Melbourne Urban Vegetation Cover: 2018 Southern Region













Date: 19/6/2019

Project: Metropolitan monitoring and analysis of vegetation cover, heat and land use

Client: Department of Environment, Land, Water and Planning, Victorian Government

Report: Melbourne Vegetation Cover 2018, Southern Region

Project Team:

Associate Professor Joe Hurley, RMIT University
Mr Alex Saunders, University of Western Australia
Associate Professor Marco Amati, RMIT University
Dr Bryan Boruff, University of Western Australia
Dr Alan Both, RMIT University
Dr Chayn Sun, RMIT University
Dr Peter Caccetta, CSIRO Data 61
Dr John Duncan, University of Western Australia

Reference: Hurley, J., Saunders, A., Amati, M., Boruff, B., Both, A., Sun, C., Caccetta, P., and Duncan, J. (2019) *Melbourne Vegetation Cover 2018, Southern Region*, Department of Environment, Land, Water and Planning, Melbourne, Australia.





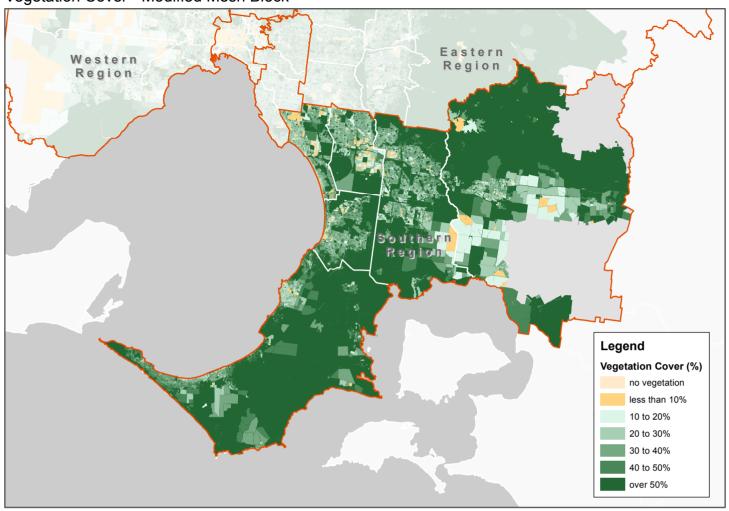


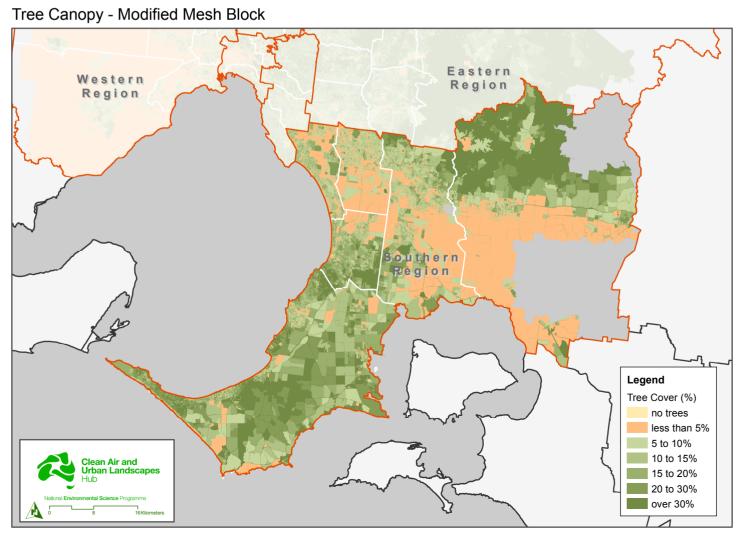




Southern Region

Vegetation Cover - Modified Mesh Block

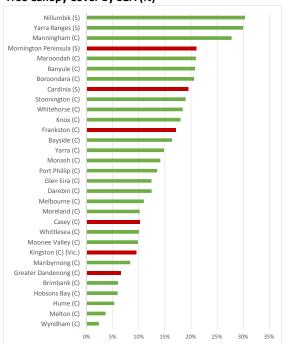




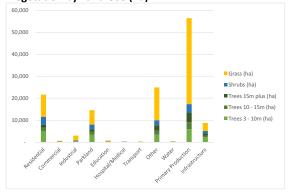
Vegetation Cover and Tree Canopy (2018)

Southern Region - Urban and Non-urban Areas

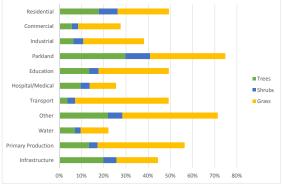
Tree Canopy Cover by LGA (%)



Vegetation by Land Use (ha)



Vegetation - Yield by Land Use (%)



Melbourne Metropolitan Region

Vegetation and Tree Canopy (2018)

Highlights

High tree canopy yield on industrial land (6.4% compared with 4.5% for the whole metropolitan region).

