



# Illicit tobacco in New Zealand

2022 Full Year Report



31 May 2023

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**31<sup>st</sup> May 2023**

### **Important notice**

This report of key findings (the 'Report') has been prepared by KPMG LLP. The Report was commissioned by Imperial Tobacco New Zealand (ITNZ), called the 'beneficiary' in this Report, on the basis of a contract between the beneficiary and KPMG LLP dated 14 July 2022.

This Report has been prepared on the basis of fieldwork carried out between 14 July 2022 and 23 March 2023. The Report has not been updated for subsequent events or circumstances.

Information sources, the scope of our work, and scope and source limitations are set out in the Report's footnotes and methodology. The scope of our work, information sources used, and any scope and source limitations were fixed by agreement with the beneficiary. The scope of our work entailed considering historical facts and circumstances regarding the illicit tobacco trade in New Zealand set out in the Report for the calendar year ended 31 December 2022. We have satisfied ourselves, where possible, that the information presented in this Report is consistent with the information sources used, but we have not sought to establish the reliability of the information sources by reference to other evidence. We relied upon and assumed without independent verification, the accuracy and completeness of information available from public and third party sources.

We note that historical facts and circumstances may no longer be representative of the current or future position regarding the subject matter of the Report.

This Report is not written for the benefit of any party other than the beneficiary. In preparing this Report we have only considered the interests, needs, or circumstances of the beneficiary. This Report is not suitable to be relied on by any party other than the beneficiary. Any person or entity other than the beneficiary who chooses to rely on this Report or any part of it does so at their own risk. To the fullest extent permitted by law, KPMG LLP does not assume any responsibility and will not accept any liability in respect of this Report to any party other than the beneficiary.

Without limiting the general statement above, although we have prepared this Report in agreement with the beneficiary, this Report has not been prepared for the benefit of any manufacturer of tobacco products nor for any other person or entity who might have an interest in the matters discussed in this Report, including, for example, those who work in or monitor the tobacco or public health sectors or those who provide goods or services to those who operate in those sectors.



# Glossary

<b>AUD</b>	Australian Dollar
<b>BATNZ</b>	British American Tobacco (New Zealand) Limited
<b>Bn</b>	Billion
<b>c.</b>	Circa
<b>CAGR</b>	Compound Annual Growth Rate
<b>CAWI</b>	Computer aided web interview
<b>CCA</b>	Customs controlled area - a secure and controlled environment in which the activities that take place are monitored or conducted by Customs and that is an area that must be licensed by Customs under section 56 of the <i>Customs and Excise Act 2018</i> . This includes places where goods are inspected and where duty free or excisable goods are manufactured, sold or stored
<b>Contraband</b>	Genuine manufactured cigarettes that are sold without the payment of applicable excise taxes in the market of consumption. Contraband tend to have been bought in a low-tax country and brought into the country of consumption illegally or acquired without taxes (for export purposes) and illegally re-sold in the market of consumption. This includes genuine products that are brought into a country in amounts exceeding the personal allowance; in New Zealand this limit is 50 cigarettes or 50 grams of tobacco per person
<b>Counterfeit</b>	Manufactured cigarettes that are illegally manufactured and carry the trademark and/or branding of a legally manufactured brand without the consent of the trademark owner. Counterfeit cigarettes are also known as fake cigarettes. For the purposes of this analysis, data relating to counterfeit is not included within the definition of contraband
<b>Customs</b>	New Zealand Customs Service
<b>Domestic cigarettes</b>	Cigarettes that are produced for consumption in New Zealand
<b>FMC</b>	Factory manufactured cigarettes
<b>G</b>	Gram
<b>H1</b>	First half of the year i.e., the period from January through June (e.g., 1 January 2022 to 30 June 2022)
<b>H2</b>	Second half of the year i.e., the period from July through December (e.g., 1 July 2022 to 31 December 2022)
<b>Illicit whites</b>	Manufactured cigarettes that are usually manufactured legally in one country/market but which the evidence suggests have been smuggled across borders during their transit to New Zealand, where they have limited or no legal distribution and are sold without the payment of tax. These flows include domestic illicit whites and non-domestic illicit whites
<b>Inflows</b>	Total volume of cigarettes coming into New Zealand
<b>ITNZ</b>	Imperial Tobacco New Zealand Limited
<b>Kg</b>	Kilogram
<b>KPMG</b>	“KPMG” or “we” (and derivatives) means “KPMG LLP” (a UK limited liability partnership)
<b>LDS</b>	Legal domestic sales

# Glossary

<b>Loose tobacco</b>	Loose leaf tobacco sold in pouches used in roll your own (RYO) cigarettes, which is consumed using rolling paper or tubes
<b>M</b>	Million
<b>MOH</b>	Ministry of Health
<b>ND(L)</b>	Non-domestic legal is the legitimate tobacco purchased in duty free or abroad within personal allowance limits
<b>Non-domestic cigarettes</b>	Cigarettes that are not from New Zealand (i.e., no health warnings or non-domestic health warning, brands not sold in New Zealand, packs with identifying marks from other markets such as tax stamps)
<b>NZ</b>	New Zealand
<b>NZD</b>	New Zealand Dollar
<b>Outflows</b>	Legitimate tobacco purchase in New Zealand and taken abroad
<b>PMNZ</b>	Philip Morris (New Zealand) Limited
<b>Pp</b>	Percentage point
<b>Project Stella</b>	A study of the illicit cigarette market in the European Union, UK, Norway and Switzerland by KPMG. Previously called Project SUN
<b>Q1</b>	First quarter to the end of March (e.g., 1 January 2022 to 31 March 2022)
<b>Q2</b>	Second quarter to the end of June (e.g., 1 April 2022 to 30 June 2022)
<b>Q3</b>	Third quarter to the end of September (e.g., 1 July 2022 to 30 September 2022)
<b>Q4</b>	Fourth quarter to the end of December (e.g., 1 October 2022 to 31 December 2022)
<b>Report</b>	Refers to this report of key findings on illicit tobacco in New Zealand dated <b>xx June 2023</b>
<b>RRP</b>	Recommended retail price
<b>RYO</b>	Roll your own cigarettes which have been rolled by consumers using loose tobacco
<b>Tobacco grown at home</b>	Home grown tobacco which has been consumed by the grower (legal). In New Zealand it is currently permitted for adults to grow unlimited amounts of tobacco and manufacture up to 5 kilograms of tobacco per year, provided it is exclusively for their personal use and not for sale to any other person
<b>Tobacco returns</b>	Tobacco sales data provided to the MOH by all tobacco importers and manufacturers, made publicly available and used by KPMG to determine legal domestic sales volumes
<b>Unbranded tobacco</b>	Illegal loose leaf tobacco upon which no duty has been paid and which carries no labelling or health warnings. It is sold and consumed either in RYO form or inserted into empty cigarette tubes, although according to the industry, there is limited evidence of the use of tubes in New Zealand. Unbranded tobacco can come from either imported product which enters New Zealand illegally, or through tobacco which is grown in New Zealand, but has been sold or given away illegally
<b>Unspecified</b>	Cigarette packs that do not bear specific market labelling or duty free labelling
<b>WSPM</b>	WSPM Group

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# 01

# Executive summary and key findings

- 1.1 Key messages
- 1.2 The purpose of this Report
- 1.3 KPMG LLP's anti-illicit tobacco experience

# Executive summary

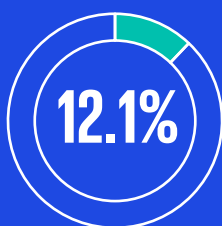
## 167.2k kgs

### Illicit tobacco consumed

Between 2019 and 2022,

- Total illicit decreased by 10.1% p.a.
- Unbranded tobacco decreased by 10.6% p.a.
- Contraband declined by 8.9% p.a.

### % of total consumption that was illicit

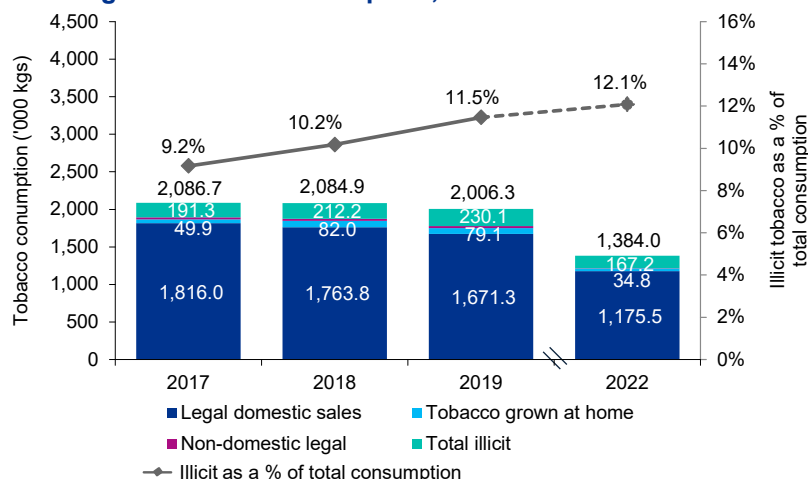


- Proportion of illicit tobacco consumption increased by 0.6 percentage points (pp) since 2019

### Share of illicit tobacco consumption (% of total)

- Unbranded tobacco: 57% (down from 58% in 2019)
- Contraband: 43% (up from 42% in 2019)
- Counterfeit: 0.1%

## Consumption of tobacco products by category and illicit as a percentage of overall consumption, 2017 - 2022<sup>(1)(a)(b)(c)(d)(e)</sup>



### Tobacco consumption in New Zealand declined in 2022

- This is the first report produced since 2019 and so does not capture the impact of COVID
- The total volume of tobacco consumed in New Zealand in 2022 was 1,384.0 thousand kilograms (kgs), representing a decline of circa (c.) 11.6% p.a. since 2019
  - This was largely driven by an 11.1% p.a. decrease in legal domestic sales (LDS) during this period
- The volume of Illicit tobacco consumption declined by 10.1% p.a. between 2019 and 2022. However, since total consumption declined at a faster rate during this time period, illicit consumption as a proportion of total consumption increased from 11.5% in 2019 to 12.1% in 2022
- If this 167.2 thousand kgs of illicit tobacco had been consumed legally, it would have represented an estimated excise value of NZD 247.8 million<sup>(f)</sup>

### Illicit tobacco consumption grew as a percentage of total consumption

- Between 2019 and 2022, there was a decline in the volumes of both contraband (8.9% p.a.) and unbranded tobacco (10.6% p.a.)
- Counterfeit accounted for a small proportion (0.1%) of illicit consumption
- The share of contraband increased by 1.7 pp to 43% of the total illicit amount, whereas the share of unbranded tobacco decreased by 1.0 pp to 57%
  - Flows from China and South Korea, including duty-free, constituted the majority of non-domestic manufactured cigarette flows, accounting for 34% and 28% of total non-domestic flows respectively
- Approximately 0.1% of total consumption was estimated to be non-domestic illicit whites (included within contraband)

### Legal tobacco consumption declined; primarily due to legal domestic sales

- Home grown tobacco declined by 24.0% p.a. between 2019 and 2022 and accounted for 2.5% of total consumption in 2022
- Due to a reduction in travel as a result of border closures, non-domestic legal (ND(L)) consumption declined at a compound annual growth rate (CAGR) of 36.8% p.a. between 2019 and 2022 and constituted only 0.5% of total consumption in 2022

- Notes:
- (a) Data labels of 0.5 and below have been removed from the chart for clarity
  - (b) Numbers for 2020 and 2021 are not available as the study had not been conducted that year
  - (c) Numbers above may not sum due to rounding
  - (d) Non domestic legal consumption on the chart may not be visible due to its scale
  - (e) Due to border closures in New Zealand in the first half of 2022 (H1), empty pack surveys were only conducted in Q3 and Q4 in 2022. As a result, we have adjusted weighting for the surveys in our analysis (refer to page 43 for further details)
  - (f) Calculated based on the excise tax rate for 2022, i.e., New Zealand Dollar (NZD) 1,098.37 per 1,000 cigarettes and NZD 1,565.18 per kilo tobacco content

Sources: (1) Industry data; see specific report sections for further detail

# KPMG in the UK is a leading advisor in the field of illicit tobacco consumption measurement

## 1.2 The purpose of this Report

Imperial Tobacco New Zealand Limited (ITNZ) have commissioned KPMG in the UK to estimate the size of the consumption of illicit tobacco in New Zealand. The purpose of this Report is:

1. To provide an overview of the nature of the legal and illicit tobacco markets in New Zealand, and
2. To provide an independent estimate of the size of the illicit tobacco market in New Zealand

This full year 2022 Report measures the consumption of illicit tobacco in New Zealand. It reports on events occurring during the twelve month period from January 2022 through to December 2022. This 2022 Report is produced using a methodology in line with previous KPMG illicit tobacco measurement, including KPMG's 'Illicit Tobacco in Australia' reports and is consistent with the previous 'Illicit Tobacco in New Zealand' reports.

## 1.3 KPMG LLP's anti-illicit tobacco experience

KPMG in the UK has significant experience in the measurement of illicit tobacco consumption across a number of markets. Our work has covered markets in Oceania, Europe, Latin and North America, Asia and the Middle East.

Our work was pioneered in Europe where we have published an annual report on illicit cigarette consumption since 2006. In 2013, it was conducted on a pan-industry basis for the first time. In 2021, the report was funded by Philip Morris Products SA. The study included all 27 European Union Member States (with previous reports covering all member states at that point in time). The project was conducted for the seventeenth time in 2022, the study also includes the non-EU markets of UK, Norway and Switzerland.



# 02

# New Zealand tobacco market

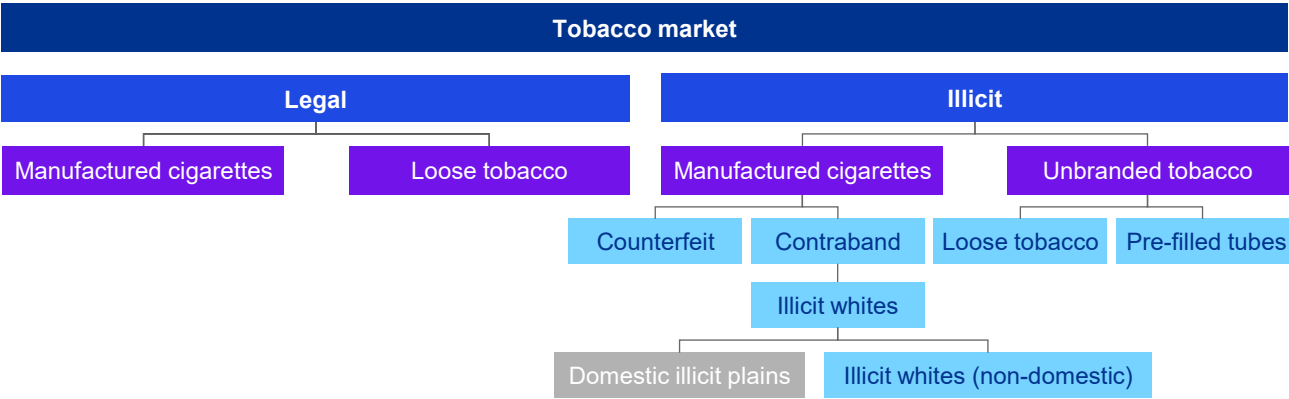
- 2.1 Tobacco consumption in New Zealand
- 2.2 Legal tobacco market
- 2.3 Home grown tobacco

# The tobacco market is includes consumption of manufactured cigarettes and loose tobacco

## 2.1 Tobacco consumption in New Zealand

Tobacco consumption refers to total volume of consumption for the types of tobacco as mapped out in figure 2.1. This section deals with the tobacco market and related products:

Figure 2.1a: New Zealand tobacco market map<sup>(a)</sup>



### Legal tobacco products

There are two types of tobacco products considered in total tobacco consumption:

**Manufactured cigarettes** - (also known as ‘FMC’) made for the tobacco market and sold in packets.

**Loose tobacco** - Loose leaf tobacco sold in pouches used in roll your own (RYO) cigarettes, which is consumed using rolling papers or tubes.

In addition to loose leaf manufactured tobacco, tobacco is also legally consumed through **tobacco grown at home**; a feature of the New Zealand market. Adults may legally grow unlimited amounts of tobacco for manufacture on the land on which their private dwelling is located if the tobacco is exclusively for their personal use and not for sale or other disposition to anyone else. They may then manufacture up to 5 kilograms (as per the Customs and Excise Act) of tobacco for personal use provided they do not sell or dispose of the tobacco to others.

Additional legal consumption is possible in the form of non-domestic legal product, that is tobacco purchased by consumers in other countries and imported into New Zealand legally for personal consumption (e.g. under the duty free allowance for travellers).<sup>(b)</sup> This Report does not consider any other tobacco products such as cigars, pipe tobacco, shisha or chewing tobacco.

### Illicit tobacco products

As shown in figure 2.1, the types of tobacco products considered in illicit tobacco consumption are counterfeit

cigarettes, contraband cigarettes and unbranded tobacco.

Illicit tobacco is either brought into the country illegally from overseas markets or grown illegally within New Zealand. This tobacco is usually sold to consumers below the recommended retail price (RRP) in New Zealand, avoiding New Zealand tax obligations, or is brought into the country in amounts exceeding the allowable personal limit.

### Counterfeit

These are manufactured cigarettes. They are generally manufactured overseas in countries with large scale tobacco production and sophisticated tobacco manufacturing machinery. Once manufactured they are illicitly smuggled into New Zealand most commonly via ports on large container freight and other channels including airmail and online purchases.

These products have been manufactured without the consent of the trademark owner.

### Contraband

These are mainly genuine cigarettes that are manufactured legally outside of New Zealand, compliant with local regulations, and then smuggled into the New Zealand market. This also includes cigarettes which are purchased legally outside New Zealand but exceed the personal import allowance and have no duty paid.

Contraband cigarettes are legitimately manufactured by the trademark owners but imported illegally (by third parties or consumers) to avoid New Zealand regulations, quarantine inspections and local product controls.

Notes: (a) Since domestic illicit plains have not been found in New Zealand in 2022, it has been greyed out in the figure  
(b) Maximum duty free allowance of tobacco in New Zealand is 50 cigarettes or 50 grams (g) of tobacco or cigars or a mixture of cigarettes, tobacco or cigars that weighs not more than 50 grams under the *Tariff Act 1988* ss 2, 3, 6, 8 and 9A and Working Tariff Document Part II Concessions Concession Reference Number 82(a)

# The tobacco market includes consumption of manufactured cigarettes and loose tobacco

### Illicit whites

Illicit whites are manufactured cigarettes that are usually manufactured legally in one country/market but which the evidence suggests have been smuggled across borders during their transit to New Zealand, where they have limited or no legal distribution and are sold without the payment of tax.<sup>(a)</sup> These flows include domestic illicit plains and illicit whites (non-domestic). Domestic illicit plains are flows of illicit white brands that have packaging designed for the domestic New Zealand market. Illicit white brand flows that do not have plain packaging designed for the domestic New Zealand market are illicit whites (non-domestic).

Domestic illicit plains have not been observed in New Zealand. Illicit whites cigarettes have been included in our analysis of contraband.

### Unbranded tobacco

Unbranded tobacco is illegal loose leaf tobacco upon which no duty has been paid and which carries no labelling or health warnings. Unbranded tobacco can come from either imported product which enters New Zealand illegally, or through tobacco which is grown in New Zealand, but has been sold or given away illegally. Unbranded tobacco is typically sold in bags as loose tobacco, or can be sold in boxes of pre-rolled tubes. According to the industry, there is limited evidence of the use of tubes in New Zealand.

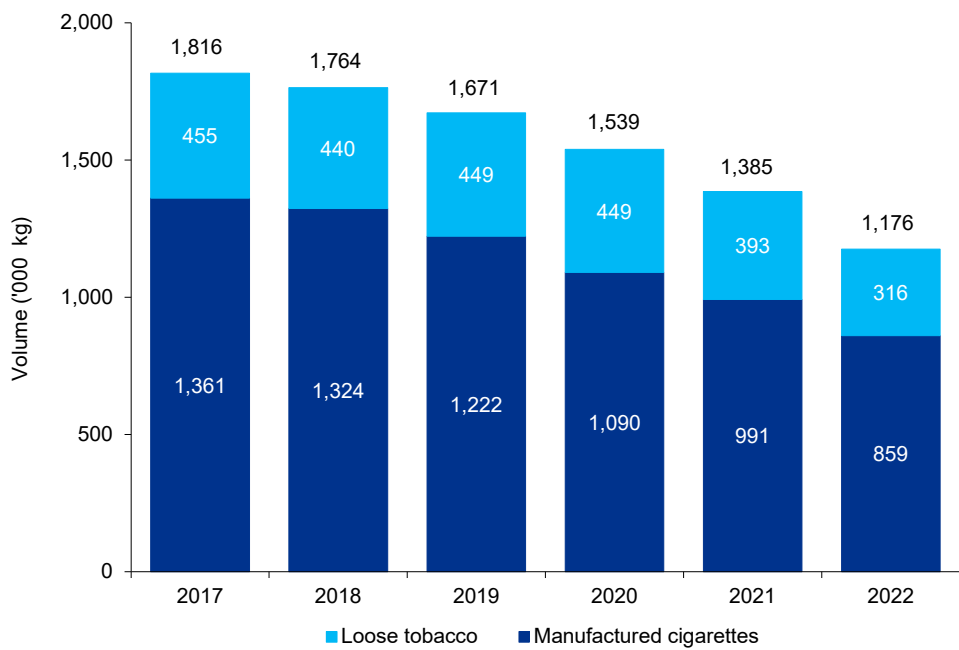
The product carries no labelling or health warnings and is consumed in RYO form or inserted into empty cigarette tubes and sold in boxes, this product is then sold either in bags or pre-rolled tubes.

Notes: (a) The sources and methodology used to identify illicit whites are further explained on pages 54 and 55. We use the results from our analysis as evidence to estimate illicit whites in New Zealand

# Legal domestic sales declined between 2019 and 2022

## 2.2.1 Legal tobacco market

Figure 2.2.1a: Historic legal domestic sales in New Zealand<sup>(1)(a)(b)(c)(d)</sup>



	2019 - 2022 CAGR	2021 - 2022 growth rate
Manufactured cigarettes	(11.1%)	(13.3%)
Loose tobacco	(11.0%)	(19.6%)
Total market	(11.1%)	(15.1%)

The legal tobacco market in New Zealand comprises of manufactured cigarettes and loose tobacco. The legal sales of both manufactured cigarettes and loose tobacco declined at the same rate (about 11% p.a.) between 2019 and 2022, leading to an overall decline in legal domestic sales.

