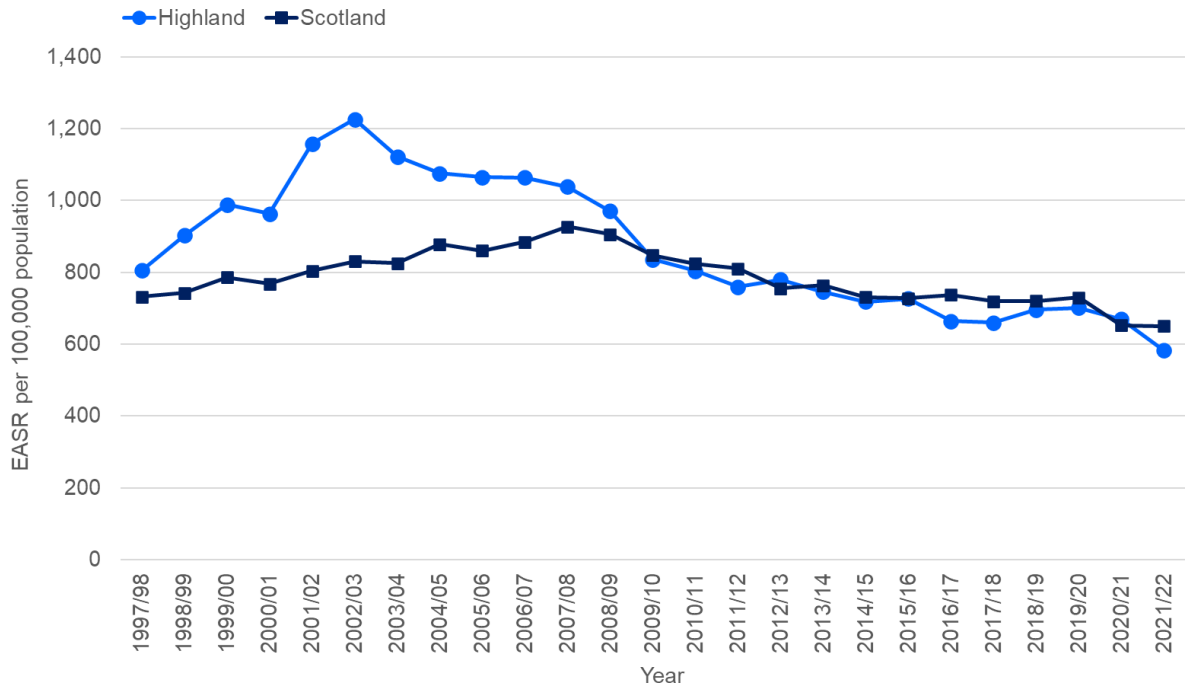
Assessment of alcohol-related harm in the Highland Council area is drawn from a wide range of evidence. The selected indicators are nationally collected datasets and provide context by allowing comparison of different areas and monitoring of changes over time.

3.1. Alcohol-related hospital admissions

Alcohol-related hospital admissions (stays) are routinely used to understand the impact of alcohol on the health of the population. The reporting of alcohol-related hospital stays includes a range of health problems that are entirely due to alcohol. These include the short-term effects on health of acute intoxication and alcohol poisoning and longer term effects such as alcohol dependency and damage to the liver and brain.

The data do not include other conditions such as injuries, epilepsy and cancer where alcohol is a contributory factor. In addition, the data do not include people who were not admitted to hospital, for instance those who consulted their GP, attended an Emergency Department or received specialist alcohol treatment. It is therefore a significant underestimation of the true picture of health harm as a result of alcohol.

Figure 5: Alcohol-related hospital admission rates in Highland and Scotland, 1997/98 to 2021/22



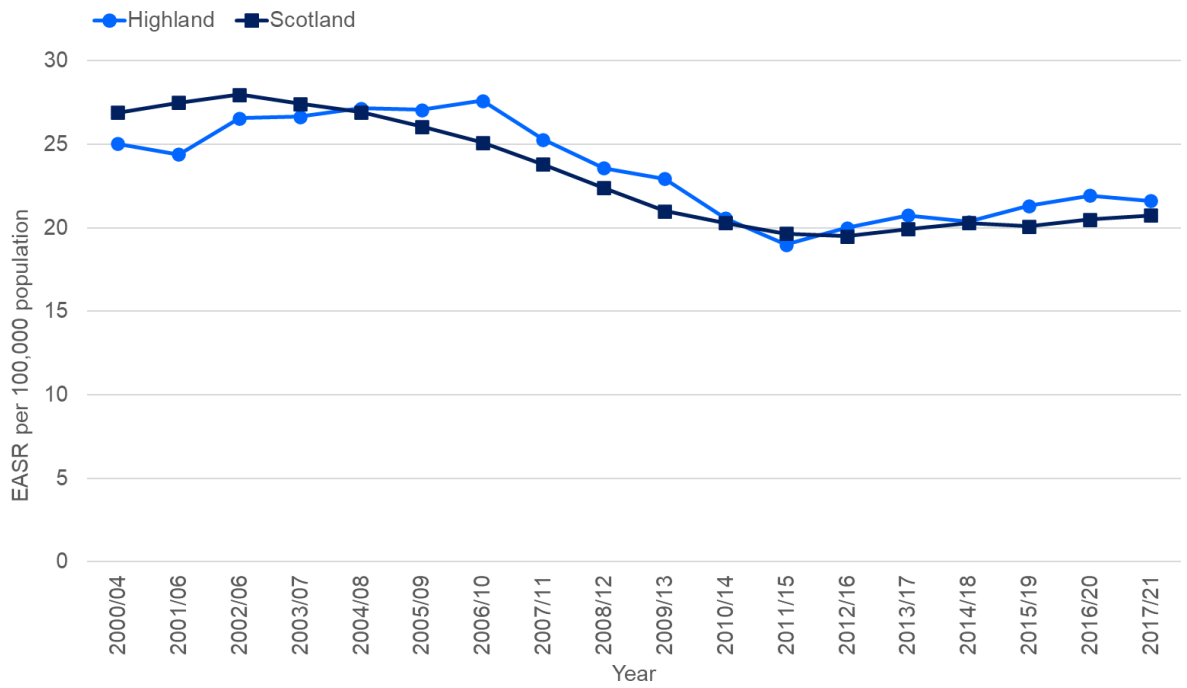
Source: Public Health Scotland[17]
EASR = European Age-Sex Standardised Rate. Standardised to the 2013 European Standard Population. Includes general acute inpatient and daycase stays (SMR01) and psychiatric inpatient and daycase stays (SMR04) with an alcohol-related condition in any diagnostic position.

In 2021/22 there were 1,400 alcohol-related hospital admissions in Highland, equivalent to an age-sex standardised rate of 581 stays per 100,000 population (Figure 5). Rates of alcohol-related hospital stays in Highland increased during the late 1990s and early 2000s, reaching a peak of 1,225 per 100,000 population in 2002/03. Alcohol-related hospital stay rates in Highland decreased steadily between 2002/03 and 2015/16 and remained relatively stable until 2020/21. The downward trend in rates of alcohol-related hospital stays is positive, although still reflects high levels of harm.

3.2. Alcohol-specific deaths

In the five-year period 2017/21, 284 people in Highland died from a cause wholly attributable to alcohol (alcohol-specific)[18]. This equates to an age-sex standardised alcohol-specific death rate of 21.6 per 100,000 population. Rates of alcohol-specific deaths in Highland decreased sharply between 2006/10 and 2011/15 (Figure 6). From 2011/15, alcohol-specific death rates in Highland have gradually increased. This is of concern and shows a level of harm in Highland higher than the Scotland rate.

Figure 6: Alcohol-specific mortality rates in Highland and Scotland, five year averages, 2000/04 to 2017/21



Source: National Records of Scotland
EASR = European Age-Sex Standardised Rate. Standardised to the 2013 European Standard Population. Deaths which are the result of alcohol-specific causes, registered in Scotland.

The numbers of deaths each year are subject to quite large annual fluctuations so five year averages are used to provide the best possible picture of mortality at council area level (Table 6).

Table 6: Alcohol-specific mortality rates in Highland and Scotland, selected five year periods, 2002 to 2021

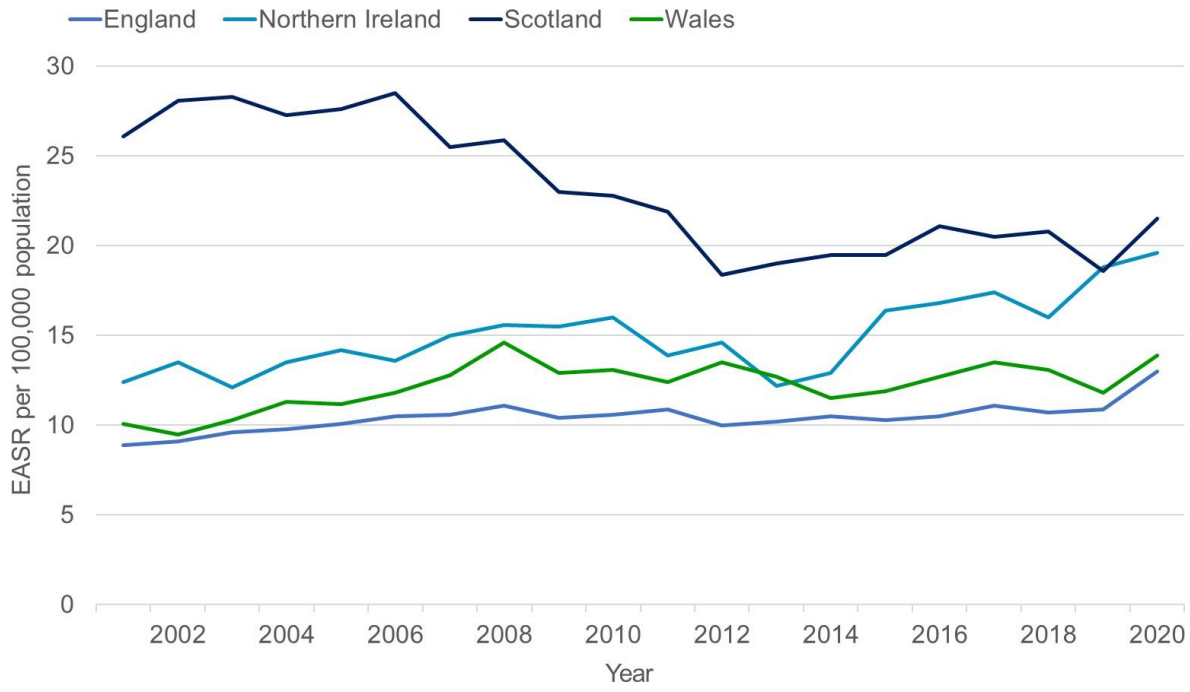
Area	2002/06	2007/11	2012/16	2017/21
Highland	26.6	25.3	20.0	21.6
Scotland	28.0	23.8	19.5	20.8

