



# Investigating the Environment

## Warrumbungle National Park

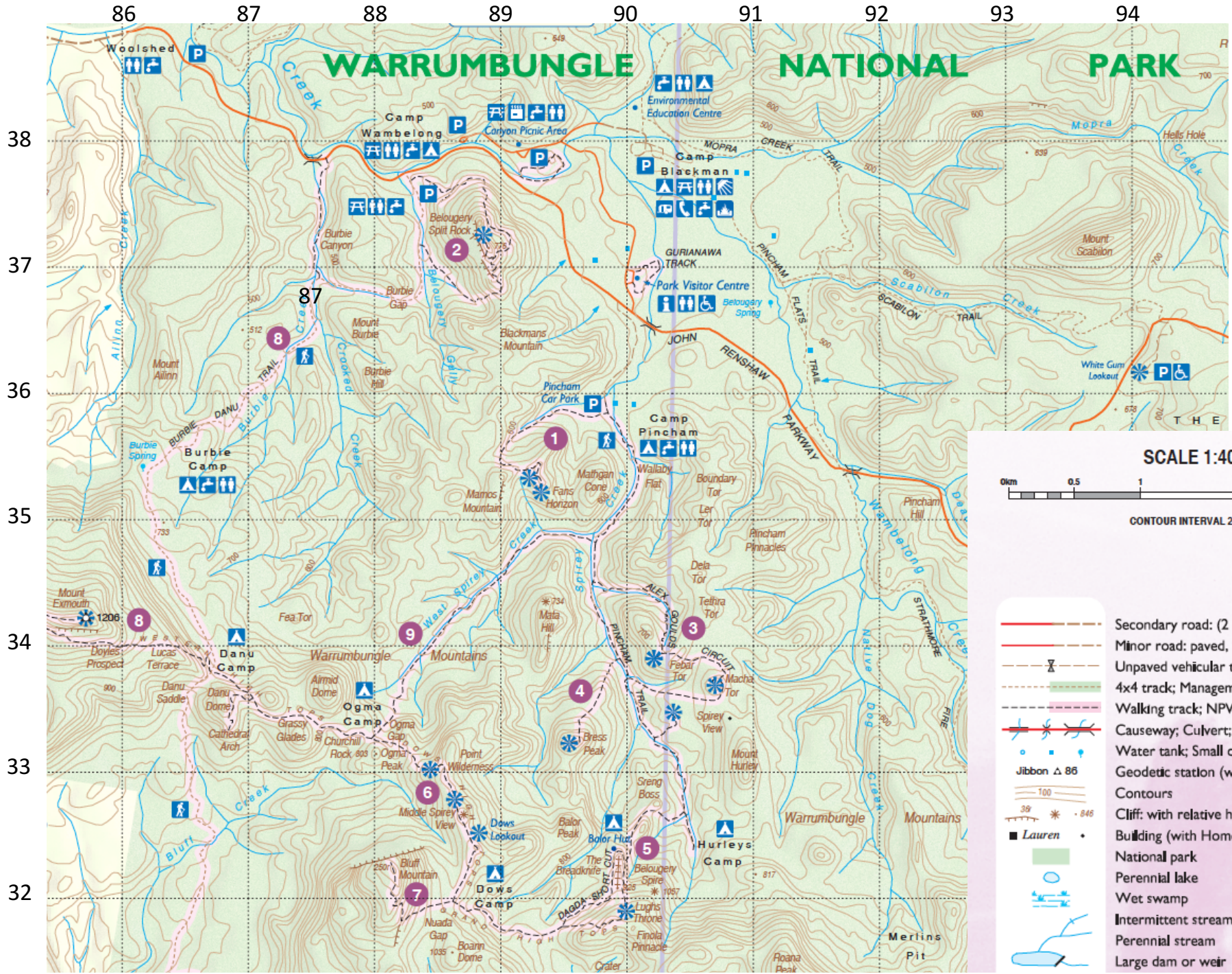


# Stage 4 Geography - Pre-Excursion Worksheets, Fieldwork Journal and Post- Excursion Worksheet

Name:

Class:





**SCALE 1:40 000**

0km 0.5 1 2 3km

CONTOUR INTERVAL 20 METRES

	Secondary road: (2 lanes) paved, unpaved
	Minor road: paved, unpaved
	Unpaved vehicular track: Locked gate
	4x4 track; Management track within National Park
	Walking track; NPWS recommended walking track
	Causeway; Culvert; Bridge
	Water tank; Small dam; Spring
	Geodetic station (with height)
	Contours
	Cliff: with relative height; Rocky pinnacle; Spot height
	Building (with Homestead name); Landmark feature
	National park
	Perennial lake
	Wet swamp
	Intermittent stream; waterfall
	Perennial stream
	Large dam or weir



## Pre-Excursion Worksheets

Using the topographic map of the Warrumbungle National Park on page 2 complete the following:

1. Use your compass to place North on the map.
2. Use the topographic map to give the grid coordinates for the following (the first is done for you):
  - a. Environmental Education Centre (EEC): 901383
  - b. White Gum Lookout: \_\_\_\_\_
  - c. Lughs Throne: \_\_\_\_\_
  - d. Ogma Camp: \_\_\_\_\_
  - e. Fans Horizon: \_\_\_\_\_
3. Identify the name and height of the highest natural geographical feature.  
\_\_\_\_\_ at \_\_\_\_\_ metres above sea level.
4. What is the altitude difference between White Gum Lookout and the Environmental Education Centre? \_\_\_\_\_
5. Describe the direction Mount Burbie is from the Environmental Education Centre.  
\_\_\_\_\_
6. Describe the direction the Environmental Education Centre is from White Gum Lookout.  
\_\_\_\_\_
7. Estimate the distance the Environmental Education Centre is from White Gum Lookout.  
\_\_\_\_\_
8. Identify West Spirey's Creek and estimate the length of the creek from where it intercepts Spirey Creek to the headwaters at Ogma Camp.  
\_\_\_\_\_
9. What distance and direction is Lughs Throne from the Environmental Education Centre?  
\_\_\_\_\_ and \_\_\_\_\_
10. How far is it **return** from Pincham Carpark to Lughs Throne on the walking trail?  
\_\_\_\_\_

Using secondary sources research the following questions:

11. Plot the location of the Warrumbungle National Park and label three (3) towns nearby the National Park.

# New South Wales



12. The Warrumbungle National Park is geographically unique. Identify four (4) geographical features of the park and explain how they contribute to making it such a special place.

