Neighbourhood Liveability Assessment of Benalla:

Using Indicators to understand and plan for liveability in the town of Benalla.

Dr Melanie Davern, Rebecca Roberts and Carl Higgs

2018

RMIT UNIVERSITY | Centre for Urban Research

VICTORIA State Government

Clean Air and Urban Landscapes Hub
National Environmental Science Programme

Healthy Liveable CITIES

First printed February 2018.

Suggested citation: Davern, M., Roberts, R. & Higgs, C. (2018). Neighbourhood Liveability in Benalla: Using Indicators to understand and plan for liveability in the town of Benalla. RMIT University, Melbourne, Australia.

Healthy Liveable Cities Group
Centre for Urban Research
RMIT University
La Trobe Street, Melbourne VIC 3000
T: + 61 3 9925 4577
E: melanie.davern@rmit.edu.au
http://cur.org.au/research-programs/healthy-liveable-cities-group/

Table of Contents

Executive Summary 5
Introduction to the *Healthy Liveable Cities Group* at RMIT University 8
Background Understanding of Liveability 8
Objectives 9
Table 1: Indicators and Measures included in Benalla Liveability Assessment 10
Methodology 11
Results 12
Socio Economic Index for Areas – Index of Relative Disadvantage (SEIFA IRSD) 12
Social Housing 13
Housing Affordability 14
Housing Diversity 15
Unemployment 16
Employment 17
Education - Certificate 18
Education - Diploma 19
Education – Bachelor Degree 20
Education – Bachelor Degree Over 25 years 21
Education – Graduate Diploma 22
Education – Post Graduate Degree 23
Access to Public Open Space (POS) 24
Access to Supermarkets 25
Access to Fast Food 26
Electronic Gambling Expenditure 27
Family Violence 28
Volunteering 29
Access to General Practitioners 30
Access to Services for Older People 32
Walkability for Transport 33
Access to Public Transport 34
Household Internet Access 35

Resident Age Distribution: 0-12 years for 2016 and 2011 36
Resident Age Distribution: 13-25 years for 2016 and 2011 37
Resident Age Distribution: 26-55 years for 2016 and 2011 38
Resident Age Distribution: 56 years and older for 2016 and 2011 39
Summary and Conclusions 41
References 43

Table of Figures

Figure 1: Dalhgren and Whitehead's (1991) Rainbow Model of the social determinants of health 9
Figure 2: SA1 boundaries within the Benalla Rural City LGA. 11
Figure 3: SEIFA Index of Relative Disadvantage for Benalla 12
Figure 4: Government owned rental dwellings as a proportion all private dwellings according to SA1 13
Figure 5: Proportion of households with income in the bottom 40% of the income distribution spending more than 30% of household income on housing costs according to SA1 14
Figure 6: Housing diversity measured according to dwelling type according to SA1 15
Figure 7: Unemployment according to people aged 15 years or older as a proportion of the total labour force provided according to SA1 16
Figure 8: Proportion of people aged 15 years or older who are employed according to SA1 17
Figure 9: Proportion of residents with Certificate as highest level of education according to SA1 18
Figure 10: Proportion of residents with Diploma as highest level of education according to SA1 19
Figure 11: Proportion of residents with Bachelor Degree as highest level of education according to SA1 20
Figure 12: Proportion of residents with Bachelor Degree as highest level of education aged above 25 years according to SA1 21
Figure 13: Proportion of residents with Graduate Diploma as highest level of education according to SA1 22
Figure 14: Proportion of residents with a postgraduate degree as their highest level of education according to SA1 23
Figure 15: Distance to Public Open Space according to SA1 24
Figure 16: Access to supermarkets according to SA1 25
Figure 17: Access to fast food outlets according to SA1 26
Figure 18: Electronic Gambling Machine expenditure and Socioeconomic Disadvantage by SA1 27
Figure 19: Recorded family violence incidents by postcode (October 2016 - September 2017) 28
Figure 20: Proportion of residents engaged in voluntary work for a group or organisation by SA1 29
Figure 21: Average distance to a General Practitioner in Benalla by SA1 30
Figure 22: Location of General Practitioners in Benalla by SA1 31
Figure 23: Access to services for older people by SA1 32
Figure 24: Walkability for transport by SA1 33
Figure 25: Access to public transport stops by SA1 34
Figure 26: Household internet access by SA1 35
Figure 27: Age distribution of residents aged 0-12 years by SA1 for 2016 36
Figure 28: Age distribution of residents aged 0-12 years by SA1 for 2011 36
Figure 29: Age distribution of residents aged 13-25 years by SA1 for 2016 37
Figure 30: Age distribution of residents aged 13-25 years by SA1 for 2011 37
Figure 31: Age distribution of residents aged 26-55 years by SA1 for 2016 38
Figure 32: Age distribution of residents aged 26-55 years by SA1 for 2011 38
Figure 33: Age distribution of residents aged 56 years and older by SA1 for 2016 39
Figure 34: Age distribution of residents aged 56 years and older by SA1 for 2011 39

Executive Summary

The *Healthy Liveable Cities Group* at RMIT University completed a Neighbourhood Liveability Assessment of the township of Benalla in November 2017. The research was funded by the Department of Health and Human Services (DHHS) and devised in partnership with the Benalla Rural City Council (BRCC). This was the first Liveability Assessment completed by the *Healthy Liveable Cities Group* for a rural council and the needs and input of the BRCC were critical during project development. A number of liveability indicators were identified as important to liveability and results were limited to the major township of Benalla with the greatest population density within the Local Government Area (LGA). This report provides spatial analysis of 15 liveability indicators of interest to DHHS and the BRCC. Liveability indicators included:

- Housing (affordability, diversity, government owned dwellings);
- Unemployment;
- Employment;
- Education;
- Access to Public Open Space;
- Access to food (supermarkets and fast food);
- Public transport;
- Walkability;
- Gambling;
- Family Violence;
- Internet access;
- Access to General Practitioners;
- Access to Services for Older People;
- Socio-economic Index for Areas
- Age profiling of residents.

The objective of the Neighbourhood Liveability Assessment was to gain a better understanding of liveability within the town of Benalla. This includes providing evidence about issues and neighbourhoods that are doing well on these liveability indicators and to identify issues and neighbourhoods that require action in the future. Key findings from the research are summarized below.

HOUSING

Housing affordability is an issue for a number of lower income Benalla residents on the bottom 40% of the income distribution spending more than 30% of their household income on housing costs. This is particularly prevalent in areas with government owned rental dwellings (social housing) where up to 40% of some neighbourhoods are struggling to meet the costs of housing.

Government owned rental dwellings are dispersed across the town and generally form small percentages (4-12%) of available housing with the exception of one neighbourhood on the western border of town where more than 65% of housing is government provided.

Housing diversity is greatest in the centre of town near the major shopping and business activity areas and the number of different types of dwellings tends to lessen moving to the outer area of the town

with the exception of the airport neighbourhood and the area to the north of town between the railway lines.

UNEMPLOYMENT

Unemployment is reasonably low across the town of Benalla when compared to the 2017 Hume Region average of 3.3% with the exception of some areas of government owned rental dwellings where it exceeds the regional average. A similar pattern is evident in employment rates across the neighbourhoods of Benalla though there are additional neighbourhoods with lower employment rates in the northern end of town over the railway line.

EDUCATION

The most common completed highest level of qualification for Benalla residents is certificate level with between 58-75% of residents reporting this as their highest level qualification. Certificate level of education does not require high school completion. Lower level Certificates provide vocational skills and pathways to employment while higher level certificates include trade certificates and more advanced skills and knowledge. Diplomas and Bachelor degrees are less common than Certificates, and post graduate qualifications are rarer and more common in the neighbourhoods on the southern end of town near the Hume Freeway or in the centre of town around the main retail and activity area.

PUBLIC OPEN SPACE

Access to Public Open Space is reasonably close and under 400m for the majority of residents of Benalla but there are notable neighbourhoods that don't have access to Public Open Space including residents living to the north of the railway line and the neighbourhood near the Benalla Hospital.

ACCESS TO FOOD

Supermarkets and fast food outlets are generally located in the main retail and shopping areas in the centre of town. Consequently, neighbourhoods on the outer boundaries of the town are access disadvantaged in terms of access to supermarkets providing affordable fresh fruit and vegetables and access to fast food outlets. Access to food is only available in the centre of town which decreases walkability for Benalla and encourages vehicle dependency in these outer neighbourhoods.

INTERNET ACCESS

Households with lower socioeconomic resources are least likely to have internet access in Benalla and a number of neighbourhoods have household internet access at low levels (<80%) which is well below the average for the state and regional Victorian areas.

PUBLIC TRANSPORT

Benalla residents with closest access to any public transport stop live between Bridge Street and the railway line through the centre of town. Residents living in the outer northern and outer southern neighbourhoods have poorest access to public transport stops. When combined with a lack of destinations to walk to (i.e. supermarkets and shops), these outer areas are the least walkable and most car dependent neighbourhoods of Benalla.

WALKABILITY

Walkability for transport is influenced by residential density, good across the central areas of Benalla but neighbourhoods in the south western and north eastern areas of town have compromised walkability largely due to a lack of amenity in the area with all retail, business and supermarkets located in the centre of town.

VOLUNTEERING

Volunteering rates are above the Victorian average across most areas of Benalla with less volunteering occurring in three neighbourhoods of town.

FAMILY VIOLENCE

Family violence is an issue facing the town of Benalla and the issue is of particular concern when viewed according to population density and in the context of the Eastern Region averages.

ACCESS TO GENERAL PRACTITIONERS

Access to General Practice clinics is limited to 4 clinics largely located in the centre of town or near the Benalla Hospital with only one General Practice clinic located towards to western side of town over Benalla Lake.

SERVICES FOR OLDER PEOPLE

It is important that future planning in Benalla caters to the needs of older people with a rising ageing population predicted for the town, similar to many other regional centres across Australia. Benalla has a notable gap in access to services for older people in the outer northern, western and south-western areas of the town with better service access concentrated in the centre and inner eastern areas of town.

AGE DISTRIBUTION

The Population of Benalla is ageing and during the past two Census periods of 2011-2018 the median age for the town has risen from 45 years to 49 years. Children aged 12 years or less are common in areas of government appointed housing. In comparison, a high proportion of residents aged older than 55 years of age live in the neighbourhood surrounding the Benalla Hospital. This area is also some distance from the centre of town where the majority of shopping, business and social activity occurs.

Introduction to the *Healthy Liveable Cities Group* at RMIT University

The *Healthy Liveable Cities Group* is located within the Centre for Urban Research at RMIT University[1]. The research program is led by Director, Professor Billie Giles-Corti, with Co-Directors Dr Melanie Davern, Associate Professor Hannah Badland and Dr Jonathan Arundel bringing together a multidisciplinary research team investigating the influence of urban design and planning on community health and wellbeing. The team's policy focussed research is developed in partnership with stakeholders across industry, state government and local government to inform best practice policy and planning through the creation of liveability indicators. Team expertise has been developed from multiple disciplines, including epidemiology, psychology, spatial analysis, computer science, policy analysis and economic evaluation with a strong focus on research translation and engagement. Liveability research is the core interest of the *Healthy Liveable Cities Group* and our research program was established in 2012 under the leadership of Prof Billie Giles-Corti and has built on policy partnered research development and application.

Background Understanding of Liveability

Liveability is becoming an increasingly popular construct and well known to a range of different stakeholders within government, planning, property, health and the general community. In 2012 the *Healthy Liveable Cities Group* at RMIT University completed a thorough review of both academic and grey literature on the topic of liveability. This led to an international review of liveability indicators and development of a new definition of a liveable community as:

> *safe, attractive, socially inclusive and cohesive, environmentally sustainable with affordable and diverse housing, linked by convenient public transport, walking and cycling infrastructure to employment, education, local shops and community services, leisure and cultural opportunities and public open space* (Lowe et al., 2013).

Since being developed, our definition of liveability has been adopted by DHHS in the Victorian Public Health and Wellbeing Plan 2015-2019 (Victorian Department of health and Human Services, 2015) and informed Plan Melbourne - the metropolitan planning scheme shaping the city and the state over the next 35 years. The *Healthy Liveable Cities Group* is also currently developing a Liveability Index for Melbourne that will be applied to other national cities across Australia as part of the NHMRC Centre for Research Excellence in Healthy Liveable Cities. This is arguably the world's first liveability index designed and built specifically to enhance population health outcomes. Most recently our research Group has released the *Creating Liveable Cities in Australia*[2] report which measures liveability across Australian capital cities. In early 2018 the research Group will also launch a new interactive online Observatory of liveability indicators for public access of our liveability indicators.

The liveability indicators produced by the *Healthy Liveable Cities Group* are based on a spatial or place focused assessment of liveability. These liveability indicators provide a spatial assessment of the building blocks required to produce good health outcomes and align to the social determinants of health – the conditions in which people are born, grow, live, work and age (World Health Organisation, 2017).

[1] http://cur.org.au/research-programs/healthy-liveable-cities-group/
[2] http://cur.org.au/project/national-liveability-report/

Liveability is an easily understood interpretation of the social determinants of health which are elegantly described in the Dahlgren and Whitehead's (1991) rainbow model of health provided in Figure 1 below.

Figure 1: Dalhgren and Whitehead's (1991) Rainbow Model of the social determinants of health

The upstream determinants or conditions that surround people are influential on long term health outcomes and these conditions are easily assessed and interpreted using small area liveability indicators. These indicator based results can then be used to identify areas needing intervention or strategies for future policy and planning implementation.

Objectives

The main objectives of the research project were:

1. Gain a better understanding about the concept of liveability across the small city of Benalla;
2. Identify neighbourhood level differences in the social determinants of health across Benalla using spatial analysis;
3. Develop a better understanding of appropriate and practical indicators for the assessment of liveability in regional areas.

A list of the indicators and measures used to assess liveability across Benalla are summarised in Table 1 overleaf. During the project inception meetings with DHHS, BRCC and RMIT University, it was decided that this project would focus on the township or small city of Benalla rather than the entire Local Government Area (LGA). The area focus was limited to explore the value and application of the method in a rural city before applying it to more remote and rural areas with very low population densities. Consequently, the majority of maps presented in this report are for the small city of Benalla and not the entire LGA.

Table 1: Indicators and Measures included in Benalla Liveability Assessment

Indicator	**Measure**
Housing	Proportion of households spending more than 30% of household income on housing costs
Housing diversity	Number of different housing types present
Social housing	Proportion of housing stock that is government provided housing
Unemployment	People who are unemployed (% labour force)
Employment	People who are employed (% over 15 years)
Education	Highest level of non-school qualification (non-school = not primary/secondary school) Highest level of education completed
Distance to nearest Public Open Space	Distance to nearest Public Open Space
Public Transport	Number of public transport stops per square kilometre
Walkability	Walkability for Transport Index
Food	Access to supermarkets Access to fast food outlets
Gambling	Number of electronic gaming machines Expenditure of electronic gaming machines
Family Violence	*Postcode level data from Victorian Police
Internet Access	Internet access at home
Volunteering	Proportion of population who have volunteered
Access to GPs	Number of medical clinics Average distance to clinic
Access to Services for Older People	Index of Access to Services for older people
SEIFA	Socio-economic Index for Areas – Relative Disadvantage (IRSD)
Age Profiling	Resident age group distribution

Methodology

Geographic Information Systems (GIS) are used in this report to complete small area spatial analyses. This spatial methodology is useful for the identification of trends and patterns across areas that are harder to identify using traditional forms of data analysis. The maps presented in the Results Section of this report provide a single point in time assessment of liveability in Benalla and can be replicated in the future during key planning milestones to identify changes occurring across time.

Maps have been produced using a range of different data sources including many from the Australian Bureau of Statistics 2016 Census with a number of additional and more complex datasets released in October 2017. Data sources are provided on each map and the Socio-Economic Indexes for Areas or SEIFA Index for Relative Disadvantage (SEIFA - IRSD) produced by the Australian Bureau of Statistics is also provided for small areas (Australian Bureau of Statistics, 2011a). SEIFA indexes are used to measure socio-economic status and rank areas in Australia on the basis of relative socio-economic advantage or disadvantage and are useful for making comparisons between areas experiencing disadvantage with areas that are less disadvantaged. The Indexes include variables including income, education level, occupation and skill levels, housing and dwelling types, and other more general variables including internet connections, disability, car ownership, families, and marital status among others.

All analyses are produced in maps at the Australian Bureau of Statistics geography of Statistical Area Level 1 (SA1). ASGS Ed 2016 Digital Boundaries in ESRI Shapefile Format were used to model area boundaries and SA1 digital boundaries were obtained from the Australian Bureau of Statistics. SA1 areas within the Benalla LGA are presented in Figure 2 below and analyses were restricted to the 25 SA1s within the town of Benalla.

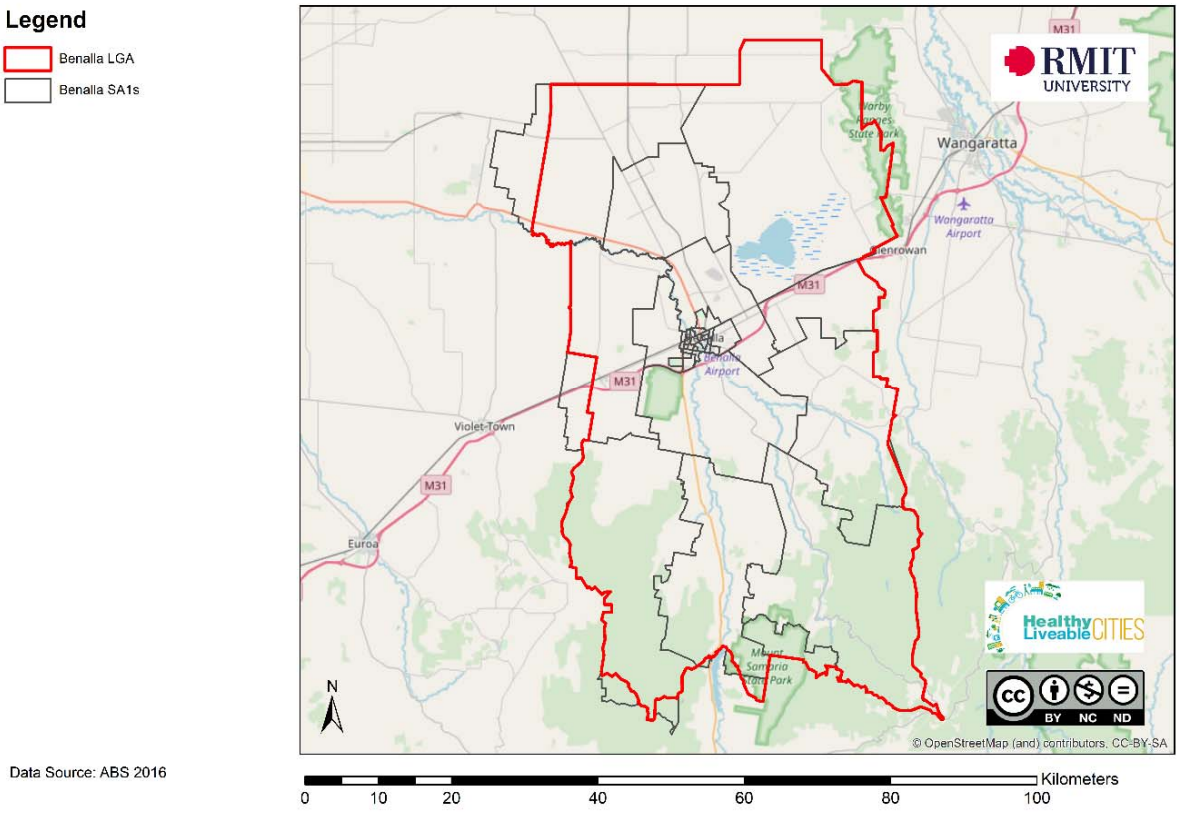


Figure 2: SA1 boundaries within the Benalla Rural City LGA.