Source: National Records of Scotland
EASR = European Age-Sex Standardised Rate. Standardised to the 2013 European Standard Population. Deaths which are the result of alcohol-specific causes, registered in Scotland

3.3. Alcohol-specific mortality in context

Trends in alcohol-specific mortality rates show that health harm which is a direct consequence of alcohol use is higher in Highland when compared to Scotland. To place this in context, evidence from the Office for National Statistics shows that alcohol-specific death rates are higher in Scotland than the other three UK constituent countries (Figure 7).

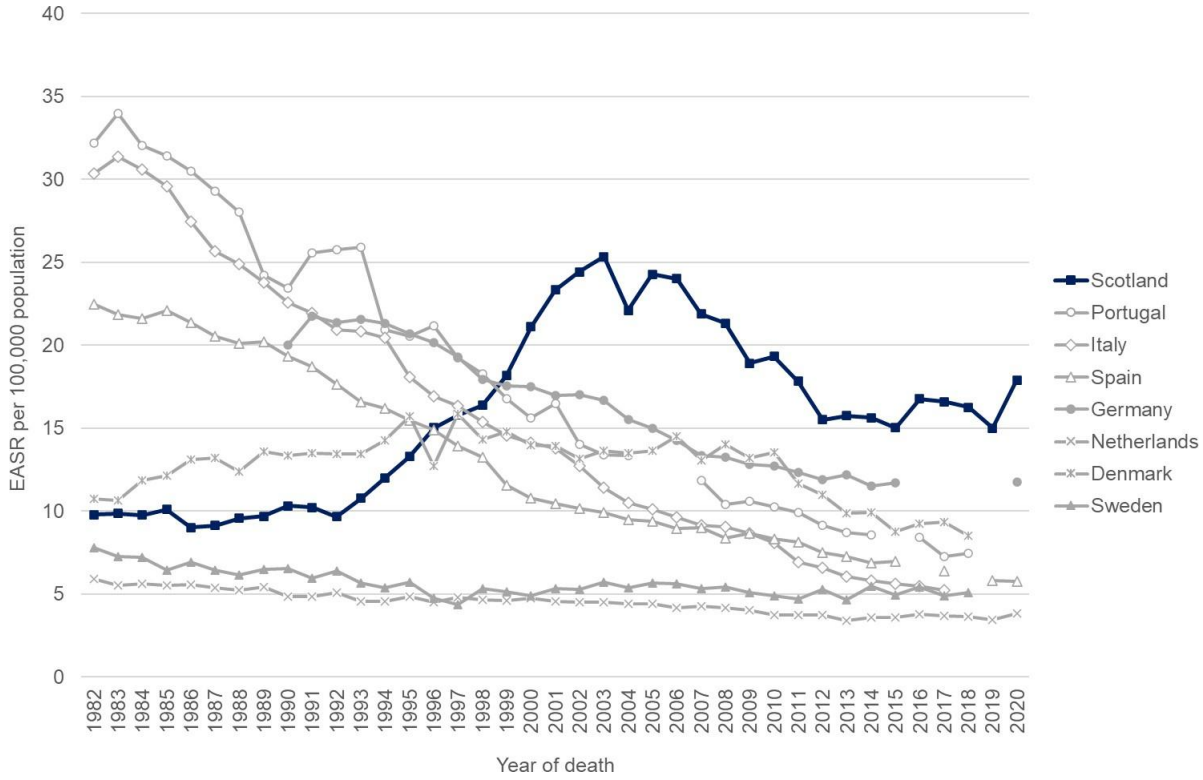
Figure 7: Alcohol-specific mortality rates, UK constituent countries, 2001 to 2020



Source: Office for National Statistics[19]
EASR = European Age-Sex Standardised Rate. Standardised to the 2013 European Standard Population. Deaths which are the result of alcohol-specific causes.

An international comparison can be made by reviewing mortality rates from chronic liver disease and cirrhosis. At a population level, consumption of alcohol is closely related to mortality from chronic liver disease. Death rates in Scotland are notably higher than most other European countries, including those shown representing southern Europe, northern Europe and Scandinavia (Figure 8).

Figure 8: Mortality from chronic liver disease and cirrhosis, Scotland and selected European countries, 1982 – 2020



Source: Scottish Public Health Observatory
EASR = European Age-Sex Standardised Rate. International Classification of Diseases (ICD10) codes used are: K70, K73 and K74 and ICD9 codes: 571.0 to 571.6.

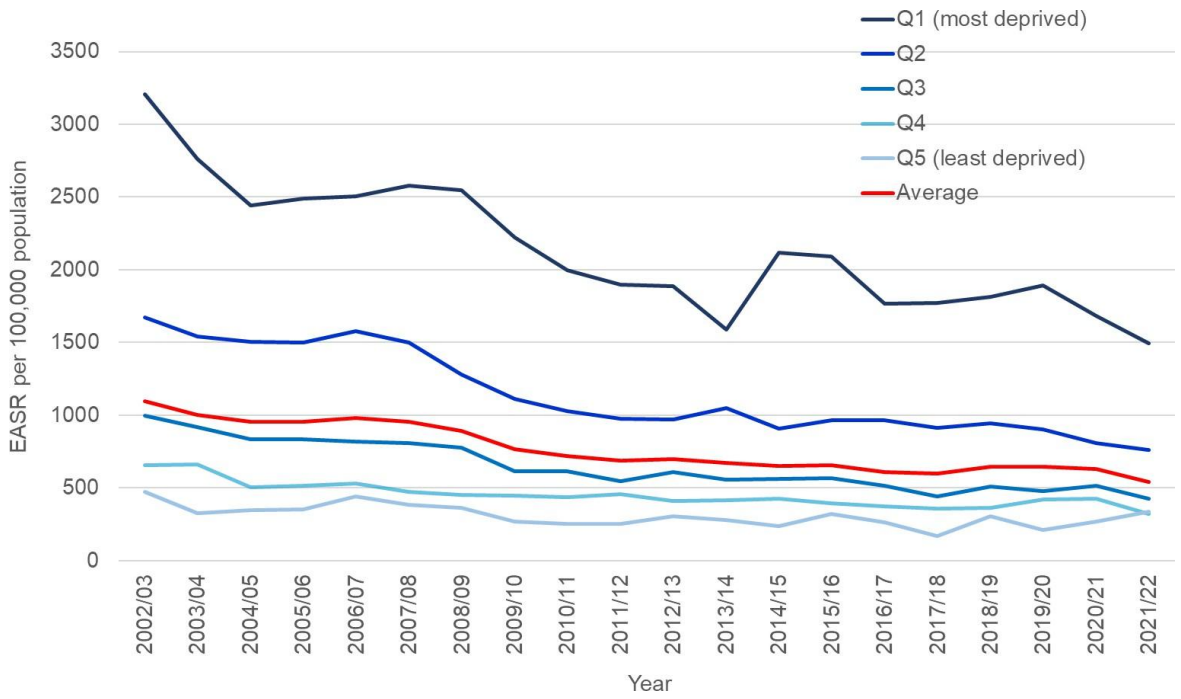
3.4. Inequalities in health harm

Alcohol can cause harm across the social scale, however health harms are more pronounced in areas of high deprivation. There is clear evidence that people living in deprived areas are many times more likely to experience an alcohol-related hospital or die of an alcohol-related cause[15]. Research shows that people of low socioeconomic status tend to experience greater alcohol-related harm than those of high socioeconomic status, even when the amount of alcohol consumption is the same or less[20]. Evidence from 2018 demonstrated a significant relationship in Highland between alcohol outlet density, deprivation and alcohol-related death and hospitalisation rates[6].

Alcohol-related hospital admissions in Highland between a marked deprivation gradient (Figure 9). In 2021/22, the rate of alcohol-related hospital admissions was

over four times higher in the most deprived areas in Highland when compared to the least deprived areas. The absolute inequality gap has narrowed over the time series, but in 2021/22 the most deprived areas of Highland (quintile 1) had 92% more hospital admissions than the overall Highland average.

Figure 9: Differences in alcohol-related hospital admissions between deprivation groups, Highland, 2002/03 to 2021/22



Source: Scottish Public Health Observatory
EASR = European Age-Sex Standardised Rate. Q = Scottish Index of Multiple Deprivation national quintile.

3.5. Alcohol consumption

3.5.1. Adults exceeding weekly drinking guidelines

The UK Chief Medical Officers low risk drinking guidelines published in 2016 reviewed the latest national and international evidence on the effects of alcohol on health and length of life[16]. This evidence included a large number of studies and covered a wide range of health issues, including accidents, injuries, cancer, heart disease and life expectancy.

