

Geodemographic Analysis of Drivers Detected Drink Driving in Victoria

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ABSTRACT

Victoria Police have developed a database containing information on drivers detected with blood alcohol content (BAC) above permissible levels. The database contains offender details (such as name, address and occupation) and offence details (including level of BAC recorded, time, date and location).

Pathfinder Solutions Pty Ltd, a market research company specialising in geodemographic analysis, has classified each Census Collection District (CCD) in Australia into one of 60 different geodemographic segments based on data sources such as the 2001 Census, household expenditure data, lifestyle survey data and property values.

Geocoding software was used to identify the CCD area for the home address of detected drink drivers and a series of geodemographic profiles created.

This paper outlines the approach used to identify profiles of detected drink drivers, the processes involved in calculating detected drink driving rates and the identification of geographic areas of under-detection and detection hot spots.

It is suggested that this information can assist in implementing enforcement strategies and allocation of resources to detect drink driving behaviour, as well as allowing local targeting of advertising and communications to areas with high levels of drink driving offences or high levels of under-detected drink driving.

1.0 INTRODUCTION

Over the last 15 years the majority of Victorians have gained a better understanding of the dangers and consequences of drink driving and modified their behaviour accordingly. For many years authorities have focussed efforts on creating the perception amongst the general public that there is a greater risk of being detected drink driving and those caught will be penalised. This has been achieved by increased levels of random breath testing (RBT) accompanied by an intensive mass media advertising campaign.

The Transport Accident Commission (TAC) has a broad objective of reducing injuries and fatalities on Victorian roads. TAC invests in campaigns to reduce road trauma, with major expenditure across various media and significant educational efforts aimed at reducing the level of drink driving. Defining and fully understanding the target audience is essential for developing the right communications, strategies and messages.

This paper outlines an approach taken to improve TAC's understanding of drink drivers. It draws upon research commissioned by TAC aimed at creating geodemographic profiles of drivers detected with blood alcohol levels above the legal limit, in addition to identifying whether there are geographical "hot spots" of drink driving behaviour.

2.0 THE APPROACH

TAC commissioned Pathfinder Solutions Pty Ltd, a market research company specialising in psycho/geodemographic analysis, to run a profiling exercise to provide an insight into offending drink drivers. The key objectives of the analysis were to:

- Profile drink drivers by levels of alcohol detected in their blood. Additionally, develop further sub-profiles by method of detection (intercept and random breath test), alcohol time (high and low), and repeat offenders versus single offenders;
- Build geodemographic profiles of drivers involved in fatal accidents where the driver had a positive blood alcohol level; and
- Identify whether there are specific locations where drivers are more likely to drink drive, and the travel patterns associated with these drivers.

2.1 Data sources

In order to meet these objectives, data was gathered from a number of different sources. Firstly, information relating to actual offending drink drivers was provided by Victoria Police. In early 1998, TAC in conjunction with Victoria Police proposed a system that would allow the identification of licensed premises that generate high levels of detected drink-driving. This system, which became known as the Licensed Premises Identification System (LPIS), has since been developed and proven very useful over the last few years in assisting Victoria Police with developing drink drive enforcement strategies and program evaluation and monitoring.

The LPIS database contains information on all drivers who have been detected with BAC above permissible levels, including specific offender details (such as name, address and occupation), and offence details (including level of BAC recorded, time, date, location of intercept and whether detection was by random breath tests from a booze bus or by patrol interception of the vehicle). De-identified evidential breath test (EBT) data held on LPIS was provided for this analysis.

The second source of data, Segments of Australia, is a proprietary product developed by Pathfinder Solutions in which every Census Collection District (CCD) in Australia has been classified into one of 60 different geodemographic segments, or types of neighbourhood. Essentially the fundamental nature of geodemographics is to capture information on the characteristics of people and places in an objective and insightful manner that allows each local area or neighbourhood to be classified as a type of area. The data for classifying these small areas covers inputs from data sources such as the 2001 Census, longitudinal analysis of changes in areas from 1991-2001, household expenditure data, lifestyle survey data, property values, estimated dwelling age and level of household movements.

Appendix 1 provides a short description of the lifestyle characteristics and demographic make-up for all the Segments of Australia. As an illustration, the following broad characteristics pertain to the segment that Pathfinder Solutions has named "Public Service Heartland":

- A significant proportion of the workforce is employed in the public sector.
- These individuals earn around \$40,000-\$50,000 per year and spend it on alcohol, clothing, footwear, gardening, child-care, home computers, interest on credit cars and donations.
- This segment is 1.5 times more likely than average to contain households that have an income above \$100,000 per year.
- Located mostly in major cities and some regional areas, most of these people live in their own house and have a mortgage between \$40,000 and \$120,000. They're not afraid of technology and use computers and the internet at home and at work.
- More than a quarter of people over 15 years of age have tertiary qualifications.
- Many households have older teenage children.

TAC provided Pathfinder Solutions with an additional de-identified data file of drivers of cars and motorcycles involved in a fatal road accident (between 1998 and 2003) with a BAC reading in excess of 0.05.

2.2 Geocoding the data

With all sources of information now made available, the next step in the process was to assign the detected drink drivers to geodemographic groups. As previously mentioned, Segments of Australia classifies every CCD area as one of the 60 Segments of Australia. On average, each CCD area contains around 225 households. Currently there are approximately 37,000 CCD areas in Australia, and there are no parts of Australia that are not part of a CCD area.

Data has been captured on the addresses contained in each CCD area as a reference table that identifies the CCD associated with each identified address. Some types of address, such as Post Office Boxes, or Road Side Delivery (RSD) addresses are non-geographic, and geodemographic codes could not be appended to these address records.

The process of assigning people to geodemographic groups involved taking the address list of people to have the codes appended, using address matching algorithms find the address in the reference table, and returning the CCD identifier and Segment of Australia code to the address list record.

