



Welcome to web based demographic mapping for schools.

Research indicates there are 14 key attributes of a financially sustainable non-government school ¹. One important attribute is a sound understanding of the school's changing enrolment profile by year group.

Declining enrolments is often a predictor of pending financial stress and therefore requires a plan to manage the change including adjustment of expenses in a timely manner.

Paradoxically, enrolments that grow too fast may also cause financial stress due to the need for capital facilities.

Schools should base their plans and budgets on a long-term demographic analysis of the enrolment catchment, including proposed new schools.

Spectrum works closely with Somerset Education, which is dedicated to the financial viability and sustainability of non-government schools and supports these arrangements as a cost-effective benefit to schools.

Our aim is to place you in the "driver's seat" at an economical price, to dynamically view schools, population changes, sources of future enrolments, indicative patronage of non-government schools plus many other demographic attributes depending on your level of access.

In this document we describe the offers and cost for a school to engage with this tool and the benefits of this type of mapping in the decision-making processes for your school.

Level 1 – Complimentary to all - Australia wide

Level 2 – Complimentary to Somerset Education subscribers only. – Australia wide.

Level 3 – Annual subscription \$800 + GST pa. (\$640 + GST for Somerset Education clients – via their web portal).

Level 4 – Annual subscription and tailored to your school by Spectrum – costs depend on student numbers.

¹ Somerset, J.W. (2017) *Attributes of a financially sustainable independent school*. Queensland University of Technology

Call now for advice! (03) 9830 0077

Peter Buckingham, Managing Director
peterb@spectrumanalysis.com.au

www.spectrumanalysis.com.au
spectrum@spectrumanalysis.com.au

Try our mapping.

Whether you are looking at Level 1 through to Level 4, the mapping is using the Open Source mapping system, and all follow the same instructions. The difference is simply the numbers of layers and information visible to you.

Please have a play with this Level 1 version to start, as it is fairly obvious to pick up:

Click on the image below and this will open a link in your browser:



Under the words “School Network Planning” you see 4 tabs – Legend, Layers, Themes and Information. Try clicking on each of these and you can see what is available:

- Firstly, start with the information tab and you can watch an introductory video.
- Now click on Themes and you can decide which map looks best for you.
- Now click Layers and you can turn on and off the various layers, and use the slide bar beside the Layers to move up and down – Blue = **ON**, Grey = **OFF**. This is the major tab you use in looking at your mapping.
- Click on Legend to have the Legends come ON (as required).
- Once you have opened a Layer, click on a site / location (or student if you have Level 4), and a data box should open with some information.
- Other Layers such as *Socio-Economic Index For Areas* (SEIFA), and population forecasts can be viewed, depending on what Level you have subscribed to.
- Zoom in or out using your mouse, or the relevant + or – keys.
- Change to Satellite view if you wish.
- Streetview is also available with “the little man”.

Background Information

The Australian Bureau of Statistics (ABS) runs the Census of Population and Housing every 5 years, the latest being done in 2016.

Australia is broken down to Statistical Areas 1, 2, 3 and 4 as geographic areas that they provide information for.

Demographics

The Geo Mapping uses Census 2016, Population Forecasts (2017 – 2032) and SEIFA from the ABS, to understand the demographics and growth forecasts for population in all surrounding areas.

The 2016 Census of Population and Housing data and SEIFA comes in specific polygons, starting with a fine-grain SA1's (there are 57,523 SA1's across Australia). These are then aggregated to SA2, of which there are 2,310 across Australia. This is a similar area to a postcode area. And then further aggregated into SA3's of which there are 358 across Australia. Whilst census data is released at SA1 level, many of the datasets we have used are only released at SA2 level, specifically the ABS dataset - Population projections (2017 – 2032).