- I. \_\_\_\_\_  
\_\_\_\_\_
- II. \_\_\_\_\_  
\_\_\_\_\_
- III. \_\_\_\_\_  
\_\_\_\_\_
- IV. \_\_\_\_\_  
\_\_\_\_\_

13. What was the date of the catastrophic Warrumbungle Bush Fire? \_\_\_\_\_

14. Identify the conditions which allowed this fire to be so devastating?

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

**15. Coonabarabran climate statistics (annual and January 2013)**

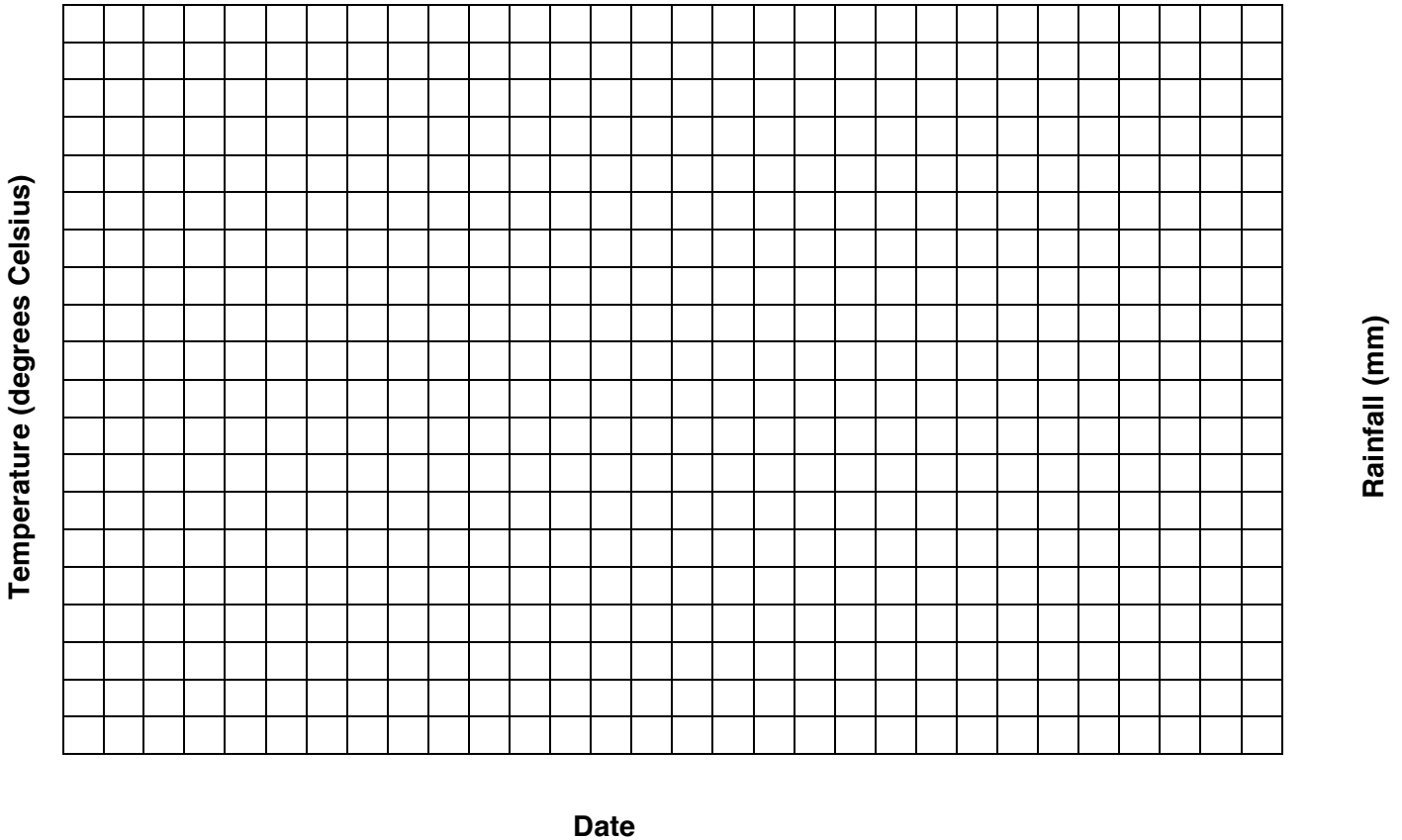
Using Table 1 and Table 2 complete the questions below:

a. Calculate how much rain fell between 1<sup>st</sup> – 18<sup>th</sup> January 2013.

\_\_\_\_\_

b. On the graph below plot January 2013's maximum and minimum temperatures and rainfall.

Title: \_\_\_\_\_



c. Calculate the average maximum temperatures for 1<sup>st</sup> – 18<sup>th</sup> January 2013.

\_\_\_\_\_

d. Describe how the average maximum temperatures shown in Q.15.c compares to the mean maximum January temperature shown in Table 2.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

e. Explain what time of the year would be best suited in planning a camping/ hiking trip to the Warrumbungle National Park?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Table 1.