Results

The following Results Section provides mapped results for each of the indicators and their associated measures listed in Table 1. The report concludes with a summary of key results and implications.

Socio Economic Index for Areas – Index of Relative Disadvantage (SEIFA IRSD)

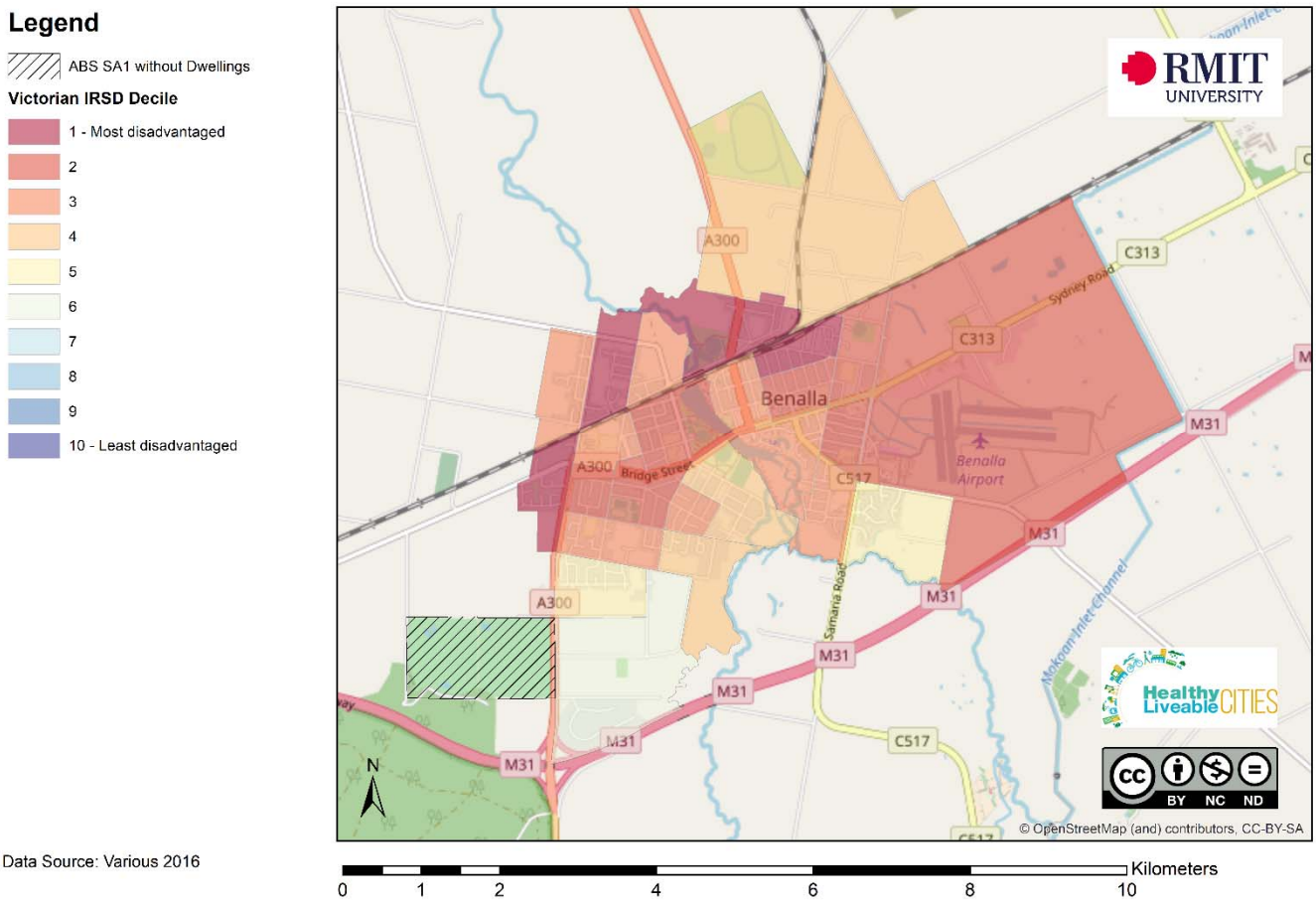


Figure 3: SEIFA Index of Relative Disadvantage for Benalla

Social and economic disadvantage is prevalent across the township of Benalla with no areas categorised above the 7th decile towards least disadvantaged on the scale of 1st to 10th deciles. However, it is also important to note that older populations also generally have lower incomes. A number of neighbourhoods within Benalla are characterised as very disadvantaged according to the SEIFA IRSD and 3 neighbourhoods as most disadvantaged in terms of decile based results. One of these most disadvantaged neighbourhoods is also co-located with a high proportion of government-owned rental dwellings (social housing) near the Baddaginnie-Benalla Rd (refer to Figure 4). However, there is no social housing associated with some of the other neighbourhoods of highest disadvantage north of the railway line and along the Midland Highway (A300).

Social Housing

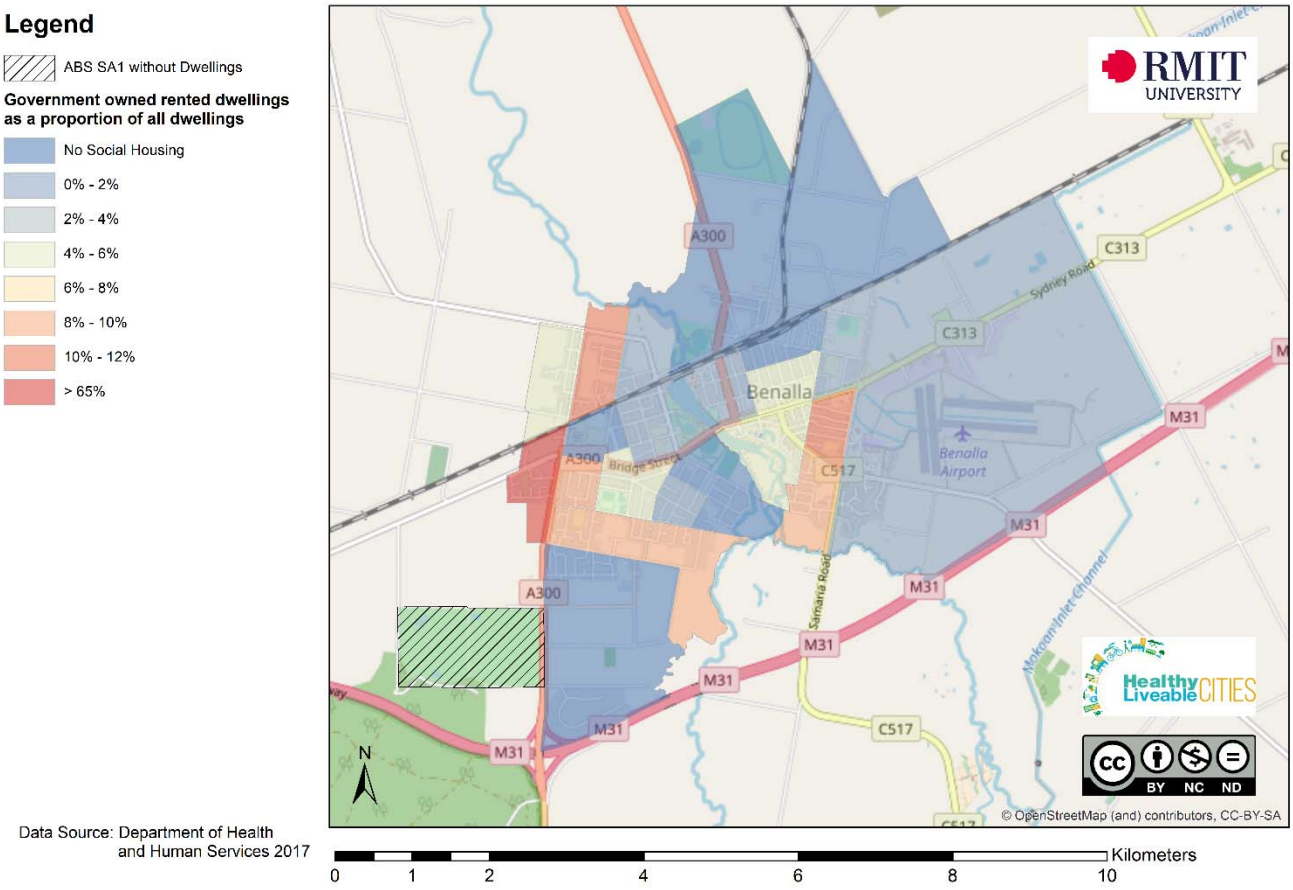


Figure 4: Government owned rental dwellings as a proportion all private dwellings according to SA1

Government owned rental dwellings are located in small proportions across Benalla. One small area on the western edge of town illustrated in red in Figure 4 has a high proportion of government owned dwellings with more than 85% of the housing in this location provided as social housing. Smaller proportions of government owned housing are present in the north west of Benalla in the areas surrounding Cook Street, as well as the centre of town, along Cowan Street and Samaria Road.

Housing Affordability

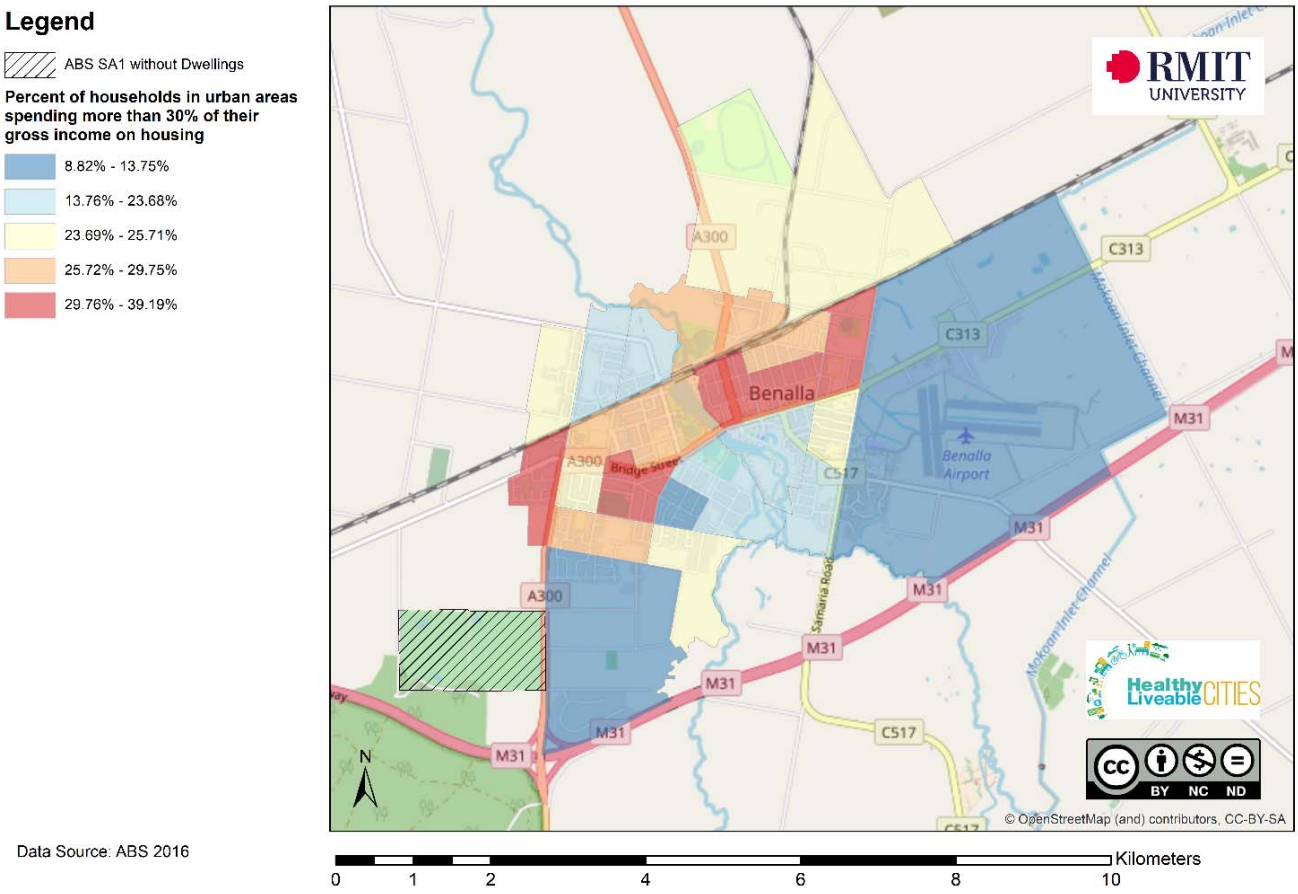


Figure 5: Proportion of households with income in the bottom 40% of the income distribution spending more than 30% of household income on housing costs according to SA1

Housing affordability is an issue facing many households across Benalla with the high levels of housing affordability concerns (30-39% of household affected) illustrated in red in Figure 5. Some of these SA1s or neighbourhoods correspond directly with areas that have high proportions of government owned rental dwellings. However, housing affordability concerns are not limited to these areas. These include a number of areas along Bridge Street, down into Thomas Street up towards the northern end of town along Maginness Street. The eastern side of town and south-western areas shaded in blue (9-14% of households) are less affected by housing affordability issues.

Housing Diversity

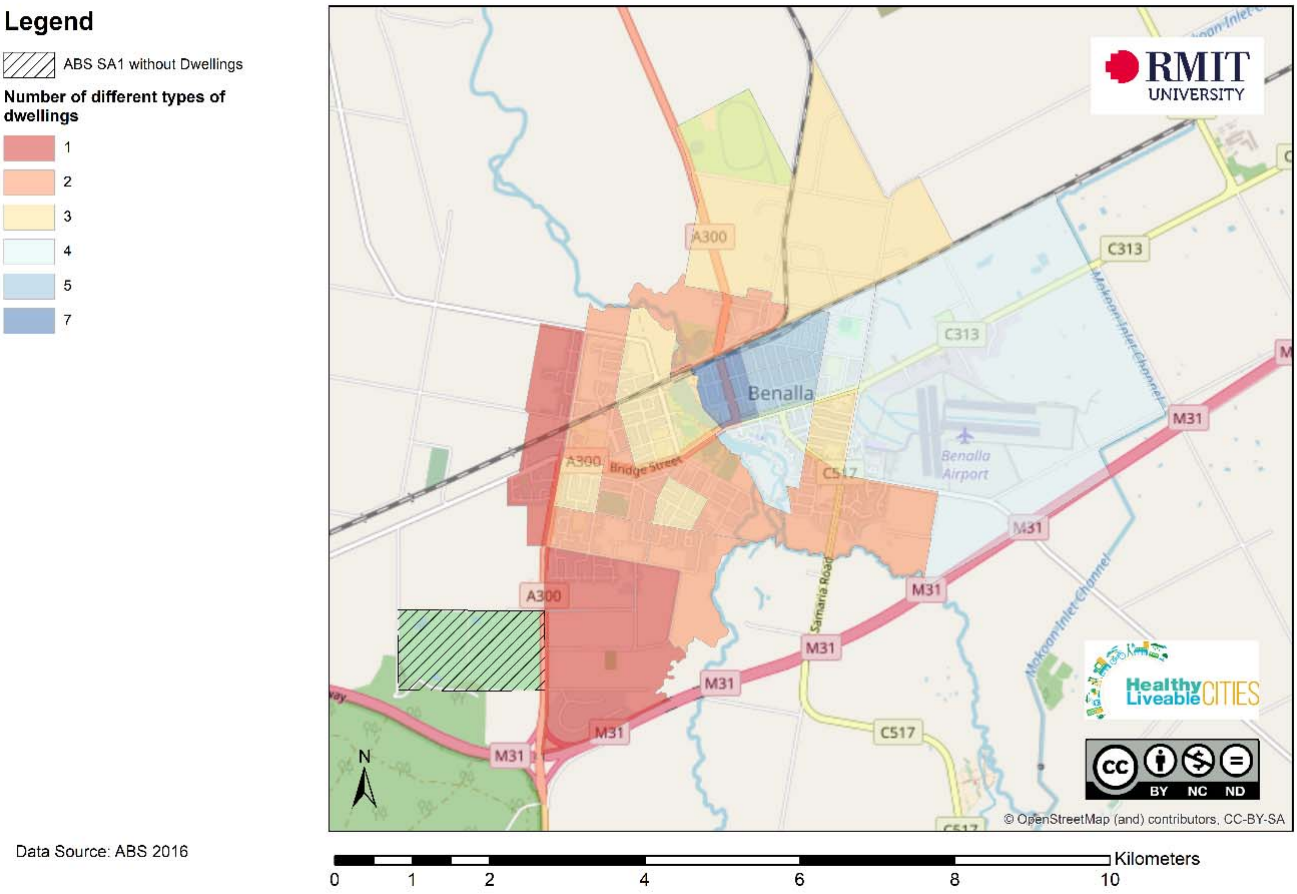


Figure 6: Housing diversity measured according to dwelling type according to SA1

Housing diversity is greatest in the centre of Benalla along Nunn Street, Bridge Street and the A300 up to the railway line which coincides with the majority of retail and business locations for the township which has 5-7 different types of dwellings in these areas. Housing diversity is lowest across large areas of the western boundary of the town including the SA1 with the highest proportion of government owned dwellings, while slightly more different types of dwellings (3 types) are present in the yellow shaded areas surrounding Benalla College and in housing near the town's north-eastern boundary.

