

COMMUNITY PROJECTOR

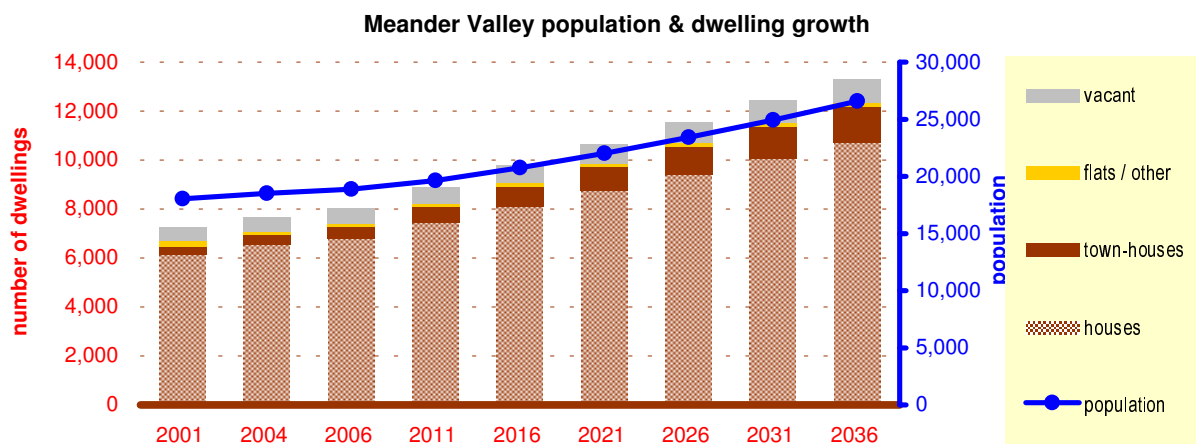
Meander Valley

2006 to 2021

The Community Projector develops a consistent set of population and dwelling projections that can be used as the basis for planning policies. It calculates what the population implications of development scenarios are, and conversely which development scenarios will generate forecasted populations. The Projector calculates future populations for Meander Valley from projections of building activity and occupancy rates, adding the results for every district to get an overall projection. While the initial settings for the Projector are based on the trends from the 1996–2001, these settings can be altered using more recent data and local knowledge.

The chart below shows the projected resident population for Meander Valley from 2001 to 2036, and the change in the number of dwellings over this period. These projections are not predictions; they are the result of development scenarios described in later tables. These assumptions can easily be varied.

The projection for 2011 is that Meander Valley will have a resident population of 19,644, accommodated mainly in 8,282 private dwellings, with 201 people living in institutional settings. The occupied private dwellings will include 7,459 houses (at an average occupancy of 2.47 persons per dwelling), 648 attached houses (at 1.34 persons), and 123 flats and other dwellings (at 1.23 persons). The district with the greatest dwelling growth over 2001 to 2011 will likely be Prospect Vale with 947 more dwellings.



