



MINISTRY OF TRANSPORT

TRANSPORT DATA CENTRE

2006 Journey to Work User Guide

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MINISTRY OF TRANSPORT

ABOUT THE TRANSPORT DATA CENTRE

The Transport Data Centre (TDC) of the NSW Ministry of Transport provides data on current and future demographic, employment and travel patterns. This data is used as inputs to transport and land use planning and policy making in New South Wales. The TDC's main data sets include:

- Personal travel data for the Sydney Greater Metropolitan Area from Household Travel Survey
- Commercial vehicle travel data for the Sydney Greater Metropolitan Area (GMA)
- Journey to Work (JTW) data for NSW derived from the Australian Bureau of Statistics (ABS) Census of Population and Housing
- Travel zone population and employment forecasts 5 yearly to 2031 for the GMA
- Travel zone trip forecasts 5 yearly to 2031 for the GMA

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1 About This Publication

This publication provides information to assist those using the TDC 2006 Journey to Work (JTW) dataset. This data is derived from place of work and other employment information collected in the Census of Population and Housing, which is the only source of small area data on where jobs are located. It is a valuable resource for the analysis and forecasting of employment, commuting patterns and land use changes.

TDC undertakes additional editing and imputation of the JTW tables purchased from ABS in order to improve the quality of the data at the small area destination level. The JTW tables are available from TDC, together with spatial boundaries, documentation and summary analysis as well as other related transport and land use data.

Users should note the potential differences between TDC and ABS JTW which result from the data quality improvements that TDC undertakes to enhance the value of the data at the travel zone level. See Section 3.6.

This User Guide is a comprehensive resource for understanding the JTW data and contains the following sections:

Section 2 The JTW Dataset

This section provides a brief description of the JTW data set, its structure and how to use it.

Section 3 Methodological Issues

This section describes the data and where it comes from. It gives details about the JTW data itself, outlining the methodological issues which influence how the data should be used and interpreted. It describes the Census questions that the information is derived from, as well as variable and scope definitions.

A number of issues to be aware of when making over time comparisons are set out. These changes include scope, classification and geographic boundary changes.

Additional information explains the different sources of employment and commuting data and how they compare with the JTW outputs.

Appendix

The appendix contains reference material such as the Census Household form that contains the JTW questions, maps, lists of geographic and other variable codes and classifications as well as a list of acronyms and variable definitions.

Also included is an outline of the process used to create the 2006 Travel Zones and the process of Census work address coding. This includes a detailed description of how TDC undertakes the imputation of some employment that could not be coded to a precise workplace travel zone during ABS Census processing.

References

This section contains a list of Census supporting documentation produced by the ABS relevant to the JTW data set that has been referred to within this document. All of this material can be downloaded for free from the ABS website.

A list of related TDC publications and data is also provided.

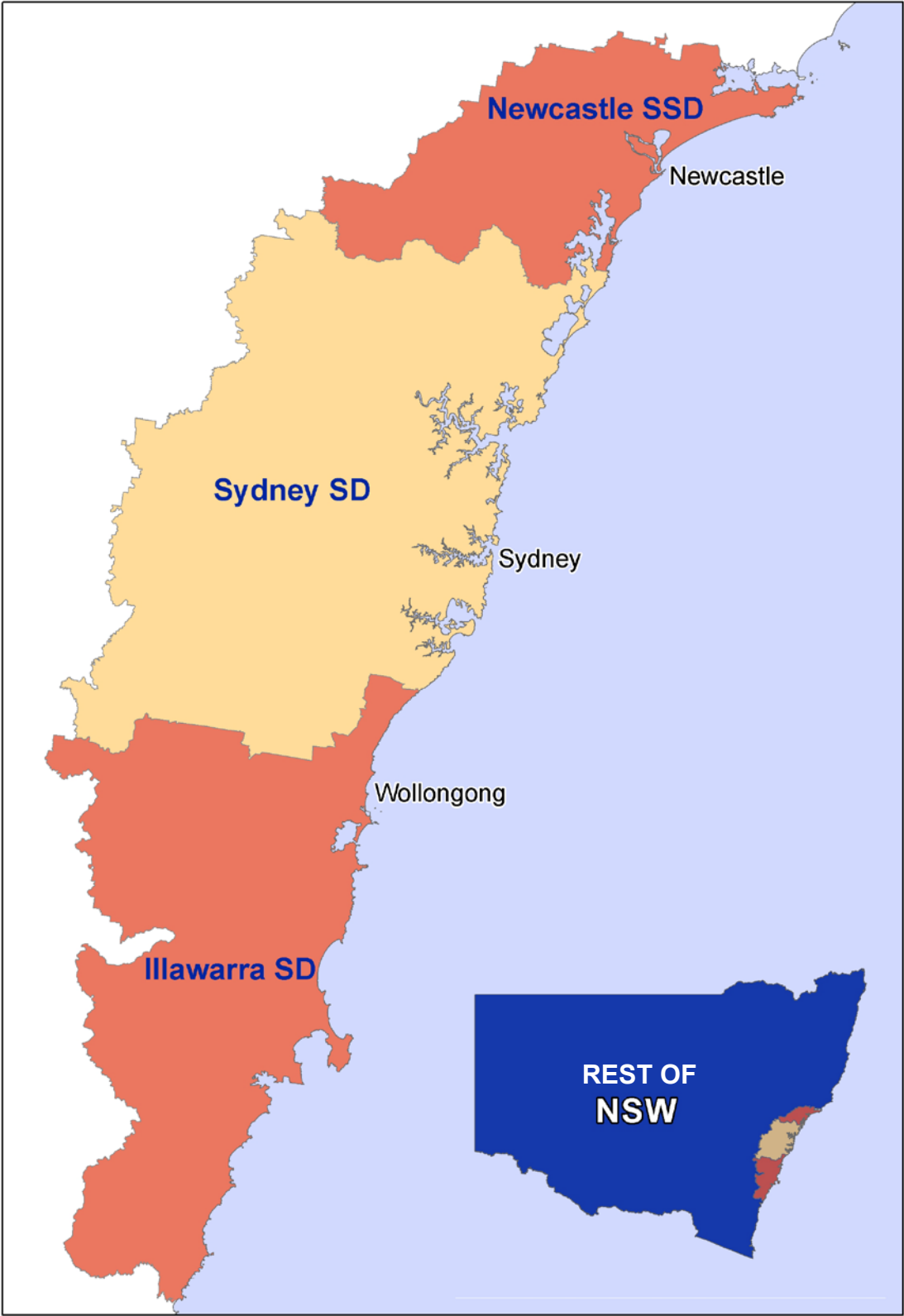


Figure 1 Greater Metropolitan Area within NSW

2 About the JTW Data

Introduction

This section outlines the main technical aspects of the JTW Database. The TDC 2006 JTW data is held as a series of separate tables in an Access Database. Most tables are too large to open in a spreadsheet.

JTW Tables

Each JTW table has a different combination of variables and is for a specific geographic scope, either for the Greater Metropolitan Area (GMA) or for the Rest of NSW as shown on the map opposite.

TDC is releasing the data progressively. The current list of the tables is available at www.transport.nsw.gov.au/tdc/employment.html. This list will be updated as the tables are released.

Variables

The variables that will be available in the final database cover employment characteristics as well as some person and household variables. These are:

Employment Variables	Person Variables	Household Variables
Place of Work (destination)	Place of Residence (origin)	Dwelling Type
Mode used to travel to work	Sex	Household Type
Industry of employment	Age	Tenure Type
Occupation	Person Income	Household Vehicles
Hours of Work	Previous place of residence	Household Income

Other variables and tables with different combinations of variables are available from ABS. TDC may purchase additional tables on request. Users should note the potential differences between TDC and ABS JTW which result from the data quality improvements which TDC undertakes to enhance the value of the data at the travel zone level. See Section 3.6

Geographic Scope

Each table has a specific geographic scope, either for the GMA or the rest of NSW. These areas are shown on the map opposite and defined in the Appendix under Definitions. A table may also be for the place of usual residence (or trip origin) end only, the workplace end (or trip destination) end only, or have both origin and destination (therefore providing a JTW trip matrix).

Origin in GMA: all employed persons who live in the GMA irrespective of where they work.

Destination in GMA: all employed persons who work in the GMA irrespective of where they live. That is, they may commute from outside the GMA.

Origin in Rest of NSW: all employed persons who live in NSW outside the GMA irrespective of where they work, including those who commute to the GMA or other states.

Destination in Rest of NSW: all employed persons who work in NSW outside the GMA irrespective of where they live, including those who commute from the GMA to Rest of NSW or from other states.

Origin in NSW: all employed persons who live in NSW irrespective of where they work, including those who commute to other states.

Destination in NSW: all employed persons who work in NSW irrespective of where they live, including those who commute from other states`.

Table Format

Each **row** of a table represents the aggregation of all records that have the same combination of characteristics on each variable. This is how the data is supplied by ABS. The tables do not have unit records and CANNOT be merged to link different variables.

Each **column** represents a variable. The column name is an abbreviation of variable name. The final column in each table ("FREQ") gives the frequency or count of employed people with these characteristics. Additional geographic variables are provided to allow for aggregation of data at a range of spatial levels. All geographic variables refer to either a destination or origin. Destination or place of work geographies have the prefix "D_" and origin or place of residence has the prefix "O_". See **Geographic Codes** below for an explanation of why Destination codes have some additional categories.

Column Names, Variable Description and Number of Codes

Column name	Description	Number of Codes		
		GMA	Other NSW	Total
	Geographic Variables			
DZN	10 digit Destination zone code used by ABS	2,694	680	3,374
D_TZ06	TDC Destination Zone code (up to 4 digit)	2,694	680	3,374
D_SLA06	ABS SLA code (4 digit)			204
D_LGA06	ABS LGA code (4 digit)			156
D_SSD06	ABS SSD code (4 digit)			55
D_SD06	ABS SD code (2 digit)			17
D_area	Part of State (1 digit)			5
O_TZ06	TDC Origin TZ Code (up to 4 digit)	2,690	677	3,367
O_SLA06	ABS SLA code (4 digit)			200
O_LGA06	ABS LGA code (4 digit)			153
O_SSD06	ABS SSD code (4 digit)			51
O_SD06	ABS SD code (2 digit)			13
O_area	Part of State (1 digit)			2
	Other Variables			
Industry1digit	Industry of Employment coded to 1 digit ANZSIC			20
Industry2digit	Industry of Employment coded to 2 digit ANZSIC			106
Industry4digit	Industry of Employment coded to 4 digit ANZSIC			721
Occupation1digit	Occupation coded to 1 digit ANZSCO			8
Occupation2digit	Occupation coded to 2 digit ANZSCO			51
Occupation4digit	Occupation coded to 4 digit ANZSCO			478
Mode9	Priority Mode with 9 categories (different to 2001 JTW Mode 10)			9
Mode15	Priority Mode with 15 categories			15
Mode30	Single and Multiple Modes with 30 categories			30
Mode235	All single and multiple mode combinations			237
	Hours of Work			5
	Dwelling Structure			4
	Household Type			5
	Number of Household Vehicles			4
IncomeGroup11	Income			10
AgeGroup7	Age			5
Sex	Sex			2
	Tenure Type			6
	Household Size			5
Freq	Frequency count of employed persons			na

DZN

This is the 10 digit destination zone code used by ABS for Census output. The ABS DZN is built from the relevant codes for State + Part of State + SLA + TDC Travel Zone code. Part of state refers to whether the TZ is in the GMA or elsewhere in NSW. For example:

DZN (10 digit)	State (1 digit)	Part of state (1 digit)	SLA (4 digit)	TZ (4 digit)
	1	..1.....3950.....6751
	NSW	GMA	Holroyd	6751
1139506751	1139506751	1139506751	1139506751	1139506751

Employment Counts

To count employment as at Census day Tuesday 8 August 2006, simply sum the frequency column. It is important to note the geographic scope of the table used. If an origin (place of usual residence) geographic variable is selected, total employment refers to employed people who live in that area or resident workforce. If a destination (workplace) geographic variable is selected the total refers to the number of people who work at that location. If both an origin and a destination variable are selected this refers to people who live in the selected origin location and work in the selected destination.

Trip Counts

To count the number of trips to work made on Census day (Tuesday 8 August 2006) it is necessary to use a table that contains a mode variable and exclude some records. The mode variable has response categories for those who did not make a trip to work on Census day. This might include those employed part-time or casually, who don't work every day, those on leave from work, away on business or people who worked at home that day. In some cases no mode is given so it cannot be ascertained whether the person went to work or not.

To count trips, simply exclude records where Mode is coded to:

- Worked at home
- Did not go to work
- Unknown

After excluding these codes, summing the frequency column gives only those workers who made a trip to work. **NOTE:** Mode shares should always be estimated using **trips**, NOT **employment**, as the denominator.

Code Frames

The tables use numeric codes for variables categories. Code frames in the form of look-up tables are provided in the database. These contain the code, column heading, variable name (text label) and where necessary a description of what is included in each category. A list of the code frames is also contained in the Appendix of this User Guide.

Geographic Codes

Additional geographic codes are provided to assist data aggregation by matching each travel zone to its Statistical Local Area (SLA), Local Government Area (LGA), Statistical sub-division (SSD) and Statistical Division (SD).

Some employment cannot be allocated to a known location because there was not enough information provided on the Census form. These are allocated one of four destination codes, referred to as **non-mappable** codes as they are data codes not true geographic boundaries. These are:

- No fixed address (NFA)
- Sydney undefined
- NSW undefined
- Unknown

See the Appendix for definitions, maps and geographic code frames.

3 Methodology

3.1 Summary

This section summarises the key methodological issues to be aware of when analysing and interpreting the 2006 JTW data. Each of these is further elaborated on in the body of this chapter with additional information provided in the Appendix.

The population scope of the 2006 JTW data is all employed persons aged 15 years and over who reported working for at least 1 hour in the week before the Census.

The geographic scope of the 2006 JTW tables is:

Greater Metropolitan Area or
NSW Outside the GMA or
All of NSW

A number of maps and lists of geographic codes are provided in the Appendix.

Definitions and classifications: Each JTW variable is derived from questions on the Census form and the key variables are explained in Section 3.3. The Census Household form and a full list of acronyms and definitions for the terms used in relation to the JTW data and used in this document can be found in the Appendix.

Data quality: A number of things impact on the quality of the Census data, which derive from the methodology, processing and ABS practices to confidentialise data. Some factors which can produce apparent anomalies in the data are explained in Section 3.4.

Comparison over time: There are a number of issues which need to be considered when comparing JTW data over time; such as scope, collection method, classifications, definitions and processing. ABS industry and occupation classifications used for the 2006 Census are significantly different to those for coding the 2001 Census. Some ABS geographic boundaries have also changed in ways that make over time comparison difficult. TDC's travel zone boundaries have also been significantly revised. Refer to Section 3.5.

Different data sources: Estimates of employment and unemployment, trips to work and commute mode share can vary depending on the source of the data. An understanding of the differences between these sources is useful in deciding which is the most appropriate data for different purposes. This includes discrepancies between TDC JTW data and output acquired directly from ABS, that result from additional data editing which TDC undertakes to improve the quality of the data. Minor data discrepancies should however not be regarded as cause for concern. A number of data sources are described in Section 3.6.

3.2 Scope

The scope of the 2006 JTW data is all persons employed in the area irrespective of where they live or where they were enumerated on Census night.

3.3 Definitions

The 2006 JTW data is derived from the employment related questions (34 to 45) on the Census Household form. These questions are asked of persons aged 15 years and over who reported that they worked for at least one hour in the previous week. Some tables contain additional person or household variables such as age, sex, household type, dwelling structure and motor vehicles. The 2006 Census Household form and a detailed list of definitions is contained in the Appendix. Users are also referred to the considerable Census reference material on the ABS web site which is listed in the References on the last page of this guide.

Place of enumeration (POE): Derived from question 1 on the Census form which asks the address of “this dwelling”, that is the place where the person was counted on Census night.

Place of usual residence (POUR): Derived from question 8 on the Census form which asks where the person usually lives. ABS codes these to a CD.

Employment: Derived from question 34 on the Census form: “Last week, did the person have a full or part time job of any kind”. Includes unpaid work. Employment is for persons aged 15 years and over only, who worked for at least 1 hour, including persons away from work.

Hours worked: Derived from question 44 on the Census form. Records total hours worked in all jobs for the previous week, including overtime.

Employment address: Derived from questions 40 (business name) and 41 (workplace address) for the main job held in the previous week. Persons who normally work from home provide their home address. Those with *no fixed place of work* were asked to give a depot address if they normally travel to a depot to start work and to otherwise write ‘None’. For example, a self-employed plumber would travel to different work sites every day. See the Census Household form and Definitions in the Appendix.

Method of travel to work: Derived from question 45 which asks how the person got to work on Census day (Tuesday 8 August 2006). All modes used can be selected but ABS only codes up to 3 when the Census is processed. The most detailed mode data available has 237 mode combinations. TDC purchases mode data at different levels of aggregation to reduce data randomisation.

Priority Mode is a concept used by TDC to report the main mode used where more than one mode was used for the whole journey. The main mode is the one which usually (but not always) takes the longest part of the journey. For the 2006 JTW, *with the exception of Mode9*, the priority order is:

Highest	Train
	Bus
	Ferry
	Tram
	Taxi
	Car as driver
	Car as passenger
	Truck
	Motorbike
	Bicycle
	Other mode
Lowest	Walked only

It stands to reason that most modes involve a walk component at one or both ends but walk is only recorded in the Census where it was the only mode used for the whole trip. Analysis of the combinations of modes used is very important for transport and urban planning and the TDC JTW dataset includes tables with the most common combinations aggregated to 30 categories as well as the complete list of 237 mode combination coded from the Census. Codes for the TDC mode variables are listed in the Appendix and look-up tables are provided in the 2006 JTW Access Database. *Note that for Mode 9 Ferry is higher than Bus.*

Occupation: Derived from questions 38 (occupation) and 39 (main tasks usually performed) for the main job held in the previous week. Coded to the 2005 Australian and New Zealand Standard Classification of Occupations (ANZSCO). The TDC JTW Tables use 1 digit, 2 digit or 4 digit ANZSCO which are listed in the Appendix. A look-up table of occupation codes is provided in the JTW data set.

Industry: Derived from questions 42 (industry or business of the employer at the location where the person works) and 43 (main goods or services produced by the employer's business). This information is coded to the 2006 Australian and New Zealand Standard Industry Classification (ANZSIC). The TDC JTW Tables use 1 digit, 2 digit or 4 digit ANZSIC which are listed in the Appendix. A look-up table of industry codes is provided in the JTW data set.

Geographic classification: ABS regularly reviews its standard geographic boundaries in response to population change and changes to official boundaries such as Local Government Areas (LGA). A number of LGA boundaries changed in the years between the 2001 and 2006 Census, particularly in non-metropolitan NSW. Some areas were not simply merged but split and integrated into new LGA boundaries. In some cases TZ or CD level data will need to be used to get the most accurate estimates of change in employment, workforce or population change. An explanation of geographies referred to here can be found in the Definitions section of the Appendix.

A list of LGA and SLA changes for NSW since 2001, and the resulting population change, can be found in the ABS publication *Regional Population Growth Australia*, (3218.0) 2005-2006 (www.abs.gov.au).

3.4 Data quality issues

Undercount. A number of things can affect the quality of the Census data. The self-enumeration method increases the likelihood that respondents may provide incorrect information or miss a question altogether. Errors may be made when reporting on behalf of another household member or someone who is away on Census night may not be counted and some households may not return a form at all. The Census includes all persons present, including visitors, but not people who are overseas at the time. For all of these reasons the Census is regarded as an undercount of the population which means it is also an undercount of employed persons.