This process can be complex, as addresses can be written differently – with abbreviations, or in full, with different locality names used for the same address, as well as sometimes having incorrect address data elements – such as wrong postcodes used. Where the address record was incomplete or errors in the address detail meant that the address could potentially be in one of a number of CCD areas, then no CCD code was appended to these records. Of the 97,389 evidential breath test records extracted from the LPIS system, 62,453 records were successfully geocoded (64%).

2.3 Grouping the data by geodemographic profile

Once the address records were geocoded, they were then grouped to obtain a count of records by geodemographic segment. It was then possible to identify the main geodemographic types amongst the detected drink drivers and build insights into their demographic and lifestyle characteristics from the Segment of Australia Index values and type descriptions. The profiles of offending drink drivers now follow.

3.0 PROFILES OF OFFENDING DRINK DRIVERS

Profiles were created for four different groups of drink drivers: all those detected drink driving; repeat drink drivers; drink drivers by level of BAC recorded and alcohol hours; and drivers killed with a BAC at or over 0.05. The data on offenders was further split in a number of ways to enable comparison of probabilities that people from different geodemographic segments would be detected drink driving. The key split factors applied were:

Time of detection: Use of a standard classification for specific time/day periods which are categorised as “high alcohol hours” and “low alcohol hours”.

Method of detection: There were two recorded methods of detection. The first was random breath test (“booze bus”) and the second was interception of vehicles by police patrols.

Place of residence: To allow analysis of any differences between drivers in Melbourne and those in rural and regional Victoria, the offenders were classified as having their home address either in ‘Greater Melbourne’ or the ‘Remainder of Victoria’.

Alcohol levels: The recorded BAC levels were classed into 3 groups. The group labelled “low” contained BAC levels between 0.05 and 0.065. The group labelled “mid” contained BAC levels between 0.066 and 0.103. The group labelled “high” contained BAC levels above 0.104 (up to 0.38). The group break points were formed by splitting offence records into 3 equally sized groups based on BAC levels.

And based upon the splits of ‘alcohol levels’ and ‘time of detection’, six sub-groups were also established. These were:

- Low alcohol hours, low BAC level recorded
- Low alcohol hours, medium BAC level recorded
- Low alcohol hours, high BAC level recorded
- High alcohol hours, low BAC level recorded
- High alcohol hours, medium BAC level recorded
- High alcohol hours, high BAC level recorded

High level results of analysis now follow.

3.1 Profiles of all detected drink drivers

This profile compares the drink driving offenders with a home address within Victoria against the population of Victoria aged between 18 and 75 years. This profile is at the offence level. For this profile the total number of detected offences committed by people living in each geodemographic neighbourhood type has been compared to the number of people aged between 18 and 75 years in the same group. The percentage distributions for offences and total population in each geodemographic segment were expressed as an index, based on the following formula:

$$\left(\frac{\text{offences in group} / \text{total count of offences}}{\text{people aged between 18 and 75 in group} / \text{total count of people aged between 18 and 75 in Victoria}} \right) * 100$$

From this profile it was found there were significant geodemographic skews in the likelihood of people being detected drink driving. People living in the geodemographic neighbourhood types listed below are between 26% and 74% more likely to be detected drink driving than drivers selected at random in Victoria. That is, the likelihood of people in these geodemographic groups

being detected drink driving is up to 1_ times that of people in other groups in Victoria. In descending order, the ten neighbourhood types with the highest skew are:

- “Single Parent Public Housing”
- “Public Service Heartland”
- “Young Single Parent Families”
- “Middle Eastern Migrant Enclaves”
- “Unskilled Battlers”
- “Moving Down”
- “Established UK Migrants”
- “Repeat Movers”
- “Struggling Country Towns”
- “Struggling City Fringe”.

Whilst each of the 60 Segments of Australia are unique according to their lifestyle characteristics and demographic make-up, there are some similar attributes exhibited for the 10 neighbourhoods listed above. For many of these particular segments, weekly household incomes were below or close to the national average; people mainly have jobs in manufacturing, transport, construction and trades; most did not pursue a tertiary education; English was the only language spoken at home; and unemployment rates were above the national average.

People in the following (primarily metropolitan) geodemographic neighbourhood types are between 21% and 31% less likely to be detected drink driving than drivers selected at random in Victoria:

- “Student Enclaves”
- “Prestige New Housing”
- “Affluent City Apartment Dwellers”
- “Older Money & Asset Rich”
- “Asset Rich, Income Rich”
- “Regional Mix”
- “Rising Wealth”
- “Comfortable & Owned Outright”
- “Hospital Precincts & Aged Care”.

The above groups typically had the following characteristics: above average personal and household income; university educated; employed in white collar jobs such as finance and business; and located in wealthy inner suburbs.

A number of fairly remote low density rural groups showed low levels of detected drink driving. This is potentially due to lower levels of enforcement activity in these areas.

Two geographic maps for the Melbourne metropolitan region were produced. The first of these two maps (Figure 1) shows the locations of the geodemographic groups with higher than expected rates of detection of drink driving. When plotted, these geodemographic segments were typically found within Local Government Areas in Melbourne’s outer east (Maroondah, Knox, Yarra Ranges), south east (Casey, Frankston) and outer north (Hume). The

second map for the same area (Figure 2) shows the locations of geodemographic groups with lower than expected rates of detected drink driving. These areas were typically inner and central eastern councils (Bayside, Glen Eira, Stonnington, Boroondara, Monash and Manningham).

