

Appendix A—Case studies of SLAs

Each SLA possesses characteristics and circumstances that determine its RRMA and ARIA class and how its population is apportioned to ASGC Remoteness Areas classes. The following discussion of a selection of SLAs (Table 12) illustrates the diversity of characteristics and circumstances that can occur.

Table 12: ASGC Remoteness Areas¹, ARIA² and RRMA³ guide – selected SLAs

SLA code	SLA name	ASGC Remoteness Areas				ARIA			RRMA			
		Percentage of population living in each Remoteness Area				ARIA class ⁴	Mean	Min.	Max.	RRMA class		
10300	Balranald (A)	R	16.1	OR	83.9	MA	5.722	3.416	8.222	Rem2 ⁵		
10500	Baulkham Hills (A)	MC	92.4	IR	7.6	HA	1.092	0.000	2.033	M1		
11250	Broken Hill (C)	OR	100.0			A	3.343	3.240	3.511	R2 ⁵		
13751	Hastings (A) – Pt A	IR	100.0			A	1.737	1.640	1.876	R1 ⁶		
13754	Hastings (A) – Pt B	OR	14.2	IR	85.8	A	2.436	1.670	3.374	R1 ⁷		
33801	Hinchinbrook (S) (excl. Palm I.)	R	0.7	OR	99.3	MA	4.685	4.282	5.445	R3 ⁶		
33804	Hinchinbrook (S) – Palm Island	R	100.0			VR	9.200	9.200	9.200	R3 ⁶		
48540	Whyalla (C)	OR	100.0			A	2.929	2.450	3.536	R1 ⁷		
54281	Kalgoorlie/Boulder (C) – Pt A	OR	100.0			MA	3.937	3.870	4.022	Rem1 ⁶		
54284	Kalgoorlie/Boulder (C) – Pt B	VR	55.1	OR	0.0	R	44.9	VR	9.832	3.924	12.000	Rem1 ⁷

Note: The footnotes in this table are listed on page 24. A guide to SLA suffixes is on page 25.

Sources: ABS, DoHA and AIHW.

Balranald

The New South Wales Area of Balranald’s boundary has not changed since 1991. This SLA has inherited the RRMA class allocated to this SLA in 1994 (and based on 1991 census information). This SLA is RRMA class Rem2 (Other Remote Area with an urban centre population of less than 5,000 people). In 2001 the urban centre of this SLA still contained fewer than 5,000 people.

This SLA is highly heterogeneous because the ARIA index values of points contained within this SLA range from 3.416 (indicating an Accessible area) to 8.222 (indicating a Remote area). The SLA is ARIA class MA (Moderately Accessible) because it has a mean index value of 5.722. Because the SLA is heterogeneous the mean index value may not be indicative of levels of accessibility experienced by the population of this SLA.

In 2001 83.9% of this SLA’s population lived in Outer Regional Australia CDs (that is, in CDs with a mean index value of greater than 2.4 and less than or equal to 5.92) and 16.1% lived in Remote Australia CDs (that is, in CDs with a mean index value of greater than 5.92 and less than or equal to 10.53).

Baulkham Hills

The New South Wales Area of Baulkham Hills is RRMA class M1 (Capital Cities) because it is contained within the boundaries of a Capital City Statistical Division¹¹ (Sydney). The SLA is ARIA class HA (Highly Accessible) because it has a mean index value of 1.092. The SLA is slightly heterogeneous because the ARIA index values of grid points contained within this SLA range from 0.000 (indicating a Highly Accessible area) to 2.033 (indicating an Accessible area). In 2001 92.4% of this SLA's population lived in Major Cities of Australia and 7.6% lived in Inner Regional Australia.

Broken Hill

The New South Wales City of Broken Hill's boundary has not changed since 1991. This SLA has inherited the RRMA class allocated to this SLA in 1994 (and based on 1991 census information). This SLA is RRMA class R2 (Small Rural Centre with an urban centre population of 10,000–24,999). In 2001 the urban centre of this SLA still had a population of 10,000–24,999).

The SLA is ARIA class A (Accessible) because it has a mean index value of 3.343. The SLA is on the borderline of Accessible/Moderately Accessible because the cut-off ARIA index value is 3.51 and the SLA is mostly homogeneous (with the ARIA index values of grid points contained within this SLA ranging from 3.240 to 3.511). In 2001 100% of this SLA's population lived in Outer Regional Australia.