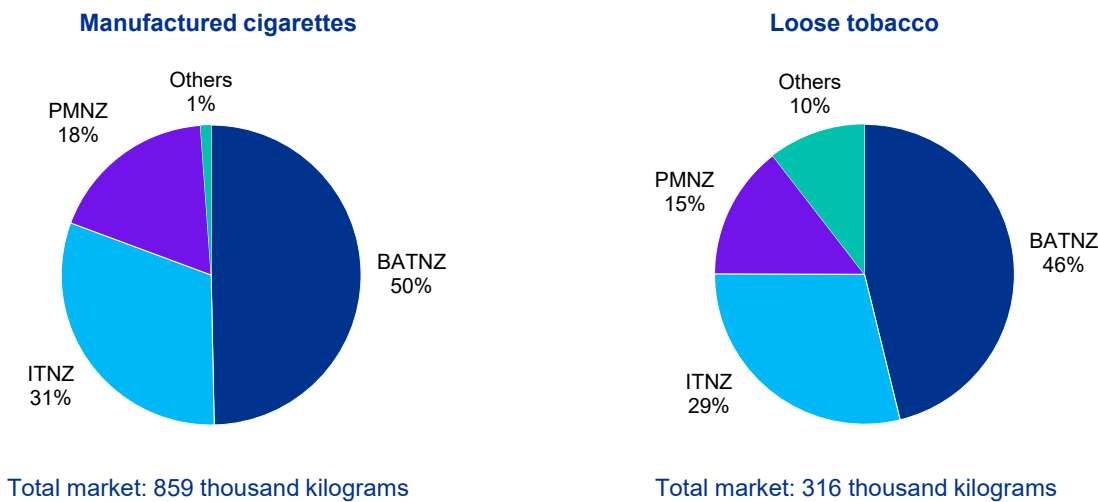
Between 2021 and 2022, the total legal tobacco market declined by 15.1%, mostly due to a 19.6% decline in the consumption of loose tobacco; although manufactured cigarettes also declined by 13.3%.

Notes: (a) Conversion of cigarettes to kilograms is based on 0.80 grams = 1 manufactured cigarette, as per the official rates used for New Zealand excise duty purposes  
(b) Duty free sales are not included as part of total sales volumes  
(c) Last twelve months January 2022 to December 2022  
(d) Numbers in the above chart may not sum due to rounding  
Source: (1) KPMG analysis of IRI data, 2017 - 2022

# BATNZ and ITNZ continue to have the largest market shares in both manufactured cigarettes and RYO

## 2.2.2 New Zealand legal tobacco competitive overview

Figure 2.2.2a: Market share by manufacturer, 2022<sup>(1)</sup>



### Market share

The three major tobacco manufacturers have relatively large shares in both the manufactured cigarettes and loose tobacco in New Zealand. British American Tobacco (New Zealand) Limited (BATNZ) continues to have the largest market share across both categories.

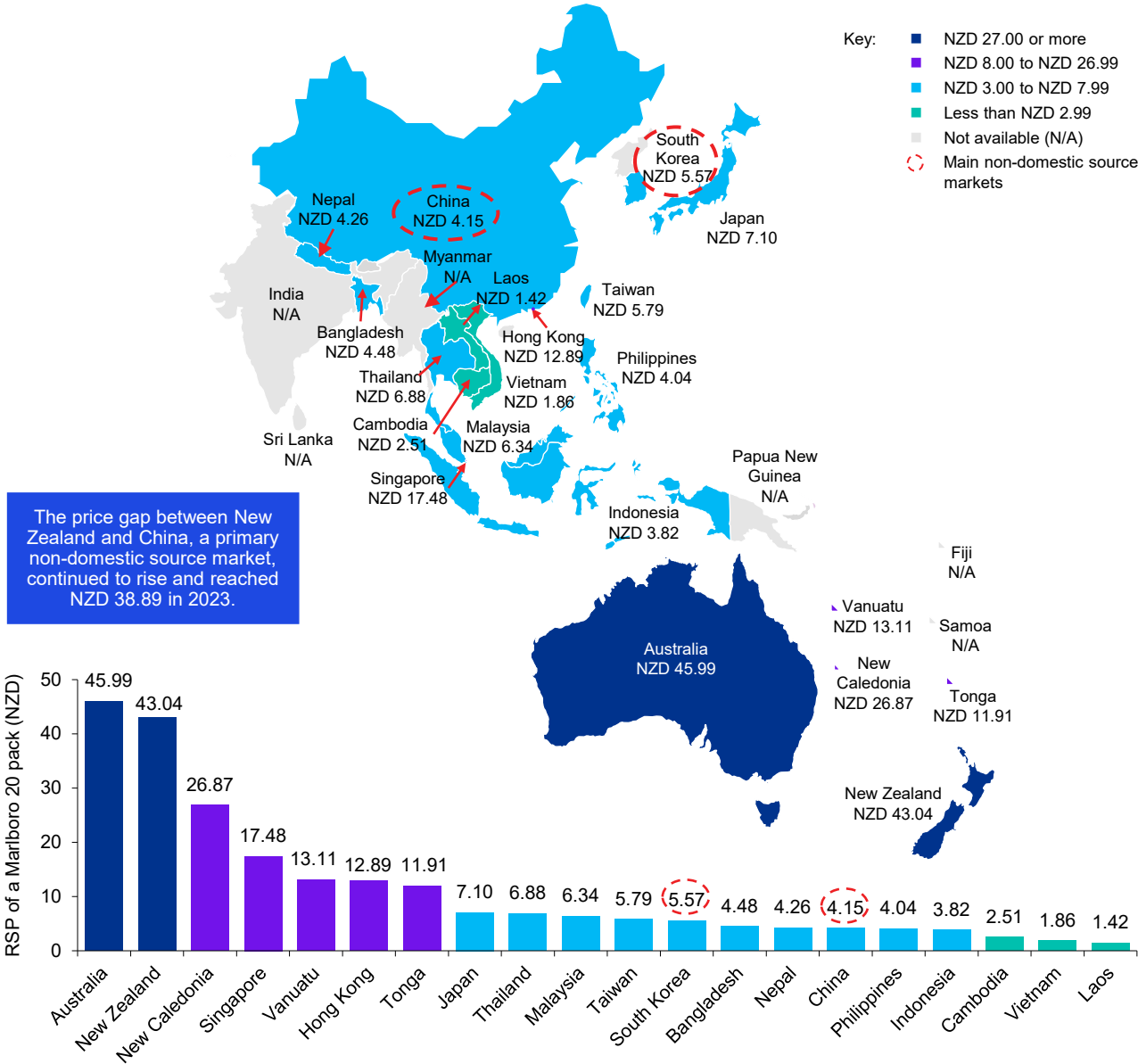
Source: (1) Tobacco Returns, Ministry of Health New Zealand (MOH), 2022



# New Zealand has the second highest cigarette prices in the Asia Pacific region

## 2.2.3 Relative regional price of tobacco

Figure 2.2.3a: Price of a pack of 20 Marlboro cigarettes – New Zealand and selected markets<sup>(1)(2)(a)(b)(c)</sup>



New Zealand is the second most expensive cigarette market in the Pacific and South East Asia. Prices are approximately 60% higher than the third most expensive market (New Caledonia) in the region.

This large price differential between New Zealand and other relatively nearby markets provides an economic incentive for smuggling opportunities for those involved in the illicit market.

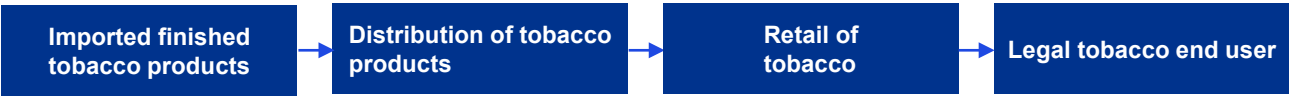
Notes: (a) The prices are as of January 2023  
(b) The industry data for Marlboro prices was provided in Australian Dollar (AUD). Hence, the exchange rate taken is 1 AUD = 1.0924 NZD, as of 15 January 2023  
(c) The cigarette price for Korea is assumed to be for South Korea

Source: (1) Marlboro prices data, PMNZ  
(2) OFX (exchange rates)

# All commercially sold tobacco products are imported into New Zealand

## 2.2.4 Supply and distribution for sale of legal products in New Zealand

Figure 2.2.4a: Supply chain for legal tobacco products in New Zealand, 2022



### Distribution and sales channels

All manufactured tobacco products are imported into New Zealand as tobacco leaf or finished products. No tobacco is legally grown in New Zealand for commercial purposes. The manufacturing process, which requires a licence from Customs, requires the payment of additional excise duties. Some of the products manufactured in New Zealand are exported.

### Non-domestic legal consumption channel and outflows

A small amount of tobacco is imported into New Zealand by consumers for their own personal consumption. Consumers have a limit of 50 cigarettes or 50g of tobacco or cigars or a mixture of cigarettes and cigars and tobacco that weighs not more than 50g which can be brought in without paying excise duty. This volume can be brought in from the country of origin or through duty free sales channels which are available on leaving and re-entering New Zealand.<sup>(1)</sup> The non-domestic legal volume is likely to be a small proportion of consumption and is discussed further in the appendix A4.<sup>(a)</sup>

Note: (a) Non-domestic legal is estimated to be 6.7 thousand kgs of tobacco or 0.5% of total consumption in 2022  
Source: (1) *Tariff Act 1988* ss 2, 3, 6 and 8 and Working Tariff Document Part II Concessions Concession Reference Number 82(a)

# In New Zealand, tobacco can be legally grown and manufactured at home for personal use

## 2.3 Home grown tobacco

### Legal growing allowance

In New Zealand, adults may grow unlimited amounts of tobacco for individual consumption, if the tobacco is on the land where their private dwelling is located and the tobacco is exclusively for their personal use and not for sale or other disposition to any other person. The *Customs and Excise Act 2018* allows the manufacture of this privately grown tobacco for personal use provided that the individual grower is aged 18 years or over and does not sell or dispose the tobacco to anyone else. The maximum amount of tobacco that an individual may manufacture in any period of 12 months beginning with 1 July and ending with 30 June is 5 kilograms.<sup>(1)</sup>

Figure 2.3a: New Zealand home grown tobacco supply chain<sup>(1)</sup>

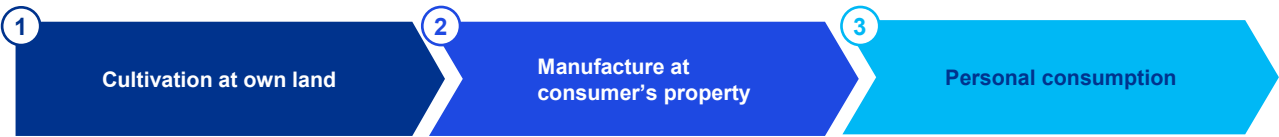


Figure 2.3 illustrates the three phases of a typical home grown tobacco supply chain:

- 1 Cultivation on own land**

There is no limit on the amount of tobacco plant that can be grown by home growers, as long as it is grown on the consumer's land. In practice, tobacco plants can grow to between six and seven feet and therefore growing is likely to be limited to smokers that have enough outdoor space.
- 2 Manufacture at consumer's property**

Growers may 'manufacture' up to 5 kilograms of tobacco per year as long as this is for their own personal consumption. The manufacturing process includes, curing, cutting, pressing, grinding, crushing, rubbing or otherwise preparing raw or leaf tobacco or manufactured or partially manufactured tobacco.<sup>(2)</sup> This process can take up to a year before the leaf can be cut into strips that can be rolled into cigarettes. The space required to hang and dry the tobacco leaf, along with the time taken before the tobacco is ready for consumption, is likely to further limit the number of legal home growers.
- 3 Personal consumption**

Home grown tobacco is strictly for personal consumption and may not be sold or given away. If the entire 5 kilogram allowance was smoked, KPMG estimates that this would equate to approximately 27 rolled cigarettes per day, depending on the amount of tobacco used in each cigarette.<sup>(a)</sup>

Note: (a) Conversion of tobacco to RYO cigarettes is based on 0.50 grams = 1 RYO cigarette  
Sources: (1) *Customs and Excise Act 2018* s 67  
(2) *Customs and Excise Act 2018* s 5(1)

# 03

## Size of the illicit tobacco market

- 3.1 Estimating the illicit tobacco market
- 3.2 Illicit tobacco consumption in New Zealand
- 3.3 Enforcement context

# The approach for sizing New Zealand's illicit tobacco market is globally consistent and robust

### 3.1 Estimating the illicit tobacco market

#### Methodology and validation

As discussed in section 2.1, the illicit tobacco market is split into unbranded tobacco and illicit manufactured cigarettes. Both of these categories are taken together to form total illicit tobacco consumption. It is therefore important to take account of all consumption flows when assessing the amount of illicit tobacco consumed.

The chart below illustrates how KPMG breaks consumption into a number of categories (defined in Section 2.1) and how each category requires different data sources to estimate the size of the market.

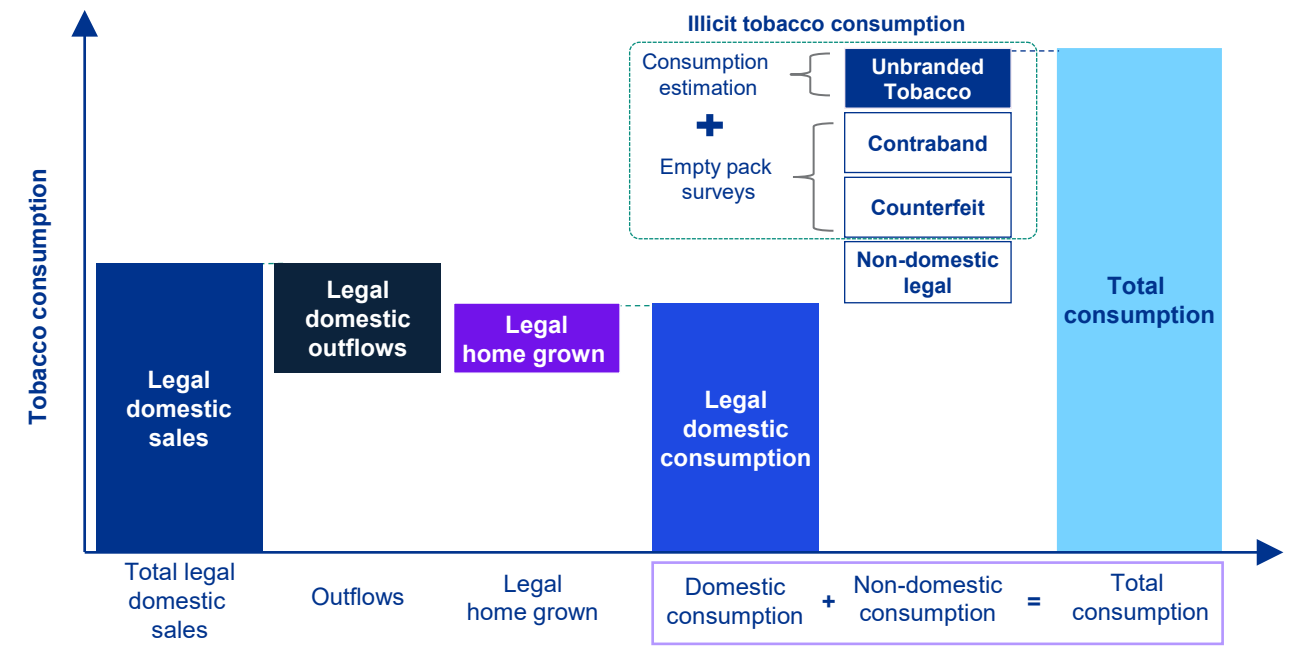
For each of these categories a separate primary approach is used in order to estimate the volume of illicit tobacco. For unbranded tobacco, a consumption estimate, based on results from a consumer survey is used. The consumption estimate includes loose tobacco sold in unbranded plastic bags or in the form of pre-rolled cigarettes.

For illicit manufactured cigarettes, an empty pack survey analysis is used, based on the collection of discarded cigarette packs across New Zealand. This approach has been used consistently in other markets including Australia over the past nine years, and this is the fourth time it is being used in New Zealand.

We believe this approach provides an estimate of the size of the illicit market in New Zealand that is as methodical and robust as possible within current research techniques. However, to further increase the level of confidence in this estimate, alternative approaches are used to validate the illicit tobacco volumes generated by the consumption estimation and the empty pack survey analysis.

In this section each of the approaches is described before the process of estimation and validation is explained. A detailed overview of these approaches can be found in appendix A1 and A2.

Figure 3.1a: Estimation of the illicit market<sup>(a)</sup>



#### Data sources

IRI data	Kantar New Zealand consumer survey Tourism statistics Euromonitor NZ Custom Service	Kantar New Zealand consumer survey	Kantar New Zealand consumer survey WSPM empty pack survey Stats NZ – tourism statistics Customs – seizure data MoH – Tobacco Returns	Kantar New Zealand consumer survey MoH – NZ Health Survey
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Note: (a) Definitions for the above sales categories can be found in the glossary on page 3 and page 4



# We have used a broad range of approaches to estimate the size of the illicit tobacco market

### 3.1 Estimating the illicit tobacco market (cont.)

#### Primary approach

##### Consumption estimation approach

This approach is based on the responses of consumers to the surveys conducted by Kantar New Zealand in Q2 2022 and Q4 2022. These surveys were commissioned by BATNZ and ITNZ.

Survey participants represent the demographic, geographic and social factors that characterise New Zealand's population. The survey asks consumers about their consumption of both legal and illicit tobacco. These survey responses are combined with other data sources by KPMG to arrive at an estimate for total illicit tobacco consumption. Consumers are asked about both illicit tobacco consumption (unbranded tobacco and manufactured cigarettes) and legal home grown tobacco.

The survey was developed using qualitative interviews. The primary insights gained from this qualitative research was an understanding of how consumers refer to illicit products. Detailed results of the consumer survey are discussed in section 6.

##### Empty pack survey

An empty pack survey is a study undertaken independently by WSPM who collect c.2,100 discarded cigarette packs per survey across the top six most populated cities in New Zealand. Due to border closures in New Zealand in the first half of 2022, empty pack surveys were only conducted in Q3 and Q4 in 2022. As a result, we have re-evaluated the weightings for the surveys in our analysis (*refer to page 43 for further details*). The brand and country of origin of each collected pack is assessed by WSPM to determine whether it is a domestic or non-domestic product. Products from different countries of origin are labelled as non-domestic. The collected packs are then sent to the participating manufacturers for analysis to determine genuine and counterfeit packs. KPMG uses the empty pack survey results to extrapolate overall consumption in the market. The percentages of non-domestic and counterfeit packs are applied to the volume of legal domestic sales in order to establish the total consumption of manufactured cigarettes in New Zealand.

The empty pack survey approach provides an objective and statistically representative estimate of the size of the illicit manufactured cigarette market. The results are not subject to respondent behaviour and are therefore less prone to sampling errors than many other alternative methodologies. The six cities covered by the sample plan covers the equivalent of 53% of New Zealand's population.

Some non-domestic cigarettes are likely to have been brought into New Zealand legally by New Zealanders travelling overseas or by tourists and permanent and long-term migrants arriving in New Zealand. Travel statistics from Statistics New Zealand are used by KPMG in order to estimate the likely volume.

An analysis of the amount of non-domestic legal brought into New Zealand by these two groups can be found in Appendix A4. Areas that are typically frequented by tourists and international students (e.g. sports stadia, tourist attractions, railway stations) are excluded from the empty pack survey to avoid over-estimating non-domestic legal consumption and to provide a representative sample of the local population's consumption.

These non-domestic legal cigarettes are removed from the total non-domestic volume by KPMG, which leaves the total estimated illicit manufactured cigarette market, split into contraband and counterfeit cigarettes as described in section 2.

The empty pack surveys in 2022 have been jointly commissioned by the industry (BATNZ, ITNZ). JTI participated in Q4 2021. Prior to 2022, surveys were also run in Q2 2014, Q2 2015, Q2 2016, Q2 2017, Q4 2017, Q2 2018, Q4 2018, Q2 2019 and Q4 2019 which have been made available to KPMG for use in this Report. The methodology and sample walking routes used in 2022 was consistent with those used in previous years.

For the purpose of this Report, empty pack surveys have been conducted by WSPM in Q3 and Q4 2022. The results from these surveys have been used to arrive at an estimate for the illicit manufactured cigarette consumption for 2022. This method is consistent with the approach used by KPMG to assess the level of counterfeit and contraband cigarettes across the EU Member States. It is a widely accepted method for measuring the illicit market.

#### Means of validation

##### Interceptions data

Interceptions data obtained from the New Zealand Customs Service shows the volume and type of tobacco intercepted at ports, airports etc. Using interceptions data to size the illicit market is often unreliable as it is difficult to ascertain the proportion of total illicit product that is seized.

Whilst interceptions data is unlikely to generate an accurate estimate for the illicit tobacco market, the size and volume of individual interceptions can indicate the likely scale of the illicit market. The average size of interceptions can indicate whether illegal smuggling is opportune and small-scale or part of a more sophisticated international criminal network.