ABS undertakes a post enumeration survey (PES) in order to estimate the size of the undercounts which showed that the 2006 Census count of 19,852,973 should have been 20,402,459, giving an undercount of 549,486 people or 2.7%. The level of undercount varies for different population groups. Males are more likely to be missed than females as are persons aged 20 to 35. The higher undercount for young adult males increases the level of employment undercount.

In addition to the PES, ABS undertakes validation based on different data sources and reports non-response rates for specific variables. See the References on page 69.

Randomisation. An additional source of "error" in Census output results from the way ABS adjusts small cell counts to reduce the risk of identifying individuals by the combination of personal characteristics. This random adjustment may affect any table cell but total table populations are maintained. Unlike previous Census years, the current method also allows for zero cells to be adjusted up, which may produce non-zero counts for a combination of variables which is not logical. ABS tables with different aggregations of the same variables may also produce slightly differently counts. In general small

differences between counts from different tables should be regarded as insignificant.

Definitional anomalies. Apparent inconsistencies may result from the comparison of employment variables that are derived from questions with a different reference in time. For example the work trip destination is derived from the question on the work address for the main job held last week, while the mode used to travel to work is that used on Census day. In a small number of cases this may produce results where the mode used is inconsistent with respect to the trip origin and destination.

3.5 Over time comparison

Changes to the Census question wording, definitions, classifications and scope can impact on the comparison of data over time. What appear to be changes in employment counts may be an artefact of changes in methodology.

The main changes affecting comparison with 2001 JTW data are:

- Scope of the datasets
- Definitions and classifications
- Processing and data quality

Scope: the 2006 JTW Census is based on Place of Usual Residence at the origin end. For previous Census years, origin was Place of Enumeration. At the aggregate level the counts are not significantly different but some locations, such as the CBD, have high levels of non-residential accommodation and are more likely to have high counts of people who are visitors on Census night but do not normally live there. This change in definition should be kept in mind when comparing TDC JTW trip origin for 2001 and 2006.

TDC Geography: For the 2006 Census, TDC has created a new set of travel zone boundaries to account for population and land use changes and reflect revisions to ABS geographic classification. The 2006 boundaries constitute a substantial redesign rather than simple splits of large zones. The number of zones has more than doubled for the GMA compared to 2001. Conversion of the data to the same geography is therefore not straightforward, but TDC has created concordances based on population and employment to convert TZ data from different years based on either population or employment land use. See the Appendix for a description of the redesign process.

ABS Geography: Within the GMA the boundary of the City of Sydney local government areas changed to include the whole South Sydney LGA and part of Leichhardt. A small area of Woollahra is now part of Waverley.

Outside the GMA a number of NSW LGAs have been abolished, merged and split, making comparisons over time difficult.

A list of NSW LGA and SLA boundary changes and resulting population movement can be found in the appendices of the ABS publication *Regional Population Growth Australia*, (3218.0) 2005-2006 (www.abs.gov.au)

GMA Employment: The 2006 JTW data set includes all employed persons within the specific geographic scope of the tables as was the case for the 2001 JTW data. For comparison with 1996 or earlier years, the 2006 and 2001 data must be adjusted to remove records for persons not in scope in previous JTW data sets.

Employment Address: this question is the same as 2001.

Method of Travel to Work: the mode categories are the same as for the 2001 Census but TDC output has changed slightly. Mode 14 (2001) has become Mode15 (2006) which has separate codes for 'Other Mode' and 'Unknown'.

Main Changes

TDC TZ boundaries
- 1,134 TZs in 2001
increased to 2,690 in
2006 in the GMA

ABS LGA and SLA
boundaries
- main GMA boundary
change between City of
Sydney and Leichhardt
- Rest of NSW has
significant revisions

Industry classification
- significant revision

Occupation classification
- significant revision

TDC has also purchased data for Mode30 which is similar to the ABS Mode breakdown used in the 2006 Census profiles.

Industry: The 2006 Industry classification (ANZSIC) used for the 2006 Census is very different from the ANZSIC 1993 edition which was used for 2001. Accurate comparison can only be made at the 4 digit level. ABS can provide 2006 Industry counts for both the 2006 and 1993 ANZSIC classifications. Industry classification correspondence files and Census Industry Data Quality Statements are available free from the ABS. (www.abs.gov.au)

Occupation: The 2005 Occupation classification (ANZSCO) was used for the 2006 Census. For some occupation groups the classification is very different from ASCO 2nd edition which was used for 2001. Accurate comparison can only be made at the 4 digit level. ABS can provide 2006 Occupation counts for the 2006 ANZSCO and ASCO 2nd edition classifications. Occupation classification correspondence files and Census Occupation Data Quality Statements are available free from ABS. (www.abs.gov.au)

3.6 Comparing TDC JTW and ABS data

TDC undertakes analysis of the JTW tables provided by the ABS and where necessary edits the data before release to TDC clients. This can result in TDC JTW data having slightly different counts to JTW data acquired directly from ABS. The reasons for this situation are explained below.

The main editing undertaken by TDC involves the imputation of employment allocated to destination “dump zone” codes. Experience has shown that people do not always report their work address with enough accuracy to code the work location to a destination zone. In selected instances, ABS codes these addresses to “dump” categories during the Census processing. TDC then undertakes an imputation process to allocate this employment based on a best fit method after purchase of JTW Tables from ABS. About 5% of 2006 JTW employment coded to an SLA in the GMA was in a dump zone.

“Locality dump” codes are used where a suburb or locality name is provided without an address and the locality covers more than one travel zone which might be expected to contain employment. For example, people sometimes report that they work in “Sydney CBD” which covers dozens of travel zones. “Street dump” codes are used where the locality and street name are provided but no street number and the area has significant employment with a street running through a number of travel zones. A common example is “George St, Sydney” in the Sydney CBD, which adjoins over 20 travel zones.

Imputation is based on a best fit process which apportions dump zone employment to the most likely travel zones within each SLA and each JTW table that TDC purchases from ABS is imputed separately. The imputation process is based on similar industry and mode, if the table contains these variables, otherwise total zonal employment is used. SLA and Travel Zone totals are kept consistent across tables. The process is explained in the Appendix.

As a rule, employment totals for each SLA should be unchanged by this imputation process and SLA employment totals should be the same for TDC JTW products and ABS Census tables, as each dump code is associated with a single SLA. The exception is in a small number of cases where dump codes were mapped to the wrong SLA during ABS Census processing and have been amended by TDC. The level of discrepancy is less than 2,000 in any given case. The SLAs affected were:

SLA	SLA Name	SLA Code	SLA Name
7201	Sydney – Inner	3950	Holroyd
7205	Sydney – South	6251	Parramatta – Inner
7206	Sydney – West	6351	Penrith – East
1100	Botany Bay	6354	Penrith – West
6650	Rockdale		

As a result of imputation, the dump code zones in the 6000 to 7999 range, that appear in ABS Travel Zone level Census employment data, are removed from the TDC JTW Tables as shown below.

ABS DZN before Imputation		TDC TZs After Imputation	
0001 – 3788	Mappable TZs in GMA	0001 – 3788	Mappable TZs in GMA
4001 – 4677	Mappable TZs in ESA	4001 – 4677	Mappable TZs in ESA
6001 – 6953	Locality Dump codes	6001 – 6953	Not used – reallocated to 1-5999
7001 – 7427	Locality Dump codes	7001 – 7427	
9979	NSW undefined	9299	NSW undefined
9985	Sydney undefined	9298	Sydney undefined
9990	No fixed address	9499	No fixed address
9999	Unknown	9999	Unknown

Additional zone changes: subsequent to the coding of the Census workplace address data TDC decided to create additional travel zones in order to improve the quality of forecasts in greenfield areas which are presently low in population but are expected to grow in the future. In all, 14 SLAs in the GMA are affected. There were 48 zones which were split to make 126 new zones. All of the old zone numbers have been deleted and new ones created. These zones will not appear in ABS 2006 JTW data. TDC can provide digitised boundaries which show the differences between the new and old zones.

SLA 2006	# New TZs	SLA 2006	# New TZs
Baulkham Hills - North	5	Hawkesbury	6
Blacktown - North	20	Liverpool – West	33
Blacktown - South-West	5	Penrith – East	2
Camden	35	Pittwater	2
Campbelltown - North	4	Wyong - North-East	2
Fairfield – West	2	Wyong – South and West	2
Gosford – East	2		
Gosford – West	6	Total New TZs	126

3.7 Different sources of employment data

Data Sources:

Employment

TDC JTW
ABS Census
ABS Labour Force
TDC Forecasts

Commuting

TDC JTW
ABS Census
TDC HTS

Users may observe that estimates of employment or commute trips can vary depending on the source of data. This variability in estimates is the result of differences in method or scope. It is important that users understand these sources and use data that is fit for purpose.

Labour Force Survey: The ABS conducts the monthly Labour Force Survey (LFS) in order to obtain up to date and accurate estimates of employment at a broad level. The LFS is the source of the official estimates of employment, participation rates and unemployment. As it is based on a survey it produces weighted estimates for a broad geographic level and does not ask about employment location but produces estimates of the number of employed people by place of residence.

In comparison, the Census has all of the constraints of a self enumeration method, but it provides the only small area counts of employment at the destination or workplace end. It also has the advantage that employment characteristics can be linked to the full range of population statistics also collected in the Census. The Census is, however, subject to a degree of population under count, as well as non-response on specific questions such as the employment status question. This leads to underestimates of employment when compared with the monthly Labour Force Survey (LFS) as the following comparison highlights:

	2006 Census Employment	2006 LFS Employment	% (Census/LFS)
Sydney SD	1,903.5	2,151.3	85.4%
NSW	2,901.5	3,553.4	81.7%

(See the ABS References on page 69.)

TDC Household Travel Survey (HTS): TDC's Household Travel Survey is a sample survey of households in occupied private dwellings across the GMA. Estimates of trips by purpose (including commuting) and mode can be produced from the HTS as can counts of employed persons. The HTS sample is weighted to the official estimates of the resident population (ERP) produced by the ABS, however the scope of the HTS is narrower than the Census (JTW) which includes persons in non-private dwellings. As it is based on a sample the HTS is less reliable than JTW at a very fine geographic level but the HTS has the advantage of additional information that allows for a more complex analysis of travel patterns, allowing comparison of trips for different purposes, by time of day, day of week and across the year. However, the Census covers the whole of Australia, and therefore has the advantage of allowing for comparison between the states and capital cities on a consistent basis.

TDC Travel Zone Employment Forecasts: TDC's Small Area Employment Forecasting Model (SAEFM) produces estimates of employment for future years at the travel zone level, including base year estimates for the most recent Census year. The base year of the TZ forecasts is usually the most recent census year but this data will not match Census employment counts by travel zone. This is because the forecasts data is adjusted to account for Census under enumeration and to make it compatible with ABS Labour Force estimates of participation rates. See the *SAEFM Outline and Background Research* and *ABS 2006 Census Quality Statement: Labour Force Status in the 2006 Census Dictionary*.

Appendix



Maps

Acronyms

Definitions

2006 Census form

Geographic codes

Mode codes

Industry codes

Occupation codes

Other variable codes

Travel zone redesign and splits

Address coding and imputation

Maps

SLA Map of 2006 GMA

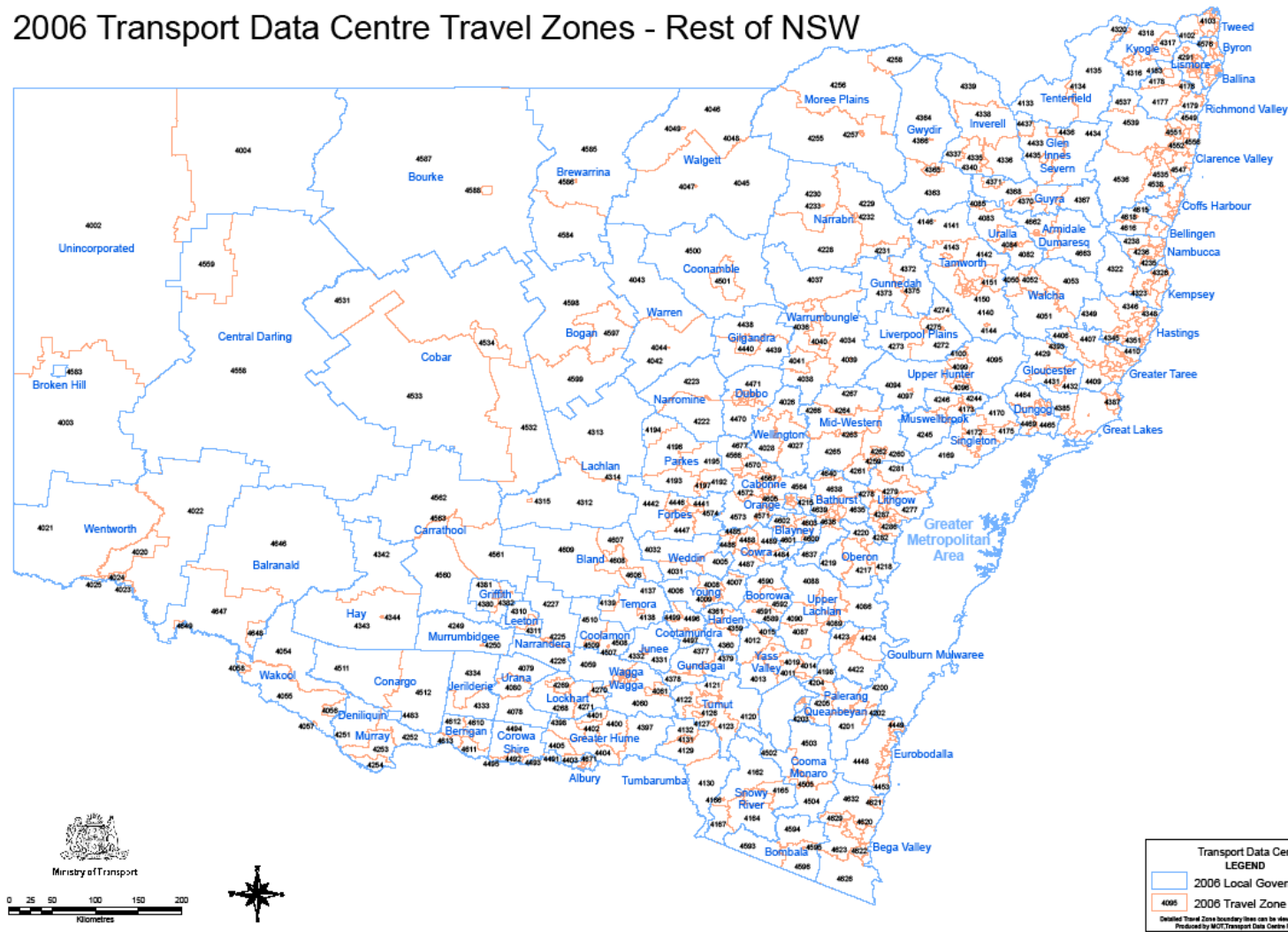
TZ Map of Extended Study Area

Example of a 2006 SLA Map with 2006 TZ boundaries



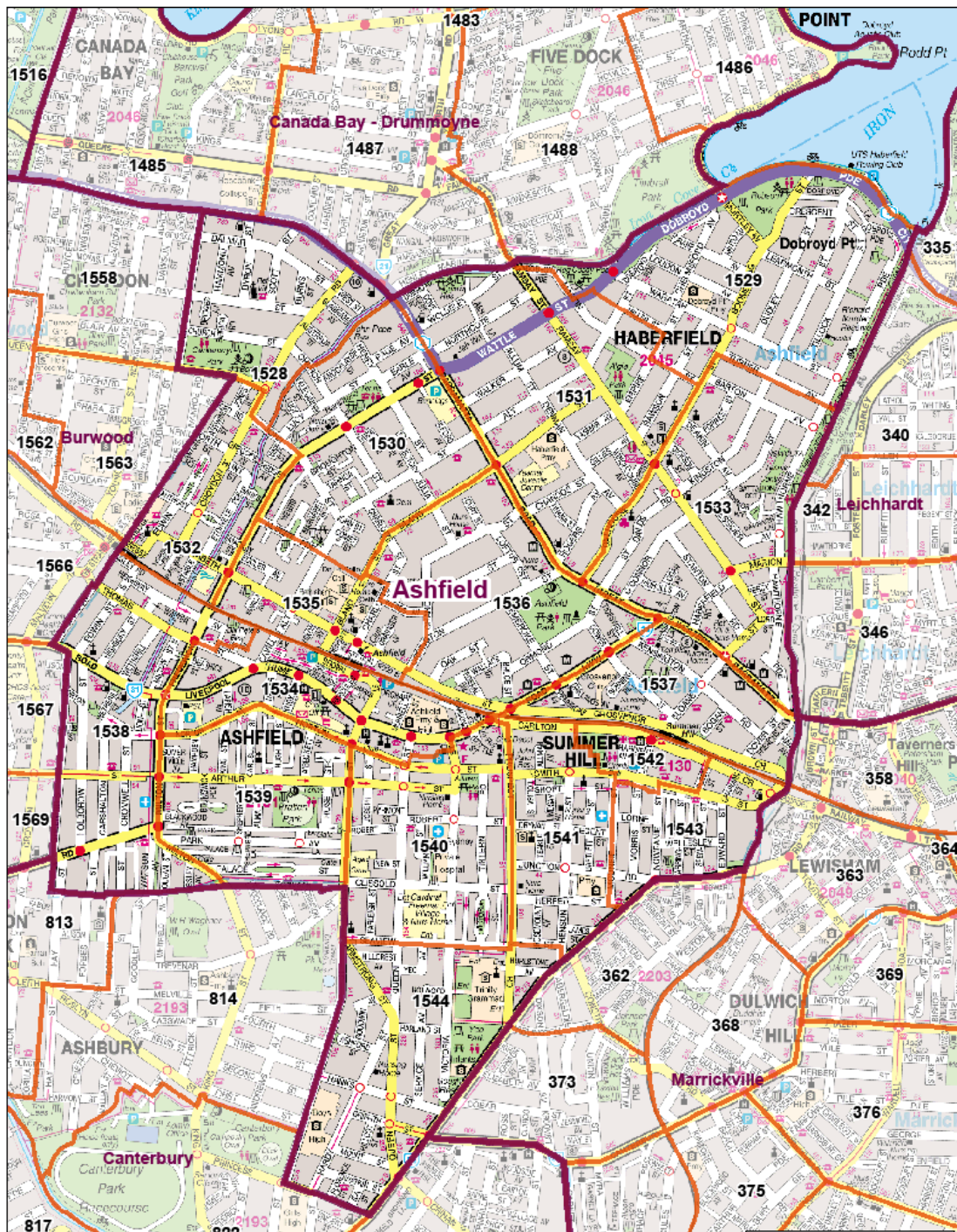
TZ Map of Extended Study Area

2006 Transport Data Centre Travel Zones - Rest of NSW



NB: Detailed maps are available at www.transport.nsw.gov.au/tdc/maps.html

Example of a 2006 SLA Map with 2006 Travel Zone boundaries



NB: Please refer to the maps at www.transport.nsw.gov.au/tdc/maps.html

Acronyms

ACRONYM	DESCRIPTION
ABS	Australian Bureau of Statistics
ASGC	Australian Standard Geographic Classification
ANZSCO	Australian and New Zealand Standard Classification of Occupations
ANZSIC	Australian and New Zealand Standard Industry Classification
CD	Collection District
DSA	Detailed Study Area (same area as the GMA)
DZN	Destination Zone - ABS 10 digit code
ERP	Estimated Resident Population
ESA	Extended Study Area (rest of NSW outside DSA)
GMA	Greater Metropolitan Area
GMR	Greater Metropolitan Region
HTS	Household Travel Survey
JTW	Journey to Work
LGA	Local Government Area
LPI	Land and Property Information
na	Not applicable
nec	Not elsewhere classified
nfd	Not further defined
NFA	No fixed address
SD	Statistical Division
SLA	Statistical Local Area
SSD	Statistical Sub-division
TDC	Transport Data Centre
TZ	Travel Zone –TDC zone code – up to 4 digit