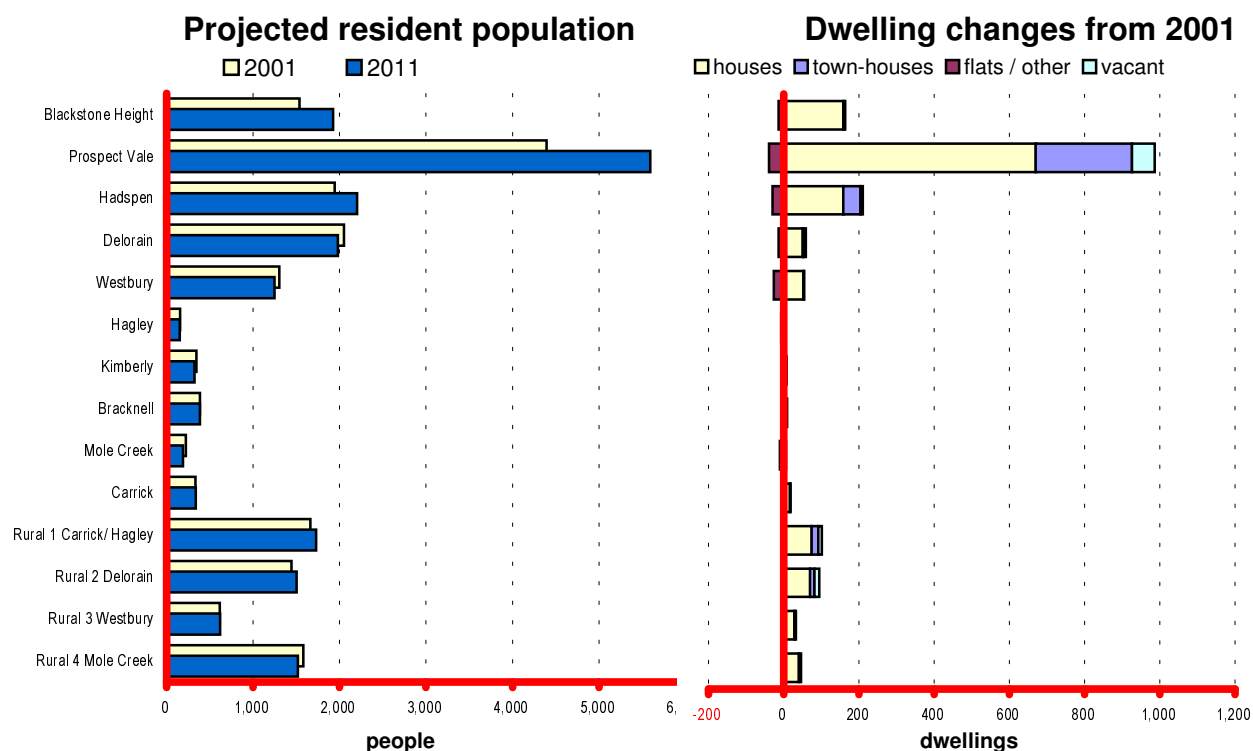
1. Projections for Meander Valley	2001	2004	2006	2011	2016	2021	2026	2031	2036	change 2006-2021
ABS medium projection	18,066	18,720	19,167	20,275	21,360	22,402	22,601			3,235
other projection								2,011		0
other projection										0
Projector Population	18,047	18,529	18,875	19,644	20,744	22,009	23,404	24,941	26,574	3,134
houses	17,028	17,536	17,831	18,424	19,306	20,326	21,475	22,766	24,153	2,495
town-houses	523	629	701	868	1,056	1,269	1,482	1,695	1,908	568
flats / other	342	195	166	151	158	167	176	186	196	1
institutions	155	168	178	201	224	247	270	294	317	70
Projector Dwellings	6,687	7,103	7,426	8,282	9,146	10,010	10,875	11,739	12,604	2,584
houses	6,151	6,543	6,805	7,459	8,113	8,767	9,421	10,075	10,729	1,962
town-houses	337	423	484	648	812	976	1,140	1,304	1,468	492
flats / other	221	137	123	123	131	139	147	155	163	16
vacant	551	579	601	659	717	775	834	892	951	174
Occupancy rates	2.70	2.61	2.54	2.37	2.27	2.20	2.15	2.12	2.11	1.21
houses	2.77	2.68	2.62	2.47	2.38	2.32	2.28	2.26	2.25	1.27
town-houses	1.55	1.49	1.45	1.34	1.30	1.30	1.30	1.30	1.30	1.15
flats / other	1.55	1.43	1.35	1.23	1.20	1.20	1.20	1.20	1.20	0.07

The data in this table is generated by running the model for all the future years shown. The forecasted years shown in the column titles in Table 1 can be altered to any you prefer, to match the ABS population forecasts. The assumptions can be altered on the following pages. The ABS population forecast or other forecast is entered from other data sources. The changes in occupancy rates, shaded blue in the bottom right corner, are the Marginal Occupancy Rates over the period (ie change in population divided by change in dwellings).

This table is based on assumptions shown in later tables

Population and dwelling projections for 2011

The projections for all the years shown in the preceding table and chart were developed using the same methodology, which is explained in the following pages using 2011 as an example. This sample year can be set to any year of choice. The two charts below illustrate the changes from the baseline year, 2001, until 2011, within each district of Meander Valley, while Table 2 shows the detailed projections for the number of dwellings and the resident population in 2011.



