

**APPENDIX 3**  
**ENVIRONMENTAL**  
**PERFORMANCE**

**APPENDIX 3A**  
**METEOROLOGICAL**  
**MONITORING DATA**

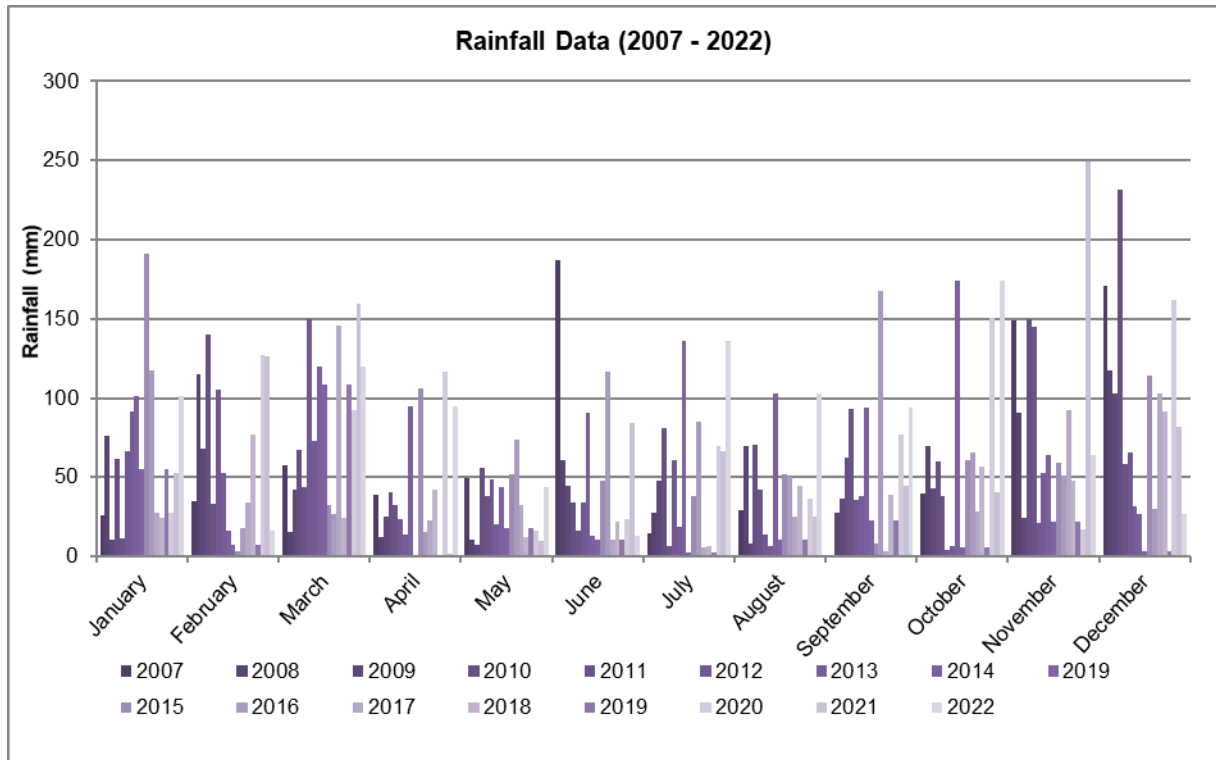
2022 Summary of Rainfall Data

	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall (mm)	2022	101.4	16	119.8	95	43.6	13	136.4	103.2	93.8	174.4	64	26.6
Cumulative Rainfall (mm)	2022	101.4	117.4	237.2	332.2	375.8	388.8	525.2	628.4	722.2	896.6	960.6	987.2