Definitions

Centres	As defined in the Metropolitan Strategy (www.metrostrategy.nsw.gov.au).
Collection district	ABS geography
Dwelling Type	Structure of dwelling eg. detached house, flat.
Employment	Persons aged 15 years and over who worked for at least 1 hour in the week prior to the Census of Tuesday August 8 2006.
Estimated Resident Population (ERP)	Official estimates of the population produced annually by ABS. Derived from Census counts, adjusted for undercount, and annual births, deaths and migration data.
Greater Metropolitan Area (GMA)	Area covered by TDC core data sets comprising Sydney SD, Newcastle SSD and Illawarra SD (See Figure 1.1).
Greater Metropolitan Region (GMR)	Area generally referred to as the greater Sydney conurbation, which covers Sydney SD, Newcastle SSD & Wollongong SSD. It is the equivalent of the TDC GMA <i>without</i> Shoalhaven and Wingecarribee LGAs.
Household vehicles	Number of registered vehicles usually garaged at the household overnight, whether privately or company owned.
Illawarra SD	Covers the Local Government Areas of Wollongong, Shellharbour, Kiama, Shoalhaven & Wingecarribee.
Land and Property Information	NSW government agency in the NSW Department of Lands which is the key provider of land administration services in New South Wales.
Local Government Area	Official gazetted Local Government Area boundaries. See also Statistical Local Area.
Lower Hunter	See Newcastle Statistical Sub-division.
Mesh block	Proposed new ABS geography.
Mode	Mode(s) used to travel to work on Census (Question x). Reported as single mode and mode combinations.
Motorised travel	Trips by private vehicle, train, bus, ferry, monorail, light rail and aircraft. Excludes walking and bicycle trips.
Newcastle SSD	Covers the Local Government Areas of Newcastle, Cessnock, Lake Macquarie, Maitland & Port Stephens.
No fixed address	Some occupations do not involve a fixed place of work but require travel to different locations each day or even different locations on a single day, as in the case of a domestic plumber. These workers are included in the total employment count, but cannot be allocated to a single employment destination.
Place of work	Address of the main job held in the week previous to the Census. Where a person always works from home they give their home address.
Place of usual residence	Where the person usually resides. Some people are counted away from home on Census night. ABS codes them back to their CD of usual residence.
Place of enumeration	Where the person was counted on Census night. Some Census output provides counts of people at this location.
Population	Census counts of the population. This can be for persons usually resident in a location or for those counted there on Census night. Census counts are slightly lower than the official population estimates (ERP) from the ABS, as

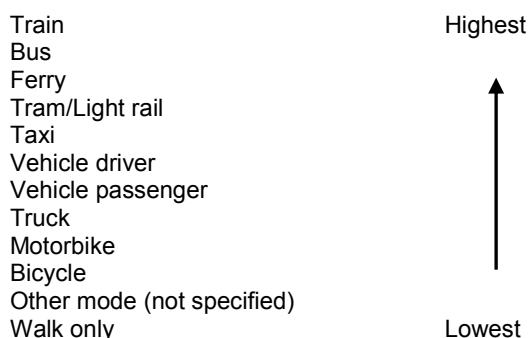
the Census is subject to a level of undercount from people who are missed on Census night. The Census also excludes people overseas.

Mode share

Mode share is estimated for each mode from the number of trips made.

Mode Priority

Where a linked trip is comprised of unlinked trips that uses more than one mode, a *priority* mode is allocated to the linked trip according to the following hierarchy, which is generally the mode with the largest likely (but not necessarily actual) duration of the trip:



Note that for the 2006 JTW the variable Mode 9 codes Ferry above Bus.

Non-motorised modes

refer to walking and cycling

Private vehicle

Includes all motorised vehicles such as cars, 4WDs, vans, motorbikes, motor scooters, utes and trucks.

Public transport

Refers to train, bus, ferry, tram or light rail whether provided by government or private sector operators.

Statistical Division

Groupings of SSDs. ABS defined.

Statistical Local Area

ABS defined geographic boundaries equal or add to LGAs.

Statistical Sub-division

Groupings of SLAs. ABS defined.

Sub-region

As defined in the Metropolitan Strategy and sub-regional planning process. See www.metrostrategy.nsw.gov.au

Sustainable modes

Refers to walking, cycling and public transport.

Sydney

Refers to Sydney Statistical Division, illustrated in Figure 1.1.

Trips

A trip is a complete journey to work. Individual links within the journey are not counted and does not include the return journey home.

Not everyone makes a trip to work on Census day. Q 45 which asks how the person got to work on Census day includes the options 'Worked at home' and 'Did not go to work'. In some cases this question is left blank and ABS codes these to 'Unknown'. The number of trips to work is the count of people for whom a method of travel to work was reported. The number of trips to work is always less than the total employment in a given area. About 15% of the employed population do not make a trip to work on Census day. This may be because they work part-time, are on leave or working at home.



Travel zone

Finest level of geography for coding TDC's data and form the basis of transport modelling and analysis. These zones completely cover the study area without omission or overlap and do not cross SLA boundaries. There are about 2,600 TZs in the GMA and 600 in the rest of NSW.

Walk only

Although a person may walk for some distance to reach another mode, in the Census walk is only recorded where it was the only mode used for the whole trip to work.

2006 Census Form

Why a Census?
The Census is the only practical way to get information on how many people there are in each part of Australia, what they do and how they live.

Collection authority
The information asked for is collected under the authority of the *Census and Statistics Act 1905*. Your co-operation is sought in completing this form.

Confidentiality
Under the *Census and Statistics Act 1905*, the ABS must not release any information you provide in a way which would enable an individual's or household's data to be identified. The one exception is that if you agree at Question 60 then your information will be provided to the National Archives of Australia for release in 99 years time. See page 17 of the Census Guide.

Help available
Refer to the Census Guide or phone the Census Inquiry Service on 1300 362 883 (8:30am - 8:00pm, 7 days a week until 9 September 2006).

For the hearing impaired, phone 1300 364 365 (TTY). Please quote your Census Form Number shown at top right of this page.

Household Form

Census Form Number

Check Letter

Check Letter

WHAT YOU NEED TO DO

- Use this form to record the details of all people (including visitors) who spend the night in your dwelling on Census Night, Tuesday, 8 August 2006.
- Your Collector will return between 9 August and 28 August to collect your form.
- On one form you can record details of six people. If you need more forms, or there is more than one household, refer to the 'Help available' section below.
- If someone in your household wants a separate Census form for privacy reasons, just ask the Collector for a Personal Form and a Privacy Envelope or phone the Census Inquiry Service, refer to the 'Help available' section below.

TO COMPLETE YOUR FORM ON THE INTERNET, VISIT:
www.census.abs.gov.au

HOW TO WRITE YOUR ANSWERS

- Use a black or blue pen.
- Mark boxes like this: —
- Start numbers in the first box. 3 2 1
- Write in **CAPITAL** letters and keep each letter within one box. A U S T R A L I A
- Use every box in a form and only miss a box to leave a space between words. P R I M A R Y S
C H O O L T E A
C H E R
- If you make a mistake in a mark box, draw a line through the box like this, or /
- draw a line through the box and re-write the letters like this: T E A C H I N G
G
- Please answer all the questions for every person, unless the form asks you not to.
- If you do not know an answer, give the best answer you can.

1 What is the address of this dwelling?
Please use CAPITAL letters only

Apartment/Flat/Unit number Street number

(if any)

Street name (Examples: GRAHAM AVENUE, GEORGE STREET)

Suburb/Locality

State/Territory Postcode

Property/Building name (if any)

02		Person 1	Person 2
		The householder if present, otherwise any adult member of the household.	The spouse or partner of 'Person 1' if present, otherwise any person present.
Please use CAPITAL letters only.			
2 Name of each person including visitors who spent the night of Tuesday, 8 August 2006 in this dwelling: <ul style="list-style-type: none"> Record details for all adults, children, babies and visitors present. Include any person who usually lives in this dwelling who returned on Wednesday, 9 August 2006, without having been counted elsewhere. For all other cases of persons absent, please include them in Questions 52 and 53 ONLY. 	First or given name <input type="text"/> Surname or family name <input type="text"/>	First or given name <input type="text"/> Surname or family name <input type="text"/>	
3 Is the person male or female? <ul style="list-style-type: none"> Mark one box for each person, like this: <input checked="" type="checkbox"/> Male <input type="checkbox"/> Female 	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Male <input type="checkbox"/> Female	
4 What is the person's date of birth (or age last birthday)? <p>Day Month Year</p> <p>Example for date of birth: <input type="text"/>2<input type="text"/>3<input type="text"/>05<input type="text"/>1970</p> <p>If date of birth not known, give age last birthday.</p> <p>Example for age last birthday: <input type="text"/>3<input type="text"/>6<input type="text"/> Years</p>	<p>Day Month Year</p> <p><input type="text"/><input type="text"/><input type="text"/> <input type="text"/><input type="text"/><input type="text"/> <input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/></p> <p>OR</p> <p>Age last birthday</p> <p><input type="text"/><input type="text"/><input type="text"/> Years</p>	<p>Day Month Year</p> <p><input type="text"/><input type="text"/><input type="text"/> <input type="text"/><input type="text"/><input type="text"/> <input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/></p> <p>OR</p> <p>Age last birthday</p> <p><input type="text"/><input type="text"/><input type="text"/> Years</p>	
5 What is the person's relationship to Person 1/Person 2? <ul style="list-style-type: none"> Examples of other relationships: SON-IN-LAW, GRAND-DAUGHTER, UNCLE, BOARDER. Remember to mark box like this: <input checked="" type="checkbox"/> 	No answer required for Person 1	<input type="checkbox"/> Husband or wife of Person 1 <input type="checkbox"/> De facto partner of Person 1 <input type="checkbox"/> Child of Person 1 <input type="checkbox"/> Stepchild of Person 1 <input type="checkbox"/> Brother or sister of Person 1 <input type="checkbox"/> Unrelated flatmate or co-tenant of Person 1 Other relationship to Person 1 – please specify <input type="text"/>	
6 What is the person's present marital status? <ul style="list-style-type: none"> 'Married' refers to registered marriages. Remember to mark box like this: <input checked="" type="checkbox"/> 	<input type="checkbox"/> Never married <input type="checkbox"/> Widowed <input type="checkbox"/> Divorced <input type="checkbox"/> Separated but not divorced <input type="checkbox"/> Married	<input type="checkbox"/> Never married <input type="checkbox"/> Widowed <input type="checkbox"/> Divorced <input type="checkbox"/> Separated but not divorced <input type="checkbox"/> Married	
7 Is the person of Aboriginal or Torres Strait Islander origin? <ul style="list-style-type: none"> For persons of both Aboriginal and Torres Strait Islander origin, mark both 'Yes' boxes. 	<input type="checkbox"/> No <input type="checkbox"/> Yes, Aboriginal <input type="checkbox"/> Yes, Torres Strait Islander	<input type="checkbox"/> No <input type="checkbox"/> Yes, Aboriginal <input type="checkbox"/> Yes, Torres Strait Islander	
8 Where does the person usually live? <ul style="list-style-type: none"> For persons who usually live in another country and who are visiting Australia for less than one year, mark 'Other country'. For other persons, 'usually live' means the address at which the person has lived or intends to live for a total of six months or more in 2006. For persons who now have no usual address, write 'NONE' in the 'Suburb/Locality' box. For boarders at boarding school, write the address of the boarding school or college. Remember to mark box like this: <input checked="" type="checkbox"/> 	<input type="checkbox"/> The address shown on the front of this form <input type="checkbox"/> Elsewhere in Australia – please specify address Apartment/Flat/Unit number (if any) <input type="text"/> Street number <input type="text"/> Street name <input type="text"/> Suburb/Locality <input type="text"/> State/Territory <input type="text"/> Postcode <input type="text"/> <input type="checkbox"/> Other country	<input type="checkbox"/> The address shown on the front of this form <input type="checkbox"/> Elsewhere in Australia – please specify address Apartment/Flat/Unit number (if any) <input type="text"/> Street number <input type="text"/> Street name <input type="text"/> Suburb/Locality <input type="text"/> State/Territory <input type="text"/> Postcode <input type="text"/> <input type="checkbox"/> Other country	

Please use CAPITAL letters only.		04	Person 1	Person 2
9 Where did the person usually live one year ago (at 8 August 2005)? <ul style="list-style-type: none"> If the person is less than one year old, leave blank. For persons who had no usual address on 8 August 2005, give the address at which they were then living. Remember to mark box like this: <input type="checkbox"/> 	<input type="checkbox"/> Same as in question 8 <input type="checkbox"/> Elsewhere in Australia – please specify address Street number <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Street name <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Suburb/Locality <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> State/Territory Postcode <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="checkbox"/> Other country	<input type="checkbox"/> Same as in question 8 <input type="checkbox"/> Elsewhere in Australia – please specify address Street number <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Street name <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Suburb/Locality <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> State/Territory Postcode <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="checkbox"/> Other country		
10 Where did the person usually live five years ago (at 8 August 2001)? <ul style="list-style-type: none"> If the person is less than five years old, leave blank. For persons who had no usual address on 8 August 2001, give the address at which they were then living. Remember to mark box like this: <input type="checkbox"/> 	<input type="checkbox"/> Same as in question 8 <input type="checkbox"/> Same as in question 9 <input type="checkbox"/> Elsewhere in Australia – please specify address Street number <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Street name <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Suburb/Locality <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> State/Territory Postcode <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="checkbox"/> Other country	<input type="checkbox"/> Same as in question 8 <input type="checkbox"/> Same as in question 9 <input type="checkbox"/> Elsewhere in Australia – please specify address Street number <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Street name <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Suburb/Locality <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> State/Territory Postcode <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="checkbox"/> Other country		
11 Is the person an Australian citizen? <ul style="list-style-type: none"> Remember to mark box like this: <input type="checkbox"/> 	<input type="checkbox"/> Yes, Australian citizen <input type="checkbox"/> No	<input type="checkbox"/> Yes, Australian citizen <input type="checkbox"/> No		
12 In which country was the person born? <ul style="list-style-type: none"> Remember to mark box like this: <input type="checkbox"/> 	<input type="checkbox"/> Australia ► Go to 14 <input type="checkbox"/> England <input type="checkbox"/> New Zealand <input type="checkbox"/> Italy <input type="checkbox"/> Viet Nam <input type="checkbox"/> Scotland <input type="checkbox"/> Greece Other – please specify <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 	<input type="checkbox"/> Australia ► Go to 14 <input type="checkbox"/> England <input type="checkbox"/> New Zealand <input type="checkbox"/> Italy <input type="checkbox"/> Viet Nam <input type="checkbox"/> Scotland <input type="checkbox"/> Greece Other – please specify <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 		
13 In what year did the person first arrive in Australia to live here for one year or more? <ul style="list-style-type: none"> For example, for arrival in 1874 write: <input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/> Year 	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Year <input type="checkbox"/> Will be in Australia less than one year	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Year <input type="checkbox"/> Will be in Australia less than one year		
14 Was the person's father born in Australia or overseas? <ul style="list-style-type: none"> Remember to mark box like this: <input type="checkbox"/> 	<input type="checkbox"/> Australia <input type="checkbox"/> Overseas	<input type="checkbox"/> Australia <input type="checkbox"/> Overseas		
15 Was the person's mother born in Australia or overseas? <ul style="list-style-type: none"> Remember to mark box like this: <input type="checkbox"/> 	<input type="checkbox"/> Australia <input type="checkbox"/> Overseas	<input type="checkbox"/> Australia <input type="checkbox"/> Overseas		

Please use CAPITAL letters only.		06	Person 1	Person 2
16 Does the person speak a language other than English <i>at home</i> ? • Mark one box only. • If more than one language other than English, write the one that is spoken most often. • Remember to mark box like this: <input checked="" type="checkbox"/>	<input type="checkbox"/> No, English only ▶ Go to 18 <input type="checkbox"/> Yes, Italian <input type="checkbox"/> Yes, Greek <input type="checkbox"/> Yes, Cantonese <input type="checkbox"/> Yes, Arabic <input type="checkbox"/> Yes, Vietnamese <input type="checkbox"/> Yes, Mandarin Yes, other – please specify <div style="border: 1px solid black; width: 100px; height: 40px;"></div>	<input type="checkbox"/> No, English only ▶ Go to 18 <input type="checkbox"/> Yes, Italian <input type="checkbox"/> Yes, Greek <input type="checkbox"/> Yes, Cantonese <input type="checkbox"/> Yes, Arabic <input type="checkbox"/> Yes, Vietnamese <input type="checkbox"/> Yes, Mandarin Yes, other – please specify <div style="border: 1px solid black; width: 100px; height: 40px;"></div>		
17 How well does the person speak <i>English</i> ? • Remember to mark box like this: <input checked="" type="checkbox"/>	<input type="checkbox"/> Very well <input type="checkbox"/> Well <input type="checkbox"/> Not well <input type="checkbox"/> Not at all	<input type="checkbox"/> Very well <input type="checkbox"/> Well <input type="checkbox"/> Not well <input type="checkbox"/> Not at all		
18 What is the person's ancestry? • Provide up to two ancestries only. • Examples of 'Other – please specify' are: GREEK, VIETNAMESE, Hmong, DUTCH, KURDISH, MAORI, LEBANESE, AUSTRALIAN SOUTH SEA ISLANDER. • See page 7 of the Census Guide for more information. • Remember to mark boxes like this: <input checked="" type="checkbox"/>	<input type="checkbox"/> English <input type="checkbox"/> Irish <input type="checkbox"/> Italian <input type="checkbox"/> German <input type="checkbox"/> Chinese <input type="checkbox"/> Scottish <input type="checkbox"/> Australian Other – please specify <div style="border: 1px solid black; width: 100px; height: 40px;"></div>	<input type="checkbox"/> English <input type="checkbox"/> Irish <input type="checkbox"/> Italian <input type="checkbox"/> German <input type="checkbox"/> Chinese <input type="checkbox"/> Scottish <input type="checkbox"/> Australian Other – please specify <div style="border: 1px solid black; width: 100px; height: 40px;"></div>		
19 What is the person's religion? • Answering this question is OPTIONAL. • Examples of 'Other – please specify' are: SALVATION ARMY, HINDUISM, JUDAISM, HUMANISM. • If no religion, mark the 'No religion' box. • Remember to mark box like this: <input checked="" type="checkbox"/>	<input type="checkbox"/> Catholic <input type="checkbox"/> Anglican (Church of England) <input type="checkbox"/> Uniting Church <input type="checkbox"/> Presbyterian <input type="checkbox"/> Greek Orthodox <input type="checkbox"/> Buddhism <input type="checkbox"/> Baptist <input type="checkbox"/> Islam <input type="checkbox"/> Lutheran Other – please specify <div style="border: 1px solid black; width: 100px; height: 40px;"></div> <input type="checkbox"/> No religion	<input type="checkbox"/> Catholic <input type="checkbox"/> Anglican (Church of England) <input type="checkbox"/> Uniting Church <input type="checkbox"/> Presbyterian <input type="checkbox"/> Greek Orthodox <input type="checkbox"/> Buddhism <input type="checkbox"/> Baptist <input type="checkbox"/> Islam <input type="checkbox"/> Lutheran Other – please specify <div style="border: 1px solid black; width: 100px; height: 40px;"></div> <input type="checkbox"/> No religion		
20 Does the person ever need someone to help with, or be with them for, self care activities? • For example: doing everyday activities such as eating, showering, dressing or toileting. • See page 9 of the Census Guide for more information. • Remember to mark box like this: <input checked="" type="checkbox"/>	<input type="checkbox"/> Yes, always <input type="checkbox"/> Yes, sometimes <input type="checkbox"/> No	<input type="checkbox"/> Yes, always <input type="checkbox"/> Yes, sometimes <input type="checkbox"/> No		
21 Does the person ever need someone to help with, or be with them for, body movement activities? • For example: getting out of bed, moving around at home or at places away from home.	<input type="checkbox"/> Yes, always <input type="checkbox"/> Yes, sometimes <input type="checkbox"/> No	<input type="checkbox"/> Yes, always <input type="checkbox"/> Yes, sometimes <input type="checkbox"/> No		
22 Does the person ever need someone to help with, or be with them for, communication activities? • For example: understanding, or being understood by, others.	<input type="checkbox"/> Yes, always <input type="checkbox"/> Yes, sometimes <input type="checkbox"/> No	<input type="checkbox"/> Yes, always <input type="checkbox"/> Yes, sometimes <input type="checkbox"/> No		