High total vegetation yield on industrial land (38.2% compared with 28.% for the whole metropolitan region).

Low percentage of total vegetation on parkland (11.1% compared with 16.% for the whole metropolitan region).

High percentage of total vegetation on "other" land (19.% compared with 14.6% for the whole metropolitan region).

Moderately low percentage of tree canopy on parkland (14.6% compared with 20.1% for the whole metropolitan region).

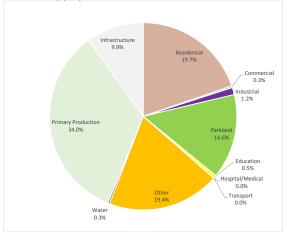
Moderately high percentage of tree canopy on "other" land (19.4% compared with 15.6% for the whole metropolitan region).

Moderately high total vegetation yield on commercial land (27.6% compared with 22.3% for the whole metropolitan region).

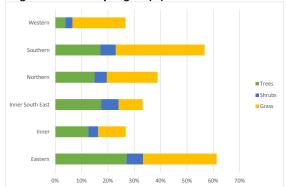
Moderately high total vegetation yield on residential land (49.4% compared with 40.% for the whole metropolitan region).

Moderately high total vegetation yield on education land (49.3% compared with 40.9% for the whole metropolitan region).

Tree Canopy by Land Use



Vegetation Cover by Region (%)



Notes

- 1. Analysis based on the 2018 data capture (limited to features where data coverage is greater then 90%), combining both urban and non-urban areas.
- 2. Mesh Blocks classified as "other" are representative of land uses which could not be easily placed in one of the other nine categories due to the nature of the land use, or due to evidence of high mixed use.





