

Presence of the Growling Grass Frog
Litoria raniformis

100 Vineyard Road Sunbury
2008

Report Prepared For
Keith Altmann & Associates



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TABLE OF CONTENTS

1.0	BACKGROUND.....	1
1.1	Objectives.....	2
1.2	Limitations.....	2
1.3	Significance of <i>Litoria raniformis</i>	3
2.0	METHODOLOGY.....	4
2.1	Study Site.....	4
2.2	Previous Reports and Related Information.....	4
2.3	Survey Techniques.....	5
2.4	GPS and Mapping Capabilities.....	5
3.0	RESULTS.....	6
4.0	IMPLICATIONS FOR DEVELOPMENT.....	10
5.0	REFERENCES.....	11

Appendices

Appendix 1 Daily Weather Observations for November and December 2008

1.0 BACKGROUND

Native Vegetation Management Services (NVMS), a division of Greybox and Grasslands Indigenous Nursery (GAGIN P/L), was commissioned by Keith Altmann in January 2005 to provide a botanical and habitat value assessment of the property 100 Vineyard Rd, Sunbury located within the City of Hume. This site is proposed for development and the intention of the preliminary report was to assess the site for habitat values and to locate, qualify and quantify these values according to Victoria's Native Vegetation Management Framework (DNRE, 2002). This assessment found that the property contained large areas dominated by *Austrodanthonia sp.* (Wallaby Grass). In addition to meeting requirements outlined by the Native Vegetation Management Framework, it was noted that the property contained 2 dams, several creeks and areas of low lying wet land surrounding the creek beds. These areas are considered potential habitat for amphibians and within a 10 km radius of the property there are nine (9) recorded species (Atlas of Victorian Wildlife, 2005) including the federally and state listed Growling Grass Frog *Litoria raniformis* (DSE, 2007). Due to the high potential of this property being considered suitable habitat for *L. raniformis*, a presence/absence survey was conducted in November and December, 2008.

This report outlines the assessment that was undertaken to determine the presence or absence of *L. raniformis* within 100 Vineyard Rd, Sunbury.

1.1 Objectives

The objectives of this report are as follows;

1. Conduct an auditory and observational survey of the amphibian species present within 100 Vineyard Rd.
2. Determine the presence or absence of *L. raniformis* within the property, 100 Vineyard Rd.
3. Identify the areas of 100 Vineyard Road which are currently habitat for amphibian species.

1.2 Limitations

The survey was conducted with the intention of confirming the presence or absence of *L. raniformis*, as well as identifying all amphibian species which utilise the area and determine the key areas of amphibian habitat located within 100 Vineyard Road. The survey was to continue throughout the period of time *L. raniformis* is active, until it has been found or sufficient survey time had passed for which it could be considered absent. Limitations included highly variable and fluctuating climatic conditions which made it difficult to conduct the survey over four consecutive weeks. Financial and time restrictions did not allow for an intensive survey to be conducted whereby the site would have been visited during the morning, day and evening on more than one occasion.

1.3 Significance of *Litoria raniformis*

Federal Significance

L. raniformis is listed as **vulnerable** under the *Environment Protection and Biodiversity Conservation (EPBC) Act, 1999*.

State Significance

L. raniformis is listed as **threatened** in Victoria under the *Flora and Fauna Guarantee (FFG) Act, 1988*.

The species has also been listed as **endangered** in New South Wales under the *Threatened Species Conservation Act, 1999* and as **vulnerable** in Tasmania under the *Threatened Species Protection Act, 1992*.

2.0 METHODOLOGY

2.1 Study Site

The study site is located at 100 Vineyard Rd. Sunbury. Details of this property location and description of the vegetation and habitat zones are contained within the preliminary botanical and habitat significance report (Wlodarczyk & Williams, 2005) and addendums to this report are listed in the following section.

2.2 Previous Reports and Related Information

The previous reports regarding 100 Vineyard Rd are as follows;

Wlodarczyk, P. & Hatt, T. (April 2008) **Flora and of Habitat Hectare Assessment for the area of the Retarding Basin - 100 Vineyard Road.** A report to Keith Altmann & Associates. Gagin Pty Ltd.

Wlodarczyk, P. & Williams, L. (January 2005) **A botanical assessment and habitat significance of 100 Vineyard road, city of Hume.** A report to Keith Altmann & Associates. Gagin Pty Ltd.