According to the weekly guideline, adults are safest not to regularly drink more than 14 units per week, to keep health risks from drinking alcohol to a low level. Moderate drinkers consume up to and including 14 units per week, whereas hazardous or harmful drinkers consume over 14 units.

In 2017-21, self-reported alcohol consumption data shows an estimated 30% of men and 15% of women in Highland drank more than 14 units a week, the low-risk

drinking guideline (Table 7). This equates to almost 45,000 adults in Highland drinking at levels that are hazardous or harmful to their health. Self-reported weekly alcohol consumption in Highland is at a similar level compared to Scotland.

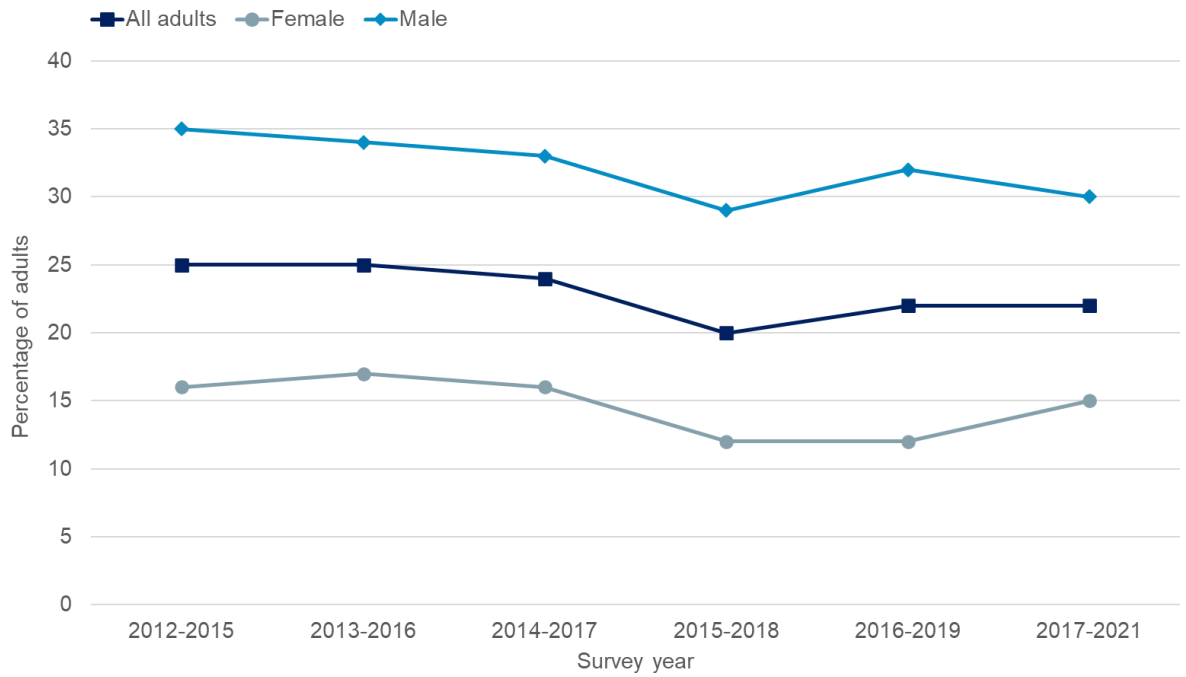
Table 7: Estimated proportion of adults drinking at hazardous/harmful levels, Highland and Scotland, 2017-2021 combined

Area	Males	Females	All adults
Highland	30	15	22
Scotland	32	16	24

Source: Scottish Health Survey
Based on 2016 CMO recommendations: Hazardous/harmful - Over 14 units per week

The proportion of adults drinking more than 14 units of alcohol a week have remained in the range 20% to 25% since 2012-15 (Figure 10). The prevalence of hazardous or harmful drinking by sex has followed a similar pattern over time, with levels consistently around twice as high for men compared with women.

Figure 10: Estimated prevalence of adults drinking at hazardous or harmful levels in Highland by sex, 2012-15 to 2017-21 (combined)



Source: Scottish Health Survey
Based on 2016 CMO recommendations: Hazardous/harmful - Over 14 units per week

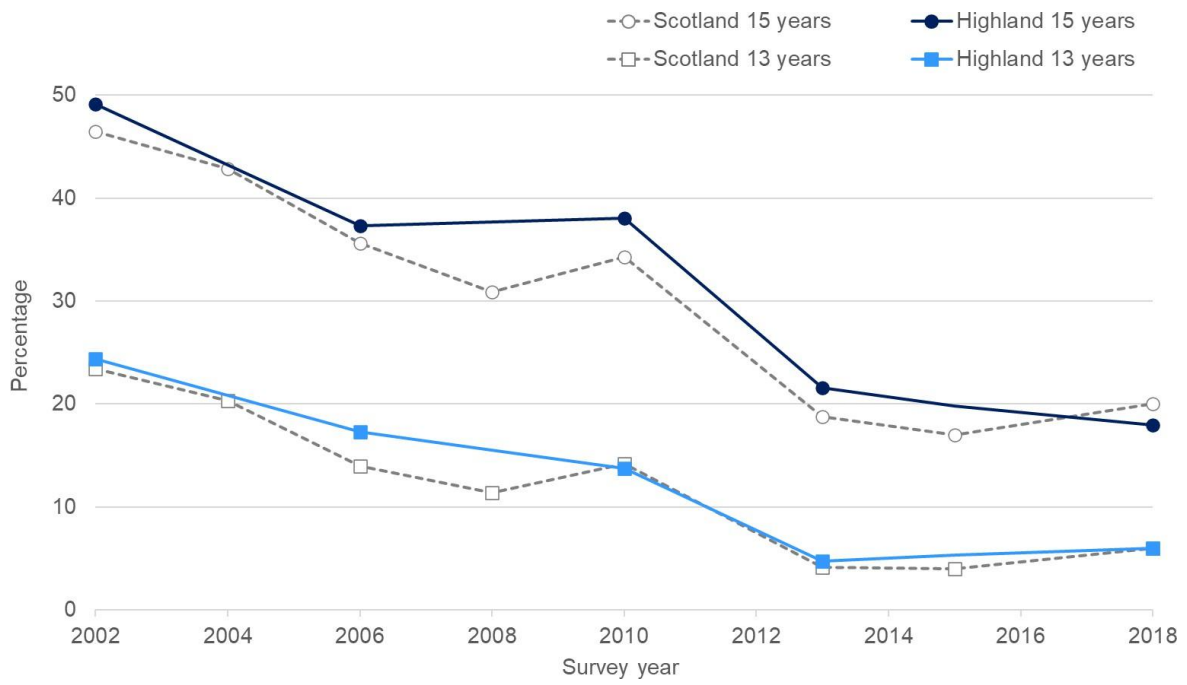
Self-reported alcohol consumption data from the Scottish Health Survey that are comparable include survey data reported to 2019. Survey data from 2020 are not comparable due to methodological differences during the COVID-19 pandemic. They do however give a picture of alcohol consumption at that time.

3.5.2. Children and young people

Preventing harm caused by alcohol among young people is a national[21] and local priority[22] and central to the Getting it Right for Every Child (GIRFEC) approach to improving outcomes and supporting the wellbeing of children and young people[23]. The avoidable harm from alcohol is a major influence on preventable ill health across the life course.

The Scottish Schools Adolescent Lifestyle and Substance Use Survey (SALSUS) is a long established survey used to measure long-term trends in young people's smoking, alcohol and drug use behaviours[24]. SALSUS data shows that overall alcohol consumption among young people has declined over time; however latest figures in 2018 show an increase in drinking alcohol among 13-year-olds (Figure 11).

Figure 11: Trends in the proportion of pupils aged 13 years and 15 years drinking alcohol in the last week in Highland and Scotland, 2002 – 2018



Source: Scottish Schools Adolescent Lifestyle and Substance Use Survey (SALSUS)

3.6. Community partnerships

For the purposes of planning and licensing, it is also necessary for the Licensing Board to be able to consider the health picture in local areas rather than across the

whole council area. Local profiles developed by Public Health present information at a community partnership level that help provide a better understanding of the impact of alcohol on local communities[25].

Table 8 shows the latest alcohol-specific mortality and hospital admission rates for each of the nine community partnerships in Highland. The 95% confidence intervals represent the range of values likely to arise from natural variation for each indicator. They are used to aide interpretation, where non-overlapping intervals represent a statistically significant difference.

The evidence demonstrates that high levels of alcohol-related harm are widespread across Highland. Inverness partnership area had a statistically significant higher alcohol-related hospital admission rate compared to Highland in 2020/21. Badenoch and Strathspey and Sutherland partnership areas both had statistically significantly lower alcohol-related hospital admission rates than the Highland average.