Please use CAPITAL letters only.		08	Person 1	Person 2																																																																																																		
23 What are the reasons for the need for assistance or supervision shown in questions 20, 21 and 22? • Mark all applicable reasons. • Remember to mark boxes like this: <input checked="" type="checkbox"/>	<input type="checkbox"/> No need for help or supervision <input type="checkbox"/> Short-term health condition (lasting less than six months) <input type="checkbox"/> Long-term health condition (lasting six months or more) <input type="checkbox"/> Disability (lasting six months or more) <input type="checkbox"/> Old or young age <input type="checkbox"/> Difficulty with English language <input type="checkbox"/> Other cause	<input type="checkbox"/> No need for help or supervision <input type="checkbox"/> Short-term health condition (lasting less than six months) <input type="checkbox"/> Long-term health condition (lasting six months or more) <input type="checkbox"/> Disability (lasting six months or more) <input type="checkbox"/> Old or young age <input type="checkbox"/> Difficulty with English language <input type="checkbox"/> Other cause																																																																																																				
24 Is the person attending a school or any other educational institution? • Include pre-school and external or correspondence students.	<input type="checkbox"/> No ► Go to 26 <input type="checkbox"/> Yes, full-time student <input type="checkbox"/> Yes, part-time student	<input type="checkbox"/> No ► Go to 26 <input type="checkbox"/> Yes, full-time student <input type="checkbox"/> Yes, part-time student																																																																																																				
25 What type of educational institution is the person attending? • Mark one box only. • Include external or correspondence students. • Include secondary colleges and senior high schools under the 'Secondary school' category. • Remember to mark box like this: <input checked="" type="checkbox"/>	<input type="checkbox"/> Pre-school Infants/Primary school <input type="checkbox"/> Government <input type="checkbox"/> Catholic <input type="checkbox"/> Other non-government Secondary school <input type="checkbox"/> Government <input type="checkbox"/> Catholic <input type="checkbox"/> Other non-government Tertiary institution <input type="checkbox"/> Technical or further educational institution (including TAFE Colleges) <input type="checkbox"/> University or other higher educational institution <input type="checkbox"/> Other educational institution	<input type="checkbox"/> Pre-school Infants/Primary school <input type="checkbox"/> Government <input type="checkbox"/> Catholic <input type="checkbox"/> Other non-government Secondary school <input type="checkbox"/> Government <input type="checkbox"/> Catholic <input type="checkbox"/> Other non-government Tertiary institution <input type="checkbox"/> Technical or further educational institution (including TAFE Colleges) <input type="checkbox"/> University or other higher educational institution <input type="checkbox"/> Other educational institution																																																																																																				
26 Only continue for persons aged 15 years or more																																																																																																						
27 What is the highest year of primary or secondary school the person has completed? • Mark one box only. • For persons who returned after a break to complete their schooling, mark the highest year completed when they left. • See page 10 of the Census Guide for more information about year equivalents.	<input type="checkbox"/> Year 12 or equivalent <input type="checkbox"/> Year 11 or equivalent <input type="checkbox"/> Year 10 or equivalent <input type="checkbox"/> Year 9 or equivalent <input type="checkbox"/> Year 8 or below <input type="checkbox"/> Did not go to school	<input type="checkbox"/> Year 12 or equivalent <input type="checkbox"/> Year 11 or equivalent <input type="checkbox"/> Year 10 or equivalent <input type="checkbox"/> Year 9 or equivalent <input type="checkbox"/> Year 8 or below <input type="checkbox"/> Did not go to school																																																																																																				
28 Has the person completed any educational qualification (including a trade certificate)? • Mark one box only. • See page 10 of the Census Guide for more information on the treatment of AQF or vocational certificates.	<input type="checkbox"/> No ► Go to 32 <input type="checkbox"/> No, still studying for first qualification ► Go to 32 <input type="checkbox"/> Yes, trade certificate/apprenticeship <input type="checkbox"/> Yes, other qualification	<input type="checkbox"/> No ► Go to 32 <input type="checkbox"/> No, still studying for first qualification ► Go to 32 <input type="checkbox"/> Yes, trade certificate/apprenticeship <input type="checkbox"/> Yes, other qualification																																																																																																				
29 What is the level of the highest qualification the person has completed? • For example: TRADE CERTIFICATE, BACHELOR DEGREE, ASSOCIATE DIPLOMA, CERTIFICATE III, ADVANCED DIPLOMA.	Level of qualification <table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																																			Level of qualification <table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																																		
30 What is the main field of study for the person's highest qualification completed? • For example: PLUMBING, HISTORY, PRIMARY SCHOOL TEACHING, HAIRDRESSING, GREENKEEPING.	Field of study <table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																																			Field of study <table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																																		
31 Did the person complete this qualification before 1998? • Remember to mark box like this: <input checked="" type="checkbox"/>	<input type="checkbox"/> Yes, before 1998 <input type="checkbox"/> No, 1998 or later	<input type="checkbox"/> Yes, before 1998 <input type="checkbox"/> No, 1998 or later																																																																																																				

[illegible]

Please use CAPITAL letters only.		12	Person 1	Person 2
39 What are the main tasks that the person usually performs in the occupation reported at Question 38? <ul style="list-style-type: none"> • Give full details. • For example: LOOKING AFTER CHILDREN AT A DAY CARE CENTRE, TEACHING SECONDARY SCHOOL STUDENTS, MAKING CAKES AND PASTRIES, OPERATING LEATHER TANNING MACHINE, LEARNING TO MAKE AND REPAIR TOOLS AND DIES, RUNNING A SHEEP AND WHEAT FARM. • For managers, provide main activities managed. 	Tasks or duties		Tasks or duties	
40 For the main job held <i>last week</i> , what was the employer's business name? <ul style="list-style-type: none"> • For self-employed persons, write name of business. • For teachers, write name of school. 	Business name		Business name	
41 For the main job held <i>last week</i> , what was the person's workplace address? <ul style="list-style-type: none"> • For persons who usually worked from home, write the home address. • For persons with no fixed place of work: <ul style="list-style-type: none"> - if the person usually travels to a depot to start work, write the depot address; - otherwise write 'NONE' in 'Suburb/Locality' box. • This information is used to calculate daytime populations and to plan transport activities. 	Street number Street name Suburb/Locality State/Territory Postcode Building/Property name (if any)		Street number Street name Suburb/Locality State/Territory Postcode Building/Property name (if any)	
42 Which best describes the <i>industry or business</i> of the employer at the location where the person works? <ul style="list-style-type: none"> • Mark one box only. • Examples of 'Other – please specify' are: REPAIRS AND MAINTENANCE, EDUCATION, AGRICULTURE, FINANCE, TELECOMMUNICATIONS SERVICE • Remember to mark box like this: <input type="checkbox"/> 	<input type="checkbox"/> Manufacturing <input type="checkbox"/> Wholesaling <input type="checkbox"/> Retailing (incl. Take-aways) <input type="checkbox"/> Accommodation <input type="checkbox"/> Pubs, cafes and restaurants <input type="checkbox"/> Road freight transport <input type="checkbox"/> House construction <input type="checkbox"/> Health service <input type="checkbox"/> Community care service Other – please specify		<input type="checkbox"/> Manufacturing <input type="checkbox"/> Wholesaling <input type="checkbox"/> Retailing (incl. Take-aways) <input type="checkbox"/> Accommodation <input type="checkbox"/> Pubs, cafes and restaurants <input type="checkbox"/> Road freight transport <input type="checkbox"/> House construction <input type="checkbox"/> Health service <input type="checkbox"/> Community care service Other – please specify	
43 What are the <i>main</i> goods produced or <i>main</i> services provided by the employer's business? <ul style="list-style-type: none"> • Describe as fully as possible, using two words or more. • For example: WHEAT AND SHEEP, BUS CHARTER, HEALTH INSURANCE, PRIMARY SCHOOL EDUCATION, CIVIL ENGINEERING CONSULTANCY SERVICE, HOUSE BUILDING, STEEL PIPES. 	Goods produced/services provided		Goods produced/services provided	

Please use CAPITAL letters only.		14	Person 1	Person 2
44 Last week, how many hours did the person work in all jobs? • Add any overtime or extra time worked and subtract any time off. • Remember to mark box like this: <input type="text"/>	<input type="text"/> <input type="text"/> Hours worked <input type="radio"/> None	<input type="text"/> <input type="text"/> Hours worked <input type="radio"/> None		
45 How did the person get to work on Tuesday, 8 August 2006? • If the person used more than one method of travel to work, mark all methods used. • Remember to mark boxes like this: <input type="checkbox"/>	<input type="radio"/> Train <input type="radio"/> Bus <input type="radio"/> Ferry <input type="radio"/> Tram (including Light Rail) <input type="radio"/> Taxi <input type="radio"/> Car – as driver <input type="radio"/> Car – as passenger <input type="radio"/> Truck <input type="radio"/> Motorbike or motor scooter <input type="radio"/> Bicycle <input type="radio"/> Walked only <input type="radio"/> Worked at home <input type="radio"/> Other <input type="radio"/> Did not go to work	<input type="radio"/> Train <input type="radio"/> Bus <input type="radio"/> Ferry <input type="radio"/> Tram (including Light Rail) <input type="radio"/> Taxi <input type="radio"/> Car – as driver <input type="radio"/> Car – as passenger <input type="radio"/> Truck <input type="radio"/> Motorbike or motor scooter <input type="radio"/> Bicycle <input type="radio"/> Walked only <input type="radio"/> Worked at home <input type="radio"/> Other <input type="radio"/> Did not go to work		
46 Did the person actively look for work at any time in the last four weeks? • Examples of actively looking for work include: being registered with Centrelink as a job seeker; checking or registering with any other employment agency; writing, telephoning or applying in person to an employer for work; or advertising for work.	<input type="radio"/> No, did not look for work <input type="radio"/> Yes, looked for full-time work <input type="radio"/> Yes, looked for part-time work	<input type="radio"/> No, did not look for work <input type="radio"/> Yes, looked for full-time work <input type="radio"/> Yes, looked for part-time work		
47 If the person had found a job, could the person have started work last week? • Remember to mark box like this: <input type="checkbox"/>	<input type="radio"/> Yes, could have started work last week <input type="radio"/> No, already had a job to go to <input type="radio"/> No, temporarily ill or injured <input type="radio"/> No, other reason	<input type="radio"/> Yes, could have started work last week <input type="radio"/> No, already had a job to go to <input type="radio"/> No, temporarily ill or injured <input type="radio"/> No, other reason		
48 In the last week did the person spend time doing unpaid domestic work for their household? • Include all housework, food/drink preparation and consumption, laundry, gardening, home maintenance and repairs and household shopping and finance management. • See page 14 of the Census Guide for more information.	<input type="radio"/> No, did not do any unpaid domestic work in the last week <input type="radio"/> Yes, less than 5 hours <input type="radio"/> Yes, 5 to 14 hours <input type="radio"/> Yes, 15 to 28 hours <input type="radio"/> Yes, 30 hours or more	<input type="radio"/> No, did not do any unpaid domestic work in the last week <input type="radio"/> Yes, less than 5 hours <input type="radio"/> Yes, 5 to 14 hours <input type="radio"/> Yes, 15 to 28 hours <input type="radio"/> Yes, 30 hours or more		
49 In the last two weeks did the person spend time providing unpaid care, help or assistance to family members or others because of a disability, a long term illness or problems relating to age? • Recipients of Carer Allowance or Carer Payment should state that they provided unpaid care. • Ad hoc help or assistance, such as shopping, should only be included if the person needed this sort of assistance because of his/her condition. • Do not include work done through a voluntary organisation or group.	<input type="radio"/> No, did not provide unpaid care, help or assistance <input type="radio"/> Yes, provided unpaid care, help or assistance	<input type="radio"/> No, did not provide unpaid care, help or assistance <input type="radio"/> Yes, provided unpaid care, help or assistance		
50 In the last two weeks did the person spend time looking after a child, without pay? • Only include children who were less than 15 years of age. • Mark all applicable responses.	<input type="radio"/> No <input type="radio"/> Yes, looked after my own child <input type="radio"/> Yes, looked after a child other than my own	<input type="radio"/> No <input type="radio"/> Yes, looked after my own child <input type="radio"/> Yes, looked after a child other than my own		
51 In the last twelve months did the person spend any time doing voluntary work through an organisation or group? • Exclude anything you do as part of your paid employment or to qualify for a Government benefit. • Exclude working in a family business.	<input type="radio"/> No, did not do voluntary work <input type="radio"/> Yes, did voluntary work	<input type="radio"/> No, did not do voluntary work <input type="radio"/> Yes, did voluntary work		

Please use CAPITAL letters only. 16

Please answer the following questions for this dwelling

52 Are there any persons who usually live in this dwelling who were *absent* on Census Night (Tuesday, 8 August 2006)?

- * 'Usually live' means that address at which the person has lived, or intends to live, for a total of six months or more in 2006.
- * Remember to mark box like this: ☐

☐ No, no-one absent ▶ Go to 54

☐ Yes, someone absent ▶ Go to 53

53 For each person *absent*, complete the following questions:

- * Remember to mark boxes like this: ☐

Name of each person who usually lives in this dwelling but was not here on the night of Tuesday, 8 August 2006.	First or given name	First or given name	First or given name
	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Surname or family name <input type="text"/>	Surname or family name <input type="text"/>	Surname or family name <input type="text"/>
Is the person male or female?	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> Male <input type="checkbox"/> Female
What is the person's date of birth (or age last birthday)?	Day Month Year <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> OR Age last birthday <input type="text"/> <input type="text"/> <input type="text"/> Years	Day Month Year <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> OR Age last birthday <input type="text"/> <input type="text"/> <input type="text"/> Years	Day Month Year <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> OR Age last birthday <input type="text"/> <input type="text"/> <input type="text"/> Years
Is the person of Aboriginal or Torres Strait Islander origin?	<input type="checkbox"/> No <input type="checkbox"/> Yes, Aboriginal <input type="checkbox"/> Yes, Torres Strait Islander	<input type="checkbox"/> No <input type="checkbox"/> Yes, Aboriginal <input type="checkbox"/> Yes, Torres Strait Islander	<input type="checkbox"/> No <input type="checkbox"/> Yes, Aboriginal <input type="checkbox"/> Yes, Torres Strait Islander
Is the person a full-time student?	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
What is the person's relationship to Person 1/ Person 2?	<input type="checkbox"/> Husband or wife of Person 1 <input type="checkbox"/> De facto partner of Person 1 <input type="checkbox"/> Child of both Person 1 and Person 2 <input type="checkbox"/> Child of Person 1 only <input type="checkbox"/> Child of Person 2 only <input type="checkbox"/> Unrelated flatmate or co-tenant of Person 1 Other relationship to Person 1 – please specify <input type="text"/>	<input type="checkbox"/> Husband or wife of Person 1 <input type="checkbox"/> De facto partner of Person 1 <input type="checkbox"/> Child of both Person 1 and Person 2 <input type="checkbox"/> Child of Person 1 only <input type="checkbox"/> Child of Person 2 only <input type="checkbox"/> Unrelated flatmate or co-tenant of Person 1 Other relationship to Person 1 – please specify <input type="text"/>	<input type="checkbox"/> Husband or wife of Person 1 <input type="checkbox"/> De facto partner of Person 1 <input type="checkbox"/> Child of both Person 1 and Person 2 <input type="checkbox"/> Child of Person 1 only <input type="checkbox"/> Child of Person 2 only <input type="checkbox"/> Unrelated flatmate or co-tenant of Person 1 Other relationship to Person 1 – please specify <input type="text"/>

54 How many registered motor vehicles owned or used by residents of this dwelling were garaged or parked at or near this dwelling on Census Night (Tuesday, 8 August 2006)?

- * Include vans and company vehicles kept at home.
- * Exclude motorbikes and motor scooters.

