



Understanding statistical geography

Statistical geography



Statistical geographies define spatial boundaries for the purpose of producing, analysing and publishing regional data to inform decision making. To choose the most appropriate geography, data users need to understand which geography most accurately represents their region/s of interest, and whether data is available at that scale.

Key ABS boundaries



The Australian Bureau of Statistics (ABS) produces spatial data following its [Australian Statistical Geography Standard \(ASGS\)](#). This standard is updated every five years – and was last updated in 2021.

The ASGS defines seven levels of increasingly detailed statistical areas that show where people and communities live.

The smallest area is known as a Mesh Block, which typically includes around 30-60 dwellings. There are 368,286 Mesh Blocks across Australia.

- The Mesh Blocks are then grouped together into four increasingly large statistical areas (SA1-SA4).
- The final two levels are states/territories and the whole of Australia.

Data availability varies according to geographical scale and the size of the survey. Every five years, Census data is collected from individual households across the entire population. At other times, surveys are undertaken using samples of the population, so data availability at smaller spatial levels can be limited.

Other widely used boundaries



The ABS also provides data across regions known as Non-ABS geographical structures. These are important geographies for regional analysis and include Local Government Areas (LGAs), Tourism Regions and postcodes. These boundaries are not defined by the ABS, and are close approximations of the administrative boundaries.

Functional regions – that is, geographical areas based on a specific function – can also be constructed to examine an activity spatially. For example, work-commuting patterns can be used to assess the economic scope of a region such as Albury and Wodonga. While they are administratively two distinct regions, they share a labour market as people freely move between them. In this way they can be considered to both be within a single functional labour market region.



Illustration of a region

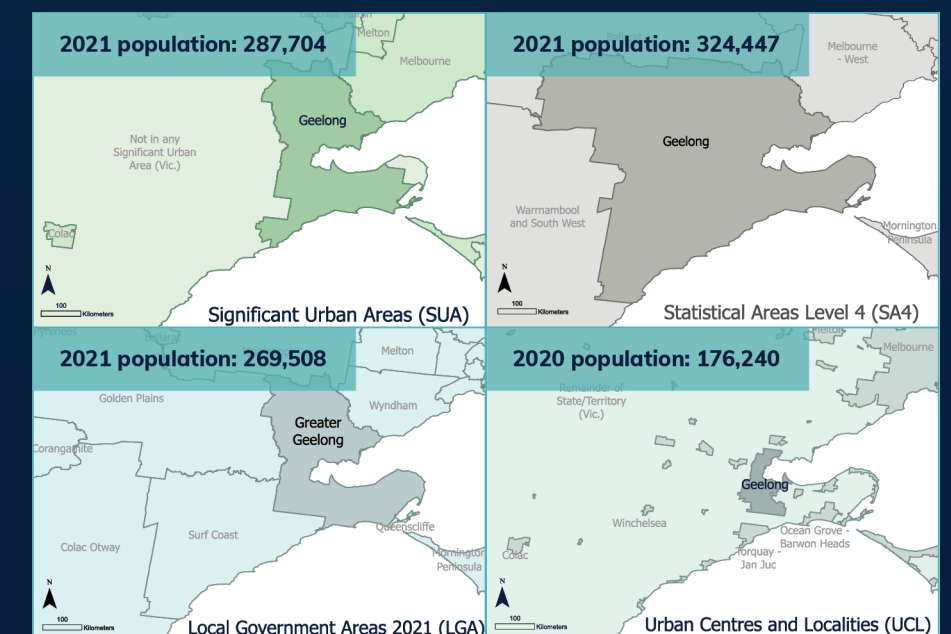
The maps on the right show four different geography types for Geelong. Boundaries can have the same name but represent

very different geographical areas, as reflected by the maps and population figures below.

As such, when undertaking analysis, one of the first questions to ask is: What is the most appropriate geographic boundary to use that captures the region/s I want to reflect?

Other considerations include: the concept underpinning the geography (e.g. urban areas, remoteness), the data available at that scale, the ability to compare with other regions on the same geography, and practical issues relating to how people understand their local area (e.g. most people are familiar with their LGA).

When considering data describing the area, it is worth asking: Which regional definition does the data refer to? This will help ensure that data are presented on a consistent basis, as definitions can vary considerably.





Common geographies

Geography	Definition	Number of regions	Map
Statistical Areas Level 4 (SA4s)	SA4s are part of the main ASGS structure. SA4s (broadly) represent labour markets. They generally have a population range of 100,000 to 500,000.	89 (ASGS 2021)	
Statistical Areas Level 3 (SA3s)	SA3s comprise SA2s that have similar regional characteristics. They generally have a population range of 30,000 to 130,000.	340 (ASGS 2021)	

Geography	Definition	Number of regions	Map
Statistical Areas Level 2 (SA2s)	SA2s represent communities that interact together socially and economically. SA2s generally have a population range of 3,000 to 25,000. SA2s can be used to create other geographies such as Working Zones, City Rings (see page 4) and Significant Urban Areas.	2,454 (ASGS 2021)	
Local Government Areas (LGAs)	LGAs reflect gazetted local government boundaries as defined by each state and territory.	547 (2024 update)	



Common geographies

Geography	Definition	Number of regions	Map
Greater Capital City Statistical Areas (GCCSAs)	The GCCSA geography represents the functional extent of each of the 8 Capital Cities, and Rest of State regions for each state and territory.	16 (ASGS 2021)	
Significant Urban Areas (SUAs)	SUAs include urban areas with a population of 10,000 people or more. SUAs are based on an aggregation of SA2s.	111 (ASGS 2021)	



Note 1: Boundaries are regularly updated to reflect changes in population. As such, it is important to know which version (year) is being used. Data from different years may not be comparable due to boundary changes. Most boundaries are updated every five years, but LGAs are updated annually.