Hastings

The boundaries of the New South Wales Area of Hastings SLA have changed since 1991. In 2001 this SLA was split, with 42% of the area (including the urban centre of Port Macquarie) going to Hastings – Part A and the remainder to Hastings – Part B. Both of these inherited the RRMA class of R1 (Large Rural Centre with an urban centre population of 25,000–99,999) which was originally allocated to the 1991 SLA of Hastings (and based on 1991 census information). In 2001 the New South Wales Area of Hastings – Part A still contained an urban centre with a population of 25,000 – 99,999. However Hastings – Part B does not contain an urban centre of this size. The RRMA class assigned to Hastings – Part B does not reflect the true status of this SLA.

Hastings – Part A is ARIA class A (Accessible) because it has a mean index value of 1.737. Hastings – Part B is ARIA class A (Accessible) because it has a mean index value of 2.436. The ARIA index values of points within Hastings – Part A range from 1.640 to 1.876. The ARIA index values of points within Hastings – Part B range from 1.670 to 3.374. The people in Hastings – Part A live closer to the service centre of Port Macquarie than the people in Hastings – Part B. This explains why the ARIA index values in Hastings – Part A tend to be lower than those in Hastings – Part B. In 2001 100% of the population of Hastings – Part A lived in Inner Regional Australia. In that same year 85.8% of the population of Hastings – Part B lived in Inner Regional Australia and 14.2% lived in Outer Regional Australia.

¹¹ A Capital City Statistical Division represents the city in a wider sense. It should contain the anticipated development of the city for a period of at least 20 years (ABS 2003).

Hinchinbrook

The boundaries of the Queensland SLA of Hinchinbrook Shire have changed since 1991. In 1998 this SLA was split into Hinchinbrook Shire (excluding Palm Island) and Hinchinbrook Shire – Palm Island. Both SLAs inherited the RRMA class originally allocated to the 1991 SLA of Hinchinbrook Shire (and which was based on 1991 census information). These SLAs are RRMA class R3 (Other Rural Areas with an urban centre population of less than 10,000 people).

Because it is an island, Hinchinbrook Shire – Palm Island is significantly more remote than Hinchinbrook Shire (excluding Palm Island). Hinchinbrook Shire (excluding Palm Island) is ARIA class MA (Moderately Accessible) because it has a mean index value of 4.685. Hinchinbrook Shire – Palm Island is ARIA class VR (Very Remote) because it has a mean index value of 9.200.

In 2001 under ASGC Remoteness Areas, 0.7% of the population of Hinchinbrook Shire (excluding Palm Island) lived in Remote Australia and 99.3% in Outer Regional Australia. In that same year 100% of the population of Hinchinbrook Shire – Palm Island lived in Remote Australia.

Whyalla

The South Australian City of Whyalla's boundary has not changed since 1991. This SLA inherited the RRMA class allocated to it in 1994 (and based on 1991 census information). This SLA is RRMA class R1 (Large Rural Centre with an urban centre population of 25,000–99,999). In 2001 the population of the urban centre of Whyalla had declined to fewer than 25,000. The RRMA class assigned to this SLA therefore does not reflect the true status of this SLA. Therefore the RRMA class has become incorrect.

The SLA is ARIA class A (Accessible) because it has a mean index value of 2.929. In 2001, 100% of this SLA's population lived in Outer Regional Australia.

Kalgoorlie/Boulder

The boundaries of the Western Australian SLAs of Kalgoorlie/Boulder City – Part A and Kalgoorlie/Boulder City – Part B have changed since 1991. In 1991 this SLA was called Kalgoorlie/Boulder City and its boundary encompassed the city of Kalgoorlie/Boulder and stretched to the Western Australia/South Australia border. In 2001 the SLA was split into Kalgoorlie/Boulder City – Part A (which included the urban centre of Kalgoorlie/Boulder) and Kalgoorlie/Boulder City – Part B (which included the remaining land in the original SLA boundary). Both SLAs inherited the RRMA class of Rem1 (Large Remote Centre with an urban centre population of more than 5,000) that was originally allocated to Kalgoorlie/Boulder City in 1994 (and based on 1991 census information).