2. Projections for 2011	occupied dwellings in 2011				total dwelling	Estimated Resident Population (ERP) in 2011				
	houses	town-houses	flats / other	vacant dwelling		houses	town-houses	flats / other	perm. NDPs	ERP
Blackstone Height	612			22	634	1,922				1,922
Prospect Vale	2,152	486		179	2,817	4,845	653		90	5,589
Hadspen	757	69		30	856	2,109	90			2,199
Delorain	796		102	111	1,009	1,798		122	55	1,975
Westbury	546	13		48	607	1,227	17			1,244
Hagley	53			5	58	124			25	149
Kimberly	120		9	24	153	307		12		319
Bracknell	132			11	143	380				380
Mole Creek	76		12	6	94	167		16	2	185
Carrick	142	3		13	158	328	4			331
Rural 1 Carrick/ Hagley	643	59		71	773	1,640	81		2	1,723
Rural 2 Delorain	576	18		99	693	1,449	23		27	1,500
Rural 3 Westbury	247			38	285	613				613
Rural 4 Mole Creek	607			106	713	1,515				1,515
Meander Valley	7,459	648	123	659	8,282	18,424	868	151	201	19,644

The projected total dwellings in 2011 includes vacant dwellings. The projected population for each district is calculated by multiplying the projected numbers of occupied dwellings by the projected occupancy rate, for each dwelling type. The projected institutional population is calculated by projecting forward the 2001 Census count at 3.0%. The results for Meander Valley are by adding the district results. NDPs = Non-Private Dwellings.

The projected number of occupied private dwellings in 2011 is shown on the left side of Table 2. Projections The number of vacant dwellings in each locality is calculated by applying a vacancy rate to the number of occupied dwellings. The future vacancy rate for each locality is set in Table 4. The default vacancy rates, shown by cells having a yellow background, are from the 2001 Census. These can be overridden if better estimates are available, in which case the background changes to orange. The Council's average vacancy rates is calculated for any year as the weighted sum of the vacancy rates in each locality.

The Estimated Resident Population (ERP) in 2011 is shown on the right side of Table 2. The ERP comes by adding the population projected to be living in private dwellings – houses, semis and flats – with those in non-private dwellings (NPDs).

The population in private dwellings is calculated by multiplying the projected number of occupied dwellings by the projected number of people per dwelling, or occupancy rate. These occupancy rates are calculated in the next section. The NPD population is calculated by projecting the 2001 number at the rate shown in Table 6 later.

3. Projected changes 2001–2011	private dwelling changes, 2001–2011					change in permanent residents, 2001–2011				
	houses	town-houses	flats / other	vacant	total	houses	town-houses	flats / other	institutions	total
Blackstone Height	up 158	dn 3	dn 11	up 5	up 149	417	-5	-21	0	391
Prospect Vale	up 670	up 256	dn 39	up 60	up 947	886	285	-61	21	1,131
Hadspen	up 158	up 46	dn 30	up 6	up 180	250	58	-49	0	259
Delorain	up 50	dn 14	up 4	up 5	up 45	-91	-19	-16	13	-114
Westbury	up 52	dn 4	dn 22	up 2	up 28	-12	-5	-38	0	-55
Hagley	dn 6	same	same	dn 1	dn 7	-27	0	0	6	-21
Kimberly	same	same	up 6	up 1	up 7	-31	0	8	0	-23
Bracknell	up 8	same	same	up 1	up 9	3	0	-3	0	-0
Mole Creek	dn 10	same	up 6	dn	dn 4	-40	-4	9	0	-35
Carrick	up 16	same	same	up 1	up 17	1	1	0	0	1
Rural 1 Carrick/ Hagley	up 74	up 18	same	up 9	up 101	50	18	-3	0	65
Rural 2 Delorain	up 70	up 12	dn 6	up 13	up 89	31	13	-12	6	38
Rural 3 Westbury	up 28	same	same	up 4	up 32	6	-3	0	0	3
Rural 4 Mole Creek	up 40	same	dn 6	up 6	up 40	-48	0	-16	0	-64
Meander Valley	up 1,308	up 311	dn 98	up 114	up 1,635	1,396	338	(203)	46	1,578

Note that the population for Meander Valley is the sum of the 14 localities.