Note 2: Count of regions excludes non-spatial special purpose codes designed to account for populations which cannot be assigned to any physical geographical area such as people in transit or who have no fixed address.

Geography	Definition	Number of regions	Map
Urban Centres and Localities (UCLs)	UCLs are tightly bounded areas defined as urban (town or city of at least 1,000 people), and localities (200 to around 1,000 people).	1,818 (ASGS 2021)	
Remoteness Areas (RAs)	Remoteness Areas divide Australia into five classes of remoteness according to relative access to services.	5 (ASGS 2021)	



Important link: ABS Maps is an interactive tool that allows the user to choose two geographic boundaries and compare them on a map. This is a quick and easy way to explore and understand different boundaries for your region/s of interest. [ABS Maps | Australian Bureau of Statistics](#).



BCARR geographies

BCARR city rings

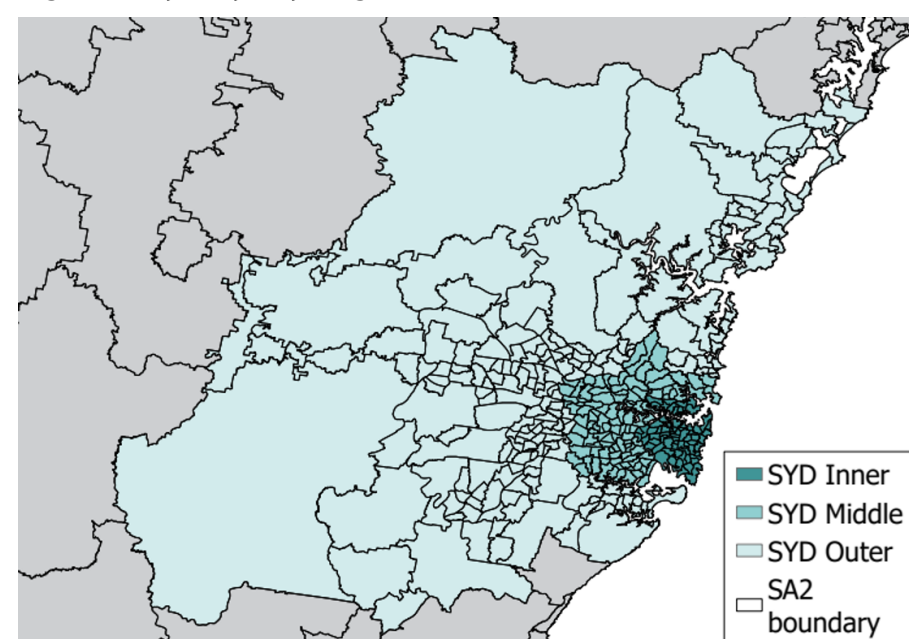
The BCARR city ring classification divides each of Australia's five largest capital cities into three sectors around the CBD (inner, middle and outer rings). Sydney, Melbourne, Perth and Adelaide rings are constructed from SA2s (ASGS 2021) within their GCCSA boundaries. However, a narrower definition is used for Brisbane (including 3% less population than the GCCSA).

This geography can be used to identify, illustrate and analyse patterns and trends for population and employment movements, and accessibility to services across the largest capitals.

The inner rings typically have higher population-density and high access to employment, infrastructure, services, public transport and amenity. The middle rings tend to have lower density than the inner rings, but include high-density precincts around public transport hubs. The outer rings typically include a mix of established and new suburbs and surrounding rural areas. They usually have less access to infrastructure, services, and public transport, with jobs accessed in other regions.

A fact sheet, allocation file and shapefile to use the city rings classification are available on [our website](#).

Figure 1: Sydney city ring classification, 2021



Working Zones

The BCARR Working Zones (WZs) geography reflects commuting patterns of Australian workers. There are 313 WZs across Australia, varying in terms of employment, population, industry and size. WZs encompass all of Australia, from capital cities to remote areas.

WZs use the ASGS 2021 SA2s as building blocks based on the 2016 Census commuting flows. While most WZs (59 per cent) are comprised of a single SA2, some heavily populated WZs include as many as 100 or more SA2s. For example, the Melbourne and surrounds WZ is made up of 366 SA2s and extends beyond the Greater Capital City Statistical Area (GCCSA). WZs are generally highly self-contained.

In the vast majority of WZs, at least 80 per cent of people working in the WZ also live in the WZ. However, the degree to which WZs are self-contained can vary depending on both geographic and economic factors. WZs can also reflect cross-border commuting relationships, such as Gold Coast-Tweed Heads and surrounds, Canberra and surrounds, and Albury-Wodonga and surrounds.

A fact sheet, allocation file and shapefile to use the working zones classification can be found on [our website](#).

Figure 2: Australia working zones, 2021