In 2001 Kalgoorlie/Boulder City – Part A still contained an urban centre with a population of more than 5,000 (Kalgoorlie/Boulder). However, because of the boundary change, Kalgoorlie/Boulder City – Part B does not contain an urban centre of this size. The RRMA class assigned to this SLA therefore does not reflect the true status of this SLA. The RRMA class of Kalgoorlie/Boulder City – Part A also does not reflect this SLA's true status. Kalgoorlie/Boulder City SLA may have originally been classed as being in a remote zone in 1994 due to the SLAs low population density. The new SLA of Kalgoorlie/Boulder – Part A has a higher population density than the much larger 1991 SLA of Kalgoorlie/Boulder City. If RRMA information were to be recalculated using 2001 SLA boundaries and 2001 census data it could result in Kalgoorlie/Boulder – Part A being reclassified from Rem1 to R1 (Large Rural Centre with an urban centre population of 25,000–99,999). Kalgoorlie/Boulder City –

Part A is ARIA class MA (Moderately Accessible) because it has a mean index value of 3.937. Kalgoorlie/Boulder City – Part B is ARIA class VR (Very Remote) because it has a mean index value of 9.832. This SLA is highly heterogeneous because the ARIA index values of points contained within this SLA range from 3.870 (indicating a Moderately Accessible area) to 12.000 (indicating a Very Remote area).

In 2001, 100% of the population of Kalgoorlie/Boulder City – Part A lived in Outer Regional Australia. In that same year 55.1% of the population of Kalgoorlie/Boulder City – Part B lived in Very Remote Australia, 44.9% in Remote Australia and a very small number in Outer Regional Australia.

Appendix B—Interpolating ARIA and ARIA+ to a 1 km grid

The ARIA and ARIA+ methodology results in ARIA and ARIA+ index values for 11,340 populated localities. This does not cover all of Australia's inhabitants because some live outside these localities. This problem is 'overcome by using a "grid-cell" approach: the values of remoteness were interpolated onto a 1 km notional grid across the whole of Australia. The interpolation procedure was an Inverse Distance Weighted algorithm which used the remoteness values of the six nearest localities¹², weighted by the distance of each point to the cell being analysed, to assign a remoteness value to that cell. (Where a cell was within a service centre in the relevant category, it was however assigned a distance value of zero.)' (DHAC & GISCA 2001).

¹² Except in the cases of islands, where a value based on the island localities only was used.

Appendix C—Population distributions

Despite the differences in their underlying methodologies, there is a rough consistency between the proportions of the population assigned to the least remote and most remote classes of the RRMA and ASGC Remoteness Areas classifications. Based on 2001 population estimates, 64% of the population live in the RRMA class of Capital Cities while 66% of the population live in the ASGC Remoteness Areas class of Major Cities of Australia. The areas covered by these classes are, however, not equivalent. The RRMA class of 'Capital Cities' includes all capital cities in Australia. The ASGC Remoteness Areas class of Major Cities of Australia does not include the capital cities of Hobart and Darwin and some areas on the fringes of some of the other capital cities. In all three classifications the proportion of the population living in remote areas is around 2–3% (see Table 13).

Table 13: Population estimates for remoteness classifications

RRMA (2001)			ARIA (1996)			ASGC Remoteness Areas (2001)		
Class	Population (million)	%	Class	Population (million)	%	Class	Population (million)	%
Capital Cities	12.4	64	Highly Accessible	14.9	81	Major Cities of Australia	12.9	66
Other Metropolitan Centres	1.5	8						
Large Rural Centres	1.2	6	Accessible	2.2	12	Inner Regional Australia	4.0	21
Small Rural Centres	1.3	7				Outer Regional Australia	2.0	10
Other Rural Areas	2.6	13	Moderately Accessible	0.8	4			
Remote Centres	0.2	1	Remote	0.2	1	Remote Australia	0.3	2
Other Remote Areas	0.3	2	Very Remote	0.2	1	Very Remote Australia	0.2	1
						Migratory	<0.1	

Notes

1. This table is based on a rough alignment of classes in the three classifications, as there is no precise mapping between them.
2. Population data for RRMA and ASGC Remoteness Areas are based on the 2001 census. 2001 population data were not available for ARIA, so 1996 census data are shown. The percentage of the population living in each area did not change substantially between 1996 and 2001.

Source: AIHW Population Estimates based on ABS Estimated Resident Population of SLAs at 30 June 1996 and 2001.

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