



# Ardglen Quarry

Community Consultative Committee Meeting  
November 2023

# Map of Area



- History of Ardglen quarry;
- Summary of current operations;
- Overview of quarry operations:
  - Air quality;
  - Noise;
  - Flora and Fauna management;
  - Incidents / Complaints
  - Rehabilitation;
- Planned quarry activities for remainder of this year into 2024;
- Consent modification update;
- 2022 Independent Environmental Audit (IEA);



- Ardglen has provided Rail ballast material since 1890;
- The quarry land was reserved for quarrying purposes in 1896;
- Ardglen Quarry rail siding Junction to the main rail line was opened In 1903;
- The Quarry underwent major upgrading between 1950 & 1964;
- Daracon purchased Ardglen in the early 2000's;
- The 2008 Ardglen Quarry Part 3 consent grants a 30 year consent to the quarry to produce 500,000 tonnes per annum;
- 2010 Modification #1 (Mod 1) updated the consent;
- 2021 proposed Modification #2 (Mod 2) was approved on the 16<sup>th</sup> March 2021;

- No work has yet been undertaken in the ‘Extension Area’;
- Ongoing inspections and maintenance of rehabilitation tree planting areas;
- Environmental monitoring continued during 2023 including PM2.5 in accordance with Mod #2;
- Mod #2 was approved on the 16<sup>th</sup> March 2021. Daracon continue to work on several relevant actions associated with the revised consent as detailed further in this presentation;
  - We’re currently screening, blending and exporting previously quarried material to various projects / clients;
  - Construction, preparation and preliminary work continuing to occur on site (such as water management, crushing pad etc);



# Current operations

Image of the revised weighbridge and quarry entry area





# Current operations

Image of the new wheel wash installation





# Current operations

Image of the quarry stockyard





# Current operations

Image of the tertiary basin works - in progress



## **Air quality monitoring**

- The Dust Deposition Gauges (DDG) are assessed against the NSW EPA Annual Average Criterion (4 g/m<sup>2</sup>/month);
- All Dust Deposition Gauges (DDG's) are compliant based on the annual average results achieved for 2023 so far;
- The following tables and graphs show all the DDG results for 2023 so far;



# Overview of quarry operations

## DDG monitoring results for January to September 2023

	Insoluble Solids (g/m <sup>2</sup> .month)			Insoluble Solids Annual Average (g/m <sup>2</sup> .month)		
	EPA2	EPA3	EPA4	EPA2	EPA3	EPA4
4/1/23 to 3/2/23	1.2	0.5	1.1	0.5	0.5	0.3
3/2/23 to 7/3/23	0.6	0.4	0.3	0.5	0.5	0.4
7/3/23 to 4/4/23	0.2	0.2	0.3	0.5	0.5	0.4
4/4/23 to 5/5/23	0.3	0.4	0.2	0.5	0.5	0.4
5/5/23 to 5/6/23	0.2	0.2	0.3	0.5	0.4	0.4
5/6/23 to 6/7/23	0.3	0.3	0.1	0.5	0.4	0.4
6/7/23 to 4/8/23	0.2	0.2	0.2	0.5	0.4	0.4
4/8/23 to 5/9/23	0.4	0.6	0.5	0.5	0.5	0.4
5/9/23 to 4/10/23	0.6	0.8	0.7	0.5	0.5	0.5