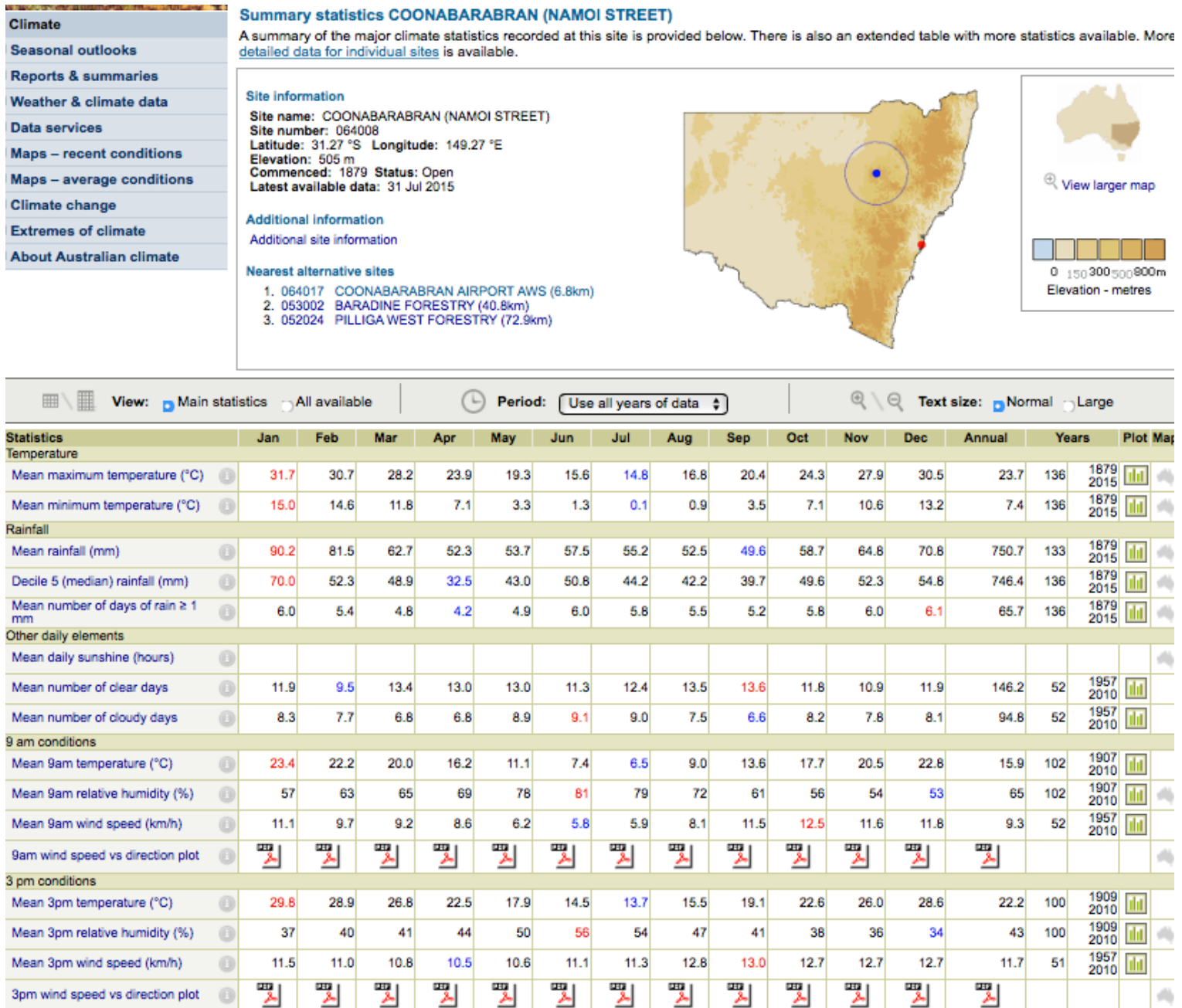
## Daily Meteorological Observations for Coonabarabran Airport AWS for January 2013

Site Number 064017 • Locality: Coonabarabran • Opened Jul 2001 • Still Open • Latitude 31°19'59"S • Longitude 149°16'12"E • Elevation 645m

