

Mt Arthur Coal Community Consultative Committee

Planned meeting date:
17 February 2021
Information provided:
1 October to 31 December

Environmental Management

FY20/FY21 Rehabilitation Update

Mt Arthur Coal has completed (with seed) 18.6ha for FY21. A further 28.6 ha in VD4, VD5 and adjacent to the new EME Pad has been bulk shaped and had topsoil spread ready for seeding. These areas will be seeded from February onwards. Further bulk shaping is scheduled in VD4 and Drayton Void areas to hit our FY21 target of 73 ha.

Mt Arthur Coal has also commenced repair and re-work of drought impacted rehab in the VD4 and VD5 areas. 68.2 ha has been scalped to removed weeds and weed seed bank. Erosion repairs and re-working of rock drains has also taken place. Follow up weed spraying has commenced and will be completed over the following 2 months. This area will be seeded with the rehab establishment work this year.

Compost continues to be used for all establishment and repair works.

Environmental Performance

Air Quality Monitoring (Period: 1 October to 31 January 2021)

- This paper (for the reporting period of 1 October to 31 January 2021 covers the performance of all six statutory PM10 monitoring sites using TEOMs, and the two dust deposition gauges.
- Five days within the reporting period experienced elevated absolute PM10 TEOM monitoring results.
 - 16 October 2020 DC02
 - 21 November 2020 DC04
 - 22 November 2020 DC04
 - 29 November 2020 DC02 DC04 DC07 DC09
 - 16 January 2021 DC04
- Table 1 below provides an equipment performance summary.
- A guide has been provided at the end of this section to assist in the interpretation of the results

Table 1 Equipment Performance Summary

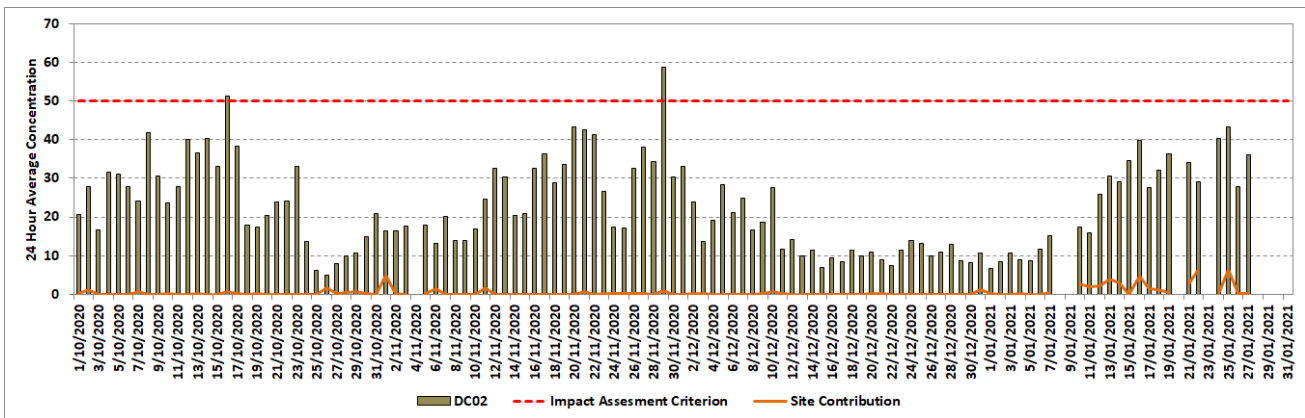
Site	Date/s	Reason
DC02	4/11/2020 8-9/1/2021 20/01/2021 23/01/2021 28-31/01/2021	Calibrations <75% Data capture Equipment issues – <75% data capture Equipment issues – <75% data capture Equipment issues – <75% data capture Equipment issues – <75% data capture
DC04	4/11/2020	Calibrations <75% Data capture
DC05	19/10/2020 4/11/2020 17/12/2020 18-20/01/2021	Communication issues – <75% data capture Calibrations <75% Data capture Equipment issues – <75% data capture Equipment issues – <75% data capture

DC06	9/11/2020 8-24/1/2021	Calibrations <75% Data capture Equipment Issues – <75% data capture
DC07	9/11/2020 17-25/11/2020	Calibrations <75% Data capture Communication issues – <75% data capture
DC09	4/11/2020	Calibrations <75% Data capture

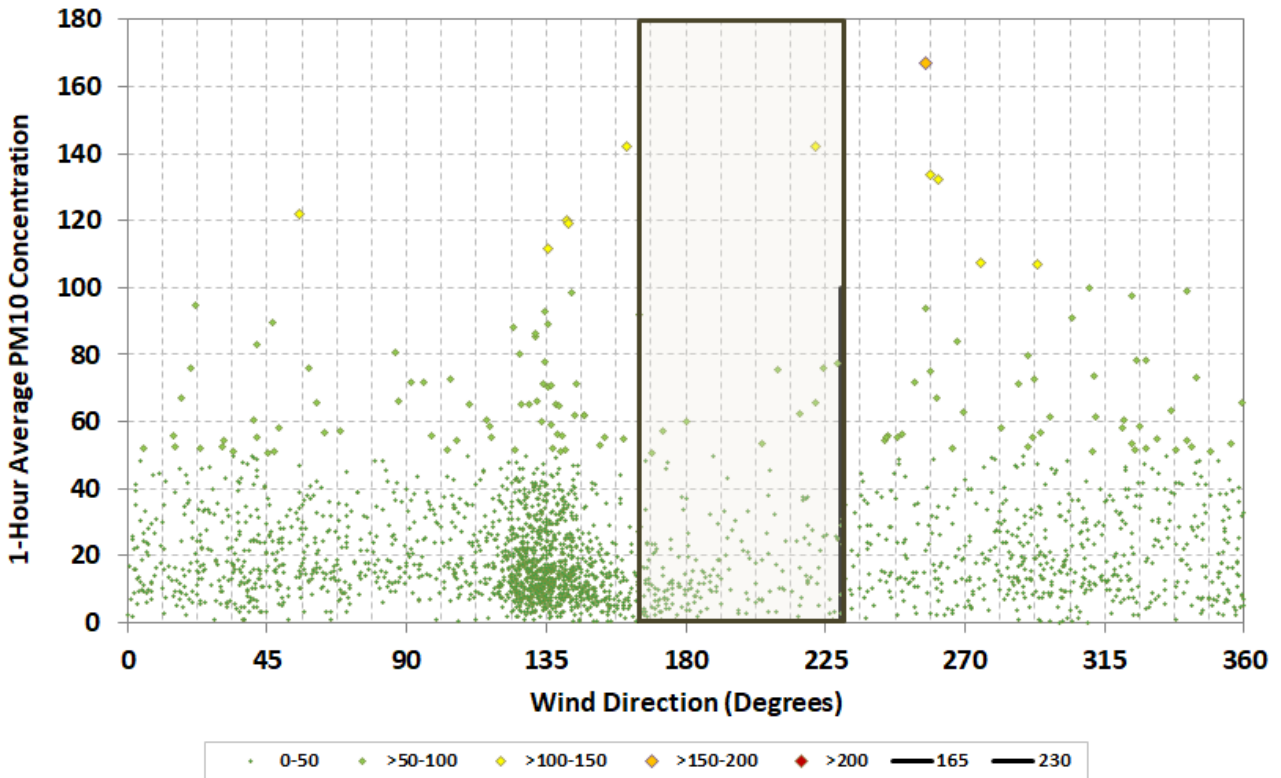
Air Quality Monitoring (Period 1 October to 31 January 2021)