Unemployment

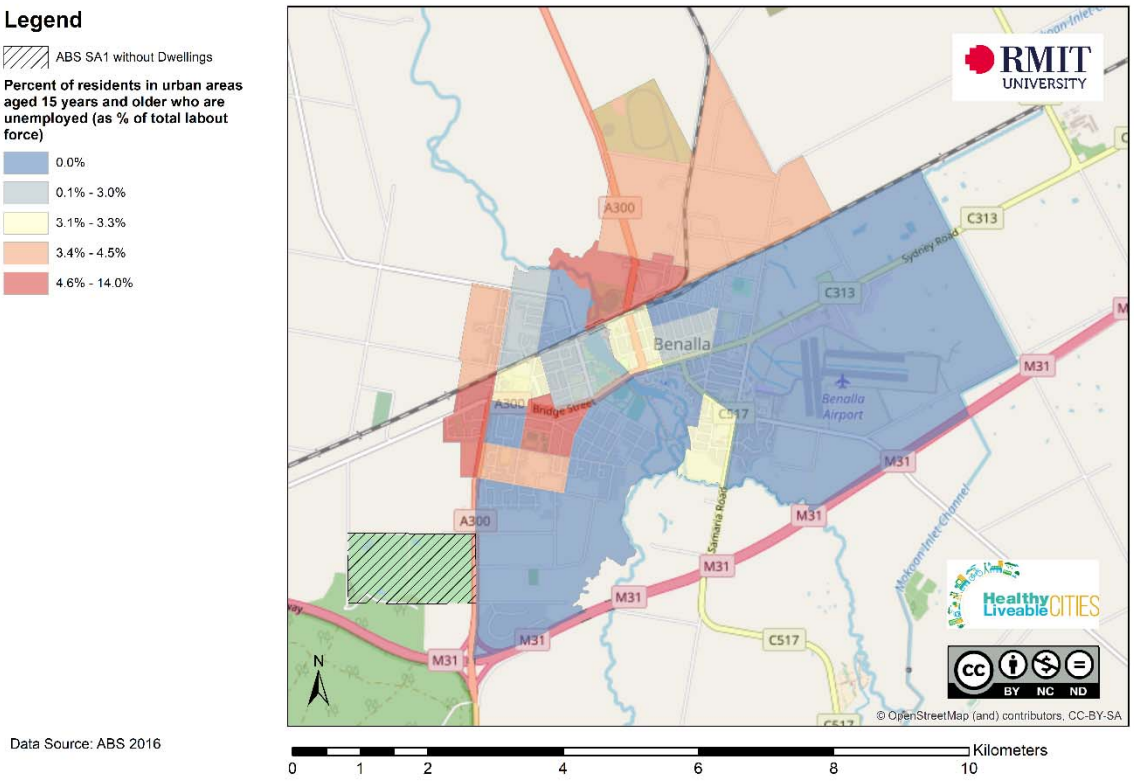


Figure 7: Unemployment according to people aged 15 years or older as a proportion of the total labour force provided according to SA1

Unemployment is highest in Benalla SA1s that also contain high proportions of government owned dwellings while most of the remaining areas of Benalla have reasonably low levels of unemployment. In these red shaded areas in Figure 7 unemployment is between 6-17% which is very high in comparison to other national averages. However, this is not common to all of Benalla. In the majority of the town, unemployment is generally below the regional average for the Hume Region (SA4) estimated at 3.3% in November 2017 according to the Australian Bureau of Statistics Labour Force Survey[3] and comparatively lower than the remainder of the LGA which has an unemployment rate of 5.3%[4]. Note that the employment rate in Figure 6 and unemployment rate above in Figure 7 do not represent direct opposites. *Employment rates* are calculated based on the total working age population (15 years or older including the economically inactive) and *unemployment rates* include only the labour force or people actively seeking and available for work and does not include the economically inactive.

[3] http://lmip.gov.au/default.aspx?LMIP/LFR_SAFOUR/VIC_LFR_LM_byLFR_UnemploymentRate
[4] http://www.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/LGA21010?opendocument

Employment

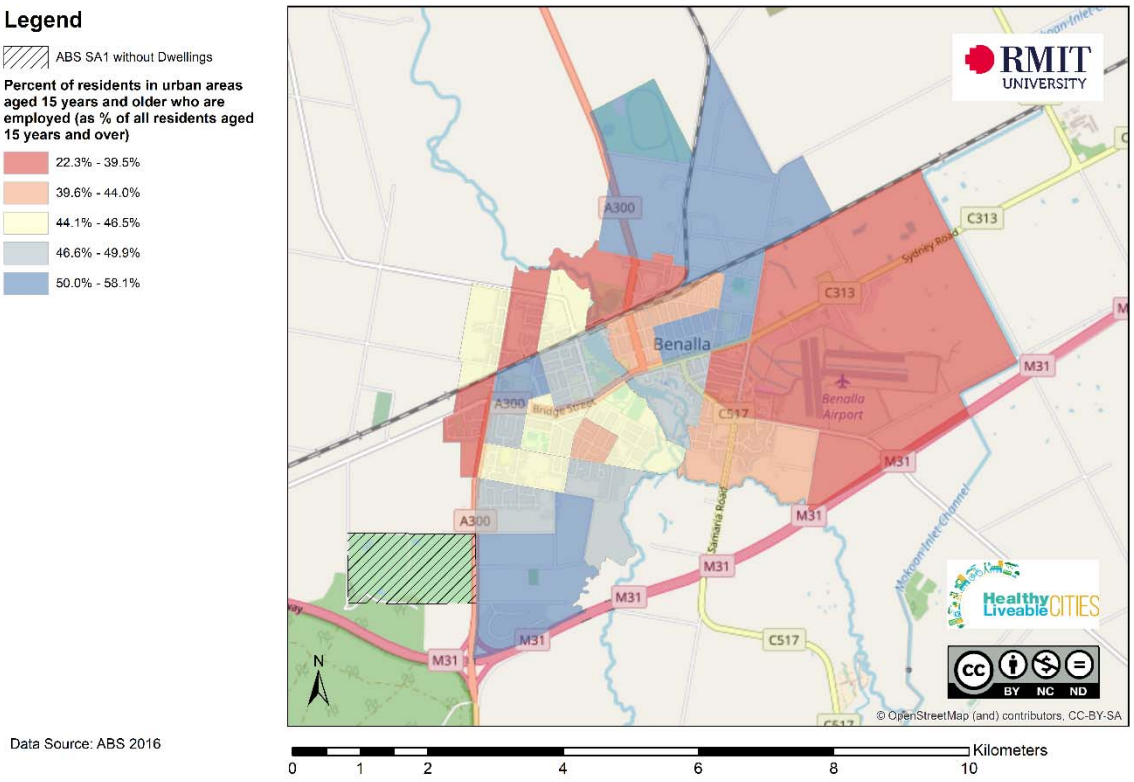


Figure 8: Proportion of people aged 15 years or older who are employed according to SA1

Lowest levels of employment are associated with the government owned housing surrounding the Baddaginnie-Benalla Road and Mansfield Road and the area near Cook Street. These two areas of the Benalla township are consistently associated with socioeconomic difficulties. Other areas of lower levels of employment are to the south of Bridge Street in the centre of town and towards the eastern boundary.

Education - Certificate

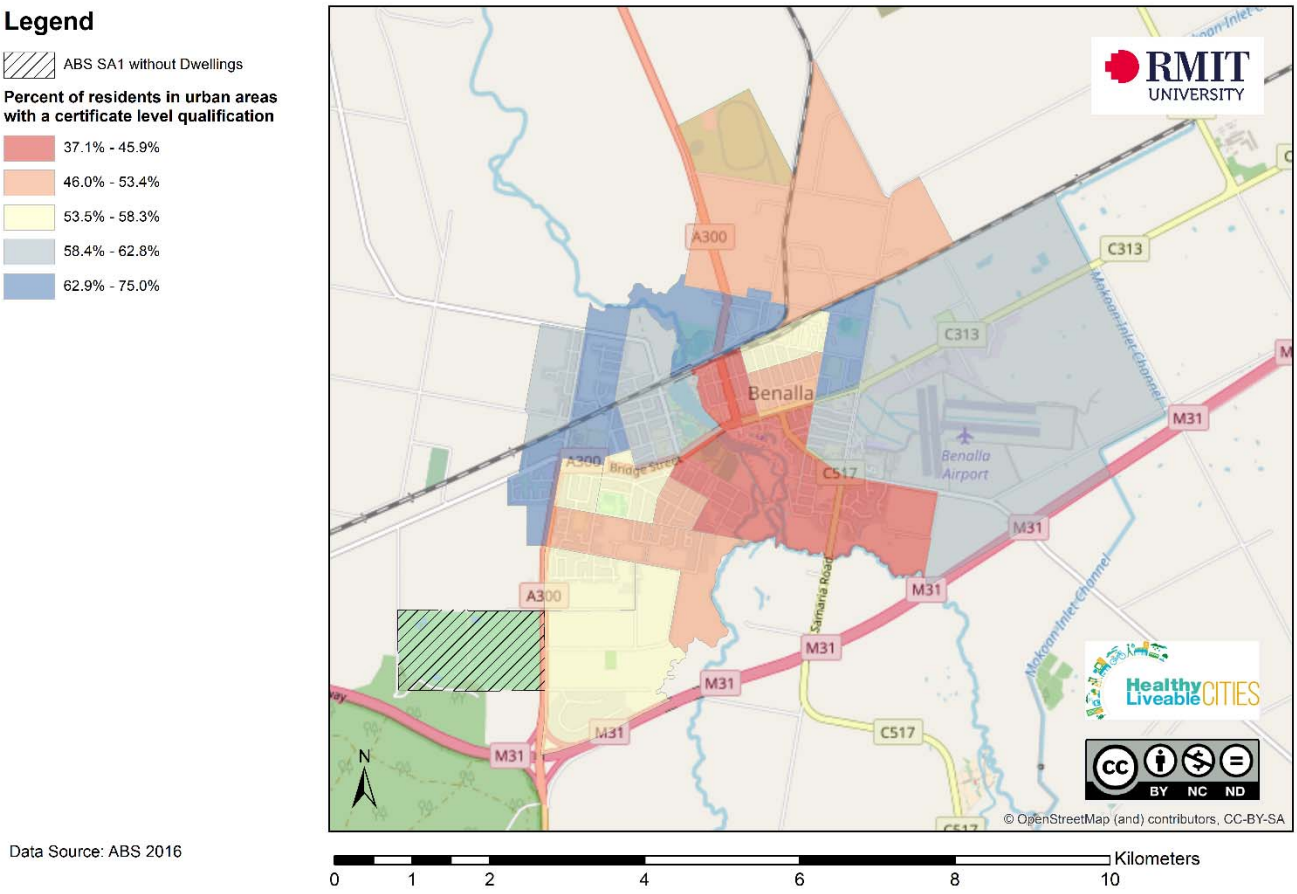


Figure 9: Proportion of residents with Certificate as highest level of education according to SA1

The highest proportions of the residential population with a certificate level of education in Benalla are located along the railway line towards the northern boundary of the township and along the southwestern border of the township. In these areas up to 75% of the population have certificate level as their highest level of completed education. Certificate level education is less prevalent in the centre and southern areas of the township and ranges from 37-46%.

Education - Diploma

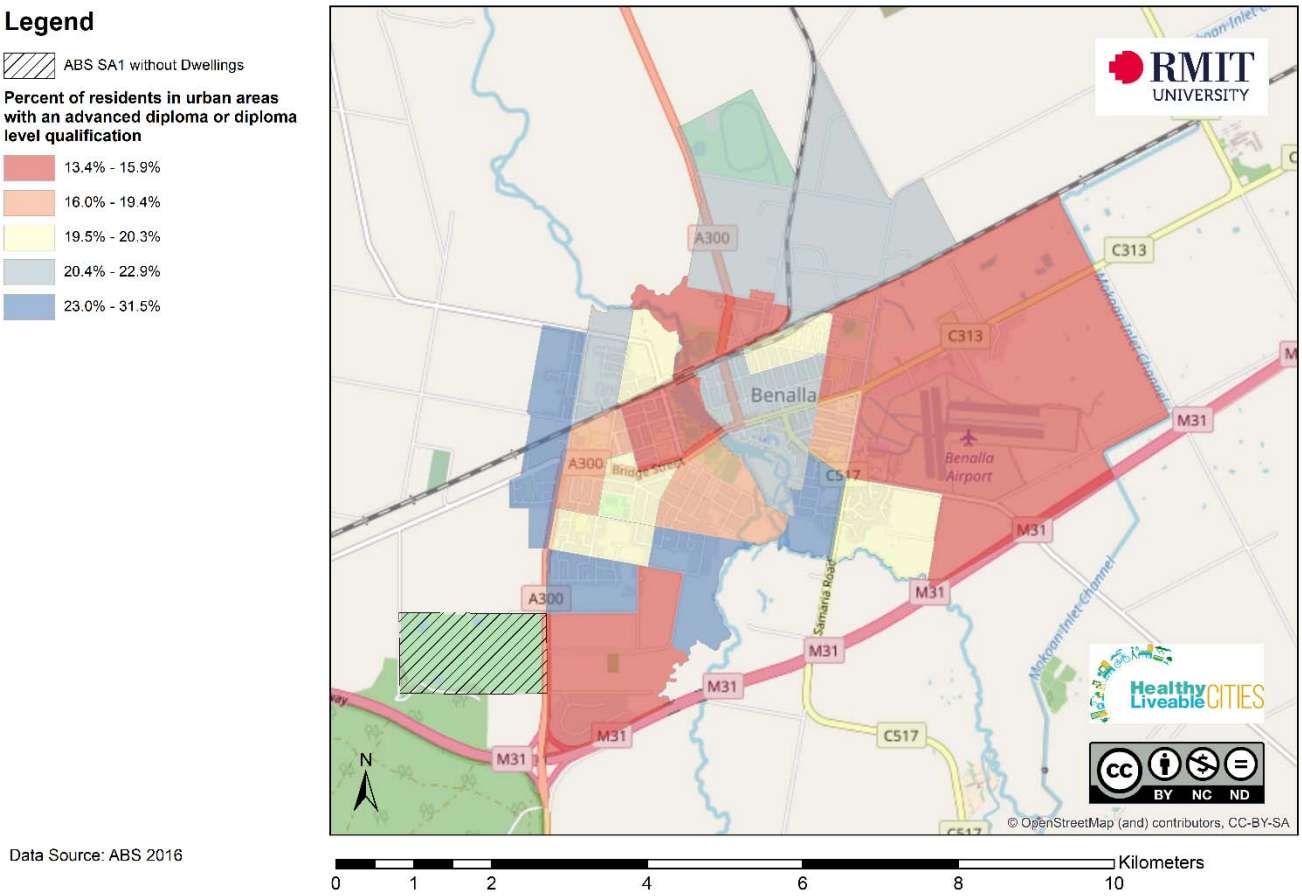


Figure 10: Proportion of residents with Diploma as highest level of education according to SA1

A diploma is a higher level of non-school qualification than a certificate but lower than a Bachelor Degree[5]. Diplomas are less frequent as a highest level of education though a number of neighbourhoods illustrated in blue in Figure 10 illustrate areas where up to 32% of the population hold a diploma as their highest level of education. Diplomas are least common (13-16%) in the areas surrounding the airport and in areas of the south west close to the Hume Freeway.

[5] https://www.aqf.edu.au/aqf-qualifications

Education – Bachelor Degree

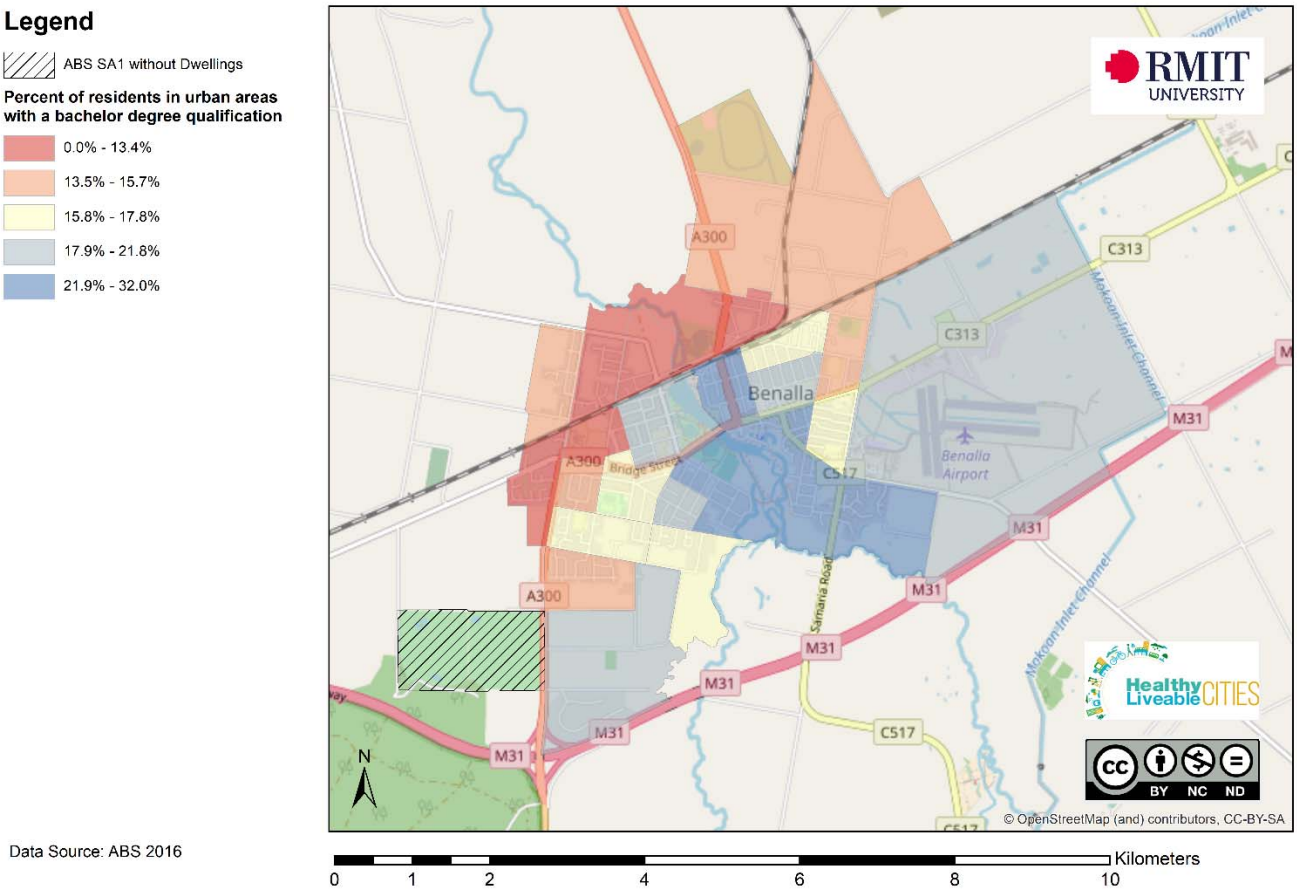


Figure 11: Proportion of residents with Bachelor Degree as highest level of education according to SA1

Residents living in the centre of Benalla are most likely to hold a Bachelor Degree and this includes up to 32% of residents living in these areas. In comparison, residents living in the north western and northern neighbourhoods of Benalla bordered by the A300 and the railway line are least likely (0-13%) to hold a degree qualification.