# The validation of our measurements with additional data sources provides confidence in the results

### 3.1 Estimating the illicit tobacco market (cont.)

Figure 3.1b: Overview of methodology for estimating illicit tobacco<sup>(a)</sup>

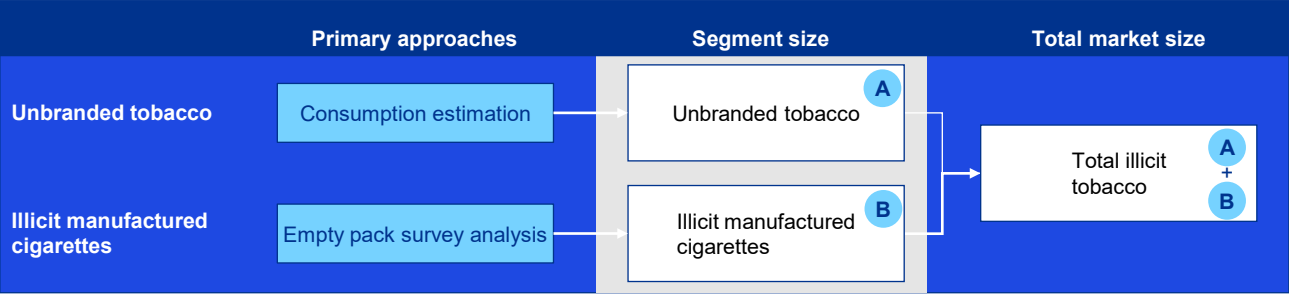


Figure 3.1b shows the process by which the consumption estimation and empty pack survey analysis is used to estimate the size of the illicit tobacco market.

- A

**Unbranded tobacco:** The consumption estimation uses data from the Kantar New Zealand consumer survey, external data sources such as the MOH tobacco returns data and the Health of New Zealand Adults data on smoking prevalence. We consider it to be the best way of sizing the unbranded tobacco market in New Zealand.
- B

**Illicit manufactured cigarettes:** The empty pack survey, conducted in New Zealand by WSPM, is the most reliable measure of contraband and counterfeit. It also forms the foundation for our study of illicit tobacco consumption in the EU, UK, Norway and Switzerland.
- A + B

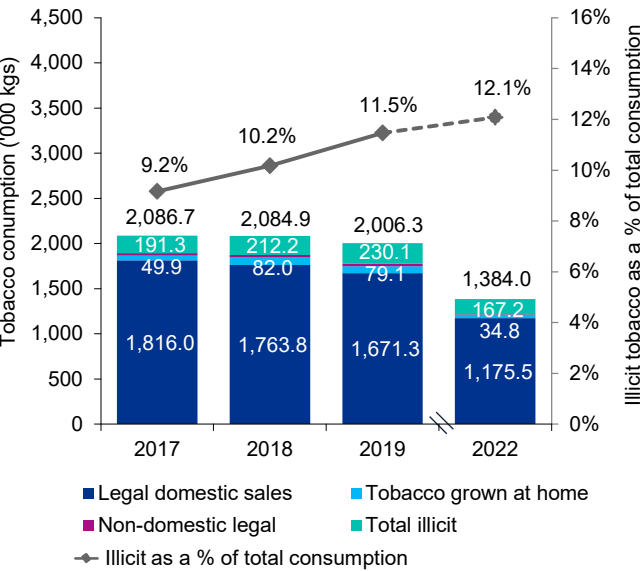
**Total illicit tobacco:** The total illicit tobacco market size estimate is calculated by adding the results of the validated empty pack survey analysis for manufactured cigarettes (i.e., contraband and counterfeit) with the output of the validated consumption estimation for unbranded tobacco. The results are presented in kilograms to show total consumption of both loose tobacco and manufactured cigarettes.

Notes: (a) The scope of the Report only includes assessment of manufactured cigarettes and loose tobacco. It does not cover the next generation products such as vapes and heated tobacco

# Illicit tobacco as a proportion of total consumption increased; despite a fall in total consumption

3.2 Illicit tobacco consumption in New Zealand

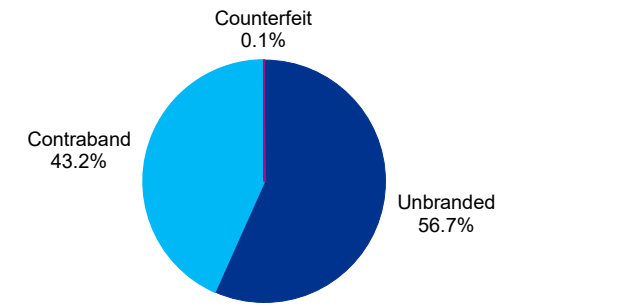
Figure 3.2a: Consumption of tobacco products by category, 2017 - 2022<sup>(1)(b)(c)(d)(e)</sup>



Total consumption of tobacco declined by 11.6% p.a. between 2019 and 2022; largely driven by an 11.1% p.a. decline in legal domestic sales.

However, there was also a decline in all other legal and illicit categories of tobacco as well. Between 2019 and 2022, there was a decline in the volumes of both unbranded tobacco (10.6% p.a.) and contraband (8.9% p.a.). This resulted in a 10.1% p.a. fall in total illicit consumption over this time period.

Figure 3.2b: Share of illicit tobacco consumption, 2022<sup>(1)(a)(b)(c)</sup>



Notes: (a) CAGR and percentage change for counterfeit is considered as n/a in 2022 as it is not comparable with the 2019 result as Philip Morris (New Zealand) Limited (PMNZ) did not participate in the empty pack survey in 2022  
(b) Contraband includes volumes of illicit whites  
(c) Numbers above may not sum due to rounding

Table 3.2.1: Total consumption of tobacco (illicit and legal)<sup>(1)(a)(b)(c)(d)</sup>

'000 kgs	2022	% of TC (2022)	% change (2019-22)	CAGR (2019-22)
Counterfeit <sup>(a)</sup>	0.1	0.0%	n/a	n/a
Contraband <sup>(b)</sup>	72.3	5.2%	(24.3%)	(8.9%)
Unbranded tobacco	94.8	6.8%	(28.6%)	(10.6%)
Total illicit	167.2	12.1%	(27.3%)	(10.1%)
Tobacco grown at home	34.8	2.5%	(56.0%)	(24.0%)
Non-domestic legal	6.5	0.5%	(74.8%)	(36.8%)
Legal domestic sales	1,175.5	84.9%	(29.7%)	(11.1%)
Total consumption	1,384.0		(31.0%)	(11.6%)

Total consumption fell at a faster rate than illicit consumption. Therefore, the proportion of illicit consumption in total tobacco consumption increased marginally by 0.6 pp from 11.5% in 2019 to 12.1% in 2022.

Since contraband and unbranded tobacco declined at a similar rate, the mix of illicit tobacco products is relatively consistent with 2019. The share of contraband in the illicit product mix increased slightly by 1.7 pp to 43.2%, whereas the share of unbranded tobacco decreased by 1.0 pp to 56.7%. Counterfeit accounted for only 0.1% of the illicit tobacco mix.

Legal consumption includes legal domestic sales, non-domestic legal and tobacco grown at home. The volume of non-domestic legal has declined by 36.8% p.a. between 2019 and 2022 (due to border closures) and represents only 0.5% of total consumption.

Similarly, tobacco grown at home also accounted for a small proportion in total consumption (2.5%).

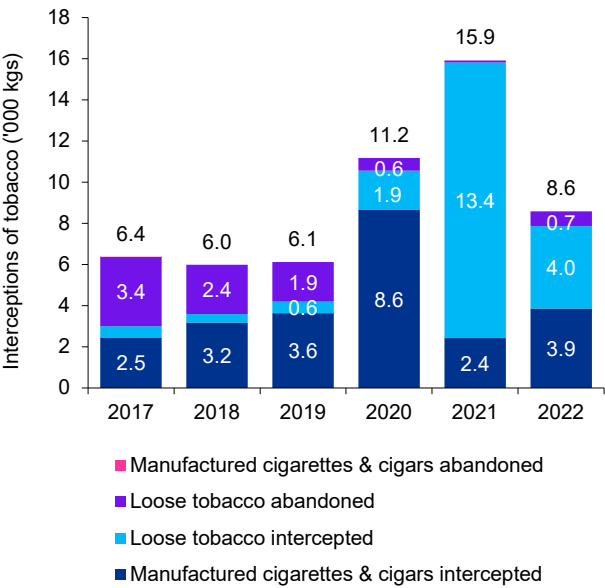
Domestic illicit whites continued to have no presence in New Zealand in 2022. However, a small flow of non-domestic illicit whites, representing 0.12% of total consumption, was identified.<sup>(1)</sup> This volume of illicit whites is included in our estimate of contraband consumption.

(d) Results from 2020 and 2021 are not available as no study was conducted during these years  
(e) Non domestic legal consumption on the chart may not be visible due to its scale  
Source: (1) Industry data; see specific report sections for further detail

# The volume of tobacco seized in 2022 remains above pre-COVID levels but below 2020-21 volumes

### 3.3 Enforcement context

Figure 3.3a: Volume of tobacco intercepted, 2017-2022<sup>(1)(a)(b)(c)</sup>

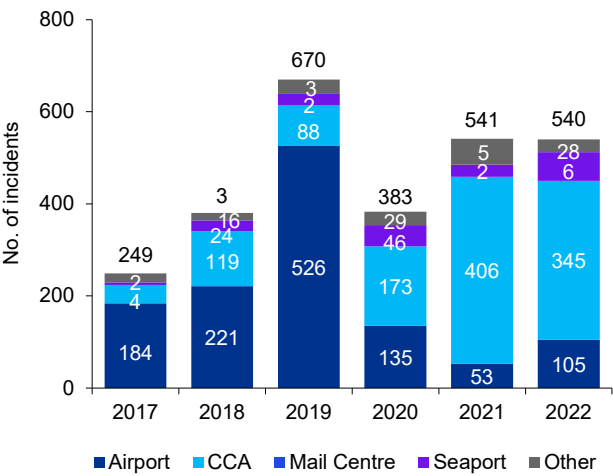


The NZ Customs Services intercept tobacco at airports, mail centres, seaports and Controlled Customs Areas (CCAs).<sup>(f)</sup> Other locations where tobacco may be intercepted include customhouses, commercial premises and residential premises. The highest number of incidents occur at airports.

Since the beginning of COVID, there has been a relatively large increase in the volume of loose tobacco seized. Whilst manufactured cigarette seizures increased in 2020, these volumes have subsequently settled back to levels in line with those seen before COVID.

Compared to 2021, the number of interceptions remained relatively constant. However, it decreased by 6.9% p.a. between 2019 and 2022.

Figure 3.3b: Number of tobacco interception incidents, 2017-2022<sup>(1)(a)(b)(d)(e)(g)</sup>



The volume of tobacco intercepted in 2022 decreased by 46.1% when compared to 2021. This is largely driven by a decrease in the volume of loose tobacco seized (70.2%). However, there has been a slight offset by the increase in the volume of seized manufactured cigarettes & cigars (59.9%).

Notes: (a) When Customs find prohibited goods or goods that have been undeclared, mis-declared or undervalued for revenue evasion purposes at the border, it is referred to as an 'interception'  
(b) Cigarette sticks have been converted into kg of tobacco, based on a conversion rate of 0.8g per stick  
(c) Data labels of 0.5 and below have been removed from the chart for clarity. Volume of manufactured cigarettes & cigars abandoned is 0 kgs in 2022  
(d) Number of incidents through mail centre is 9 in 2022

(e) 2017 data label of value 5 for 'Seaport' category has been removed for clarity  
(f) Customs Controlled Area (CCA) is a secure and controlled environment in which the activities that take place are monitored or conducted by Customs. This includes places where goods are inspected and where duty free or excisable goods are manufactured, sold or stored  
(g) May not be the exhaustive list  
Source: (1) New Zealand Custom Service

# 04

## Drivers of results

- 4.1 Consumer survey results
- 4.2 Empty pack survey results



# The consumer survey was conducted by Kantar New Zealand and was conducted online in 2022

## 4.1 Consumer survey results<sup>(1)</sup>

### 4.1.1 Kantar New Zealand overview

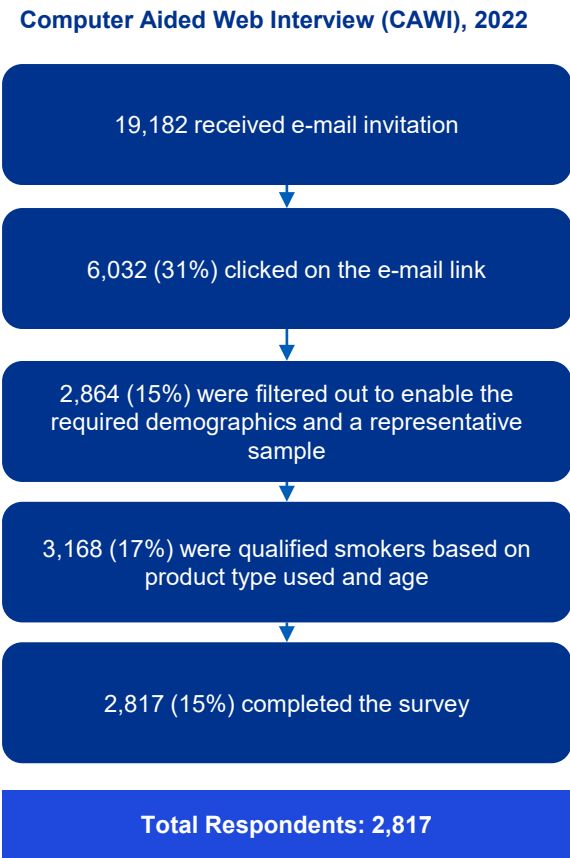
The consumer survey is primary research carried out to establish the size of the illicit tobacco market in New Zealand. The survey, commissioned by BATNZ and ITNZ, was carried out by Kantar New Zealand.

Kantar is a global data, insight and consultancy company and part of WPP. Kantar has been conducting the consumer survey annually for the tobacco industry since 2013.<sup>(a)</sup> Prior to this, they had conducted three surveys for BATNZ, the first of which was completed in 2009.

The consumer survey interview script was informed by consumer insights obtained from qualitative research undertaken by Kantar New Zealand. Respondents were also asked about their awareness and consumption of illicit tobacco products.

The fieldwork took place between 26<sup>th</sup> May and 15<sup>th</sup> June for Q2 2022, 27<sup>th</sup> October and 21<sup>st</sup> December for Q4 2022 and was conducted via the internet.

### Kantar New Zealand survey attrition chart for 2022<sup>(b)</sup>

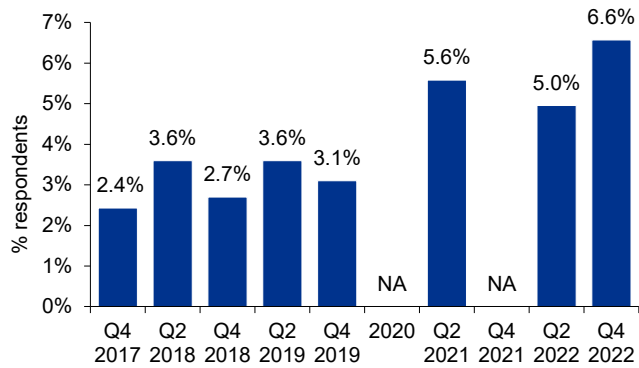


Note: (a) Results from consumer surveys prior to 2017 have not been included in this Report as the questions used were not consistent with those used in 2017, 2018, 2019 and 2022  
(b) The Computer Aided Telephone Interview (CATI) was not conducted in 2022  
Source: (1) Kantar New Zealand Research, consumer survey: quantitative and qualitative findings, 2022

# The survey suggests highest proportion of respondents buying unbranded tobacco in Q4 2022

## 4.1.2 Purchasers of unbranded tobacco

Figure 4.1.2a: Respondents who reported purchasing unbranded tobacco in the last twelve months, Q4 2017-Q4 2022<sup>(1)(a)(b)</sup>



In Q4 2022 approximately 6.6% of total respondents reported having purchased unbranded tobacco in the past 12 months which is an increase of 3.5 pp from Q4 2019.

Figure 4.1.2b: Average volume purchased (grams) per occasion, Q4 2017-Q4 2022<sup>(1)(a)(b)(c)(d)(e)</sup>

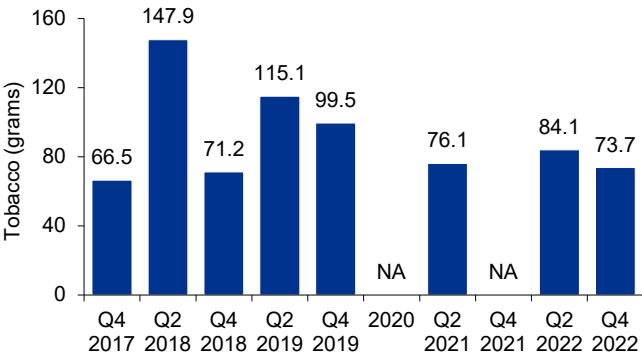
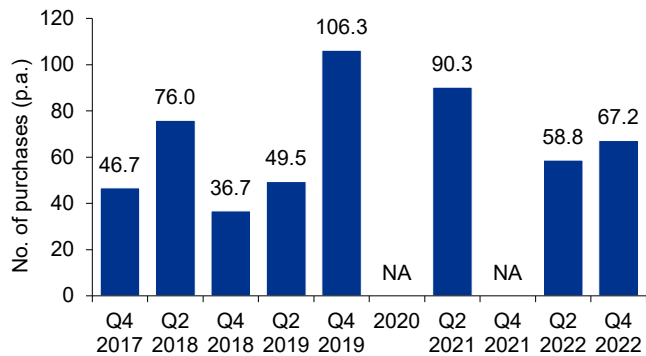


Figure 4.1.2c: Average frequency of purchase per annum, Q4 2017-Q4 2022<sup>(1)(a)(b)(d)(e)</sup>



The average volume purchased by respondents in Q4 2022 declined compared to Q2 2022 as well as Q4 2019, whereas the average frequency reported in Q4 2022 increased. However, there is a relatively large decline when compared to Q4 2019. The decrease in volume and frequency of purchases between 2019 to 2022 has largely driven the overall decrease in unbranded tobacco consumption levels, which fell from 132.7 thousand kgs in 2019 to 94.8 thousand kgs in 2022.

Notes: (a) Responses are based on CAWI surveys  
(b) Numbers for 2020 are not available as the study had not been conducted that year  
(c) Based on the volume purchased at time of last purchase  
(d) Conversion of cigarettes to kilograms is based on 0.80 grams = 1 manufactured cigarette  
(e) KPMG estimate based on New Zealand Health Survey (15+)  
(f) Blended average represents an average of Q2 and Q4 of a year

Sources: (1) Kantar New Zealand Research, consumer survey, Q4 2017, Q2 2018, Q4 2018, Q2 2019, Q4 2019, Q2 2021, Q2 2022 and Q4 2022

# The survey also indicated an increase in the awareness of home grown tobacco

## 4.1.3 Tobacco grown at home

Figure 4.1.3a: Proportion of respondents who were aware of home grown allowance limit, Q4 2017-Q4 2022<sup>(1)(a)(b)(c)(d)(e)</sup>

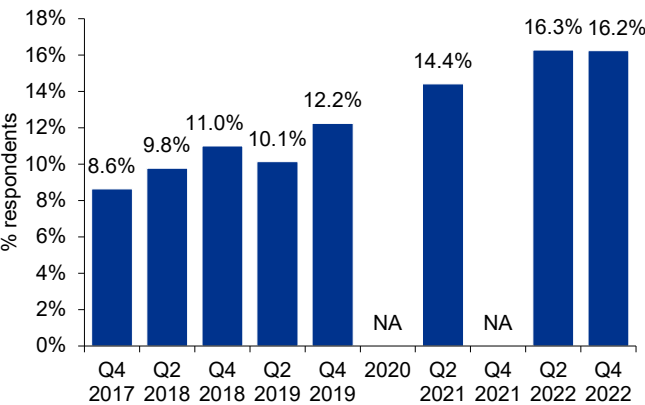


Figure 4.1.3b: Proportion of respondents who have ever grown tobacco from plant or seed, Q4 2017-Q4 2022<sup>(1)(a)(b)(c)(d)(e)</sup>

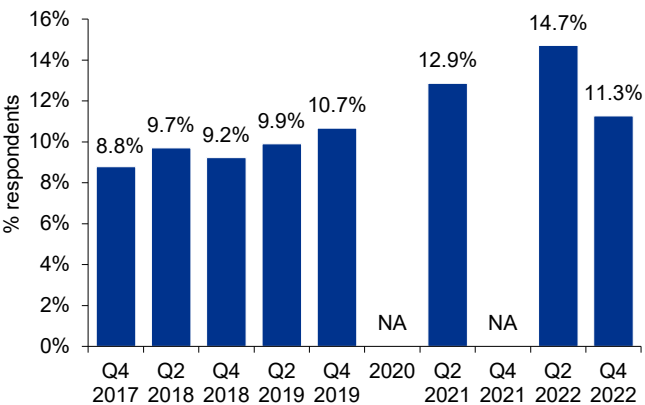
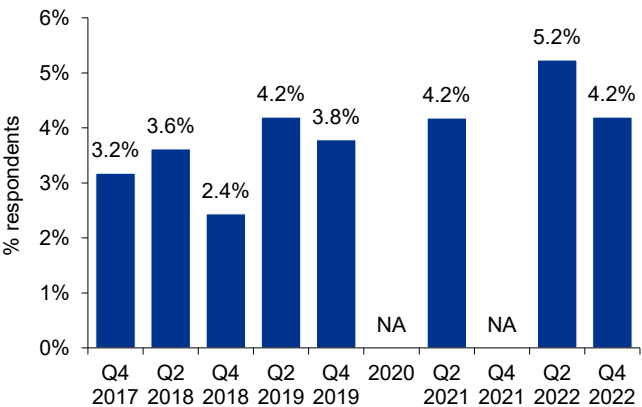


Figure 4.1.3c: Proportion of respondents who have grown tobacco from plant or seed in the last twelve months, Q4 2017-Q4 2022<sup>(1)(a)(b)(c)(d)(e)</sup>



The proportion of respondents who were aware of unbranded tobacco increased in 2022 to the highest levels recorded by the survey since Q4 2017. The Q4 2022 survey suggests that 4.2% respondents have grown tobacco in the last twelve months, a 1.0 pp decline from Q2 2022 and an increase of 0.4 pp from Q4 2019.