Sheppard Avenue – DC02

Data capture – 92%

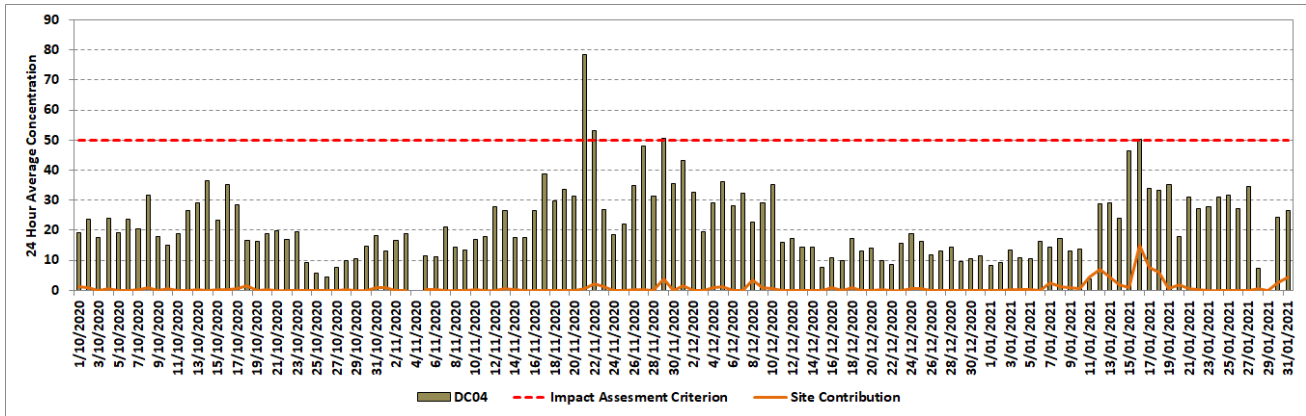


DC02

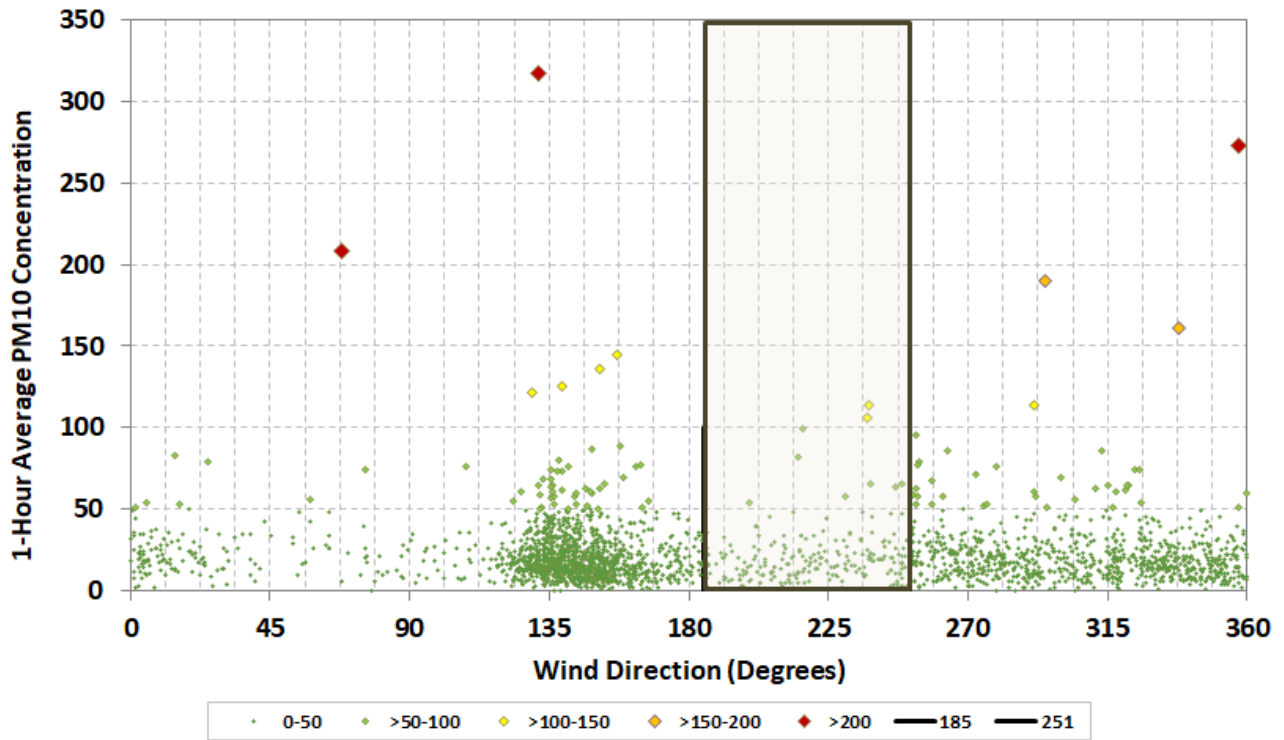


South Muswellbrook – DC04

Data capture – 99%

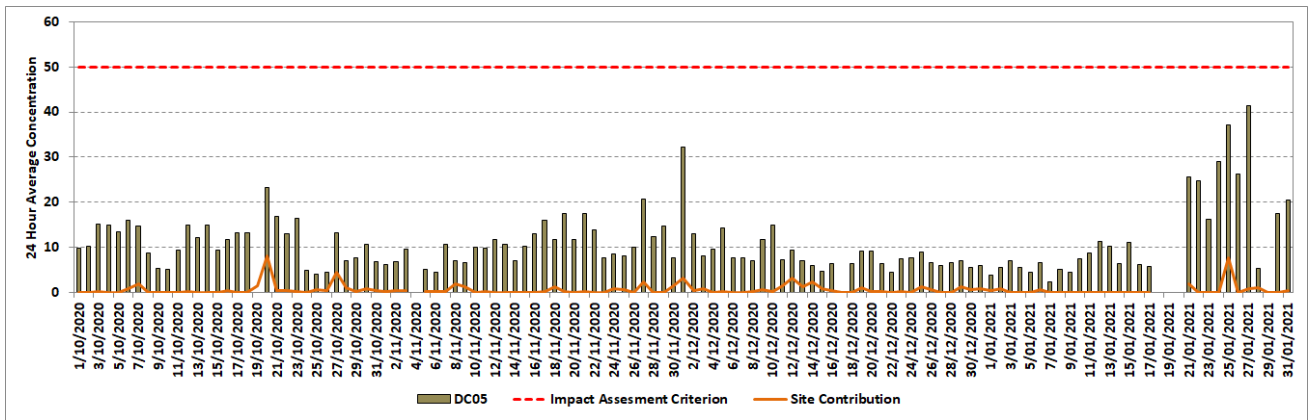


DC04

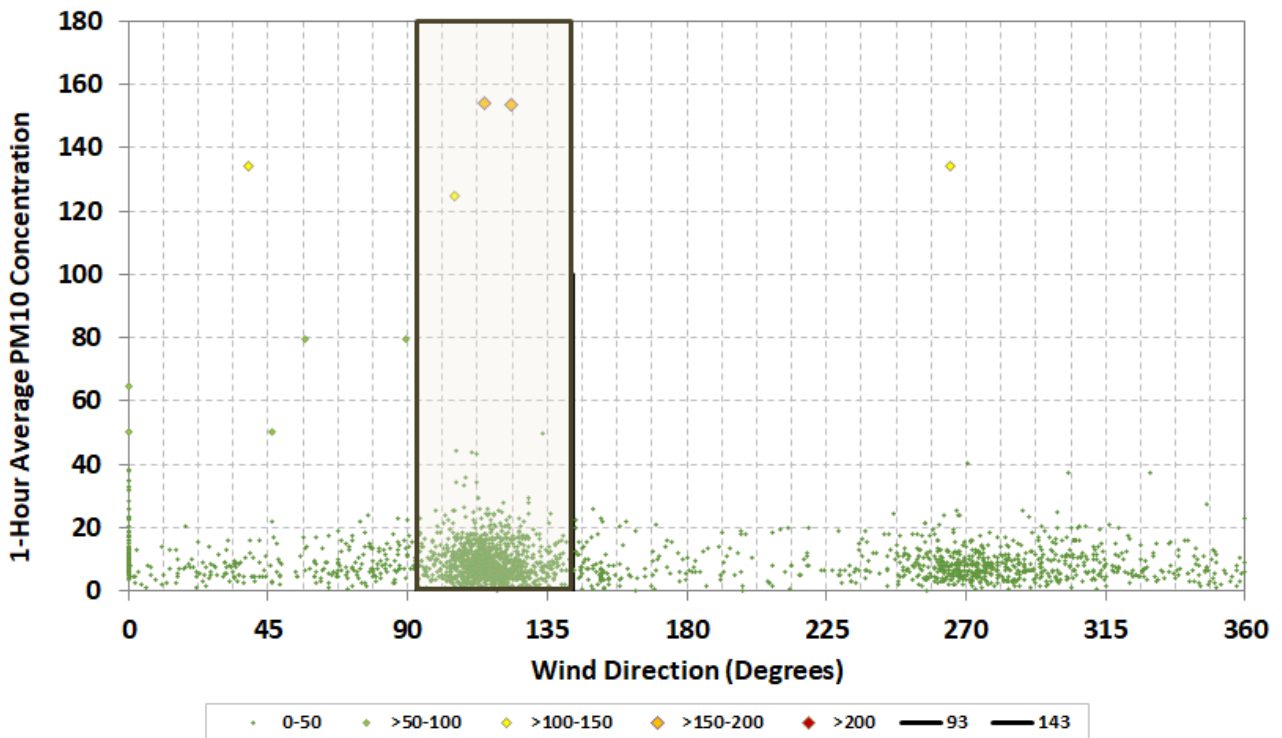


Roxburgh Road – DC05

Data capture – 95%