Description from the ABS's website:

Statistical Areas Level 2 (SA2s) are designed to reflect functional areas that represent a community that interacts together socially and economically. They consider Suburb and Locality boundaries to improve the geographic coding of data to these areas and in major urban areas SA2s often reflect one or more related suburbs. The SA2 is the smallest area for the release of many ABS statistics, including the Estimated Resident Population (ERP), Health & Vitals and Building Approvals data. **SA2s generally have a population range of 3,000 to 25,000 persons and have an average population of about 10,000 persons.** SA2s are aggregations of whole SA1s.

Population forecast at SA2s

In October 2019, the ABS released the 'Customised projections prepared for the Australian Government Department of Health by the Australian Bureau of Statistics (2017-2032)'. This data gives forecasts by gender and age for specific years to 2032 and gives population estimates in specific age bands from Age 0 to 85+ for all areas across Australia. The Age groups in the ABS data are 0 – 4, 5 – 9, 10 – 14, 15 – 19 etc. This data is used throughout the mapping in forecasting population.

Level 1 - Complimentary

This layer is free to everyone. It is basic mapping allowing you to see:

- All schools across Australia with information from ACARA
- SEIFA scores at SA2 and Suburb level
- SA3 Score of Potential growth for Independent students rated 10 (high) to 1 (low). This is based on a formula of the additional number of student aged children according to the ABS from 2017 – 2032 X % attending Independent Schools (from 2016 Census).

Click on the image directly below and this will open a link in the browser:



Level 2 – Complimentary to Somerset Education Survey subscribers

This level is complimentary to schools that participating in the [ASBA/Somerset Non-Government Schools' Financial Performance Survey](#) (FPS).

It provides all the information from Level 1, and has additional features:

- SEIFA at SA1 and SA3 levels as well
- % Christian population at SA1 and Suburb levels.
- % Islamic population at SA1 and Suburb levels
- Total forecast population growth at SA3 level (2017 – 2032). This is to allow you to see the high growth areas across Australia.

Click on the image below and this will open a link in the browser showing an Example-only of the complimentary service received as an FPS subscriber. If you log into your [Somerset Education School Portal](#) the map covers all of Australia so you can focus on your catchments:



Level 3 – Subscriber level for \$800 + GST pa.

Level 3 has been built to allow a school to start to make their own decisions as far as future enrolments, marketing and having a better understanding of their demographics. Whilst it will not solve all issues, school staff should be able to apply useful facts and data in many of the decisions they need to make.

Special layers are available at this level that advise you of the forecast numbers of school age children expected in an area from 2017 – 2032. This is the latest data provided by the ABS and should be seen to replace any earlier data, either from the ABS or from various State Government agencies. In Spectrum’s view this is the data future investment decisions should be based upon.

Above the information that is provided at Level 2 we also add:

- Schools data, including number of children at any specific area by Primary and Secondary levels, and if they attend Independent, Government or Catholic schools. This information is available at Suburb, SA2 and SA3 levels;
- SA3 Area : **Playford**
- State : **South Australia**
- Population : **90,181**
- SEIFA : **852**
- Pre-school Males : **675**
- Pre-school Females : **643**
- Infants-Primary Government Males : **3,095**
- Infants-Primary Government Females : **2,913**
- Infants-Primary Catholic Males : **693**
- Infants-Primary Catholic Females : **670**
- Infants-Primary Other Independent Schools Males : **801**
- Infants-Primary Other Independent Schools Females : **730**
- Infants-Primary Total Males : **4,643**
- Infants-Primary Total Females : **4,414**
- Secondary Government Males : **1,599**
- Secondary Government Females : **1,499**
- Secondary Catholic Males : **490**
- Secondary Catholic Females : **548**
- Secondary Other Independent Schools Males : **504**
- Secondary Other Independent Schools Females : **471**
- Secondary Total Males : **2,680**
- Secondary Total Females : **2,625**

Infants-Primary:	% Government:	67 %
	% Catholic:	15 %
	% Independent:	17 %
Secondary:	% Government:	61 %
	% Catholic:	20 %
	% Independent:	19 %

- Population density (school aged children / sq km.) at SA1 and suburb levels

- School aged population forecasts 2017 – 2032 at SA2 and SA3 levels

Example - SA3 Area : Playford (South Australia)