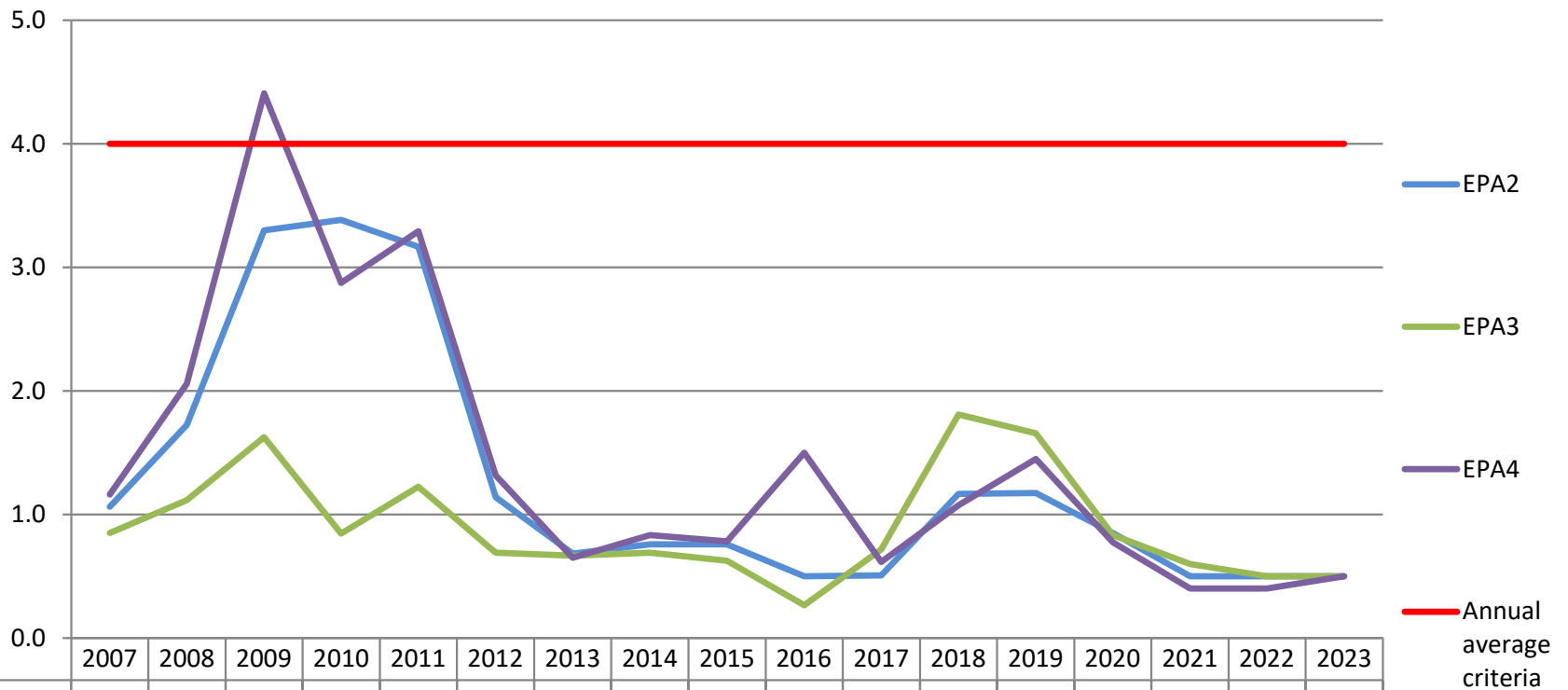
The results highlighted show the DDG annual average results for the period from January to September 2023



# Overview of quarry operations

Insoluble Solids (g/m<sup>2</sup>. month)