Wlodarczyk, P. & Williams, L. (June 2005) **A short report into the habitat hectare value and net gain analysis of habitat zone PG4. Addendum to – Botanical assessment and habitat significance of 100 Vineyard Road, Sunbury.** For Keith Altmann & Associates. Gagin Pty Ltd.

Wlodarczyk, P. & Williams, L. (June 2005) **A botanical assessment and habitat significance of 100 vineyard road, city of Hume. Addendum 2.** A report to Keith Altmann & Associates. Gagin Pty Ltd.

2.3 Survey Techniques

An auditory and observational survey was conducted over four (4) days within a five (5) week period from the 14th November to the 15th December, 2008. The survey was conducted within several days of the previous rainfall event between 900hrs – 1000hrs or at dusk between 1700hrs-1900hrs. The survey was conducted by highly qualified personnel who possess comprehensive information regarding the physical characteristics, behaviour, habitat and vocalisations of *L. raniformis*. During these hours recordings were taken at several locations along the creeks to allow for positive identification of all frog species present. Prior to commencing the survey a site which contained a known population of *L. raniformis* was visited. The known population is located in Bridgewater Way, Hoppers Crossing along Skeleton Creek. Only when *L. raniformis* was detected at Bridgewater Way would the survey at 100 Vineyard road proceed.

2.4 GPS and Mapping Capabilities

The location of each section of habitat where amphibian species were found to be present was recorded using a Magellan eXplorist 600 handheld GPS receiver. The Magellan eXplorist 600 has an accuracy of <7m and uses multiple satellites which provide a 3D position fix. Thus recording the altitude, longitude and latitude of each position.

Maps were created using the mapping program TumAus. TumAus is a vector based map of the state of Victoria, Australia which provides a 1:25, 000 topographical vectorised data set (Sourced from VicMap, Department of Natural Resources and Environment). TumAus allows for the addition of information including uploading data from the handheld GPS receiver and the production of locally specific maps.

3.0 RESULTS

100 Vineyard Rd was surveyed for the presence of amphibian species and showed that approximately 10.5 hectares of the property is currently habitat for a wide variety of frog species (**Map 1.0**). Of the nine (9) species recorded within a 10km radius of the Vineyard Road property (Atlas of Victorian Wildlife, 2005) five (5) frog species were identified and determined present. They included the Eastern Common Froglet *Crinia signifera*, Eastern Banjo Frog or Pobblebonk *Limnodynastes dumerili*, Spotted Marsh Frog *Limnodynastes tasmaniensis*, Lesueur’s Tree Frog, *Litoria lesueuri* and Verreaux’s Tree Frog, *Litoria verreauxi* (**Table 1.0 & Map 1.1**).

Table 1.0 Frog species recorded within a 10km radius, the frog species that were present during the survey and the site within the property that they were found at (Map 1.1).

Species recorded within a 10km radius		Present during Survey	Site Number (Map 1.1)
Common Name	Scientific Name		
Bibrons Toadlet	<i>Pseudophryne bibronii</i>	Absent	-
Common Froglet	<i>Crinia signifera</i>	Present	1-5
Common Spadefoot Toad	<i>Neobatrachus sudelli</i>	Absent	-
Growling Grass Frog	<i>Litoria raniformis</i>	Absent	-
Lesueur’s Frog	<i>Litoria lesueuri</i>	Present	4
Eastern Banjo Frog	<i>Limnodynastes dumerili</i>	Present	2
Spotted Marsh Frog	<i>Limnodynastes tasmaniensis</i>	Present	2
Verreaux’s Tree Frog	<i>Litoria verreauxi</i>	Present	1-5
Whistling Tree Frog	<i>Litoria verreauxi verreauxi</i>	Absent	-

During the four (4) days of surveying 100 Vineyard Road, Sunbury there were no sightings or vocalisations of *L. raniformis* in either the adult form or as a tadpole. During this period a known population of *L. raniformis* was visited prior to surveying the site. On each occasion that the known population was visited *L. raniformis* was detected, subsequently the Vineyard road property was surveyed and on each and every occasion *L. raniformis* was found to be absent despite the presence of five (5) other frog species.