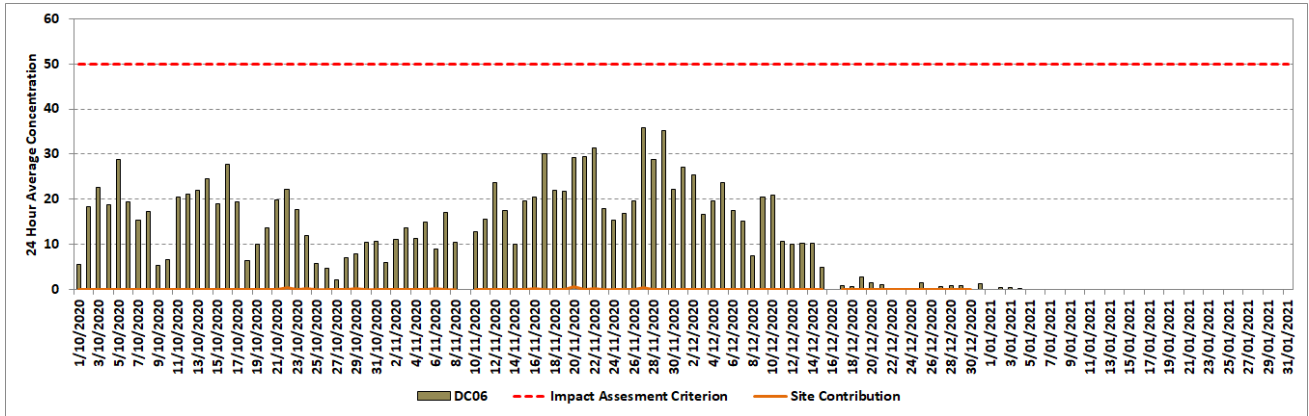


DC05

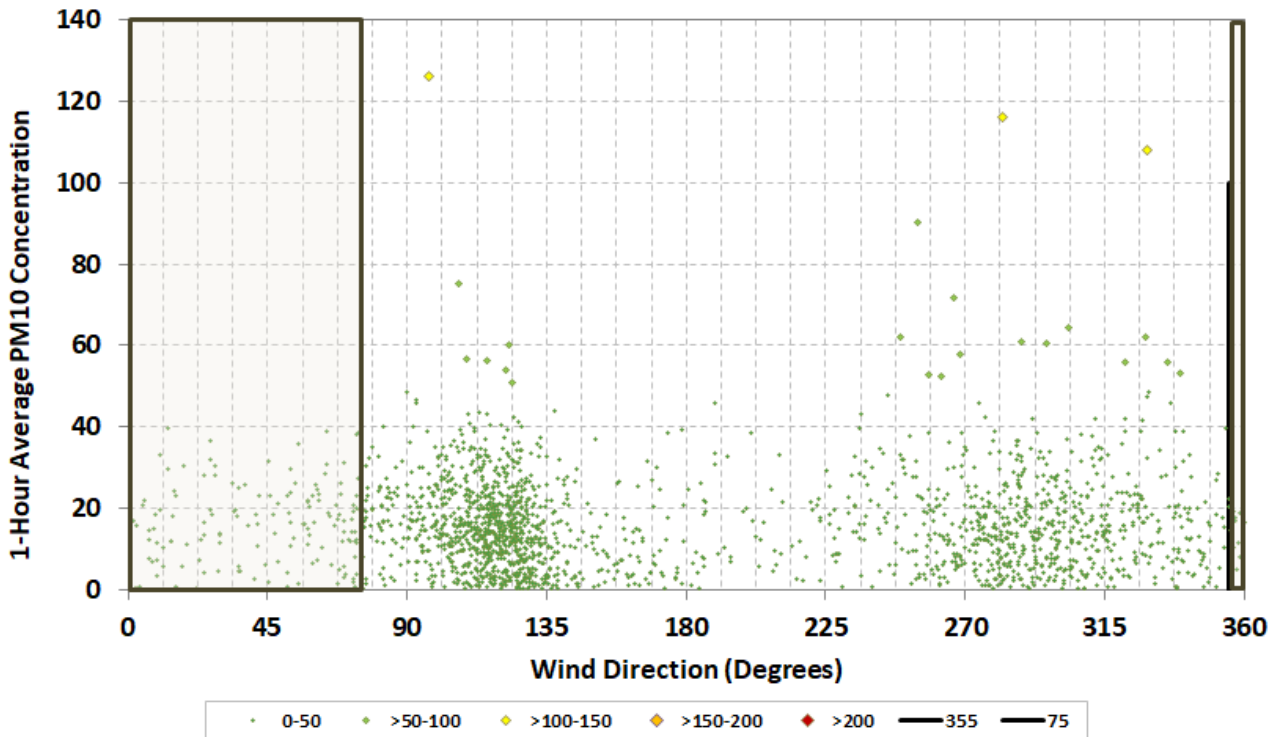


Edderton Homestead - DC06

Data capture – 82%

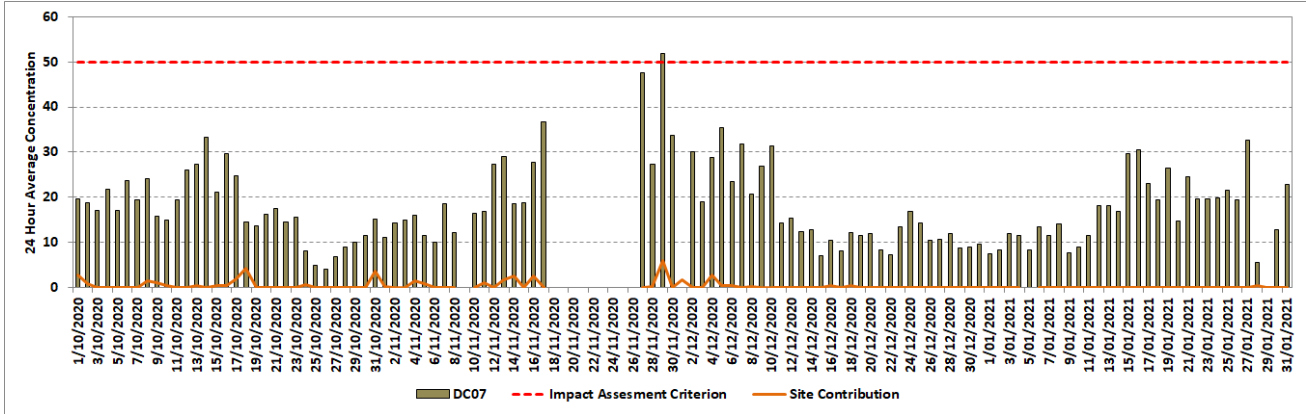


DC06

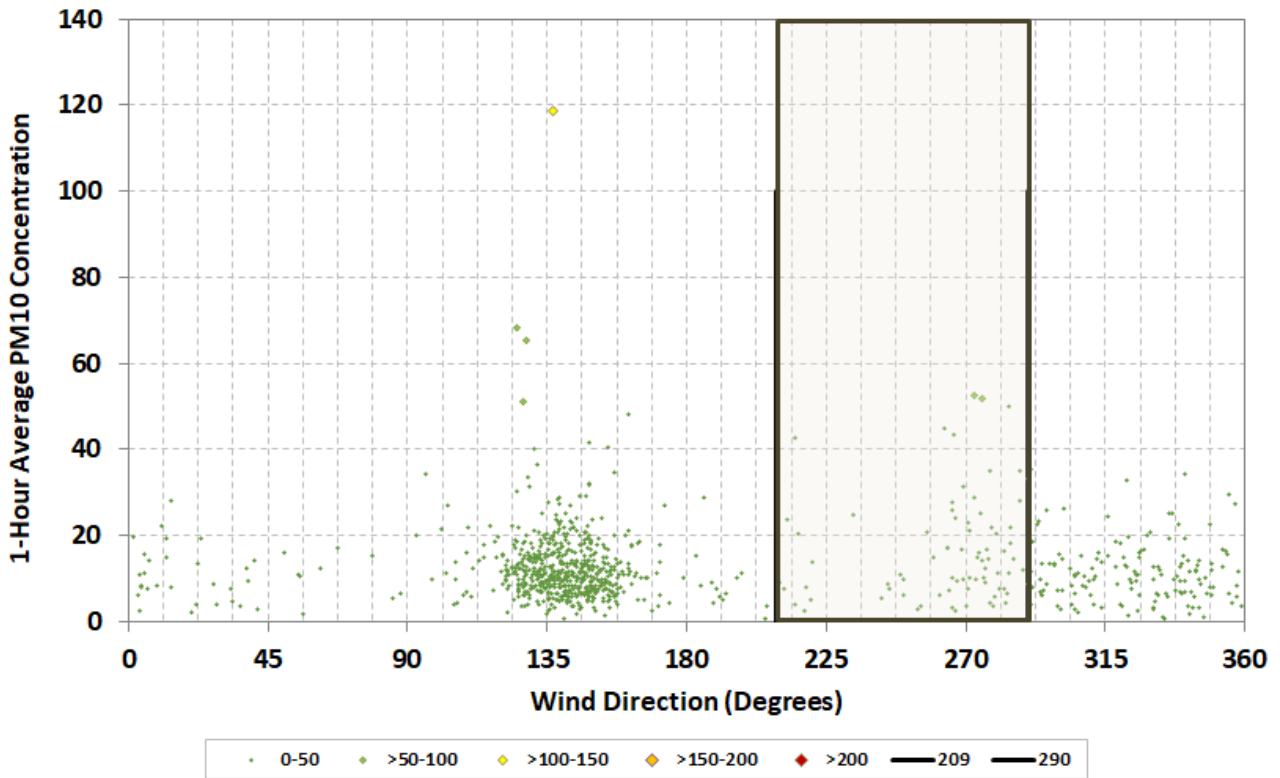


Antiene - DC07

Data capture - 91%

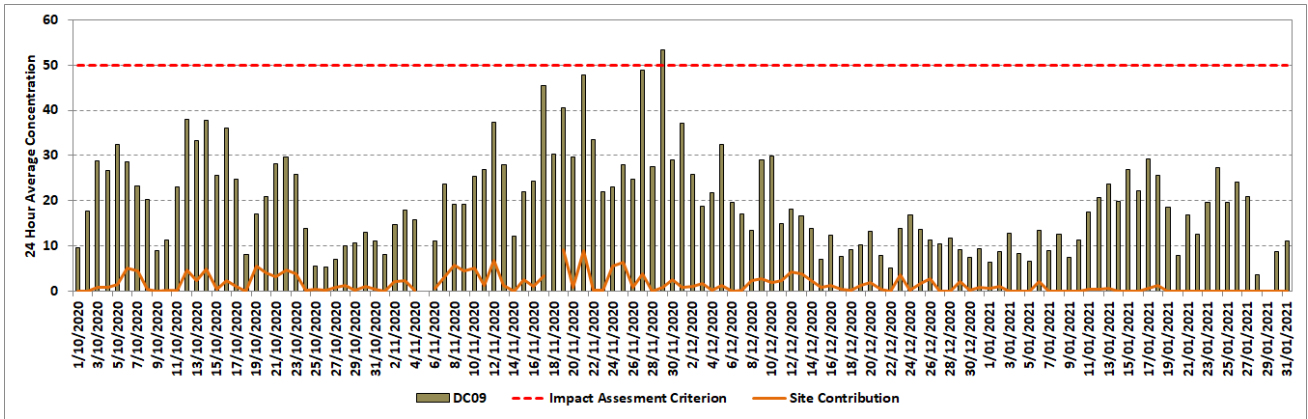


DC07

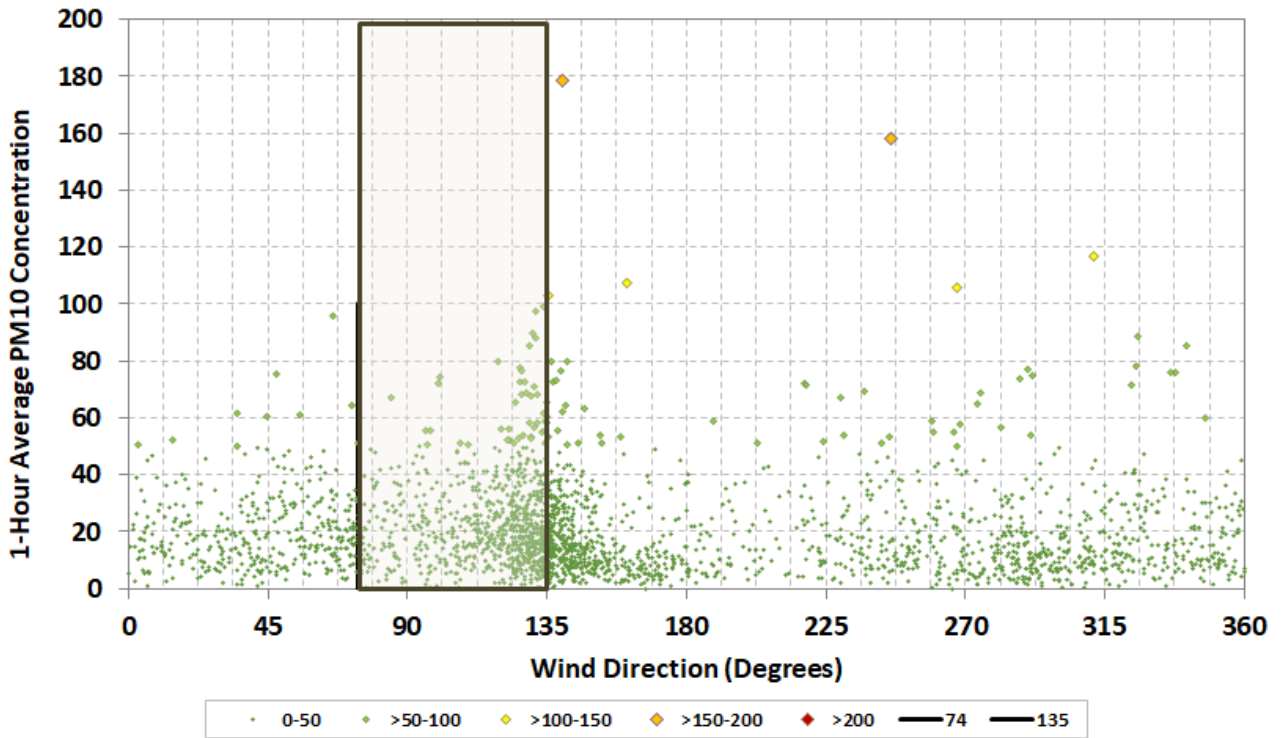