Deposition Dust Gauge rolling annual average 2007 to 2023 so far



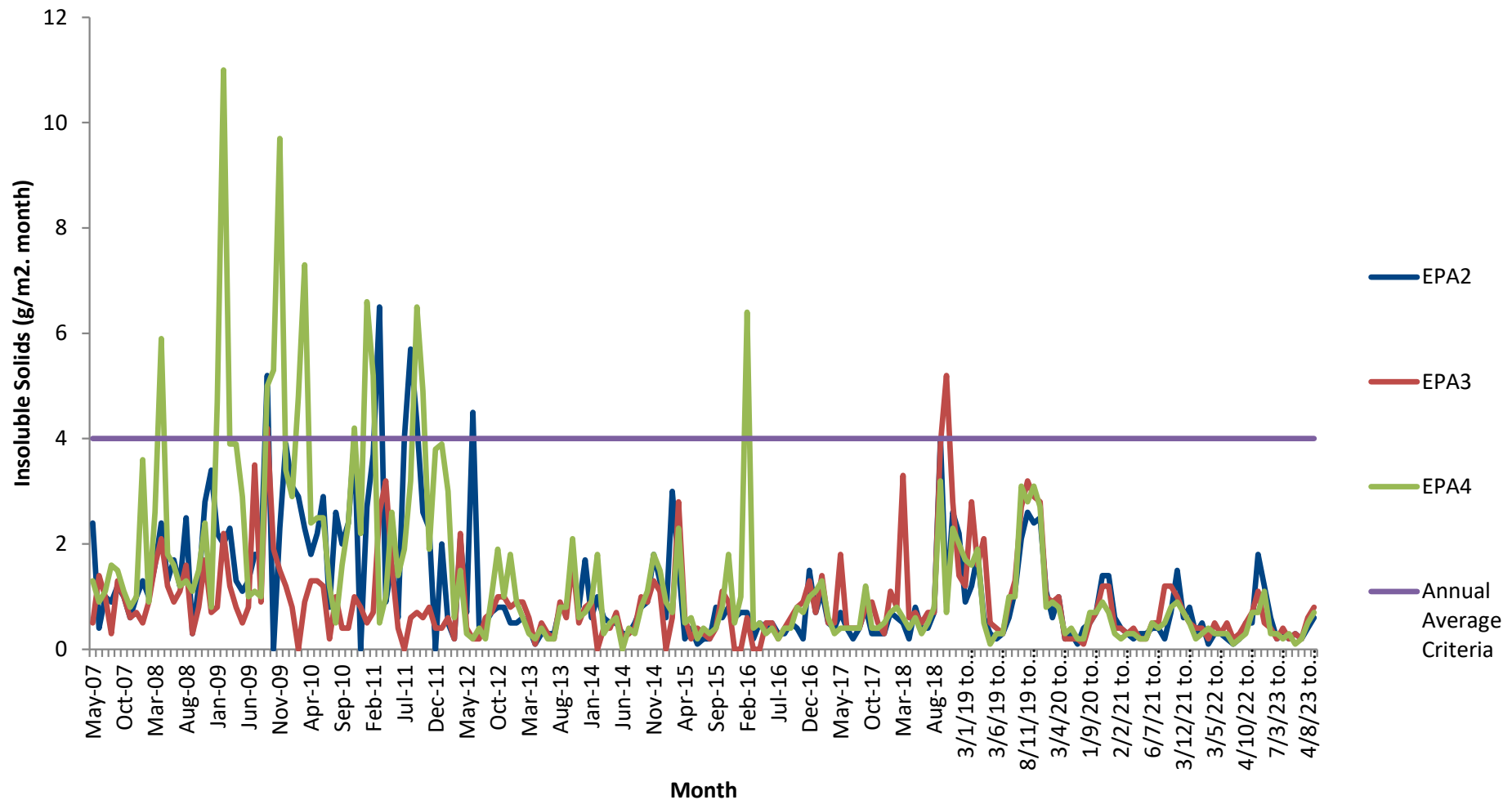
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
EPA2	1.1	1.7	3.3	3.4	3.2	1.1	0.7	0.8	0.8	0.5	0.5	1.2	1.2	0.9	0.5	0.5	0.5
EPA3	0.9	1.1	1.6	0.8	1.2	0.7	0.7	0.7	0.6	0.3	0.7	1.8	1.7	0.8	0.6	0.5	0.5
EPA4	1.2	2.1	4.4	2.9	3.3	1.3	0.7	0.8	0.8	1.5	0.6	1.1	1.5	0.8	0.4	0.4	0.5
Annual average criteria	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