Education – Bachelor Degree Over 25 years

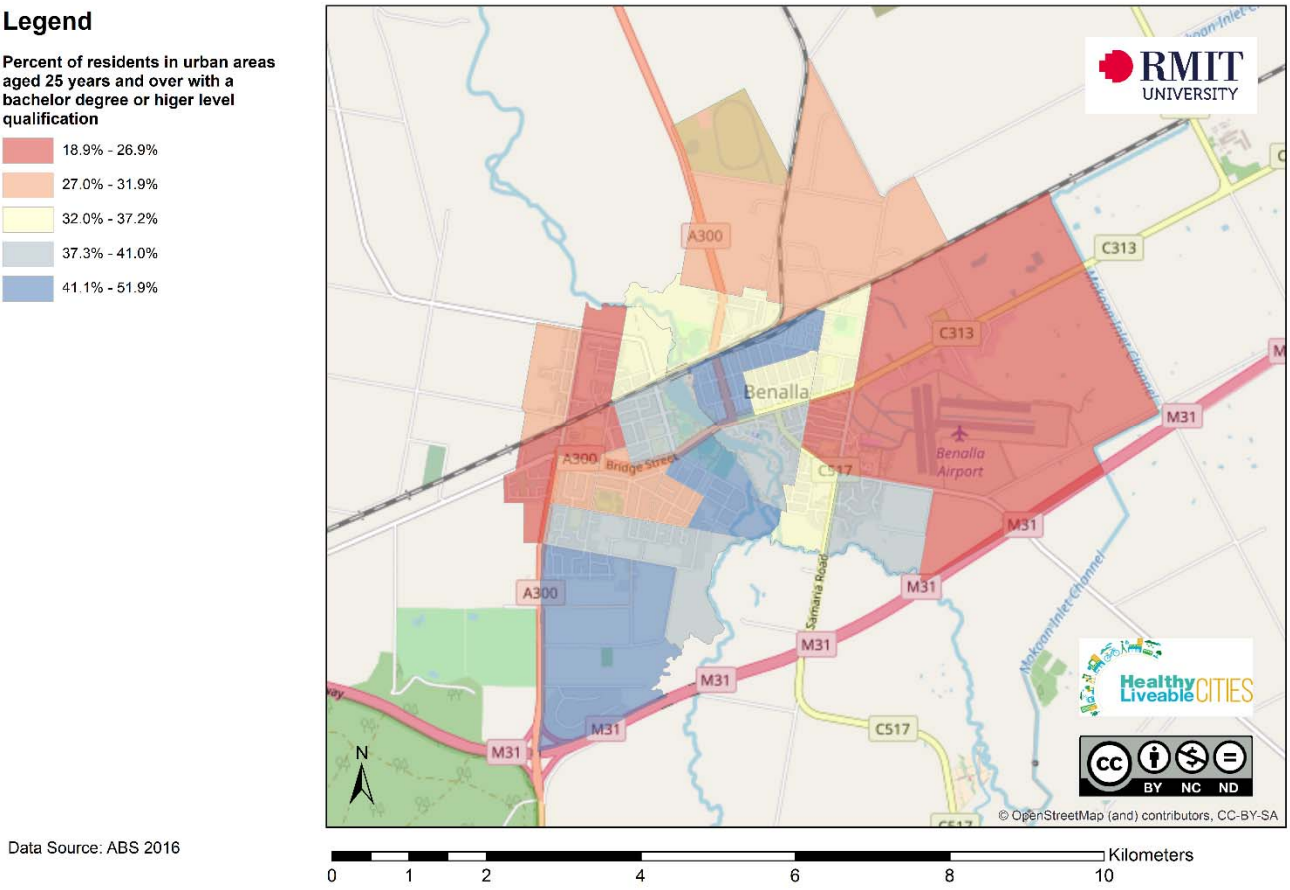


Figure 12: Proportion of residents with Bachelor Degree as highest level of education aged above 25 years according to SA1

Reducing the population to residents over 25 years allows time for people to fully complete a typical Bachelor Degree at university and also decreases the proportion of young people who might still be studying when calculating population percentages for education completions.

A similar distribution is visible for the location of residents aged over 25 years who hold a Bachelor Degree to the entire population holding a Bachelor Degree. However, there is a slight shift in pattern in Figure 12 compared to Figure 11 with more residents holding a degree being located towards the southern end of town near the Hume Freeway where up to 52% of residents hold a degree with a slight decrease in the distribution across the centre of town. This pattern suggests that the high frequency of residents with a Bachelor degree in the centre of Benalla might include a number of younger residents under 25 years of age.

Education – Graduate Diploma

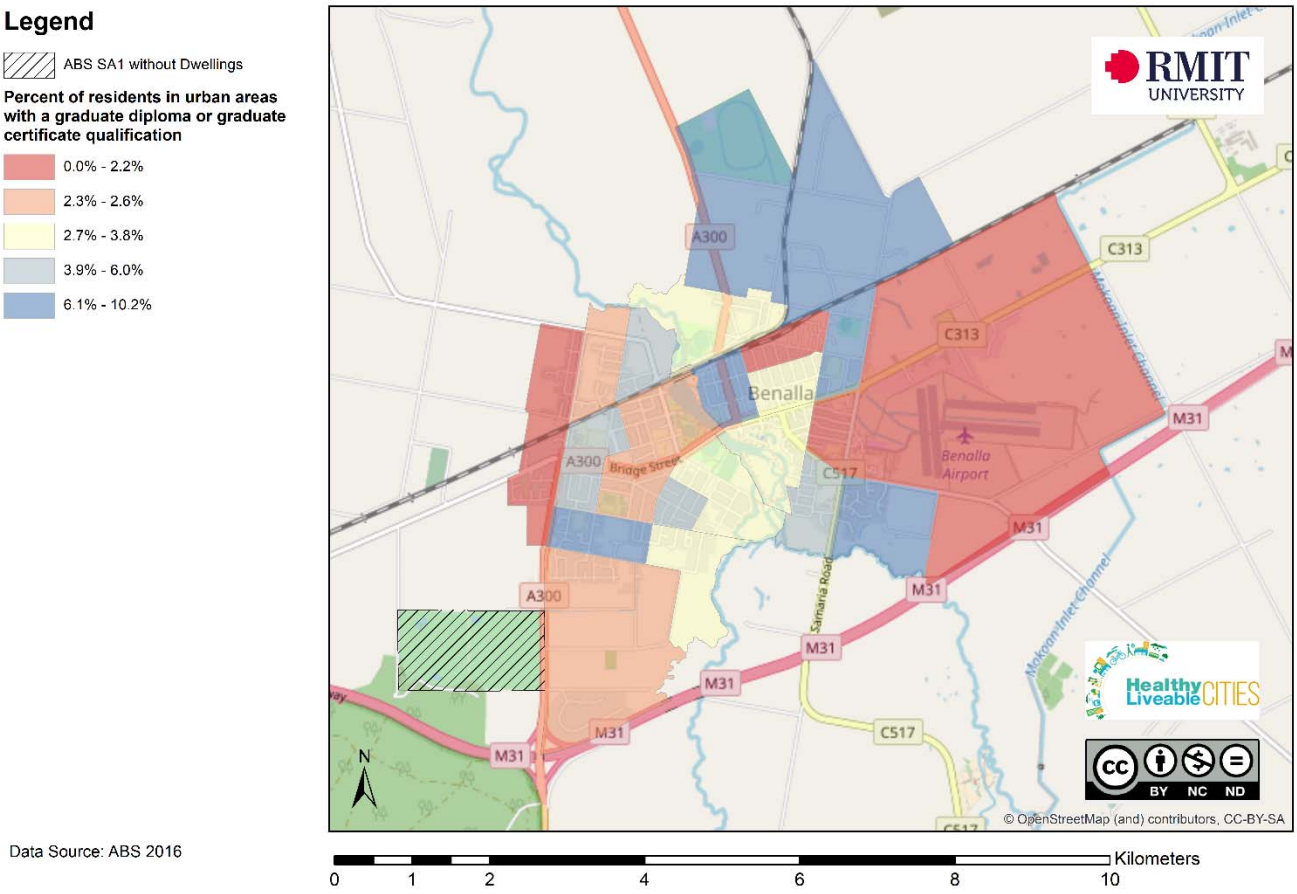


Figure 13: Proportion of residents with Graduate Diploma as highest level of education according to SA1

In Benalla few residents hold a Graduate Diploma as their highest level of education. The majority of these residents live in the northern corner of the town and in neighbourhoods across the town but only applies to 10% of the population or lower.

Education – Post Graduate Degree

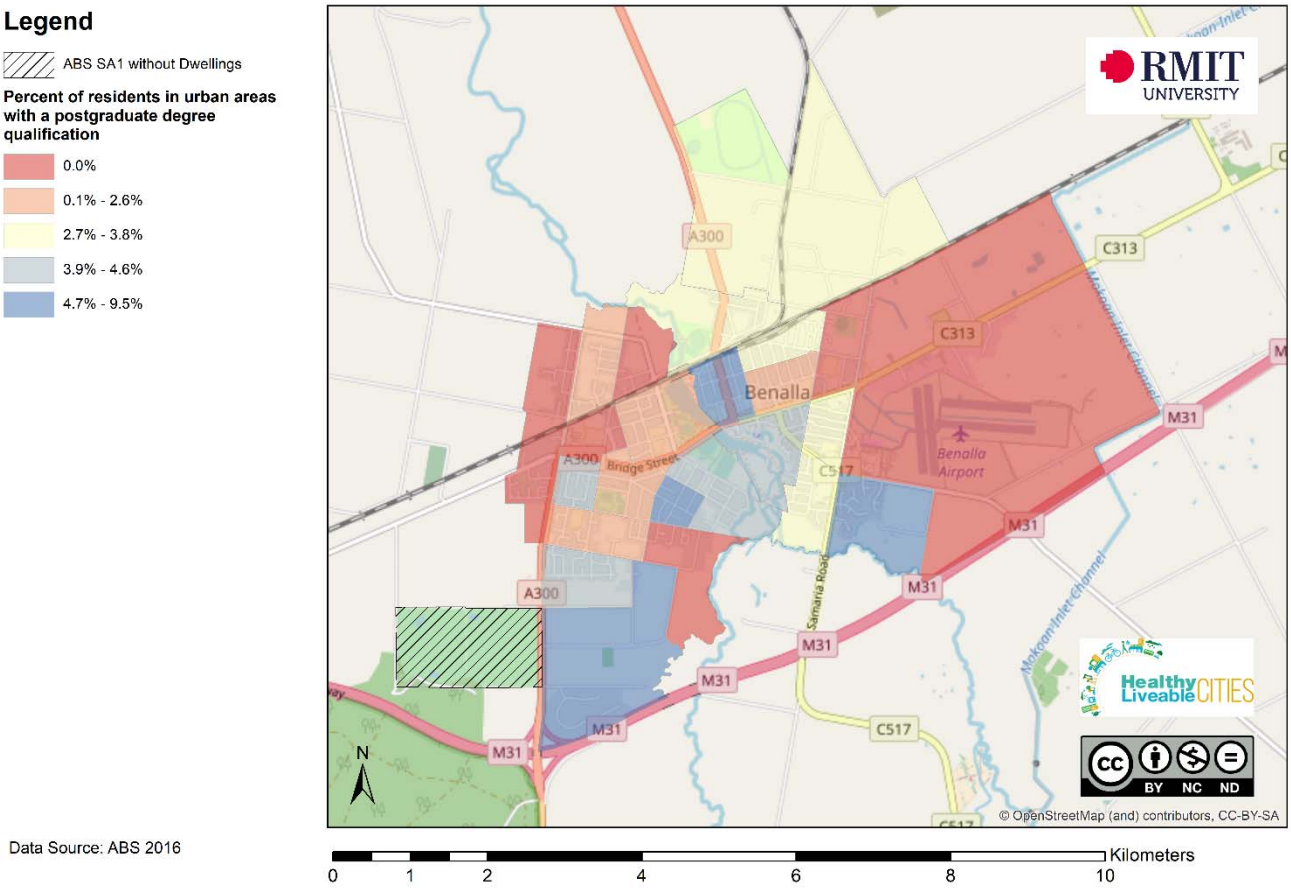


Figure 14: Proportion of residents with a postgraduate degree as their highest level of education according to SA1

Few residents of Benalla hold postgraduate degree qualifications. Between 5-10% of the population hold these degrees in few neighbourhoods located within the centre of town and in neighbourhoods within the south eastern and south western borders of the township. These areas are illustrated in blue in Figure 14.

Access to Public Open Space (POS)

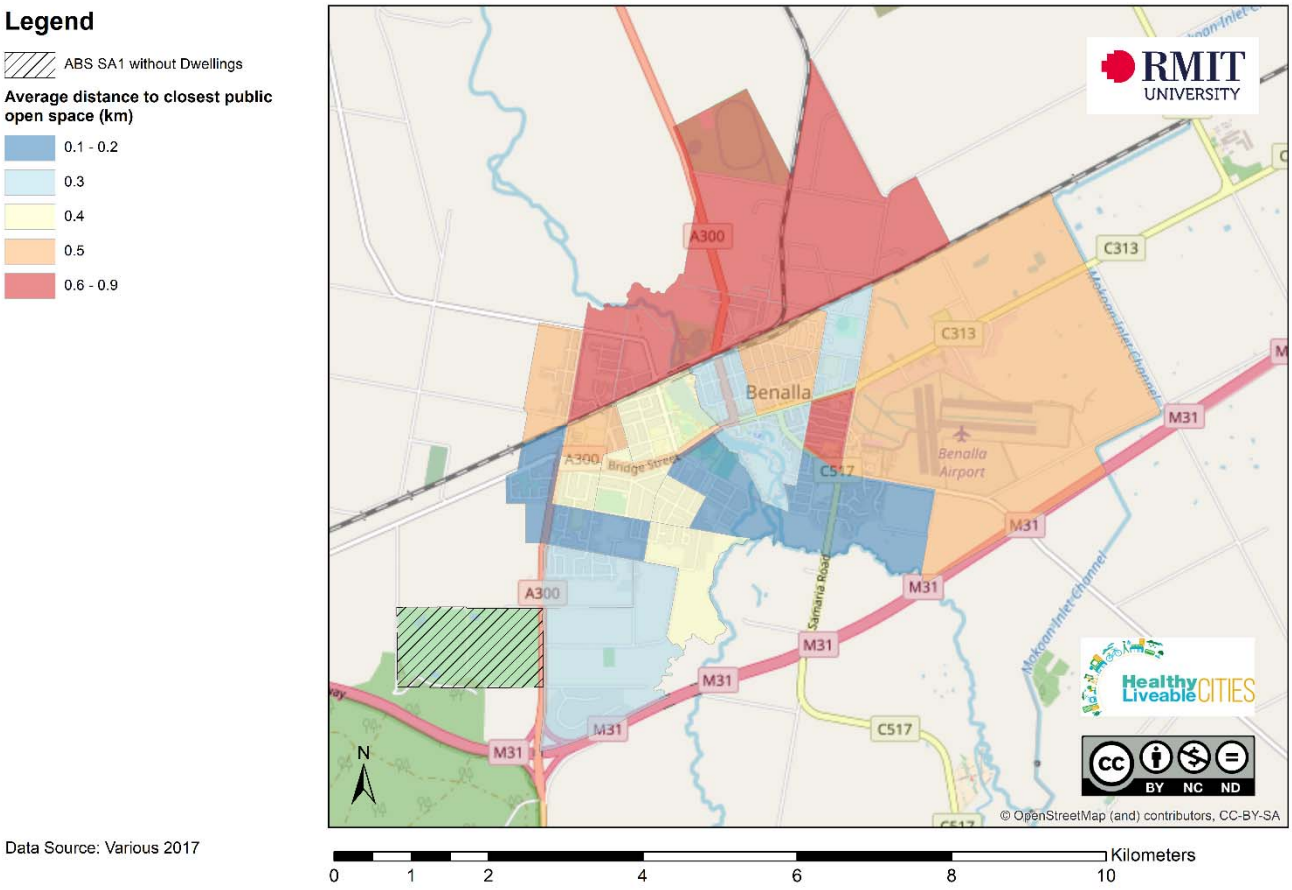


Figure 15: Distance to Public Open Space according to SA1

Residents of Benalla have good access to Public Open Space in the centre of town, western and south western boundaries where most people live within 400m of Public Open Space. However, residents living in the northern and eastern areas of Benalla do not have such convenient access to an area of Public Open Space, particularly those living north of the railway line. The location of an oval on Ackerly Avenue is home to the Benalla All Blacks Football and Netball Club but is generally between 600-900m in distance from most of the residential addresses located in these northern areas of Benalla.