Motor vehicles

☐ None

17

Please answer the following questions for this dwelling

55 How many bedrooms are there in this dwelling? • If the dwelling is a bedsitter, mark the 'None' box like this: <input type="checkbox"/>	<input type="text"/> <input type="text"/> Number of bedrooms <input type="checkbox"/> None				
56 Is this dwelling: • Include owners of caravans, manufactured homes or houseboats regardless of whether or not the site is owned. • Remember to mark box like this: <input type="checkbox"/>	<input type="checkbox"/> Owned outright? ► Go to 58 <input type="checkbox"/> Owned with a mortgage? ► Go to 58 <input type="checkbox"/> Being purchased under a rent/buy scheme? <input type="checkbox"/> Being rented? <input type="checkbox"/> Being occupied rent free? <input type="checkbox"/> Being occupied under a life tenure scheme? <input type="checkbox"/> Other?				
57 If this dwelling is being rented, who is it rented from? • For all state/territory specific Government housing authorities, mark sector box. Some examples of Government housing authorities are: NSW Department of Housing, Office of Housing (VIC), Department of Housing (QLD), South Australian Housing Trust, Homeswest (WA), Housing Tasmania, Territory Housing (NT), ACT Housing, Aboriginal Housing Authorities. • Remember to mark box like this: <input type="checkbox"/>	<input type="checkbox"/> Real estate agent <input type="checkbox"/> Government Housing Authority/Housing Department (Public Housing) <input type="checkbox"/> Parent/Other relative not in this dwelling <input type="checkbox"/> Other person not in this dwelling <input type="checkbox"/> Residential park (including caravan parks and marinas) <input type="checkbox"/> Employer – Government (including Defence Housing Authority) <input type="checkbox"/> Employer – Private <input type="checkbox"/> Housing co-operative; Community or Church Group				
58 How much does your household pay for this dwelling? • Include rent and mortgage repayments and site fees if the dwelling is a caravan or manufactured home in a caravan park or manufactured home estate. • Exclude water rates, council rates, repairs, maintenance and other fees. • Do not include cents. • If no payments, please mark the 'Nil payments' box like this: <input type="checkbox"/>	\$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> per week OR \$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> per fortnight OR \$ <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> per month <input type="checkbox"/> Nil payments				
59 Can the Internet be accessed at this dwelling? • Include any Internet service regardless of whether or not paid for by the household. • If more than one type of connection in dwelling, mark the higher type. • Remember to mark box like this: <input type="checkbox"/>	<input type="checkbox"/> No Internet connection <input type="checkbox"/> Yes, broadband connection (including ADSL, Cable, Wireless and Satellite connections) <input type="checkbox"/> Yes, dial-up connection (including analog modem and ISDN connections) <input type="checkbox"/> Other (include Internet access through mobile phones, etc)				
60 Does each person in this household agree to his/her name and address and other information on this form being kept by the National Archives of Australia and then made publicly available after 99 years? • Answering this question is OPTIONAL. • A person's name-identified information will not be kept where a person does not agree or the answer is left blank. • See page 17 of the Census Guide for more information. • Remember to mark box like this: <input type="checkbox"/>					
PLEASE CHECK WITH EACH PERSON BEFORE ANSWERING – LEAVE BLANK FOR THOSE PERSONS WHOSE VIEWS ARE NOT KNOWN TO YOU					
Person 1	Person 2	Person 3	Person 4	Person 5	Person 6
<input type="checkbox"/> Yes, agrees	<input type="checkbox"/> Yes, agrees	<input type="checkbox"/> Yes, agrees	<input type="checkbox"/> Yes, agrees	<input type="checkbox"/> Yes, agrees	<input type="checkbox"/> Yes, agrees
<input type="checkbox"/> No, does not agree	<input type="checkbox"/> No, does not agree	<input type="checkbox"/> No, does not agree	<input type="checkbox"/> No, does not agree	<input type="checkbox"/> No, does not agree	<input type="checkbox"/> No, does not agree
61 Finished? • Please check that the answers to Question 60 accurately reflect the view, where known, of each person in the household. • Please make sure you have not missed any pages or questions. • Please sign here. Signature <input type="text"/> Date <input type="text"/> Thank you for completing this form. Australian Statistician					

Geographic codes

Non-mappable Geographic Codes

Level		No fixed address	Sydney undefined	NSW undefined	Unknown/Not stated
DZN	ABS Destination Zone	1294999990	1100999985	1298999979	9999999999
TZ	TDC Travel Zone	9499	9298	9299	9999
SLA	Statistical Local Area	9499	9298	9299	9999
LGA	Local Government Area	9499	9298	9299	9999
SSD	Statistical Sub-division	9499	9298	9299	9999
SD	Statistical Division	94	05	92	99

State code

State code	Description
00	GMR
01	RRNSW – NSW outside the GMA
02	Victoria
03	Queensland
04	South Australia
05	Western Australia
06	Tasmania
07	Northern Territories
08	Australian Capital Territory
09	Other Territories
89	Remainder of New South Wales (Usual Residence code only)
91	Jervis Bay Territory
93	Remainder of Australia (Usual Residence code only)
95	No usual address

Statistical Local Areas in Greater Metropolitan Area (GMA)

SD	SD Name	SSD	SSD Name	LGA	LGA Name	SLA	SLA_Name	# TZs
05	SYDNEY	05	Inner Sydney	1100	Botany Bay	1100	Botany Bay	23
05	SYDNEY	05	Inner Sydney	4800	Leichhardt	4800	Leichhardt	27
05	SYDNEY	05	Inner Sydney	5200	Marrickville	5200	Marrickville	37
05	SYDNEY	05	Inner Sydney	7200	Sydney City	7201	Sydney Inner	166
05	SYDNEY	05	Inner Sydney	7200	Sydney City	7204	Sydney East	36
05	SYDNEY	05	Inner Sydney	7200	Sydney City	7205	Sydney South	42
05	SYDNEY	05	Inner Sydney	7200	Sydney City	7206	Sydney West	19
05	SYDNEY	10	Eastern Suburbs	6550	Randwick	6550	Randwick	52
05	SYDNEY	10	Eastern Suburbs	8050	Waverley	8050	Waverley	23
05	SYDNEY	10	Eastern Suburbs	8500	Woollahra	8500	Woollahra	27
05	SYDNEY	15	St George-Sutherland	4150	Hurstville	4150	Hurstville	31
05	SYDNEY	15	St George-Sutherland	4450	Kogarah	4450	Kogarah	24
05	SYDNEY	15	St George-Sutherland	6650	Rockdale	6650	Rockdale	42
05	SYDNEY	15	St George-Sutherland	7150	Sutherland	7151	Sutherland Shire East	42
05	SYDNEY	15	St George-Sutherland	7150	Sutherland	7152	Sutherland Shire West	39
05	SYDNEY	20	Canterbury-Bankstown	0350	Bankstown	0351	Bankstown North-East	23
05	SYDNEY	20	Canterbury-Bankstown	0350	Bankstown	0353	Bankstown North-West	32
05	SYDNEY	20	Canterbury-Bankstown	0350	Bankstown	0355	Bankstown South	26
05	SYDNEY	20	Canterbury-Bankstown	1550	Canterbury	1550	Canterbury	47
05	SYDNEY	25	Fairfield-Liverpool	2850	Fairfield	2851	Fairfield East	48
05	SYDNEY	25	Fairfield-Liverpool	2850	Fairfield	2854	Fairfield West	33
05	SYDNEY	25	Fairfield-Liverpool	4900	Liverpool	4901	Liverpool East	47
05	SYDNEY	25	Fairfield-Liverpool	4900	Liverpool	4904	Liverpool West	40

SD	SD Name	SSD	SSD Name	LGA	LGA Name	SLA	SLA_Name	# TZs
05	SYDNEY	30	Outer South Western Sydney	1450	Camden	1450	Camden	42
05	SYDNEY	30	Outer South Western Sydney	1500	Campbelltown	1501	Campbelltown North	40
05	SYDNEY	30	Outer South Western Sydney	1500	Campbelltown	1504	Campbelltown South	38
05	SYDNEY	30	Outer South Western Sydney	8400	Wollondilly	8400	Wollondilly	17
05	SYDNEY	35	Inner Western Sydney	0150	Ashfield	0150	Ashfield	17
05	SYDNEY	35	Inner Western Sydney	1300	Burwood	1300	Burwood	16
05	SYDNEY	35	Inner Western Sydney	1520	Canada Bay	1521	Canada Bay-Concord	19
05	SYDNEY	35	Inner Western Sydney	1520	Canada Bay	1524	Canada Bay-Drummoyne	13
05	SYDNEY	35	Inner Western Sydney	7100	Strathfield	7100	Strathfield	21
05	SYDNEY	40	Central Western Sydney	0200	Auburn	0200	Auburn	35
05	SYDNEY	40	Central Western Sydney	3950	Holroyd	3950	Holroyd	41
05	SYDNEY	40	Central Western Sydney	6250	Parramatta	6251	Parramatta Inner	34
05	SYDNEY	40	Central Western Sydney	6250	Parramatta	6252	Parramatta North-East	23
05	SYDNEY	40	Central Western Sydney	6250	Parramatta	6253	Parramatta North-West	18
05	SYDNEY	40	Central Western Sydney	6250	Parramatta	6254	Parramatta South	15
05	SYDNEY	45	Outer Western Sydney	0900	Blue Mountains	0900	Blue Mountains	37
05	SYDNEY	45	Outer Western Sydney	3800	Hawkesbury	3800	Hawkesbury	30
05	SYDNEY	45	Outer Western Sydney	6350	Penrith	6351	Penrith East	47
05	SYDNEY	45	Outer Western Sydney	6350	Penrith	6354	Penrith West	41
05	SYDNEY	53	Blacktown	0750	Blacktown	0751	Blacktown North	51
05	SYDNEY	53	Blacktown	0750	Blacktown	0752	Blacktown South-East	45
05	SYDNEY	53	Blacktown	0750	Blacktown	0753	Blacktown South-West	38
05	SYDNEY	55	Lower Northern Sydney	4100	Hunter's Hill	4100	Hunter's Hill	8
05	SYDNEY	55	Lower Northern Sydney	4700	Lane Cove	4700	Lane Cove	16
05	SYDNEY	55	Lower Northern Sydney	5350	Mosman	5350	Mosman	13
05	SYDNEY	55	Lower Northern Sydney	5950	North Sydney	5950	North Sydney	36
05	SYDNEY	55	Lower Northern Sydney	6700	Ryde	6700	Ryde	64
05	SYDNEY	55	Lower Northern Sydney	8250	Willoughby	8250	Willoughby	33
05	SYDNEY	60	Central Northern Sydney	0500	Baulkham Hills	0501	Baulkham Hills Central	38
05	SYDNEY	60	Central Northern Sydney	0500	Baulkham Hills	0503	Baulkham Hills North	35
05	SYDNEY	60	Central Northern Sydney	0500	Baulkham Hills	0505	Baulkham Hills South	17
05	SYDNEY	60	Central Northern Sydney	4000	Hornsby	4001	Hornsby North	29
05	SYDNEY	60	Central Northern Sydney	4000	Hornsby	4004	Hornsby South	41
05	SYDNEY	60	Central Northern Sydney	4500	Ku-ring-gai	4500	Ku-ring-gai	43
05	SYDNEY	65	Northern Beaches	5150	Manly	5150	Manly	15
05	SYDNEY	65	Northern Beaches	6370	Pittwater	6370	Pittwater	28
05	SYDNEY	65	Northern Beaches	8000	Warringah	8000	Warringah	51
05	SYDNEY	70	Gosford-Wyong	3100	Gosford	3101	Gosford East	27
05	SYDNEY	70	Gosford-Wyong	3100	Gosford	3104	Gosford West	42
05	SYDNEY	70	Gosford-Wyong	8550	Wyong	8551	Wyong North-East	29
05	SYDNEY	70	Gosford-Wyong	8550	Wyong	8554	Wyong South and West	31
10	HUNTER	05	Newcastle	1720	Cessnock	1720	Cessnock	27
10	HUNTER	05	Newcastle	4650	Lake Macquarie	4651	Lake Macquarie East	21
10	HUNTER	05	Newcastle	4650	Lake Macquarie	4653	Lake Macquarie North	33
10	HUNTER	05	Newcastle	4650	Lake Macquarie	4655	Lake Macquarie West	24
10	HUNTER	05	Newcastle	5050	Maitland	5050	Maitland	24
10	HUNTER	05	Newcastle	5900	Newcastle	5903	Newcastle Inner City	23
10	HUNTER	05	Newcastle	5900	Newcastle	5904	Newcastle Outer West	16
10	HUNTER	05	Newcastle	5900	Newcastle	5905	Newcastle Throsby	23
10	HUNTER	05	Newcastle	6400	Port Stephens	6400	Port Stephens	24
15	ILLAWARRA	05	Wollongong	4400	Kiama	4400	Kiama	9
15	ILLAWARRA	05	Wollongong	6900	Shellharbour	6900	Shellharbour	28
15	ILLAWARRA	05	Wollongong	8450	Wollongong	8451	Wollongong Inner	43
15	ILLAWARRA	05	Wollongong	8450	Wollongong	8454	Wollongong Bal	54
15	ILLAWARRA	07	Nowra-Bomaderry	6950	Shoalhaven	6951	Shoalhaven Pt A	16
15	ILLAWARRA	10	Illawarra SD Bal	6950	Shoalhaven	6952	Shoalhaven Pt B	27
15	ILLAWARRA	10	Illawarra SD Bal	8350	Wingecarribee	8350	Wingecarribee	23

2006 NSW SLAs outside the Greater Metropolitan Area and number of Travel Zones in each

SLA06 in Rest of NSW	No. TZs	SLA06 in Rest of NSW	No. TZs	SLA06 in Rest of NSW	No. TZs
Albury	9	Forbes	7	Narrabri	6
Armidale Dumaresq - City	4	Gilgandra	3	Narrandera	3
Armidale Dumaresq Balance	3	Glen Innes Severn	5	Narromine	3
Ballina	11	Gloucester	5	Oberon	5
Balranald	4	Goulburn Mulwaree - Goulburn	4	Orange	10
Bathurst Regional - Pt A	5	Goulburn Mulwaree - Balance	3	Palerang - Pt A	4
Bathurst Regional - Pt B	6	Great Lakes	12	Palerang - Pt B	5
Bega Valley	15	Greater Hume Shire - Pt A	3	Parkes	6
Bellingen	6	Greater Hume Shire - Pt B	6	Queanbeyan	8
Berrigan	4	Greater Taree	16	Richmond Valley - Casino	1
Bland	3	Griffith	4	Richmond Valley Balance	6
Blayney	6	Gundagai	4	Singleton	6
Bogan	3	Gunnedah	4	Snowy River	8
Bombala	4	Guyra	5	Tamworth Regional - Pt A	13
Boorowa	4	Gwydir	4	Tamworth Regional - Pt B	8
Bourke	2	Harden	4	Temora	3
Brewarrina	3	Hastings - Pt A	2	Tenterfield	4
Broken Hill	2	Hastings - Pt B	12	Tumbarumba	4
Byron	7	Hay	3	Tumut Shire	9
Cabonne	12	Inverell - Pt A	5	Tweed - Pt B	5
Carrathool	4	Inverell - Pt B	2	Tweed - Tweed Coast	5
Central Darling	2	Jerilderie	2	Tweed - Tweed-Heads	9
Clarence Valley - Coast	13	Junee	2	Unincorp. Far West	3
Clarence Valley - Grafton	5	Kempsey	9	Upper Hunter Shire	7
Clarence Valley Balance	5	Kyogle	6	Upper Lachlan	8
Cobar	4	Lachlan	5	Uralla	5
Coffs Harbour - Pt A	11	Leeton	3	Urana	3
Coffs Harbour - Pt B	7	Lismore - Pt A	13	Wagga Wagga - Pt A	16
Conargo	3	Lismore - Pt B	6	Wagga Wagga - Pt B	3
Coolamon	3	Lithgow	13	Wakool	5
Cooma-Monaro	5	Liverpool Plains	4	Walcha	4
Coonamble	2	Lockhart	4	Walgett	5
Cootamundra	4	Lord Howe Island	1	Warren	3
Corowa Shire	5	Mid-Western Regional - Pt A	5	Warrumbungle Shire	8
Cowra	7	Mid-Western Regional - Pt B	4	Weddin	4
Deniliquin	1	Moree Plains	4	Wellington	5
Dubbo - Pt A	11	Murray	4	Wentworth	6
Dubbo - Pt B	2	Murrumbidgee	2	Yass Valley	9
Dungog	6	Muswellbrook	6	Young	5
Eurobodalla	16	Nambucca	10	Total	675

Mode codes

Code	Description	Notes
Mode6		
Mode9		
1	Train	Train only or train with any other mode(s)
2	Ferry/Tram	Ferry or tram only or with any other mode(s) except train
3	Bus	Bus only OR bus with other mode(s) except train, ferry or tram
4	Vehicle driver	Car driver, truck or motorbike only or with other mode (except train, bus, ferry, tram/lightrail)
5	Vehicle passenger	Car passenger only or with other mode (except train, bus, ferry, tram/lightrail or vehicle
6	Other mode	All other modes (excludes train, bus, ferry, tram/LR, vehicle driver or passenger)
7	Not stated	
9	Worked at Home or Did not go to Work	
Mode15		
1	Train	Train only or train with any other mode(s)
2	Bus	Bus only or bus with any other mode(s) except train
3	Ferry	Ferry or ferry , tram or lightrail with any other mode(s) except train or bus
4	Tram	Tram/lightrail only or tram/lightrail with any other mode(s) except train, bus or ferry
5	Taxi	Taxi passenger only or with other mode(s) excluding those above
6	Car as driver	Car driver only or with other mode(s) excluding those above
7	Car as passenger	Car passenger only or with other mode(s) excluding those above
8	Truck	Truck only or with other mode(s) excluding those above
9	Motorbike	Motorbike only or with other mode(s) excluding those above
10	Bicycle	Bicycle only or with other mode(s) excluding those above
11	Other mode	Other mode only or with other mode(s) excluding those above
12	Walked only	Walked only
13	Worked at home	Worked at home
14	Did not go to work	Did not go to work
15	Unknown	Unknown whether traveled to work
Mode30 Mode 30 (this variable is based on a recode of Mode 237)		
1	One method: Train	
2	One method: Bus	
3	One method: Ferrv	
4	One method: Tram	
5	One method: Taxi	
6	One method: Car driver	
7	One method: Car passenger	
8	One method: Truck	
9	One method: Motorbike	
10	One method: Bicycple	
11	One method: Other	
12	One method: Walked onlv	
13	Two methods: Train and Bus	
14	Two methods: Train and Ferrv	
15	Two methods: Train and Tram	
16	Two methods: Train and Car driver	
17	Two methods: Train and Car passenger	
18	Two methods: Train and Other mode	
19	Two methods: Bus and Ferrv	
20	Two methods: Bus and Tram	
21	Two methods: Bus and Car driver	
22	Two methods: Bus and Car passenger	
23	Two methods: Bus and Other	
24	Three methods: Train and two other modes	
25	Three methods: Bus and two other modes	

26	Two or Three methods: With Ferry or Tram
27	Two or Three methods: WITHOUT Ferry or Tram
28	Worked at home
29	Did not go to work
30	Mode not stated

Mode237	Mode 237 Description
1	Train
2	Bus
3	Ferry
4	Tram
5	Taxi
6	Car driver
7	Car passenger
8	Truck
9	Motorbike
10	Bicycle
11	Other
12	Train, bus
13	Train, ferry
14	Train, tram
15	Train, taxi
16	Train, car as driver
17	Train, car as passenger
18	Train, truck
19	Train, Motorbike
20	Train, bicycle
21	Train, other
22	Bus, ferry
23	Bus, tram
24	Bus, taxi
25	Bus, car as driver
26	Bus, car as passenger
27	Bus, truck
28	Bus, Motorbike
29	Bus, bicycle
30	Bus, other
31	Ferry, tram
32	Ferry, taxi
33	Ferry, car as driver
34	Ferry, car as passenger
35	Ferry, truck
36	Ferry, Motorbike
37	Ferry, bicycle
38	Ferry, other
39	Tram, taxi
40	Tram, car as driver
41	Tram, car as passenger
42	Tram, truck
43	Tram, Motorbike
44	Tram, bicycle
45	Tram, other
46	Taxi, car as driver
47	Taxi, car as passenger
48	Taxi, truck
49	Taxi, Motorbike
50	Taxi, bicycle
51	Taxi, other
52	Car as driver, car as passenger
53	Car as driver, truck
54	Car as driver, Motorbike
55	Car as driver, bicycle
56	Car as driver, other
57	Car as passenger, truck
58	Car as passenger, Motorbike
59	Car as passenger, bicycle

Mode237	Mode 237 Description
60	Car as passenger, other
61	Truck, Motorbike
62	Truck, bicycle
63	Truck, other
64	Motorbike, bicycle
65	Motorbike, other
66	Bicycle, other
67	Train, bus, ferry
68	Train, bus, tram
69	Train, bus, taxi
70	Train, bus, car as driver
71	Train, bus, car as passenger
72	Train, bus, truck
73	Train, bus, Motorbike
74	Train, bus, bicycle
75	Train, bus, other
76	Train, ferry, tram
77	Train, ferry, taxi
78	Train, ferry, car as driver
79	Train, ferry, car as passenger
80	Train, ferry, truck
81	Train, ferry, Motorbike
82	Train, ferry, bicycle
83	Train, ferry, other
84	Train, tram, taxi
85	Train, tram, car as driver
86	Train, tram, car as passenger
87	Train, tram, truck
88	Train, tram, Motorbike
89	Train, tram, bicycle
90	Train, tram, other
91	Train, taxi, car as driver
92	Train, taxi, car as passenger
93	Train, taxi, truck
94	Train, taxi, Motorbike
95	Train, taxi, bicycle
96	Train, taxi, other
97	Train, car as driver, car as passenger
98	Train, car as driver, truck
99	Train, car as driver, Motorbike
100	Train, car as driver, bicycle
101	Train, car as driver, other
102	Train, car as passenger, truck
103	Train, car as passenger, Motorbike
104	Train, car as passenger, bicycle
105	Train, car as passenger, other
106	Train, truck, Motorbike
107	Train, truck, bicycle
108	Train, truck, other
109	Train, Motorbike, bicycle
110	Train, Motorbike, other
111	Train, bicycle, other
112	Bus, ferry, tram
113	Bus, ferry, taxi
114	Bus, ferry, car as driver
115	Bus, ferry, car as passenger
116	Bus, ferry, truck
117	Bus, ferry, Motorbike
118	Bus, ferry, bicycle
119	Bus, ferry, other