3.2 Profiles of all repeat offenders

Profiles were also generated for repeat offenders, that is, those drink drivers with a second or subsequent offence. The repeat drink driver profile provides an indication of characteristics of people who, if they do drink and drive, are likely to have an ingrained habit. Again, these profiles point to significant variations in detected drink driving rates by geodemographic group. The propensity for recidivism in the segment called "Sheep Runs" was 145% above the expected rate. Other neighbourhood segments with elevated rates of detected drink driving recidivism included "Affluent City Apartment Dwellers", "Mixed Farming Areas", "Dairy Farming", "Moving Up", "Small Farms & Regional Lifestyle" and "Regional Battlers".

Geodemographic groups less likely to be detected drink driving more than once include "Asset Rich, Income Rich", "Middle Income Suburban Families", "Fringe Lifestyle", "Market Gardens" and "Multicultural Mix".

A geographic map for high rates of drink drive recidivism in the Greater Melbourne region was produced (Figure 3). The map shows the locations of the geodemographic groups with higher than expected rates of drink drive recidivism were generally found in Local Government Areas in outer Melbourne and nearby rural areas (for example, Frankston, Macedon Ranges, Surf Coast).

3.3 Profiles by level of BAC recorded and alcohol hours

Analysis of the indexes across the six groups showed a much higher rate of detection of drink drivers in low alcohol hours in predominantly rural/regional neighbourhoods, as well as "Single Parent Public Housing", "Middle Eastern Migrant Enclaves" and "Unskilled Battlers".