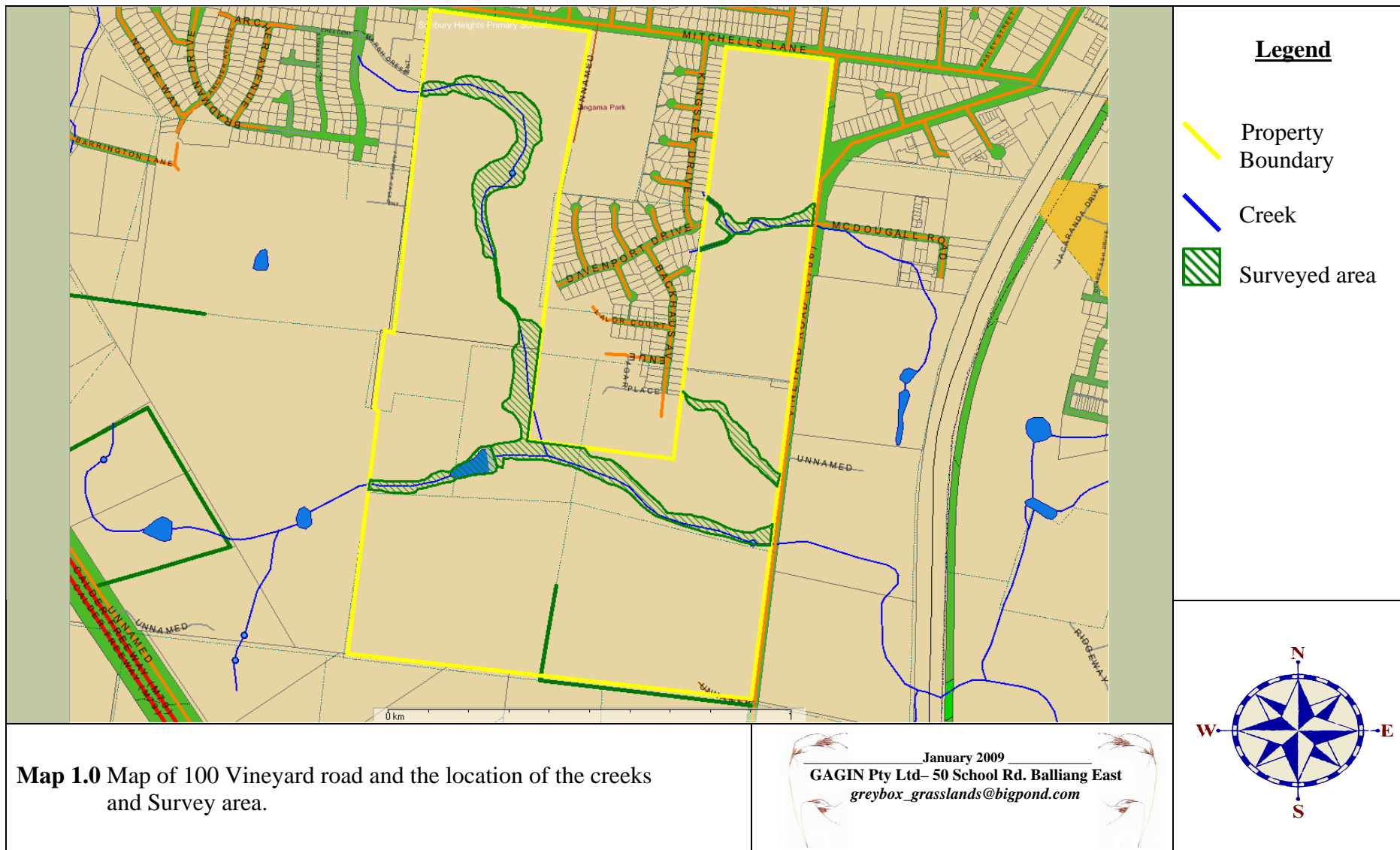
**Presence of the Growling Grass Frog *Litoria raniformis*
100 Vineyard Road, Sunbury**

The property was surveyed in temperatures greater than 10°C and less than 25°C within several days of the previous rainfall event (**Table 1.1**).

Table 1.1 Daily temperatures and rainfall for each of the days that the survey was conducted (Bureau of Meteorology).