Access to Supermarkets

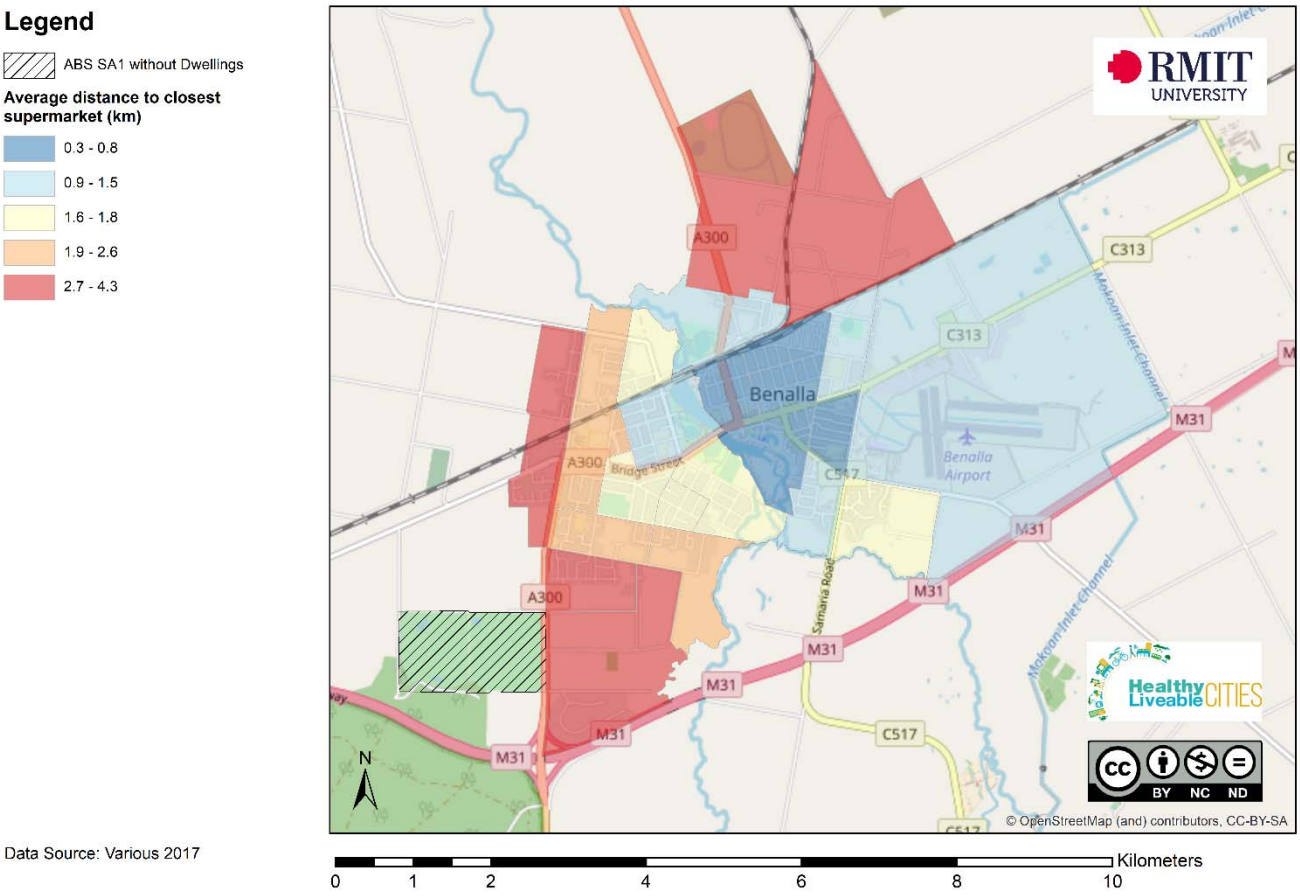


Figure 16: Access to supermarkets according to SA1

Supermarkets are located in the central shopping and activity areas of Benalla along Bridge Street which provide good access (within 800m) to supermarkets for residents living within the centre of Benalla. However, residents living on the outer western, south western, and northern boundaries of the town need to travel up to 4.3km to access affordable fresh fruit and vegetables that is available from supermarkets. Such distances from supermarkets are not conducive to walking for transport and makes access to fresh food a vehicle dependent activity.

Access to Fast Food

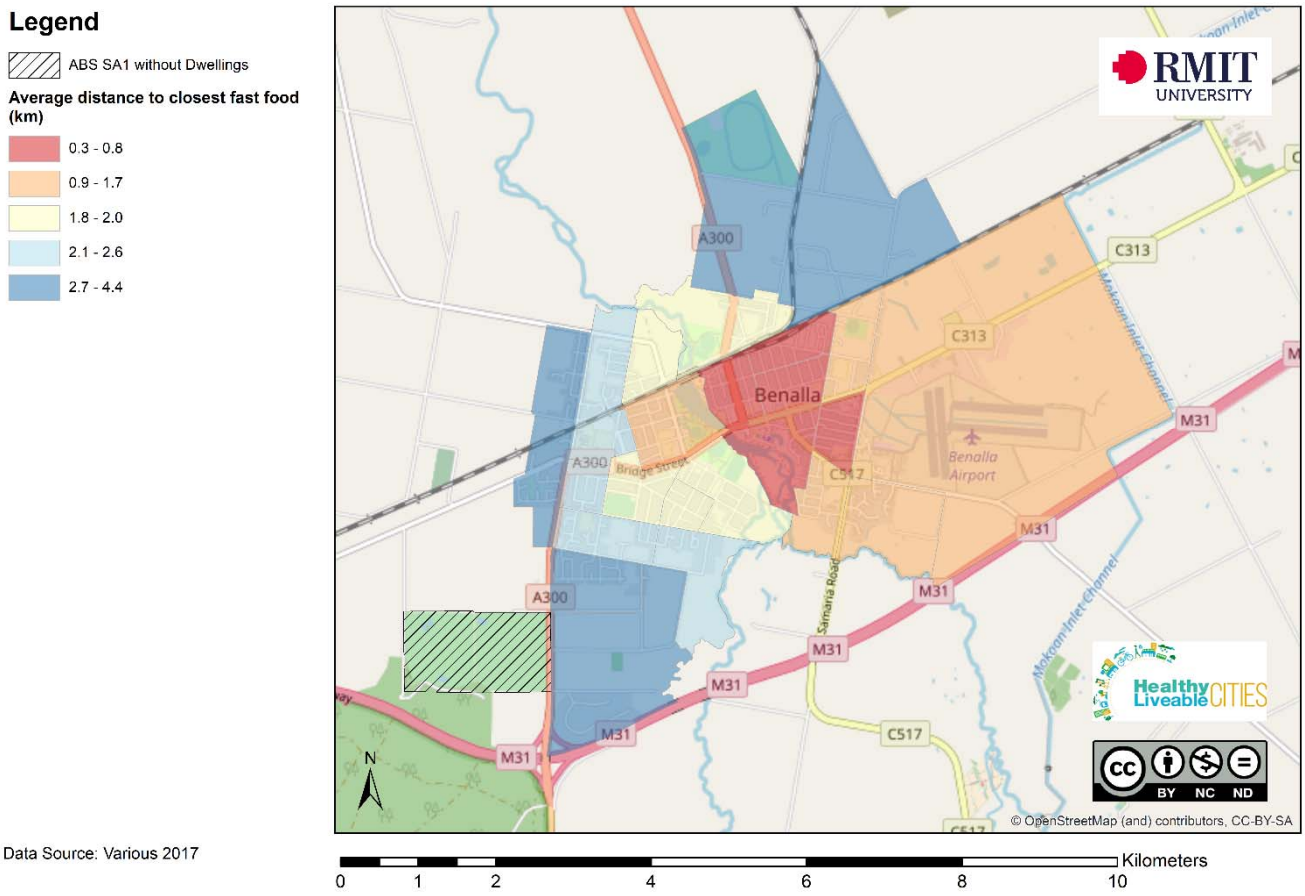


Figure 17: Access to fast food outlets according to SA1

Access to fast food mirrors access to fresh food via supermarkets in Benalla with outlets located across the centre of the town activity centre. Residents living in central Benalla live within close proximity to fast food and supermarkets whole residents living on the outer boundaries of the town must travel up to 4.4km to access these food outlets.

Electronic Gambling Expenditure

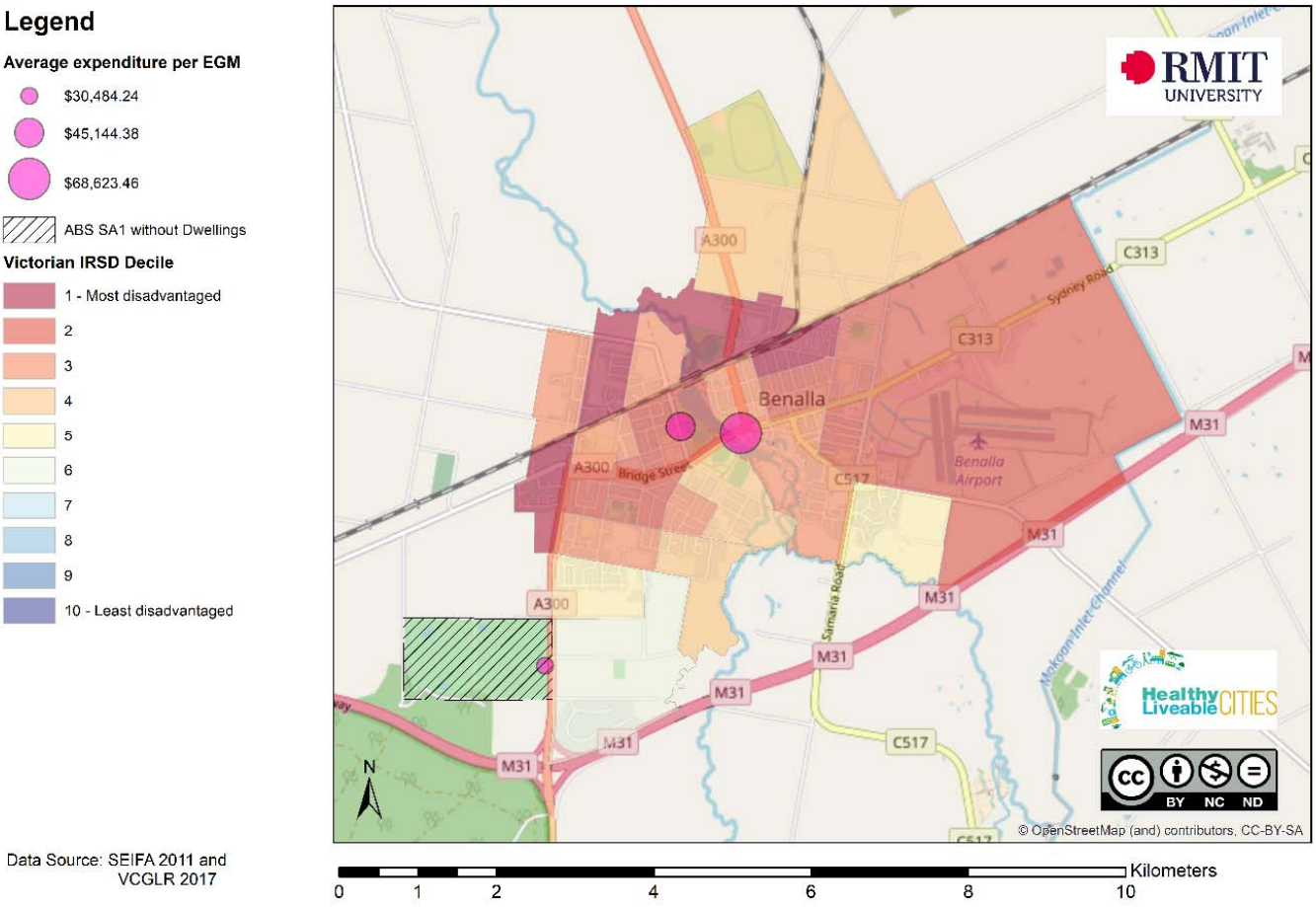


Figure 18: Electronic Gambling Machine expenditure and Socioeconomic Disadvantage by SA1

The location of Electronic Gaming Machines (EGMs) are provided in Figure 17 along with average expenditure per machine overlayed with the SEIFA IRSD describing socioeconomic disadvantage according to SA1. The Royal Hotel has the highest average expenditure per EGM at $68,623 and the Benalla Bowls Club has an average expenditure of $45,144 per EGM. The Benalla Bowls Club is located slightly closer to areas of socioeconomic disadvantage illustrated with dark red shaded areas on the map in Figure 17, while the Royal Hotel is centrally located in town on the major transport route of the A300 on Bridge Street.

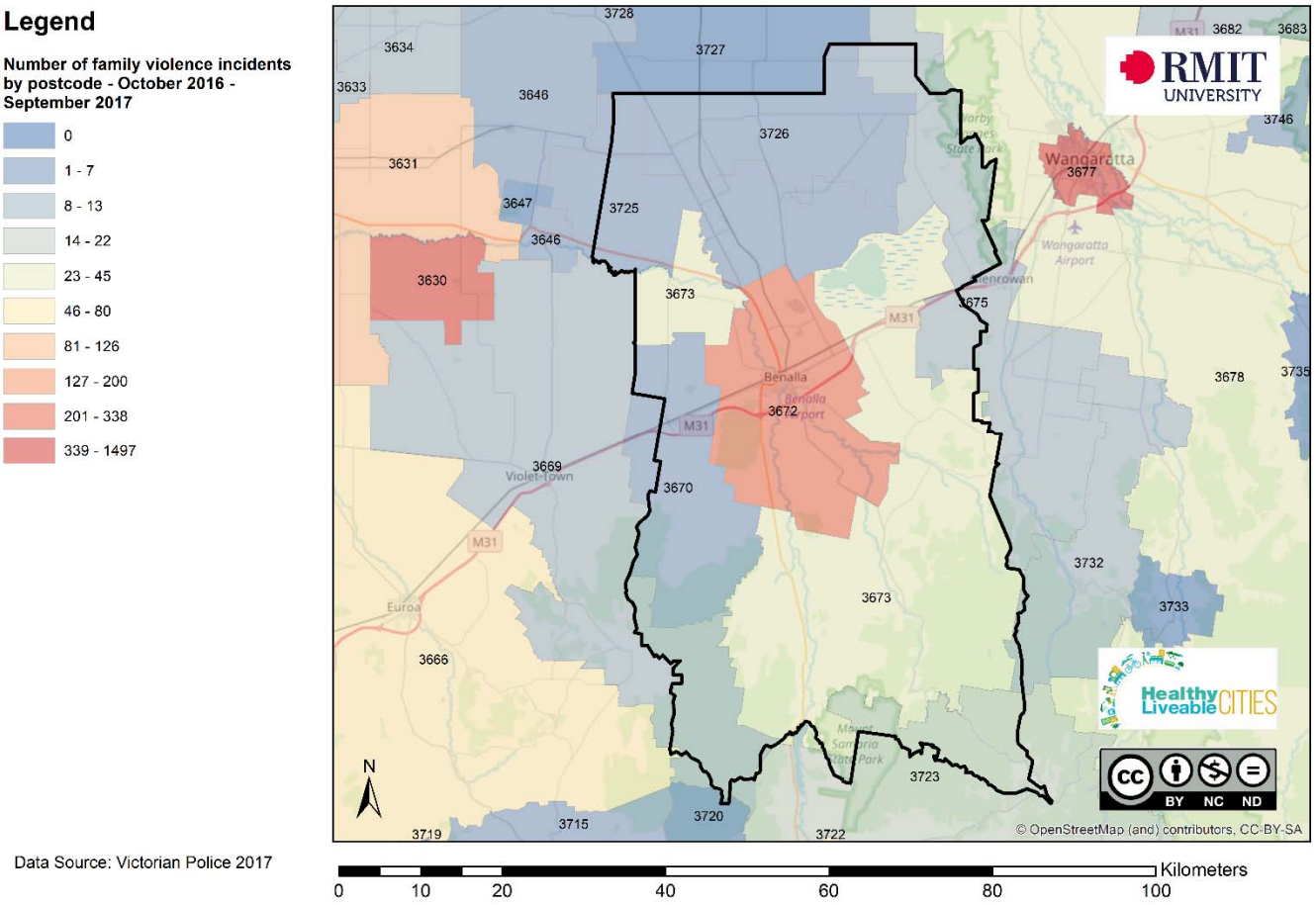


Figure 19: Recorded family violence incidents by postcode (October 2016 - September 2017)

Family violence data have been customised and provided by the Victorian Crime Statistics Agency via Victoria Police. The lowest level of geography available for these data are postcode in line with Victoria Police reporting and associated divisional boundaries. Postcode level data are presented in Figure 19 and the entire town of Benalla is represented according to postcode 3672 noting that postcode level data are the smallest aggregated unit available from the Crime Statistics Agency. These statistics are the actual number of incidents alone while crime statistics are best interpreted according to a ratio of per 100,000 people based on Estimated Resident Population. However, postcode concordance to estimated population is less reliable because Australia Post postcodes don't align easily to Australian Bureau of Statistics geography used to calculate population estimates. It is worthwhile noting that using an LGA boundary and estimating family violence by population results in the Benalla Rural City having the second highest number of incidence within the Eastern Region, second to the LGA of Latrobe and above the LGA of Mitchell.[6]

[6] https://www.crimestatistics.vic.gov.au/family-violence-data-portal/family-violence-data-dashboard/victoria-police