Wellbrook – DC09

Data capture – 99%

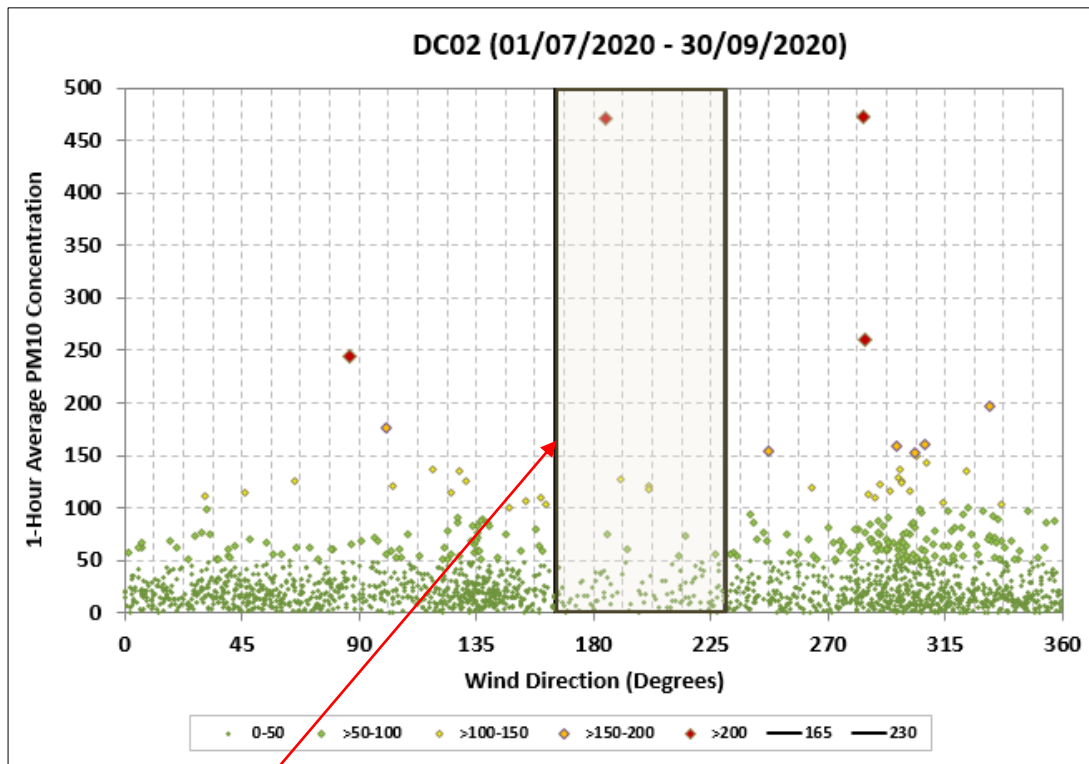


DC09

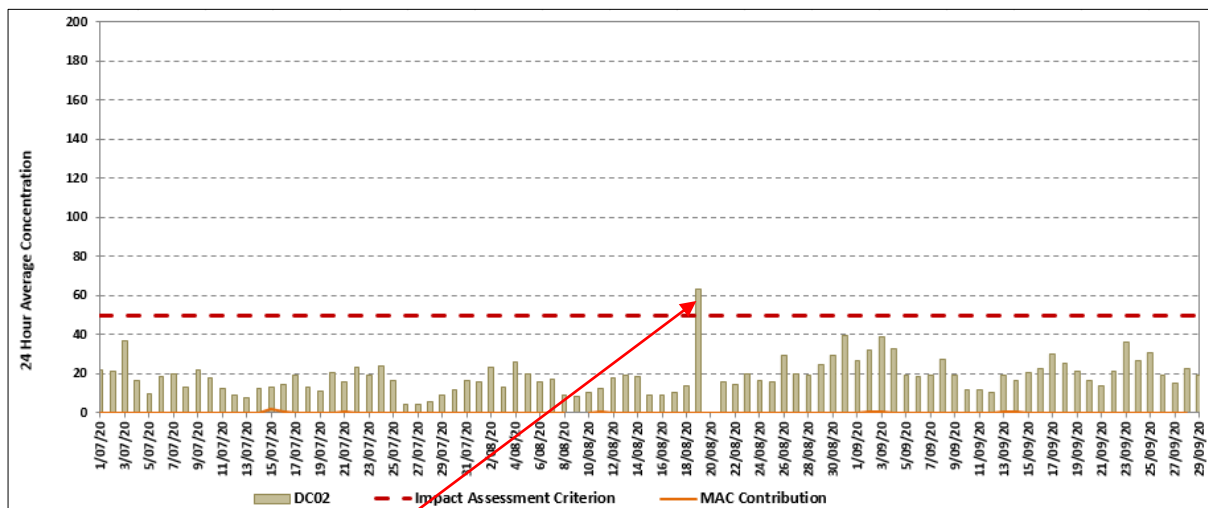


Air Quality Monitoring Interpretation Information

This information has been provided to assist with the interpretation of the air quality monitoring results within this report.



This graphic shows the window where the Mt Arthur Coal contribution is at risk of influencing the DC02 dust monitor based on the wind direction. This window can be referred to as the Arc of Influence. 1- Hour Average Concentrations have been plotted for the reporting period to give an indication of Mt Arthur's influence on DC02.