Table 8: Alcohol-specific mortality and alcohol-related hospital admissions in Highland community partnership areas

	Alcohol-specific mortality[a]		Alcohol-related hospital stays[b]	
Partnership area	EASR	95% CI	EASR	95% CI
Badenoch and Strathspey	12.2	1.3 to 44.4	**254.1**	179.9 to 348.1
Caithness	15.7	4.5 to 38.3	551.9	462.7 to 653.0
East Ross	22.3	7.1 to 51.9	444.2	358.4 to 544.1
Inverness	28.1	17.9 to 42.1	**632.3**	578.9 to 689.3
Lochaber	28.0	9.1 to 63.8	631.9	527.7 to 750.4
Mid Ross	19.2	6.7 to 42.6	544.6	459.0 to 641.2
Nairn and Nairnshire	12.8	1.3 to 46.7	473.1	364.4 to 603.5
Skye, Lochalsh and West Ross	16.5	4.4 to 42.0	497.4	401.9 to 607.9
Sutherland	23.2	4.0 to 65.8	**418.7**	316.5 to 541.5
Highland	21.9	16.5 to 28.4	543.0	513.6 to 573.5

Source: Scottish Public Health Observatory Online Profiles[26]
EASR = European Age-Sex Standardised Rate. CI = Confidence Interval
[a] National Records of Scotland. 2017-21 5-year aggregate
[b] Public Health Scotland. 2021/22 financial year
Figures in bold are statistically significantly compared against the Highland value

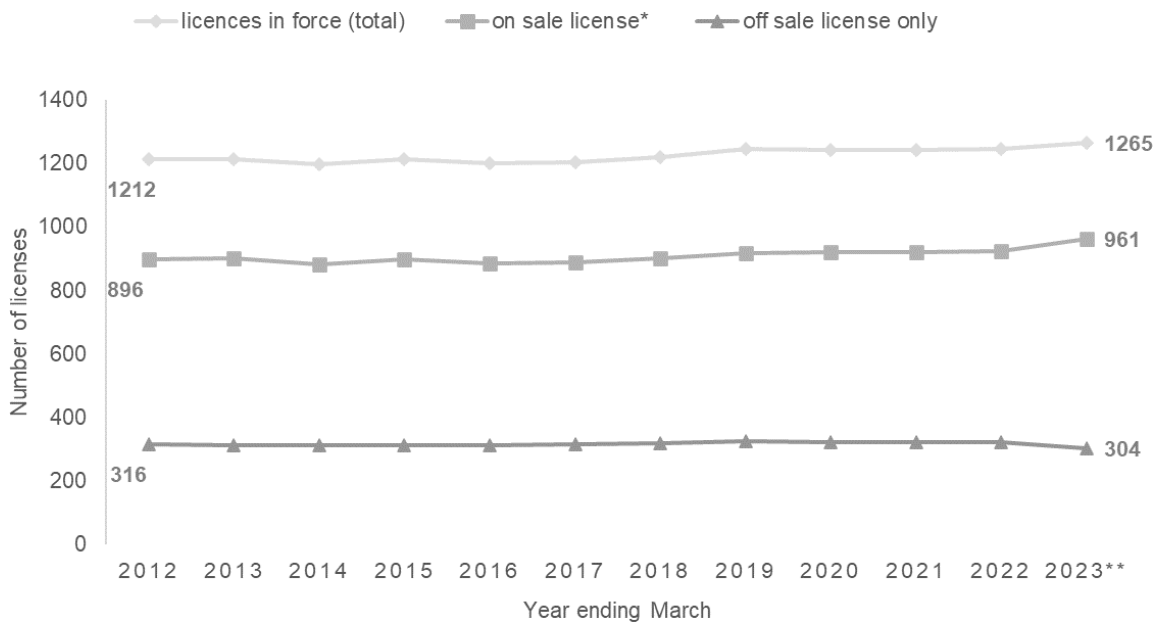
3.7. Alcohol premise licenses in Highland

Alcohol availability refers to the ease of access to alcohol, whether to drink on the premises (e.g. pubs, clubs or restaurants) or to drink off the premises (e.g. shops and supermarkets). Alcohol availability includes the number, capacity and opening hours of licensed alcohol premise outlets.

Across Highland, there are 1,265 alcohol premise licenses in operation. Three hundred and four are off-sales licenses, 282 are on-sales and 679 as on and off-sales. The number of alcohol licenses in force in Highland has increased gradually, primarily due to the number of on-sales premises (Figure 12). The reporting of alcohol licensing by the Scottish Government combines on-sales licensing with outlets licensed for on and off-sales, considering off-trade-only licensing as a separate grouping.

The data for 2023 were provided directly by the Highland Council and are provisional. The figures suggest an above-average annual increase in the number of on-sale licenses last year, partly balanced by a reduction in off-sales premises.

Figure 12: Number of premise licenses in force in Highland, 2012 - 2023



Source: Scottish Government Liquor Licensing Statistics

* The on sale licence category includes licences which allowed for both on sale transactions and off sale transactions

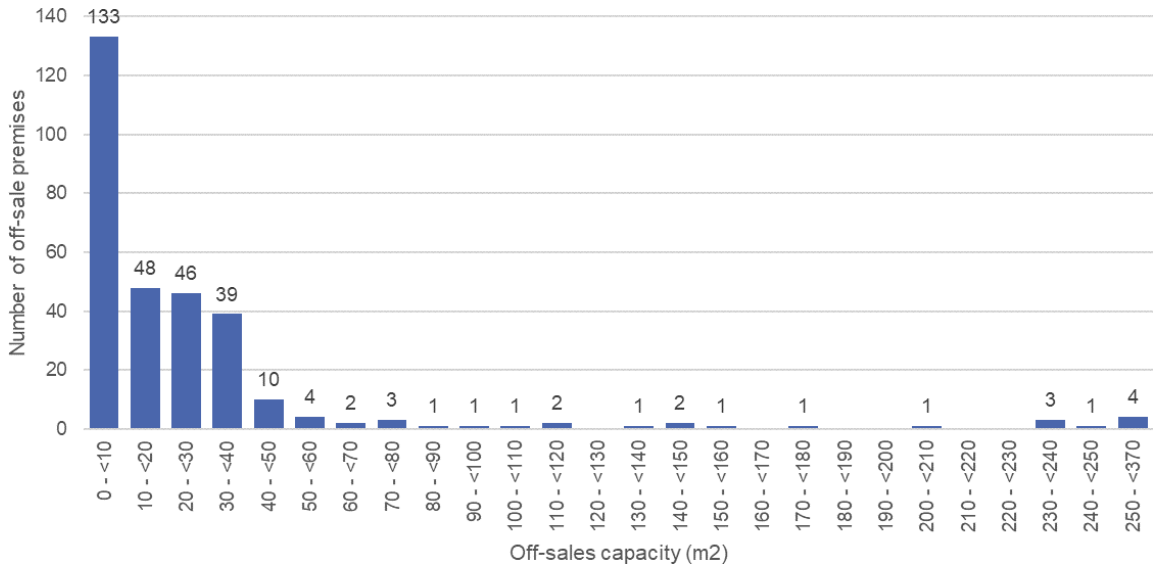
** Data provided by Highland Council and are provisional

A limitation of the data provided by the Highland Council is that beyond broad categories, there is no consistent classification of the types of alcohol outlets. On-premises include bars, clubs, hotels, producers (distilleries and breweries) and

restaurants that sell alcohol for consumption on-site. Off-sales premises include a variety of retail outlets that sell alcohol for consumption elsewhere. These include specialist off-sales shops, supermarkets, grocery stores, small convenience stores and garages. Sites licensed for both on and off-sales include hotels, public houses, clubs, restaurants and other entertainment venues. There will be substantial differences in the choice and volume of alcohol that individual retailers sell.

The data extract provided by the Highland Council includes the sales area in off-sales retail outlets in metres squared. Most off-sales outlets in Highland have a small sales area (Figure 13). The number and geographic distribution of off-license locations in operation ensures that alcohol is in ready supply to communities across Highland.

Figure 13: Distribution of off-sales premises license capacity in Highland, 2023



Source data: Highland Council

Drive and walk time analysis using a geographic information system (GIS) suggests that for most people in Highland, alcohol is highly accessible, involving short journey times to licensed locations (Table 9).

Table 9: Percentage of the Highland population able to access premises licensed to sell alcohol by driving and walking times

		Journey time category in minutes				
		0 - 5	5 - 15	15 - 30	30+	Total
All categories of licenced premises	Drive time	81.0%	9.5%	4.6%	4.9%	100%
	Walking time	30.3%	33.8%	20.7%	15.2%	100%
Off-licensed premises	Drive time	78.9%	12.6%	3.9%	4.5%	100%
	Walking time	20.1%	36.6%	20.4%	22.8%	100%

Source data: Highland Council
Drive and walk time categories: 0 to less than 5 minutes, 5 to less than 15 minutes, 15 to less than 30 minutes, 30 minutes and over

3.8. Alcohol outlet availability in Highland

While overall time to access gives an impression of the extent of alcohol licensing in Highland, the number and concentration of alcohol outlets in our communities are essential measures of access and exposure to alcohol.

Evidence from a systematic review identified significant positive relationships between the density of outlets and levels of violence, alcohol related traffic accidents, self-reported injuries and suicide, sexually-transmitted disease and child abuse or neglect[27].

Research conducted in Scotland and internationally has found an association between the number of licensed premises in an area and alcohol-related health problems[28]. Neighbourhoods with higher availability of alcohol outlets in Scotland have higher alcohol-related deaths and hospitalisations. The most deprived areas in Scotland have the highest concentration of licensed premises and significantly higher levels of alcohol-related population health harm than affluent areas[29].

Analyses of population access to licensed premises in Highland were undertaken by the Directorate of Public Health and Policy. The locations of outlets licensed to sell alcohol were obtained from the Highland Council Solicitor for the area's licensing boards in March 2023. Analyses looked at the distribution of all licensed premises and considered off-license retailers as a separate category, for datazones in the Highland Council area. Datazones, of which 312 are in Highland, are Scotland's principal small area statistical geography and have populations between 500 and 1,000[30]. Datazones are also the geography of the Scottish Index of Multiple Deprivation (SIMD), allowing analysis of licensing distribution by this classification[31].