Volunteering

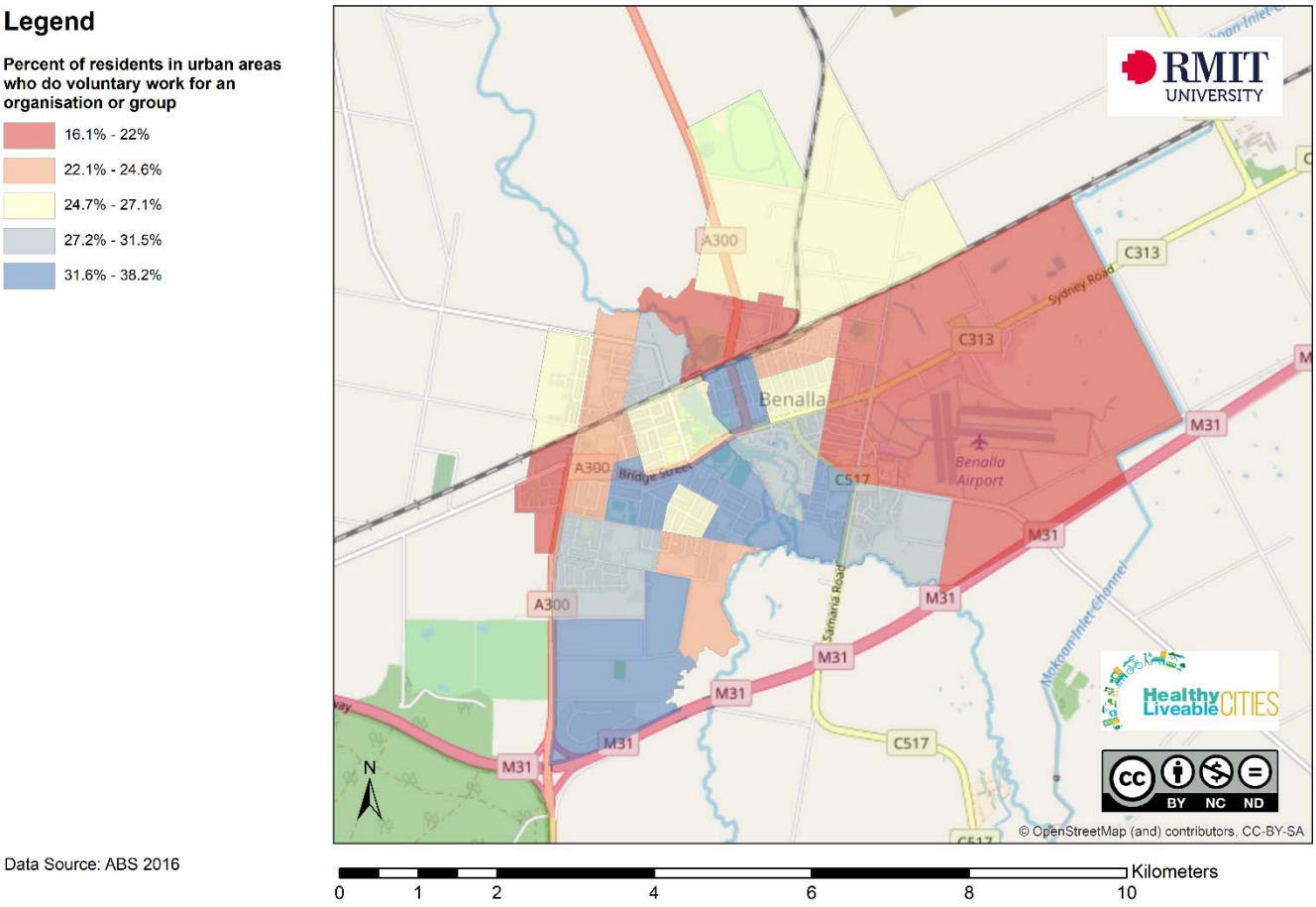
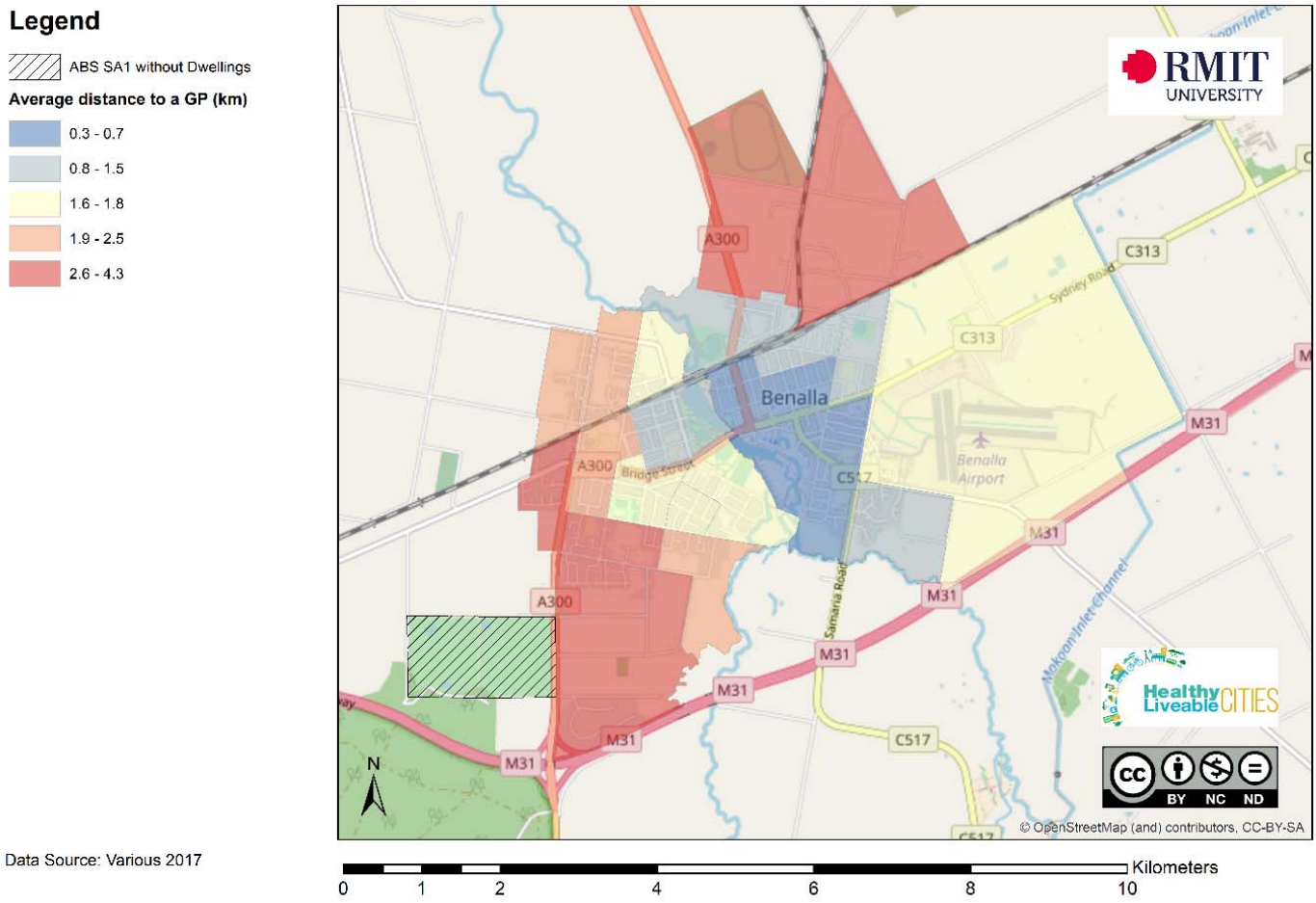


Figure 20: Proportion of residents engaged in voluntary work for a group or organisation by SA1

Volunteering rates are generally above average across Benalla in comparison to the Victorian state average of 19% in the 2016 Census[7]. In some neighbourhoods of Benalla up to 38% of residents had volunteered with an organisation or group over the last 12 months, while lower volunteering rates are still reasonably high in areas with fewer volunteers (16-22%). Lower levels of volunteering are evident in three neighbourhoods within town: one on the western border co-located with a high proportion of government owned dwellings; another neighbourhood on the northern boundary of town; and a neighbourhood on the eastern boundary of town near the Benalla airport.

[7] http://www.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/2?opendocument

Access to General Practitioners



Data Source: Various 2017

Figure 21: Average distance to a General Practitioner in Benalla by SA1

Residents living close to the centre of Benalla or the hospital and community health centre have the closest access to General Practitioners and are generally living within walking distance of a medical service (less than 700m). Residents living in the outer northern, western and south-western areas of the town are up to 4km from a General Practitioner and limited access to these services. Data included in this map are sourced from the National Health Services Directory (2017).

Access to General Practitioners - Location

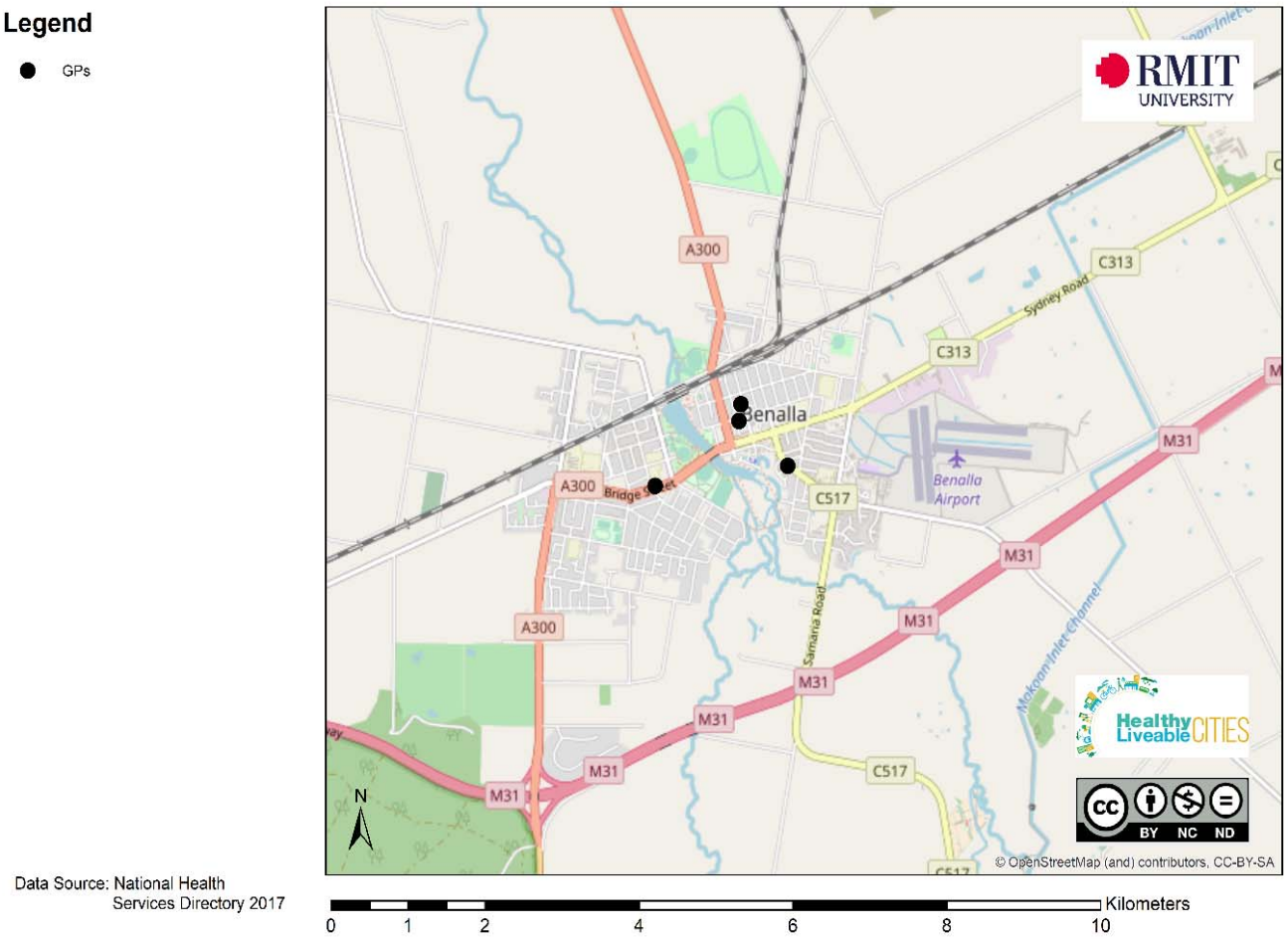


Figure 22: Location of General Practitioners in Benalla by SA1

Four locations on Figure 22 identify the location of General Practitioners in Benalla with mist located in the centre are of town or near the hospital. Three of these services are located on the eastern side of town and only 1 service is located on the western end of Bridge Street over Lake Benalla.

Access to Services for Older People

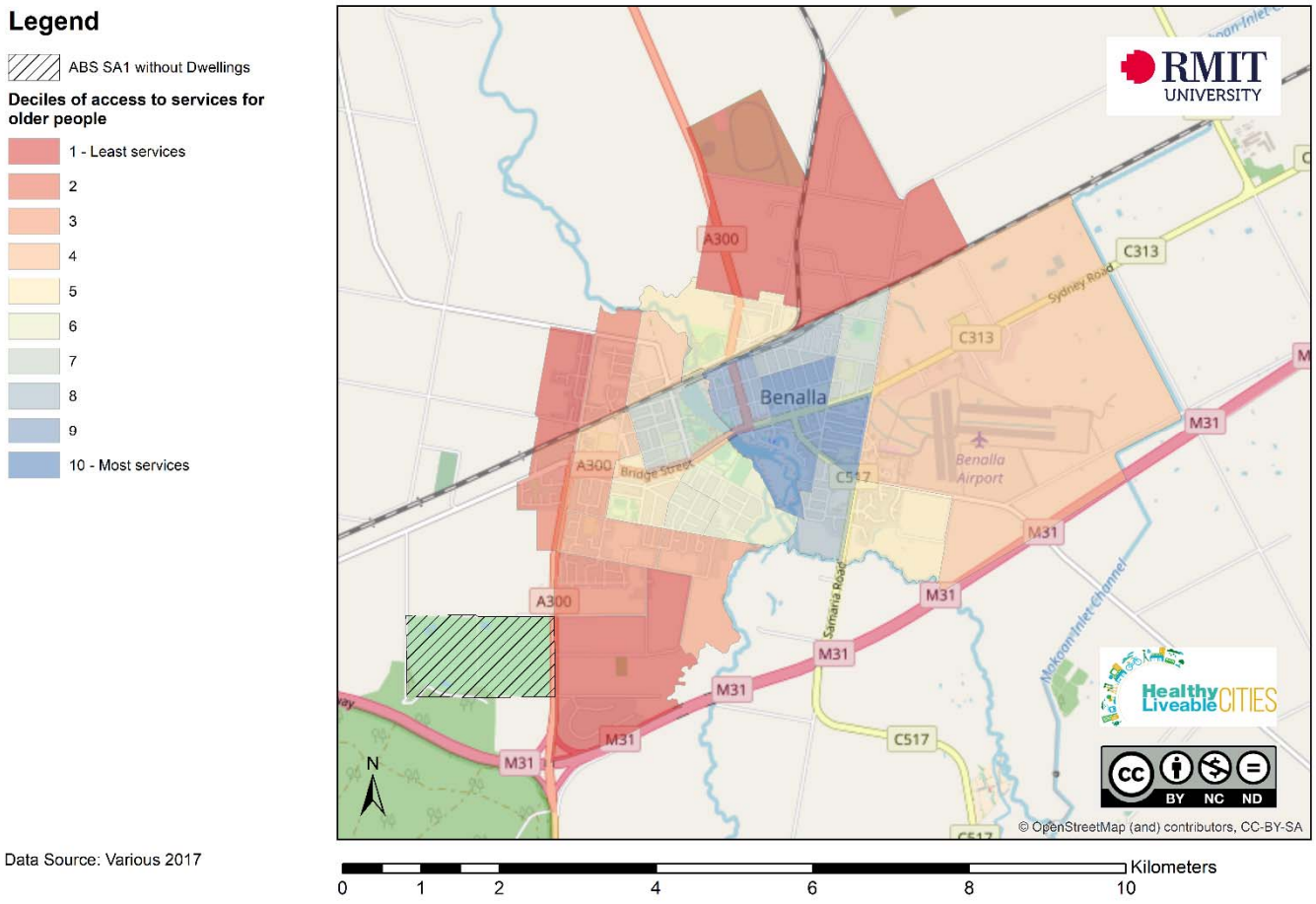


Figure 23: Access to services for older people by SA1

Planning for the needs of older people are critical in regional towns and cities across Australia. Age friendly cities support successful ageing in place with access to relevant service needs within the community. These include access to medical care, retail, recreation, affordable entertainment, social facilities, public transport, housing and age care facilities, home and community services and environmental facilities such as public open space (Lowen, Davern, Mavoa & Brasher, 2015). The specific measures used to represent these were: community centres, General Practice clinics, hospitals, libraries, aged care facilities, supermarkets, University of the 3rd Age and public transport stops within 1600m of residential land parcels. Proposed services are not included in analysis. Access to these services are important for the social, economic, emotional and physical needs of an ageing population.

Figure 23 above provides evidence that the central area of Benalla has good access to services for older people but the northern, western and south-western areas of the town have poorer access to services that support ageing in place. This evidence is important for planning services and development of Benalla in the future.

Walkability for Transport

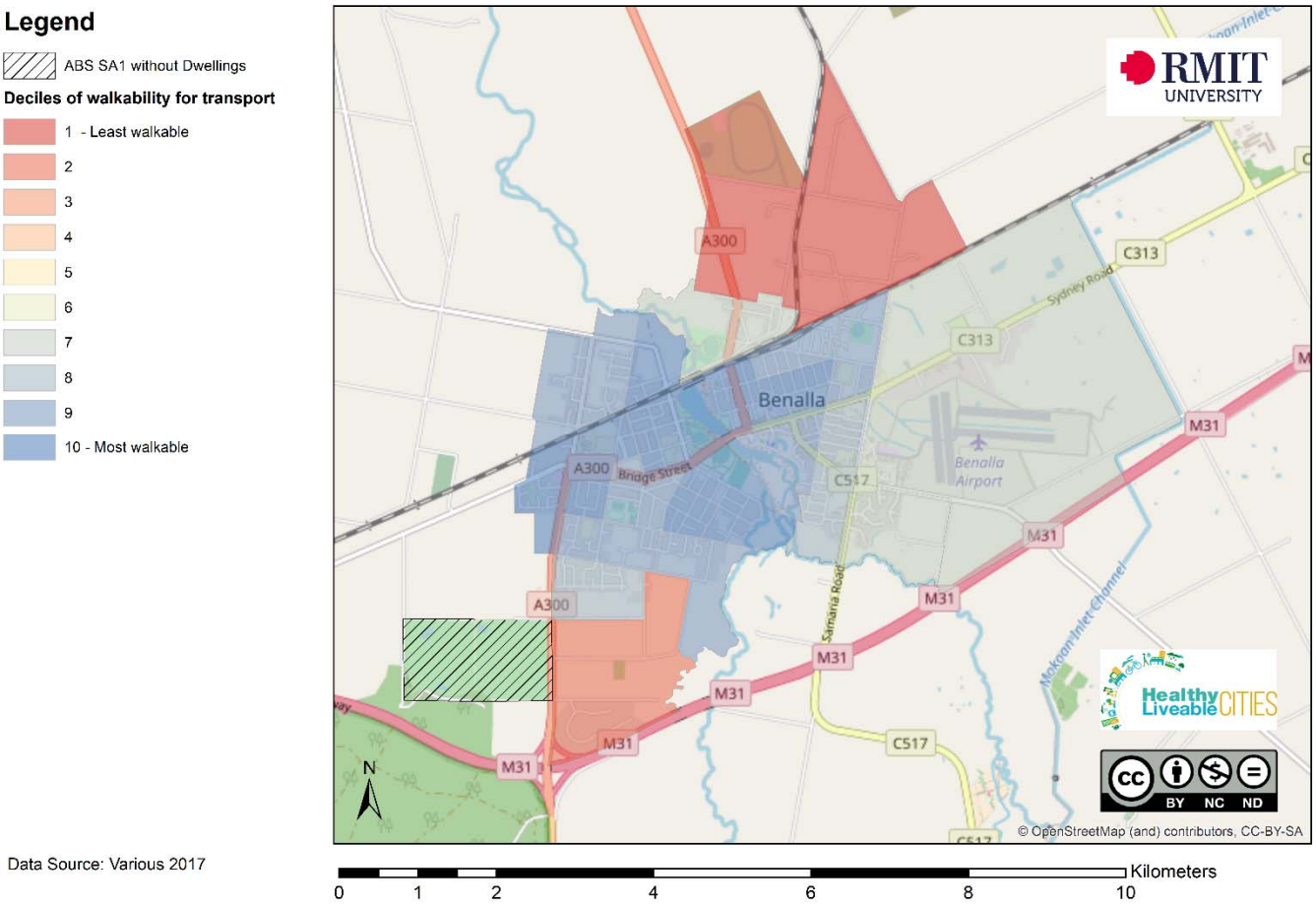


Figure 24: Walkability for transport by SA1

An area that is walkable for transport is one that consists of three key factors: Land Use Mix and services of daily living (something to walk too); Road Connectivity (a way to get there); and Housing Density (more housing and population density to supply services and different land uses) (Giles-Corti et al., 2014). Areas that are walkable influence how people move around their neighbourhoods to undertake daily activities which reinforces the importance of access to supermarkets, convenience stores, petrol stations, newsagents and public transport stops in community design. Considerable research evidence has shown that the design of local neighbourhoods are an important influence of physical activity, health outcomes, social connectedness and sustainability (Saelens et al., 2003).