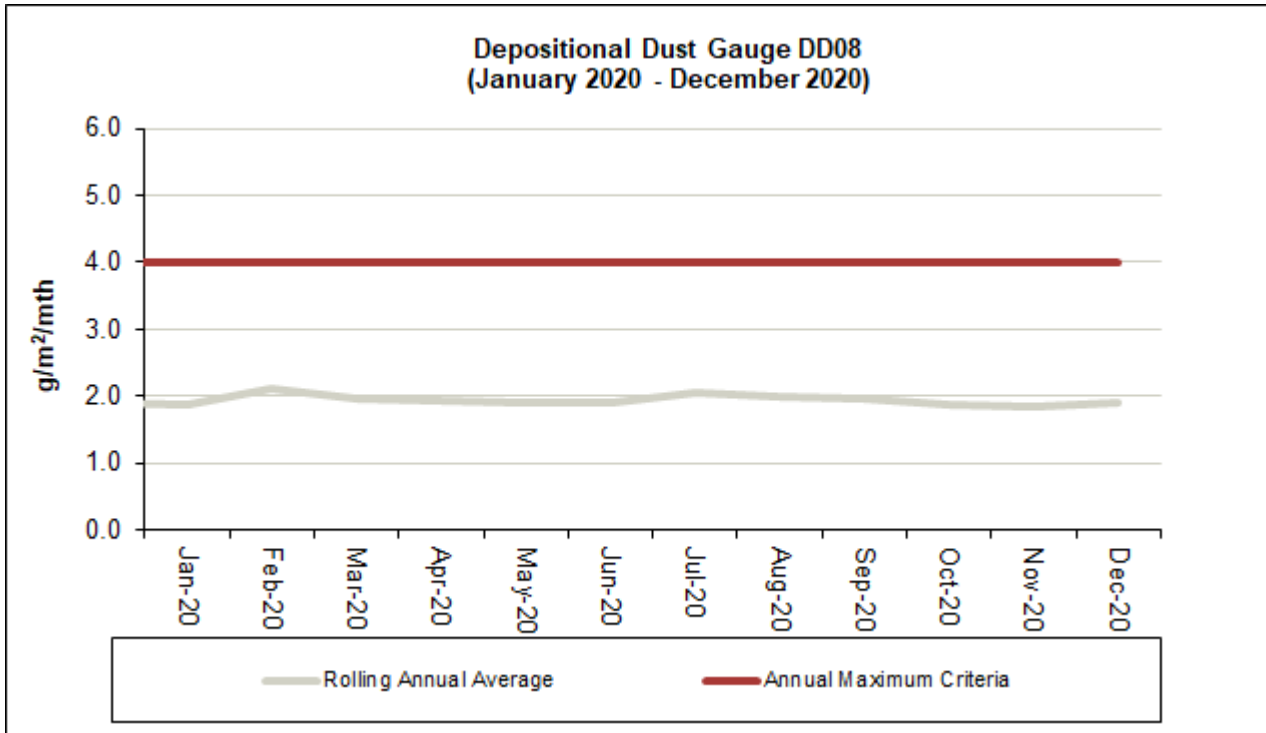


This graphic shows the cumulative Daily 24hr PM10 concentrations along with the incremental Mt Arthur Coal concentrations. This example shows that the cumulative 24hr concentration exceeded the impact assessment criteria; the Mt Arthur incremental concentrations remained below the criteria.