Notes: (a) Responses are based on CAWI surveys  
(b) Numbers for 2020 are not available as the study had not been conducted that year  
(c) Based on the volume purchased at time of last purchase  
(d) Conversion of cigarettes to kilograms is based on 0.80 grams = 1 manufactured cigarette  
(e) KPMG estimate based on New Zealand Health Survey (15+)

Sources: (1) Kantar New Zealand Research, consumer survey, Q4 2017, Q2 2018, Q4 2018, Q2 2019, Q4 2019, Q2 2021, Q2 2022 and Q4 2022

# Approximately 37% of respondents grew over the legal limit in Q4 2022; a decrease from Q2 2022

## 4.1.3 Tobacco grown at home (cont.)

Figure 4.1.3d: Average quantity grown at home, Q4 2022<sup>(1)(a)(b)</sup>

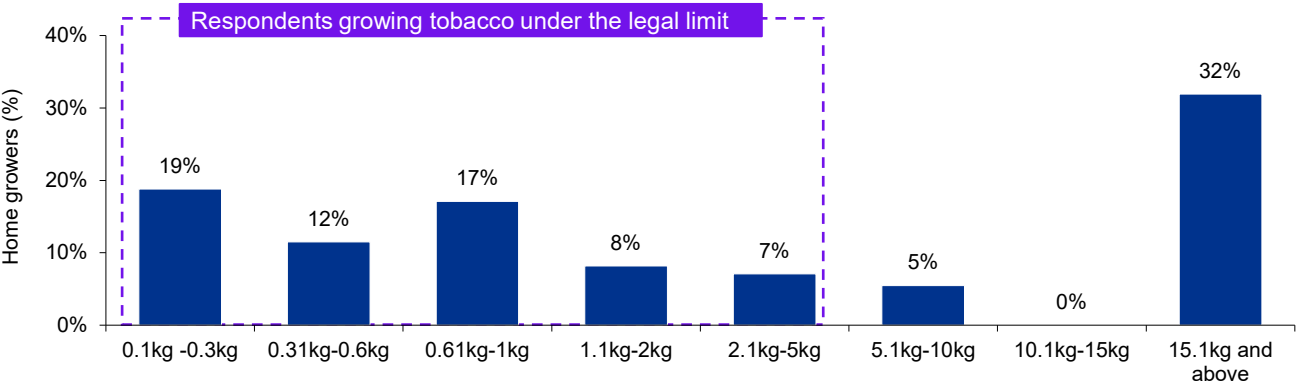
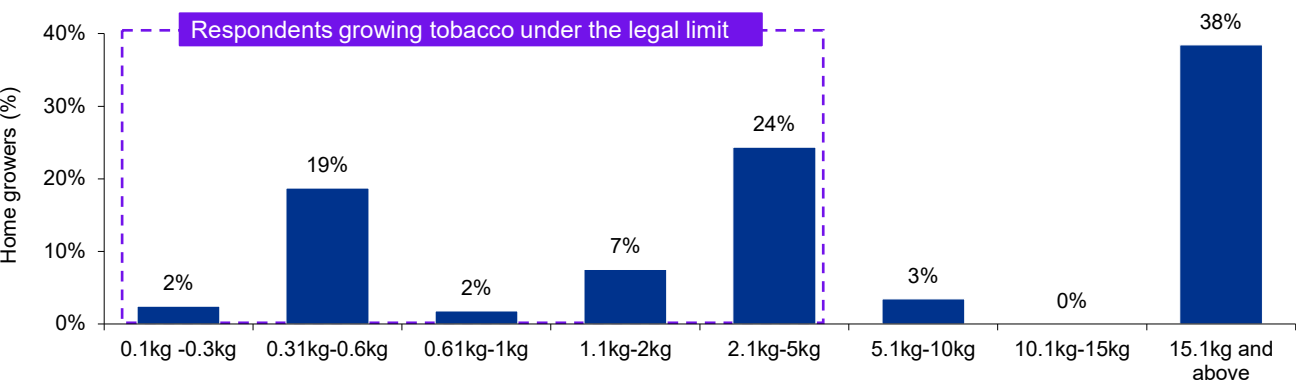


Figure 4.1.3e: Average quantity grown at home, Q2 2022<sup>(1)(a)(b)</sup>



Under the *Customs and Excise Act 2018*, adults may manufacture up to 5 kilograms of this tobacco for their personal use without having to pay excise duty. According to the Q4 2022 consumer survey, 37% of home growers reported they grew more than the legal limit of 5 kilograms, a 4.0 pp decrease from Q2 2022. The average amount of tobacco grown at home legally per annum for the year 2022 equates to a total of 3.3 kilograms.<sup>(1)</sup>

The survey suggests that 7,903 kilograms of tobacco was grown over the legal limit of 5 kilograms in Q4 2022.<sup>(2)(c)(d)</sup> However, we do not know how much of this was processed into smoking tobacco and therefore illicit.

Notes: (a) Responses are based on CAWI surveys  
(b) Conversion of cigarettes to kilograms is based on 0.80 grams = 1 manufactured cigarette  
(c) Quantity grown per annum above the legal limit is derived by multiplying the total number of illicit tobacco home growers with the average amount grown per year above the legal limit  
(d) The 5 kg legal limit indicates the maximum amount of tobacco that an individual may manufacture in any period of 12 months beginning with 1 July and ending with 30 June

Sources: (1) Kantar New Zealand Research, consumer survey: quantitative and qualitative findings, Q4 2017, Q2 2018, Q4 2018, Q2 2019 and Q4 2019, Q2 2022 and Q4 2022  
(2) *Customs and Excise Act 2018* s 67

# The empty pack survey collects c.2,100 empty packs collected across New Zealand

## 4.2 Empty pack survey results

### 4.2.1 New Zealand empty pack survey sampling plan<sup>(1)(2)</sup>

The empty pack survey analyses discarded cigarette packets that have been collected from a set area. The aim is to collect a representative sample of discarded cigarette packets that can then be analysed to provide information about the nature of consumption of manufactured tobacco products.

Empty packs are collected on a proportionate basis from a number of neighbourhoods. Packs are collected from streets and easy access public bins in areas in the sampling plan.

For the purpose of this Report, empty pack surveys were carried out by an independent market research agency, WSPM, in Q3 2022 (between 5<sup>th</sup> August and 21<sup>st</sup> August) and Q4 2022 (between 5<sup>th</sup> November and 28<sup>th</sup> November).<sup>(a)</sup> Due to border restrictions it was not possible to conduct an empty pack survey in the first half of the year. As a result, we reassessed our approach to weighting the empty pack surveys (*refer to page 43 for further details*).

The Q3 and Q4 2022 empty pack survey collection was based on a sampling plan consistent with the empty pack survey sampling plans of previous years. For each empty pack survey, approximately 2,100 packs were collected and all the six population centres that were covered remained the same as 2019. The neighbourhoods sampled also remained consistent for the five population centres.

Packs are collected from pre-determined neighbourhoods, selected to be representative of the city being sampled. Similarly, the neighbourhoods selected are also consistent with previous surveys.

Packs are collected irrespective of their brand and country of origin. Collection routes specifically exclude sports stadia, shopping malls and stations, or any other locations where non-domestic incidence is likely to be higher as a result of a skewed population visiting these areas and may not be representative of local consumption.

To ensure the sample is representative, packs are weighted based on the proportion of each city's population after the collection is completed.

WSPM is a private group of companies registered in 2002, with worldwide activity and presence. Since 2017, its headquarters have been located in Cyprus. WSPM group is a specialist in consumption intelligence and brand integrity with experience in the tobacco industry. Since 2001, WSPM's management has managed and conducted more than 1,200 empty pack surveys across 81 countries.

Table 4.2.1: Q4 2022 empty pack survey sampling plan:

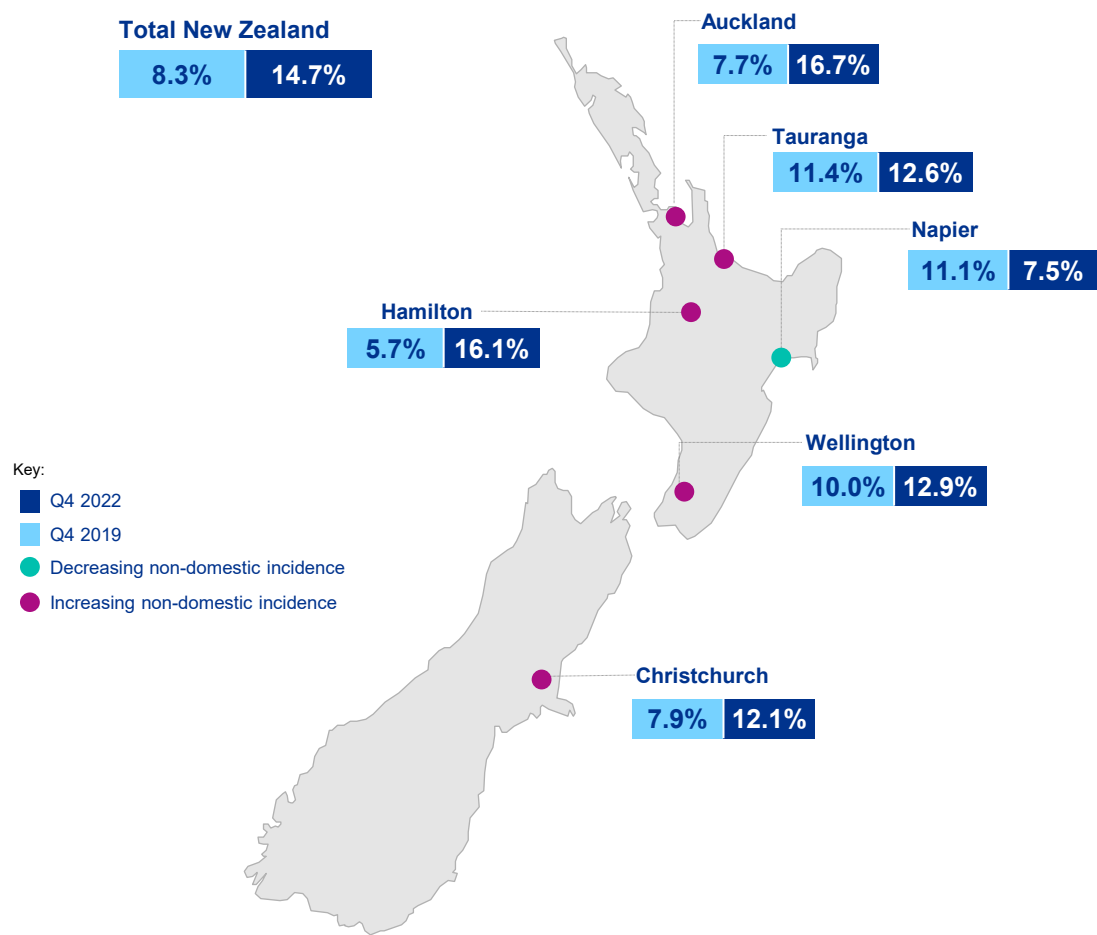
Population centres	Population (000's) 2022 estimate <sup>(2)</sup>	Number of sampled neighbourhoods	Sample packs	Weighted packs
Auckland	1,695	30	1,064	1,596
Christchurch	389	10	318	477
Hamilton	180	5	163	245
Napier	67	3	104	156
Tauranga	158	3	109	164
Wellington	213	10	351	527
Total	2,702	61	2,109	3,164
Total population of New Zealand	5,124			

Note: (a) The empty pack survey was not conducted in Q2 2022 as there were border closures and travel restrictions in New Zealand due to lockdown in that quarter  
Sources: (1) WSPM, empty pack survey, Q2 2017, Q4 2017, Q2 2018, Q4 2018, Q2 2019, Q4 2019, Q3 2022, Q4 2022  
(2) Estimated Resident Population for Territorial Authority Areas, at 30 June 2022 (provisional)

# Non-domestic incidence has increased across all but one location surveyed

## 4.2.2 New Zealand empty pack survey results – Non-domestic incidence by population centre

Figure 4.2.2a: Total non-domestic incidence by population centre, Q4 2019 and Q4 2022<sup>(1)</sup>



Q4 2022 saw an increase in non-domestic incidence across all major cities, except Napier, which saw a 3.6 pp decline between Q4 2019 and Q4 2022. Napier also has the lowest non-domestic incidence among all the cities surveyed in New Zealand.

There was an overall increase in the non-domestic incidence between Q4 2019 and Q4 2022 in New Zealand (6.4 pp), which was primarily driven by an increase in the non-domestic incidence in Hamilton (10.4 pp) and Auckland (9.0 pp).

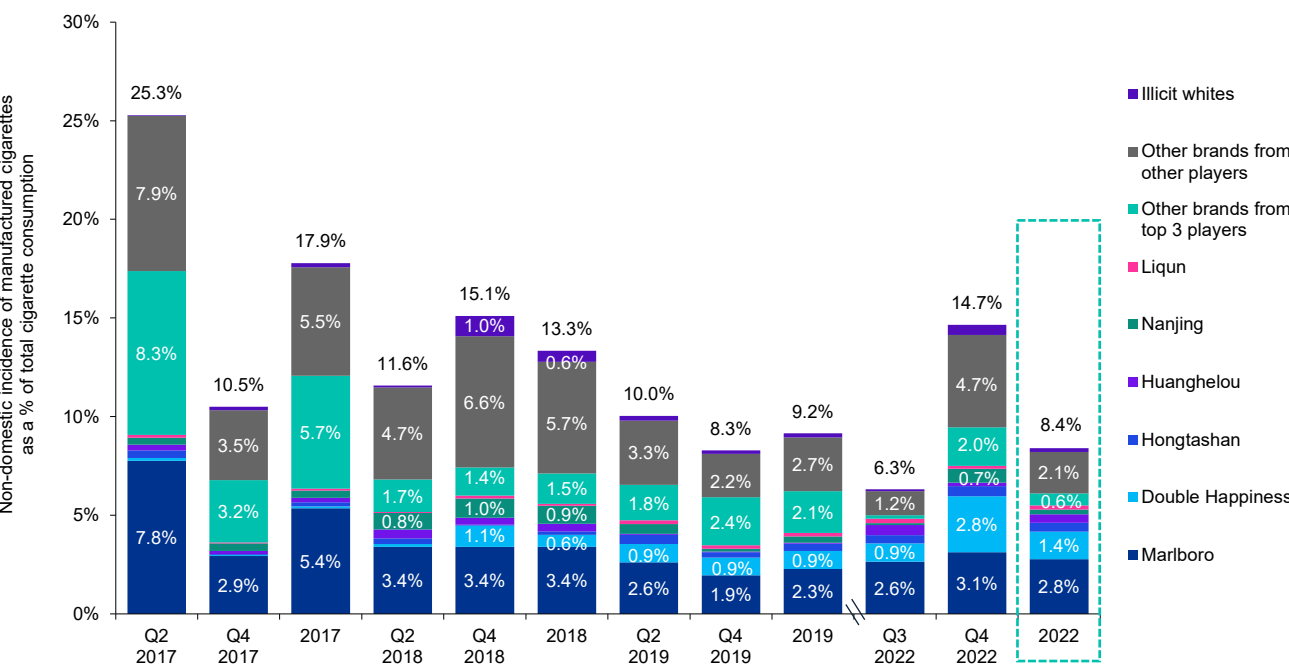
Between Q4 2019 and Q4 2022, Hamilton also saw the largest increase in the non-domestic incidence.

Source: (1) WSPM, empty pack survey, Q4 2019 and Q4 2022

# Non-domestic incidence decreased due to a fall in the flows of smaller brands

## 4.2.3 New Zealand empty pack survey results – Brand flow

Figure 6.2.3a: Total non-domestic incidence by brand flow as a percentage of total manufactured cigarette consumption, Q2 2017, Q4 2017, Q2 2018, Q4 2018, Q2 2019, Q4 2019, Q3 2022 and Q4 2022<sup>(1)(a)(b)(c)</sup>



The 2022 figures are based on the blended results of Q3 2022 and Q4 2022. Our approach to this is discussed later.

Whilst the non-domestic flows of the three largest brands, i.e., Marlboro, Double Happiness and Hongtashan, increased between 2019 and 2022, the overall decrease in non-domestic incidence between 2019 and 2022 (0.7 pp) was primarily driven by a reduction in the incidence of flows of other brands (such as Raison, John Player Special and Parliament).

Flows of non-domestic Marlboro constituted the largest share. These flows accounted for 2.8% of total non-domestic incidence in 2022. Double Happiness constituted the second largest brand flow.

The share of illicit white brands' flows of non-domestic manufactured cigarettes consumption has decreased only marginally from 0.21% of total non-domestic incidence in 2019 to 0.20% in 2022.

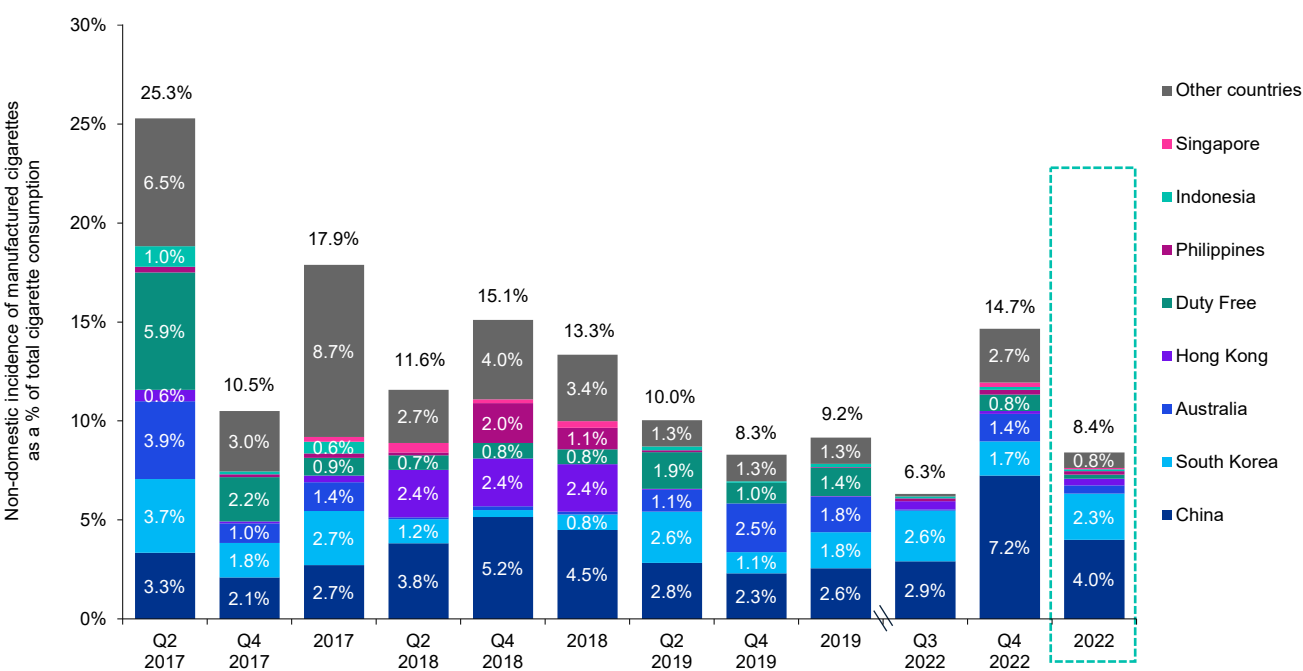
Notes: (a) Numbers for 2020 and 2021 are not available as the study had not been conducted that year  
(b) Data labels of 0.5% and below have been removed from the chart for clarity  
(c) Numbers in the above chart may not sum due to rounding  
Source: (1) WSPM, empty pack survey, Q2 2017, Q4 2017, Q2 2018, Q4 2018, Q2 2019, Q4 2019, Q3 2022 and Q4 2022



# Non-domestic incidence in 2022 was primarily driven by flows from China and South Korea

## 4.2.4 New Zealand empty pack survey results – Country of origin flows

Figure 4.2.4a: Total non-domestic incidence by country of origin flows as a percentage of total manufactured cigarette consumption, Q2 2017, Q4 2017, Q2 2018, Q4 2018, Q2 2019, Q4 2019, Q3 2022 and Q4 2022<sup>(1)(a)(b)(c)(d)</sup>



Duty free volumes represent all duty free variant packs collected, which mainly comprise of South Korea and China duty free flows.

Asian markets were the primary sources of inflows of non-domestic manufactured cigarettes into New Zealand.

The flows from China (including China duty free) increased in 2022 and continued to remain the largest individual source country for non-domestic manufactured cigarette flows, accounting for over 34% of total non-domestic flows.

Flows of products from South Korea (including South Korea duty free) were the second largest flows from an individual country with an annual share of c.28% of total non-domestic flows in 2022.

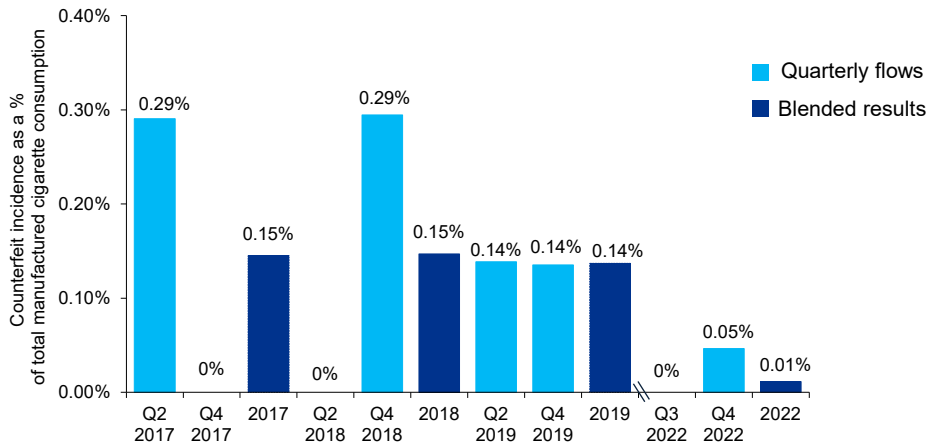
Whilst non-domestic flows from Australia continued to be the third largest individual source country in 2022 (accounting for 0.4% of the total non-domestic incidence), these flows decreased by 1.4 pp from 2019 levels.