Figure 1: Segments of Australia with above detected drink driving in Melbourne

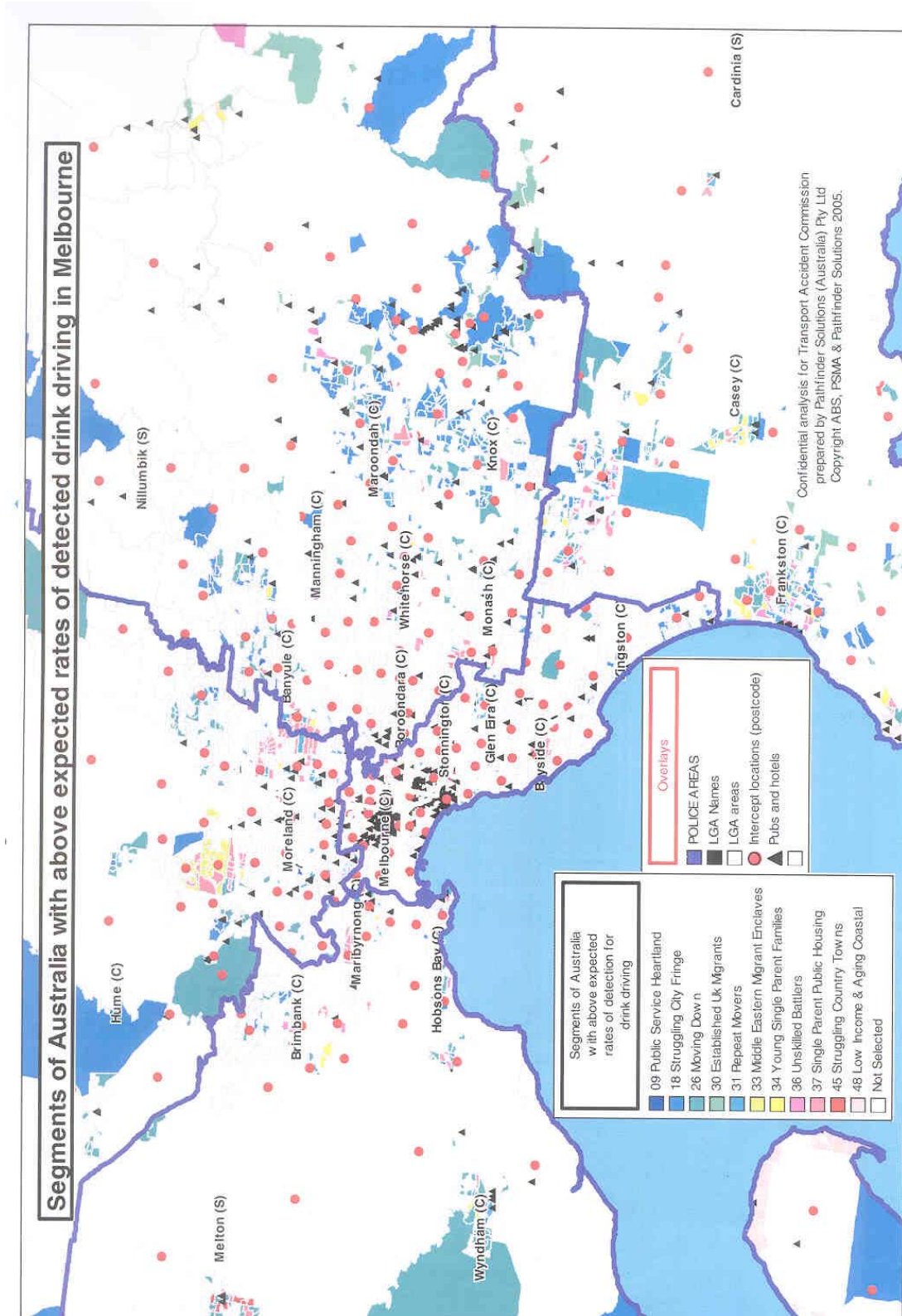


Figure 2: Segments of Australia with below detected drink driving in Melbourne

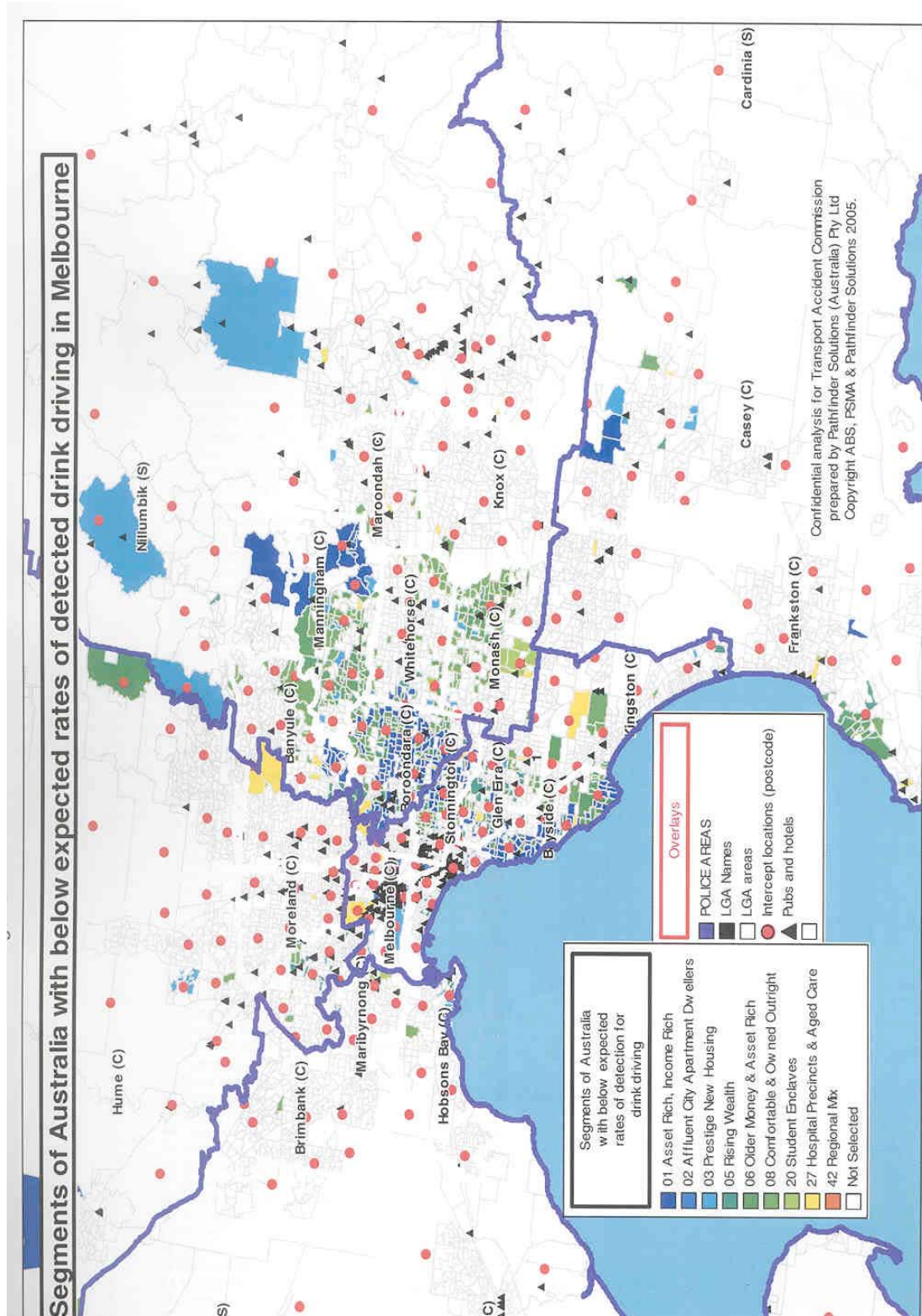
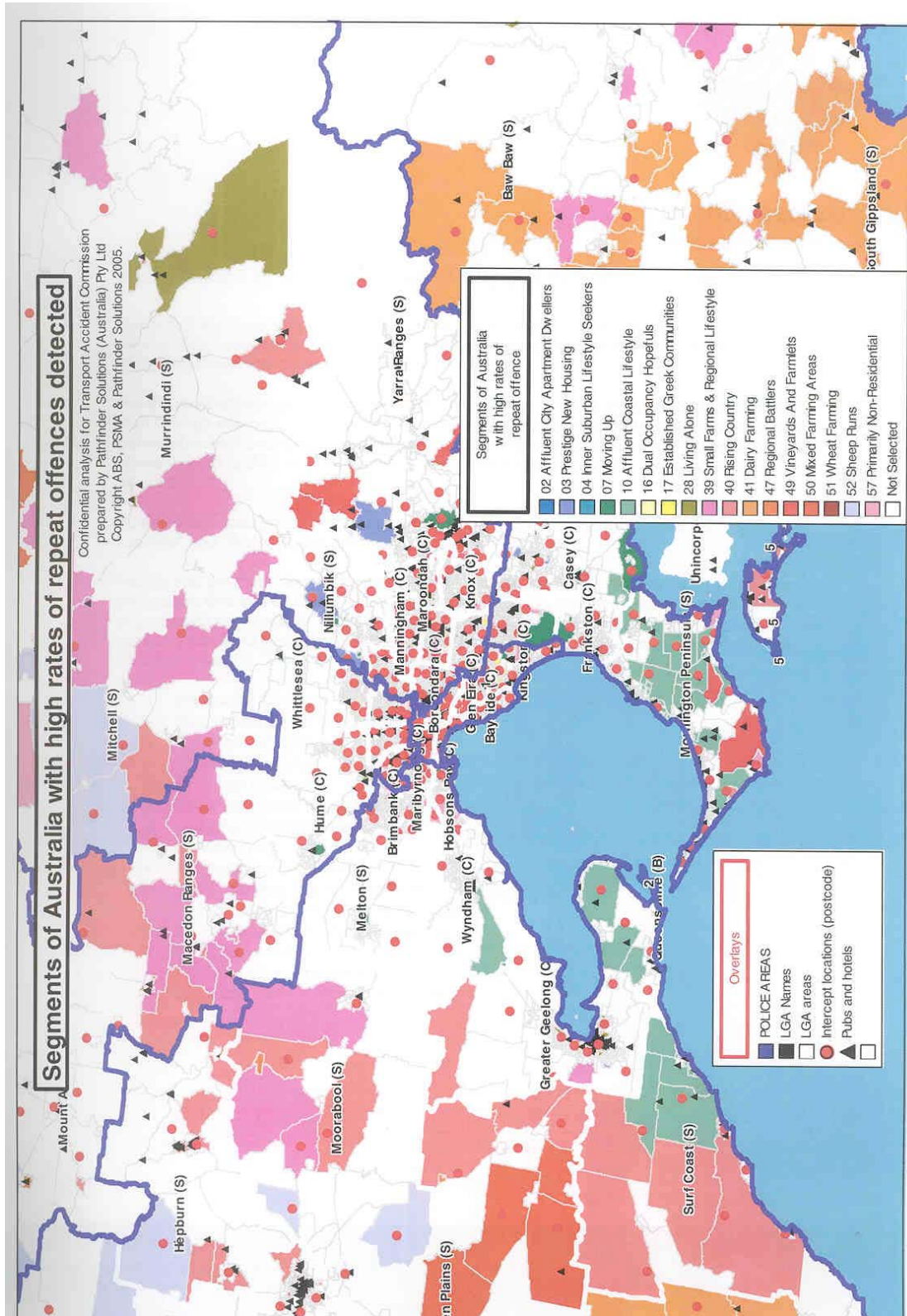