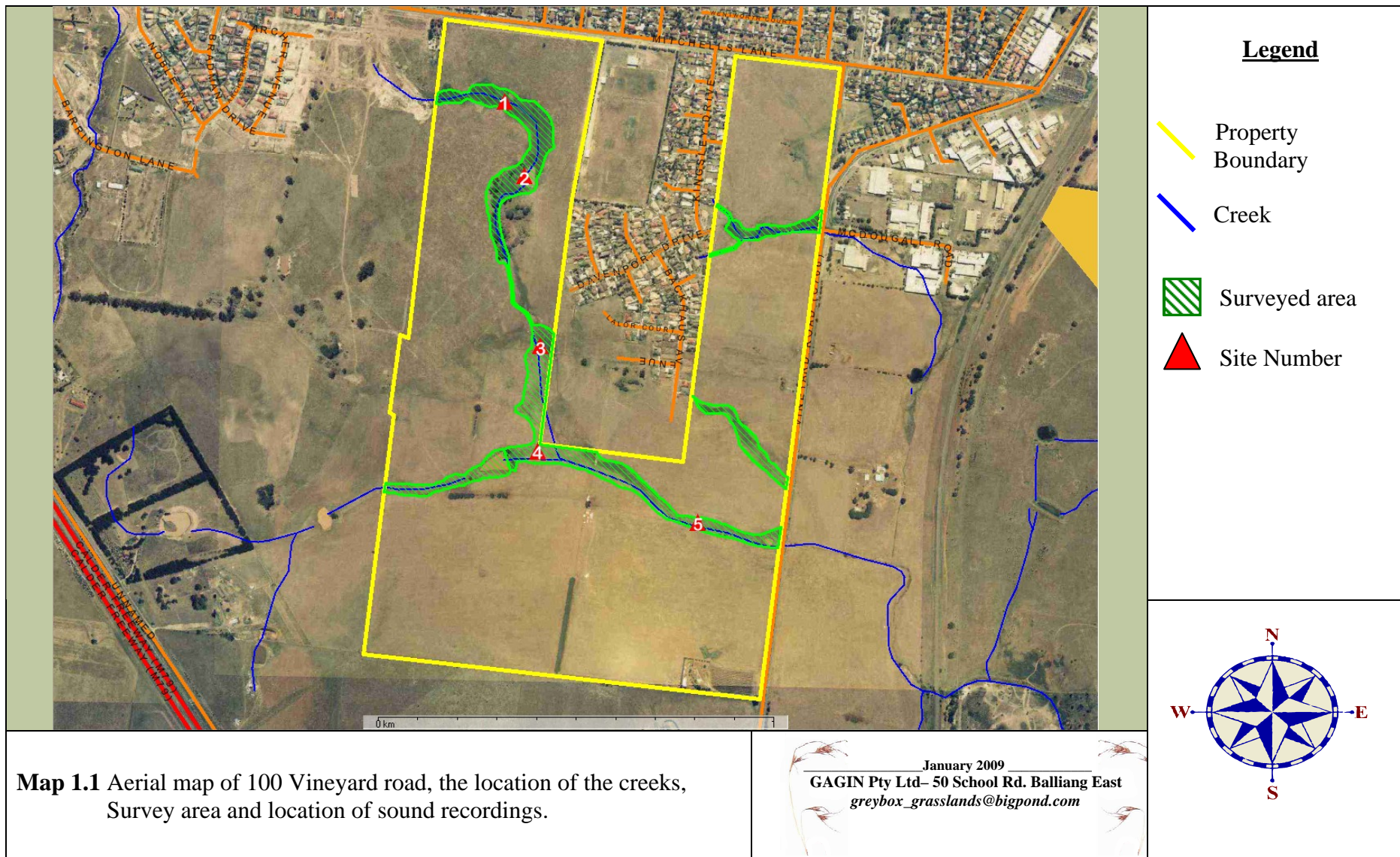
Date	Temperature		Rain in previous 24Hrs (mm)	Rain (mm)
	Min (°C)	Max (°C)		
14/11/08	13.4	21.5	0.0	12.2
24/11/08	10.8	17.3	14.0	0.0
4/12/08	7.4	25.6	0.0	0.0
15/12/08	11.2	20.4	39.0	0.4

Presence of the Growling Grass Frog *Litoria raniformis*
100 Vineyard Road, Sunbury



Map 1.0 Map of 100 Vineyard road and the location of the creeks and Survey area.

Presence of the Growling Grass Frog *Litoria raniformis*
100 Vineyard Road, Sunbury



4.0 IMPLICATIONS FOR DEVELOPMENT

Despite being unable to detect the presence of *L. raniformis* during the survey period there is still a high potential for this species to be present within 100 Vineyard Rd.