Notes: (a) Numbers for 2020 and 2021 are not available as the study had not been conducted that year  
(b) Data labels of 0.5% and below have been removed from the chart for clarity  
(c) Numbers in the above chart may not sum due to rounding  
(d) Country or origin as recorded by the empty pack survey  
Source: (1) WSPM, empty pack survey, Q2 2017, Q4 2017, Q2 2018, Q4 2018, Q2 2019, Q4 2019, Q3 2022 and Q4 2022

# Illicit whites and counterfeit brand flows constitute a low share of total manufactured cigarettes

## 4.2.5 New Zealand empty pack survey results – Counterfeit flows

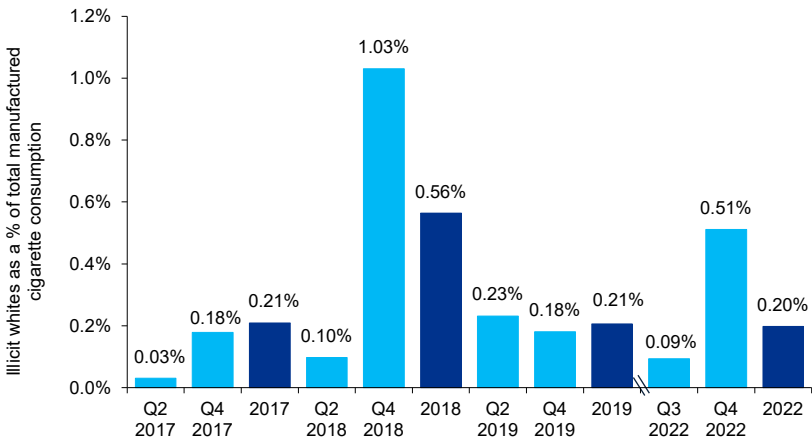
Figure 4.2.5a: Counterfeit flows incidence as a percentage of total manufactured cigarette consumption, 2017 - 2022<sup>(1)(a)(b)</sup>



PMNZ did not participate in the empty pack survey in 2022. Hence, none of their brands have been classified as counterfeit in the analysis. Even as it continued to be a small part of the empty pack survey findings, counterfeit flows as a percentage of manufactured cigarettes decreased between 2019 and 2022 by 0.13 pp; much likely due to the exclusion of brands trademark owned by PMNZ. Overall in 2022, 0.01% of manufactured cigarettes consumed in New Zealand were counterfeit.<sup>(c)</sup> No counterfeit was identified in Q3 2022.

## 4.2.6 New Zealand empty pack survey results – Illicit whites brand flows

Figure 4.2.6a: Consumption of non-domestic illicit white flows as a percentage of total manufactured cigarette consumption, 2017 - 2022<sup>(1)(2)(3)(4)(b)(d)</sup>



Non-domestic illicit whites flows decreased from 0.21% in 2019 to 0.20% of all manufactured cigarettes consumed in New Zealand in 2022. Based on our analysis, there was no evidence of domestic illicit whites in New Zealand in 2022.

Notes: (a) The counterfeit volume is reported from manufacturers participating in the empty pack survey: BATNZ and ITNZ. No other counterfeit is included in the volumes reported due to lack of information; PMNZ did not participate in the empty pack survey  
(b) Numbers for 2020 and 2021 are not available as the study had not been conducted that year  
(c) Counterfeit is considered as n/a in 2022 within the total consumption calculation  
(d) Within the illicit whites methodology, the Tobacco Returns data used is based on the 2021 data due to delay in release of the latest 2022 data. Further discussed on pages 54 and 55

Source: (1) WSPM, empty pack survey, Q2 2017, Q4 2017, Q2 2018, Q4 2018, Q2 2019, Q4 2019, Q3 2022 and Q4 2022  
(2) Tobacco returns, MOH, 2021  
(3) IRI data, 2022  
(4) Euromonitor country reports on cigarettes

**05**

# **Conclusion**

# Illicit tobacco increased to 12.1% of consumption; despite a fall in total tobacco consumed

Table 5.1: Consumption model results<sup>(1)(2)(3)</sup>

2019-2022 results (kg '000) <sup>(a)(b)(c)</sup>					
		2019	2022	% change (2019-22)	CAGR (2019-22)
Illicit manufactured cigarettes	Contraband	95.5	72.3	(24.3%)	(8.9%)
	Counterfeit	1.8	0.1	n/a	n/a
	Total	97.3	72.4	(25.6%)	(9.4%)
Unbranded tobacco		132.7	94.8	(28.6%)	(10.6%)
<b>Total illicit tobacco</b>		<b>230.1</b>	<b>167.2</b>	<b>(27.3%)</b>	<b>(10.1%)</b>
<b>Illicit tobacco consumption as % of total consumption</b>		<b>11.5%</b>	<b>12.1%</b>	<b>n/a</b>	<b>n/a</b>
<b>Equivalent excise value (NZDm)<sup>(d)</sup></b>		<b>287.4</b>	<b>247.8</b>	<b>(13.8%)</b>	<b>(4.8%)</b>
<b>Legal domestic sales (FMC and RYO)</b>		<b>1,671.3</b>	<b>1,175.5</b>	<b>(29.7%)</b>	<b>(11.1%)</b>
<b>Total consumption</b>		<b>2,006.3</b>	<b>1,384.0</b>	<b>(31.0%)</b>	<b>(11.6%)</b>

## Total consumption

Total tobacco consumption declined by a CAGR of 11.6% between 2019 and 2022 to 1,384.0 thousand kgs in 2022.

This was primarily driven by a decline in legal domestic sales, as both manufactured cigarettes and loose tobacco consumption declined.

## The illicit tobacco market in New Zealand

Our Report indicates that the consumption of illicit tobacco declined at a slower rate than total consumption. This is due to a decline in volumes of both unbranded tobacco (10.6% p.a.) and contraband (8.9%) in 2022.

As a result, illicit tobacco consumption as a proportion of total consumption represented approximately 12.1% in 2022, which is an increase of 0.6 pp from 2019.

However, the share of illicit tobacco mix remained consistent with 2019. Unbranded tobacco accounted for the largest share, representing c.57% of the total illicit tobacco consumption, whereas the share of contraband increased marginally since 2019 to represent 43% of the total mix in 2022. Counterfeit accounted for only 0.1% of the total illicit consumption.

If all of the illicit tobacco had been consumed in the legitimate market, it would have represented an excise amount of approximately NZD 247.8 million at the 2022 excise rate.<sup>(3)(d)</sup>

## The legal tobacco market in New Zealand

The consumption of all forms of legal tobacco in New Zealand declined between 2019 and 2022.

Legal domestic sales declined by 11.1% p.a. during this time period as the consumption of both manufactured cigarettes and loose tobacco declined at a similar rate.

The consumption of tobacco grown at home (c.34.8 thousand kgs in 2022) declined at a CAGR of 24.0% between 2019 to 2022 and accounted for approximately 2.5% of the total consumption.

Non-domestic legal consumption reflected travel trends and remained below pre-COVID levels, showing an annualised decline of 36.8% p.a. between 2019 and 2022. However, it remains a small part of total consumption in New Zealand (0.5%).

Flows or products from China and South Korea represented the largest shares of non-domestic inflows in 2022.

Notes: (a) CAGR and percentage change for counterfeit is considered as n/a in 2022 as it is not comparable with the 2019 result as PMNZ did not participate in the empty pack survey in 2022

(b) Contraband includes volumes of illicit whites

(c) Numbers for 2020 and 2021 are not available as the study had not been conducted that year

(d) Calculated based on the excise tax rate for 2022, i.e., NZD 1,098.37 per 1,000 cigarettes and NZD 1,565.18 per kilo tobacco content

Sources: (1) Kantar New Zealand Research, consumer survey: quantitative and qualitative findings, Q2 2019, Q4 2019, Q2 2022 and Q4 2022

(2) WSPM, empty pack survey, Q2 2019, Q4 2019, Q3 2022 and Q4 2022

(3) Excise tax rate, January 2022

# Appendices

- A1 Consumption estimation
- A2 Empty pack survey analysis
- A3 Use of smoking prevalence data
- A4 Non-domestic legal calculation
- A5 Illicit whites flows analysis
- A6 Notes to this Report
- A7 Scope of work
- A8 Kantar New Zealand questionnaire

# KPMG has used a consumption based approach for unbranded tobacco and tobacco grown at home

## A1 Approach to estimating consumption

### Introduction

The home grown market is comprised of tobacco grown at home for personal use. Some of this is purchased which represents an illicit product (referred to as 'unbranded tobacco'), whilst some is consumed legally (referred to as 'tobacco grown at home').

The primary methodology we have used to estimate the unbranded tobacco market and the tobacco grown at home market in New Zealand is a consumption estimation approach.

The consumption estimation approach uses the results of the Kantar New Zealand consumer survey to determine the core inputs to the calculation, combined with publicly available information on the legal tobacco market and smoking population.

### The consumer survey

The estimate of consumption was based on the responses of 2,817 smokers in New Zealand to two CAWI based consumer surveys undertaken in 2022. This was the first time that CAWI alone (i.e. rather than combined with CATI) has been used. Respondents were sampled from Kantar New Zealand online panels and previous tobacco surveys. The sample was weighted to be representative of the market in terms of product range (FMC and RYO consumers), age and gender.

The surveys were conducted between 26<sup>th</sup> May and 15<sup>th</sup> June for Q2 2022, and 27<sup>th</sup> October and 21<sup>st</sup> December for Q4 2022.<sup>(a)</sup> Online interviews took an average of 10 minutes to complete. Consumers were asked about their consumption and purchase of legal and illicit tobacco products; unbranded loose tobacco sold in bags, pre-filled unbranded tobacco, home grown tobacco, as well as counterfeit and contraband manufactured cigarette products.

The consumer survey questionnaire is provided in Appendix A8. This lists the entire set of questions and is not a representation of how respondents view the online survey. Respondents are asked questions based on their answers in earlier filtering questions and their navigation through the survey is determined by programmed skip patterns.

The consumer survey is used to form a view on the unbranded tobacco market and the tobacco grown at home market.

Kantar New Zealand collects and compiles the consumer survey responses and provides a consolidated data sheet for KPMG analysis. The data sheet lists question responses on an individual respondent basis and is accompanied by a question and answer reference mapping.

The consumer survey responses are used to obtain several core inputs for the consumption estimation process. These core inputs are based on consumer responses and include:

- How many smokers purchase unbranded tobacco, how often these illicit purchasers purchase unbranded tobacco, and how much they purchase on each occasion
- How many smokers grown their own tobacco, how much they grow each year and how much they give away/sell

These responses generate the core assumptions which are used in the consumption estimation and are illustrated on table A1b and table A1c overleaf.

### Additional assumptions

In addition to the results generated by the consumer survey, further assumptions and data-points are used:

- Total adult smoking population – we calculated that the total smoking population was 332,360.<sup>(b)</sup> This assumption is based on data from the New Zealand Health Survey and population data from Euromonitor

The next few pages provide more detail on how we have estimated consumption in both unbranded tobacco and tobacco grown at home.

Note: (a) Historically, the analysis has been based on both CATI and CAWI. However, the CATI was not conducted in 2022  
(b) Please see appendix A3 for details of the estimation of the smoking population

# Consumption estimates are built on the results of the consumer survey and publicly available data

## A1 Consumption estimation: Unbranded tobacco

The core inputs from the consumer survey and publicly available information are used in the estimation of consumption, illustrated in table A1a. These core inputs are factored together to produce an estimate of the amount of illicit tobacco products consumed by the representative population sampled in the Kantar New Zealand consumer survey covering the steps outlined:

- a. Steps 1 and 2 are used to estimate the average annual volume of illicit consumption per consumer in step 3
- b. The number of unbranded tobacco users is estimated by multiplying the total adult smoking population in step 4 by the percentage of unbranded tobacco users noted in the consumer survey in step 5

In New Zealand it is assumed that unbranded tobacco is solely in the form of home grown tobacco which has been sold illegally.

The 2022 consumption estimation process and relevant data sources are shown in detail overleaf.

Table A1a: Consumption estimation data sources and process

Consumption estimation inputs		
Quantity of unbranded tobacco purchased per occasion (g)	①	Kantar New Zealand consumer survey
Frequency of unbranded tobacco purchased per annum	②	Kantar New Zealand consumer survey
Quantity of unbranded tobacco purchased per annum (kg)	③	① x ② = ③
Total adult smoking population ('000)	④	New Zealand Health Survey smoking prevalence data and Euromonitor New Zealand adult population data <sup>(a)</sup>
Unbranded tobacco users as % of New Zealand tobacco users	⑤	Kantar New Zealand consumer survey
Number of unbranded tobacco users, New Zealand ('000)	⑥	④ x ⑤ = ⑥
Quantity of unbranded tobacco purchased in New Zealand (kg '000)	⑦	③ x ⑥ = ⑦

Note: (a) Please see appendix A3 for details of the estimation of the smoking population



# The consumer survey indicates an illicit volume of 94.8 thousand kg of unbranded tobacco purchased

A1 Consumption estimation: Unbranded tobacco (cont.)

The core inputs from the consumer survey and publicly available information are used in the estimation of consumption.

Table A1b: Consumption estimation results, 2022<sup>(1)(a)</sup>

Unbranded tobacco consumption						
		Q2 2022	Q4 2022	Blended		
①	Average quantity of unbranded tobacco purchased per occasion (g)	84.1	73.7			
②	Average frequency of unbranded tobacco purchased per annum	58.8	67.2			
③	Average quantity of unbranded tobacco purchased per annum (g)	① x ②	4943.1			4953.5
④	Total adult smoking population ('000)	332.4	332.4			
⑤	Unbranded tobacco users as % of New Zealand tobacco users	5.0%	6.6%			
⑥	Number of unbranded tobacco users, New Zealand ('000)	④ x ⑤	16.5			21.8
⑦	Quantity of unbranded tobacco purchased in New Zealand (kg '000)	③ x ⑥	81.4	108.2	94.8	

Based on the responses to the Kantar New Zealand consumer survey, this approach estimates the volume of unbranded tobacco consumed in 2022 to be c.94.8 thousand kg.

The survey suggests that 7,903 kilograms of tobacco was grown by people growing over the legal limit of 5 kilograms in Q4 2022.<sup>(2)(b)(c)</sup> However, we do not know how much of this was processed into smoking tobacco (and therefore illicit).

Notes: (a) Numbers in the above table may not sum due to rounding  
(b) Quantity grown per annum above the legal limit is derived by multiplying the total number of illicit tobacco home growers with the average amount grown per year above the legal limit  
(c) The 5 kg legal limit indicates the maximum amount of tobacco that an individual may manufacture in any period of 12 months beginning with 1 July and ending with 30 June

Sources: (1) Kantar New Zealand Research, consumer survey: quantitative and qualitative findings, Q2 2022 and Q4 2022  
(2) Customs and Excise Act 2018 s 67

# This approach to estimating consumption is also used to calculate the legal home grown market

## A1 Consumption estimation: Tobacco grown at home market

In the consumer survey, each respondent was asked if they had smoked their own home grown tobacco within the last twelve months. The percentage that this generated was applied to the total smoking population in order to determine the number of people who smoke their own home grown tobacco.

When estimating the total size of the tobacco grown at home market, the growers were asked how much tobacco they grew. The growers were also asked whether they had given away or sold any of the tobacco they grew, and if so the quantity which was given away or sold. This was deducted from the amount grown to calculate the total amount of tobacco grown at home that was consumed legally. There will likely be some wastage that the survey does not capture.

Table A1c: New Zealand tobacco grown at home consumption volumes<sup>(1)(2)(3)</sup>

Consumption estimation inputs			
Average quantity of tobacco grown per year (kg)	①	Kantar New Zealand consumer survey	
Total adult smoking population ('000)	②	New Zealand Health Survey smoking prevalence and Euromonitor New Zealand adult population data	
Tobacco grown at home smokers as % of New Zealand tobacco users	③	Kantar New Zealand consumer survey	
Number of tobacco grown at home smokers, New Zealand ('000)	④	② x ③ = ④	
Quantity of tobacco grown at home smokers in New Zealand (kg '000)	⑤	① x ④ = ⑤	
Average quantity of tobacco given away or sold (kg)	⑥	Kantar New Zealand consumer survey	
% of home growers who have given away or sold tobacco grown at home	⑦	Kantar New Zealand consumer survey	
Number of tobacco grown at home smokers who give away or sell tobacco grown at home, New Zealand ('000)	⑧	④ x ⑦ = ⑧	
Quantity of tobacco given away or sold by tobacco grown at home smokers in New Zealand (kg '000)	⑨	⑥ x ⑧ = ⑨	
Quantity of tobacco grown at home consumed legally (kg '000) <sup>(a)</sup>	⑩	⑤ - ⑨ = ⑩	

Note: (a) Under sections 2, 9 and 67 and Schedule 1 item 6 of the *Customs and Excise Act 2018*, individuals may only manufacture 5 kilograms of tobacco for personal use from 1 July 2019. However, we do not know how much of this quantity was processed into smoking tobacco (and therefore illicit)

Sources: (1) KPMG consumption estimation analysis  
(2) MOH; New Zealand Health Survey  
(3) Kantar New Zealand Research, consumer survey: quantitative and qualitative findings, Q2 2022 and Q4 2022

# Around 34.6 thousand kg of home grown tobacco was consumed legally

A1 Consumption estimation: Tobacco grown at home market (cont.)

Table A1d: Tobacco grown at home results, 2022<sup>(1)(a)(b)</sup>

Legal home grown tobacco						
			Q2 2022	Q4 2022	Blended	
①	Average quantity of tobacco grown per year (kg)		3.6	2.9		
②	Total adult smoking population (‘000)		332.4	332.4		
③	Tobacco grown at home smokers as % of New Zealand tobacco users		3.4%	3.0%		
④	Number of tobacco grown at home smokers, New Zealand (‘000)	② x ③	11.2	10.0		
⑤	Quantity of tobacco grown by home growers in New Zealand (kg ‘000)	① x ④	40.4	29.2		
⑥	Average quantity of tobacco given away or sold (kg)		0.3	0.3		
⑦	% of home growers who have given away or sold tobacco grown at home		6.1%	4.8%		
⑧	Number of tobacco grown at home smokers who give away or sell tobacco grown at home, New Zealand (‘000)	④ x ⑦	0.7	0.5		
⑨	Quantity of tobacco given away or sold by tobacco grown at home smokers in New Zealand (kg ‘000)	⑥ x ⑧	0.2	0.1		
⑩	Quantity of tobacco grown at home consumed legally (kg ‘000)	⑤ - ⑨	40.2	29.0		

Based on the responses to the Q2 and Q4 2022 Kantar New Zealand surveys, 34,793 kg of tobacco was estimated to be grown by tobacco grown at home smokers in New Zealand. Of this, 162 kg were sold or given away, therefore 34,631 kg of tobacco was estimated to be grown at home and consumed legally.<sup>(c)</sup>

When added to all legal domestic sales, including manufactured cigarettes, this equates to c.3% of the total volume of legal purchased and grown tobacco within New Zealand.

Note: (a) Numbers in the above table may not sum due to rounding  
(b) Numbers for 2020 and 2021 are not available as the study had not been conducted that year  
(c) Based on the blended average of Q2 and Q4 survey results  
Source: (1) Kantar New Zealand Research, consumer survey: quantitative and qualitative findings, Q2 2022 and Q4 2022

# Empty pack survey methodology

## A2 Empty pack survey analysis

Figure A2a: Empty pack survey methodology



### Empty pack survey methodology

The empty pack survey is conducted in a consistent way in each time period to provide a clear comparison of results and follow trends. It follows a four step process:

#### 1. Population centre selection

To achieve a sample of cigarette packs that is representative of the cigarette smoking population of New Zealand, six population centres are chosen based, on parameters such as population, size and geographical location. The population centres chosen represent the five largest cities in New Zealand and cover 53% of New Zealand’s population.

#### 2. Pack collection

The neighbourhoods sampled include residential, commercial and industrial areas. The empty pack survey collection routes specifically exclude tourist areas, sports stadia, shopping malls and stations, or any other locations where non-domestic incidence is likely to be higher as a result of a skewed population visiting these areas. The empty pack survey is therefore representative of New Zealand’s population. Each neighbourhood is assigned a number of discarded packs for collection based on the size of the overall population centre in comparison with the national population.

A minimum of 30 empty packs are collected from each neighbourhood (higher thresholds are applied in larger neighbourhoods) to fulfil statistical requirements and support reliable confidence level. These packs can be collected by any number of collectors, each of whom has no target number of packs to collect and no knowledge of the clients’ names or purpose of the survey. Each neighbourhood has a specific starting point and a fixed route. The collectors accumulate as many empty packs as possible within each neighbourhood regardless of the quota requested in the sampling plan. Packs collected may be from any manufacturer regardless of whether they participate in the survey. Indeed, collectors are unaware of the final client. Collectors revisit the neighbourhood as many times as necessary in order to achieve the required quotas.

The training of WSPM collectors includes an explanation of the methodology and running of pilots prior to the

collection. Each team of collectors is supervised by a team leader.

An additional 5% extra packs (‘the buffer’) are collected across neighbourhoods in case there are issues with the existing sample, such as spoiled packs. Any such packs are replaced by an identical ‘buffer’ pack collected from the same neighbourhood. If no identical pack is available, the pack is replaced randomly from the ‘buffer’ collected in that neighbourhood.

#### 3. Pack processing

**The empty packs are placed into bags and stored at a safe collection point.** Packs are discarded if they do not meet the survey quality requirements (e.g. torn, unreadable, rotten). Each survey qualified pack is cleaned and placed in a transparent nylon bag with a zipper that carries a unique barcode label indicating the serial number attributed to the pack (corresponding to the datasheet). WSPM identifies whether the packs are domestic or non-domestic. The details are then entered into the survey ‘Data Sheet’ provided by WSPM. The packs are delivered to the participating manufacturer(s) in a way that enables easy processing and identification. Data discussed in this Report refers to the information recorded on these packs.

Those brand names that are unknown are sent to the participating manufacturers to assess whether they are Illicit White flows.

#### 4. Pack analysis

The participating manufacturers check their packs only to identify counterfeit and inform the agency, which collates and updates the data-sheets. The collected packs are weighted according to the population of each settlement with results then calculated based on the number of cigarettes per pack. Reporting is done on the basis of cigarette sticks (as opposed to packs) to provide a more accurate estimation of total consumption). We do not know whether packs from other manufacturers are counterfeit or not.

These data-sheets are finally provided to KPMG and analysed to calculate the non-domestic incidence and contraband and counterfeit volumes.