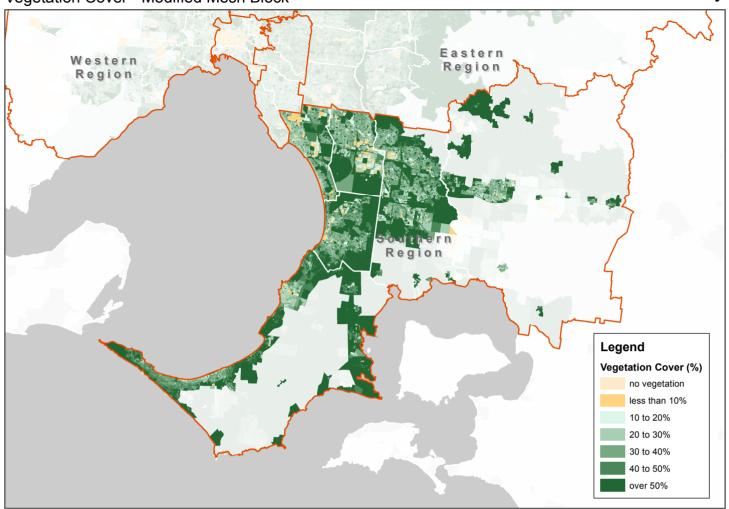


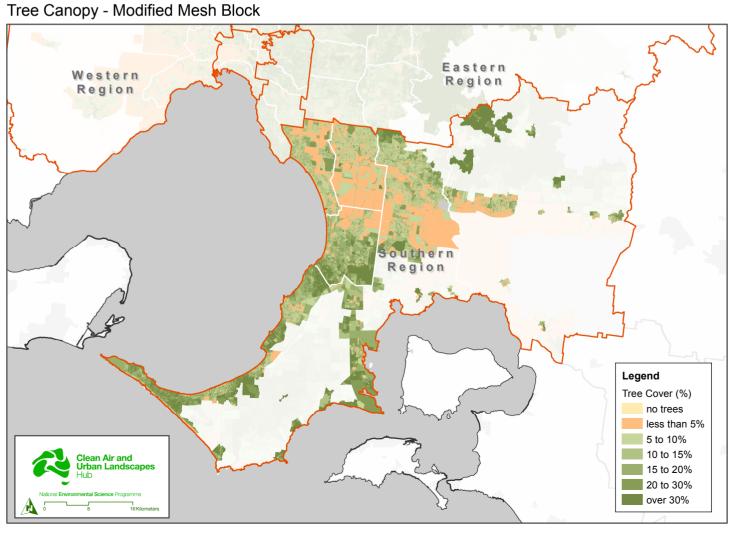


Southern Region

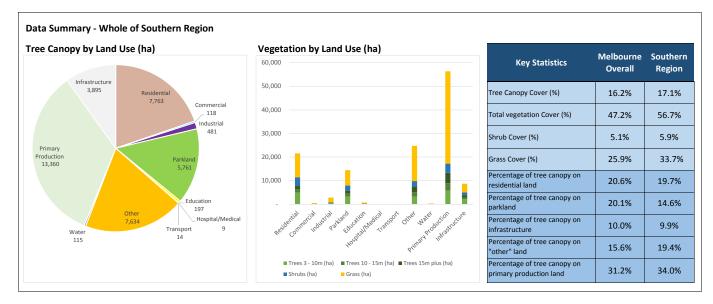
Vegetation Cover - Modified Mesh Block

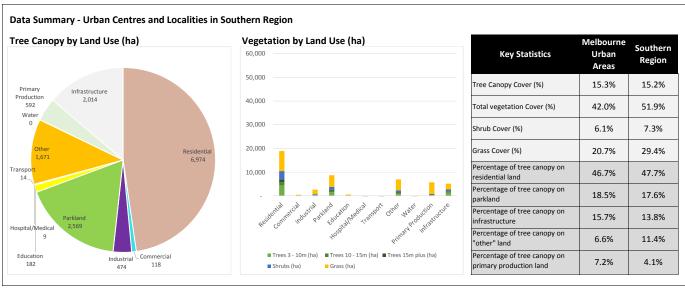
Vegetation Cover and Tree Canopy Urban Centres and Localities Only

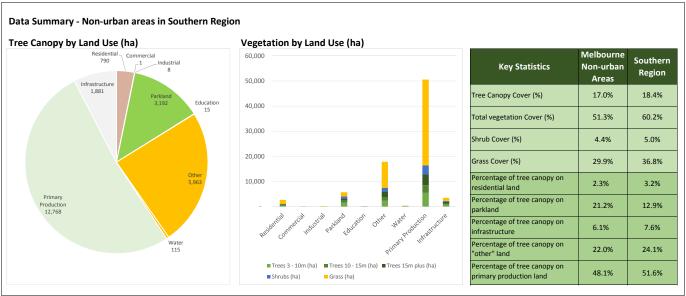




Vegetation Cover and Tree Canopy (2018) Southern Region







Notes:

- 1. Analysis based on the 2018 data capture (limited to features where data coverage is greater then 90%), combining both urban and non-urban areas.
- 2. Whole region analysis uses all available data; urban area analysis is restricted to areas defined by ABS Urban Centres and Localities 2016; non-urban area analysis is restricted to areas outside ABS Urban Centres and Localities 2016.
- 3. Mesh Blocks classified as "other" are representative of land uses which could not be easily placed in one of the other nine categories due to the nature of the land use, or due to evidence of high mixed use.

Southern Region - Data TablesLand Use and Vegetation - Urban and Non-urban areas

Vegetation Area (ha)

Land Use	Grass (ha)	Shrubs (ha)	Trees 3 to 10m (ha)	Trees 10 to 15m (ha)	Trees 15m plus (ha)	Total Trees (ha)	Total Vegetation (ha)	Total Land Area within Study (ha)
Residential	10,064	3,742	5,034	1,447	1,282	7,763	21,570	43,663
Commercial	399	61	74	28	16	118	579	2,095
Industrial	2,056	334	318	112	51	481	2,871	7,522
Parkland	6,552	2,167	3,259	1,398	1,104	5,761	14,480	19,372
Education	464	62	122	49	26	197	723	1,465
Hospital/Medical	11	4	7	2	1	9	25	96
Transport	153	12	10	3	1	14	179	363
Other	14,939	2,235	3,358	1,769	2,507	7,634	24,807	34,745
Water	203	43	46	32	37	115	361	1,628
Primary Production	39,175	3,864	5,779	3,209	4,371	13,360	56,399	99,888
Infrastructure	·		·	772				·
Total	3,653 77,669	1,139 13,664	2,172 20,178	8,822	951 10,348	3,895 39,348	8,688 130,681	19,537 230,376