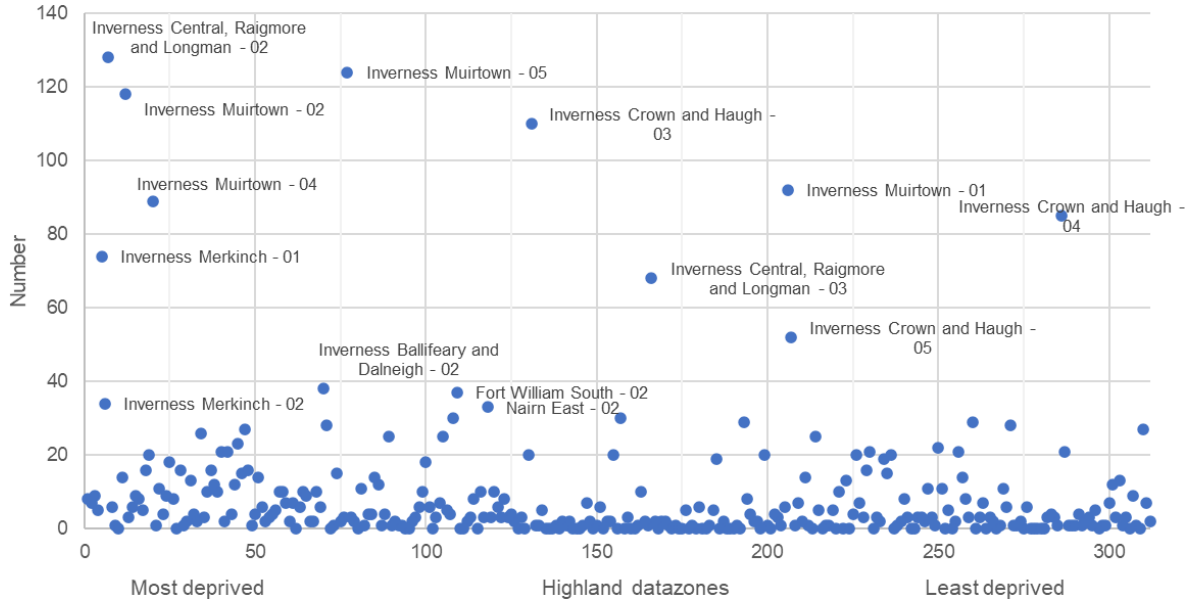
Using a GIS, a spatial access measure was calculated based on a fifteen-minute walk threshold from the population centre of each data zone area in Highland and the number of licensed locations that can be reached, including those in surrounding datazones. This method can highlight small areas with few or no licenses with access to nearby licenced premises in other datazones.

The number of outlets identified provides a measure of consumer access and the potential exposure of the community to alcohol sales. The calculation did not adjust for the size of the sales area of the outlet or the maximum capacity. More detailed classification of premises type could potentially facilitate the inclusion of these factors in the future.

Figure 14 and Figure 15 show the relationship between the spatial access measure and area deprivation defined by the Scottish Index of Multiple Deprivation. The horizontal axis is ordered from the most deprived area in Highland (ranked one) to

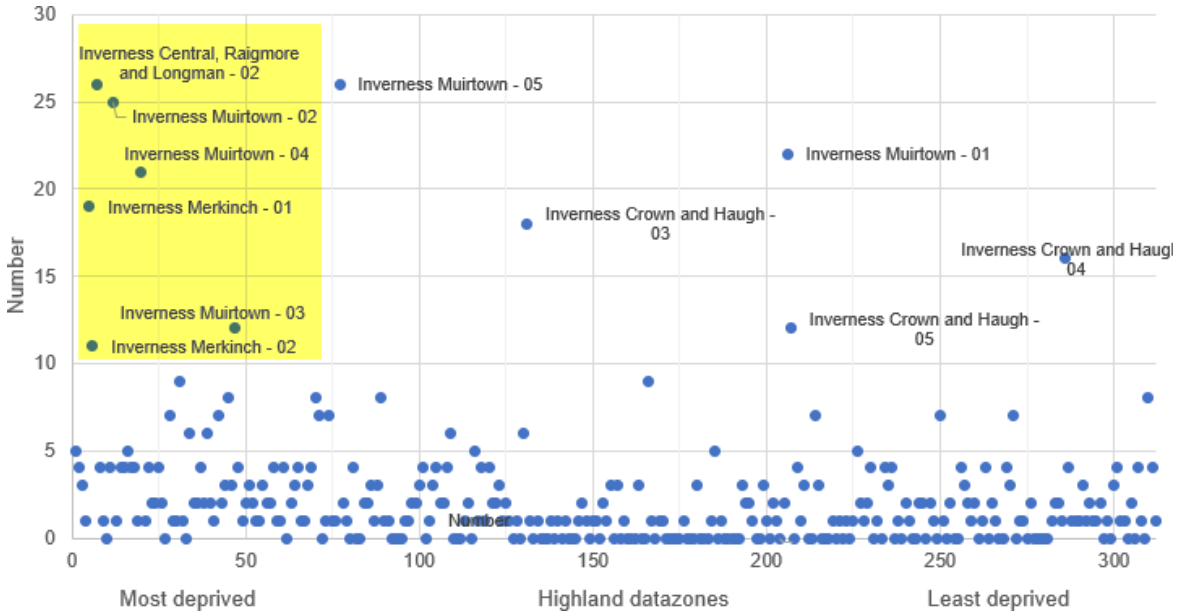
the least deprived area (ranked 312). The vertical axis shows the measure of access based on the number of outlets within 15 minutes walk.

Figure 14: Number of licensed premises accessible within 15 minutes walk from the population centre of datazones in Highland by their Scottish Index of Multiple Deprivation Local Authority rank



Source data: Highland Council

Figure 15: Number of off-license premises accessible within 15 minutes walk from the population centre of datazones in Highland by their Scottish Index of Multiple Deprivation Local Authority rank



Source data: Highland Council

Many of the named areas highlighted are within the environs of the Inverness City Centre. In this context, the all-licensing category includes diverse businesses servicing hospitality and entertainment for residents and visitors.

However, the access to off-licenses identifies considerably higher exposure to and opportunity for purchasing alcohol in some of Highland's most deprived neighbourhoods. Given the known association between deprivation and alcohol health-related harms, it should be a concern that a number of the communities in Highland with the highest availability of alcohol retailing outlets are among the most deprived neighbourhoods.

Understanding alcohol outlet density in Highland and the deprivation status of communities is necessary to inform licensing decisions that manage the local availability of alcohol and consider health-related harms. Increasing availability of alcohol within or within short distances of deprived areas may contribute to health inequalities.

3.9. Views of the public

A survey undertaken by the Directorate of Public Health and Policy in 2023 provides public opinion about alcohol provision and overprovision in Highland. The survey, distributed through a range of networks using an online SmartSurvey tool, collected the views of 323 people across Highland. This method was chosen to add another dimension to the discussion about alcohol overprovision in addition to quantitative data.

In total there were 323 responses to the survey. Of the respondents, 66.4% were female, 32.4% were male and 1.2% preferred not to answer this question. Most responses came from the age group 40-59 (58.7%), followed by those aged over 60 (21.4%). Respondents in the category aged under 25 had the lowest response of 2.5%. Responses were received from people across the Highland council area and reflected where different populations live, for example, Inverness, Wick and Fort William.

The key results are described in the following section, although it is not possible to report all the survey findings here. Further information is available from the Directorate of Public Health and Policy[32].

Public opinion on alcohol and availability

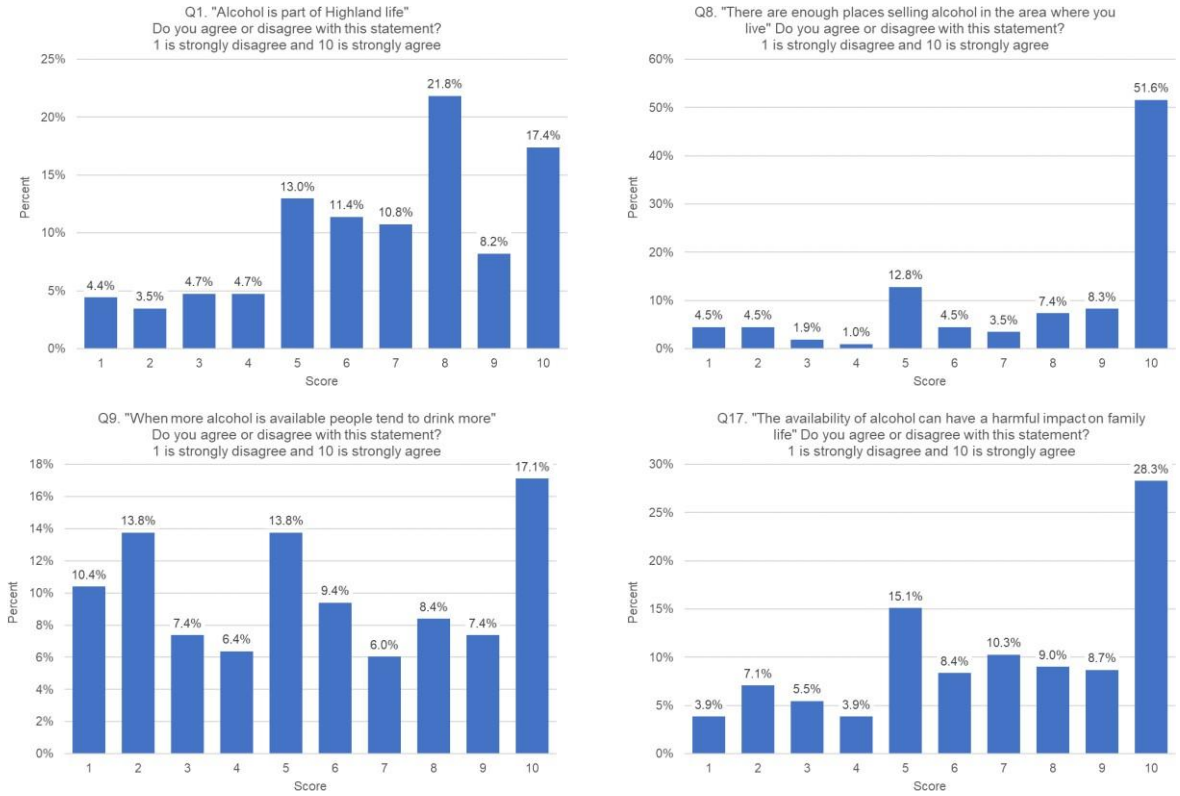
In Table 10, results to four statements the survey respondents were asked to score between the number 1 (strongly disagree) and 10 (strongly agree) are presented along with the average score for 2018 and 2023.