Due to the possibility that *L. raniformis* may occur within the property and the known presence of five (5) other species of frogs it is recommended that in the event of the development proceeding that conditions be placed upon the activities surrounding the construction process.

Conditions should include;

- Protecting the creek, both dams and all wetland areas from any damage which may be caused as a result of the construction process.
- Fencing off the creek, both dams and all wetland areas to restrict the access of both humans and livestock.
- Induct all construction workers on the sensitivity and ecological importance of the wetland areas and the need to minimise the disturbance of these areas during the construction process.
- Minimise the turbidity entering the waterways.
- Manage the riparian vegetation as it has a direct effect on the quality of the water and the fauna which rely on it.
- Manage the rubbish entering the creek especially the plastics and pollutants which are often a by-product of construction.

5.0 REFERENCES

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**Presence of the Growling Grass Frog *Litoria raniformis*
100 Vineyard Road, Sunbury**

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Appendix 1

**Daily Weather Observations
for November and December 2008
Melbourne Airport, Victoria**

Presence of the Growling Grass Frog *Litoria raniformis*
100 Vineyard Road, Sunbury

Melbourne Airport, Victoria
November 2008 Daily Weather Observations



Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain mm	Evap mm	Sun hours	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C					km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Sa	10.2	19.7	1.2	4.4	3.4	S	37	00:55	12.5	67	7	S	17	1024.5	15.7	58	7	SSE	20	1023.0
2	Su	10.1	29.0	0	4.4	8.6	N	57	08:21	19.5	53	7	N	37	1018.0	27.5	22	7	NW	24	1013.4
3	Mo	13.4	17.8	8.0	6.6	0.2	N	56	23:33	14.4	76	8	SW	31	1014.3	16.5	64	7	SSW	31	1015.4
4	Tu	9.8	16.4	0	4.0	10.5	S	48	05:28	11.0	46	7	SSE	28	1021.5	14.9	45	1	S	19	1018.0
5	We	5.2	26.4	0	5.4	5.3	WSW	52	21:19	10.7	67	7	NNE	9	1012.6	24.6	18	7	NW	28	1007.7
6	Th	10.5	24.5	0	8.0	10.2	WSW	46	23:02	15.0	63	7	W	15	1010.3	22.9	25	3	W	24	1008.5
7	Fr	10.0	20.8	0	6.4	0.0	N	87	12:41	18.0	38	8	N	24	1007.8	15.7	62	8	N	46	1002.7