- Age 0-4 Projected (2017) : **8,090**
- Age 5-9 Projected (2017) : **7,561**
- Age 10-14 Projected (2017) : **6,146**
- Age 15-19 Projected (2017) : **6,097**

- Age 0-4 Projected (2022) : **8,323**
- Age 5-9 Projected (2022) : **8,371**
- Age 10-14 Projected (2022) : **7,707**
- Age 15-19 Projected (2022) : **6,707**

- Age 0-4 Projected (2027) : **9,012**
- Age 5-9 Projected (2027) : **8,823**
- Age 10-14 Projected (2027) : **8,451**
- Age 15-19 Projected (2027) : **8,069**

- Age 0-4 Projected (2032) : **9,604**
- Age 5-9 Projected (2032) : **9,552**
- Age 10-14 Projected (2032) : **8,978**
- Age 15-19 Projected (2032) : **8,737**

- Age 5-19 Projected (2017) : **19,804**
- Age 5-19 Projected (2022) : **22,785**
- Age 5-19 Projected (2027) : **25,343**
- Age 5-19 Projected (2032) : **27,267**

- **Age 5-19 Change 2017-2032 proj. (pct): 38 %**
- **Age 5-19 Change 2017-2032 proj. : 7,463 school aged children**

- % of population by various religions: Christian, Catholic, Pentecostal, Other Protestants, Islamic, Hindu, Buddhist and Non-Religious, all at SA1 and Suburb levels
- Contact Somerset Education to subscribe for this service for \$640 + GST, which will be active for the period of the current year's FPS reporting, generally August to July the next year.

Level 3 demonstration sample:



Level 4 – Tailored information for your school

As well as all the information provided at Level 3, Spectrum Analysis can map all your students and provide specific layers to look at the market share you have in any area and identify your Primary and Secondary catchment areas. This is provided as a secure website with only your nominated person being given the access (password).

Using geocoding software, we can map all your current students (and past year's students if requested), all the alumni, and all future enrolments (by year if required).

Once a student is mapped, we can attach specific data such as name, address, age, year they started at the school, current year, and what school they came from, provided we can have this from the school's admissions system.

We can also map all school bus routes and public transport, and you can see how well this is covering the existing students, and how well it covers future students.

This allows you to look at where your current students come from, and where future student populations are most likely to come from and market accordingly.

Click on the image below and this will open a link in the browser:

This is our **imaginary school** called Jells College



In the CoVid-19 crisis, we can also map and identify which students are attending the school, and which students are working from home.

Conclusion

Both Somerset Education and Spectrum Analysis offer schools a variety of products to assist to make well informed decisions. The investments schools make in property and building is very large, and this should be backed by the best information available to help ensure success.

Please feel free to visit the [Spectrum Analysis](#) and [Somerset Education](#) and Websites:

See the Video on how to use the Geo Mapping tool.

Spectrum Analysis also offers services for undertaking a full demographic analysis for schools as a part of their strategic plan (which we shall address as Level 5).

[Download demographic analysis services brochure](#)

Please download a demonstration report for our imaginary Jells College as a sample of what we produce.

[Download demonstration report for Jells College](#)

You may also want to read an article published in the October 2019 AHISA magazine which explains the issues we assist schools with:

[Data based decision making for schools](#)

Discusses the importance of understanding your school's demographics

Published October 2019

By **AHISA** (Association of Heads of Independent Schools of Australia)

[Download and View now](#)

Kind regards,



Peter Buckingham
Managing Director
Spectrum Analysis



John Somerset
Director
Somerset Education

This Geo Mapping service is provided by Spectrum Analysis Australia Pty Ltd, ABN 87 074 495 926 (Spectrum) who is solely responsible for running and maintaining this service. By using this tool, you acknowledge that the contractual relationship is between you and Spectrum. Somerset Education Pty Ltd ABN 72 369 008 673 is merely acting as Spectrum's agent.