Figure 3: Segments of Australia with high rates of repeat offences detected



3.4 Profiles of persons killed in road accidents with a BAC at or over 0.05

Analysis of the file supplied by TAC on drivers and riders killed in road accidents with a BAC at or over 0.05 over the period 1998 to 2003 shows significant variation by geodemographic group. It should be noted however that there was a relatively small number of records. Geodemographic groups where the likelihood of alcohol related fatality is high included "Vineyards and Farmlets", "Sheep Runs", "Low Income & Aging Coastal", "Student Enclaves", "Young Parent Public Housing" and "Thriving Regional Living".

Rural areas, lower socio-economic status and younger people are some of the key attributes associated with one or more of the above groups.

4.0 FURTHER STEPS

Having calculated the likelihood for each geodemographic group of being detected drink driving, the expected rate of people detected drink driving can then be calculated for each CCD area in Victoria. The expected rate of detection can then be compared to the actual rate for each CCD area, and the level of under detection and detection hot spots associated with current enforcement practices can then be identified and mapped.

Conducting this analysis on all CCD areas within the Greater Melbourne Statistical Division identified areas of under detection and detection hot spots associated with current enforcement practices.

Analysis was also conducted to identify the distance between the location of interception and the offender's home. In examining the data for the Mornington Peninsula area it could be seen that inland areas on the Peninsula have high rates of under detection, with many of these areas having multiple access roads to reach properties within CCD areas with high levels of under detection. The analyses conducted for the Mornington Peninsula area can be applied to any region in Victoria.

5.0 DISCUSSION

It is suggested that this information adds to the current corpus of knowledge in implementing enforcement strategies and allocation of resources to detect drink driving behaviour, as well as allowing local targeting of advertising and communications to areas with high levels of drink driving offences or high levels of under detected drink driving.

Law enforcement strategies are the responsibility of Victoria Police. TAC has provided Victoria Police with the results of the analyses discussed above. Victoria Police now has the opportunity to factor in this additional intelligence when creating and implementing an integrated program of strategic

enforcement targeted to specific locations and geodemographic segments of the state's population.

The role of localised and general publicity in adding to the effects of enforcement is significant. The public education campaigns spearheaded by TAC over many years have long played a supportive role in the Victorian government's anti drink-drive strategy that has been shown to be associated with reductions in casualty crashes. Targeting the right audience is an important part of the strategy with many recent campaigns in Victoria focusing on young, blue collar males, who, according to statistical evidence, are at greatest risk of involvement in an alcohol-related accident. However, it is clear that the drink drive problem is by no means confined to just this socio-demographic group, as this analysis has shown. There may be a danger that drink drivers who are not young, blue collar males will assume that the message does not apply to them.

What this analysis has shown is that detected drink drivers are an eclectic mix of individuals who live in many suburban, regional and rural areas of Victoria. Knowing where the detected drink drivers reside and their profile type can assist in designing and delivering more effective and targeted communications. Campaign strategies need to ensure the right audiences are reached and appropriate means are used to reach them.

It may be possible to develop localised communications delivering localised messages. Geodemographic analysis can tell us how to communicate in the tone that resonates best for local circumstances and the types of drink driving situations faced by members of a particular geodemographic segment.

Knowing where detected drink drivers live, or where offenders are under detected, can assist in the selection of the most appropriate communication channels to deliver the right message. The use of radio in regional areas, especially with a specific reference to a place name or street name in the script, could help achieve a high level of engagement with the audience.

The analysis may also be very useful in selecting the right sites for placing advertising billboards. The strategic placement of billboards can be complemented with a message which is very localised and aimed at the type of people who live in that area. Whilst an enforcement message may not be appropriate for under-detected areas, because it may reinforce enforcement inactivity, the use of an emotive message may be better suited.

One-to-one communications such as direct mail or letter box drops would benefit from the knowledge gained from this type of geodemographic analysis. Possibly a specific communication could be directed at the drink driver, or at the influencer in the household. The message could have an educative flavour, providing information on alternative transport services known to be operating in the area such as a 'NightRider' bus route.

The results of the analysis could also be used to help select sponsorships or choose road safety program partners. For instance, it might be possible to

map characteristics that demonstrate the need for a shuttle bus service between local pubs; government agencies may then be able to work with local community organisations to set up appropriate bus services in areas pinpointed by the mapping process. The identification of high risk areas can also be useful for site selection of public breath tester machines and convenience advertising in venues serving alcohol.