8	Sa	10.9	20.0	2.6	3.6	4.0	WSW	59	12:07	13.3	68	7	W	31	1005.6	17.0	41	7	WSW	33	1007.6
9	Su	7.5	27.0	0	4.4	11.8	WSW	33	07:58	14.9	58	7	W	22	1018.9	23.9	33	2	NW	11	1016.9
10	Mo	12.3	24.2	0	6.6	11.1	SSE	35	14:13	16.2	70	2	SSW	7	1023.0	23.2	40	7	SSE	20	1020.9
11	Tu	9.6	32.3	0	6.0	12.6	N	41	12:10	16.4	71	1	N	7	1020.4	31.5	16	5	NNW	19	1015.0
12	We	15.2	34.8	0	10.0	10.5	NNE	65	11:48	27.1	22	7	N	30	1015.1	33.2	12	6	NW	17	1012.6
13	Th	16.8	34.4	0	14.2	2.1	W	78	18:32	25.5	29	8	N	48	1008.6	31.7	16	7	N	50	1006.3
14	Fr	13.4	21.5	12.2	11.2	6.5	S	35	15:44	13.7	92	8	SSW	13	1012.1	19.7	53	6	S	20	1011.7
15	Sa	9.2	21.7	0	4.4	11.5	WSW	57	15:10	13.4	62	7	SW	20	1016.5	21.3	24	2	SW	19	1014.8
16	Su	8.7	16.8	0	8.4	8.4	SSE	50	11:18	11.4	47	7	SSW	28	1021.7	15.5	35	3	S	24	1021.3
17	Mo	9.5	18.8	0	4.2	10.0	SE	37	10:18	12.5	52	7	S	20	1020.5	17.9	39	1	ESE	19	1016.9
18	Tu	8.9	18.8	0	5.8	3.1	SSE	30	15:53	14.0	65	7	SE	7	1014.0	18.0	48	7	SSW	15	1011.8
19	We	12.4	21.5	0	2.8	0.1	SSE	30	15:44	13.4	97	8	S	15	1011.5	19.9	60	8	SW	13	1007.0
20	Th	13.3	17.9	0.8	2.4	6.0	WSW	52	09:46	13.9	82	8	WSW	31	1002.1	16.8	52	7	SW	31	1002.4
21	Fr	7.1	20.9	0	4.4	7.1	SW	61	17:14	12.6	51	7	WSW	19	1002.1	18.0	30	5	NW	31	996.8
22	Sa	6.5	13.8	3.2	6.4	6.1	S	72	14:57	10.2	64	7	WSW	41	996.7	9.2	84	7	SSW	35	998.6
23	Su	7.1	17.7	14.0	4.6	5.4	SSW	63	03:13	13.7	74	7	SSW	37	1003.6	17.0	49	7	S	33	1004.0
24	Mo	10.8	17.3	0	5.0	4.7	SW	37	10:34	11.5	69	8	SW	28	1009.7	15.6	56	7	SE	24	1009.7
25	Tu	7.7	25.5	0	4.4	13.3	S	39	17:59	13.6	73	1	W	7	1013.8	23.7	32	1	ENE	11	1011.4
26	We	9.3	29.7	0	7.4	11.4	N	54	13:40	17.4	59	2	E	7	1010.7	27.3	26	6	N	22	1008.5
27	Th	17.2	30.7	0	11.2	6.4	N	72	10:08	21.9	50	7	N	48	1004.9	30.0	33	6	N	35	1001.1
28	Fr	14.6	20.0	0	7.2	1.3	SSE	33	13:18	17.0	74	8	S	4	1004.9	18.1	60	8	SSE	19	1004.1
29	Sa	12.3	18.5	4.8	3.4	3.7	SSE	44	13:39	13.5	77	8	SSW	26	1008.2	16.2	58	7	S	24	1008.4
30	Su	6.8	24.9	0	3.6	9.7	NNW	59	14:25	13.7	56	5	WNW	13	1010.8	22.7	22	6	NNW	26	1005.8
Statistics for November 2008																					
Mean		10.5	22.8		6.0	6.8				15.1	62	6		22	1012.1	20.8	41	5		24	1010.0
Lowest		5.2	13.8		2.4	0.0				10.2	22	1	S	4	996.7	9.2	12	1	#	11	996.8
Highest		17.2	34.8	14.0	14.2	13.3	N	87		27.1	97	8	N	48	1024.5	33.2	64	8	N	50	1023.0
Total				46.8	180.8	205.0															