# 8.4% of manufactured cigarette flows originated from outside of New Zealand

## A2 Empty pack survey analysis (cont.)

We have been given access to nine empty pack surveys which have been carried out in New Zealand.

The empty pack surveys for 2022 have been jointly commissioned by the BATNZ and ITNZ. Prior to 2022, surveys were also run in Q2 2014, Q2 2015, Q2 2016, Q2 2017, Q4 2017, Q2 2018, Q4 2018, Q2 2019 and Q4 2019 which have been made available to KPMG for use in this Report. The methodology and sample walking routes used in 2022 was consistent with those used in previous years.

The empty pack surveys record the pack size of each pack collected. This approach enables us to report using the number of cigarettes rather than the number of packs. As there can be considerable variation in pack sizes, using a measurement based on the number of cigarettes provides a more accurate representation of consumption patterns.

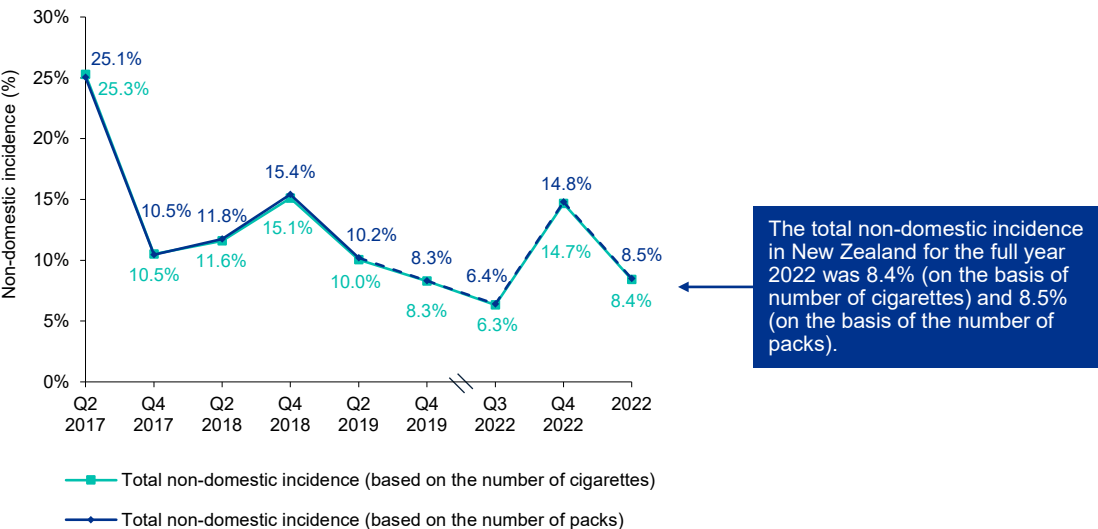
WSPM uses the empty pack survey analysis in order to take the proportion of cigarettes that are not from New Zealand (no health warnings or non-domestic health warning, brands not sold in New Zealand, packs with identifying marks from other markets such as tax stamps) and class these cigarettes as ‘non-domestic’.

The proportion of non-domestic cigarettes recorded by the empty pack survey is called the non-domestic incidence. The non-domestic incidence of the empty pack survey is shown in the chart (see below).

The total non-domestic incidence in New Zealand for Q3 2022 was 6.4% and for Q4 2022 was 14.8% (on the basis of number of packs). The non-domestic incidence (on the basis of number of cigarettes) was 6.3% for Q3 2022 and 14.7% for Q4 2022. The combined non-domestic incidence (on the basis of weighted sticks) of 8.4% in 2022.

Whilst a proportion of non-domestic cigarettes will be legally brought into New Zealand by both inbound (foreign nationals travelling to New Zealand) and outbound travellers (New Zealanders returning from abroad), this legal proportion is relatively small, with the majority of non-domestic cigarettes being illicit. A calculation of the legal volume of non-domestic cigarettes is shown in Appendix A4.

Figure A2b: Total non-domestic incidence, Q2 2017 - Q4 2022<sup>(1)(a)</sup>



Note: (a) Numbers for 2020 and 2021 are not available as the study had not been conducted that year  
Source: (1) WSPM, empty pack survey, Q2 2017, Q4 2017, Q2 2018, Q4 2018, Q2 2019, Q4 2019, Q3 2022 and Q4 2022

# Border closures in 2022 required a change in approach to make it more representative

## A2 Empty pack survey analysis (cont.)

### Impact of COVID

Due to COVID, the New Zealand government imposed border restrictions in 2020 which continued into 2022. The government eased the restrictions in stages from 27<sup>th</sup> February 2022 for New Zealanders and the border was fully reopened to the rest of the world on 31<sup>st</sup> July 2022.<sup>(1)(2)</sup>

As a result of border closures, WSPM could not conduct the empty pack survey in the first half of the year as would normally occur. Therefore, we do not have our usual insight into consumption habits for the first half of 2022.

In 2022, WSPM conducted empty pack surveys in Q3 between 5<sup>th</sup> August and 21<sup>st</sup> August and Q4 between 5<sup>th</sup> November and 28<sup>th</sup> November. For the purpose of this Report, the results from these surveys have been used to arrive at an estimate for the illicit manufactured cigarette consumption for the whole year 2022.

### Empty pack survey adjustment

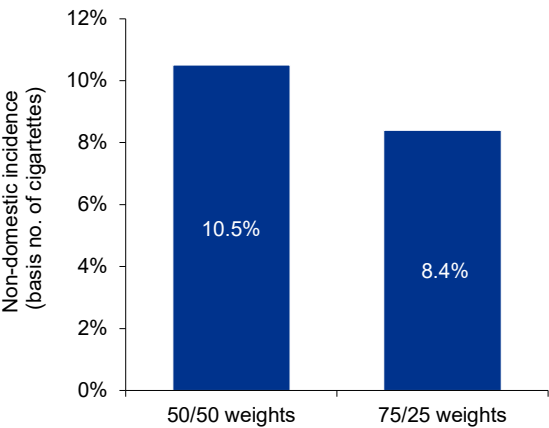
Normally we would combine the Q2 and Q4 empty pack surveys by assigning a 50% weight to each. Given that the Q3 and Q4 empty pack surveys suggested very different non-domestic incidences (i.e., 6.3% in Q3 and 14.7% in Q4), there is a danger of overstating the non-domestic incidence if a 50/50 weighting was used.<sup>(3)</sup> The Q3 empty pack survey was conducted much closer to the first half of the year and is therefore likely to be more comparable to the consumption habits experienced in that period than the Q4 survey.

Given the absence of empty pack survey data for the first half of 2022 we also looked at the monthly sales of legal products versus pre COVID periods. We noted a slightly higher percentage of sales of legal products in H1 2022<sup>(4)</sup> compared to previous years (i.e., from 2017 to 2021, where the proportion of H1 consumption in total LDS was lower than that in H1 2022). This could suggest that, whilst overall sales continued to decline, consumers may have partially switched to legal products if COVID impacted the supply of illicit products into New Zealand. As a result, we believe a more prudent approach is to give the higher Q4 empty pack survey non-domestic incidence finding a lower weighting.

Hence, we have assigned a weight of 75% to the Q3 2022 empty pack survey and a weight of 25% to the Q4 2022 empty pack survey

A recent study by the University of Otago, which assessed littered tobacco packs in New Zealand from May 2021 to April 2022, estimated their non-domestic incidence to be 5.4% for the study period. Although it is not directly comparable to our empty pack survey, it further supports our rationale behind the reweighting methodology, as our adjusted non-domestic incidence is more in line with the results from the study (*details on pages 45 to 47*).

Figure A2c: Non-domestic incidence in 2022 based on the empty pack survey



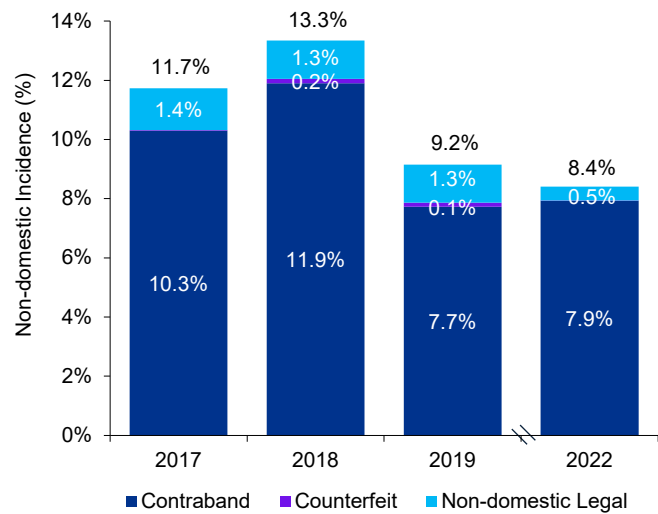
As a result of the 75/25 weighting for the Q3 and Q4 empty pack surveys, non-domestic incidence for the year 2022 (based on the blended average) was estimated to be 8.4% as compared to 10.5% if Q3 and Q4 were weighted equally.

Source: (1) New Zealand border to reopen in stages from 27 February, Unite against COVID, February 2022  
(2) New Zealand's borders fully open after long pandemic closure, Reuters, August 2022  
(3) WSPM, empty pack survey, Q3 2022 and Q4 2022  
(4) IRI data, 2022

# The majority of non-domestic manufactured cigarette flows continued to be illicit in 2022

A2 Empty pack survey analysis (cont.)

Figure A2d: Break down of non-domestic incidence, 2017- 2022<sup>(1)(a)(b)(c)(d)</sup>



As discussed on page 42, not all non-domestic tobacco is illicit tobacco. Non-domestic incidence can be broken down into three separate categories of flows:

- 1. **Non-domestic legal** – These are cigarettes legally brought into New Zealand as part of travellers' non-domestic allowance
- 2. **Counterfeit** – The packs collected in the empty pack survey are examined by the companies participating in the empty pack survey. They are able to identify packs that are counterfeit versions of their products
- 3. **Contraband** – The remainder, and majority, of non-domestic manufactured cigarettes are legitimate products (i.e. non-counterfeit) that have entered New Zealand illegally. Contraband includes illicit whites

Total non-domestic incidence decreased from 9.2% in 2019 to 8.4% in 2022.

Non-domestic legal incidence accounts for 0.5% out of total non-domestic incidence in 2022 (a decrease by 0.8 pp between 2019 and 2022).

Contraband continued to be a majority portion of non-domestic incidence. Therefore, the majority of non-domestic cigarettes are illicit flows.

It is also worth noting that PMNZ did not participate in the empty pack survey in 2022 which may also be reflected in the reduction of recorded counterfeit.

Notes: (a) Please refer to appendix A4 for detailed calculation of non-domestic legal volumes  
(b) Numbers for 2020 and 2021 are not available as the study had not been conducted that year  
(c) The 2017, 2018, 2019 and 2022 figures are based on the blended results of Q2 2017 and Q4 2017 for 2017, Q2 2018 and Q4 2018 for 2018, Q2 2019 and Q4 2019 for 2019 and Q3 2022 and Q4 2022 for 2022 using the weighted number of cigarettes  
(d) The 2022 figures are based on the blended results of Q3 2022 and Q4 2022 using the weighted number of cigarettes. A weight of 1.5 (75%) was assigned to the Q3 2022 empty pack survey, and a weight of 0.5 (25%) was assigned to the Q4 2022 empty pack survey. This was done as the empty pack survey was not conducted for the first two quarters of 2022 (Q1 and Q2), and assigning a 75% weight on Q3 survey would reflect a conservative representation of the whole year 2022

Source: (1) WSPM, empty pack survey, Q2 2017, Q4 2017, Q2 2018, Q4 2018, Q2 2019, Q4 2019, Q3 2022 and Q4 2022



# A recent Otago University study provides insights into non-domestic consumption during lockdown

## A2 Empty pack survey analysis (cont.)

### Introduction

The University of Otago produced an academic paper called *Assessing cigarette smuggling at a time of border closure to international tourists: survey of littered packs in New Zealand* ('the Otago study'), published on 26<sup>th</sup> August 2022 in the Tobacco Control Journal by the BMJ Group. The purpose of the study was quoted in the report as: *"Aotearoa New Zealand (NZ) is a country with a tobacco endgame plan that includes denicotinisation of tobacco. Because of concerns these measures could increase tobacco smuggling, we aimed to provide new baseline data on such smuggling."* The findings were supported by a survey of littered cigarette packs conducted between May 2021 and April 2022 whilst border restrictions were in place in New Zealand.<sup>(1)</sup>

Given that we do not have other data sources to estimate the non-domestic consumption during the first half of 2022, we have considered the Otago study to determine how it may inform our assumptions for that period.

### Approach

The collection of tobacco packs (including cigarettes packs and RYO pouches) was conducted by the university researchers through convenience sampling<sup>(a)</sup> while on routine travel around a number of regions, supplemented with purposeful sampling<sup>(b)</sup> in key cities and major ports, particularly Auckland (the largest city) and Tauranga (the largest port). However, it is unclear from the report on how this sampling was conducted.

They collected 1,590 discarded packs (comprising of 97.3% cigarettes and 2.7% RYO) from 12 of the country's 16 regions (missing regions include Tasman, Nelson, Marlborough and the West Coast regions), which were examined to identify foreign packs (based on the lack of distinctive New Zealand-specific pictorial health warnings) and to estimate the proportion of foreign packs in the total packs collected. Of these packs, 36 were determined to be foreign. This proportion was then adjusted/weighted by the population distribution in New Zealand.

### Findings

The distribution of foreign packs was dominated by just two cities: Auckland and Wellington. Their study suggested that non-domestic incidence (based on the number of packs) in New Zealand was 5.4% for the study period.

The top non-domestic brands identified in the Otago study were Double Happiness and Marlboro, whereas the top non-domestic source countries were China and South Korea.

### Comparability to our approach

The timing of the Otago study (i.e., May 2021 to April 2022) suggests the most appropriate empty pack survey to compare it to is the Q3 2022 empty pack survey conducted in August 2022. This is important as the Q3 empty pack survey is also closest in time to the lifting of border restrictions. There are a few notable differences:

#### 1. Classification of Australian packs

The empty pack survey classifies a pack based on whether it is for domestic or non-domestic consumption based on the markings of the pack. The Otago study assumes that all Australian packs are domestic as these can be legally sold in New Zealand. However, because the average cigarette price in Australia is higher than in New Zealand and there is therefore no economic incentive to smuggle them into New Zealand, we assume all Australian packs are non-domestic legal consumption.

#### 2. Sample size and representativeness

The Otago study is based on a sample size of 1,590 packs (consisting of 1,502 cigarettes, with the rest being RYO pouches), collected across a wider range of sites than the empty pack survey. However, the empty pack survey is based on 2,109 cigarette packs collected across the top six most populated cities in New Zealand, which accounted for 53% of the population in New Zealand.

#### 3. Brands and countries of origin

The top two non-domestic source countries identified in the Otago study (China and South Korea, which accounted for 34 out of 36 foreign packs) were consistent with the findings of the empty pack survey.

However, the only other source countries identified in the Otago study were Turkey and the United Kingdom, whereas the empty pack survey also suggests inflows from countries such as Hong Kong, Philippines, Indonesia and Singapore as other major sources of non-domestic cigarette consumption in New Zealand.

There is also similarity in the top non-domestic brands identified between the Otago study and empty pack survey. Double Happiness dominated the number of foreign packs found in the Otago study (10 out of 36), followed by Marlboro (6 out of 36), whereas Marlboro is the most prevalent non domestic brand identified in the Q3 empty pack survey, comprising of approximately 42% of the non-domestic flows in New Zealand, followed by Double Happiness (c.15% of the non-domestic flows in Q3).

Note: (a) Convenience sampling involves choosing samples which are easier for the researcher to access (e.g., based on geographical proximity)

(b) Purposeful sampling involves choosing samples based on certain criteria (e.g., population to improve coverage and efficacy of the study)

Sources: (1) *Assessing cigarette smuggling at a time of border closure to international tourists: survey of littered packs in New Zealand*, Tobacco Control Aug 2022

(2) WSPM, empty pack survey, Q3 2022

# The Otago study differs from the empty pack survey in its sampling methodology and analysis

## A2 Empty pack survey analysis (cont.)

### 4. Analysis of different types of non-domestic/illicit product

The Otago study stated that it does not distinguish counterfeit from non-counterfeit foreign packs, as this requires specialist expertise. It is also difficult to estimate other categories of tobacco such as illicit whites or non-domestic legal from the Otago study. This is captured in the empty pack survey analysis.

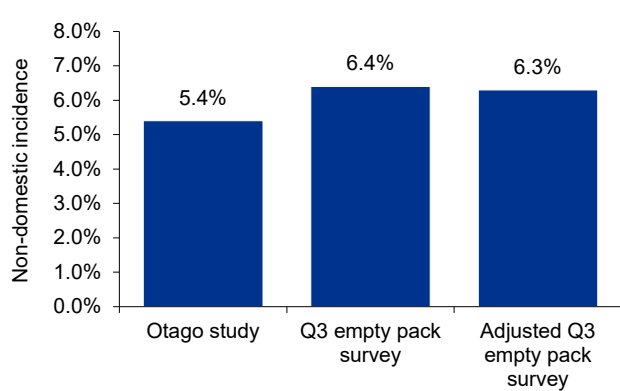
### 5. Categories

In addition to cigarettes, the Otago study also collects RYO packs, whereas our analysis excludes RYO packs. It does not appear that the sample packs collected for the Otago study were based on a set quota. The authors suggest the findings had a disproportionately low proportion of RYO pouches (41 out of 1,590 albeit none of these were foreign). They have indicated this is in contrast with statistics published by the MoH, i.e., 36.9% of people who smoke in New Zealand mostly smoke RYO and a further 16.5% smoke both RYO and tailor-made cigarettes. The authors stated the reasons for this difference could be due to less littering of these RYO pouches or people are less likely to carry it out of the home.

### 6. Sampling and collection

The Otago study does not detail how samples were derived, i.e. how routes were selected. It does not appear from the paper that formal routes were selected to make the sample representative of the local population.

Figure A2d: Non-domestic incidence based on the Otago study vs empty pack survey<sup>(1)(2)(a)</sup>



Note: (a) We have excluded Australia's contribution to the non-domestic flows in order to calculate non-domestic incidence for the adjusted Q3 empty pack survey  
Sources: (1) Assessing cigarette smuggling at a time of border closure to international tourists: survey of littered packs in New Zealand, Tobacco Control Aug 2022  
(2) WSPM, empty pack survey, Q3 2022

The study states that samples were mainly collected by the researchers through convenience sampling while on routine travel. This means that packs were picked based on factors such as geographical accessibility rather than pre-determined quotas. Although this was supplemented with purposeful sampling to improve coverage, the study does not mention sampling criteria and acknowledges over sampling in Wellington and under sampling in other major areas, especially Auckland.

By comparison, we have a set route and a quota of cigarette packs based on population. In our survey, packs are collected from neighbourhoods, selected to be representative of the city being sampled. The packs are also collected on a proportionate basis (i.e., based on the size of the overall population centre in comparison with the national population), to fulfil statistical requirements and support reliable confidence levels.

The Otago study excludes quarantine facilities from its study and does not avoid areas with high levels of non-domestic incidence such as tourist areas, sports stadia, shopping malls and stations as done in the empty pack survey. However, since lockdown restrictions were in place during their fieldwork, we assume that this would not be a major issue.

Since the samples in the Otago study were collected over a year, it is unclear on the timings of collections. As a result, the weights of these collections and therefore seasonal factors are uncertain. We do note that the empty pack survey shows variability of results between cities across the quarters of analysis. Without further detail on the sampling plan and timings of collection by location over the course of the year of study, it is difficult to determine the comparability of approach.

### Conclusion

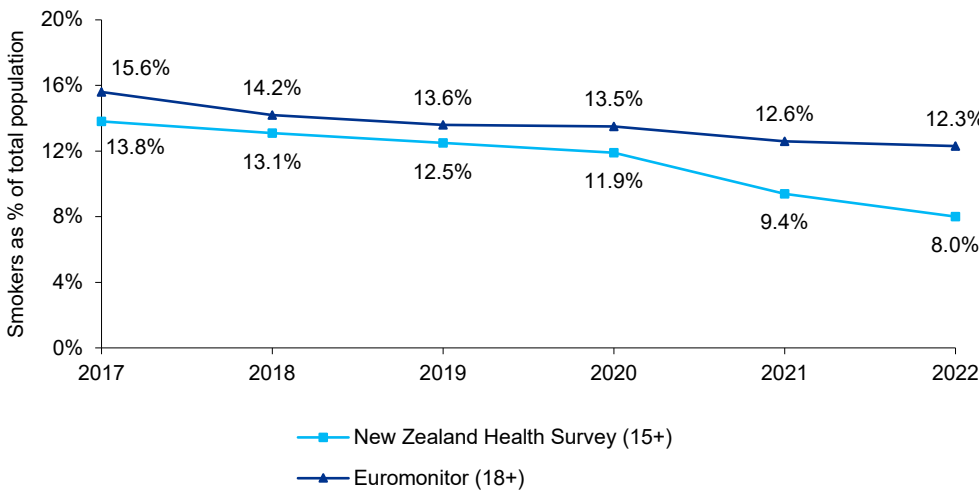
The Otago study suggested a 5.4% incidence of foreign packs. If we compare this on as close to a like for like basis by adjusting the Q3 empty pack survey to exclude Australian packs, we found 6.3% non-domestic incidence; not too far from the Otago findings.

It is worth reiterating that the Otago study crosses both 2021 and 2022 and utilises a different methodology. As such, it can provide some insights into the first half of 2022 but is not a direct comparator to the empty pack survey used in our study. Nonetheless, it does provide us with further comfort in our reweighting of the empty pack survey as the correct approach.

# Estimates of smoking prevalence are available from New Zealand Health Survey and Euromonitor

## A3 Use of smoking prevalence data

Figure A3a: Smokers as a percentage of population, 2017 - 2022<sup>(1)(2)(a)(b)</sup>



The smoking prevalence rate measures the total percentage of regular smokers in New Zealand and can be used as an indicator of the level of tobacco consumption. Smoking prevalence data is used in order to calculate the total number of smokers in New Zealand.