The most walkable areas of Benalla are located in the centre of the town which correspond with more housing diversity, an accessible road network and destinations to walk to including retail and business services, supermarkets and cafes. The least walkable areas of town are the outer north eastern neighbourhoods above the railway line and east of the M300 and the south western neighbourhoods closest to the Hume Freeway.

Access to Public Transport

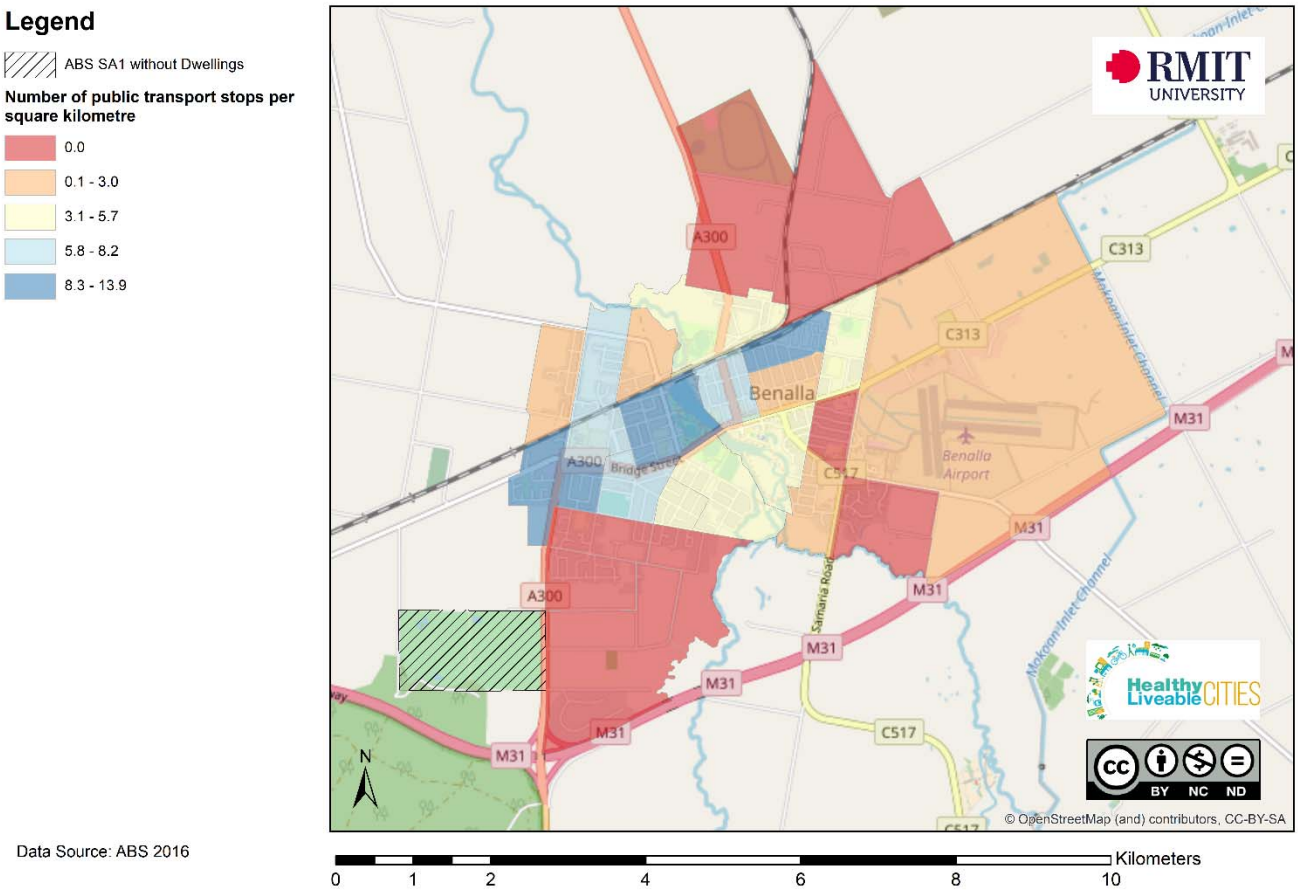


Figure 25: Access to public transport stops by SA1

Three SA1s within the town of Benalla have no public transport stops at all. These areas shaded in red in Figure 25 are located along the south western, southern and northern boundaries of the town and also in the SA1 neighbourhood that includes the Benalla Hospital and also the neighbourhood located diagonally opposite to the east of Samaria Road. No access to public transport in an area servicing a hospital, community health services and aged care centre is a concern providing a barrier to health service access and intergenerational community connectedness. Areas of Benalla with the best access to public transport stops are between Bridge Street and the railway line and in the neighbourhood on the western border of town that has a high proportion of government owned dwellings. Note that Figure 25 provides a map of public transport stops only and does not account for service frequency.

Household Internet Access

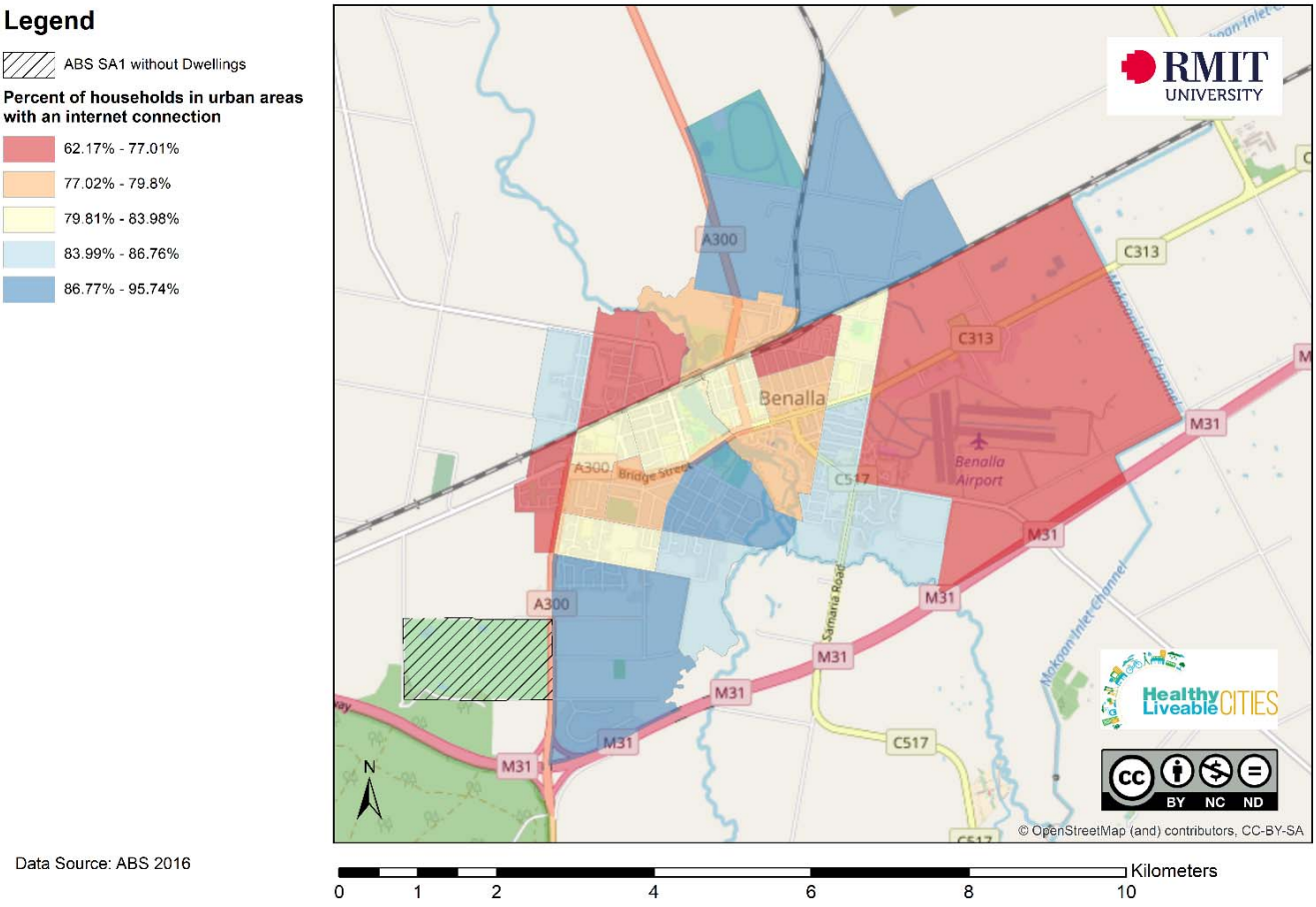


Figure 26: Household internet access by SA1

Household internet access is defined by the ABS as any access via computers/laptops, mobile phones, tablets, music or video player, gaming console, smart TV or any other device. Household internet access is highest in 3 neighbourhoods of Benalla that are located in the southern, northern and central areas of the town. These neighbourhoods are shaded blue in Figure 26 and between 87-96% of households have access to the internet within households in these locations. The southern neighbourhood closest to the Hume Freeway also has the highest proportion of residents with a postgraduate degree and both this area and the northern neighbourhood also have the highest rates of employment within the town. The most disadvantaged neighbourhoods of Benalla have the lowest levels of household internet access (62-77%) are illustrated in red in Figure 26 and is much lower than the Victorian average of 84%[8] and the regional Victorian average of 82%[9].

[8] http://www.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/2?opendocument
[9] http://www.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/UCL231777?opendocument