Day	Maximum Temperature	Minimum Temperature	Minimum Terrestrial Temperature	9am					3pm					Maximum Wind Gust	Rainfall in 24 hours to 9am	Evaporation in 24 hrs to 9am	Bright Sunshine	Day
				Temperature	Relative Humidity	Total Cloud	Wind	MSL pressure	Temperature	Relative Humidity	Total Cloud	Wind	MSL pressure					
				°C	%	oktas	km/h	hPa	°C	%	oktas	km/h	hPa					
Tue 1	34.8	20.2		23.6	56		NNW 28	1014.7	32.0	28		N 20	1011.0	N 46	0.0			1
Wed 2	36.1	21.6		28.8	29		W 7	1011.1	34.8	10		WSW 11	1008.8	WSW 61	0.0			2
Thu 3	33.5	14.1		22.5	62		ENE 17	1013.8	31.8	29		E 15	1010.7	NE 30	0.0			3
Fri 4	34.5	16.8		23.9	58		NNE 13	1013.8	33.4	31		WNW 7	1010.8	NNW 31	0.0			4
Sat 5	36.9	21.7		25.2	52		NNW 26	1015.0	34.5	29		ESE 22	1013.5	N 46	0.0			5
Sun 6	37.3	21.2		25.5	52		N 15	1017.2	36.2	14		SE 11	1014.9	ESE 37	0.0			6
Mon 7	34.3	17.1		22.7	59		NE 15	1019.9	32.8	18		NE 19	1015.7	NE 30	0.0			7
Tue 8	34.4	20.1		23.7	53		N 28	1011.4	33.5	21		NW 28	1005.6	NNW 48	0.0			8
Wed 9	32.7	23.0		27.8	34		NW 17	998.2	32.2	16		SW 22	998.0	NNW 54	0.0			9
Thu 10	35.2	13.5		21.2	65		SE 11	1004.6	33.5	16		NNE 13	1003.0	NW 43	0.0			10
Fri 11	37.8	17.0		24.5	60		N 20	1008.7	35.7	24		NNW 17	1006.2	NW 48	0.0			11
Sat 12	41.4	24.5		29.3	49		N 35	1009.3	39.9	20		NNW 20	1007.8	N 50	0.0			12
Sun 13	39.9	22.7		29.9	38		N 19	1008.1	36.8	29		N 31	1002.5	N 65	0.8			13
Mon 14	30.1	18.2		21.3	63		SSE 22	1010.3	28.0	32		SSE 28	1009.0	SSE 48	0.0			14
Tue 15	29.1	13.6		18.3	58		ENE 17	1015.2	27.6	38		ENE 11	1011.8	E 41	0.0			15
Wed 16	31.7	18.3		22.6	62		NNW 22	1014.0	30.5	39		W 11	1011.3	N 43	0.0			16
Thu 17	36.0	22.0		27.2	42		N 22	1010.7	34.6	26		NW 28	1007.8	WNW 41	0.0			17
Fri 18	37.3	25.1		29.5	37		NNW 30	1007.3	36.8	25		W 11	1004.2	NNW 48	0.0			18
Sat 19	31.7	23.0		26.5	60		Calm	1008.7	23.6	83		SW 15	1008.2	S 52	2.2			19
Sun 20	28.4	16.1		19.5	83		ENE 20	1012.7	26.5	57		ENE 15	1010.9	E 35	3.6			20
Mon 21	33.6	16.2		22.0	70		NE 15	1012.9	30.1	38		SSW 9	1008.8	E 35	0.0			21
Tue 22	31.4	21.3		24.1	68		NNW 17	1010.4	29.3	46		ENE 7	1008.4	SSE 48	0.0			22
Wed 23	32.3	17.0		21.2	74		S 15	1011.8	30.7	36		S 15	1009.7	NNW 41	17.0			23
Thu 24	31.1	17.4		21.1	72		E 19	1012.9	28.9	38		ENE 24	1010.8	E 37	0.0			24
Fri 25	33.9	17.4		22.6	68		E 13	1010.8	32.5	35		ESE 13	1007.0	ENE 43	0.0			25
Sat 26	33.7	19.9		24.1	61		E 17	1009.6	31.8	34		E 19	1006.1	NE 46	0.0			26
Sun 27	22.8	17.2		18.8	100		NNE 6	1007.2	20.6	96		ENE 19	1005.6	S 31	7.6			27
Mon 28	20.6	18.5		18.9	98		SE 19	1003.4	18.6	100		SSE 26	1000.9	SSE 56	5.0			28
Tue 29	30.5	17.6		20.6	89		SW 19	1003.2	29.4	40		SW 22	1004.6	W 46	63.2			29
Wed 30	32.8	17.8		22.0	47		SSE 7	1011.3	31.5	18		S 9	1009.9	WSW 28	0.0			30
Thu 31	31.9	17.8		21.7	83		NNW 30	1012.1	31.1	35		N 20	1008.5	WNW 61	0.0			31
Mean Daily	33.2	19.0		23.6	61.4		18.0	1010.7	31.3	35.5		17.4	1008.1					
Lowest Daily	20.6	13.5		18.3	29		0	998.2	18.6	10		8	998.0					
Highest Daily	41.4	25.1		29.9	100		35	1019.9	39.9	100		31	1015.7	65	63.2			
Total															99.4			



