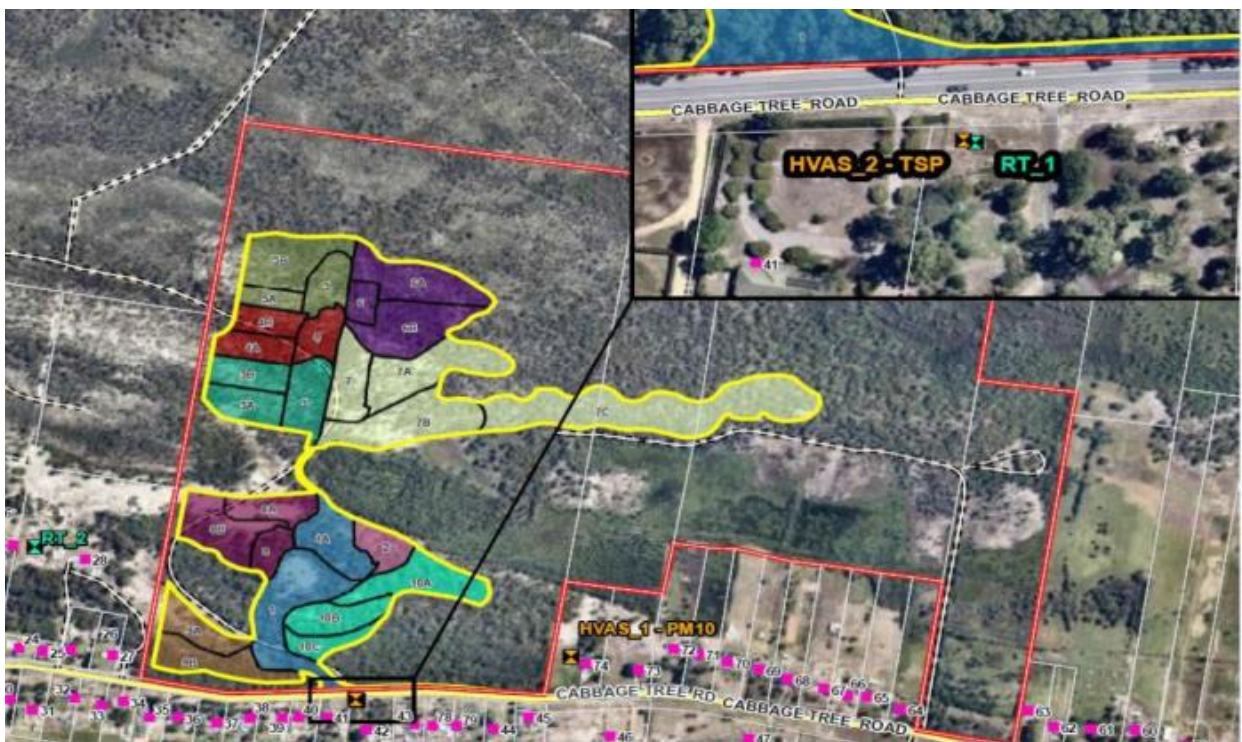


Newcastle Sand

Cabbage Tree Road Sand Quarry

282B (398) Cabbage Tree Road, Williamtown NSW

Air Quality Monitoring Network Results



Monitoring Locations

Newcastle Sand must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria in below at any residence on privately-owned land.

Table 1 Air quality criteria

Pollutant	Averaging Period	Criterion	
Particulate matter <10µm (PM ₁₀)	Annual	a, c 25µg/m ³	
Particulate matter <10µm (PM ₁₀)	24 hours	b 25µg/m ³	
Total suspended particulates (TSP)	Annual	a, c 25µg/m ³	

Table 2 HVAS Monitoring Result

HVAS 1 (PM10) paddock			HVAS 2 (TSP) Sampson		
Sample Date	Concentration (µg/m ³)	Rolling annual average Inclusive of extraordinary events (Criteria 25 µg/m ³ excluding events)	Sample Date	Concentration (µg/m ³)	Rolling annual average Inclusive of extraordinary events (Criteria 25 µg/m ³ excluding events)
6-Jan-24	16.8	11.9	6-Jan-24	21.8	32.0
12-Jan-24	16.9	11.9	12-Jan-24	29.4	32.1
18-Jan-24	8.8	11.9	18-Jan-24	20	32.1
24-Jan-24	12	11.9	24-Jan-24	26.8	32.1
30-Jan-24	26	12.1	30-Jan-24	23.4	32.1
5-Feb-24	27.1	12.3	5-Feb-24	45.4	32.5
11-Feb-24	11.7	12.3	11-Feb-24	22.8	27.6
17-Feb-24	12.6	12.2	17-Feb-24	21.1	27.5
23-Feb-24	19.6	12.3	23-Feb-24	45.2	27.7
29-Feb-24	22.5	12.5	29-Feb-24	41	28.1
6-Mar-24	16	12.5	6-Mar-24	33.2	28.3
12-Mar-24	11.9	12.3	12-Mar-24	32.9	28.1
18-Mar-24	-		18-Mar-24	15.6	27.8
24-Mar-24	-		24-Mar-24	13.9	27.6
30-Mar-24	-		30-Mar-24	11.4	27.4

Comments

- 29-Feb-24 - Stopped ~314 minutes short of run time
- 6-Mar-24 Ran for ~214 minutes then stopped
- 12-Mar-24 Sample only ran for ~576 minutes then stopped again.
- 18-Mar-24 HVAS error "major blockage or motor drive error"
- 24-Mar-24 HVAS error "major blockage or motor drive error"
- 30-Mar-24 HVAS out of service

Table 3 Beta Attenuation Monitoring (BAM) Real-Time Monitoring

Month	RT1 (sth of CBT Rd)				RT2 (nth of CBT Rd)				Maximum 24hr Average Quarry Contribution RT2-RT1 assumes NW wind Criteria 50 $\mu\text{g}/\text{m}^3$
	24 hr rolling average in $\mu\text{g}/\text{m}^3$			Rolling annual average Inclusive of extraordinary events at end of month, Criteria 25 $\mu\text{g}/\text{m}^3$ exclusive of events.	24 hr rolling average in $\mu\text{g}/\text{m}^3$			Rolling annual average Inclusive of extraordinary events at end of month, Criteria 25 $\mu\text{g}/\text{m}^3$ exclusive of events.	
	Minimum	Average	Maximum		Minimum	Average	Maximum		
January	7.2	15.6	26.9	14.1	2.6	7.6	12.8	6.3	15.2
February	7.9	16.7	30.3	14.3	5.6	13.3	24.3	6.6	15.4
March	6.0	14.4	30.9	14.3	3.2	11.0	31.9	7.0	14.5

Table 4 Meteorological Data (BOM)

Month	Max mean temperature at 2 meters (Degrees Celsius)	Wind direction at 10 meters (Degrees)	Highest wind speed at 10 meters (Km/h)	Average Rainfall (Millimetres)	Mean Relative Humidity at 3pm (Percent)
January	30.7	SSW	61	0.65	56
February	29.2	SW	74	4.07	64
March	27.3	SSE	61	1.46	63