Deposited Dust

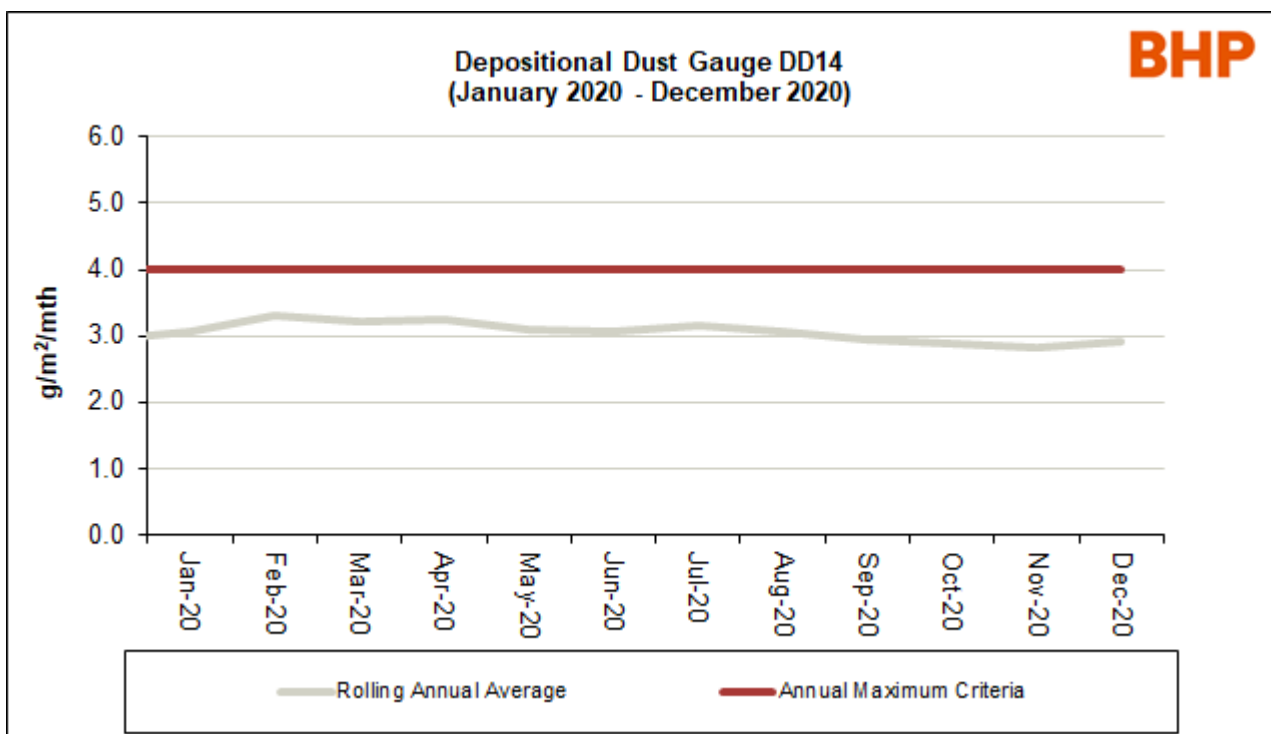
DD08

Data capture – 100%

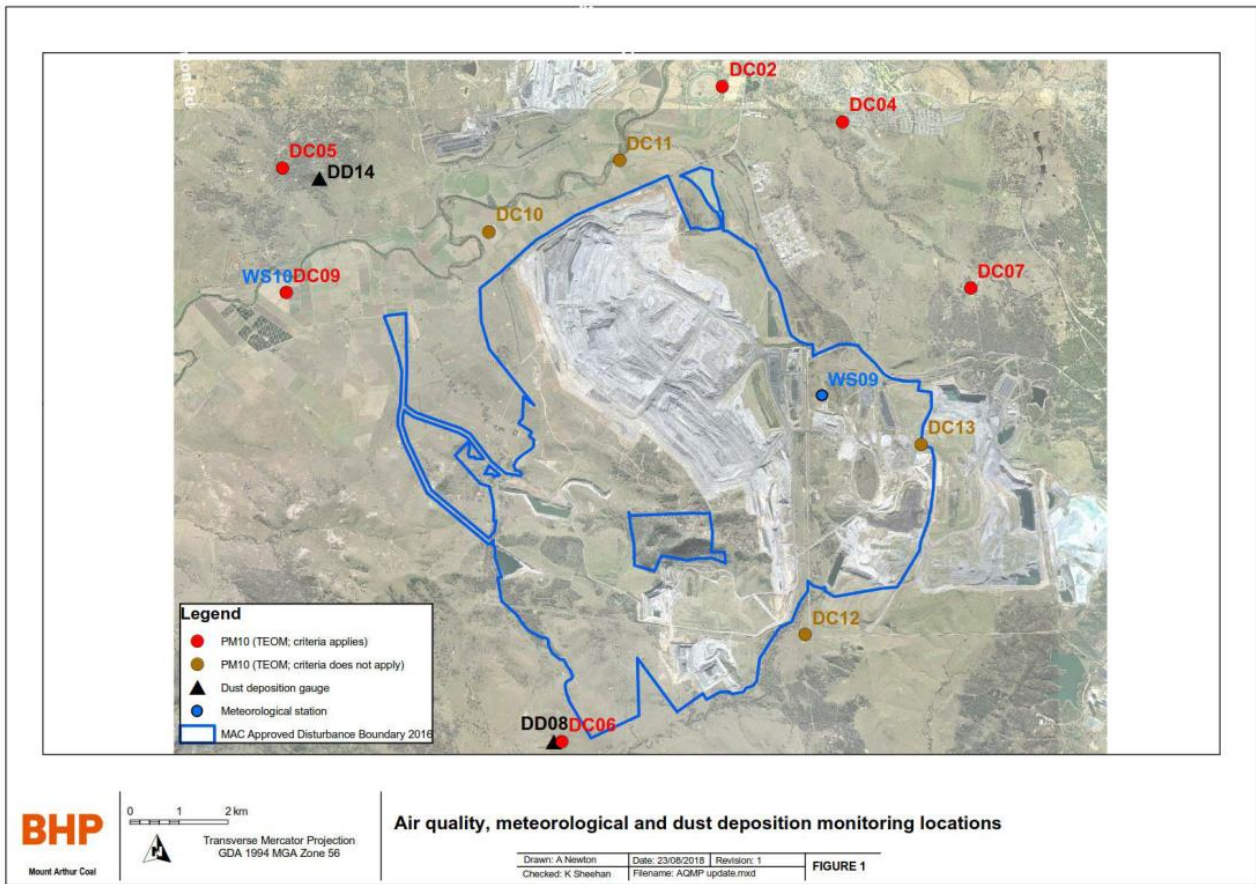


DD14

Data capture – 100%



Air Quality and Meteorological Monitoring Locations



Water Monitoring (Period 1 October to 31 December 2020):

- There were eight occurrences within the reporting period where sampling points exceeded trigger levels. These occurrences are outlined in Table 4 below.
- During 2020 MAC undertook a review of the Groundwater Monitoring Program (as defined in Appendix 3 of MAC-ENC-PRO-062 Groundwater Monitoring Program) including specific trigger levels for groundwater levels and quality used to assess mining induced impacts. The review undertook a comprehensive analysis of the existing data sets and recalculated trigger levels for groundwater level, pH and EC. The developed triggers are based on statistical analysis of monitoring data. The review also assessed the integrity of the bores and future monitoring requirements. The findings of this report have been incorporated into the revised Site Water Management Plan that has been approved by DPIE on 3 February 2021, this approved plan now replaces MAC-ENC-PRO-062 Groundwater Monitoring Program.
- The exceedance investigation has taken into consideration the findings of the 2020 Groundwater Monitoring Review Program and the new approved Site Water Management Plan. The investigation has found a consistent trend that the majority of the reported exceedances, against the Groundwater Monitoring Program in place in December do not exceed the now approved Site Water Management Plan trigger levels.

Table 4 Water Monitoring Performance Summary**Standing Water Level (SWL) Results as meters below top of casing (mBToC)**

	December 2020 SWL (mBToC)	SWL trigger (mBToC)	Comments from Annual Review Assessment
GW2	11.6	8.53	The bore is located within 700 m of Saddlers Pit and within the extent of predicted depressurisation within the Permian coal measures. The 2020 assessment and trigger level approved in the 2021 Site Water Management Plan is 133mAHD. Using the 2021 Approve Water Management Plan the December recorded level would not be an exceedance.
GW3	10.93	6.25	The 2020 assessment identified that the bore has likely collapsed based on latest bore audit, and would not be returning valid results. Woodlands Hill Seam can continue to be monitored by nearby GW2 which is also screened in the Woodlands Hill Seam. Based on this it has been recommended that GW3 be removed from the monitoring network. The 2021 Approve Water Management Plan does not require monitoring of GW3.
GW23	49.42	49.19	The 2020 assessment identified that bore GW23 is screened at three intervals (16.2 – 19.2, 30.2 – 34.2 and 46 – 49 mbgl) therefore monitoring three different formations and therefore does not provide representative monitoring data. Based on this it has been recommended that GW23 be removed from the monitoring network. The 2021 Approve Water Management Plan does not require monitoring of GW23.
GW39P	10.52	9.52	This decline likely relates to depressurisation of the coal measures with progression of mining. In contrast bore GW39A has recorded relatively stable groundwater levels at around 221.3 mAHD (± 0.1 m), with a recent slight rise in levels in response to above average rainfall.

			The 2020 assessment and trigger level approved in the 2021 Site Water Management Plan is 116mAHD. Using the 2021 Approve Water Management Plan the December recorded level would not be an exceedance.
OD1078-PIEZO	51.44	29.04	The 2020 assessment identified that the bore has likely collapsed based on latest bore audit and would not be returning valid results. Based on this it has been recommended that OD1078-PIEZO be removed from the monitoring network, and a replacement bore be considered for monitoring of the Bowfield formation if required. The 2021 approved Water Management Plan does not require monitoring of OD1078-PIEZO.

Ground Water Quality Trigger Values

		Sep-20	EC Stage 1 Trigger	EC Stage 2 Trigger	Comments from Annual Review Assessment
EC ($\mu\text{S}/\text{cm}$) monitoring result	GW39A	7540	6531	6817	The 2020 assessment identified that the bore has been below the base of the screen since 2008 and the data is not likely indicative of alluvium. It was recommended that GW39A be replaced with nearby existing bore X1MB which is 500 m to the NE of GW39A and is screened in the Hunter River alluvium. The 2021 approved Water Management Plan does not require monitoring of GW39A and requires monitoring of X1MB.
	GW40A	5680	4477	4587	The bore is located over 3 km from Mt Arthur mine and the decline in levels is unique compared to bores closer to the mine area (i.e. GW16). The 2020 assessment and trigger levels approved in the 2021 Site Water Management Plan are, Stage 1 Trigger 5290 $\mu\text{S}/\text{cm}$ and Stage 2 Trigger 5650 $\mu\text{S}/\text{cm}$. Using the 2021 Approve Water Management Plan the December recorded level of 5680 $\mu\text{S}/\text{cm}$ would slightly above the Stage 2 trigger and still be an exceedance. Assessment of water levels and results from neighbouring bores do not indicate that mining impacts have been the cause of the increased EC levels. The bore is positioned on a private property with infrastructure (houses and sheds), water supply use in the area will be assessed with the continued monitoring and assessment of the bore.

	GW41A	10500	4970	5134	<p>This trend is unique to the bore, and due to this and the distance from the mine, likely relates to local agricultural land use practices. The 2020 assessment and trigger levels approved in the 2021 Site Water Management Plan are, Stage 1 Trigger 9090 $\mu\text{S}/\text{cm}$ and Stage 2 Trigger 10600 $\mu\text{S}/\text{cm}$. Using the 2021 Approve Water Management Plan the December recorded level of 10500 $\mu\text{S}/\text{cm}$ would slightly above the Stage 1 trigger only, based on the response plan this would have triggered ongoing assessment but not reporting to DPIE.</p> <p>The integrity of the bore has been assessed in the 2020 review and it was found to be sound. Further review of the sampling technique, along with information about local land use and irrigation with be undertaken along with the ongoing monitoring of the bore.</p>
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Blast Monitoring (Period 1 July to 30 September 2020)

- There have been no exceedances of overpressure or vibration at any community monitoring location in the reporting period. There has been 100 per cent data capture for all monitoring locations in the reporting period.

Environmental Incidents

Nil to report.