## Table 2. Coonabarabran Climate Statistics (Source: BOM, 2016)

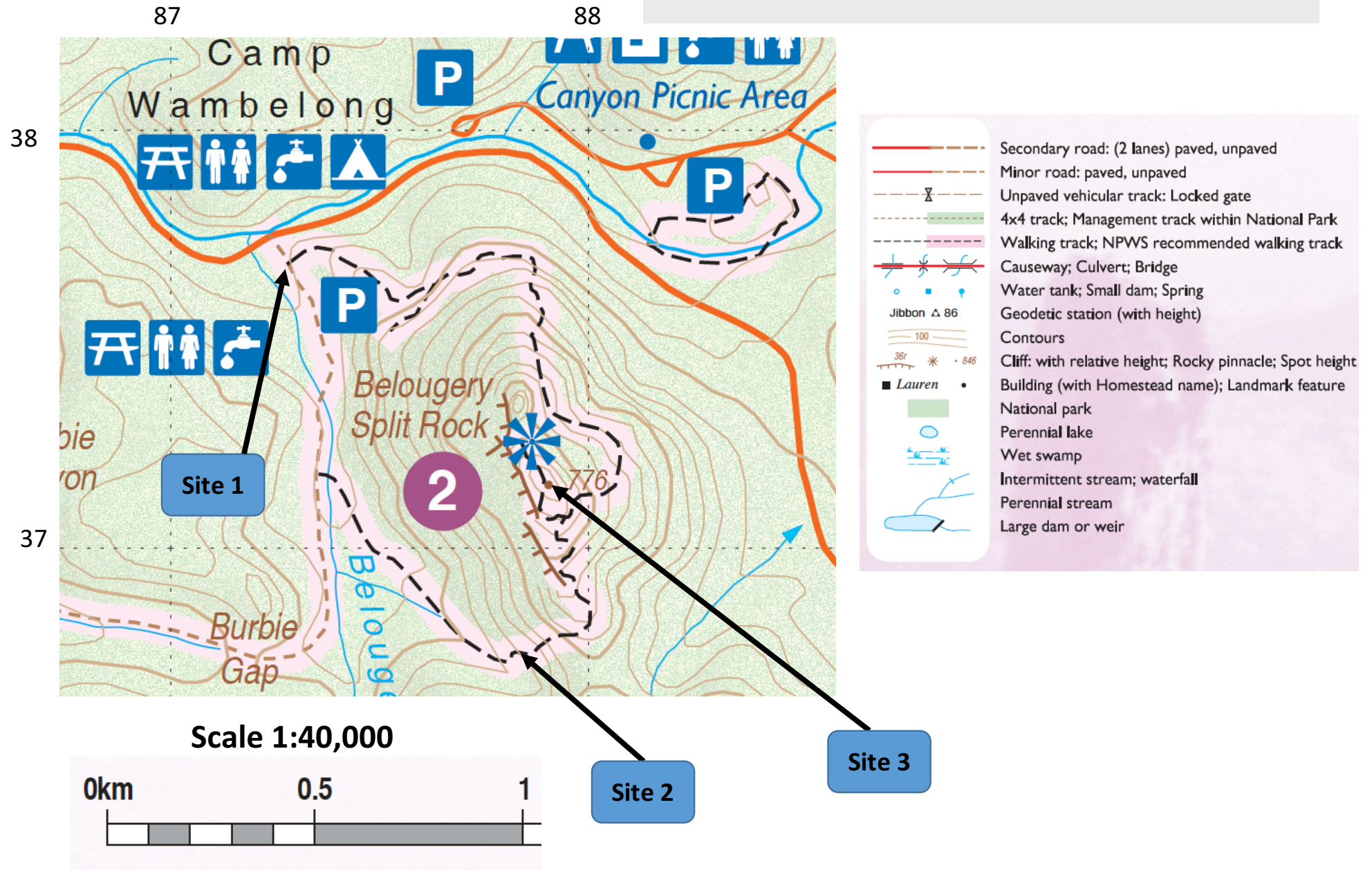


red = highest value blue = lowest value

Product IDCJCM0028 Prepared at Thu 21 Apr 2016 01:07:57 AM EST



# WNPEEC Fieldwork at Split Rock - Topographic Map of Split Rock Circuit and Fieldwork Site Locations





# Fieldwork Recordings - Site 1 – Split Rock Carpark

## General Characteristics

Factors	Notes	Results
<b>Grid Reference</b>	6 digit reference	
<b>Slope</b>	Use a clinometer Flat <10, Gentle 10-20, Medium 20-30, Steep >30	
<b>Aspect</b>	The direction the land is sloping	
<b>Landform</b>	eg. creek, hill, valley	