Historical Rainfall

Monthly	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
January	67	26.2	75.8	10.6	61.4	11.4	66.8	91.2	52.6	190.8	117.4	27.8	24.4	54.8	27.2	52.6	101.4
February	76.6	35	115.2	67.8	139.8	33.6	105.6	53	126.6	3.6	17.8	34.2	77	7.4	127	126.6	16.0
March	9.2	57.2	15.6	42.2	67.2	43.4	150	73	159.8	32.4	26.4	146	24.6	108.8	92	159.8	119.8
April	20.8	38.8	12.4	25.4	40.6	32	23.8	13.8	1.8	106	15.4	23	42.2	0	117	1.8	95.0
May	0.8	49.2	10.4	7.4	56	38	48.8	20	9.4	52	73.4	32.4	12.4	17.6	16	9.4	43.6
June	37.2	186.8	61	44.8	34	16.6	34.2	90.6	84.4	47.4	116.6	10.4	21.6	10.6	23.4	84.4	13.0
July	51	14.6	27.8	48	81	6.2	60.6	18.6	66.8	38.2	84.8	5.8	6.8	2.6	70	66.8	136.4
August	7	29.2	69.4	8.2	70.8	41.8	13.4	6.8	25.4	52	50	25.2	44.4	10.2	36.4	25.4	103.2
September	15.6	0.2	27.8	36.2	62.4	92.8	35.4	38	44.2	7.8	167.2	3	39	23	77.2	44.2	93.8
October	1.8	39.4	70	43	60	38	4.2	6.6	40.8	60.8	65.8	28.4	56.8	5.6	150.6	40.8	174.4
November	70	149.2	91	24.2	150	145	20.8	52.8	249.2	59	50.8	92.6	47.4	22	17.4	249.2	64.0
December	NA	171.2	117.4	103.2	231.2	58	65.6	31.8	81.4	114.4	30	102.6	91.2	3	161.6	81.4	26.6
<b>Total</b>	357	797	693.8	461	1054.4	556.8	629.2	496.2	942.4	764.4	815.6	531.4	487.8	265.6	915.8	942.4	987.2