Vegetation Cover (%)

Land Use	Grass (%)	Shrubs (%)	Trees 3 to 10m (%)	Trees 10 to 15m (%)	Trees 15m plus (%)	Total Trees (%)	Total Vegetation (%)
Residential	23.0%	8.6%	11.5%	3.3%	2.9%	17.8%	49.4%
Commercial	19.0%	2.9%	3.6%	1.3%	0.8%	5.6%	27.6%
Industrial	27.3%	4.4%	4.2%	1.5%	0.7%	6.4%	38.2%
Parkland	33.8%	11.2%	16.8%	7.2%	5.7%	29.7%	74.7%
Education	31.6%	4.2%	8.3%	3.4%	1.8%	13.5%	49.3%
Hospital/Medical	11.8%	4.1%	6.8%	2.0%	0.9%	9.6%	25.5%
Transport	42.1%	3.4%	2.7%	0.8%	0.3%	3.7%	49.2%
Other	43.0%	6.4%	9.7%	5.1%	7.2%	22.0%	71.4%
Water	12.5%	2.6%	2.8%	2.0%	2.3%	7.1%	22.2%
Primary Production	39.2%	3.9%	5.8%	3.2%	4.4%	13.4%	56.5%
Infrastructure	18.7%	5.8%	11.1%	4.0%	4.9%	19.9%	44.5%
Total	33.7%	5.9%	8.8%	3.8%	4.5%	17.1%	56.7%

^{*} Data tables on this page based on the 2018 data capture (limited to features where data coverage is greater then 90%), combining both urban and non-urban areas.

Southern Region - Data Tables Urban and Non-urban areas

Tree Canopy Cover by Local Government

mee camppy core.	by Local Gove								
Local Government	Region	Trees 3 to 10m	Trees 10 to 15m	Trees 15m plus	Total Trees	Trees 3 to 10m	Trees 10 to 15m	Trees 15m plus	Total Trees
	, and the second	(ha)	(ha)	(ha)	(ha)	(%)	(%)	(%)	(%)
Nillumbik (S)	Northern	6,173	4,072	2,860	13,105	14.3%	9.4%	6.6%	30.4%
Yarra Ranges (S)	Eastern	10,747	6,072	13,448	30,267	10.7%	6.0%	13.4%	30.0%
Manningham (C)	Eastern	1,493	914	744	3,151	13.2%	8.1%	6.6%	27.8%
Mornington Peninsula (S)	Southern	8,664	3,539	3,073	15,276	12.0%	4.9%	4.2%	21.1%
Maroondah (C)	Eastern	703	331	252	1,287	11.5%	5.4%	4.1%	20.9%
Banyule (C)	Northern	740	324	236	1,300	11.8%	5.2%	3.8%	20.8%
Boroondara (C)	Inner South East	851	262	127	1,241	14.1%	4.4%	2.1%	20.6%
Cardinia (S)	Southern	5,959	3,577	6,420	15,956	7.3%	4.4%	7.8%	19.5%
Stonnington (C)	Inner South East	348	102	37	488	13.6%	4.0%	1.5%	19.0%
Whitehorse (C)	Eastern	777	261	147	1,185	12.1%	4.1%	2.3%	18.4%
Knox (C)	Eastern	1,111	482	460	2,053	9.8%	4.2%	4.0%	18.0%
Frankston (C)	Southern	1,580	462	180	2,222	12.2%	3.6%	1.4%	17.2%
Bayside (C)	Inner South East	467	103	40	610	12.6%	2.8%	1.1%	16.4%
Yarra (C)	Inner	179	67	44	290	9.1%	3.4%	2.3%	14.8%
Monash (C)	Eastern	810	225	118	1,153	9.9%	2.8%	1.4%	14.2%
Port Phillip (C)	Inner	194	64	22	280	9.4%	3.1%	1.1%	13.5%
Glen Eira (C)	Inner South East	403	60	20	483	10.4%	1.5%	0.5%	12.5%
Darebin (C)	Northern	488	122	58	667	9.1%	2.3%	1.1%	12.5%
Melbourne (C)	Inner	219	113	79	411	5.9%	3.0%	2.1%	11.0%
Moreland (C)	Northern	395	89	35	519	7.8%	1.7%	0.7%	10.2%
Casey (C)	Southern	2,757	914	503	4,174	6.7%	2.2%	1.2%	10.2%
Whittlesea (C)	Northern	2,289	1,121	749	4,158	5.5%	2.7%	1.8%	10.0%
Moonee Valley (C)	Western	336	64	26	426	7.8%	1.5%	0.6%	9.9%
Kingston (C) (Vic.)	Southern	643	155	70	868	7.0%	1.7%	0.8%	9.5%
Maribyrnong (C)	Western	210	37	14	261	6.7%	1.2%	0.4%	8.4%
Greater Dandenong (C)	Southern	574	176	102	851	4.4%	1.4%	0.8%	6.6%
Brimbank (C)	Western	563	126	56	745	4.6%	1.0%	0.5%	6.0%
Hobsons Bay (C)	Western	309	57	16	383	4.8%	0.9%	0.3%	6.0%
Hume (C)	Northern	1,731	619	274	2,624	3.5%	1.3%	0.6%	5.3%
Melton (C)	Western	1,254	439	160	1,853	2.5%	0.9%	0.3%	3.7%
Wyndham (C)	Western	839	207	95	1,141	1.7%	0.4%	0.2%	2.4%
Total	-	53,808	25,155	30,465	109,427	8.0%	3.7%	4.5%	16.2%