In summary, geodemographic profiling does have potential to better target and tailor effective enforcement and communication programs. Careful evaluation of such programs will be important in ultimately assessing the added value these type of mapping techniques described in this paper can bring to bear.

Appendix 1: Descriptions of geodemographic segments

Profile Segment Name	Defining Features
Asset Rich, Income Rich	Four times the average level of personal income above \$1500 per week; 95% of homes are within the top 10% of Australian house values; more than half of all homes are owned outright; more than a quarter of people over 15 years of age have university qualifications.
Affluent City Apartment Dwellers	Weekly household incomes are strong in the \$75,000+ p.a. range; 75% of households live in apartments, 80% of households are singles or couples only; this segment has the highest levels of tertiary education in Australia; more than _ of men have jobs in finance, insurance and business services and around _ are employed in professional, managerial or associate professional roles.
Prestige New Housing	The suburban elite; majority of the homes were built between 1994 and 1999; 20% of people speak a language other than English at home and the proportion of people speaking Chinese has increased by 77% from 1991 to 2001; over 70% of homes fall in the top 2 deciles for home value; a significant number of households have 2 or 3 motor vehicles
Inner Suburban Lifestyle Seekers	Weekly household incomes are double the national rate in the \$100,000+ p.a. range; group households make up almost 15% of all households, with a strong skew to the 25-39 age bands; around half the homes are semi-detached terraces or flats and apartments.
Rising Wealth	Over the last 10 years this segment has had a substantial increase in people earning incomes in the top income quartiles; this segment has two times the average level of household income above \$104,000 p.a.; the average house value is \$578,000, with over _ of all households having mortgage repayments of \$1800 per month.
Older Money & Asset Rich	Around 21% of people in this segment are aged over 65; around half the homes are semi-detached terraces or flats and apartments; approximately _ of all households are single person households; household incomes over \$100,000 p.a. are twice as common as the national average.
Moving Up	Contains a high proportion of professionals, associate professionals and advanced clerical and service workers; this segment has 1.7 times the average level of household income above \$104,000 p.a.; more than half the CCDs in this segment are in the top 3 house value deciles; since 1991, the proportion of households in the top income quartiles has increased by 24%, while those in the bottom quartile decreased by 33%; the people aged over 65 has decreased by 29% from 1991 to 2001.
Comfortable & Owned Outright	57% of homes in this segment are owned outright; over 60% of people have lived in the same address for over 5 years; families with dependant children aged 15-24 are over-represented; many households have 2-3 cars and 4-5 people.
Public Service Heartland	Incomes are common at both ends of the scale (very high and very low); 85% of dwellings are separate homes; many households have older teenage children; more than a quarter of people over 15 years of age have tertiary qualifications; 4 times the national average work in government or defence.
Affluent Coastal Lifestyle	Median house values in this segment are very high with more than _ of homes being in the top house value decile; virtually all of these households can be found within a few kilometres of the coast; ages 10-19 and 40-64 are common with few people speaking a language other than English at home.
Professionals with Young Families	This segment has low levels of unemployment; age ranges 5-14 years and 40-44 years over-represented; around 37% of all homes are being purchased with almost 60% of households being couple families with children; this segment has 1.4 times the average level of household income above \$62,400 p.a.; their homes were built around the 60s or 80s and are in the leafier suburbs.

Mature Families	Teenagers and 45-54 y.o. are over-represented in this segment; many homes are owned outright with typical mortgage repayments around \$1,200-\$1,400 per month; there are average levels of overseas born people in this segment; family income is over-represented in \$75,000+ bands and under-represented in bands below \$35,000 p.a.; three cars per household is common.
Fringe Lifestyle	This segment is typically found in larger allotments on the outskirts of major cities; ages 50-54 are over represented, and migrants from the UK, Netherlands and Germany are common; this segment has 1.25 times the average level of household income above \$62,400 p.a.; they are likely to be builders, engineers or teachers.
Lifestyle Allotments	These guys are far enough out of the city to be in a regional area but close enough that they are not far; 12.5% of households have 3 or more motor vehicles and this segment is well under-represented in travelling to work by public transport; this segment is 1.7 times as likely to work from home; they mainly work in construction and agriculture, but also in trades, clerical and other services.
Prosperous Trades	Households incomes are over-represented in the upper bands; households are 30% more likely to have non-dependant children; all age groups over 65 are under-represented; these are manufacturing, construction and communications services people.
Dual Occupancy Hopefuls	This segment has 2 to 3 times the number of building approvals for dual occupancy and flats over the last 10 years compared to the national average; 30% of households are lone households; more than _ of the people were born overseas (China, Hong Kong, Malaysia, Korea, Macedonia, Greece); household incomes are average across all bands; there's a strong young 25-34 yo age group who work mainly in areas such as finance, insurance, cultural and recreational services.
Established Greek Communities	45% of people in this segment speak a language other than English at home, _ of all people speak Greek; 20% of people in this segment are Greek Orthodox; _ of migrants have been in Australia for over 15 years; lone person households are unlikely in this segment & approximately 10% of households earn \$104,000 p.a.
Struggling City Fringe	Around the major cities and inner regional areas are those who earn less and are more likely to work in the trades; this segment has 1.3 times the average level of household income in the \$60,000 to \$70,000 p.a. bracket; house in the top quartile have declined by 27%; the kids are likely to drop out of school at Year 10 or 11 and go to TAFE to study part time.
Middle Income Suburban Families	This is your average suburban family; employment in the public sector, health and education are strong; this segment has average income levels across most income bands; while there is no dominant ethnic group – 30% of this segment is born overseas (in line with the Australian average).
Student Enclaves	30% of people were born overseas, with the proportion of Chinese speaking students increasing by almost 50% between 1991 and 2001; more than 20% live in student housing provided by universities and other tertiary institutions; part time employment is high in cafes, restaurants, hotels and education is common; most people use the internet.
New Housing Estates	Here we find new housing developments targeted at young, slightly above average income families; ages 30-39 are over-represented; the proportion of children in pre-schools is high, unemployment levels in this segment are low; over 2 million people reside in this segment; cars are the favoured transport option with public transport getting the thumbs down.
Maturing Housing Estates	A quarter of the population is aged under 14 years old; 10% more likely to have a split partnership; there are no dominant ethnicities in this segment, and over 70% of residents were born in Australia; the \$62,000 - \$78,000 p.a. income range is over-represented.