Rainfall Data 2007-2022



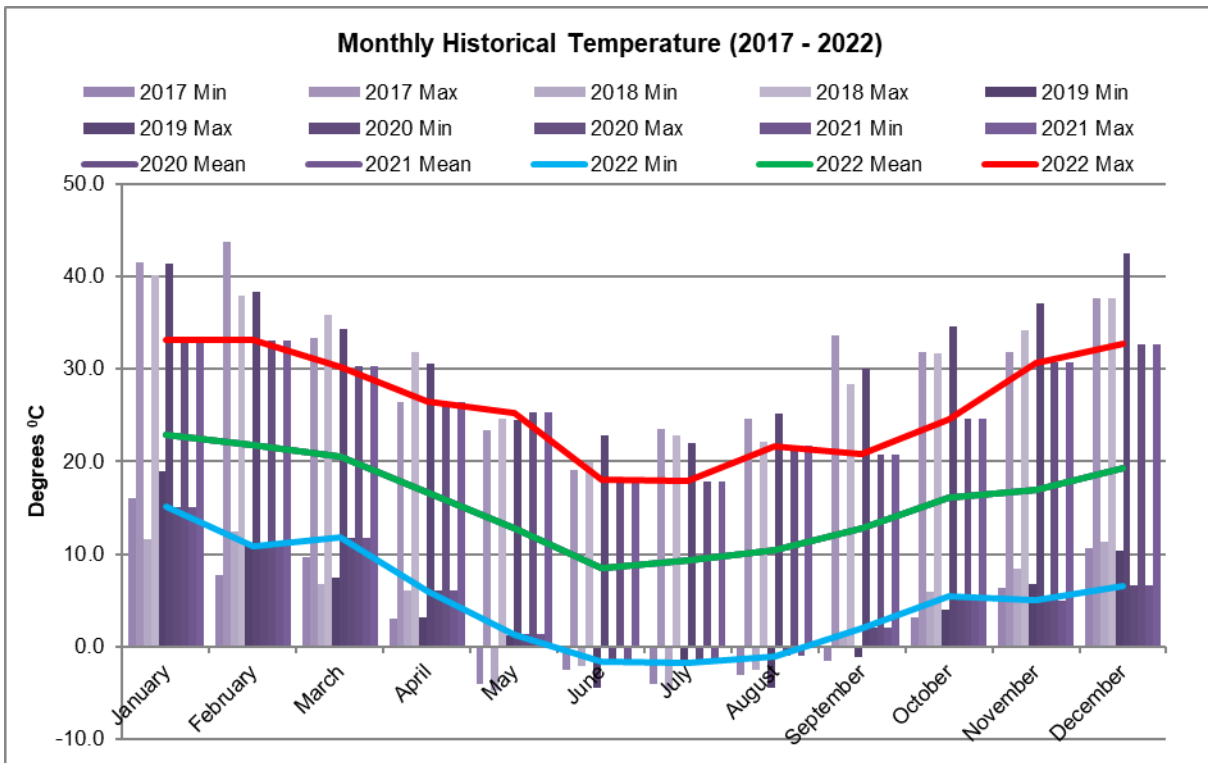
## 2022 Summary of Temperature Data

2021	Air Temperature (°C at 2 m)			Air Temperature (°C at 10 m)			Air Temperature (°C at 60 m)		
	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean
January	14.4	33.6	23.1	15.1	33.1	22.9	15.3	32.1	22.4
February	9.9	34.2	22.0	10.9	33.1	21.8	11.8	32.0	21.4
March	10.8	30.9	20.6	11.8	30.3	20.5	12.5	28.9	20.1
April	5.5	27.5	16.6	6.0	26.5	16.7	7.3	25.6	16.7
May	0.8	26.0	12.7	1.3	25.3	12.8	2.5	24.7	13.0
June	-2.1	18.9	8.5	-1.6	18.0	8.5	-0.3	16.9	8.7
July	-2.5	18.7	9.2	-1.8	17.9	9.3	-0.7	16.8	9.5
August	-1.6	22.3	10.2	-1.0	21.7	10.3	0.9	20.3	10.5
September	1.4	21.7	12.8	2.0	20.8	12.8	3.3	19.9	12.7
October	4.6	25.3	16.3	5.5	24.6	16.2	5.9	23.6	15.9
November	4.1	30.9	17.1	5.0	30.7	17.0	6.1	29.6	16.7
December	5.5	33.6	19.4	6.6	32.7	19.3	6.7	31.3	18.9

## Historical Temperature Data

	2013			2014			2015			2016		
	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean
January	14.3	41.9	25.6	12.5	41.8	24.8	10.0	34.9	22.9	11.8	37.9	22.7
February	10.4	34.2	22.0	19.2	20.9	30.4	12.5	34.6	22.9	11.1	37.8	23.6
March	9.3	31.4	20.5	7.5	29.6	20.1	6.6	35.8	21.6	8.9	35.0	22.2
April	4.0	28.8	16.2	3.6	30.0	16.9	4.0	29.6	16.3	7.6	32.9	18.5
May	0.2	27.1	12.4	1.2	26.3	12.2	1.4	24.3	13.0	-1.4	26.5	13.3
June	-0.2	18.7	10.0	-0.9	19.6	9.9	-1.6	19.0	9.2	-2.1	18.8	10.0
July	-2.2	20.3	9.6	-3.7	21.3	8.0	-2.2	16.5	7.6	-2.4	21.7	10.0
August	1.6	25.0	12.9	-3.1	20.6	9.8	-1.3	23.3	9.9	-0.9	22.1	9.7
September	2.0	30.0	15.2	-0.2	29.7	13.6	0.4	25.5	12.8	1.8	21.7	12.7
October	1.5	33.6	17.7	1.6	35.9	18.8	7.0	33.8	19.4	2.6	29.4	15.0
November	5.9	35.2	19.6	6.9	41.9	22.7	10.3	37.8	21.4	4.4	34.2	19.6
December	5.1	38.5	23.1	11.1	35.0	22.6	12.0	36.1	22.7	8.6	37.4	24.1
	2017			2018			2019			2020		
	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean
January	16.0	41.6	26.4	11.6	40.1	25.9	18.9	41.4	27.8	16.0	41.5	26.2
February	7.7	43.7	25.9	12.5	38.0	23.9	11.2	38.3	24.1	10.4	40.4	22.3
March	9.7	33.3	21.7	6.7	35.8	21.9	7.5	34.3	22.1	7.5	33.6	19.2
April	3.0	26.4	15.3	6.0	31.8	19.1	3.1	30.6	17.5	5.6	26.6	16.0
May	-4.0	23.4	12.3	-4.8	24.7	12.4	1.2	24.5	12.2	0.0	23.2	11.3
June	-2.5	19.1	9.5	-2.1	19.9	9.2	-4.4	22.9	9.3	0.3	19.6	9.9
July	-4.0	23.5	7.7	-4.8	22.8	8.7	-2.1	22.0	9.9	-0.5	20.4	9.4
August	-3.1	24.6	9.6	-2.5	22.1	9.6	-4.5	25.2	9.8	-1.5	21.1	9.6
September	-1.6	33.7	14.1	1.1	28.4	13.7	-1.1	30.0	14.3	2.5	26.5	14.0
October	3.2	31.8	19.0	5.9	31.7	18.0	4.0	34.6	19.0	4.4	29.9	17.3
November	6.3	31.9	21.2	8.4	34.2	21.2	6.8	37.1	21.9	8.5	38.2	20.9
December	10.7	37.6	23.9	11.3	37.6	24.0	10.4	42.5	25.3	9.6	40.2	20.9
	2021											
	Min	Max	Mean									
January	10.9	35.7	22.5									
February	11.6	32.1	21.6									
March	10.0	31.8	19.5									
April	1.3	27.1	14.8									
May	-0.8	23.0	11.9									
June	0.3	21.2	9.3									
July	-3.0	20.6	8.7									
August	-0.2	24.9	10.6									
September	1.3	26.3	13.2									
October	5.1	31.2	15.9									
November	8.0	28.5	17.8									
December	8.3	33.7	21.2									