Year



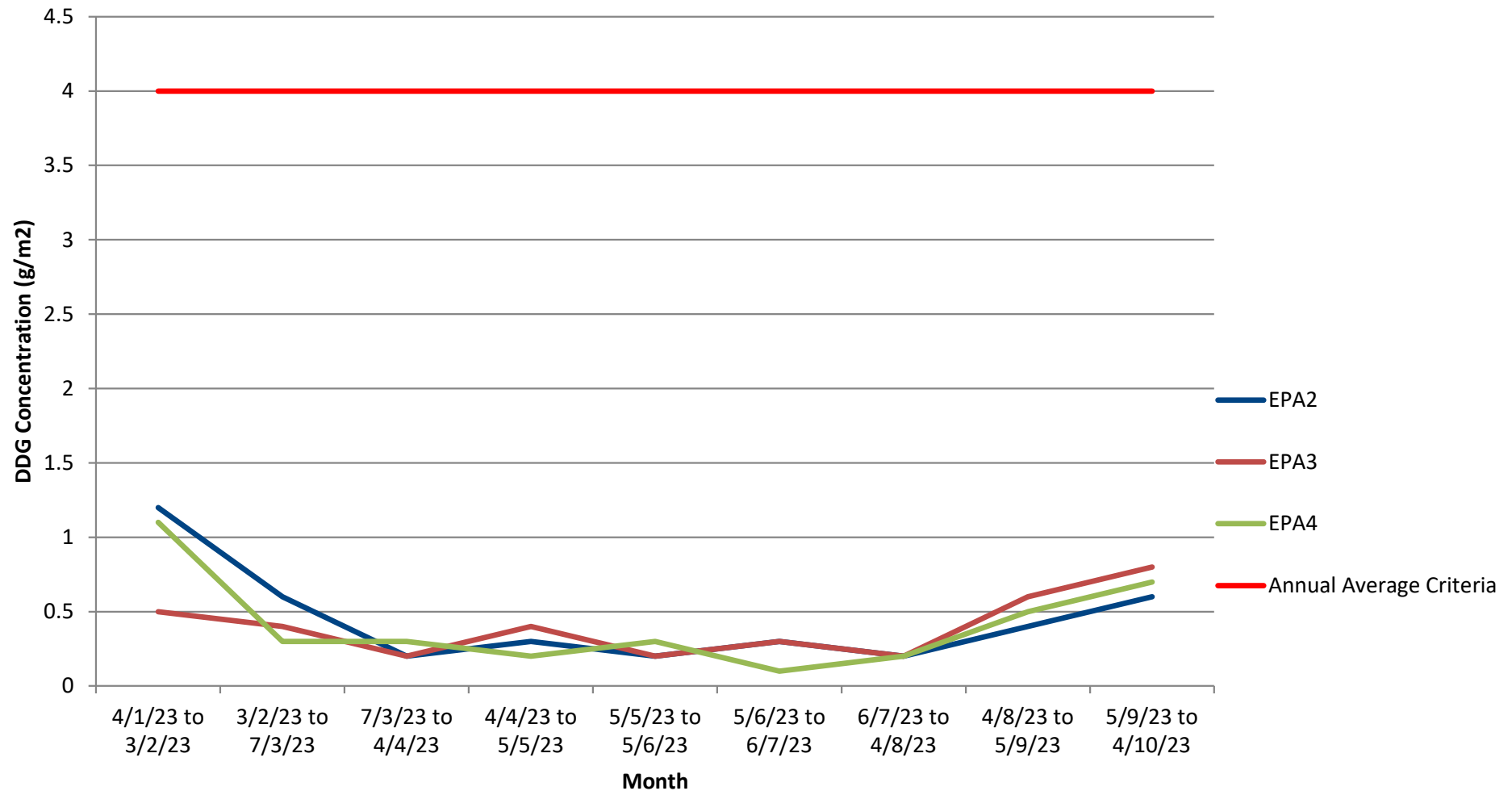
# Overview of quarry operations

## Deposition Dust Gauge (DDG) 2007 to 2023 so far



# Overview of quarry operations

**Dust Deposition Gauge (DDG) graph for 2023 so far**





# Overview of quarry operations

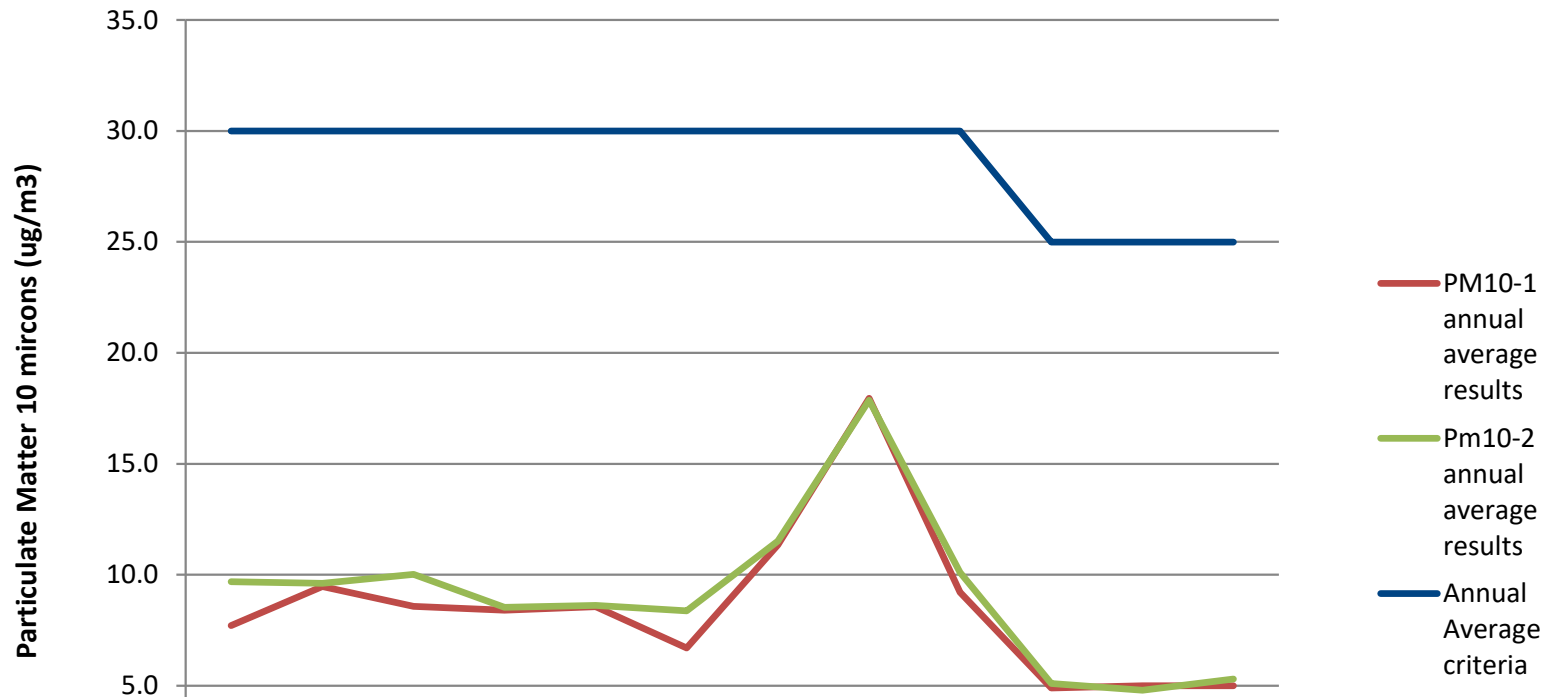
- The PM10, Total Suspended Particulate (TSP) and PM2.5 are assessed against the consent criteria as detailed in the modified approval (Mod 2);
- All air quality monitoring results for PM10, TSP and PM2.5 were compliant for all annual averages and 24-hour results during 2023 so far;

Unit	Annual Average results achieved	24 hour Criterion (Short Term)	Annual Average Criterion (Long Term)
PM10-1	5.0	50	25
PM10-2	5.3	50	25
TSP	11.6	N/A	90
PM2.5	4.2	25	8

These four results show the PM10, TSP and PM2.5 annual averages for the period from January to September 2023