Aging Suburban Areas	This segment has double the proportion of people aged over 65; around _ of primary and secondary school children attend Catholic schools; monthly loan repayments are close to average in all bands except for the lowest band which is 37% over represented.
Established Italian Migrants	1 in 5 residents of this segment speak Italian at home; 40% are Catholic; couple families with non dependent children are over represented; many homes have 3 or more cars; more than half of the households own their homes outright.
Settled Trades & Manufacturing	16% of the workforce is employed in manufacturing and trades; 18% of people speak a language other than English at home; South Eastern Europe and South East Asian birthplaces are common; this segment is losing its richer inhabitants and gaining those with lower incomes.
Moving Down	Although the income distribution for this segment is average, there have been significant decreases over the last 10 years; there has been a 70% increase in the proportion of people aged over 65; the presence of families with older children and non dependent children are well above average; lots of kids are dropping out of school at Year 11 to pursue work in manufacturing or communication services and many people are employed in trades, elementary sales and intermediate jobs.
Hospital Precincts and Aged Care	This segment has 4 times the national average of people aged 85+; 14% of women work in healthcare; household incomes are average across most bands (although over represented in the \$5,000-\$15,000 p.a. band); 32% or residences in this segment live in non-private accommodation.
Living Alone	Around _ of people in this segment live alone; 17% of families in this segment are single parent families; flats, units and low rise apartments are common; 18% (1.4 times the average) of people in this segment are aged over 65; 75% of people were born in Australia; they have one or no car.
Multicultural Mix	55% of people in this segment speak a language other than English at home, hailing from countries such as Italy, Turkey, Greece and Vietnam; more than half the homes are fully owned; unemployment levels are 20% above the national average; around 20% of adults in this segment didn't attend school, or finished before Year 8; TAFE education is common; manufacturing accounts for 23% of jobs with labouring and intermediate jobs also being common.
Established UK Migrants	15% of people were born in the UK; over 80% of those born overseas arrived in Australia at least 15 years ago; almost _ of this segment has no religion; income are around the average although both the highest and lowest bands are under-represented.
Repeat Movers	Ages 20-29 are very strong as are the over 70's; more than _ of the residents live in units or townhouses; unemployment rate is 36% above the national average; the proportion of single people is very high (includes divorced, separated and widowed); there is a strong presence of both group and lone person households; they're a sporty, active bunch, preferring the pub and the gym to other recreational activities; public housing accounts for 10%; around 11% were born overseas and many of these are recent arrivals.
High Rise Rentals	Around _ of the housing in this segment is made up of flats and apartments; there is a mixture of state and private rentals (10% and 50% respectively); the number of people with bachelor degrees is 40% over the average; 40% of people were born overseas and more than _ of the migrants have arrived in Australia in the last 10 years; there is a strong skew towards 20-34 year old age groups; people are generally employed in industries such as hospitality, cultural & recreational services, business, property and financial services.
Middle Eastern Migrant Enclaves	This segment has high ethnicity with 60% speaking a language other than English at home (24% speak Arabic); 44% of people were born overseas; all age groups under 25 are over-represented; unemployment rates are 53% above the average; household incomes are average; people mainly have jobs in transport, construction, manufacturing, communications, trades, intermediate skilled jobs and labouring.

Young Single Parent Families	Around _ of all families are single parent families; it is common for schooling to have finished in Year 9 or 10; unemployment rates are 40% above the national average.
Vietnamese Migrant Enclaves	Over a quarter of all Australia's Vietnamese born residents live in this segment; 17% of people speak Vietnamese at home; there are many couple families with both dependent and non-dependent children; households with 5 or more people are common; women have particular trouble getting work and the general employment rates are almost double the average.
Unskilled Battlers	Around _ of households have an average income below \$20,000 p.a.; education levels are strongly skewed towards completion of schooling at Year 10 or earlier (25% finished at Year 9 or below); unemployment rates are 64% above the national average; occupations are typically non-skilled (labouring, elementary clerical, sales and service, intermediate productions and trades); over _ of all households have one or no car.
Single Parent Public Housing	_ of families in this segment are single parent families; 17% of residents are under the age of 9; income levels are typically below \$30,000 p.a.; 17% of people over the age of 15 are divorced or separated; nearly _ of all people finished high school at Year 9 or earlier; there is an above average attendance at full time TAFE; this segment accounts for over 1,000,000 Australians.
Thriving Regional Living	Family incomes above \$52,000 p.a. are over represented; regional allotments around 2 hectare in size are common; there is a strong presence of couple families with children; the most common monthly mortgage repayment is the \$800-\$1000 band; there are low levels of full-time university students; many leave school in Year 10 or 11 to pursue certificate qualifications in agriculture, engineering or education.
Small Farms & Regional Lifestyle	15% of people work in agriculture; there has been strong growth in home building over the last 10 years; over 60% of people aged over 15 are married; the 10-14 and 40-54 year age bands are over-represented; education levels are pretty standard with more dropping out between Year 9 and 11; around 10% work from home.
Rising Country	Very few people speak a language other than English at home; household incomes follow national averages (normally country areas have lower incomes); 2 – 3 car households are common; qualifications in agriculture, health and education are over-represented; 50% more than the national average work at home; they're not interested in studying, with levels at TAFE and university well below national levels.
Dairy Farming	Around 40% of the labour force is employed in agriculture; this segment accounts for 35% of the total land area used for dairying in Australia, and 42% of all dairy farms can be found here; weekly household income is skewed towards the \$31,000-\$36,000 p.a. range; this segment has higher proportions of people born in Australia, and 92% of homes speaks English only; of those paying mortgages, 36% are below \$600 per month. Over a quarter of homes have 3 or more vehicles; most adults completed Year 11 or an earlier level of schooling.
Regional Mix	This segment is found predominantly in regional areas; a mixture of tradespeople, intermediate skilled workers and labourers predominate; unemployment rates are 24% above the national average; land values are relatively low; young adults and the very elderly are under-represented.
Young Regional Families	Weekly household incomes are strongest in the \$15,000-\$41,000 p.a. range; 45% of households are made up of families with children under 15; key occupational groups include tradespeople, intermediate skilled workers and labourers; less than 3% of people speak a language other than English; education levels are low, with many people having dropped out of school at Years 8, 9 or 10.
Aging Regional Towns	All ages over 60 years are over-represented, with the proportion of people over 65 increasing by 43% from 1991 to 2001; around 10% of the people are widowed and these are many elderly people living alone; unemployment is 22% above the national average; if working, the most common jobs are in agriculture, mining, utilities and hospitality; the majority of incomes are less than \$26,000 p.a.; there are low levels of Internet use in this segment.