Historical Temperature 2016-2022



2022 Average Wind Speeds & Directions

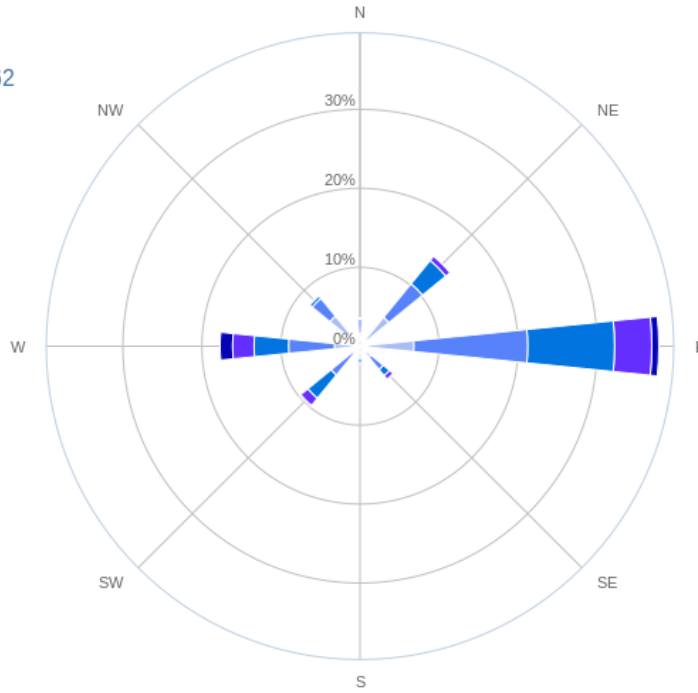
Month	Ave Wind Speed (m/s)	Max Wind Speed (m/s)	Ave Wind Dir.
January	2.2	11.0	93.29
February	2.5	14.3	114.46
March	1.9	7.4	106.87
April	1.7	6.7	138.27
May	1.6	10.4	159.74
June	1.7	8.7	237.73
July	1.8	8.5	170.06
August	1.6	7.6	208.68
September	1.8	9.1	161.80
October	2.2	8.8	144.26
November	2.2	10.3	174.47
December	2.2	7.3	129.65

Annual Wind Rose 2021

Wind Rose Chart

SX34 - Wilpinjong Coal -M4 Period: (2022-01-01 to 2022-12-31) [15mins interval]