Table 10: Public opinion on alcohol and availability in Highland

Question: Do you agree or disagree with this statement?"	Average response 2023	Average response 2018	% Score 8, 9, 10 combined 2023
Alcohol is part of Highland life?	6.8	6.2	47.5
There are enough places selling alcohol in the area where you live?	7.9	8.2	67.8
When more alcohol is available people tend to drink more?	5.6	6.0	32.9
The availability of alcohol can have a harmful impact on family life?	6.8	7.0	64.3

Source: NHS Highland Directorate of Public Health and Policy 2023

Figure 16: Public Opinion on alcohol and availability in Highland



Source: NHS Highland Directorate of Public Health and Policy 2023

From the data presented in Table 10 and Figure 16, it can be observed for the question "*There are enough places selling alcohol in the area where you live*", 51.6% of respondents selected the score 10 or strongly agree. This is the strongest score out of the four questions. The question "*The availability of alcohol can have a harmful impact on family life*", 28.3% of respondents selected 10 or strongly agree. In comparison, the question "*When more alcohol is available people tend to drink more*" shows the score selected is split across the possible scores. This question, also, has the lowest combined scores 8, 9, and 10 at 32.9%. For the question "*Alcohol is part of Highland life*" the responses are also split across the range of possible scores.

Public opinion on alcohol and children and young people

The public survey asked the question "*In your view are there actions that will minimise exposure to children (under 16 years of age)?"*

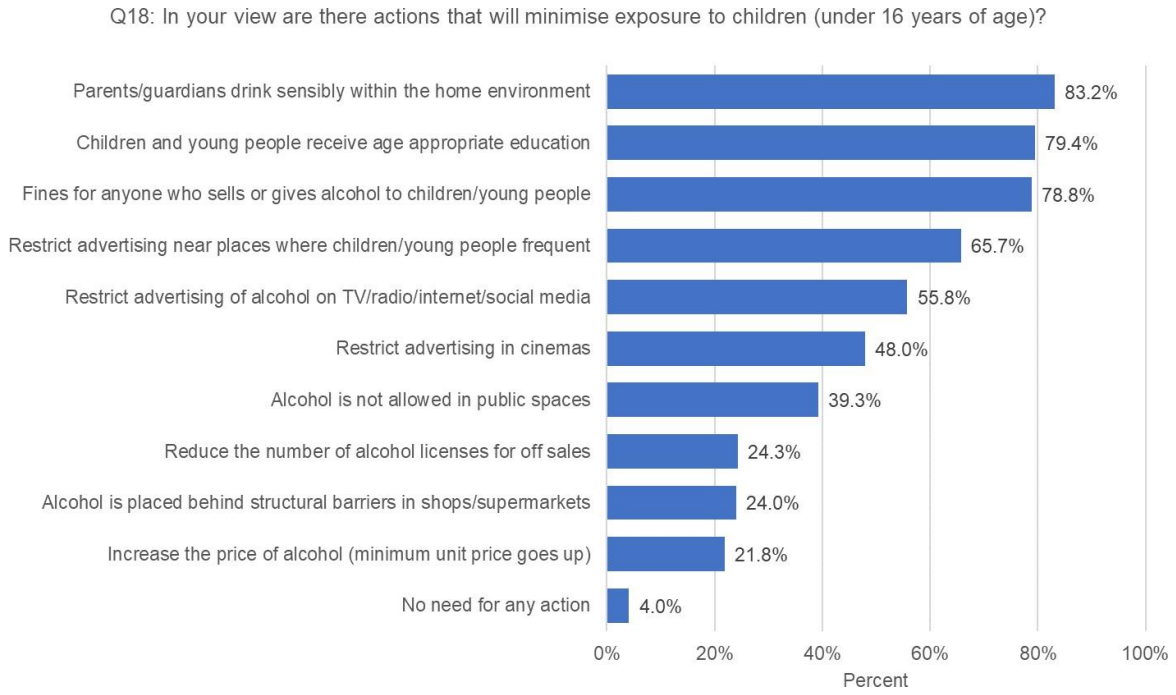
Using the results from the previous (2018) survey, an open text box question was used to construct this question about minimising exposure of alcohol to children under 16. Eleven actions were offered and respondents were asked to tick all that apply. There were 321 respondents to this question.

Public opinion on actions to minimise exposure of alcohol to children and young people in Highland are summarised in Figure 17. The action selected the most was 'parents/guardians drink sensibly within the home environment' (83.2%), followed by 'children and young people receive age appropriate education' (79.4%). 'Fines for anyone who sell or give alcohol to children/young people' (78.8%) was third.

The respondents were not adverse to advertising and marketing restrictions such as restricting advertising near schools and places where children/young people frequent (66%), and restricting advertising of alcohol on TV/radio/internet/social media (56%).

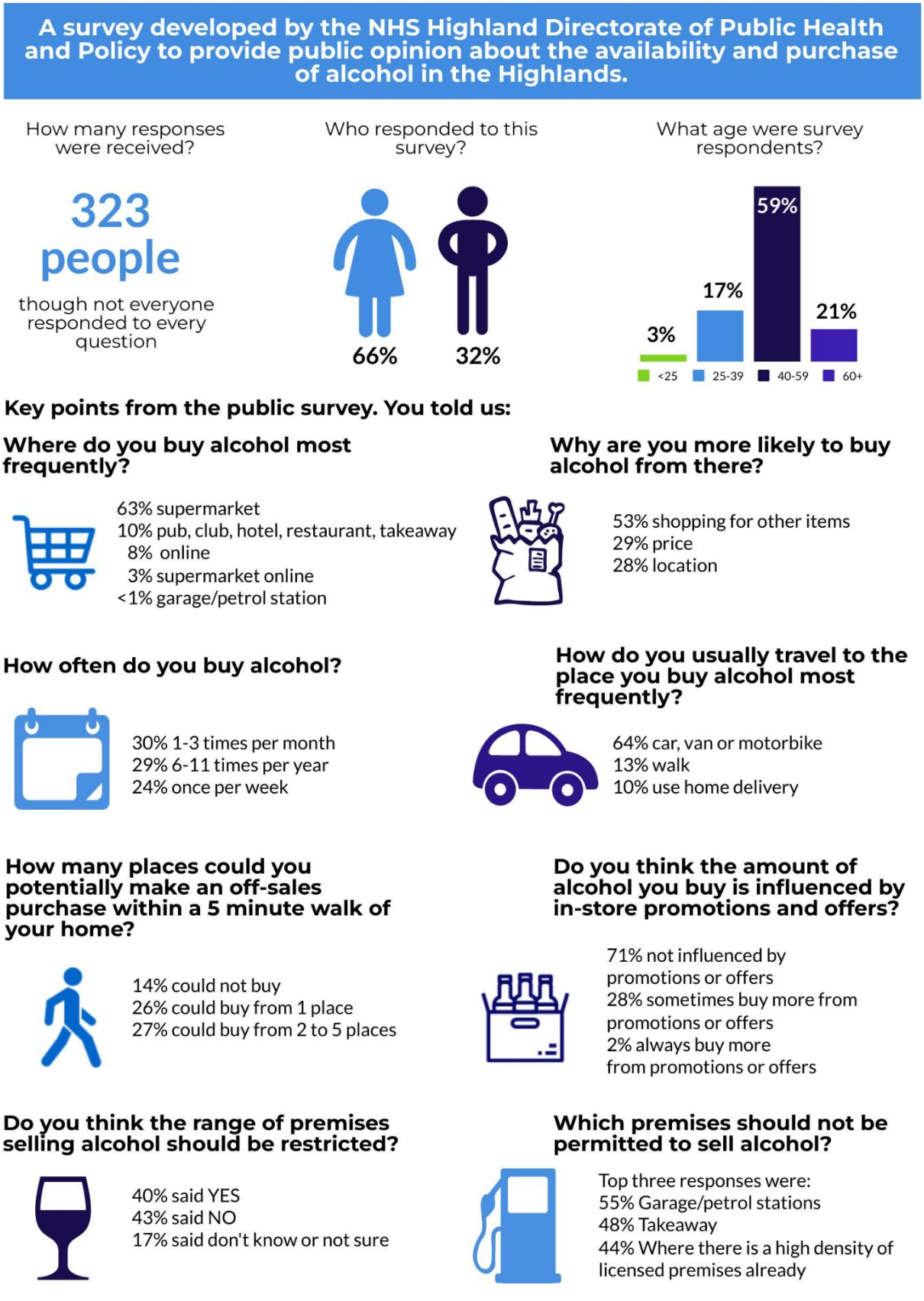
It is notable the World Health Organisation has recommended 'best buys' for non communicable disease to reduce alcohol consumption and these include an increase in taxes on alcohol beverages and enact and enforce physical restrictions regarding availability[33].

Figure 17: Public Opinion on actions to minimise exposure of alcohol to children and young people in Highland



Source: NHS Highland Directorate of Public Health and Policy 2023

Figure 18: Summary of views of the public on the availability and purchase of alcohol in Highland



Source: NHS Highland Directorate of Public Health and Policy 2023

Any other comments

The final question in the survey (Q19) was a free text box designed to collect any other comments the respondents wished to make. As expected, members of the public, approximately one quarter of all respondents, gave a range of views and were not always in agreement, however, there was a unifying desire to protect children from the harms of alcohol.

Below are examples of some of the comments made.