Table 3 shows the changes over the period 2001–2011 given the projections in Table 2. Changes in the number of private dwellings is shown on the left, population changes on the right. These dwelling changes are by subtracting the 2001 Census count from the 2011 projections. The population changes are by the difference between the 2001 ERP and the projected 2011 ERP, so measure changes in the number of permanent residents.

Making occupancy rate projections

The projected occupancy rates (ie persons per dwelling) for each locality and type of dwelling are calculated for any future year by applying a rate of change (percent per annum) to baseline occupancy rates from the 2001 Census. This is shown in Table 4 following, where 2011 is the projected year. There are several steps in this process, to allow for differences between the Estimated Resident Population, which is being projected, and the way the population is counted in the Census.

The first three columns of Table 4 show the annual rates at which the occupancy rates of houses, semi's and flats are projected to change from 2001. A rate of -1% means that an occupancy rate of 3.00 would fall by 0.03 over a year. The default change rates are calculated by smoothing the 1996–2001 trends (calculated in Table 5 later) to reduce extreme changes. The default rates can be overridden, say to slow changes in localities whose occupancy rate has peaked, or to set a fixed rate across all localities or dwelling types. Default (trend) rates have a yellow background; altered cells are orange.

The projected occupancy rates for 2011 are calculated by applying the change rate to the 2001 occupancy rates, for each locality and dwelling type. The 2001 occupancy rates are based on Census data. Upper and lower limits for the occupancy rates have been set to restrain projections. The limits for houses are 2.2 to 3.6; for terrace and semi-detached, 1.3 to 2.6; and for flats and other dwellings, 1.2 to 2.0. These limits can be altered but not exceeded in projections.

Table 4 also shows the future vacancy rate which is used for calculating dwelling numbers. In any future year, the percentage of private dwellings shown here will be vacant. The default vacancy rates (which have yellow backgrounds), are the 2001 Census rate; orange cells have had an alternative rate entered.

The final columns of Table 4, 'Allocated 2001 ERP', show how the 2001 ERP (estimated resident population) is apportioned between private and non-private dwellings or NPDs, across the localities. In 2001, of the 313 people counted in NPDs in Meander Valley on Census night, 50% or 157 might be regarded as permanent residents (eg those in nursing homes, boarding houses and staff quarters), while the rest could be regarded as visiting (eg those in motels or boarding schools).

To provide a baseline for the projections, the 2001 ERP for each district in Meander Valley is calculated by distributing the ERP in private dwellings (ie 18,066 minus 155 = 17,912) among them proportional to their counted population in private dwellings.

4. Projected occupancy rates	Projected occupancy change, 2001–2011			Projected occupancy rate in 2011				future vacancy rate	2001 ERP	
	houses	town-houses	flats / other	houses	town-houses	flats / other	all dwelling		in NPDs	private dwelling
Blackstone Height	-0.5%	-2.0%	-1.2%	3.14	1.30	1.69	3.14	3.5%		1,532
Prospect Vale	-1.6%	-1.6%	-1.9%	2.25	1.34	1.26	2.08	6.4%	70	4,389
Hadspen	-1.0%	-5.3%	1.0%	2.79	1.30	1.81	2.66	3.6%		1,940
Delorain	-1.1%	-5.3%	-1.5%	2.26	1.30	1.20	2.14	11.0%	42	2,047
Westbury	-1.0%	-1.6%	-1.4%	2.25	1.30	1.48	2.23	7.9%		1,298
Hagley	-0.8%	-2.0%	-1.6%	2.34	1.30	1.35	2.34	9.2%	19	150
Kimberly	-0.9%	-2.0%	-1.6%	2.56	1.30	1.35	2.47	15.8%		342
Bracknell	-0.5%	-2.0%	-1.6%	2.88	1.30	1.35	2.88	7.5%		380
Mole Creek	-1.6%	-2.0%	-1.6%	2.20	1.30	1.35	2.08	6.1%	2	219
Carrick	-1.1%	-2.0%	-1.6%	2.31	1.30	1.35	2.29	8.5%		330
Rural 1 Carrick/ Hagley	-0.9%	-1.1%	-4.1%	2.55	1.37	1.20	2.45	9.2%	2	1,657
Rural 2 Delorain	-1.0%	-2.0%	-4.1%	2.52	1.30	1.20	2.48	14.2%	21	1,440
Rural 3 Westbury	-1.0%	-2.0%	-1.6%	2.48	1.30	1.35	2.48	13.4%		610
Rural 4 Mole Creek	-0.9%	-2.0%	-0.8%	2.50	1.30	1.48	2.50	14.9%		1,578
Meander Valley	-1.1%	-2.0%	-1.3%	2.47	1.34	1.23	2.36	9.2%	155	17,912
Northern Region	-0.8%	0.4%	-1.6%	2.47	1.74	1.32	2.39	13.6%	1,797	131,158
Tasmania	-0.9%	-0.3%	-1.1%	2.48	1.65	1.45	2.36	12.9%	6,469	465,195
Meander Valley std. dev'n	0.3%	1.3%	1.3%	0.27	0.02	0.18	0.30	Residency Ratio		1.051