Count=29362  
Calm=7.7%



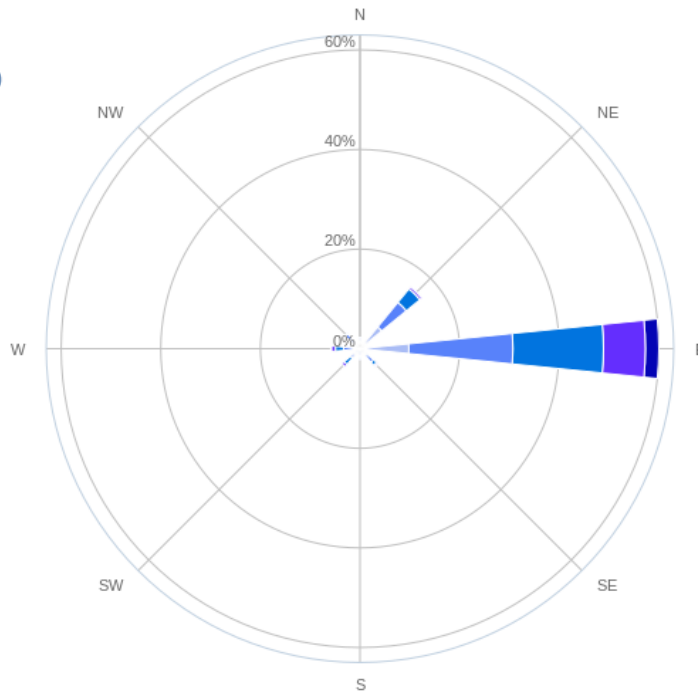
Novecom.com.au

Summer Wind Rose December 2020 - February 2022

Wind Rose Chart

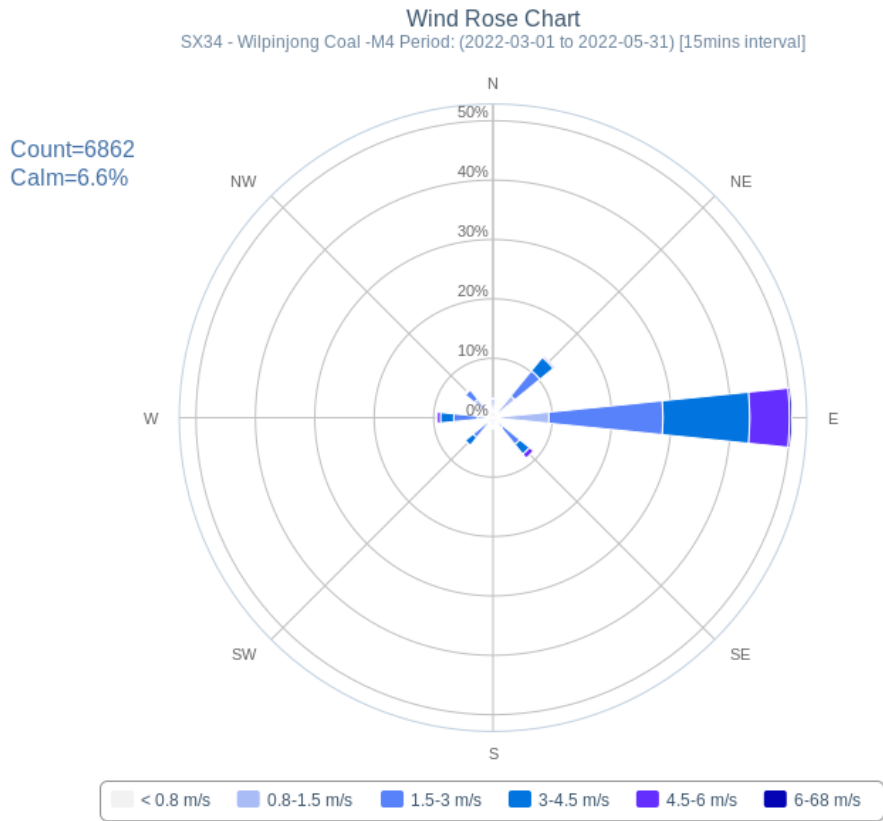
SX34 - Wilpinjong Coal -M4 Period: (2021-12-01 to 2022-02-28) [15mins interval]

