

CASE STUDY: Global Warming - the forest from the trees

APPENDIX 1 (a): Selected meteorological stations in Eastern Australia

The table below lists the locations and detailed characteristics of the selected Meteorological Stations in the states of Victoria, New South Wales and Queensland that are featured in this case study. (For a map of the station locations see the following page).

Selected Met Stations	BOM No.	Lat.	Long.	Alt. (m)	Aspect	Purpose of station	Year first open	Completeness %	Mean maximum °C	Mean minimum °C	Composite station required?
A Cape Otway lighthouse	090015	-38.86	143.51	82	R , Co	RCS Synoptic	1861	98.8	17.3	10.5	N
B Melbourne RO	086071	-37.81	144.97	31	U , Co	Synoptic	1908	99.9	19.8	10.2	N
C Omeo	083025	-37.10	147.60	685	R , In	Synoptic	1879	n.a.	18.3	4.8	N
D Moruya Heads	069018	-35.91	150.15	17	R , Co	RCS Synoptic	1875	99.6	20.4	11.3	N
E Canberra airport	070014	-35.30	149.20	578	U , In	RCS, Synoptic	1939	99.9	19.7	6.5	-
F Wagga Wagga AMO	072150	-35.16	147.46	212	R , In	CLIMAT RCS	1941	99.8	22.1	9.0	072151
G Mildura airport	076031	-34.23	142.08	50	R , In	RCS Synoptic	1946	99.8	23.7	10.3	076077
H Sydney observatory	066062	-33.86	151.21	39	U , Co	Synoptic	1858	99.9	21.7	13.7	N
I Bathurst agric station	063005	-33.43	149.56	713	U , In	RCS synoptic	1908	98.7	19.8	6.8	N
J Newcastle Nobbys	061055	-32.92	151.80	33	U , Co	Synoptic	1862	98.3	21.8	14.2	N
K Tibooburra post office	046037	-29.44	142.01	183	R , In	RCS Synoptic	1886	96.2	27.4	13.9	N
L Yamba pilot station	058012	-29.43	153.36	27	R , Co	RCS Synoptic	1877	80.8	23.3	15.4	N
M Brisbane aero	040842	-27.39	153.13	4	U , Co	RCS Synoptic	1994	95.5	25.3	15.5	040223, 040214
N Charleville airport	044021	-26.41	146.26	303	R , In	RCS Synoptic	1942	99.4	28.0	13.5	044022
O Rockhampton airport	039083	-23.38	150.48	10	R , Co	RCS Synoptic	1839	99.8	28.3	16.6	039082
P Boulia airport	038003	-22.91	139.90	162	R , In	Synoptic	1886	96.8	31.8	16.9	N
Q Normanton post office	029041	-17.69	141.07	18	R , Co	Synoptic	1872	98.1	33.4	21.3	029063
R Cairns airport	031011	-16.87	145.75	3	R , Co	RCS Synoptic	1941	99.7	29.0	20.8	031010

(Source: BOM, 2009 a, b)

NOTES:

Aspect: **R** = Rural or **U** = Urban (Urban stations are those located in towns with population > 10,000 and subject to Urban Heat Island effect i.e. an effect in which under certain conditions the atmospheric temperatures are likely to be inflated by strictly local effects (e.g. heating associated with asphalt tarmacs, heat trapping effects of streets lined with high rise buildings))
Co = coastal or In = Inland

Purpose: RCS = Australian Reference Climate Station Synoptic = the type of meteorological data taken simultaneously over a large area at specified times of day to enable the analysis of the current state of atmosphere for the purposes of preparing forecasts of weather events (e.g. storm fronts, anticyclones etc.) in particular localities

Completeness: The amount of missing data in the maximum temperature record expressed as a % of the total maximum temperature data at the station.

Composite station required? Is the High Quality Temperature Dataset for this location a composite record, (requiring data from more than one Met Station to complete a dataset stretching back at least to 1910)? If another Station's data is combined with this Station to make a High Quality Dataset, what is the BOM number of the other Station(s)?

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Map of Australia showing the locations of the eighteen meteorological stations listed in the Table on the previous page.