^{*} Data tables on this page based on the 2018 data capture (limited to features where data coverage is greater then 90%), combining both urban and non-urban areas.

^{*} Partial data coverage only for some outer LGAs including - Cadinia, Melton, Whittlesea, Wyndham and Yarra Ranges.

Southern Region - Data Tables Land Use and Vegetation - Urban Areas

Vegetation Area (ha)

Land Use	Grass (ha)	Shrubs (ha)	Trees 3 to 10m (ha)	Trees 10 to 15m (ha)	Trees 15m plus (ha)	Total Trees (ha)	Total Vegetation (ha)	Total Land Area within Study (ha)
Residential	8,438	3,529	4,623	1,245	1,105	6,974	18,940	39,815
Commercial	376	60	74	28	16	118	553	2,024
Industrial	1,897	326	313	110	50	474	2,697	7,269
Parkland	4,928	1,295	1,651	548	370	2,569	8,792	12,251
Education	447	58	113	45	24	182	687	1,408
Hospital/Medical	11	4	7	2	1	9	25	96
Transport	153	12	10	3	1	14	179	363
Other	4,601	721	953	367	351	1,671	6,993	9,871
Water	1	0	0	0	0	0	1	57
Primary Production	4,939	295	332	152	109	592	5,826	9,348
Infrastructure	2,458	714	1,403	337	274	2,014	5,187	13,633
Total	28,249	7,015	9,480	2,836	2,300	14,616	49,880	96,134

Vegetation Cover (%)

Land Use	Grass (%)	Shrubs (%)	Trees 3 to 10m (%)	Trees 10 to 15m (%)	Trees 15m plus (%)	Total Trees (%)	Total Vegetation (%)
Residential	21.2%	8.9%	11.6%	3.1%	2.8%	17.5%	47.6%
Commercial	18.6%	3.0%	3.7%	1.4%	0.8%	5.8%	27.3%
Industrial	26.1%	4.5%	4.3%	1.5%	0.7%	6.5%	37.1%
Parkland	40.2%	10.6%	13.5%	4.5%	3.0%	21.0%	71.8%
Education	31.7%	4.1%	8.0%	3.2%	1.7%	12.9%	48.8%
Hospital/Medical	11.8%	4.1%	6.8%	2.0%	0.9%	9.6%	25.5%
Transport	42.1%	3.4%	2.7%	0.8%	0.3%	3.7%	49.2%
Other	46.6%	7.3%	9.7%	3.7%	3.6%	16.9%	70.8%
Water	1.3%	0.2%	0.6%	0.2%	0.0%	0.8%	2.3%
Primary Production	52.8%	3.2%	3.6%	1.6%	1.2%	6.3%	62.3%
Infrastructure	18.0%	5.2%	10.3%	2.5%	2.0%	14.8%	38.0%
Total	29.4%	7.3%	9.9%	3.0%	2.4%	15.2%	51.9%

^{*} Data tables on this page based on the 2018 data capture (limited to features where data coverage is greater then 90%), limited to urban areas as defined by ABS Urban Centres and Localities 2016.