Count=7690  
Calm=6.2%



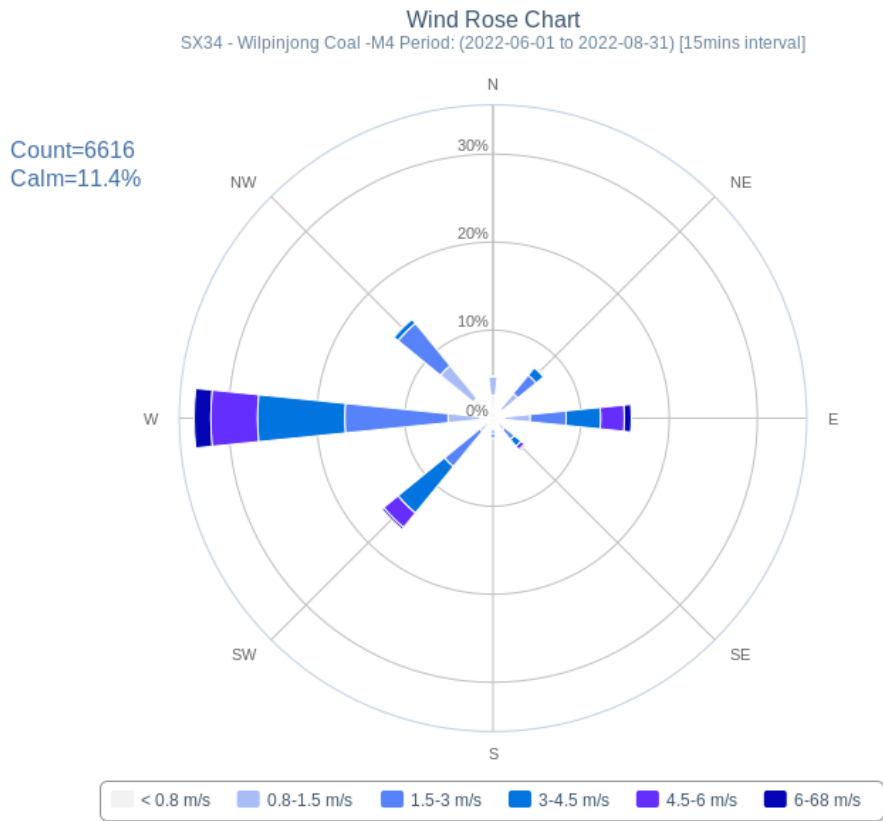
Novecom.com.au

**Autumn Wind Rose 2022**



Novecom.com.au

**Winter Wind Rose 2022**



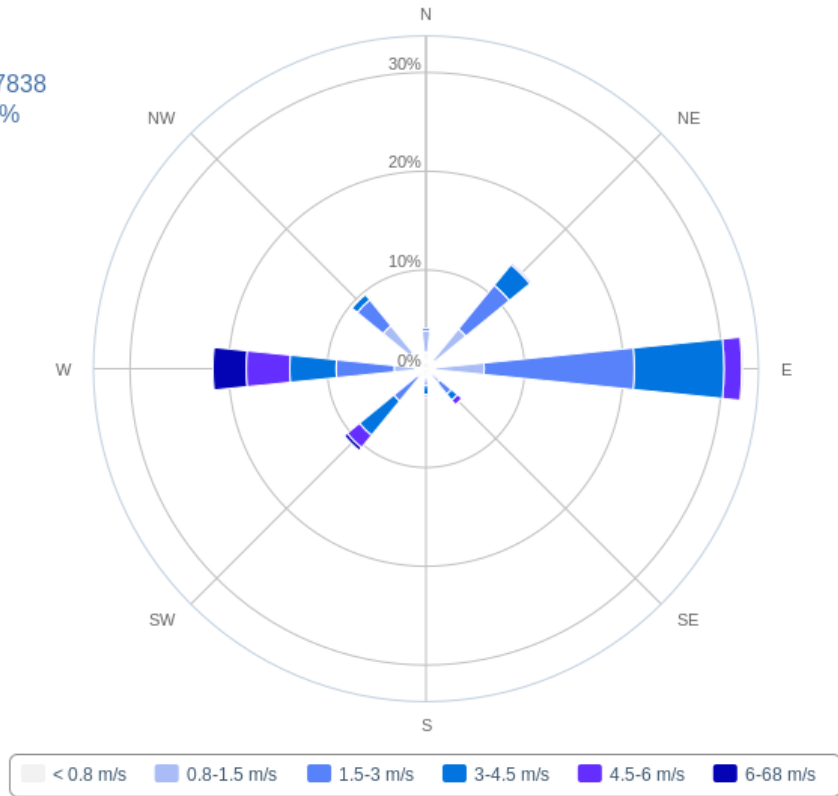
Novecom.com.au

Spring Wind Rose 2022

Wind Rose Chart

SX34 - Wilpinjong Coal -M4 Period: (2022-09-01 to 2022-11-30) [15mins interval]