Observations were drawn from Melbourne Airport (station 086282)

ICDJW3049.200811 Prepared at 16:14 GMT on 2 Jan 2009
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Users of this product are deemed to have read the information and
accepted the conditions described in the notes at
<http://www.bom.gov.au/climate/dwo/ICDJW0000.pdf>

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Melbourne Airport, Victoria
December 2008 Daily Weather Observations



Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain mm	Evap mm	Sun hours	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C					km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Mo	8.9	21.1	2.0	7.2	10.1	WSW	58	23:18	13.7	58	5	WSW	24	1008.9	18.5	28	7	W	31	1007.8
2	Tu	8.9	22.2	0	6.8	7.5	WNW	46	07:10	16.0	42	6	WNW	30	1009.5	20.7	28	7	W	17	1007.2
3	We	13.4	21.3	0	5.6	6.7	SSW	48	12:19	14.8	62	7	WSW	22	1009.7	17.5	46	7	S	26	1011.7
4	Th	7.4	25.6	0	5.8	5.8	N	39	15:22	14.4	55	7	E	9	1018.4	24.4	19	8	NNE	24	1012.4
5	Fr	13.9	31.7	0	6.8	13.4	NW	67	12:38	24.0	43	3	NW	30	1006.4	29.9	23	1	NNW	31	1003.8
6	Sa	12.9	27.2	0	12.6	9.1	NW	63	15:26	17.1	59	3	SW	11	1009.6	25.3	27	7	W	30	1004.7
7	Su	7.8	19.0	0	7.0	11.2	SW	52	09:44	13.9	43	3	SW	26	1012.7	17.2	40	6	S	11	1012.3
8	Mo	6.8	22.7	0	8.0	11.9	S	37	14:38	13.4	52	4	S	13	1014.9	21.3	33	2	S	24	1010.7
9	Tu	7.7	19.2	0	5.6	0.0	S	41	12:11	13.4	77	8	WSW	13	1007.5	13.5	67	8	S	20	1007.9
10	We	11.6	18.0	4.4	1.2	10.3	S	48	13:09	12.5	65	7	SSE	28	1013.3	16.8	39	1	S	30	1012.6
11	Th	7.7	22.7	0	6.4	13.2	S	37	12:00	15.3	60	2	SSE	19	1015.1	21.4	41	1	S	24	1012.1
12	Fr	12.0	22.4	0	8.0	0.3	N	59	09:20	20.6	51	8	N	24	1007.1	17.0	89	8	ENE	15	1003.5
13	Sa	15.0	16.6	40.2	4.8	0.0	SW	76	16:24	16.2	97	8	NW	17	989.0	14.5	94	8	SSW	48	994.1
14	Su	10.9	18.2	39.0	6.6	7.3	SSW	50	08:49	14.1	90	7	SSW	31	1005.0	15.7	75	7	SSW	35	1007.3
15	Mo	11.2	20.4	0.4	5.8	5.7	S	35	17:31	11.9	59	8	WSW	24	1012.8	17.0	47	6	W	13	1012.0
16	Tu	10.7	19.3	0	4.0	2.0	SSE	33	15:01	15.8	67	7	NW	6	1012.8	18.4	65	7	S	9	1011.9
17	We	12.5	19.2	1.6	2.2	1.2	SSE	28	16:11	14.3	81	7			1012.9	18.6	61	7	N	4	1009.7
18	Th	12.8	20.4	0	3.8	4.3	SW	41	12:11	15.0	79	7	W	9	1006.2	16.8	70	7	S	26	1005.2
19	Fr	8.9	17.7	0.2	4.2	10.2	SSE	56	13:55	11.0	72	7	SSW	20	1014.2	15.2	46	5	SSE	35	1015.8
20	Sa	7.6	21.4	0.2	4.6	13.1	SSE	41	12:24	14.2	62	2	SE	15	1021.4	19.8	43	5	SSE	22	1019.2
21	Su	10.0	29.1	0	6.0	10.8	N	48	08:22	18.5	58	1	N	22	1018.4	27.7	27	3	NNE	26	1013.9
22	Mo	18.3	34.5	0	14.8	7.5	N	85	09:52	22.5	39	7	N	48	1007.6	33.3	20	7	NNW	41	1003.3
23	Tu	13.8	19.7	0.2	9.8	7.9	SSW	41	08:25	14.9	76	8	SSW	28	1013.6	18.5	50	5	S	24	1013.7
24	We	10.2	23.2	0.2	5.4	13.8	SE	31	00:17	15.6	54	4	SE	19	1013.6	21.9	39	1	SSW	13	1011.7
25	Th	11.1	23.8	0	6.4	13.5	SE	37	12:43	16.6	61	3	SSW	9	1015.1	22.3	47	6	SSE	22	1013.1
26	Fr	11.4	29.7	0	7.8	9.9	S	67	11:57	23.8	42	7	N	22	1009.6	24.2	43	7	SE	17	1008.5
27	Sa	13.8	29.2	0	6.4	9.4	S	39	15:32	24.2	46	6	NNW	20	1006.0	21.1	73	6	S	20	1003.5
28	Su	11.2	28.5	1.4	6.0	10.5	SSE	48	17:42	20.1	58	5	NNE	9	1003.9	27.9	32	6	SE	22	1001.7
29	Mo	11.8	22.3	0	8.6	9.8	SW	54	16:19	15.7	54	6	SW	20	1008.0	19.6	33	7	SW	30	1007.9
30	Tu	13.3	23.5	0.2	6.2	8.0	WSW	59	14:18	14.5	86	7	W	24	1003.6	21.5	31	7	WSW	35	1002.3
31	We	12.0	23.3	0	9.4	8.4	WSW	46	03:38	16.0	47	7	W	22	1006.1	20.5	34	6	W	17	1004.8
Statistics for December 2008																					
Mean	11.1	23.0		6.6	8.2					16.3	61	5		20	1010.1	20.6	46	5		23	1008.6
Lowest	6.8	16.6		1.2	0.0					11.0	39	1	NW	6	989.0	13.5	19	1	N	4	994.1
Highest	18.3	34.5	40.2	14.8	13.8		N	85		24.2	97	8	N	48	1021.4	33.3	94	8	SSW	48	1019.2
Total			90.0	203.8	252.8																

Observations were drawn from Melbourne Airport (station 086262)

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