Official estimates of smoking prevalence are available from MOH, based on data from the New Zealand Health Survey which has been collected annually since 2011/12. Euromonitor also provides estimates of smoking prevalence.

Each of the data sources reflects specific age groups. The New Zealand Health Survey estimates reflect prevalence for 15 year olds and above, whilst Euromonitor figures estimated prevalence among those aged over 18. This age difference likely explains part of the higher Euromonitor results. Both estimates indicate a downward trend in smoking prevalence.

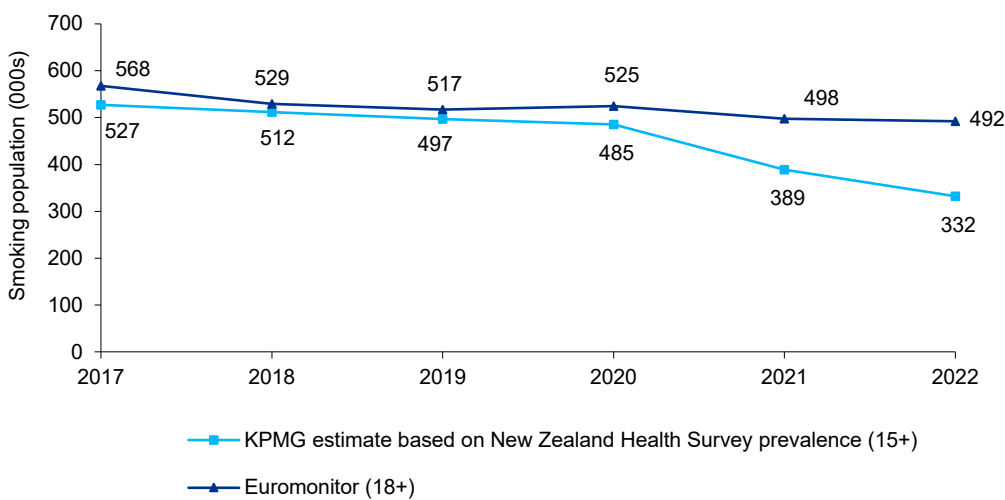
Where KPMG require prevalence data for our estimation process, we have used the New Zealand Health Survey results to avoid overstating the estimate for the number of smokers in New Zealand. Overstating the number of smokers would lead to an incorrectly inflated estimate of the size of illicit consumption.

Notes: (a) Data has been updated based on data from Euromonitor, accessed in January 2023. Euromonitor occasionally update their numbers and so numbers may not match data reported previously  
(b) New Zealand Health Survey data is based on period between July and June  
Sources: (1) Euromonitor, Smoking Population in New Zealand, accessed January 2023  
(2) MOH; New Zealand Health Survey, 2016/17 - 2021/22

# Both the estimates of smoking prevalence suggest a decline in the smoking population of New Zealand

A3 Use of smoking prevalence data

Figure A3b: Total number of smokers, 2017 - 2022<sup>(1)(2)(a)(b)</sup>



CAGR (%) of total number of smokers	2019 - 22
KPMG estimates based on New Zealand Health Survey	(12.5%)
Euromonitor	(1.6%)

The number of adult smokers in New Zealand is used to extrapolate the consumer survey results up to an illicit estimate for the entire population.

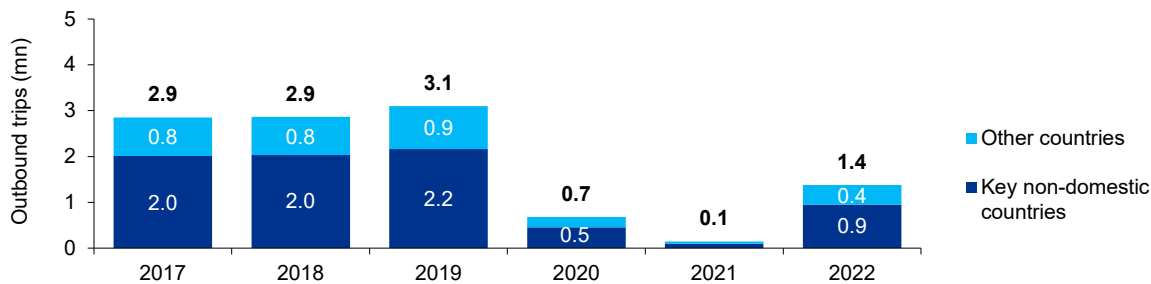
KPMG use the prevalence data provided by the New Zealand Health Survey and population data provided by Euromonitor to calculate the smoking population. This approach indicates a declining population similar to the results of Euromonitor.

Notes: (a) Data has been updated based on data from Euromonitor, accessed in January 2023. Euromonitor occasionally update their numbers and so numbers may not match data reported previously  
(b) New Zealand Health Survey data is based on period between July and June  
Sources: (1) Euromonitor, Smoking Population in New Zealand, accessed January 2023  
(2) MOH; New Zealand Health Survey, 2016/17 - 2021/22

# Outbound trips to non-domestic source countries have increased post COVID

## A4 Non-domestic legal calculation

Figure A4a: Overseas travel of New Zealand residents, 2017 - 2022<sup>(1)(a)(b)(c)</sup>

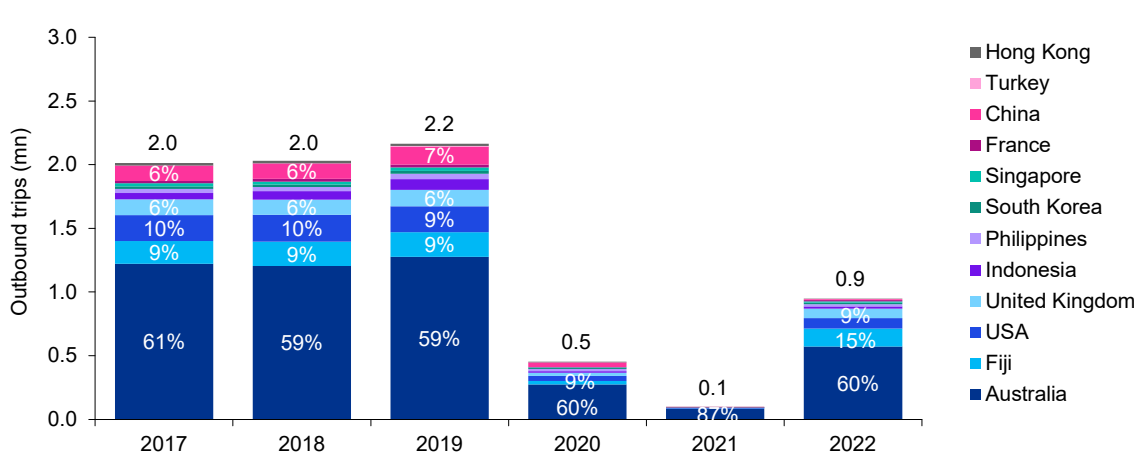


CAGR (%) of outbound trips	2019-20	2020-21	2019-22
Key 2022 non-domestic source countries	(79.1%)	(78.6%)	(24.1%)
Total overseas trips	(78.0%)	(79.0%)	(23.7%)

Travel trend data is used by KPMG to estimate non-domestic legal volumes, i.e., tobacco products that are brought into the country legally by consumers, such as during an overseas trip.

COVID restrictions have clearly impacted traveller numbers. Since our last report, trips made to key non-domestic source countries of manufactured cigarettes decreased at a higher rate than the decrease in overall trips. Traveller numbers started to increase again in 2022 but remain below pre-COVID levels.

Figure A4b: Overseas travel of New Zealand residents to key 2022 non-domestic source countries, 2017 - 2022<sup>(1)(a)(b)(c)</sup>



Visits to key non-domestic source countries reached a total of 0.9 million in 2022, accounting for approximately 70% of all trips made overseas by New Zealand residents.

Notes: (a) Key non-domestic source countries have been selected from the empty pack survey carried out in 2022. The countries shown in the graph above accounted for about 92% of the total non-domestic incidence in 2022 in New Zealand  
(b) ND(L) volumes are estimated using actual travel data from January 2022 to December 2022  
(c) Some chart labels of 0.2 and below, and 8% and below have been removed for clarity  
Source: (1) Statistics New Zealand, NZ resident traveller departures by every country of main destination and purpose (monthly): Trend, 2017, 2018, 2019, 2020, 2021 and 2022

ND(L) volumes due to outbound trips is relatively low as a proportion of total consumption

A4 Non-domestic legal calculation (cont.)

Figure A4c: Example non-domestic legal calculation (outbound)											
	Overseas visits		ND uplift		% population smokers		Propensity to purchase		Amount per trip		Total (kg '000)
Full year 2022	0.72m	x	1.08 <sup>(a)</sup>	x	8.0%	x	65.8%	x	50g	=	2.1

KPMG non-domestic legal calculation for overseas travel of New Zealand residents <sup>(1)(2)(3)(4)(a)(b)(c)(d)(e)(f)</sup>				
	Source	2018	2019	2022
Overseas trips to non-domestic source countries in the year (m)	Statistics New Zealand	1.88	1.84	0.72
Non-domestic source uplift	Empty pack survey	14.0%	12.0%	8.0%
% of population that are smokers	MOH	13.1%	12.5%	8.0%
% of smokers that buy tobacco overseas	Kantar New Zealand consumer survey	60.8%	65.8%	65.8%
Number of smokers purchasing overseas (m)		0.16	0.17	0.04
Amount purchased (kg)	Inbound traveller allowance	0.05	0.05	0.05
Total outbound non-domestic legal (kg)		8,072	8,471	2,051

Estimates of non-domestic legal flows show that total volumes account for a small proportion of total consumption in 2022. The total volume of tobacco brought in New Zealand through overseas travel of New Zealand residents was 2,051 kg in 2022.<sup>(e)</sup>

The 2022 consumer survey suggested that 65.8% of smokers bought cigarettes overseas.

Notes: (a) The key non-domestic source countries used to calculate non-domestic legal flows accounted for approximately 92% of the total non-domestic incidence in 2022 in New Zealand. Therefore, an 8% uplift has been used to get the total non-domestic legal volume

(b) Respondents were asked 'OP1. Have you travelled outside of New Zealand in the last 12 months?'

(c) Respondents were then asked 'OP2. Have you bought any tailor made cigarettes/roll your own tobacco in another country to bring back to New Zealand on any of your overseas trips in the last 12 months?'

(d) Population above the age of 18 years

(e) Flows from Australia that were compliant with the Australian plain packaging requirements as per the Q3 2022 and Q4 2022 empty pack surveys have been considered to be legal inflows. Since Australia is a key non-domestic source country, it has been included in the above calculation. However, it has been categorised separately in our non-domestic calculation on page 54

(f) Numbers for 2020 and 2021 are not available as the study had not been conducted that year

Sources: (1) Kantar New Zealand Research, consumer survey: quantitative and qualitative Findings, Q4 2017, Q2 2018, Q4 2018, Q2 2019, Q4 2019, Q2 2022 and Q4 2022

(2) Statistics New Zealand, Resident traveller arrivals by every country of main destination and purpose (monthly):Trend, 2022

(3) MOH, Government of New Zealand, Health Survey, 2021-22

(4) IATA, New Zealand Customs, Currency & Airport Tax regulations details, accessed on January 2020.

# Overseas visitors also serve as contributors to non-domestic packs found in New Zealand

## A4 Non-domestic legal calculation (cont.)

Overseas visitors arrivals from key non-domestic countries include both short term arrivals and permanent and long-term migration. As discussed on page 50, the key source countries have been included based on the inflows from each market in the 2022 empty pack survey.

The visitors (short term arrivals and permanent and long-term migration) from key non-domestic source countries decreased during the COVID period due to border closures. This number increased in 2022 as New Zealand’s borders reopened to the rest of the world in the second half of 2022 (H2). However, the total number of visitors declined by 33.8% p.a. between 2019 and 2022.

In the absence of data, KPMG has made a prudent assumption that all visitors who are calculated to be smokers bring their full 50 cigarettes or 50 gram duty free limit.

Figure A4d: Overseas visitors (short term visitors and permanent and long-term migration) arrivals to New Zealand, 2017 - 2022<sup>(1)(2)(a)(b)(c)</sup>

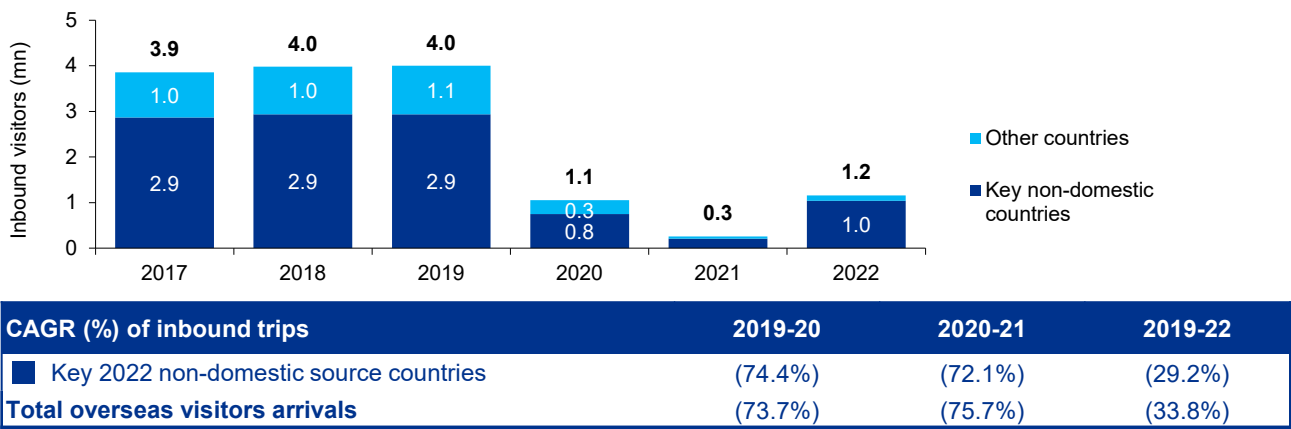
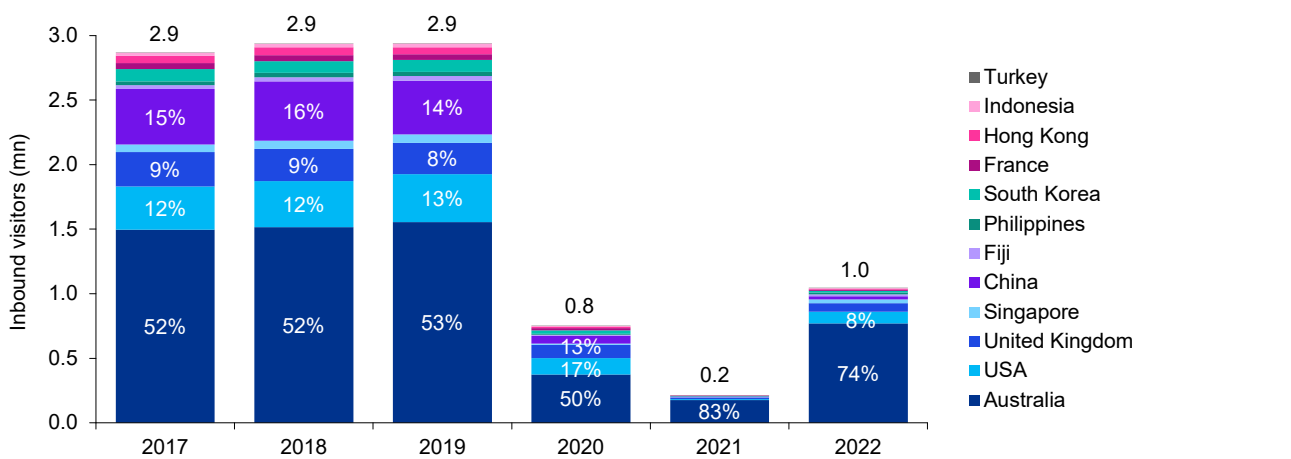


Figure A4e: Overseas visitors arrivals from key non-domestic source countries, 2017 - 2022<sup>(1)(2)(a)(b)(c)</sup>



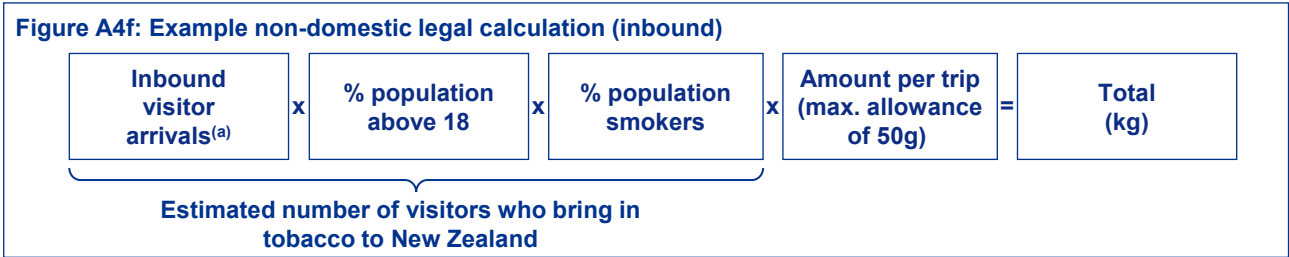
Notes: (a) Key non-domestic source countries have been selected from the empty pack survey carried out in 2022. The countries shown in the graph above accounted for about 92% of the total non-domestic incidence in 2022 in New Zealand  
(b) ND(L) volumes are estimated using actual travel data from January 2022 to December 2022  
(c) Some chart labels of 0.2 and below, and 8% and below have been removed for clarity

Sources: (1) Statistics New Zealand, Visitor arrivals by every country of residence and purpose (monthly): Trend, 2017, 2018, 2019, 2020, 2021 and 2022  
(2) Statistics New Zealand, Permanent & long-term migration by every country of residence and citizenship (monthly): Trend, 2017, 2018, 2019, 2020, 2021 and 2022



# ND(L) calculated on the basis of inbound visitors is a small proportion of total consumption

A4 Non-domestic legal calculation (cont.)



KPMG non-domestic legal calculation based on overseas visitor arrivals to New Zealand <sup>(1)(2)(3)(4)(a)(b)(c)(d)</sup>					
2022	Inbound visitor arrivals (m) <sup>(a)</sup>	% population above 18 <sup>(b)</sup>	% population smokers	Number of visitors bringing tobacco ('000) <sup>(c)</sup>	Amount consumed (kg)
Source	Statistics New Zealand	Euromonitor	Euromonitor		
Australia	0.77	78%	9%	56.57	2,828.50
USA	0.09	78%	13%	8.78	438.75
United Kingdom	0.07	79%	13%	6.88	343.85
China	0.02	80%	25%	4.66	232.90
Singapore	0.03	87%	12%	3.01	150.40
South Korea	0.01	86%	19%	2.06	103.20
Philippines	0.01	64%	23%	1.98	99.15
France	0.01	79%	25%	1.94	97.10
Fiji	0.02	66%	15%	1.53	76.30
Indonesia	0.00	70%	37%	0.79	39.40
Hong Kong	0.01	87%	10%	0.73	36.35
Turkey	0.00	73%	27%	0.07	3.65
Total	1.04				4,449.55

Total amount brought into New Zealand by inbound tourists

KPMG’s estimate of non-domestic legal volumes indicates that they account for a small proportion of total consumption. This proportion remains insignificant even if arrivals data is included in the non-domestic legal calculation. This analysis has been shown in detail on the next page.

Notes: (a) Inbound visitor arrivals to include arrivals of short term overseas visitors and permanent and long-term migration  
(b) Population above the age of 18 years  
(c) KPMG has used a prudent approach and assumed that 100% of visitors arriving in New Zealand purchase the maximum inbound traveller allowance  
(d) Flows from Australia that were compliant with the Australian plain packaging requirements as per the Q3 2022 and Q4 2022 empty pack surveys have been considered to be legal inflows. Since Australia is a key non-domestic source country, it has been included in the above calculation. However, it has been categorised separately in our non-domestic calculation on page 54

Sources: (1) Statistics New Zealand, Visitor arrivals by every country of residence and purpose (monthly): Trend, 2022  
(2) Statistics New Zealand, Permanent & long-term migration by every country of residence and citizenship (monthly): Trend, 2022  
(3) Euromonitor, Population in New Zealand, accessed January 2023.  
(4) Euromonitor, Smoking Prevalence Among Total Adult Population, accessed January 2023

# Total ND(L) consumption represents 0.5% of total consumption in New Zealand

A4 Non-domestic legal calculation (cont.)

KPMG total non-domestic legal calculation <sup>(1)(2)(3)(4)(5)(a)(b)(c)(d)</sup>			
	2018	2019	2022
Outbound trips ('000 kg)	2.6	2.6	0.4
Inbound trips ('000 kg)	10.8	9.5	1.6
Australian (Plain Packaged) ('000 kg) <sup>(e)</sup>	13.5	13.7	4.4
Total ND(L) ('000 kg)	26.9	25.8	6.5
Non-domestic legal as % of total consumption	1.3%	1.3%	0.5%

Due to the restrictions on travelling, non-domestic legal volumes declined between 2019 and 2022.

The estimate of ND(L) volumes above comprises of the legitimate flows from the main source countries as per the empty pack surveys and represents 0.5% of total consumption. If we were to assume that all travellers from the source markets indicated by the empty pack survey purchased their allowance of 50 grams, we would derive an ND(L) volume of approximately 42,800 kg or 3.1% of total consumption.<sup>(b)</sup>

As the price of tobacco is higher in Australia than New Zealand, there is no economic incentive to smuggle tobacco illegally into New Zealand from Australia with the aim of selling illicitly. Therefore, all inflows from Australia were considered to be legal flows and so included in non-domestic legal flows.

One limitation of this methodology is that it does not include cigarettes purchased through mail order and imported legally into New Zealand. Given the limited financial gain associated with paying New Zealand excise duty on cigarettes purchased abroad, compared to those purchased in New Zealand, we believe that the volume consumed is unlikely to be significant.