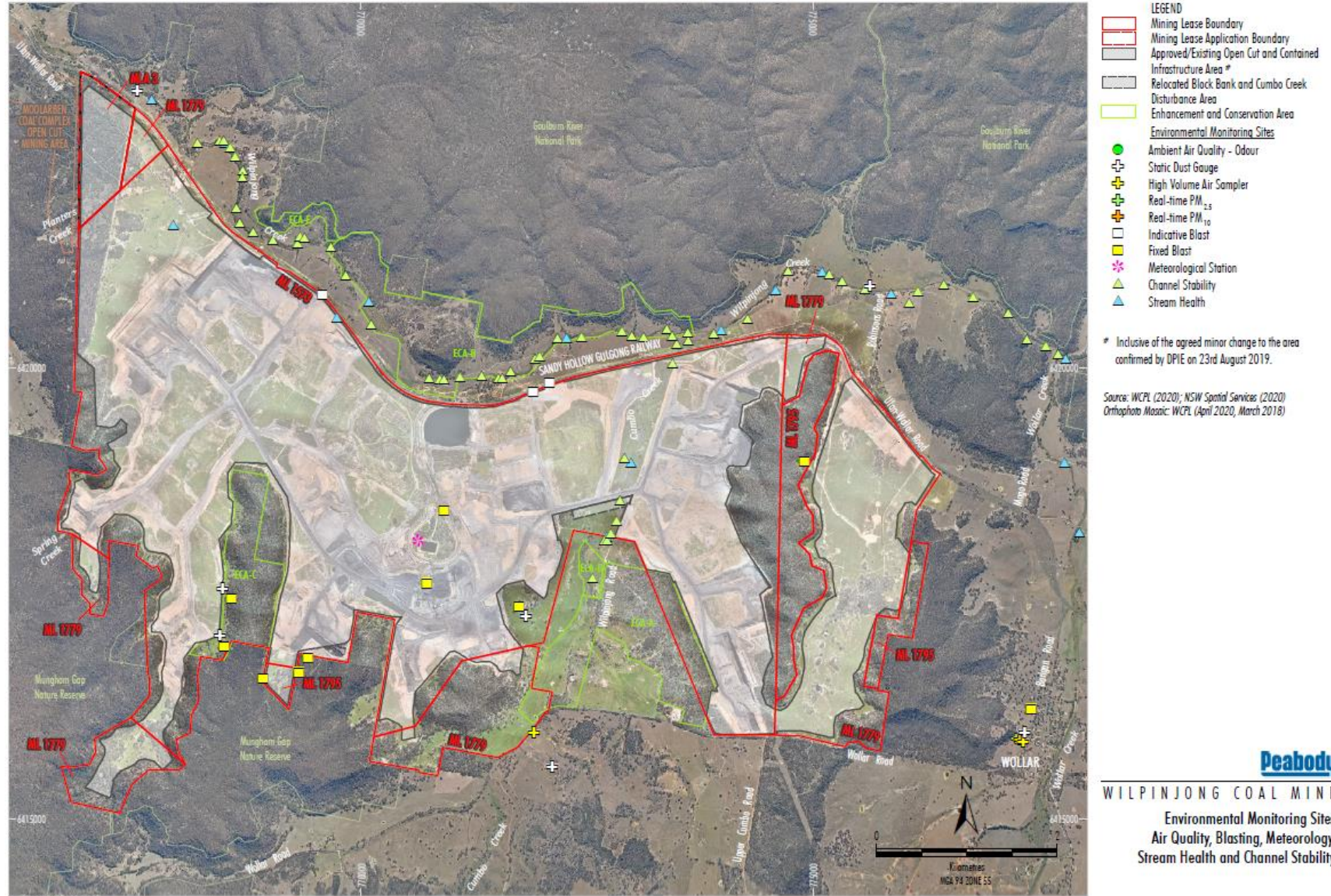
Count=7838  
Calm=8%



Novocom.com.au



Location of WCPL’s Meteorological Station



WL-12-11\_EMS 2020\_2054