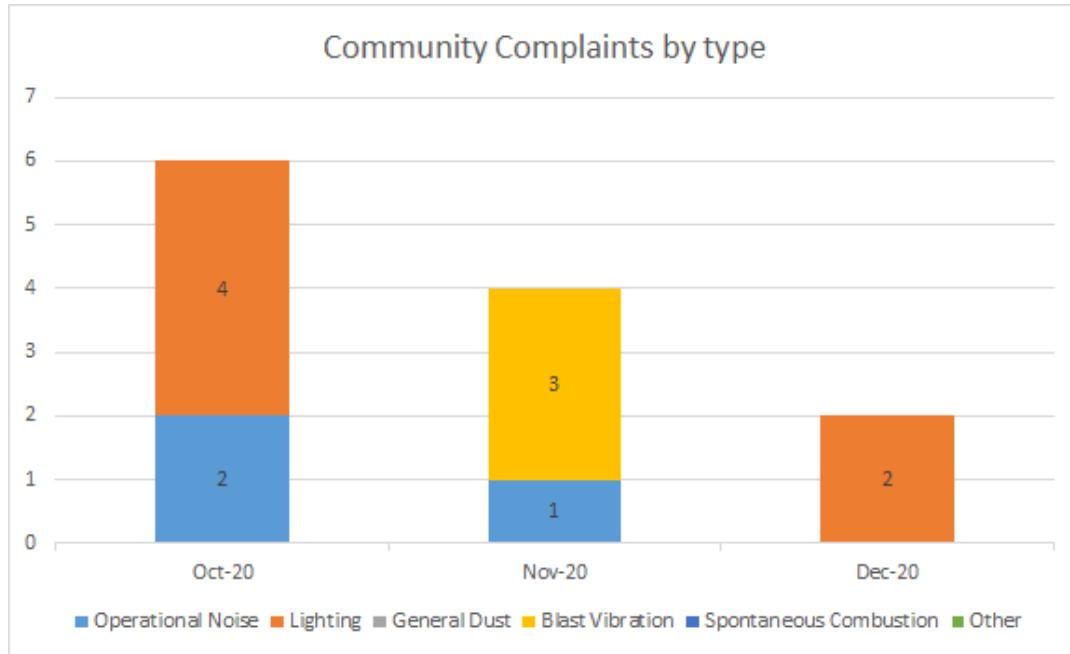
Environmental Reporting

MAC has completed, and therefore complied with, all annual reporting requirements under licence conditions. During the reporting period, the FY20 Annual Review and the annual FY20 EPBC Compliance reports were submitted to the relevant regulators. These reports are available to view on the BHP website using the following link:

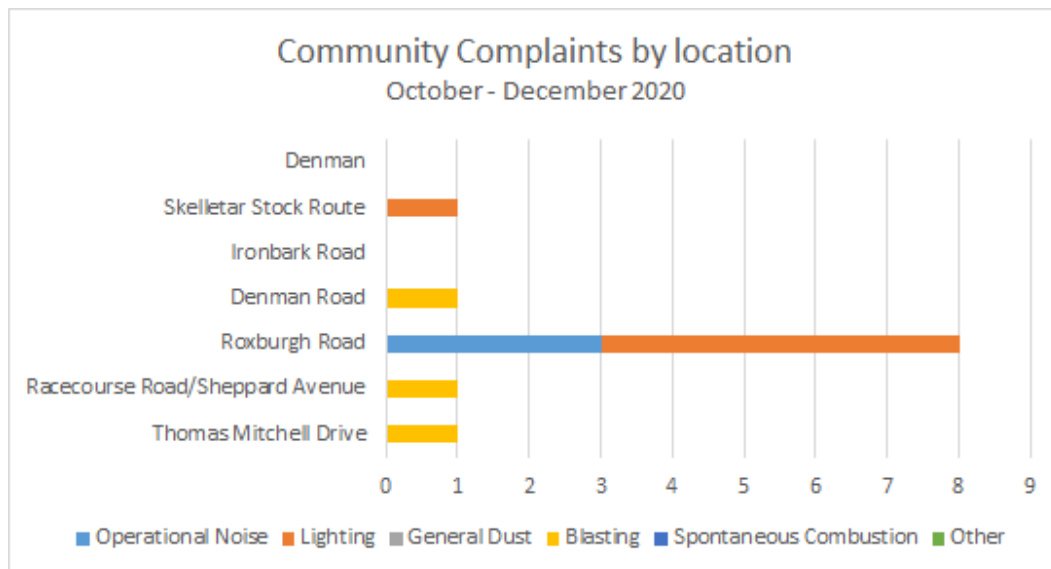
<https://www.bhp.com/environment/regulatory-information#>

Community Complaints

The Community Complaints included in this report are for the period 1 October to 31 December 2020. Mt Arthur Coal received twelve (12) complaints during this period. Of the twelve complaints, six were related to lighting; three to noise and three to blasting.



Of the twelve complaints received for the three-month reporting period, eight came from residents at Roxburgh Rd, one was from Racecourse Road and one from Skellatar Stock Route. One complaint pertaining to blasting was from a resident that reported directly to the EPA.



Community Complaints Summary: 1 October to 31 December 2020

Date	Time	From	Issue	Lodgement type	Investigation and response to caller
7/10/2020	8:21pm	Roxburgh Road	Lighting	Community Response Line	Investigation revealed location of lights, which were redirected or turned off. Caller was advised of investigation and action taken.
11/10/2020	8:06pm	Roxburgh Road	Lighting	Community Response Line	Investigation revealed location of lights, which were redirected or turned off. Caller was advised of investigation and action taken.
15/10/2020	9:42pm	Roxburgh Road	Lighting	Community Response Line	Investigation revealed location of lights, which were redirected or turned off. Caller was advised of investigation and action taken.
19/10/2020	5:36am	Roxburgh Road	Noise	Community Response Line	Results at the nearest real-time monitor indicated noise levels were within regulatory criteria. Caller was advised of investigation and monitoring results.
19/10/2020	8:41pm	Roxburgh Road	Lighting	Community Response Line	Investigation revealed location of lights, which were redirected or turned off. Caller was advised of investigation and action taken.
26/10/2020	12:34am	Roxburgh Road	Noise	Community Response Line	Results at the nearest real-time monitor indicated noise levels were within regulatory criteria. Caller was advised of investigation and monitoring results.
5/11/2020	1:22pm	Racecourse Road	Blast	Community Response Line	Monitoring results indicated overpressure and vibration levels were within regulatory criteria. Caller was advised of investigation and monitoring results
13/11/2020	10:45pm	Roxburgh Road	Noise	Community Response Line	Nearest real-time monitor did not record any exceedances or distribute any alerts. Caller was advised of investigation and monitoring results.
26/11/2020	1:00pm	Denman Road	Blast	Community Response Line	Nearest real-time monitor did not record any exceedances or distribute any alerts. Caller was advised of investigation and monitoring results.
28/11/2020	10:00am	Thomas Mitchell Drive	Blast	NSW Environment Protection Authority	

Date	Time	From	Issue	Lodgement type	Investigation and response to caller
9/12/2020	1:22pm	Skellatar Stock Route	Lighting	Community Response Line	Investigation revealed location of lights, which were redirected or turned off. Caller was advised of investigation and action taken.
11/12/2020	10:45pm	Roxburgh Road	Lighting	Community Response Line	Investigation revealed location of lights, which were redirected or turned off. Caller was advised of investigation and action taken.

Actions from previous meeting/s

The actions from previous meetings are listed below.

Action	Status
Actions from 9 November 2020 meeting	
ACTION 1: AM to set dates for CCC meetings next year and circulate the schedule for 2021 meetings to the CCC. Next meeting (Feb 2020) to be held offsite.	Proposed dates for 2021 meetings (offsite) as follows: • Feb 17, May 12, Sept 15, Nov 10
ACTION 2: JN to provide list of BHP owned properties and water licence/rights in the area.	To be discussed at following meeting.
ACTION 3: JN to confirm where compost is being sourced from.	To be discussed at following meeting.
ACTION 4: JN to change the scale on the dust graph to make the levels clearer.	To be discussed at following meeting.
ACTION 5: JN to include a map of the groundwater monitoring sites when groundwater monitoring results are reported to the CCC.	To be discussed at following meeting.
ACTION 6: JN to provide an update on the blast exceedance investigation at the next meeting.	To be discussed at following meeting.
Actions remaining open from previous meetings	