Struggling Country Towns	Unemployment is 44% above the national average and the proportion of single parent families has increased by 46% from 1991; employment is likely to be within the mining, electricity, gas and water industries, and a high proportion of females work within retail; household incomes are under \$41,600 p.a. are over-represented; education levels past Year 10 are uncommon and Internet usage is low.
Forestry, Fishing & Farming	25% of the workforce in this segment are employed in forestry, fishing or farming; ages 10-14 and 50-64 are over-represented and education levels below Year 10 are over-represented; married couples and couples with children are over-represented; household incomes between \$15,600 and \$36,400 p.a. are over-represented.
Regional Battlers	All age groups over 60 years are over-represented and there are also high levels of separated, divorced and widowed people as well as one parent families and lone person households; all household income levels under \$31,200 p.a. are over-represented; there are low education levels with most people finishing school before Year 10; a high proportion of households do not have a car; most people are employed as labourers or have intermediate roles in agriculture or transport.
Low Income & Aging Coastal	25% of the people living in this segment are over 65 years and 10% are widowed; ages from 0-35 are under represented; this segment is over-represented in living in caravans and cabins, and rent payments on all dwellings is low; most households have incomes between \$10,400 and \$36,400 p.a.; those who do work are mainly employed in construction or hospitality.
Vineyards & Farmlets	People aged between 50-59 are over-represented; around 40% of the workforce are in agricultural and household incomes of \$31,200-\$36,000 are over represented; 80% of people were born in Australia and around 6% of the people within this segment speak Greek or Italian at home; the average size of a farm in this segment is 570 hectares.
Mixed Farming Areas	People aged between 5-14 and 55-64 are over-represented; couples with children are common and there are low rates of separation and divorce; this segment is also over-represented in people born in Australia; 60% of the male workforce are employed in agriculture and unemployment is low.
Wheat Farming	A high proportion of the people were born in Australia; this segment is stable, with 70% of people having lived in the same house for more than 5 years; married couples are over-represented, as are household incomes between \$20,800-\$36,400 p.a.; 60% of males are employed in agriculture with a large number of farm managers, administrators and labourers.
Sheep Runs	Households with more than 5 people are over-represented, as are married couples with children; ages 50-69 are over-represented and this segment has low levels of education with people finishing at Year 10 or below common; around 40% are employed in agriculture.
Market Gardens	40% of this segment work in the agricultural industry; household incomes between \$10,400-\$36,400 p.a. are over-represented; education levels are low with over-representation of people leaving school at the end of Year 10 or earlier.
Sugar Cane Plantations	This segment is mainly regional, though also comprising some remote areas; over-represented in age groups 10-14 and 55-64, and education to Year 10 level or lower is common; household incomes between \$15,500 - \$31,200 are over-represented and there is a presence of households with no income; low Internet use.
Cattle Country	Many of these folk were born in Australia and it's pretty unusual that they speak a language other than English at home; around 40% work in agriculture with over 20% working on their own properties; both the age groups 5-14 and 55-64 are over-represented in this segment and households with couples and with 5 or more occupants are common.
Regional & Remote Mining	Twice the average level of income above \$78,000 p.a.; the dominant age range is between 24-44 y.o and 4 times the national average live in non private dwellings due to many people living in shared accommodation provided by the mining companies.

Primarily Non-residential	These areas are out in the never reaches, where hardly anybody lives. They mainly contain commercial, industrial or uninhabited properties; around 20% of people who do live in this very small segment live in non-private dwellings and around 18% are overseas visitors.
Defence Enclaves	Majority of males and females in this segment are employed in defence jobs; 74% of people are aged under 34 years of age; 90% of people in this segment were born in Australia.
Remote Koori Lands & Stations	_ of the people living in these areas are indigenous Australians; children under 14 are over-represented and older age groups, particularly over 70 are under represented, reflecting a lower life expectancy for indigenous Australians; low levels of education are common with _ of all people leaving school before Year 8 and 7% never having gone to school at all.
Offshore, Shipping & Migratory	This very small, remote group accounts for those who live away from Australia or those who work in shipping or other maritime activities such as on oil rigs; high incomes are over-represented.