If the occupancy change rate for a dwelling type in a locality is more than one standard deviation different from the average for the whole area, the projected occupancy change rate is taken as that which is just one standard deviation from the average. If the occupancy change rate is within the normal range for the area (within one standard deviation of average), it is projected forward at the average change rate of the locality, the area and the region.

The Residency Ratio calculated at the end of Table 4 is used to convert the 2001 occupancy rates from counted person per dwelling to residents per dwelling. The Residency Ratio equals the ERP in private dwellings divided by the Census count in private dwellings. For Meander Valley, the Census count was 17,349 in 2001, of whom 17,036 lived in private dwellings and 313 lived in non-private dwellings. The 2001 ERP is estimated by the ABS as 18,066 people, of whom 17,910 lived in private dwellings and 157 were permanent residents of non-private dwellings. This means that the Residency Ratio is 1.051.

5. Occupancy rates 1996–2001 (count)	persons counted / dwelling, 2001				counted / dwelling, 1996			Occupancy change, % pa		
	houses	town-houses	flats / other	all dwelling	houses	town-houses	flats / other	houses	town-houses	flats / other
Blackstone Height	3.2	1.5	1.8	3.11	3.2	1.8	1.8	dn 0.3%	dn 3.2%	dn 0.3%
Prospect Vale	2.5	1.5	1.5	2.38	2.8	1.7	1.7	dn 1.6%	dn 2.0%	dn 2.6%
Hadspen	3.0	1.3	1.6	2.83	3.1	1.8	1.4	dn 1.2%	dn 5.6%	up 2.1%
Delorain	2.4	1.3	1.3	2.27	2.6	2.3	1.4	dn 1.4%	dn 8.7%	dn 1.4%
Westbury	2.4	1.2	1.6	2.32	2.5	1.4	1.7	dn 1.2%	dn 1.9%	dn 1.0%
Hagley	2.4	1.5	1.5	2.42	2.5	1.8	1.7	dn 0.6%	dn 3.2%	dn 1.6%
Kimberly	2.7	1.5	1.5	2.64	2.8	1.8	1.7	dn 0.8%	dn 3.2%	dn 1.6%
Bracknell	2.9	1.5	1.5	2.91	3.0	1.8	1.7	dn 0.4%	dn 3.2%	dn 1.6%
Mole Creek	2.3	1.5	1.5	2.26	2.6	1.8	1.7	dn 2.3%	dn 3.2%	dn 1.6%
Carrick	2.5	1.5	1.5	2.43	2.7	1.8	1.7	dn 1.4%	dn 3.2%	dn 1.6%
Rural 1 Carrick/ Hagley	2.7	1.5	1.5	2.58	2.8	1.4	2.7	dn 0.7%	up 1.3%	dn 8.5%
Rural 2 Delorain	2.7	1.5	1.5	2.64	2.8	1.8	2.1	dn 1.2%	dn 3.2%	dn 5.5%
Rural 3 Westbury	2.6	1.5	1.5	2.65	2.8	1.8	1.7	dn 1.2%	dn 3.2%	dn 1.6%
Rural 4 Mole Creek	2.6	1.5	1.5	2.62	2.8	1.8	1.5	dn 0.9%	dn 3.2%	up 0.8%
Meander Valley	2.63	1.52	1.53	2.54	2.78	1.81	1.66	dn 1.1%	dn 3.2%	dn 1.6%
Northern Region	2.6	1.6	1.5	2.43	2.7	1.6	1.6	dn 0.8%	up 0.4%	dn 1.6%
Tasmania	2.6	1.6	1.5	2.44	2.7	1.7	1.6	dn 0.9%	dn 0.3%	dn 1.1%
Meander Valley std. dev'n	0.2	0.1	0.1	0.25	0.2	0.2	0.3	0.5%	2.1%	2.6%

Results more than one standard deviation above average are shaded green; those over one standard deviation below average are shaded pink.