Resident Age Distribution: 0-12 years for 2016 and 2011

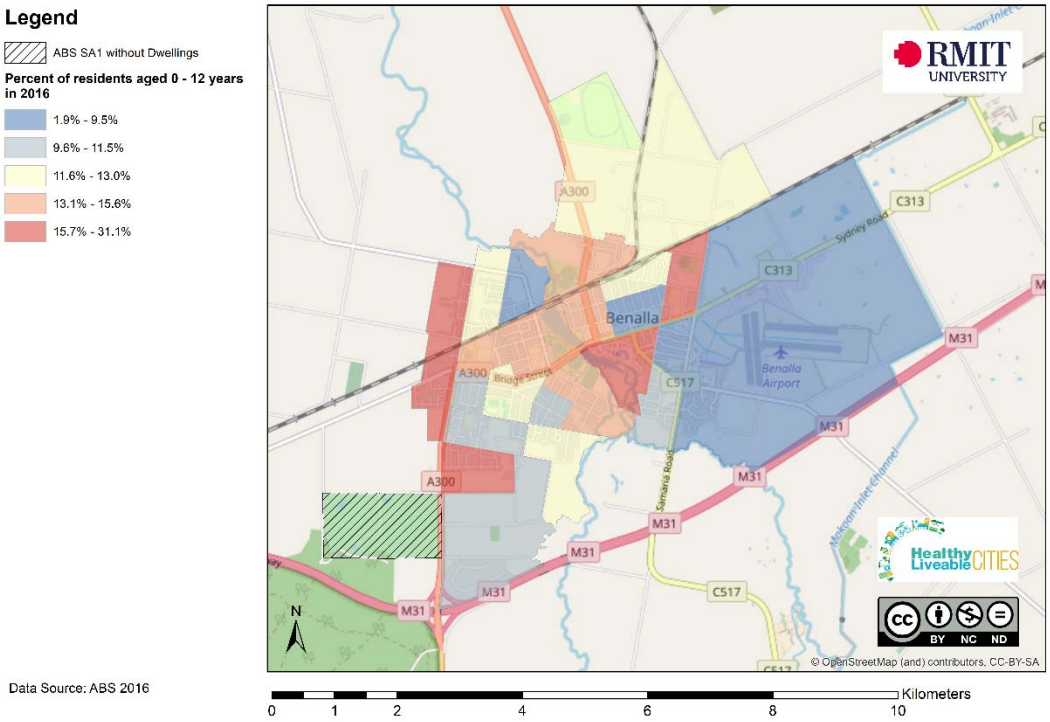


Figure 27: Age distribution of residents aged 0-12 years by SA1 for 2016

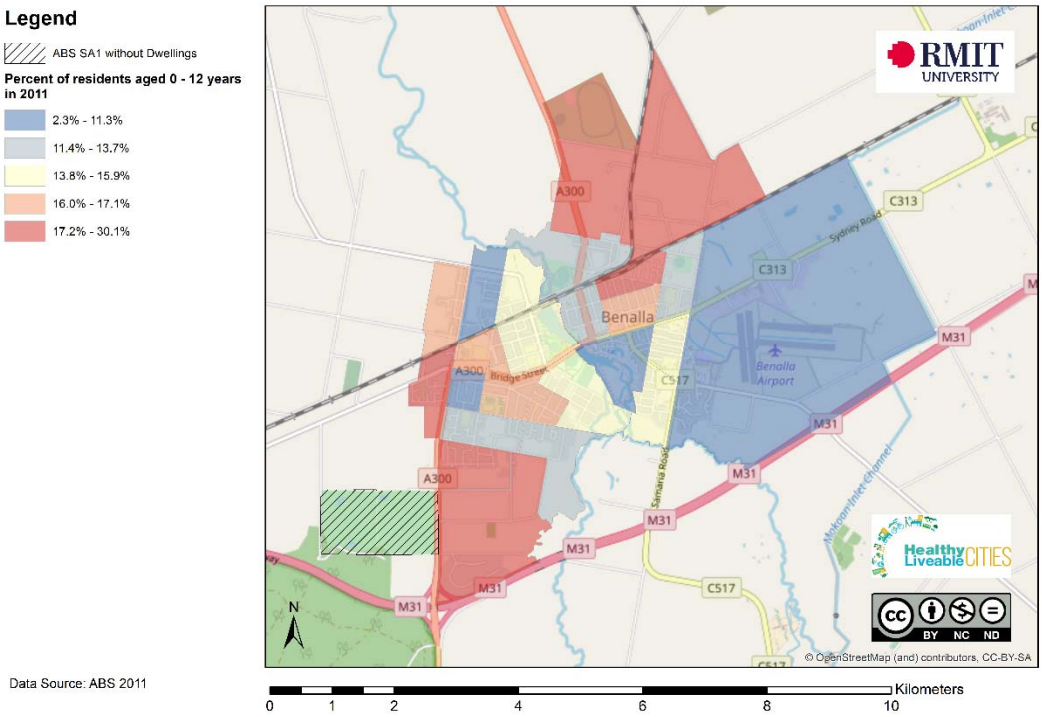


Figure 28: Age distribution of residents aged 0-12 years by SA1 for 2011

Resident Age Distribution: 13-25 years for 2016 and 2011

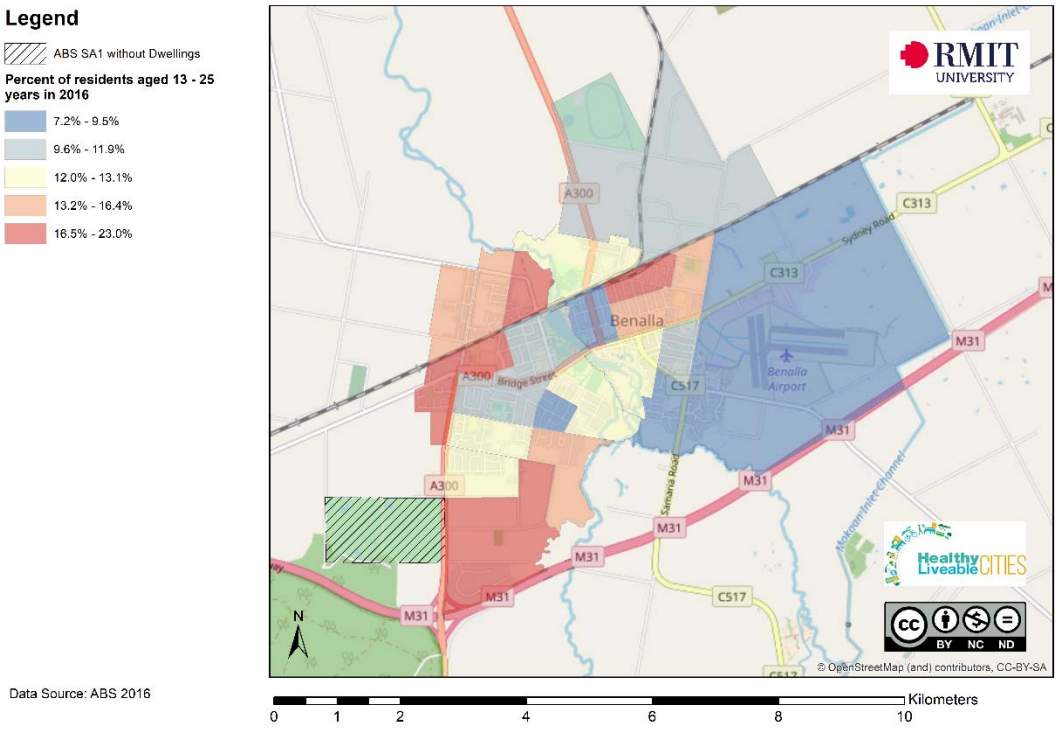


Figure 29: Age distribution of residents aged 13-25 years by SA1 for 2016

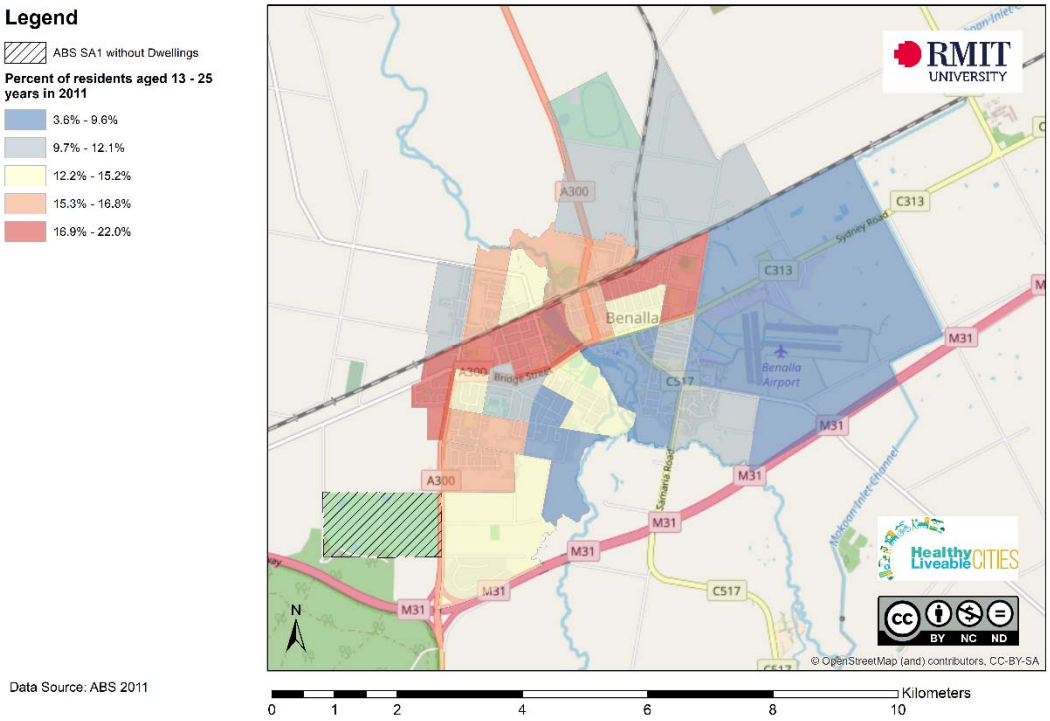


Figure 30: Age distribution of residents aged 13-25 years by SA1 for 2011

Resident Age Distribution: 26-55 years for 2016 and 2011

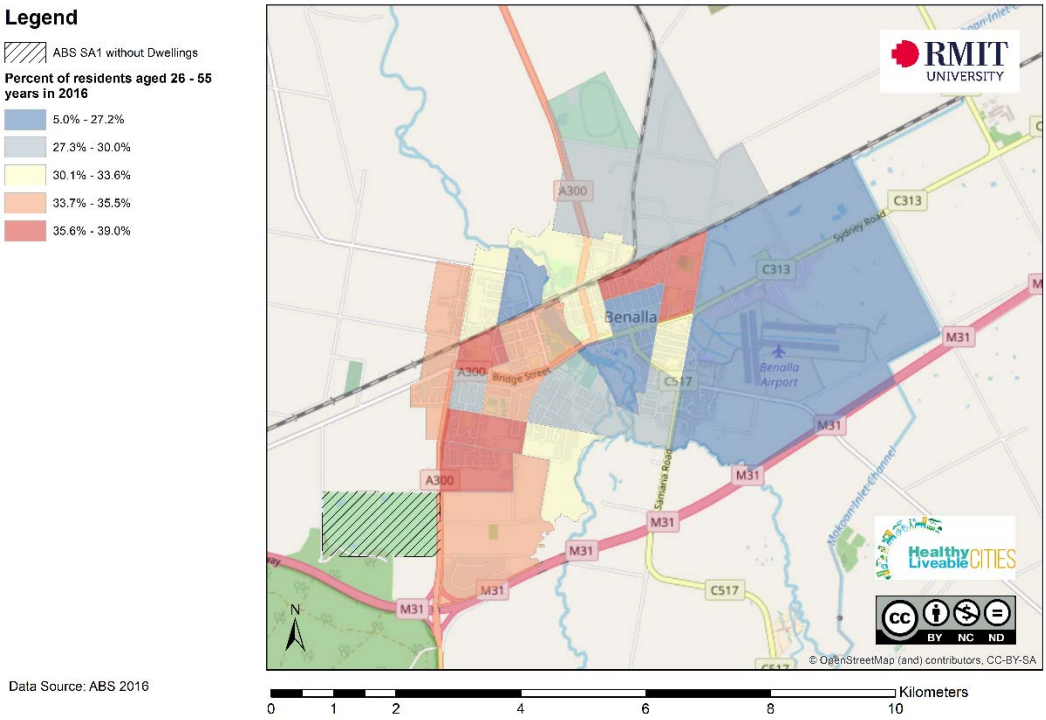


Figure 31: Age distribution of residents aged 26-55 years by SA1 for 2016

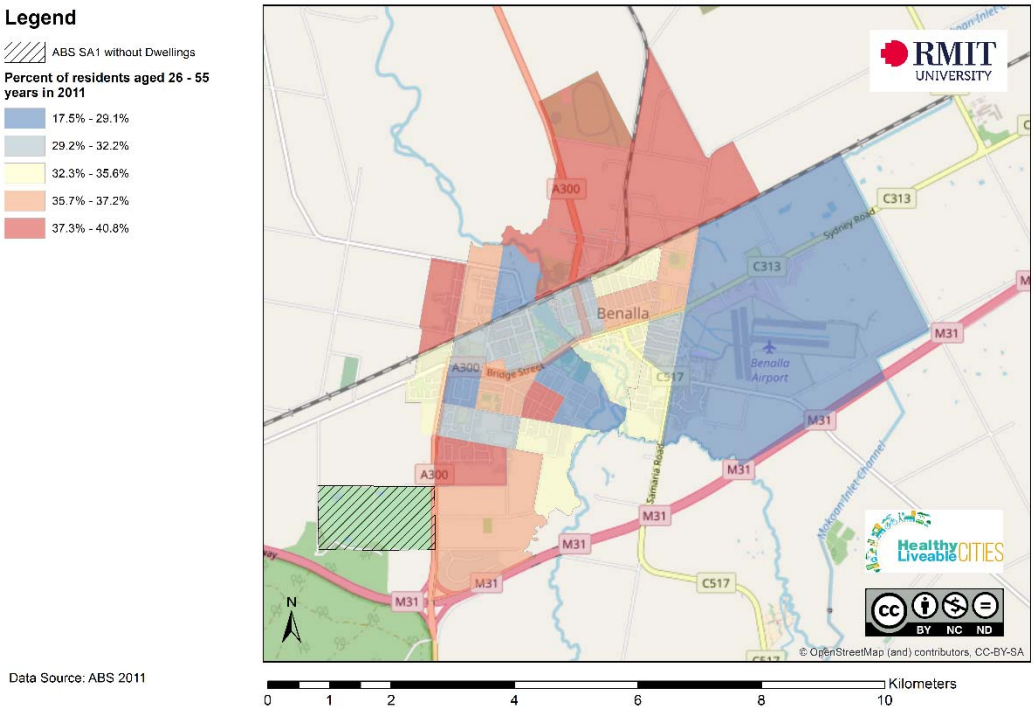


Figure 32: Age distribution of residents aged 26-55 years by SA1 for 2011

Resident Age Distribution: 56 years and over for 2016 and 2011

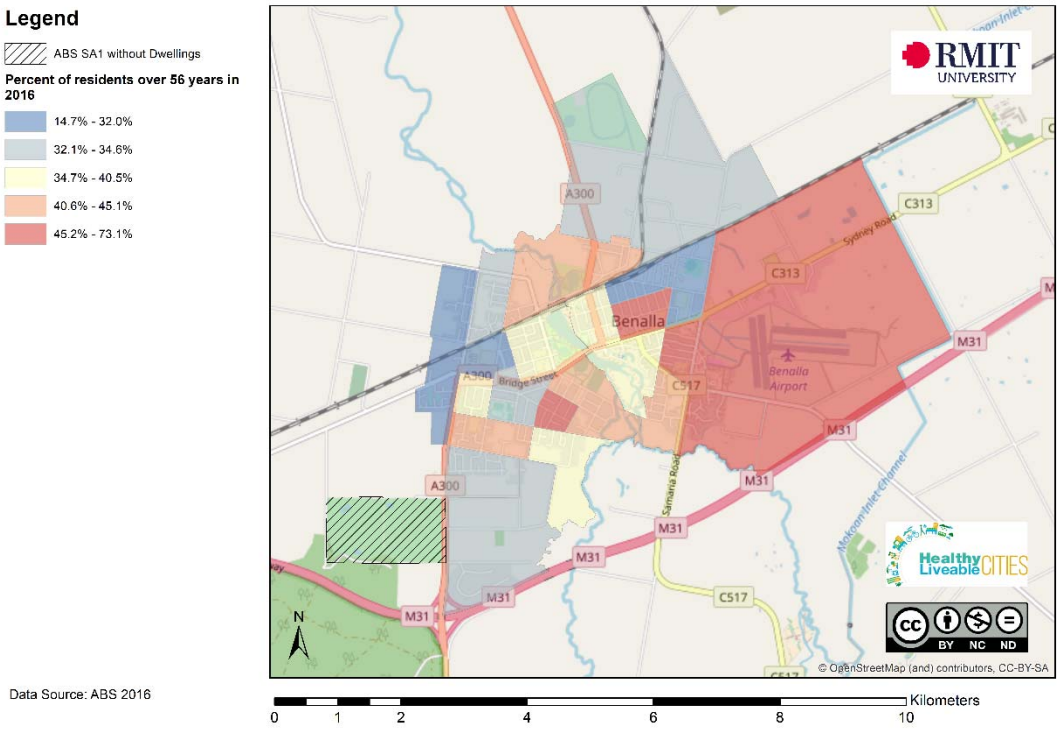


Figure 33: Age distribution of residents aged 56 years and older by SA1 for 2016

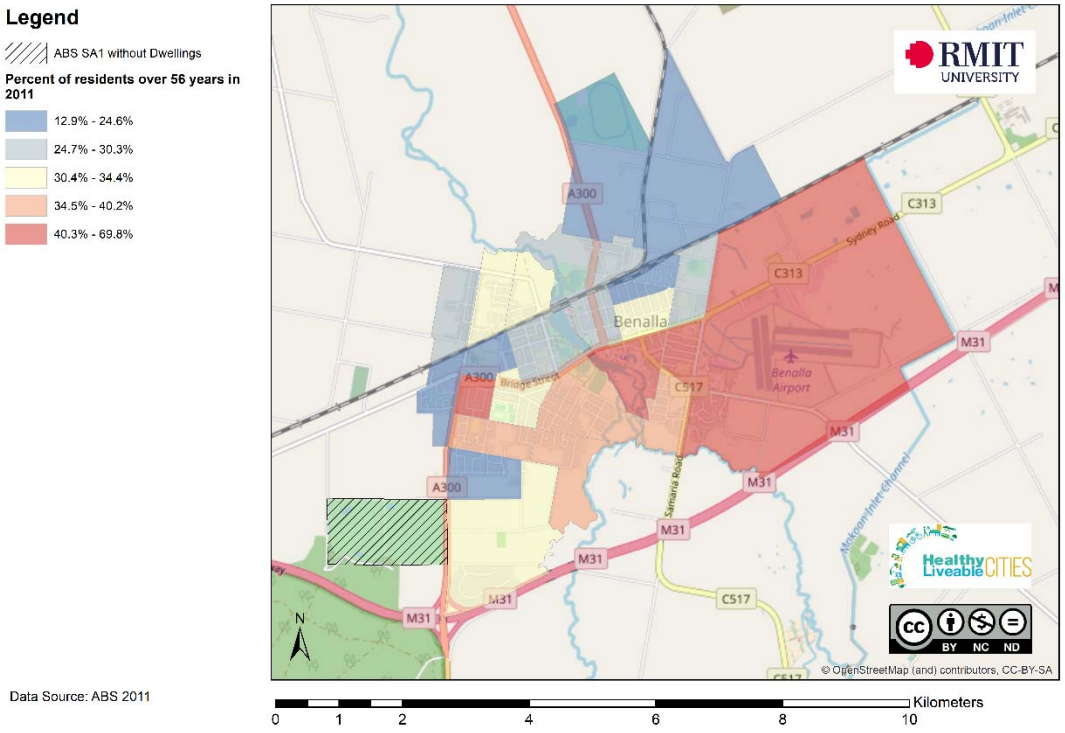


Figure 34: Age distribution of residents aged 56 years and older by SA1 for 2011

The age distribution for Benalla has changed over the last 2 Census periods of 2011 and 2016. Children aged between 0-12 years are located in concentrated pockets across Benalla particularly in the areas of social housing and around the centre of town. The proportion of children residing in the northern areas of town has also decreased over the 5 year period between 2011 and 2016.

Youth aged between 13-25 years are located in the south western area of town closer to the Hume Freeway which has increased in proportion since the last Census period and in the areas of social housing and between the railway line and Bridge Street in the centre of town. There has also been an increase in youth population between 2011 and 2016 in the north western areas of town north of the railway line.

Residents aged between 26-55 years tend to be located throughout the centre of the town with a slight decrease in the proportion of these residents living in the northern end of town in 2016 compared to 2011.

The majority of residents aged 56 years or older reside in the neighbourhood surrounding the Benalla Hospital and aged care facility on the outer edge of town. The built environment in this area is not walkable nor is the area serviced with shops, supermarkets or destinations which are the focus of the centre of the town suggesting that their location is not conducive to intergenerational social interactions. One neighbourhood in the centre of town has an increasing population of older residents who live independently and within close access to services and social interaction. The median age for Benalla has increased from 45 years to 49 years between 2011 and 2016 and the proportion of people aged 65 years and over has increased from 23% to 28% of the population between 2011 and 2016[10,11].

[10] http://www.censusdata.abs.gov.au/census_services/getproduct/census/2011/quickstat/UCL214002?opendocument
[11] http://www.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/UCL214002?opendocument

Summary and Conclusions

This Liveability Assessment has been completed by the *Healthy Liveable Cities Group* at RMIT University for DHHS and the Benalla Rural City Council. It has provided an assessment of liveability for 25 neighbourhoods across the township of Benalla using 18 liveability indicators. The report identifies issues of strength across the town as well as areas that could be identified for future improvement, intervention and evidence to support future advocacy actions. It is also suggested that these indicator based results are combined with existing and future community strengthening activities to gain further understanding of these results before formulation of future planning activities. In this respect, we encourage the use of the maps contained in this report as future community engagement tools. With support from Council these maps can be used for the following activities:

- start discussions with the Benalla community to understand the local context of these indicator results and the direct impact on the liveability of the area;
- facilitate across Council and whole of council discussions and future policy and planning development; and
- use these results to advocate for future funding applications and new partnership developments between council and external organisations.

In summary, Benalla provides residents with high levels of liveability and a wonderful rural lifestyle and a number of strengths have been identified in the liveability indicators to support this. These include:

- an active central activity area for the town that provides access to fresh food via supermarkets;
- good access to public transport stops in the centre of town;
- low unemployment in many areas;
- growing diversity in housing dwelling types;
- high levels of volunteering indicative of good community connectedness;
- limited access to electronic gaming machines;
- a walkable centre of town;
- good accessibility to public open space in most neighbourhoods of Benalla.

However, this assessment has also identified issues that require further exploration to improve the liveability of Benalla and consequently the health and wellbeing of residents living in the area. These include:

- a lack of public transport stops in the area surrounding the Benalla Hospital area;
- limited access to Public Open Space in the northern areas of the town;
- low levels of walkability in some neighbourhoods of town;
- an ageing population;
- poorer access to services for older people in the northern, western and south-western areas of town that do not meet community needs for successful ageing in place;
- high levels of population estimated incidence of family violence; and
- low rates of household internet access in some areas that appears to be co-located with areas of socioeconomic disadvantage.

This report has been developed to provide evidence of these neighbourhood based differences that exist in the rural location of Benalla and achieved to objective of demonstrating the value of spatial analysis for liveability assessment. It is hoped that this evidence will be used to support the development of future policy and planning initiatives that will further improve the liveability of the area.

References

Badland, H., Whitzman, C., Lowe, M., Davern, M., Aye, L., Butterworth, I., Hes, D. and Giles-Corti, B. (2014). Urban liveability: emerging lessons from Australia for exploring the potential for indicators to measure the social determinants of health. *Social Science & Medicine*, *111*, 64-73.

Dahlgren, G. and Whitehead, M. (1991). Rainbow model of health. In Dahlgren, G. (1995). *European Health Policy Conference: Opportunities for the future. Vol 11 – Intersectoral Action for Health.* Copenhagen: WHO Regional Office for Europe.

Davern, M. T., Gunn, L., Giles-Corti, B., & David, S. (2017). Best practice principles for community indicator systems and a case study analysis: How community indicators Victoria is creating impact and bridging policy, practice and research. *Social Indicators Research, 131(2),* 567-586.

Giles-Corti, B., Mavoa, S., Eagleson, S., Davern, M., Roberts B., Badland, H.M., (2014). *Transport Walkability Index: Melbourne.* McCaughey VicHealth Centre for Community Wellbeing, Melbourne: The University of Melbourne. ISBN: 978-0-9804620-3-6 (Digital).

Lowe, M., Whitzman, C., Badland, H., Davern, M., Aye, L., Hes, D., Butterworth, I. and Giles-Corti, B., (2015). Planning healthy, liveable and sustainable cities: how can indicators inform policy? *Urban Policy and Research*, *33*(2), pp.131-144.

Lowen, T., Davern, M. T., Mavoa, S., & Brasher, K. (2015). Age-friendly cities and communities: access to services for older people. *Australian Planner*, *52*(4), 255-265.

Saelens, B. E., Sallis, J. F., & Frank, L. D. (2003). Environmental correlates of walking and cycling: findings from the transportation, urban design, and planning literatures. *Annals of Behavioral Medicine, 25(2),* 80-91.

Victorian Department of Health and Human Services. (2015). *Victorian public health and wellbeing plan.* Melbourne: Victorian Government.

World Health Organization. (2007). *Global age-friendly cities: A guide*. World Health Organization.

World Health Organisation. (2017). *Social determinants of Health*. www.who.int/social_determinants/sdh_definition/en/. Retrieved October 28th.