## Vegetation Description

Factors	Notes	Results
<b>Dominant Trees</b>	use the ID book provided	
<b>Dominant Shrubs</b>	use the ID book provided	
<b>Ground cover</b>	(Estimate %cover of plants, leaf litter and soil and rock)	
<b>Forest Type</b>	eg. Dry Sclerophyll	

## Physical and Chemical Tests

Factors	Notes	Results
<b>Air Temp.</b>	Use Digital Thermometer	
<b>Humidity</b>	Use digital instrument	
<b>Light</b>	Use a light meter (units of Lux)	
<b>Moisture</b>	Dry, Moist or wet	
<b>Soil Temperature</b>	Use Probe Thermometer	
<b>Soil Colour</b>	Rub some soil onto paper as a record of soil colour	
<b>Soil pH</b>	Use pH Soil Kit	

# Fieldwork Recordings - Site 2 – As shown on Map

## General Characteristics

Factors	Notes	Results
<b>Grid Reference</b>	6 digit reference	
<b>Slope</b>	Use a clinometer Flat <10, Gentle 10-20, Medium 20-30, Steep >30	
<b>Aspect</b>	The direction the land is sloping	
<b>Landform</b>	eg. creek, hill, valley	

## Vegetation Description

Factors	Notes	Results
<b>Dominant Trees</b>	use the ID book provided	
<b>Dominant Shrubs</b>	use the ID book provided	
<b>Ground cover</b>	(Estimate %cover of plants, leaf litter and soil and rock)	
<b>Forest Type</b>	eg. Dry Sclerophyll	

## Physical and Chemical Tests

Factors	Notes	Results
<b>Air Temp.</b>	Use Digital Thermometer	
<b>Humidity</b>	Use digital instrument	
<b>Light</b>	Use a light meter (units of Lux)	
<b>Moisture</b>	Dry, Moist or wet	
<b>Soil Temperature</b>	Use Probe Thermometer	
<b>Soil Colour</b>	Rub some soil onto paper as a record of soil colour	
<b>Soil pH</b>	Use pH Soil Kit	



# Fieldwork Recordings - Site 3 – As shown on Map

## Characteristics

Factors	Notes	Results
<b>Grid Reference</b>	6 digit reference	
<b>Slope</b>	Use a clinometer Flat <10, Gentle 10-20, Medium 20-30, Steep >30	
<b>Aspect</b>	The direction the land is sloping	
<b>Landform</b>	eg. creek, hill, valley	

## Vegetation Description

Factors	Notes	Results
<b>Dominant Trees</b>	use the ID book provided	
<b>Dominant Shrubs</b>	use the ID book provided	
<b>Ground cover</b>	(Estimate %cover of plants, leaf litter and soil and rock)	
<b>Forest Type</b>	eg. Dry Sclerophyll	

## Physical and Chemical Tests

Factors	Notes	Results
<b>Air Temp.</b>	Use Digital Thermometer	
<b>Humidity</b>	Use digital instrument	
<b>Light</b>	Use a light meter (units of Lux)	
<b>Moisture</b>	Dry, Moist or wet	
<b>Soil Temperature</b>	Use Probe Thermometer	
<b>Soil Colour</b>	Rub some soil onto paper as a record of soil colour	
<b>Soil pH</b>	Use pH Soil Kit	

# Fieldwork Recordings – Line Drawing

Looking North from the Top of Split Rock, sketch the horizon first, then the main landscape features and then finally the human elements.



Symbol	Description

Symbol	Description

Symbol	Description



# Fieldwork Recordings - Notes

# Post-WNPEEC Excursion Worksheet

## Management Strategies

Name and describe management strategies used by the Warrumbungle National Park for the protection of the natural environment, protection of culturally significant sites and for visitor access and enjoyment.

Natural environments

Cultural sites

Visitor access and enjoyment