Table 5 calculates occupancy rates in 2001 and 1996, and the annual rate of change over this period, for each district, using the Census data in Tables 9 and 10. The occupancy rates are in 'counted persons' per occupied private dwelling. The Occupancy Change is the 1996-2001 change averaged over the five years, unless there are fewer than 10 dwellings of a type, in which case the Meander Valley average change is used. While these changes are calculated on the basis of 'counted persons', it is assumed the same rate of change applies when residents are counted.

Making dwelling projections

The annual change in the number of dwellings is a key determinant of population growth. The default rates used in the Projector are the trend between the 1996 and 2001 Censuses. These default rates can be altered using knowledge of building approvals, planning schemes and market trends.

The dwelling projections for 2011 are calculated in Table 6 below. The left side shows the projected dwelling growth rates since the 2001 Census (in extra dwellings per year); the right side shows the resultant number of dwellings in 2011. Cells with a yellow background are calculated from 1996–2001 trends; cells with orange background have had other growth rates entered directly.

The change rates for the number of permanent residents in non-private dwellings is also set in Table 6. The default (yellow) number in each district in 2011 is calculated by increasing the estimated number of permanent residents in NPDs in 2001 by an NPD Growth rate, set at 3.0%. The default NPD growth for any district can be overridden based on local knowledge (eg if there will be changes in aged housing, nursing homes, boarding houses or staff quarters during the forecast period). Changes in non-private dwellings catering for visitors (eg motels and boarding schools) are not counted.

The dwelling changes in Table 6 represent net extra dwellings, including demolitions. A negative number signifies more demolitions than new completions. Changes in dwelling numbers should generally be a bit lower than the comparable building approvals, to allow for demolitions and non-completions.

A 'dwelling limit' can be set in the right-hand column to place a ceiling on dwelling growth in any locality, if there are site or planning restrictions. If the calculated number of dwellings for any year is going to exceed the locality's limit, the projection (as shown in Table 1) is restricted to the limit.

6. Dwelling trends from 2001	Annual change in private dwellings				Change p.a. in perm. NPDs	Projected dwellings in 2011 (no limit)				limit
	houses	town-houses	flats / other	total dwelling		houses	town-houses	flats / other	vacant	or total
Blackstone Height	16	(1)	(4)	up 11		612			22	634
Prospect Vale	67	26	(27)	up 68	2	2,152	486		179	2,817
Hadspen	16	5	(6)	up 15		757	69		30	856
Delorain	5	(3)		up 2	1	796		102	111	1,009
Westbury	5	0	(3)	up 2		546	13		48	607
Hagley	(1)		(1)	dn 1	1	53			5	58
Kimberly			1	up 1		120		9	24	153
Bracknell	1			up 1		132			11	143
Mole Creek	(1)	(1)	1	dn 1		76		12	6	94
Carrick	2		(1)	up 1		142	3		13	158
Rural 1 Carrick/ Hagley	7	2	(2)	up 7		643	59		71	773
Rural 2 Delorain	7	1	(2)	up 6	1	576	18		99	693
Rural 3 Westbury	3		(2)	up 1		247			38	285
Rural 4 Mole Creek	4	(1)	(2)	up 2		607			106	713
Meander Valley	131	27	(49)	up 113	5	7,459	648	123	765	8,995
Northern Region	373	183	(257)	up 310	54	48,468	5,002	769	8,528	62,767
Tasmania	1,348	292	(445)	up 1,239	194	169,710	12,622	10,794	28,647	221,773

The default annual change in private dwellings is the average over 1996–2001, shown if the cells are shaded yellow. If other rates are entered, the cell's background turns orange. The projected total dwellings in the right hand column can be overridden by entering dwelling limits for any locality, where there are local capacity constraints. Localities without limits have yellow cells showing the total dwelling in the year. Localities where limits have been set orange.