Southern Region - Data Tables Urban Areas

Tree Canopy Cover by Local Government

Tree Canopy Cove	er by Local Gove	ernment							
Local Government	Region	Trees 3 to 10m (ha)	Trees 10 to 15m (ha)	Trees 15m plus (ha)	Total Trees (ha)	Trees 3 to 10m (%)	Trees 10 to 15m (%)	Trees 15m plus (%)	Total Trees (%)
Yarra Ranges (S)	Eastern	3,071	1,835	4,431	9,338	12.1%	7.2%	17.4%	36.7%
Nillumbik (S)	Northern	913	681	467	2,061	13.8%	10.3%	7.0%	31.1%
Manningham (C)	Eastern	1,132	603	507	2,241	12.8%	6.8%	5.7%	25.4%
Cardinia (S)	Southern	874	510	1,163	2,548	8.5%	5.0%	11.4%	24.9%
Mornington Peninsula (S)	Southern	4,082	1,043	554	5,679	15.7%	4.0%	2.1%	21.8%
Maroondah (C)	Eastern	703	331	252	1,287	11.5%	5.4%	4.1%	20.9%
Banyule (C)	Northern	740	324	236	1,300	11.8%	5.2%	3.8%	20.8%
Boroondara (C)	Inner South East	851	262	127	1,241	14.1%	4.4%	2.1%	20.6%
Stonnington (C)	Inner South East	348	102	37	488	13.6%	4.0%	1.5%	19.0%
Whitehorse (C)	Eastern	777	261	147	1,185	12.1%	4.1%	2.3%	18.4%
Frankston (C)	Southern	1,580	462	180	2,222	12.2%	3.6%	1.4%	17.2%
Bayside (C)	Inner South East	467	103	40	610	12.6%	2.8%	1.1%	16.4%
Knox (C)	Eastern	970	380	312	1,662	9.5%	3.7%	3.1%	16.3%
Yarra (C)	Inner	179	67	44	290	9.1%	3.4%	2.3%	14.8%
Monash (C)	Eastern	810	225	118	1,153	9.9%	2.8%	1.4%	14.2%
Port Phillip (C)	Inner	194	64	22	280	9.4%	3.1%	1.1%	13.5%
Glen Eira (C)	Inner South East	403	60	20	483	10.4%	1.5%	0.5%	12.5%
Darebin (C)	Northern	488	122	58	667	9.1%	2.3%	1.1%	12.5%
Melbourne (C)	Inner	219	113	79	411	5.9%	3.0%	2.1%	11.0%
Moreland (C)	Northern	395	89	35	519	7.8%	1.7%	0.7%	10.2%
Casey (C)	Southern	1,726	491	232	2,449	7.0%	2.0%	0.9%	9.9%
Moonee Valley (C)	Western	336	64	26	426	7.8%	1.5%	0.6%	9.9%
Kingston (C) (Vic.)	Southern	643	155	70	868	7.0%	1.7%	0.8%	9.5%
Maribyrnong (C)	Western	210	37	14	261	6.7%	1.2%	0.4%	8.4%
Whittlesea (C)	Northern	582	190	122	894	5.2%	1.7%	1.1%	7.9%
Greater Dandenong (C)	Southern	574	176	102	851	4.4%	1.4%	0.8%	6.6%
Hume (C)	Northern	989	313	123	1,425	4.4%	1.4%	0.6%	6.4%
Brimbank (C)	Western	563	126	56	745	4.6%	1.0%	0.5%	6.0%
Hobsons Bay (C)	Western	309	57	16	383	4.8%	0.9%	0.3%	6.0%
Wyndham (C)	Western	500	82	28	609	3.5%	0.6%	0.2%	4.2%
Melton (C)	Western	402	82	31	515	3.2%	0.7%	0.2%	4.1%
Total	-	26,030	9,411	9,648	45,089	8.8%	3.2%	3.3%	15.3%

^{*} Data tables on this page based on the 2018 data capture (limited to features where data coverage is greater then 90%), limited to urban areas as defined by ABS Urban Centres and Localities 2016.

* Partial data coverage only for some outer LGAs including - Cadinia, Melton, Whittlesea, Wyndham and Yarra Ranges.