About responsibility:

The purchase of alcohol is down to the individual and we are all responsible for our own actions.	*The vast majority of people drink sensibly and shouldn't be penalised unduly, we have tough restrictions in place already.*

About affordability:

People will always drink. In the case of addiction, minimum pricing just means that people will neglect other basic needs to afford alcohol, and worsen quality of life as a result.	*Restrictions needed and increase in price are helpful tools but underlying issues of lack of activities is a big factor.*

About availability:

The availability of alcohol in supermarkets, grocery shops, etc, makes it very difficult for anyone with addiction issues to recover.	*I don't believe an availability of alcohol has an effect. If someone wants to obtain alcohol they will do so regardless of its location or availability.*
I don't think the ability to purchase alcohol at any time, or limiting the number of places that sell alcohol, would make a significant difference to people's consumption.	*To me, living in a remote and rural location there is no local provision at all, let alone an overprovision.*
In my view there are far too many outlets selling alcohol and that is part of the reason we have such a problem in Scotland.	*In our area the only supermarket is the [name of supermarket]. They refurbished some of their shops in recent years moving the alcohol aisle to the most prominent place, giving it special flooring and ensuring it was the widest aisle next to the first till.*

About Highland:

The culture of drinking in the Highlands has to change. Cheap prices and easily accessibly in supermarkets and small shops makes it more tempting and normalises buying a 'bottle' while you do your shopping.	*Alcohol continues to be big problem in the highlands. The change to binge drinking culture plays a part. Restrictions need and increase in price are helpful tools but underlying issues of lack of other activities is a big factor.*

About children and young people:

In teenagers there is a culture of drinking in the rural area I lived in, more so in relation to shinty which is the main sport for young adults where alcohol is consumed on the bus taking the team home after an away match. It concerns me that my young adults who are keen on sport will view this as normal.	*I moved back to Scotland with children - astonished to find that it's considered almost normal/a rite of passage to end up having your stomach pumped as a result of alcohol poisoning.*
I also feel that if you ban something or make it unobtainable then you actually make it more appealing to youngsters.	*No school raffle prizes, more activities for young people, alcohol prices to increase, legal age to drink to go up.*

General:

Alcohol is legal and has great economic benefits for Scotland. There are many other products more harmful to human health (including processed meat) which are not restricted. Look at processed meat eating first if you want to improve health.	*...the focus on alcohol is a red herring...the issues are much wider and complex and difficult to label under 'alcohol availability'...*
It should be spent on employing people with lived experience who are now in recovery. Such individuals can offer real practical help 24/7 to others with problems on the dependency/addiction spectrum.	*Restrictions will not reduce alcohol use. Prohibition never worked.*

4. Summary

In developing this report it is recognised that alcohol has an important place in Highland culture and contributes significantly to the local economy. The four recommendations are intended to tackle the overprovision of alcohol and to reduce alcohol-related harm.

The levels of alcohol-related health harm in the Highland Council area remain of serious concern. At a population level, consumption of alcohol is closely related to mortality from chronic liver disease. Death rates in Scotland are notably higher than most other European countries, including those shown representing southern Europe, northern Europe and Scandinavia (Figure 8). Furthermore, alcohol specific mortality rates are higher in Scotland that the other three UK constituent countries (Figure 7). From 2019 there is an increase in alcohol specific mortality.

In 2017-21, self-reported alcohol consumption data shows an estimated 30% of men and 15% of women in Highland drank more than 14 units a week, the low-risk drinking guideline (Table 7). This equates to almost 45,000 adults in Highland drinking at levels that are hazardous or harmful to their health. Self-reported weekly alcohol consumption in Highland is at a similar level compared to Scotland.

There is clear evidence that people living in deprived areas are many times more likely to experience an alcohol-related hospital or die of an alcohol-related cause. Alcohol-related hospital admissions in NHS Highland, 2021/22, were almost four times higher in the most deprived areas when compared to the least deprived areas (Figure 9).

Data for the nine community partnerships are available such as Alcohol-related mortality and hospital admission rates (2020/21) which help understand local variations. The significant differences found are as follows (Table 8):

- Inverness partnership area had a statistically significant higher alcohol-related hospital admission rate compared to Highland in 2020/21.
- Badenoch and Strathspey and Sutherland partnership areas both had statistically significantly lower alcohol-related hospital admission rates than the Highland average.

A breakdown of accidental dwelling fires by Highland Area Committee where alcohol and drugs use was a contributory factor is available. For the time period between 2017/18 and 2022/23, the greatest numbers of fires occurred in Inverness (49) and Ross and Cromarty (23).

There is a strong link between violent crime and alcohol. Figures from the annual Highland Council Performance Survey show that in 2019 more than two thirds (69%) of Highland Council residents felt concerned about alcohol misuse in their local area.

The impact of the downward trend of on-trade sales and upward trend of off-trade sales is important and should be considered in developing the policy statement. In Figure 4 it can be seen that the COVID-19 pandemic had an impact on alcohol sales with on-trade sales showing a dramatic decrease and on sales showing a corresponding increase in 2019. This was because the population, due to national restrictions and self isolation rules, changed their purchasing habits to buying more off-trade alcohol. The next sales data release might indicate if these trends are returning to pre COVID-19 levels.

Furthermore, this report provides evidence in Table 9 of the population's ease of access to alcohol because 91% of the population of Highland are within a fifteen minute drive of a licensed premise.

Understanding of alcohol outlet density in Highland and the deprivation status of communities in section 3.8 should be considered in licensing decisions that manage the local availability of alcohol and consider health-related harms. Increasing availability of alcohol within or within short distances of deprived areas may contribute to health inequalities.

From the public survey data presented in Table 10 and Figure 16 it can be observed for the question "there are enough places selling alcohol in the area where you live" 51.6% of respondents selected 10 or strongly agree with an average response score of 7.9. The survey respondents also selected options about marketing and advertising restrictions such as places near where children and young people frequent (66%) and on TV/radio/internet/social media (56%).

5. Recommendations

Option 1
The Highland Licensing Board should consider in relation to off-sales the overall supply of alcohol in Highland as well as individual premises and agree that the current supply is sufficient. To limit the supply, no more off-sales licenses are agreed, where the sales capacity is 40 square meters and over.

Key Evidence

- Standardised mortality rates for Scotland in comparison to European rates (Figure 8)
- Alcohol-related mortality and alcohol-related hospital admission rates (Figure 5 and Figure 6)
- Increased supply of alcohol through off-sales trade sector (Figure 4)
- Alcohol accounts for 8% of the overall disease burden in Scotland (Figure 1)
- Alcohol related hospital admissions between deprivation groups (Figure 9)
- Highland patterns of harmful drinking (Table 7 and Figure 10)
- Fear of alcohol misuse in local areas (Table 2)
- Population access to alcohol licensed premises; 5 minute drive and walk times (Table 9)
- Public opinion suggesting an awareness of the availability of alcohol within Highland council area and an awareness of the importance of protecting children from harm (Section 3.9)

Option 2
The Highland Licensing Board should consider in relation to off-sales the overall supply of alcohol in Highland as well as individual premises and agree that the current supply is sufficient. To limit the supply, no more off-sales licenses are agreed, where the sales capacity is 30 square meters and over.

Key Evidence

- As option 1

Option 3
The Highland Licensing Board should consider in relation to off-sales the overall supply of alcohol in Highland as well as individual premises and agree that the current supply is sufficient. To limit the supply, no more off-sales licenses are agreed, where the sales capacity is 40 square meters and over, AND no more on-sales licenses are agreed in the Scottish Index of Multiple Deprivation quintile 1 areas of Highland.

Key Evidence

- As option 1

- Alcohol- related mortality and hospital admission rates for Highland Community Partnership area (Table 8)
- Differences in alcohol-related hospital admissions between deprivation groups in Highland (Figure 9)
- Understanding of alcohol outlet density and the deprivation status of communities in Highland (Section 3.8)

Note: see Appendix 1 for SIMD Highland data zone list.

Option 4

The Highland Licensing Board should consider in relation to off-sales the overall supply of alcohol in Highland as well as individual premises and agree that the current supply is sufficient. To limit the supply, no more off-sales licenses are agreed, where the sales capacity is 30 square meters and over, AND no more on sales licenses are agreed in the area of Inverness which has higher than average alcohol-related admission rates.

Key Evidence

- As option 1
- Alcohol- related mortality and hospital admission rates for Highland Community Partnership area (Table 8)
- Differences in alcohol-related hospital admissions between deprivation groups in Highland (Figure 9)
- Understanding of alcohol outlet density and the deprivation status of communities in Highland (Section 3.8)

Note: see Appendix 1 for SIMD Highland data zone list.