ABS data

Table 2 gives some ABS data for Meander Valley, extracted from the National Regional Profile data series (updated annually). The most recent estimated population and the building approvals data can be used to calibrate the Community Projector.

7. ABS estimates (year ending 30/6)	1999	2000	2001	2002	2003	2004	2005	2006	trend
Resident population	17,697	17,835	18,066	18,164	18,275	18,615	18,621		0.9%
Dwelling approvals									
houses	82	101	77	85	101				88
other dwellings	4	4	7	4	0				4
total dwellings	86	105	84	89	101				91
Est'd completions									
houses		91	89	81	93				
other dwellings		4	4	7	4	0			
total dwellings		95	93	88	97				

The trend is calculated as the average of the annual changes. Dwelling completions are calculated on the basis of assume a six-month delay from approval for houses and a 12-month delay for other dwellings.

Tables 9 and 10 provide the 2001 and 1996 Census data from which the other tables are calculated.

8. Census 2001	occupied and vacant dwellings 2001					counted population 2001				
	houses	town-houses	flats / other	vacant	total	in houses	town-houses	flats / other	NPDs	total
Blackstone Height	454	3	11	17	485	1,432	5	20		1,457
Prospect Vale	1,482	230	39	119	1,870	3,766	350	58	139	4,313
Hadspen	599	23	30	24	676	1,768	30	47		1,845
Delorain	746	14	98	106	964	1,797	18	132	84	2,031
Westbury	494	17	22	46	579	1,178	21	36		1,235
Hagley	59			6	65	143	0		38	181
Kimberly	120		3	23	146	321	0	4		325
Bracknell	124			10	134	358	0	3		361
Mole Creek	86		6	6	98	197	4	7	3	211
Carrick	126	3		12	141	311	3			314
Rural 1 Carrick/ Hagley	569	41		62	672	1,513	60	3	3	1,579
Rural 2 Delorain	506	6	6	86	604	1,349	10	11	42	1,412
Rural 3 Westbury	219			34	253	577	3			580
Rural 4 Mole Creek	567		6	100	673	1,486	0	15		1,501
Meander Valley	6,151	332	220	651	7,354	16,196	504	336	313	17,349
Northern Region	44,738	3,176	3,335	8,058	59,307	114,664	5,064	5,019	3,594	128,341
Tasmania	156,226	9,698	15,248	26,874	208,046	403,117	15,790	23,550	12,937	455,394

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9. Census 1996	occupied and vacant dwellings 1996					counted population 1996				
	houses	town-houses	flats / other	vacant	total	houses	town-houses	flats / other	NPDs	total
Blackstone Height	375	9	32	11	427	1,201	29	59		1,289
Prospect Vale	1,147	102	176	114	1,539	3,166	172	300	121	3,759
Hadspen	520		62	42	624	1,631	6	88		1,725
Delorain	721	30	96	71	918	1,863	68	139	95	2,165
Westbury	468	19	36	48	571	1,189	26	62		1,277
Hagley	62		3	3	68	155	0	5		160
Kimberly	120			20	140	335	0	4		339
Bracknell	120			7	127	354	0	12		366
Mole Creek	91	3	3	6	103	236	3	11	7	257
Carrick	118	3	3	7	131	314	3	16		333
Rural 1 Carrick/ Hagley	532	32	12	86	662	1,469	44	32	9	1,554
Rural 2 Delorain	471		18	93	582	1,335	0	38	30	1,403
Rural 3 Westbury	205		9	26	240	576	0	15		591
Rural 4 Mole Creek	547	3	15	92	657	1,505	13	22	3	1,543
Meander Valley	5,516	203	473	631	6,823	15,329	367	784	270	16,750
Northern Region	42,873	2,263	4,618	7,497	57,251	114,667	3,545	7,565	3,811	129,588
Tasmania	149,484	8,236	17,475	25,927	201,122	403,408	13,638	28,503	12,715	458,264

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Vehicle forecasts for Meander Valley

Table 10 estimates the number of vehicles per occupied dwelling and in total for each district in 2011.

Each area's rate of change in vehicles/dwelling over 1996–2001 is calculated. Then a projected annual change rate for 2001–2011 is calculated by smoothing the past rates. These projected rates can be overridden by entering other assumptions in the 'Adopted change' column. The vehicles/dwelling rate for 2011 is calculated by projecting forward the 2001 rate at the adopted change rate.