Southern Region - Data Tables

Land Use and Vegetation - Non-urban areas

Vegetation Area (ha)

Land Use	Grass (ha)	Shrubs (ha)	Trees 3 to 10m (ha)	Trees 10 to 15m (ha)	Trees 15m plus (ha)	Total Trees (ha)	Total Vegetation (ha)	Total Land Area within Study (ha)
Residential	1,626	214	411	202	177	790	2,629	3,848
Commercial	23	2	1	0	0	1	26	72
Industrial	159	8	4	2	1	8	174	254
Parkland	1,625	872	1,607	850	734	3,192	5,688	7,121
Education	17	4	9	4	2	15	35	57
Other	10,337	1,514	2,405	1,402	2,156	5,963	17,814	24,874
Water	202	43	45	32	37	115	360	1,571
Primary Production	34,236	3,570	5,447	3,058	4,263	12,768	50,574	90,541
Infrastructure	1,195	425	769	435	677	1,881	3,501	5,904
Total	49,420	6,649	10,699	5,986	8,047	24,732	80,801	134,242

Vegetation Cover (%)

vegetation cover (70)							
Land Use	Grass (%)	Shrubs (%)	Trees 3 to 10m (%)	Trees 10 to 15m (%)	Trees 15m plus (%)	Total Trees (%)	Total Vegetation (%)
Residential	42.2%	5.6%	10.7%	5.3%	4.6%	20.5%	68.3%
Commercial	32.8%	2.1%	0.7%	0.0%	0.0%	0.8%	35.7%
Industrial	62.6%	3.0%	1.8%	0.8%	0.4%	3.0%	68.6%
Parkland	22.8%	12.2%	22.6%	11.9%	10.3%	44.8%	79.9%
Education	29.3%	6.4%	15.9%	6.8%	3.9%	26.6%	62.3%
Other	41.6%	6.1%	9.7%	5.6%	8.7%	24.0%	71.6%
Water	12.9%	2.7%	2.9%	2.1%	2.4%	7.3%	22.9%
Primary Production	37.8%	3.9%	6.0%	3.4%	4.7%	14.1%	55.9%
Infrastructure	20.2%	7.2%	13.0%	7.4%	11.5%	31.9%	59.3%
Total	36.8%	5.0%	8.0%	4.5%	6.0%	18.4%	60.2%

^{*} Data tables on this page based on the 2018 data capture (limited to features where data coverage is greater then 90%), limited to non-urban areas being those areas outside ABS Urban Centres and Localities 2016.

Southern Region - Data Tables Non-urban Areas

Tree Canopy Cover by Local Government

Local Government	Region	Trees 3 to 10m (ha)	Trees 10 to 15m (ha)	Trees 15m plus (ha)	Total Trees (ha)	Trees 3 to 10m (%)	Trees 10 to 15m (%)	Trees 15m plus (%)	Total Trees (%)
Manningham (C)	Eastern	361	311	237	910	14.4%	12.4%	9.5%	36.3%
Knox (C)	Eastern	141	101	148	391	11.8%	8.5%	12.4%	32.7%
Nillumbik (S)	Northern	5,260	3,390	2,394	11,044	14.4%	9.3%	6.6%	30.3%
Yarra Ranges (S)	Eastern	7,676	4,236	9,017	20,930	10.2%	5.6%	12.0%	27.8%
Mornington Peninsula (S)	Southern	4,582	2,496	2,519	9,598	9.9%	5.4%	5.4%	20.7%
Cardinia (S)	Southern	5,085	3,067	5,257	13,409	7.1%	4.3%	7.3%	18.7%
Whittlesea (C)	Northern	1,707	931	627	3,264	5.7%	3.1%	2.1%	10.8%
Casey (C)	Southern	1,031	423	271	1,725	6.4%	2.6%	1.7%	10.6%
Hume (C)	Northern	742	305	151	1,199	2.8%	1.1%	0.6%	4.5%
Melton (C)	Western	852	358	128	1,338	2.2%	0.9%	0.3%	3.5%
Wyndham (C)	Western	339	125	67	531	1.0%	0.4%	0.2%	1.6%
Total		27,778	15,744	20,816	64,338	7.3%	4.2%	5.5%	17.0%

^{*} Data tables on this page based on the 2018 data capture (limited to features where data coverage is greater then 90%), limited to non-urban areas being those areas outside ABS Urban Centres and Localities 2016.

* Partial data coverage only for some outer LGAs including - Cadinia, Melton, Whittlesea, Wyndham and Yarra Ranges.