Appendix 1

Highland datazones in the Scottish Index of Multiple Deprivation most deprived national and local quintiles

Datazone name	SIMD rank	SIMD national quintile	SIMD local quintile
Inverness Merkinch - 04	8	1	1
Inverness Merkinch - 03	174	1	1
Wick South - 03	215	1	1
Invergordon - 01	216	1	1
Inverness Merkinch - 01	240	1	1
Inverness Merkinch - 02	436	1	1
Inverness Central, Raigmore and Longman - 02	458	1	1
Inverness Drummond - 03	535	1	1
Nairn West - 06	575	1	1
Alness - 04	628	1	1
Wick North - 03	659	1	1
Inverness Muirtown - 02	682	1	1
Seaboard - 06	689	1	1
Inverness Hilton - 04	714	1	1
Alness - 02	776	1	1
Inverness Ballifeary and Dalneigh - 04	791	1	1
Alness - 03	905	1	1
Wick South - 02	912	1	1
Fort William South - 08	941	1	1
Inverness Muirtown - 04	972	1	1
Alness - 01	999	1	1
Wick South - 04	1004	1	1
Inverness Central, Raigmore and Longman - 04	1096	1	1
Invergordon - 04	1099	1	1
Fort William South - 07	1129	1	1
Dingwall - 03	1132	1	1
Inverness Kinmylies and South West - 01	1220	1	1
Inverness Ballifeary and Dalneigh - 06	1225	1	1
Seaboard - 02	1369	1	1
Inverness Westhill - 08	1387	1	1
Inverness Central, Raigmore and Longman - 01	1400	1	1
Caithness South - 03	1416	1	1
Thurso West - 04	1422	1	1
Thurso West - 01	1439	2	1
Inverness Smithton - 01	1476	2	1
Invergordon - 06	1540	2	1
Wick North - 01	1555	2	1
Tain - 02	1604	2	1
Inverness Drummond - 04	1612	2	1
Nairn East - 03	1760	2	1
Caithness North West - 01	1838	2	1
Inverness Ballifeary and Dalneigh - 05	1887	2	1
Inverness Central, Raigmore and Longman - 06	1895	2	1
Inverness Ballifeary and Dalneigh - 01	1920	2	1
Inverness Ballifeary and Dalneigh - 03	1922	2	1

Tain - 03	1926	2	1
Inverness Muirtown - 03	1961	2	1
Wick North - 02	1976	2	1
Conon - 04	2028	2	1
Inverness East Rural - 05	2064	2	1
Dingwall - 05	2103	2	1
Invergordon - 03	2162	2	1
Inverness Kinmylies and South West - 02	2189	2	1
Dingwall - 01	2190	2	1
Inverness Hilton - 01	2212	2	1
Sutherland East - 06	2216	2	1
Sutherland East - 02	2220	2	1
Alness - 06	2224	2	1
Lochaber East and North - 04	2290	2	1
Caithness South - 01	2298	2	1
Thurso East - 03	2334	2	1
Skye North East - 02	2344	2	1
Sutherland East - 05	2347	2	1
Inverness Hilton - 03	2362	2	1

Source: Scottish Index of Multiple Deprivation 2020[31]

References

[1] Licensing (Scotland) Act 2005. Edinburgh: Scottish Government; 2005. http://www.legislation.gov.uk/asp/2005/16/contents (accessed April 2023)

[2] Public Health England. The Public Health Burden of Alcohol and the Effectiveness and Cost-Effectiveness of Alcohol Control Policies: An Evidence Review. London: Public Health England; 2016. https://www.gov.uk/government/publications/the-public-health-burden-of-alcohol-evidence-review (accessed April 2023)

[3] Public Health England. The range and magnitude of alcohol's harm to others: a five-nations report. London: Public Health England; 2019. https://www.gov.uk/government/publications/alcohols-harm-to-others (accessed April 2023)

[4] Scottish Public Health Observatory. Hospital admissions, deaths and overall burden of disease attributable to alcohol consumption in Scotland. Edinburgh: NHS Health Scotland; 2018. https://www.scotpho.org.uk/media/1597/scotpho180201-bod-alcohol-scotland.pdf (accessed April 2023)

[5] Alcohol Focus Scotland. Alcohol and Violent Crime briefing. 2018. http://www.alcohol-focus-scotland.org.uk/media/310765/alcohol-and-violent-crime-april-18.pdf (accessed April 2023)

[6] Centre for Research on Environment, Society and Health (CRESH). Alcohol Outlet Availability and Harm in Highland. Alcohol Focus Scotland; 2018. https://www.alcohol-focus-scotland.org.uk/media/310745/alcohol-outlet-availability-and-harm-in-highland.pdf (accessed April 2023)

[7] Scottish Government. Scottish Crime and Justice Survey 2019/20: Main Findings. Edinburgh: Scottish Government; 2022. https://www.gov.scot/publications/scottish-crime-justice-survey-2019-20-main-findings/documents/ (accessed April 2023)

[8] Scottish Government. Recorded Crime in Scotland, 2021-22. https://www.gov.scot/publications/recorded-crime-scotland-2021-2022/documents/ (accessed April 2023)

[9] Scottish Government Social Research. The Societal Cost of Alcohol Misuse in Scotland for 2007. Scottish Government; 2010. http://drugslibrary.wordpress.stir.ac.uk/files/2017/03/SGalocohol_cost_to_society.pdf (accessed April 2023)

[10] Johnston M, Ludbrook A, Jaffray M. Inequalities in the Distribution of the Costs of Alcohol Misuse in Scotland: A Cost of Illness Study. Alcohol and Alcoholism, 2012;47(6):725-731.https://doi.org/10.1093/alcalc/ags092

[11] Social Market Foundation, Scottish Health Action on Alcohol Problems (SHAAP). Getting in the spirit? Alcohol and the Scottish economy. SHAAP; 2023. https://shaap.org.uk/downloads/reports/483-getting-in-the-spirit-alcohol-and-the-scottish-economy.html (accessed April 2023)

[12] World Health Organisation (WHO). International Guide for Monitoring Alcohol Consumption and Related Harm. Geneva: WHO; 2000. https://apps.who.int/iris/handle/10665/66529 (accessed April 2023)

[13] Ponce Hardy V, Giles L. Monitoring and Evaluating Scotland's Alcohol Strategy: Monitoring Report 2022. Edinburgh: Public Health Scotland; 2022. https://www.publichealthscotland.scot/media/13693/mesas-2022_english_jun2022.pdf (accessed April 2023)

[14] Richardson E, Gillies L, Fraser C. Alcohol sales and harm in Scotland during the COVID-19 pandemic. Edinburgh: Public Health Scotland; 2022. https://www.publichealthscotland.scot/media/11870/alcohol-sales-and-harm-in-scotland-during-the-covid-19-pandemic.pdf (accessed April 2023)

[15] Public Health Scotland. Monitoring and Evaluating Scotland's Alcohol Strategy (MESAS) monitoring report 2022 – alcohol sales. Edinburgh: Public Health Scotland; 2022. https://www.publichealthscotland.scot/media/13691/mesas-monitoring-report-2022-alcohol-sales.xlsx (accessed April 2023)

[16] Department of Health and Social Care. UK Chief Medical Officers' Low Risk Drinking Guidelines. London: Department of Health and Social Care; 2016. https://www.gov.uk/government/publications/alcohol-consumption-advice-on-low-risk-drinking (accessed April 2023)

[17] Public Health Scotland. Alcohol related hospital statistics Scotland financial year 2021 to 2022. https://publichealthscotland.scot/publications/alcohol-related-hospital-statistics/alcohol-related-hospital-statistics-scotland-financial-year-2021-to-2022/ (accessed April 2023)

[18] National Records of Scotland. Alcohol-specific deaths 2021. https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/deaths/alcohol-deaths (accessed April 2023)

[19] Office for National Statistics. Alcohol-specific deaths in the UK: registered in 2020. https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/alcoholrelateddeathsintheunitedkingdom/registeredin2020#alcohol-specific-deaths-in-the-uk (accessed April 2023)

[20] Jones L, McCoy E, Bates G, Bellis M, Sumnall H. Understanding the alcohol harm paradox in order to focus the development of interventions: Final Report. Alcohol Research UK; 2015. https://alcoholchange.org.uk/publication/understanding-the-alcohol-harm-paradox (accessed April 2023)

[21] Scottish Government. Public Health Priorities for Scotland. Edinburgh: Scottish Government; 2018. https://www.gov.scot/publications/scotlands-public-health-priorities/documents/ (accessed April 2023)

[22] Highland Alcohol and Drugs Partnership. Rights, Respect and Recovery in Highland: Alcohol and Drugs Strategy 2020 – 2023. https://www.highland-

adp.org.uk/userfiles/file/hadp_general/HADP-Strategy-2020-2023-Nov-2020-FINAL.pdf (accessed April 2023)

[23] Scottish Government. Getting it right for every child (GIRFEC). https://www.gov.scot/policies/girfec/ (accessed April 2023)

[24] Scottish Government. Scottish Schools Adolescent Lifestyle and Substance Use Survey (SALSUS) 2018. https://www.gov.scot/collections/scottish-schools-adolescent-lifestyle-and-substance-use-survey-salsus/ (accessed April 2023)

[25] NHS Highland Public Health Intelligence. Adult Health and Wellbeing Profiles. https://www.nhshighland.scot.nhs.uk/staff-and-partners/public-health-profiles/

[26] Scottish Public Health Observatory. Online Profiles Tool. https://scotland.shinyapps.io/ScotPHO_profiles_tool/ (accessed April 2023)

[27] Popova S, Giesbrecht N, Bekmuradov D, and Patra J. Hours and days of sale and density of alcohol outlets: impacts on alcohol consumption and damage: a systematic review. Alcohol and Alcoholism. 2009;44(5):500-516. https://doi.org/10.1093/alcalc/agp054

[28] Richardson E, Hill S, Mitchell R, Pearce J, Shortt N. Is local alcohol outlet density related to alcohol-related morbidity and mortality in Scottish cities? Health Place. 2015;33:172-80. https://doi.org/10.1016/j.healthplace.2015.02.014

[29] Shortt N, Tisch C, Pearce J, *et al.* A cross-sectional analysis of the relationship between tobacco and alcohol outlet density and neighbourhood deprivation. BMC Public Health. 2015;15:1014. https://doi.org/10.1186/s12889-015-2321-1

[30] Scottish Government. Data Zone Boundaries 2011. https://www.data.gov.uk/dataset/ab9f1f20-3b7f-4efa-9bd2-239acf63b540/data-zone-boundaries-2011 (accessed April 2023)

[31] Scottish Government. Scottish Index of Multiple Deprivation 2020. https://www.gov.scot/collections/scottish-index-of-multiple-deprivation-2020/ (accessed April 2023)

[32] Directorate of Public Health and Policy. Survey of the availability and purchase of alcohol in the Highlands. Inverness: NHS Highland; 2023

[33] World Health Organisation. Tackling NCDS: 'Best buys' and other recommended interventions for the prevention and control of noncommunicable diseases. WHO; 2017. https://apps.who.int/iris/bitstream/handle/10665/259232/WHO-NMH-NVI-17.9-eng.pdf (accessed April 2023)