In the final three columns of the table, the number of vehicles resulting from this projected vehicle/dwelling rate is calculated by multiplying by the projected number of occupied dwellings.

10. Vehicle Ownership	vehicles per occupied dwelling					vehicles		
	average in	annual	smooth	future	Proj'n in	Est. 2001	Proj'n in	Change
	2001	change 1996-	annual	change rate				
Blackstone Height	2.15	0.023	0.023	0.023	2.38	1,004	1,457	453
Prospect Vale	1.57	0.001	0.001	0.001	1.58	2,748	4,178	1,430
Hadspen	1.83	0.001	0.001	0.001	1.84	1,192	1,515	323
Delorain	1.50	-0.005	-0.005	-0.005	1.45	1,287	1,300	13
Westbury	1.68	0.033	0.024	0.024	1.92	895	1,074	179
Hagley	1.90	0.019	0.019	0.019	2.08	111	110	-1
Kimberly	2.07	0.015	0.015	0.015	2.22	254	286	32
Bracknell	2.08	0.048	0.024	0.024	2.32	257	306	49
Mole Creek	1.66	-0.022	-0.012	-0.012	1.53	152	134	-18
Carrick	1.85	-0.004	-0.004	-0.004	1.80	238	261	23
Rural 1 Carrick/ Hagley	1.95	-0.000	-0.000	-0.000	1.94	1,188	1,364	176
Rural 2 Delorain	1.92	0.008	0.008	0.008	2.00	997	1,188	191
Rural 3 Westbury	1.95	-0.010	-0.010	-0.010	1.85	427	457	30
Rural 4 Mole Creek	1.90	0.010	0.010	0.010	2.01	1,091	1,219	128
Meander Valley	1.77	0.006	0.005	0.005	1.96	11,841	14,849	3,008
Northern Region	1.60	0.005	0.005	0.005	1.66	82,162		
Tasmania	1.57	0.005	0.005	0.005	1.62	284,215		
Meander Valley Std Dev'n	0.19	0.018	0.013	0.013	0.28			

The projected annual change is calculated from 1996–2001 data by smoothing extreme change rates to be only one standard deviation from the average for Meander Valley. If the vehicles/dwelling change rate adopted to 2011 is the same as that projected, the adopted rate cells are yellow. If they have been overridden by other estimates, the cells are orange. Future rates for Meander Valley are calculated as the average of the 14 districts, weighted by their projected population in 2011.

11. Vehicles per household	No. of vehicles, 2001					No. of vehicles, 1996				
	none	one	two	three +	average	none	one	two	three +	average
Blackstone Height	6	80	247	122	2.1	6	83	227	82	2.0
Prospect Vale	119	702	659	175	1.6	94	606	554	141	1.6
Hadspen	22	194	305	101	1.8	13	190	273	90	1.8
Delorain	115	317	263	111	1.5	103	327	291	108	1.5
Westbury	36	208	149	95	1.7	48	229	173	59	1.5
Hagley	6	17	26	17	1.9	3	22	18	13	1.8
Kimberly	6	28	47	37	2.1	3	34	50	30	2.0
Bracknell	3	29	55	34	2.1	12	31	60	26	1.8
Mole Creek	3	37	37	10	1.7	3	38	35	17	1.8
Carrick	10	26	67	21	1.8	3	37	50	22	1.9
Rural 1 Carrick/ Hagley	33	172	237	159	1.9	25	162	216	142	1.9
Rural 2 Delorain	15	161	207	118	1.9	24	145	212	106	1.9
Rural 3 Westbury	12	66	77	61	2.0	6	57	88	53	2.0
Rural 4 Mole Creek	13	187	218	124	1.9	23	175	219	110	1.9
Meander Valley	401	2,232	2,599	1,183	1.8	360	2,139	2,475	991	1.7
Northern Region	4,835	19,005	17,659	7,195	1.6	5,106	18,414	17,223	6,592	1.6
Tasmania	17,911	69,289	60,791	23,851	1.6	18,676	66,658	59,137	21,843	1.5

The average number of vehicles per household is calculated by assuming that households with 3+ vehicles average 3.3 each. Motorbikes are not included.