Mode237	Mode 237 Description
120	Bus, tram, taxi
121	Bus, tram, car as driver
122	Bus, tram, car as passenger
123	Bus, tram, truck
124	Bus, tram, Motorbike
125	Bus, tram, bicycle
126	Bus, tram, other
127	Bus, taxi, car as driver
128	Bus, taxi, car as passenger
129	Bus, taxi, truck
130	Bus, taxi, Motorbike
131	Bus, taxi, bicycle
132	Bus, taxi, other
133	Bus, car as driver, car as passenger
134	Bus, car as driver, truck
135	Bus, car as driver, Motorbike
136	Bus, car as driver, bicycle
137	Bus, car as driver, other
138	Bus, car as passenger, truck
139	Bus, car as passenger, Motorbike
140	Bus, car as passenger, bicycle
141	Bus, car as passenger, other
142	Bus, truck, Motorbike
143	Bus, truck, bicycle
144	Bus, truck, other
145	Bus, Motorbike, bicycle
146	Bus, Motorbike, other
147	Bus, bicycle, other
148	Ferry, tram, taxi
149	Ferry, tram, car as driver
150	Ferry, tram, car as passenger
151	Ferry, tram, truck
152	Ferry, tram, Motorbike
153	Ferry, tram, bicycle
154	Ferry, tram, other
155	Ferry, taxi, car as driver
156	Ferry, taxi, car as passenger
157	Ferry, taxi, truck
158	Ferry, taxi, Motorbike
159	Ferry, taxi, bicycle
160	Ferry, taxi, other
161	Ferry, car as driver, car as passenger
162	Ferry, car as driver, truck
163	Ferry, car as driver, Motorbike
164	Ferry, car as driver, bicycle
165	Ferry, car as driver, other
166	Ferry, car as passenger, truck
167	Ferry, car as passenger, Motorbike
168	Ferry, car as passenger, bicycle
169	Ferry, car as passenger, other
170	Ferry, truck, Motorbike
171	Ferry, truck, bicycle
172	Ferry, truck, other
173	Ferry, Motorbike, bicycle
174	Ferry, Motorbike, other
175	Ferry, bicycle, other
176	Tram, taxi, car as driver
177	Tram, taxi, car as passenger
178	Tram, taxi, truck
179	Tram, taxi, Motorbike

Mode237	Mode 237 Description
180	Tram, taxi, bicycle
181	Tram, taxi, other
182	Tram, car as driver, car as passenger
183	Tram, car as driver, truck
184	Tram, car as driver, Motorbike
185	Tram, car as driver, bicycle
186	Tram, car as driver, other
187	Tram, car as passenger, truck
188	Tram, car as passenger, Motorbike
189	Tram, car as passenger, bicycle
190	Tram, car as passenger, other
191	Tram, truck, Motorbike
192	Tram, truck, bicycle
193	Tram, truck, other
194	Tram, Motorbike, bicycle
195	Tram, Motorbike, other
196	Tram, bicycle, other
197	Taxi, car as driver, car as passenger
198	Taxi, car as driver, truck
199	Taxi, car as driver, Motorbike
200	Taxi, car as driver, bicycle
201	Taxi, car as driver, other
202	Taxi, car as passenger, truck
203	Taxi, car as passenger, Motorbike
204	Taxi, car as passenger, bicycle
205	Taxi, car as passenger, other
206	Taxi, truck, Motorbike
207	Taxi, truck, bicycle
208	Taxi, truck, other
209	Taxi, Motorbike, bicycle
210	Taxi, Motorbike, other
211	Taxi, bicycle, other
212	Car as driver, car as passenger, truck
213	Car as driver, car as passenger, Motorbike
214	Car as driver, car as passenger, bicycle
215	Car as driver, car as passenger, other
216	Car as driver, truck, Motorbike
217	Car as driver, truck, bicycle
218	Car as driver, truck, other
219	Car as driver, Motorbike, bicycle
220	Car as driver, Motorbike, other
221	Car as driver, bicycle, other
222	Car as passenger, truck, Motorbike
223	Car as passenger, truck, bicycle
224	Car as passenger, truck, other
225	Car as passenger, Motorbike, bicycle
226	Car as passenger, Motorbike, other
227	Car as passenger, bicycle, other
228	Truck, Motorbike, bicycle
229	Truck, Motorbike, other
230	Truck, bicycle, other
231	Motorbike, bicycle, other
232	Walked only
233	Worked at home
234	Did not go to work
235	Not stated

Industry codes

1 digit, 2 digit and 4 digit ANZSIC codes are listed below.

Industry 1 digit code	Industry 1 digit Description
A	Agriculture, Forestry and Fishing
B	Mining
C	Manufacturing
D	Electricity, Gas, Water and Waste Services
E	Construction
F	Wholesale Trade
G	Retail Trade
H	Accommodation and Food Services
I	Transport, Postal and Warehousing
J	Information Media and Telecommunications
K	Financial and Insurance Services
L	Rental, Hiring and Real Estate Services
M	Professional, Scientific and Technical Services
N	Administrative and Support Services
O	Public Administration and Safety
P	Education and Training
Q	Health Care and Social Assistance
R	Arts and Recreation Services
S	Other Services
T	Inadequately described
X	Unknown

Industry 2 digit code	Industry 2 digit Description
01	Agriculture
02	Aquaculture
03	Forestry and Logging
04	Fishing, Hunting and Trapping
05	Agriculture, Forestry and Fishing Support Services
A0	Agriculture, Forestry and Fishing, nfd
06	Coal Mining
07	Oil and Gas Extraction
08	Metal Ore Mining
09	Non-Metallic Mineral Mining and Quarrying
10	Exploration and Other Mining Support Services
B0	Mining, nfd
11	Food Product Manufacturing
12	Beverage and Tobacco Product Manufacturing
13	Textile, Leather, Clothing and Footwear Manufacturing
14	Wood Product Manufacturing
15	Pulp, Paper and Converted Paper Product Manufacturing
16	Printing (including the Reproduction of Recorded Media)
17	Petroleum and Coal Product Manufacturing
18	Basic Chemical and Chemical Product Manufacturing
19	Polymer Product and Rubber Product Manufacturing
20	Non-Metallic Mineral Product Manufacturing
21	Primary Metal and Metal Product Manufacturing
22	Fabricated Metal Product Manufacturing
23	Transport Equipment Manufacturing
24	Machinery and Equipment Manufacturing
25	Furniture and Other Manufacturing

Industry 2 digit code	Industry 2 digit Description
C0	Manufacturing, nfd
26	Electricity Supply
27	Gas Supply
28	Water Supply, Sewerage and Drainage Services
29	Waste Collection, Treatment and Disposal Services
D0	Electricity, Gas, Water and Waste Services, nfd
30	Building Construction
31	Heavy and Civil Engineering Construction
32	Construction Services
E0	Construction, nfd
33	Basic Material Wholesaling
34	Machinery and Equipment Wholesaling
35	Motor Vehicle and Motor Vehicle Parts Wholesaling
36	Grocery, Liquor and Tobacco Product Wholesaling
37	Other Goods Wholesaling
38	Commission-Based Wholesaling
F0	Wholesale Trade, nfd
39	Motor Vehicle and Motor Vehicle Parts Retailing
40	Fuel Retailing
41	Food Retailing
42	Other Store-Based Retailing
43	Non-Store Retailing and Retail Commission-Based Buying and/or Selling
G0	Retail Trade, nfd
44	Accommodation
45	Food and Beverage Services
H0	Accommodation and Food Services, nfd
46	Road Transport
47	Rail Transport
48	Water Transport
49	Air and Space Transport
50	Other Transport
51	Postal and Courier Pick-up and Delivery Services
52	Transport Support Services
53	Warehousing and Storage Services
I0	Transport, Postal and Warehousing, nfd
54	Publishing (excl. Internet & Music Publishing)
55	Motion Picture and Sound Recording Activities
56	Broadcasting (excl. Internet)
57	Internet Publishing and Broadcasting
58	Telecommunications Services
59	Internet Service Providers, Web Search Portals and Data Processing Services
60	Library and Other Information Services
J0	Information Media and Telecommunications, nfd
62	Finance
63	Insurance and Superannuation Funds
64	Auxiliary Finance and Insurance Services
K0	Financial and Insurance Services, nfd
66	Rental and Hiring Services (excl. Real Estate)
67	Property Operators and Real Estate Services
L0	Rental, Hiring and Real Estate Services, nfd
69	Professional, Scientific and Technical Services (excl. Computer System Design & Related Services)
70	Computer System Design and Related Services
M0	Professional, Scientific and Technical Services, nfd
72	Administrative Services
73	Building Cleaning, Pest Control and Other Support Services
N0	Administrative and Support Services, nfd
75	Public Administration
76	Defence

Industry 2 digit code	Industry 2 digit Description
77	Public Order, Safety and Regulatory Services
O0	Public Administration and Safety, nfd
80	Preschool and School Education
81	Tertiary Education
82	Adult, Community and Other Education
P0	Education and Training, nfd
84	Hospitals
85	Medical and Other Health Care Services
86	Residential Care Services
87	Social Assistance Services
Q0	Health Care and Social Assistance, nfd
89	Heritage Activities
90	Creative and Performing Arts Activities
91	Sports and Recreation Activities
92	Gambling Activities
R0	Arts and Recreation Services, nfd
94	Repair and Maintenance
95	Personal Care and Other Services
96	Private Households Employing Staff, Undifferentiated Goods & Service-Producing Activities of Hholds
S0	Other Services, nfd
98	Inadequately described
99	Not stated

Occupation codes

1 digit, 2 digit and 4 digit ANZSCO codes are listed here.

Occupation 1 digit	Occupation 1 digit Description
01	Managers
02	Professionals
03	Technicians And Trades Workers
04	Community And Personal Service Workers
05	Clerical And Administrative Workers
06	Sales Workers
07	Machinery Operators And Drivers
08	Labourers
09	Inadequately described
10	Not stated

Occupation 2 digit Code	Occupation 2 digit Description
10	Managers, nfd
11	Chief Executives, General Managers and Legislators
12	Farmers and Farm Managers
13	Specialist Managers
14	Hospitality, Retail and Service Managers
20	Professionals, nfd
21	Arts and Media Professionals
22	Business, Human Resource and Marketing Professionals
23	Design, Engineering, Science and Transport Professionals
24	Education Professionals
25	Health Professionals
26	ICT Professionals
27	Legal, Social and Welfare Professionals
30	Technicians and Trades Workers, nfd
31	Engineering, ICT and Science Technicians
32	Automotive and Engineering Trades Workers
33	Construction Trades Workers
34	Electrotechnology and Telecommunications Trades Workers
35	Food Trades Workers
36	Skilled Animal and Horticultural Workers
39	Other Technicians and Trades Workers
40	Community and Personal Service Workers, nfd
41	Health and Welfare Support Workers
42	Carers and Aides
43	Hospitality Workers
44	Protective Service Workers
45	Sports and Personal Service Workers
50	Clerical and Administrative Workers, nfd
51	Office Managers and Program Administrators
52	Personal Assistants and Secretaries
53	General Clerical Workers
54	Inquiry Clerks and Receptionists
55	Numerical Clerks
56	Clerical and Office Support Workers
59	Other Clerical and Administrative Workers
60	Sales Workers, nfd

Occupation 2 digit Code	Occupation 2 digit Description
61	Sales Representatives and Agents
62	Sales Assistants and Salespersons
63	Sales Support Workers
70	Machinery Operators and Drivers, nfd
71	Machine and Stationary Plant Operators
72	Mobile Plant Operators
73	Road and Rail Drivers
74	Storepersons
80	Labourers, nfd
81	Cleaners and Laundry Workers
82	Construction and Mining Labourers
83	Factory Process Workers
84	Farm, Forestry and Garden Workers
85	Food Preparation Assistants
89	Other Labourers
98	Inadequately described
99	Not stated

Occupation 4 digit Code	Occupation 4 digit Description
1000	Managers, nfd
1110	Chief Executives, General Managers and Legislators, nfd
1111	Chief Executives and Managing Directors
1112	General Managers
1113	Legislators
1210	Farmers and Farm Managers, nfd
1211	Aquaculture Farmers
1212	Crop Farmers
1213	Livestock Farmers
1214	Mixed Crop and Livestock Farmers
1300	Specialist Managers, nfd
1311	Advertising and Sales Managers
1320	Business Administration Managers, nfd
1321	Corporate Services Managers
1322	Finance Managers
1323	Human Resource Managers
1324	Policy and Planning Managers
1325	Research and Development Managers
1330	Construction, Distribution and Production Managers, nfd
1331	Construction Managers
1332	Engineering Managers
1333	Importers, Exporters and Wholesalers
1334	Manufacturers
1335	Production Managers
1336	Supply and Distribution Managers
1340	Education, Health and Welfare Services Managers, nfd
1341	Child Care Centre Managers
1342	Health and Welfare Services Managers
1343	School Principals
1344	Other Education Managers
1351	ICT Managers
1390	Miscellaneous Specialist Managers, nfd
1391	Commissioned Officers (Management)
1392	Senior Non-commissioned Defence Force Members
1399	Other Specialist Managers
1400	Hospitality, Retail and Service Managers, nfd
1410	Accommodation and Hospitality Managers, nfd
1411	Cafe and Restaurant Managers

Occupation 4 digit Code	Occupation 4 digit Description
1412	Caravan Park and Camping Ground Managers
1413	Hotel and Motel Managers
1414	Licensed Club Managers
1419	Other Accommodation and Hospitality Managers
1421	Retail Managers
1490	Miscellaneous Hospitality, Retail and Service Managers, nfd
1491	Amusement, Fitness and Sports Centre Managers
1492	Call or Contact Centre and Customer Service Managers
1493	Conference and Event Organisers
1494	Transport Services Managers
1499	Other Hospitality, Retail and Service Managers
2000	Professionals, nfd
2100	Arts and Media Professionals, nfd
2110	Arts Professionals, nfd
2111	Actors, Dancers and Other Entertainers
2112	Music Professionals
2113	Photographers
2114	Visual Arts and Crafts Professionals
2120	Media Professionals, nfd
2121	Artistic Directors, and Media Producers and Presenters
2122	Authors, and Book and Script Editors
2123	Film, Television, Radio and Stage Directors
2124	Journalists and Other Writers
2200	Business, Human Resource and Marketing Professionals, nfd
2210	Accountants, Auditors and Company Secretaries, nfd
2211	Accountants
2212	Auditors, Company Secretaries and Corporate Treasurers
2220	Financial Brokers and Dealers, and Investment Advisers, nfd
2221	Financial Brokers
2222	Financial Dealers
2223	Financial Investment Advisers and Managers
2230	Human Resource and Training Professionals, nfd
2231	Human Resource Professionals
2232	ICT Trainers
2233	Training and Development Professionals
2240	Information and Organisation Professionals, nfd
2241	Actuaries, Mathematicians and Statisticians
2242	Archivists, Curators and Records Managers
2243	Economists
2244	Intelligence and Policy Analysts
2245	Land Economists and Valuers
2246	Librarians
2247	Management and Organisation Analysts
2249	Other Information and Organisation Professionals
2250	Sales, Marketing and Public Relations Professionals, nfd
2251	Advertising and Marketing Professionals
2252	ICT Sales Professionals
2253	Public Relations Professionals
2254	Technical Sales Representatives
2300	Design, Engineering, Science and Transport Professionals, nf
2310	Air and Marine Transport Professionals, nfd
2311	Air Transport Professionals
2312	Marine Transport Professionals
2320	Architects, Designers, Planners and Surveyors, nfd
2321	Architects and Landscape Architects
2322	Cartographers and Surveyors
2323	Fashion, Industrial and Jewellery Designers
2324	Graphic and Web Designers, and Illustrators

Occupation 4 digit Code	Occupation 4 digit Description
2325	Interior Designers
2326	Urban and Regional Planners
2330	Engineering Professionals, nfd
2331	Chemical and Materials Engineers
2332	Civil Engineering Professionals
2333	Electrical Engineers
2334	Electronics Engineers
2335	Industrial, Mechanical and Production Engineers
2336	Mining Engineers
2339	Other Engineering Professionals
2340	Natural and Physical Science Professionals, nfd
2341	Agricultural and Forestry Scientists
2342	Chemists, and Food and Wine Scientists
2343	Environmental Scientists
2344	Geologists and Geophysicists
2345	Life Scientists
2346	Medical Laboratory Scientists
2347	Veterinarians
2349	Other Natural and Physical Science Professionals
2400	Education Professionals, nfd
2410	School Teachers, nfd
2411	Early Childhood (Pre-primary School) Teachers
2412	Primary School Teachers
2413	Middle School Teachers (Aus) / Intermediate School Teachers
2414	Secondary School Teachers
2415	Special Education Teachers
2420	Tertiary Education Teachers, nfd
2421	University Lecturers and Tutors
2422	Vocational Education Teachers (Aus) / Polytechnic Teachers (
2490	Miscellaneous Education Professionals, nfd
2491	Education Advisers and Reviewers
2492	Private Tutors and Teachers
2493	Teachers of English to Speakers of Other Languages
2500	Health Professionals, nfd
2510	Health Diagnostic and Promotion Professionals, nfd
2511	Dietitians
2512	Medical Imaging Professionals
2513	Occupational and Environmental Health Professionals
2514	Optometrists and Orthoptists
2515	Pharmacists
2519	Other Health Diagnostic and Promotion Professionals
2520	Health Therapy Professionals, nfd
2521	Chiropractors and Osteopaths
2522	Complementary Health Therapists
2523	Dental Practitioners
2524	Occupational Therapists
2525	Physiotherapists
2526	Podiatrists
2527	Speech Professionals and Audiologists
2530	Medical Practitioners, nfd
2531	Generalist Medical Practitioners
2532	Anaesthetists
2533	Internal Medicine Specialists
2534	Psychiatrists
2535	Surgeons
2539	Other Medical Practitioners
2540	Midwifery and Nursing Professionals, nfd
2541	Midwives

Occupation 4 digit Code	Occupation 4 digit Description
2542	Nurse Educators and Researchers
2543	Nurse Managers
2544	Registered Nurses
2600	ICT Professionals, nfd
2610	Business and Systems Analysts, and Programmers, nfd
2611	ICT Business and Systems Analysts
2612	Multimedia Specialists and Web Developers
2613	Software and Applications Programmers
2621	Database and Systems Administrators, and ICT Security Special
2630	ICT Network and Support Professionals, nfd
2631	Computer Network Professionals
2632	ICT Support and Test Engineers
2633	Telecommunications Engineering Professionals
2700	Legal, Social and Welfare Professionals, nfd
2710	Legal Professionals, nfd
2711	Barristers
2712	Judicial and Other Legal Professionals
2713	Solicitors
2720	Social and Welfare Professionals, nfd
2721	Counsellors
2722	Ministers of Religion
2723	Psychologists
2724	Social Professionals
2725	Social Workers
2726	Welfare, Recreation and Community Arts Workers
3000	Technicians and Trades Workers, nfd
3100	Engineering, ICT and Science Technicians, nfd
3110	Agricultural, Medical and Science Technicians, nfd
3111	Agricultural Technicians
3112	Medical Technicians
3113	Primary Products Inspectors
3114	Science Technicians
3120	Building and Engineering Technicians, nfd
3121	Architectural, Building and Surveying Technicians
3122	Civil Engineering Draftspersons and Technicians
3123	Electrical Engineering Draftspersons and Technicians
3124	Electronic Engineering Draftspersons and Technicians
3125	Mechanical Engineering Draftspersons and Technicians
3126	Safety Inspectors
3129	Other Building and Engineering Technicians
3130	ICT and Telecommunications Technicians, nfd
3131	ICT Support Technicians
3132	Telecommunications Technical Specialists
3200	Automotive and Engineering Trades Workers, nfd
3210	Automotive Electricians and Mechanics, nfd
3211	Automotive Electricians
3212	Motor Mechanics
3220	Fabrication Engineering Trades Workers, nfd
3221	Metal Casting, Forging and Finishing Trades Workers
3222	Sheetmetal Trades Workers
3223	Structural Steel and Welding Trades Workers
3230	Mechanical Engineering Trades Workers, nfd
3231	Aircraft Maintenance Engineers
3232	Metal Fitters and Machinists
3233	Precision Metal Trades Workers
3234	Toolmakers and Engineering Patternmakers
3240	Panelbeaters, and Vehicle Body Builders, Trimmers and Painters
3241	Panelbeaters