Store based retailing continued to be a major distribution channel, accounting for 98.9% of all sales for cigarettes and 99.2% of all sales of tobacco in New Zealand.<sup>(6)</sup>

The share of internet retailing as a distribution channel remained in-line with the previous years and is still small in comparison to convenience stores, supermarkets and other traditional retail channels.<sup>(6)</sup>

Notes:

(a)

Inbound visitor arrivals to include arrivals of short term overseas visitors and permanent and long-term migration

(b)

Assuming that all the travellers (adult population) purchase their entire tobacco allowance of 50 grams. This calculation does not take into consideration the proportion of smoking population

(c)

Conversion of cigarettes to kilograms is based on 0.80 grams = 1 manufactured cigarette, as per the official rates used for New Zealand excise duty purposes

(d)

Numbers for 2020 and 2021 are not available as the study had not been conducted that year

(e)

Flows from Australia that were compliant with the Australian plain packaging requirements as per the Q3 2022 and Q4 2022 empty pack surveys have been considered to be legal inflows. Our estimate of non-domestic legal includes the volume of these flows

Sources:

(1)

Statistics New Zealand, Visitor arrivals by every country of residence and purpose (monthly): Trend, 2022

(2)

Statistics New Zealand, Permanent & long-term migration by every country of residence and citizenship (monthly): Trend, 2022

(3)

Statistics New Zealand, Resident traveller departures by every country of main destination and purpose (monthly): Trend, 2022

(4)

Kantar New Zealand, consumer survey, 2022

(5)

New Zealand Custom Service

(6)

Euromonitor, Tobacco in New Zealand, July 2022

# Illicit whites flows methodology

## A5 Illicit whites flows analysis

Illicit whites are defined as manufactured cigarettes that are usually manufactured legally in one country/market but which the evidence suggests have been smuggled across borders during their transit to New Zealand, where they have limited or no legal distribution and are sold without the payment of tax.<sup>(a)</sup> For completeness we test for both domestic illicit whites and illicit whites (non-domestic) brand flows. Historically, domestic illicit whites have not been identified in our studies.

Our analysis includes an assessment of domestic illicit whites and illicit whites (non-domestic) brand flows.

### Domestic illicit whites

To identify which brands made up domestic illicit whites brand flows, KPMG undertook the following analysis:

- All domestic cigarette brands in the empty pack survey data were compiled for analysis. The list was corroborated through an analysis of IRI data (and pack labelling as per empty pack survey). Volumes from the empty pack survey were compared to legally reported sales of these brands to estimate share of total consumption<sup>(1)(2)</sup>
- Brand flows were also compared with the brands listed in the Tobacco Returns data published by MOH, which are annual tobacco returns filed by manufacturers and importers pursuant to the Smokefree Environments and Regulated Products Act 1990.<sup>(3)</sup> For the year 2022, we have used the 2021 Tobacco Returns data due to the timing in the release of the latest 2022 data on the website
- Consistent with our approach in our European report<sup>(b)</sup>, KPMG has conservatively assumed that, where consumption implied by the domestic empty pack survey volumes represented > 99% of total legal consumption, the brand is considered a 'domestic illicit white'
- In line with the previous reports, no brands were found to be domestic illicit whites in 2022

Table A5a: Example of domestic illicit whites identification process in New Zealand<sup>(c)</sup>

Example: Domestic illicit whites identification process, 2022 <sup>(1)(2)(3)</sup>				
	Domestic volume – billion (bn) sticks	LDS volume (bn sticks)	Domestic volumes as a share of total legal consumption	Illicit white volumes by brand
Brand A	0.01	-	100%	0.01
Brand B	0.24	0.00	100%	0.24
Brand C	0.01	-	100%	0.01
Brand D	0.01	0.01	38%	-

Brands A, B and C are classified as a domestic illicit white since there is no evidence of legal distribution and all flows are unspecified origin.  
<sup>(1)(2)(3)</sup> Brand D is not classified as a domestic illicit white where the domestic volumes are 38% of the consumption.

Notes: (a) The sources used in the methodology above are considered as evidence to estimate domestic illicit whites in New Zealand  
(b) Project Stella was formerly called Project SUN  
(c) The table is an example to illustrate the process of identifying domestic illicit whites. Hence, the numbers mentioned therein are not the actual data

Sources: (1) WSPM, empty pack survey, Q2 2019, Q4 2019, Q3 2022 and Q4 2022  
(2) IRI data, 2017 - 2022  
(3) Tobacco returns, MOH, 2021

Illicit whites flows methodology

A5 Illicit whites flows analysis (cont.)

Illicit whites (non-domestic)

To identify which non-domestic brands made up illicit whites brand flows, KPMG undertook the following analysis:

- All non-domestic labelled cigarette brands were compiled to form an initial list of brands<sup>(1)</sup>
- These brands were then compared with the IRI data<sup>(2)</sup> (which records brands being sold through most legitimate channels). Brands included in the IRI data were then eliminated from the list
- Remaining brands were then compared with the brands listed in the Tobacco Returns data.<sup>(3)</sup> As discussed on page 54, this is based on the 2021 Tobacco Returns data due to the timing of the release of the latest 2022 data on the website. Brands included in this publication were then also eliminated
- Further analysis was undertaken by looking at the country of origin and corroborating this with third party sources<sup>(a)</sup>
- Remaining brand flows were identified as ‘illicit whites’

Given our identification of counterfeit product is limited to the two industry participants in 2022, we cannot assess whether or not these flows are counterfeit product.

Table A5b: Example of illicit whites (non-domestic) identification process for illicit tobacco in New Zealand<sup>(b)</sup>

Example: Non-domestic illicit whites identification process <sup>(1)(2)(3)</sup>					
	2022 non-domestic volume (bn sticks)	IRI data?	Tobacco Returns?	Other third party sources?	Illicit white brand flow
Brand A	0.02	Yes	Yes	Yes	✗
Brand B	0.15	No	Yes	Yes	✗
Brand C	0.06	No	No	Yes	✗
Brand D	0.01	Yes	No	No	✗
Brand E	0.01	Yes	Yes	No	✗
Brand F	0.05	No	No	No	✓
Brand G	0.10	Yes	No	Yes	✗
Brand H	0.07	No	Yes	No	✗

Only the brand flows which are not present in all three (i.e., the IRI data, Tobacco Returns and other third party sources) are categorised as illicit white flows.

Notes: (a) Third party sources include Euromonitor tobacco reports which were used for further verification  
(b) The table is an example to illustrate the process of identifying non-domestic illicit whites. Hence, the numbers mentioned therein are not the actual data  
Sources: (1) WSPM, empty pack survey, Q2 2019, Q4 2019, Q3 2022 and Q4 2022  
(2) IRI data, 2017 - 2022  
(3) Tobacco returns, MOH, 2021

# Notes to this Report

## A6 Notes to this Report

The measurement of illicit consumption is inherently complex as those involved seek to conceal their activities.

We believe that the approach adopted for this Report, both in terms of the consumption estimation methodology and the key data sources, generates an estimate of illicit consumption that is as robust as possible within current research techniques. Whilst we believe this approach is currently the most appropriate method, we also recognize that we have been required to make a number of data assumptions and scope exclusions.

Further detail on key approaches and methodology limitations is provided in the table below.

Illicit tobacco in New Zealand	
Source	Overview
Empty pack survey	<ul style="list-style-type: none"><li>— The empty pack survey approach provides an objective and statistically representative estimate of the size of the illicit manufactured cigarette market. The results are not subject to respondent behaviour and are less prone to sampling errors than many other alternative methodologies</li><li>— Whilst the empty pack survey is designed to be representative of the overall population, it is not possible to ensure the sample is fully representative because:<ul style="list-style-type: none"><li>- The sample is more heavily weighted towards populous, urban areas, so in some markets the empty pack survey may not be fully representative of consumption habits in rural areas. The impact in New Zealand is likely to be minimal as only 13.1% of the population live in rural areas.<sup>(1)</sup> Nevertheless, the empty pack survey covers 53% of the population and so a reasonably large proportion of the population is not covered by the study</li></ul></li><li>— Collection routes specifically exclude sports stadia, shopping malls and stations, or any other locations where non-domestic incidence is likely to be higher as a result of a skewed population visiting these areas</li><li>— Although empty pack dates are selected to minimise seasonal factors, there may be specific events that impact the results such as major national events which result in number of overseas visitors that can skew the data.</li><li>— Due to COVID, New Zealand's borders were closed in 2020 and the restrictions continued till July 2022. WSPM could not conduct the survey in Q2 2022, but instead conducted the empty pack survey in Q3 2022 and Q4 2022. As a result, we do not know the consumption of illicit tobacco and non-domestic tobacco products in the first half of 2022</li><li>— Brand and market variant share can only be extrapolated with a degree of statistical accuracy for brands where a sufficiently large number of packs have been collected</li></ul>

Source: (1) Euromonitor, Population: National Estimates, accessed April 2023

# Notes to this Report

A6 Notes to this Report (cont.)

Illicit tobacco in New Zealand	
Source	Overview
Non-major manufacturer (non-participating) counterfeit	<ul style="list-style-type: none"><li>— For 2022, the empty pack survey results do not identify counterfeit packs that have been made by manufacturers other than the top two manufacturers (BATNZ and ITNZ) as only the manufacturer / trademark owner can confirm whether their brand pack is genuine<ul style="list-style-type: none"><li>- As a result, for brands not trademark-owned by these two manufacturers, it is not possible to identify counterfeit (non-domestic variants) and contraband product, although the overall volume of illicit would remain unaffected</li><li>- PMNZ did not participate in the empty pack survey in 2022. Hence, none of their brands have been classified as counterfeit in the analysis. This suggests counterfeit could potentially be understated although counterfeit incidence was low even when they did participate</li></ul></li><li>— The volume of legal domestic consumption may be overstated where domestic counterfeit variants exist, leading to potential corresponding understatements of illicit volumes for some brands (although the impact is likely to be minimal and would require any counterfeit pack barcodes to operate correctly and to be scanned by retailers)</li><li>— Illicit white volumes may include counterfeit. However, the presence of counterfeit is unlikely to have a major impact as counterfeit volumes in 2022 only represented a small proportion (0.01%)(1) of the total sample of the two participating manufacturers brand flows and counterfeit is typically concentrated on the most popular brands only</li></ul>
Consumer surveys	<ul style="list-style-type: none"><li>— The sample for the tobacco questionnaire is weighted by location, age and gender in order to be representative of the national population</li><li>— Although the consumer survey is designed to be nationally representative of the population, there are certain limitations associated with consumer surveys, such as:<ul style="list-style-type: none"><li>- Information obtained from a consumer survey is based on a sample rather than the entire population and therefore data is subject to sampling variability</li></ul></li><li>— In addition, there are limitations to using a consumer survey to estimate tobacco consumption and more specifically illicit tobacco consumption<ul style="list-style-type: none"><li>- Consumer surveys have historically under-reported tobacco consumption, especially in countries where it has become increasingly socially less acceptable. As such, the Kantar New Zealand consumer survey used in this Report asks respondents about purchase behaviour rather than actual consumption habits</li><li>- Illicit tobacco consumption is likely to be under-reported to an even greater degree(2)</li></ul></li></ul>

Sources: (1) WSPM, empty pack surveys, Q3 2022 and Q4 2022  
(2) Temporal changes of under-reporting of cigarette consumption in population-based studies, Gallus et al, 2011

# Notes to this Report

A6    Notes to this Report (cont.)

Illicit tobacco in New Zealand	
Source	Overview
ND(L)	<ul style="list-style-type: none"><li>— We have used inbound and outbound travel data and inbound settler data from Statistics New Zealand to calculate the number of trips made</li><li>— We have calculated the number of cigarettes purchased by assuming smokers purchase the legal allowance. This approach may overweight ND(L) volumes as a share of total non-domestic flows</li><li>— We have used key non-domestic source countries from the empty pack survey to calculate non-domestic legal flows. These countries accounted for approximately 92% of the total non-domestic incidence in 2022 in New Zealand. Therefore, an 8% uplift has been used to get the total non-domestic legal volume</li><li>— We have not been able to accurately estimate the number of cigarettes purchased through mail order and legally imported into New Zealand. However, as highlighted on page 54, we feel that the volume consumed is unlikely to be material</li></ul>
Outflows from New Zealand	<ul style="list-style-type: none"><li>— Outflows from New Zealand are not considered to be material due to the high prices relative to other parts of the world</li></ul>
External data sources	<ul style="list-style-type: none"><li>— We have used a series of external data sources to estimate illicit tobacco consumption in New Zealand in 2022. There are a number of limitations associated with these sources</li><li>— There are also differences between our key data sources and other points of corroboration. For example, the Kantar New Zealand consumer survey focuses on those over 18 years old, whilst the New Zealand health survey focuses on those over 15 years old</li></ul>

# The description of the services set out below comprises the agreed scope of our work

## A7 Scope of work

The description of the services set out below comprises the agreed restrictive scope of our work, and our ability to perform the services is subject in all cases to relevant information being available from the sources of information and documentation to be made available to us.

### Overview/objective

The objective of this engagement is to provide assistance to you in connection with the estimation of the size of the illicit tobacco market in New Zealand.

### Scope of work

Utilising the results of the Kantar New Zealand consumer surveys conducted during 2022 and the empty pack surveys conducted by WSPM as well as using other public data sources, we will analyse, consider and comment on:

- The total level of legal domestic sales (LDS) of tobacco products, and consumption in the market for 2022 and represent it against the previously reported results (i.e., for 2017-2019)
- The amount that illicit tobacco (i.e., manufactured products and unbranded, encompassing contraband, counterfeit and unbranded products (including 'home grown')) represents as a percentage of total tobacco consumption
- An overview of the key features, nature and character of the illicit trade in New Zealand
- An estimated size of illicit white and domestic white consumption at an aggregate level (i.e., brands and trademark owners shall not be identified)
- The characteristics and consumption patterns of unbranded tobacco users, and how these have changed relative to previously reported results for 2017, 2018 and 2019
- If information is available, we will provide a short overview of the size and growth of the legal tobacco market in New Zealand based on net clearances of tobacco based on publicly available government statistics

### Approach

In order to estimate the illicit tobacco market, we will use two principal sources and methods:

- Consumer research: utilising the half yearly and full year 2022 Kantar New Zealand reports provided by you; namely:
  - Analyse consumer responses to consider the proportion of unbranded tobacco
  - Extrapolate the proportion of illicit tobacco consumed on a national level
  - Express the findings as a proportion of total tobacco consumption (Full Year 2022 Report only)
- Empty pack survey methodology: utilising empty pack survey data; namely
  - Analyse the data output from the WSPM empty pack surveys undertaken in 2022 to consider the proportion of the market accounted for by non-domestic manufactured cigarettes
  - Extrapolate the non-domestic and counterfeit incidence estimates identified in the empty pack surveys against the level of legal domestic sales in New Zealand
  - Express findings on the estimates of both non-domestic consumption of manufactured cigarettes and consumption of counterfeit product as a proportion of consumption

The overall results from the two methodologies will then be compared and combined in order to build up our overall estimate of the size and composition of the illicit market as a proportion of total tobacco consumption.



# Questions asked by the consumer survey

### A8 Kantar New Zealand questionnaire

Do you, or does any member of your close family work in any of the following companies?

Can you please tell me how old you are?

Are you male or female?

Which age group do you fall into? (Options provided)

Which of the following products do you currently consume? (Options provided)

What type of tobacco products do you smoke or use, even if only occasionally? (Options provided)

How often do you normally smoke tailor made / manufactured cigarettes? (Options provided)

How many tailor made / manufactured cigarettes do you normally smoke each day (on average)?

Did you change your manufactured cigarette smoking habits due to COVID related lockdowns in the first six months of 2022?

What is your regular brand of tailor made / manufactured cigarettes? That is, the one you smoke more than any other brand?

What other brands of tailor made/ manufactured cigarettes do you currently smoke?

How often do you normally smoke roll your own tobacco?

How many roll your own cigarettes do you normally smoke each day (on average)?

What is your regular brand of roll your own tobacco? That is, the one you smoke more than any other brand?

What other brands of roll your own tobacco do you currently smoke?

Before today, were you aware of tobacco or cigarettes that can be bought for less than the normal price?

How did you become aware of the availability of cheap tobacco or cheap cigarettes?

Since you turned 18 have you ever bought cheap tobacco or cheap cigarettes for your own use?

Have you bought cheap tobacco or cheap cigarettes for your own use in the last 12 months?

Since you turned 18, how long have you been buying cheap tobacco or cheap cigarettes?

Which of the following types of cheap tobacco or cheap cigarettes are you aware of? (options provided)

How did you become aware of the availability of home-grown tobacco?

Since you turned 18 have you ever bought home grown tobacco for your own use?

Have you bought home grown tobacco in the last 12 months?

When did you last buy home grown tobacco?

When you last bought home grown tobacco, where did you get it from?

How was this locally grown tobacco delivered to you?

When you last bought home grown tobacco, can you estimate in grams or cigarettes how much you bought?

When you last bought home grown tobacco, how much did it cost in total?

In the last 12 months, has there been an occasion where you have wanted to get home grown tobacco, but were unable to buy any?

When you smoke home grown tobacco how much do you smoke per day?

How did you usually smoke home grown tobacco?

Do you know where the home grown tobacco you buy usually comes from?

Why do you smoke home grown tobacco?

How did you become aware of the availability of these cheaper RYO tobacco products?

Since you turned 18 have you ever bought any of these cheaper RYO tobacco products for your own use?

Have you bought these cheaper RYO tobacco products in the last 12 months?

In the past 12 months, how often did you buy these cheaper RYO tobacco products?

When did you last buy these cheaper RYO tobacco products?

When you last bought these cheaper RYO tobacco products, where did you get it from?

(If online or over the internet) How was this cheaper RYO tobacco delivered to you?

When you last bought these cheaper RYO tobacco products, can you estimate in grams or cigarettes how much you bought?

When you last bought these cheaper RYO tobacco products, how much did it cost in total?

When you smoke them, how much of these cheaper RYO tobacco products do you smoke per day?

Do you know where this cheaper RYO tobacco products you buy usually comes from?

Why did/do you smoke these cheaper RYO tobacco products?

Since you turned 18, do you think have you ever bought contraband cigarettes?

Do you think or suspect that you have bought contraband cigarettes, in the last 12 months?

Source: (1) Kantar New Zealand consumer survey

# Questions asked by the consumer survey (cont.)

## A8 Kantar New Zealand questionnaire (cont.)

Since you turned 18, do you think you have ever bought counterfeit cigarettes?

Do you think or suspect that you have bought counterfeit cigarettes, in the last 12 months?

If you think you have bought contraband or counterfeit cigarettes which brand(s) was it?

How did you become aware of the availability of contraband/ counterfeit cigarettes?

In the past 12 months, how often do you think you may have bought contraband/ counterfeit cigarettes?

When do you think you last bought contraband/ counterfeit cigarettes?

When you last bought contraband/ counterfeit cigarettes, where did you get them from?

When you last bought contraband/ counterfeit cigarettes, how was it sold?

When you last bought contraband/ counterfeit cigarettes, how many cigarettes did you buy?

When you last bought contraband/ counterfeit cigarettes, how much did it cost in total?

In the last 12 months, has there been an occasion where you have wanted to get contraband/ counterfeit cigarettes, but were unable to buy any?

When you smoke them, how many contraband/ counterfeit cigarettes do you smoke per day?

Do you know where the contraband/ counterfeit cigarettes you buy usually come from?

Why did/do you smoke contraband/ counterfeit cigarettes?

How did you become aware of the availability of cheap cigarettes?

Since you turned 18 do you think you have ever bought cheap cigarettes?

Have you bought cheap cigarettes in the last 12 months?

If you think you have bought cheap cigarettes which brand(s) was it?

In the past 12 months, how often did you buy cheap cigarettes?

When did you last buy cheap cigarettes?

When you last bought cheap cigarettes, where did you get them from?

When you last bought cheap cigarettes, how was it sold?

When you last bought cheap cigarettes, how many did you buy?

When you last bought cheap cigarettes, how much did it cost in total?

In the last 12 months, has there been an occasion where you have wanted to get cheap cigarettes, but were unable to buy any?

When you smoke them, how many cheap cigarettes do you smoke per day?

Did you change your cheap cigarette smoking habits due to COVID related lockdowns in the first six months of 2022?

How many cheap cigarettes did you smoke per day during the first six months of 2022?

Why did/do you smoke cheap cigarettes?

Since you turned 18 have you ever grown your own tobacco from a plant or a seed?

Have you grown tobacco from a plant or a seed in the last 12 months?

Can you estimate how much tobacco you grew in the last 12 months?

Please estimate how much tobacco you grew in kilograms in the last 12 months

Can you estimate how much of the tobacco you have personally grown at home, you have smoked in the last 12 months?

Please estimate how much tobacco you grew in number of plants in the last 12 months

Since you turned 18, have you ever smoked home grown tobacco that you have grown yourself?

Have you smoked your own home grown tobacco in the last 12 months?

How do you usually smoke your own home grown tobacco?

Are you aware of the personal home grown tobacco allowance in New Zealand?

If you have any of your own home grown tobacco left over (i.e. that you haven't smoked), what do you do with it?

When you last gave it away, what form was it in?

When you last sold it, what form was it in?

In the last 12 months, how much have you given away / sold in total?

Have you travelled outside of New Zealand in the last 12 months?

Have you bought any tailor made cigarettes / roll your own tobacco in another country to bring back to New Zealand on any of your overseas trips in the last 12 months?

What type of tobacco did you buy?

How many trips in the last 12 months did you make where you bought tailor made cigarettes / Roll Your Own tobacco back to New Zealand?

Source: (1) Kantar New Zealand consumer survey

# Questions asked by the consumer survey (cont.)

**A8 Kantar New Zealand questionnaire (cont.)**

For each type of product, indicate how much you brought back into New Zealand from overseas on average per trip

In which countries did you buy tailor made cigarettes / Roll Your Own tobacco?

Are you aware of the recent reduction to New Zealand's duty free tobacco allowance? This was reduced in 2016 from 200 cigarettes/ grams to 50 cigarettes/grams.

In the last 12 months, have you received or purchased any manufactured cigarettes or roll your own tobacco that was posted from abroad?

How did you order the cigarettes or tobacco from overseas?

Are you aware of the penalties associated with buying, selling or importing illicit tobacco and cigarettes?

Are you currently employed? (other options provided)

Which of the following occupational categories best describes you? (options provided)

What is your approximate annual personal income (before tax)?

Which of the following best describes the region in which you live? (options provided)

Source: (1) Kantar New Zealand consumer survey



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