Occupation 4 digit Code	Occupation 4 digit Description
3242	Vehicle Body Builders and Trimmers
3243	Vehicle Painters
3300	Construction Trades Workers, nfd
3310	Bricklayers, and Carpenters and Joiners, nfd
3311	Bricklayers and Stonemasons
3312	Carpenters and Joiners
3320	Floor Finishers and Painting Trades Workers, nfd
3321	Floor Finishers
3322	Painting Trades Workers
3330	Glaziers, Plasterers and Tilers, nfd
3331	Glaziers
3332	Plasterers
3333	Roof Tilers
3334	Wall and Floor Tilers
3341	Plumbers
3400	Electrotechnology and Telecommunications Trades Workers, nfd
3411	Electricians
3420	Electronics and Telecommunications Trades Workers, nfd
3421	Airconditioning and Refrigeration Mechanics
3422	Electrical Distribution Trades Workers
3423	Electronics Trades Workers
3424	Telecommunications Trades Workers
3510	Food Trades Workers, nfd
3511	Bakers and Pastrycooks
3512	Butchers and Smallgoods Makers
3513	Chefs
3514	Cooks
3600	Skilled Animal and Horticultural Workers, nfd
3610	Animal Attendants and Trainers, and Shearers, nfd
3611	Animal Attendants and Trainers
3612	Shearers
3613	Veterinary Nurses
3620	Horticultural Trades Workers, nfd
3621	Florists
3622	Gardeners
3623	Greenkeepers
3624	Nurserypersons
3900	Other Technicians and Trades Workers, nfd
3911	Hairdressers
3920	Printing Trades Workers, nfd
3921	Binders, Finishers and Screen Printers
3922	Graphic Pre-press Trades Workers
3923	Printers
3930	Textile, Clothing and Footwear Trades Workers, nfd
3931	Canvas and Leather Goods Makers
3932	Clothing Trades Workers
3933	Upholsterers
3940	Wood Trades Workers, nfd
3941	Cabinetmakers
3942	Wood Machinists and Other Wood Trades Workers
3990	Miscellaneous Technicians and Trades Workers, nfd
3991	Boat Builders and Shipwrights
3992	Chemical, Gas, Petroleum and Power Generation Plant Operator
3993	Gallery, Library and Museum Technicians
3994	Jewellers
3995	Performing Arts Technicians
3996	Signwriters
3999	Other Miscellaneous Technicians and Trades Workers

Occupation 4 digit Code	Occupation 4 digit Description
4000	Community and Personal Service Workers, nfd
4110	Health and Welfare Support Workers, nfd
4111	Ambulance Officers and Paramedics
4112	Dental Hygienists, Technicians and Therapists
4113	Diversional Therapists
4114	Enrolled and Mothercraft Nurses
4115	Indigenous Health Workers
4116	Massage Therapists
4117	Welfare Support Workers
4200	Carers and Aides, nfd
4211	Child Carers
4221	Education Aides
4230	Personal Carers and Assistants, nfd
4231	Aged and Disabled Carers
4232	Dental Assistants
4233	Nursing Support and Personal Care Workers
4234	Special Care Workers
4310	Hospitality Workers, nfd
4311	Bar Attendants and Baristas
4312	Cafe Workers
4313	Gaming Workers
4314	Hotel Service Managers
4315	Waiters
4319	Other Hospitality Workers
4400	Protective Service Workers, nfd
4410	Defence Force Members, Fire Fighters and Police, nfd
4411	Defence Force Members - Other Ranks
4412	Fire and Emergency Workers
4413	Police
4420	Prison and Security Officers, nfd
4421	Prison Officers
4422	Security Officers and Guards
4500	Sports and Personal Service Workers, nfd
4510	Personal Service and Travel Workers, nfd
4511	Beauty Therapists
4512	Driving Instructors
4513	Funeral Workers
4514	Gallery, Museum and Tour Guides
4515	Personal Care Consultants
4516	Tourism and Travel Advisers
4517	Travel Attendants
4518	Other Personal Service Workers
4520	Sports and Fitness Workers, nfd
4521	Fitness Instructors
4522	Outdoor Adventure Guides
4523	Sports Coaches, Instructors and Officials
4524	Sportspersons
5000	Clerical and Administrative Workers, nfd
5100	Office Managers and Program Administrators, nfd
5111	Contract, Program and Project Administrators
5120	Office and Practice Managers, nfd
5121	Office Managers
5122	Practice Managers
5210	Personal Assistants and Secretaries, nfd
5211	Personal Assistants
5212	Secretaries
5300	General Clerical Workers, nfd
5311	General Clerks

Occupation 4 digit Code	Occupation 4 digit Description
5321	Keyboard Operators
5400	Inquiry Clerks and Receptionists, nfd
5410	Call or Contact Centre Information Clerks, nfd
5411	Call or Contact Centre Workers
5412	Inquiry Clerks
5421	Receptionists
5500	Numerical Clerks, nfd
5510	Accounting Clerks and Bookkeepers, nfd
5511	Accounting Clerks
5512	Bookkeepers
5513	Payroll Clerks
5520	Financial and Insurance Clerks, nfd
5521	Bank Workers
5522	Credit and Loans Officers
5523	Insurance, Money Market and Statistical Clerks
5610	Clerical and Office Support Workers, nfd
5611	Betting Clerks
5612	Couriers and Postal Deliverers
5613	Filing and Registry Clerks
5614	Mail Sorters
5615	Survey Interviewers
5616	Switchboard Operators
5619	Other Clerical and Office Support Workers
5900	Other Clerical and Administrative Workers, nfd
5910	Logistics Clerks, nfd
5911	Purchasing and Supply Logistics Clerks
5912	Transport and Despatch Clerks
5990	Miscellaneous Clerical and Administrative Workers, nfd
5991	Conveyancers and Legal Executives
5992	Court and Legal Clerks
5993	Debt Collectors
5994	Human Resource Clerks
5995	Inspectors and Regulatory Officers
5996	Insurance Investigators, Loss Adjusters and Risk Surveyors
5997	Library Assistants
5999	Other Miscellaneous Clerical and Administrative Workers
6000	Sales Workers, nfd
6100	Sales Representatives and Agents, nfd
6110	Insurance Agents and Sales Representatives, nfd
6111	Auctioneers, and Stock and Station Agents
6112	Insurance Agents
6113	Sales Representatives
6121	Real Estate Sales Agents
6210	Sales Assistants and Salespersons, nfd
6211	Sales Assistants (General)
6212	ICT Sales Assistants
6213	Motor Vehicle and Vehicle Parts Salespersons
6214	Pharmacy Sales Assistants
6215	Retail Supervisors
6216	Service Station Attendants
6217	Street Vendors and Related Salespersons
6219	Other Sales Assistants and Salespersons
6300	Sales Support Workers, nfd
6311	Checkout Operators and Office Cashiers
6390	Miscellaneous Sales Support Workers, nfd
6391	Models and Sales Demonstrators
6392	Retail and Wool Buyers
6393	Telemarketers

Occupation 4 digit Code	Occupation 4 digit Description
6394	Ticket Salespersons
6395	Visual Merchandisers
6399	Other Sales Support Workers
7000	Machinery Operators and Drivers, nfd
7100	Machine and Stationary Plant Operators, nfd
7110	Machine Operators, nfd
7111	Clay, Concrete, Glass and Stone Processing Machine Operators
7112	Industrial Spraypainters
7113	Paper and Wood Processing Machine Operators
7114	Photographic Developers and Printers
7115	Plastics and Rubber Production Machine Operators
7116	Sewing Machinists
7117	Textile and Footwear Production Machine Operators
7119	Other Machine Operators
7120	Stationary Plant Operators, nfd
7121	Crane, Hoist and Lift Operators
7122	Drillers, Miners and Shot Firers
7123	Engineering Production Systems Workers
7129	Other Stationary Plant Operators
7210	Mobile Plant Operators, nfd
7211	Agricultural, Forestry and Horticultural Plant Operators
7212	Earthmoving Plant Operators
7213	Forklift Drivers
7219	Other Mobile Plant Operators
7300	Road and Rail Drivers, nfd
7310	Automobile, Bus and Rail Drivers, nfd
7311	Automobile Drivers
7312	Bus and Coach Drivers
7313	Train and Tram Drivers
7321	Delivery Drivers
7331	Truck Drivers
7411	Storepersons
8000	Labourers, nfd
8110	Cleaners and Laundry Workers, nfd
8111	Car Detailers
8112	Commercial Cleaners
8113	Domestic Cleaners
8114	Housekeepers
8115	Laundry Workers
8116	Other Cleaners
8210	Construction and Mining Labourers, nfd
8211	Building and Plumbing Labourers
8212	Concreters
8213	Fencers
8214	Insulation and Home Improvement Installers
8215	Paving and Surfacing Labourers
8216	Railway Track Workers
8217	Structural Steel Construction Workers
8219	Other Construction and Mining Labourers
8300	Factory Process Workers, nfd
8310	Food Process Workers, nfd
8311	Food and Drink Factory Workers
8312	Meat Boners and Slicers, and Slaughterers
8313	Meat, Poultry and Seafood Process Workers
8320	Packers and Product Assemblers, nfd
8321	Packers
8322	Product Assemblers
8390	Miscellaneous Factory Process Workers, nfd

Occupation 4 digit Code	Occupation 4 digit Description
8391	Metal Engineering Process Workers
8392	Plastics and Rubber Factory Workers
8393	Product Quality Controllers
8394	Timber and Wood Process Workers
8399	Other Factory Process Workers
8410	Farm, Forestry and Garden Workers, nfd
8411	Aquaculture Workers
8412	Crop Farm Workers
8413	Forestry and Logging Workers
8414	Garden and Nursery Labourers
8415	Livestock Farm Workers
8416	Mixed Crop and Livestock Farm Workers
8419	Other Farm, Forestry and Garden Workers
8510	Food Preparation Assistants, nfd
8511	Fast Food Cooks
8512	Food Trades Assistants
8513	Kitchenhands
8900	Other Labourers, nfd
8910	Freight Handlers and Shelf Fillers, nfd
8911	Freight and Furniture Handlers
8912	Shelf Fillers
8990	Miscellaneous Labourers, nfd
8991	Caretakers
8992	Deck and Fishing Hands
8993	Handypersons
8994	Motor Vehicle Parts and Accessories Fitters
8995	Printing Assistants and Table Workers
8996	Recycling and Rubbish Collectors
8997	Vending Machine Attendants
8999	Other Miscellaneous Labourers
9998	Inadequately described
9999	Not stated

Other variable codes

Variable Name	Code	Variable Description
AGE11	1	15 - 19
	2	20 - 24
	3	25 - 29
	4	30 - 34
	5	35 - 39
	6	40 - 44
	7	45 - 49
	8	50 - 54
	9	55 - 59
	10	60 - 64
	11	65+ years'
Sex	1	Males
	2	Female
Income10	1	up to \$149
	2	\$150-\$249
	3	\$250-\$399
	4	\$400-\$599
	5	\$600-\$799
	6	\$800-\$999
	7	\$1,000-\$1,299
	8	\$1,300-\$1,599
	9	\$1,600-\$1,999
	10	\$2,000 or more
Dwellingtype06	1	'Separate house'
	2	Semi- 1 story
	3	Semi- 2 or more story
	4	Flat 1 or 2 story
	5	Flat 3 or more stories
	6	'Other'.
HHWKR04	1	'None'
	2	'One'
	3	'Two'
	4	'Three or more'
HHVEH05	1	No vehicles
	2	One vehicle
	3	Two vehicles
	4	Three vehicles
	5	Four or more vehicles
HHSIZE05	1	'One'
	2	'Two'
	3	'Three'
	4	'Four'
	5	'Five or more'

Travel zone redesign and splits

Zone Redesign

TDC undertook a complete boundary redesign to arrive at the 2006 Travel Zones. This involved moving zone boundaries, splitting zones and even combining zones. The goal was to allow for more detailed analysis of transport networks and travel behaviour at the travel zone level.

The basis of the new zone boundaries is the new ABS micro-level geographic unit called 'mesh blocks'. Mesh Blocks are based on property boundaries and will eventually replace Collection Districts (CD). Information on Mesh Blocks is available from the ABS web site at www.abs.gov.au

A note on terminology: ABS refers to employment destinations within each state with respect to two broad areas. The Detailed Study Area (DSA) covers the main metropolitan area, the extent of which is defined by each state. Outside this area is referred to as the Extended Study Area (ESA). For the purposes of JTW, TDC refers to the DSA in NSW as the Greater Metropolitan Area (GMA) and the ESA by the term 'Rest of NSW'.

Detailed Study Area

Guidelines for splitting TZs or changing TZ boundaries were that as far as possible zone boundaries should be designed so as to

- only be changed if really necessary and changes kept to a minimum to retain over time consistency
- align with and not split mesh block boundaries
- align with SLA boundaries and correct for TZ boundary anomalies created by LGA and SLA changes since the 2001 Census
- include no more than one train station to a TZ
- not overlap major transport network features such as railways or freeways and motorways where there is no access from one side of the motorway to another
- make it possible to travel from one side of a TZ to the other side without having to go outside of the zone
- not include multiple suburbs in a zone unless suburbs are large
- contain only 1 commercial centre
- account for earmarked industrial areas or planned centres
- or centres within a single zone unless very large and/or have a high level of employment.

Extended Study Area

Prior to the 2001 Census it was not possible to get place of work information for areas of NSW outside the GMA. For the 2001 Census ABS coded place of work to the SLA level and, for some of the more populated regional areas, SLAs were further split into smaller areas.

For the 2006 Census TDC was able to create a number of travel zones within each non-metropolitan SLA, making possible much finer spatial analysis of employment and commuting patterns in rural and regional NSW.

The travel zones created for the Rest of NSW were based on existing localities and population size, with the broad guidelines for design being:

- Travel Zones should not cross SLA boundaries
- Meshblock is the basic building block
- Travel Zones match as far as possible official (LPI) localities
- Meshblock to have population greater than 1,000
- Regional centres to be split on landuse (where possible)
- Where there was minimal population in an SLA, 2 travel zones were designed on the regional centre and then the remainder of the SLA, similar to some 'donut' SLAs.
- Department of Planning demographers to review the zone boundaries and their recommended changes implemented

Further GMA Zone Splits

After the JTW data was processed TDC made a decision to create new travel zones in some areas to improve the quality of data analysis and modelling. Most new zones are in the greenfields areas of South West and North West Sydney as shown in the table below. In all 126 new zones were created from 48 old ones, giving a net increase of 78 in the number of TZs. Completely new zone numbers have been created and the old numbers deleted.

SLA 2006	Number of New Zones	SLA 2006	Number of New Zones
Baulkham Hills - North	5	Gosford - West	6
Blacktown - North	20	Hawkesbury	6
Blacktown - South-West	5	Liverpool - West	33
Camden	35	Penrith - East	2
Campbelltown - North	4	Pittwater	2
Fairfield - West	2	Wyong - North-East	2
Gosford - East	2	Wyong - South and West	2

A small number of users may have obtained the first version of the 2006 TDC TZs boundaries or purchased Census place of work data directly from ABS which was coded to the earlier 2006 TZ version.

The table on the next page is provided to assist users. It lists the new zone numbers, their equivalent old zone number and the SLA in which they are located.

Note : The 2006 JTW data is the first to be released by TDC using the 2006 Travel Zones. All other TDC data sets to be coded to 2006 TZs will use the version which includes these new split zones.

2006 Travel Zones split by TDC after Census Processing

OldTZ06	New TZ06	9 digit SLA CODE	4 digit SLA CODE	SLA_NAME_2006
1039	1072	105252854	2854	Fairfield - West
1039	1073	105252854	2854	Fairfield - West
1139	1179	105254904	4904	Liverpool - West
1139	1180	105254904	4904	Liverpool - West
1162	1181	105254904	4904	Liverpool - West
1145	1182	105254904	4904	Liverpool - West
1145	1183	105254904	4904	Liverpool - West
1155	1184	105254904	4904	Liverpool - West
1162	1185	105254904	4904	Liverpool - West
1141	1186	105254904	4904	Liverpool - West
1141	1187	105254904	4904	Liverpool - West
1147	1188	105254904	4904	Liverpool - West
1153	1189	105254904	4904	Liverpool - West
1153	1190	105254904	4904	Liverpool - West
1153	1191	105254904	4904	Liverpool - West
1153	1192	105254904	4904	Liverpool - West
1155	1193	105254904	4904	Liverpool - West
1155	1194	105254904	4904	Liverpool - West
1162	1195	105254904	4904	Liverpool - West
1163	1196	105254904	4904	Liverpool - West
1166	1197	105254904	4904	Liverpool - West
1166	1198	105254904	4904	Liverpool - West
1147	1199	105254904	4904	Liverpool - West
1147	1200	105254904	4904	Liverpool - West
1147	1201	105254904	4904	Liverpool - West
1168	1202	105254904	4904	Liverpool - West
1168	1203	105254904	4904	Liverpool - West
1168	1204	105254904	4904	Liverpool - West
1168	1205	105254904	4904	Liverpool - West
1178	1206	105254904	4904	Liverpool - West
1178	1207	105254904	4904	Liverpool - West
1177	1208	105254904	4904	Liverpool - West
1177	1209	105254904	4904	Liverpool - West
1177	1210	105254904	4904	Liverpool - West
1177	1211	105254904	4904	Liverpool - West
1235	1269	105301501	1501	Campbelltown - North
1235	1270	105301501	1501	Campbelltown - North
1231	1271	105301501	1501	Campbelltown - North
1231	1272	105301501	1501	Campbelltown - North
1346	1384	105301450	1450	Camden
1346	1385	105301450	1450	Camden
1342	1386	105301450	1450	Camden
1342	1387	105301450	1450	Camden
1346	1388	105301450	1450	Camden
1349	1389	105301450	1450	Camden
1346	1390	105301450	1450	Camden
1349	1391	105301450	1450	Camden
1352	1392	105301450	1450	Camden
1352	1393	105301450	1450	Camden
1352	1394	105301450	1450	Camden
1353	1395	105301450	1450	Camden
1353	1396	105301450	1450	Camden
1343	1397	105301450	1450	Camden
1343	1398	105301450	1450	Camden
1351	1399	105301450	1450	Camden
1351	1400	105301450	1450	Camden
1351	1401	105301450	1450	Camden
1351	1402	105301450	1450	Camden
1351	1403	105301450	1450	Camden
1359	1404	105301450	1450	Camden
1359	1405	105301450	1450	Camden
1348	1406	105301450	1450	Camden
1348	1407	105301450	1450	Camden
1348	1408	105301450	1450	Camden
1348	1409	105301450	1450	Camden
1344	1410	105301450	1450	Camden
1344	1411	105301450	1450	Camden

OldTZ06	New TZ06	9 digit SLA CODE	4 digit SLA CODE	SLA_NAME_2006
1344	1412	105301450	1450	Camden
1344	1413	105301450	1450	Camden
1350	1414	105301450	1450	Camden
1350	1415	105301450	1450	Camden
1350	1416	105301450	1450	Camden
1350	1417	105301450	1450	Camden
1350	1418	105301450	1450	Camden
1880	1884	105456351	6351	Penrith - East
1880	1885	105456351	6351	Penrith - East
2042	2052	105453800	3800	Hawkesbury
2042	2053	105453800	3800	Hawkesbury
2043	2054	105453800	3800	Hawkesbury
2043	2055	105453800	3800	Hawkesbury
2044	2056	105453800	3800	Hawkesbury
2044	2057	105453800	3800	Hawkesbury
2183	2185	105530753	0753	Blacktown - South-West
2183	2186	105530753	0753	Blacktown - South-West
2183	2187	105530753	0753	Blacktown - South-West
2183	2188	105530753	0753	Blacktown - South-West
2183	2189	105530753	0753	Blacktown - South-West
2212	2261	105530751	0751	Blacktown - North
2212	2262	105530751	0751	Blacktown - North
2215	2263	105530751	0751	Blacktown - North
2215	2264	105530751	0751	Blacktown - North
2219	2265	105530751	0751	Blacktown - North
2219	2266	105530751	0751	Blacktown - North
2228	2267	105530751	0751	Blacktown - North
2228	2268	105530751	0751	Blacktown - North
2229	2269	105530751	0751	Blacktown - North
2229	2270	105530751	0751	Blacktown - North
2239	2271	105530751	0751	Blacktown - North
2239	2272	105530751	0751	Blacktown - North
2225	2273	105530751	0751	Blacktown - North
2225	2274	105530751	0751	Blacktown - North
2225	2275	105530751	0751	Blacktown - North
2225	2276	105530751	0751	Blacktown - North
2235	2277	105530751	0751	Blacktown - North
2235	2278	105530751	0751	Blacktown - North
2217	2279	105530751	0751	Blacktown - North
2217	2280	105530751	0751	Blacktown - North
2785	2809	105600503	0503	Baulkham Hills - North
2785	2810	105600503	0503	Baulkham Hills - North
2785	2811	105600503	0503	Baulkham Hills - North
2785	2812	105600503	0503	Baulkham Hills - North
2785	2813	105600503	0503	Baulkham Hills - North
2960	2972	105656370	6370	Pittwater
2960	2973	105656370	6370	Pittwater
2988	3009	105703101	3101	Gosford - East
2988	3010	105703101	3101	Gosford - East
3030	3061	105703104	3104	Gosford - West
3030	3062	105703104	3104	Gosford - West
3036	3063	105703104	3104	Gosford - West
3036	3064	105703104	3104	Gosford - West
3037	3065	105703104	3104	Gosford - West
3037	3066	105703104	3104	Gosford - West
3091	3118	105708554	8554	Wyong - South and West
3091	3119	105708554	8554	Wyong - South and West
3152	3172	105708551	8551	Wyong - North-East
3152	3173	105708551	8551	Wyong - North-East

Work address processing and imputation

Introduction

Journey To Work (JTW) processing involves the allocation of a DZN ('Destination Zone') to workplace address reported in the ABS Census of Population and Housing. In the majority of cases sufficient address information is provided to allow for coding to a DZN. However, in some cases it is not possible to allocate the address to a DZN because only partial address information has been reported.

'Locality dump' codes

A significant number of respondents only report the locality of the workplace address e.g. they report suburb but not street. In some cases locality alone will provide sufficient information to allocate the address to a single DZN, but such cases are in the minority. In the majority of cases, addresses that report locality-only are allocated a '*Locality dump*' code to indicate that locality is known but there is insufficient other information to allow coding to a single DZN.

'Street dump' codes

It is also common for respondents to report locality and street¹, but no street number. In a large number of cases this will be sufficient information to allocate the address to a single DZN. The street involved may be wholly contained within one DZN, a business and/or building name may have been supplied to facilitate coding to a single DZN, or the address can be reasonably 'best-fitted' ie. allocated to the most likely DZN of a set of possible DZNs. However, for some important streets a best-fit approach is not possible, because the number of possible DZNs is too large - and the employment too significant - to simply allocate all the street dump employment to a single DZN (for example, Pitt Street in the Sydney CBD runs through 30 zones). In such cases, the address is allocated a '*Street dump*' code to indicate that locality and street are known but there is insufficient other information to allow coding to a single DZN.

Street Dump codes were first used by TDC in the 2001 Census. For the 2006 Census the number of street dump codes was significantly expanded to ensure more accurate final figures for zones in the CBD and other major centres.

Imputation

DZN

Unique 10 digit code used to code workplace addresses across Australia to travel zones.

The code is made up of:

State (1 digit)
Part of State (1 digit)
SLA (4 digit)
TZ (4 digit)

eg. 1|1|7201|0018 is

TZ (18) in
Sydney Inner SLA (7201)
in
GMA (1) in
NSW (1)

The DZN field in JTW tables compiled by ABS contains locality and street dump codes as well as true zones. For 2006, the code range 6001 - 6953 was reserved for Locality Dumps and 7001 - 7427 for Street Dumps. To facilitate usage of JTW data, TDC distributes (imputes) dump employment to true DZNs. As a result of this imputation process, TDC is able to provide clients with JTW tables that contain no locality dump codes.

The general structure of the 2006 JTW tables before and after imputation is as follows:

Original ABS Table

0001 – 5999	TDC Travel Zones
6001 – 6953	Locality Dump codes
7001 – 7427	Locality Dump codes
9979	NSW undefined
9985	Sydney undefined
9990	No fixed address
9999	Unknown

After TDC Imputation

0001 – 5999	TDC Travel Zones
6001 – 6953	<u>No Locality Dump codes</u>
7001 – 7427	<u>No Street Dump codes</u>
9299	NSW undefined
9298	Sydney undefined
9499	No fixed address
9999	Unknown

¹ The term 'street' is used throughout this report as a generic term for 'street', 'road', 'lane', 'avenue', 'highway', 'boulevard' etc.

Restrictions on distribution There are two restrictions on the locality and street dump distribution process that limit the options for development of a distribution methodology:

1. *All SLA totals should be retained:* JTW tables provide data at both Statistical Local Area (SLA) and DZN level. During JTW processing each dump code *must* be mapped to a single SLA, and consequently SLA data does not require any imputation. It is advisable, therefore, that any distribution of dump data to DZNs leaves SLA totals undisturbed.

As in previous years, for the 2006 JTW this rule was followed where possible. However, for a small number of dump codes it was found during imputation that the restriction of a single SLA being allocated to the dump code did not give an accurate representation of employment when the data was distributed to zonal level. As a result, TDC extended the scope of possible zones for these dump codes, and for the SLAs connected with these dump codes there will be a difference between SLA totals before and after imputation. The SLAs affected were:

SLA	SLA Name
1100	Botany Bay
3950	Holroyd
6251	Parramatta – Inner
6351	Penrith – East
6354	Penrith – West
6650	Rockdale
7201	Sydney – Inner
7205	Sydney – South
7206	Sydney – West

2. *All DZN totals must be consistent across tables:* The distribution process must ensure that the DZN totals are consistent across all JTW tables.

These restrictions on the imputation process cannot be perfectly achieved because it is ABS policy to ensure confidentiality by randomising table cells with small employment. As a result, zone totals can differ slightly across ABS JTW tables as each table is independently randomised.

Candidate zones

When an address only contains locality name, and hence is allocated a locality dump code, it cannot be known for certain what area (or zones) this name refers to. It is necessary to define a range of zones which, without extending the range unrealistically, covers the areas that could have been meant by the locality reported. The first stage in distribution, therefore, is to compile a list of ‘*candidate zones*’ for each locality dump code.

A locality dump code is allocated to an address by having an appropriate ‘no street name given’ record in the JTW Search Index e.g.

Locality	Street	DZN
smithfield	no street name given	1139506751

A list of candidate zones for a locality dump code is compiled using this information, as follows:

1. From the index the locality names for the locality dump code are determined from the localities for the ‘no street name given’ records to which the locality dump code is attached. There may be more than one locality name pointing to a locality dump code (e.g. ‘no street name given’ records for “Smithfield” and “Smithfield West” and “Sherwood Grange” all point to locality dump code

1139506751), but in the current example it is assumed that the only locality name for locality dump code 1139506751 is "Smithfield".

2. The *potential* candidate zones for the locality dump code comprise the DZNs for which there are index entries under the locality dump name e.g.

Locality	Street	No. Range	DZN
smithfield	alexander st	00019999a	1128510981
smithfield	alt st	00019999a	1128510984
smithfield	betts rd	00019999a	1139501818
smithfield	blackstone st	00019999a	1128541043
smithfield	britton st	00019999a	1139501820
etc			

The full potential candidate zone list for locality dump code 1139506751 is as follows:

Potential Candidate Zones

DZN	TZ	SLA
1128510981	0981	2851
1128510982	0982	2851
1128510983	0983	2851
1128510984	0984	2851
1128510985	0985	2851
1128510986	0986	2851
1128510988	0988	2851
1128510990	0990	2851
1128541043	1043	2854
1128541046	1046	2854
1128541050	1050	2854
1139501817	1817	3950
1139501818	1818	3950
1139501820	1820	3950
1139501821	1821	3950
1139501823	1823	3950

It can be seen from this table that the Smithfield area spans more than one SLA. Therefore, for the JTW Index it was necessary to choose which SLA the Smithfield Dump Code should be allocated to. A map of the area is shown below:



The map shows that there is a major industrial area in the northern part of Smithfield. This is in SLA 3950 (Holroyd). As a result, TDC assigned SLA 3950 to the Smithfield locality dump code 1139506751.

The *final* candidate zones for the locality dump code are determined by selecting from the potential candidate zones *only those DZNs with the same SLA as that to which the locality dump code is mapped*. This is to comply with the restriction referred to in Section 2.1 that “All SLA totals should be retained”. Since locality dump code 1139506751 (“Smithfield”) is mapped to SLA 3950, the final list of candidate zones is as follows:

Final Candidate Zones

DZN	TZ	SLA
1139501817	1817	3950
1139501818	1818	3950
1139501820	1820	3950
1139501821	1821	3950
1139501823	1823	3950

Distributing the data

Having compiled a list of candidate zones for each locality dump code, the next task is to distribute locality dump employment to these zones.

Maintaining variable integrity

When distributing employment from a locality dump code *it is desirable that variable integrity is maintained* i.e. the frequencies of other variables associated with the dump code are maintained (although they will always differ slightly due to randomisation). For example, in JTW Table 01 (DZN x Industry x Mode x Employment) there is the following record:

DZN	Industry	Mode	Employment
1139506751	C	06	218

Since we know from this record that the locality dump code employment was for Industry = C and Mode = 06, we would obviously want to distribute the employment to candidate zones as Industry = C and Mode = 06 i.e. distribution of

locality dump employment should be undertaken individually for each locality dump record to ensure that data for other variables is maintained.

Primary distribution methodology

If there were only one candidate zone for a locality dump code, then distribution of employment would be simple. For example, if locality dump code 1139506751 only had the one candidate zone, DZN 1139501817, say, then distribution would only entail creation of one new record, as follows:

DZN	Industry	Mode	Employment
1139501817	C	06	218

In reality, there is more than one candidate zone for locality dump code 1139506751, so we need to have a process for estimating how much of the locality dump employment to apportion to each candidate zone. The only relevant information available for this process is the JTW data itself, and since we know the frequency of employment for each candidate zone, for each exact variable combination, the primary assumption made is that *the locality dump employment distribution for the variables in question is the same as the distribution of employment between candidate zones for the same variables*.

To make clear what is meant here, assume that Table 01 contains the following records:

DZN	Industry	Mode	Employment
1139501817	C	06	10
1139501818	C	06	40
1139501820	C	06	50
1139501821	C	06	70
1139501823	C	06	<u>30</u>
			200

For the candidate zones the employment distribution (where Industry = C and Mode = 06) is therefore:

DZN	Industry	Mode	Distribution
1139501817	C	06	10/200 = 5%
1139501818	C	06	40/200 = 20%
1139501820	C	06	50/200 = 25%
1139501821	C	06	70/200 = 35%
1139501823	C	06	30/200 = <u>15%</u>
			100%

Based on the primary assumption we would thus distribute the locality dump employment to candidate zones as follows:

DZN	Industry	Mode	Employment
1139501817	C	06	Locality dump employment (218) * 5% = 11
1139501818	C	06	Locality dump employment (218) * 20% = 44
1139501820	C	06	Locality dump employment (218) * 25% = 54
1139501821	C	06	Locality dump employment (218) * 35% = 76
1139501823	C	06	Locality dump employment (218) * 15% = 33

This employment is added to the imputed Table 01, thus:

DZN	Industry	Mode	Original + Imputed (= Final Employment)
1139501817	C	06	10 + 11 = 21
1139501818	C	06	40 + 44 = 84
1139501820	C	06	50 + 54 = 104
1139501821	C	06	70 + 76 = 146
1139501823	C	06	30 + 33 = 63

Street dump distribution

The logic for distributing street dump employment is identical to that used for locality dump employment, except that the compilation of candidate zones is based on 'no number' index entries for the Locality and Street in question, rather than 'no street name' entries for the Locality.

Variable prioritisation

It is desirable to maintain variable integrity when distributing dump employment, and the best way to do so is using the primary distribution methodology which assumes that the dump employment distribution for a combination of variables is the same as the candidate zone employment distribution for the same combination of variables. *Unfortunately, it is not possible to apply the primary distribution methodology to more than one table as doing so conflicts with the restriction referred to in Section 2.1 that "all DZN totals must be consistent across tables".*

To see why this is so, consider the current example where employment for locality dump code 1139506751 has now been distributed in Table 01 to DZN 1139501817, 1139501818, 1139501820, 1139501821 and 1139501823. The JTW tables aggregate data in different ways. Where Table 01 aggregates data for DZN x Industry x Mode x Employment, Table 03, for example, aggregates data for DZN x Industry x Occupation x Employment. Assume for the current example that Table 03 contains the following data for locality dump code 1139506751:

DZN	Industry	Occupation	Employment
1139506751	C	14	218

Applying the same procedure used for Table 01, we would search for records in Table 03 that have DZN = Candidate zone, Industry = C and Occupation = 14. Assume we find the following data:

DZN	Industry	Occupation	Employment
1139501817	C	14	10
1139501818	C	14	30
1139501820	C	14	20
1139501821	C	14	30
1139501823	C	14	<u>10</u>
			100

Continuing the same procedure, we apply the simplifying assumption that the locality dump employment distribution for the variables in question is the same as

the candidate zone employment distribution for the same variables, to obtain this distribution:

DZN	Industry	Occupation	Employment
1139501817	C	14	10/100 = 10%
1139501818	C	14	30/100 = 30%
1139501820	C	14	20/100 = 20%
1139501821	C	14	30/100 = 30%
1139501823	C	14	10/100 = <u>10%</u>
			100%

to get:

DZN	Industry	Occupation	Employment
1139501817	C	14	Dump employment (218) * 10%= 22
1139501818	C	14	Dump employment (218) * 30%= 65
1139501820	C	14	Dump employment (218) * 20%= 44
1139501821	C	14	Dump employment (218) * 30%= 65
1139501823	C	14	Dump employment (218) * 10%= <u>22</u>
			218

Therefore, as a result of applying the primary distribution methodology to both tables, the same locality dump employment (218) has been distributed in different amounts across the candidate zones:

DZN	Table 01	Table 03
1139501817	11	22
1139501818	44	65
1139501820	54	44
1139501821	76	65
1139501823	33	22

Since it is not possible to apply the primary distribution methodology to more than one table, as the resulting data conflicts with the requirement that all DZN totals are consistent across tables, it is necessary to prioritise the JTW variables i.e. decide which variables should have their original distributions maintained through using the primary distribution methodology and which variables can be distributed in a less exact manner.

For the 2006 JTW it was decided that the variables whose exact distribution should be maintained were those also used in 1996 and 2001 i.e. Industry and Mode, as contained in Table 01.

Secondary distribution methodology

Since the primary distribution methodology can only be applied to Table 01 (DZN x Industry x Mode x Employment), it is necessary to have a secondary distribution methodology for all other tables that contain dump codes. For these tables, although it is not possible to maintain exact variable integrity it is obviously still desirable to maximise the correspondence between dump employment and distributed employment for each category in the table. The secondary distribution will vary slightly depending on which variables a particular table contains. Secondary tables may contain (along with other variables) DZN and Industry, DZN and Mode, or only DZN, and the secondary distribution method varies depending on which of these combinations each table contains.

Tables containing DZN and Industry

Continuing with the current example, the task is to distribute the following data in Table 03:

DZN	Industry	Occupation	Employment
1139506751	C	14	218

We cannot use the primary distribution methodology which would examine the data for candidate zones within Table 03. Instead, we have to satisfy the requirement that DZN totals must be the same across all tables. Since *Industry x Mode* has been made the priority variable combination, the DZN totals for Industry and Mode derived by distributing dump employment in Table 01 represent constraints on all other tables.

If a table other than Table 01 contains an Industry or Mode variable, then the result of distributing dump employment for that table must be consistent with the Industry or Mode totals, respectively, for Table 01. This consistency is achieved by applying the employment distribution for candidate zones by Industry or Mode in Table 01 to the data in the other table.

To make clear what is meant here, for a table containing DZN and Industry, assume that the distributed locality dump employment in Table 01 for Industry = C is as follows (with employment referring to employment *before* primary distribution of dump employment has taken place):

DZN	Industry	Mode	Employment
1139501817	C	01	50
1139501817	C	06	150
1139501818	C	06	250
1139501818	C	07	50
1139501818	C	14	200
1139501820	C	01	150
1139501820	C	06	150
1139501821	C	01	100
1139501821	C	06	50
1139501821	C	07	50
1139501823	C	01	200
1139501823	C	06	600

From these records we compile the total for each DZN and Industry combination:

DZN	Industry	Employment
1139501817	C	50 + 150 = 200
1139501818	C	250 + 50 + 200 = 500
1139501820	C	150 + 150 = 300
1139501821	C	100 + 50 + 50 = 200
1139501823	C	200 + 600 = <u>800</u>
		2,000

and hence the distribution for the candidate zones:

DZN	Industry	Employment	
1139501817	C	200/2000	= 10%
1139501818	C	500/2000	= 25%
1139501820	C	300/2000	= 15%
1139501821	C	200/2000	= 10%
1139501823	C	800/2000	= 40%

These proportions are then applied to the locality dump employment to distribute the data in Table 03:

DZN	Industry	Occupation	Employment
1139501817	C	14	Dump employment (218) * 10% = 22
1139501818	C	14	Dump employment (218) * 25% = 54
1139501820	C	14	Dump employment (218) * 15% = 33
1139501820	C	14	Dump employment (218) * 10% = 22
1139501820	C	14	Dump employment (218) * 40% = <u>87</u>
			218

As a result of this secondary distribution, the frequencies for secondary variables (in this example, Occupation) are maintained, but the employment distribution is determined by the primary Industry variable.

Tables containing DZN and Mode

For tables containing Mode rather than Industry the secondary distribution process is identical to that outlined for Industry, except that the Table 01 Mode distribution, rather than the Industry distribution, is used as a constraint.

Tables containing DZN but neither Industry nor Mode

The secondary distribution process when tables contain neither Industry nor Mode is based simply on the distribution of employment by DZN in Table 01.

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