# Overview of quarry operations

## PM10 annual average results 2012 to 2023 so far



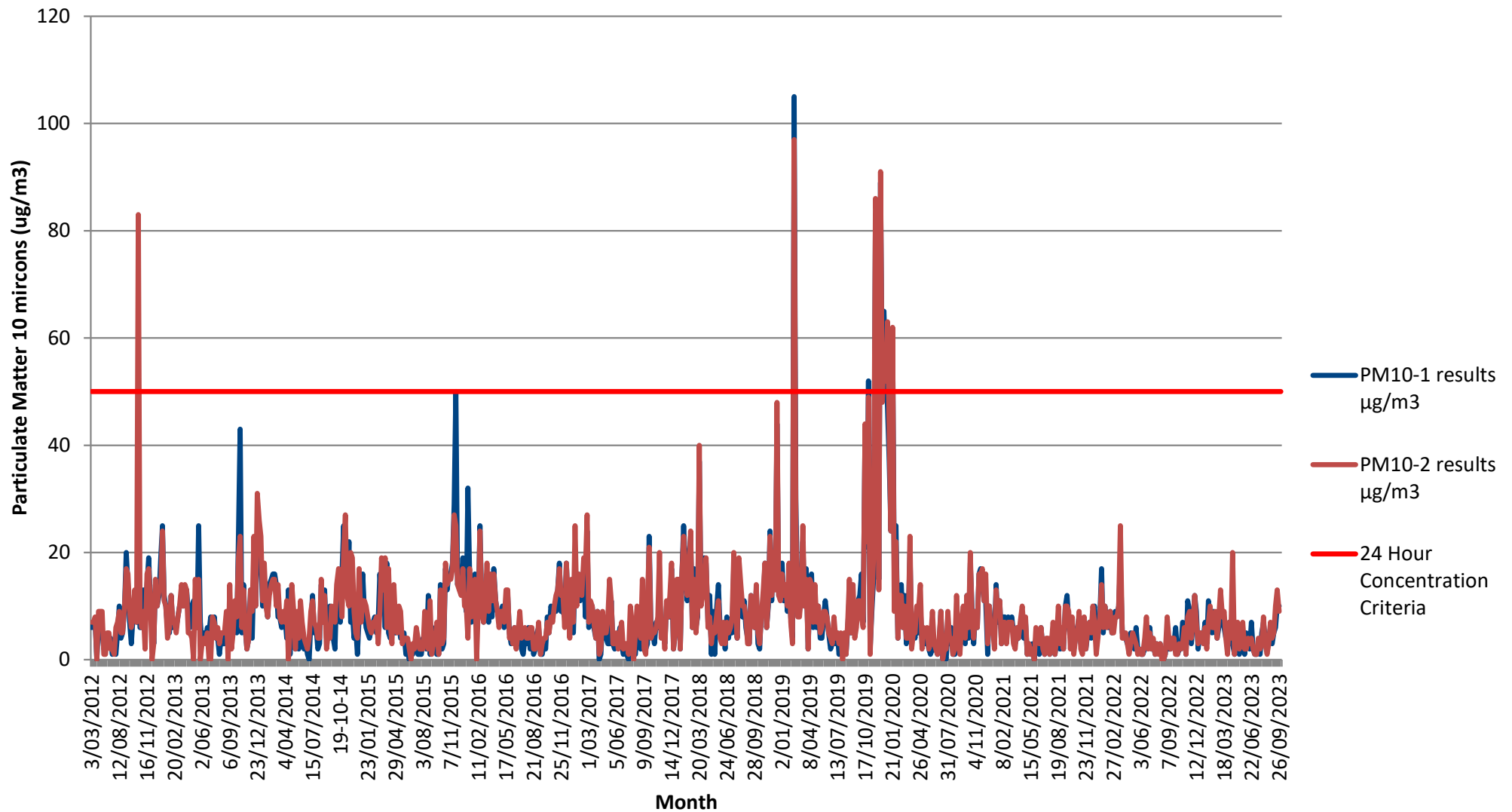
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
PM10-1 annual average results	7.7	9.5	8.6	8.4	8.6	6.7	11.3	18.0	9.2	4.9	5	5
Pm10-2 annual average results	9.7	9.6	10.0	8.5	8.6	8.4	11.5	17.9	10.1	5.1	4.8	5.3
Annual Average criteria	30	30	30	30	30	30	30	30	30	25	25	25

Year



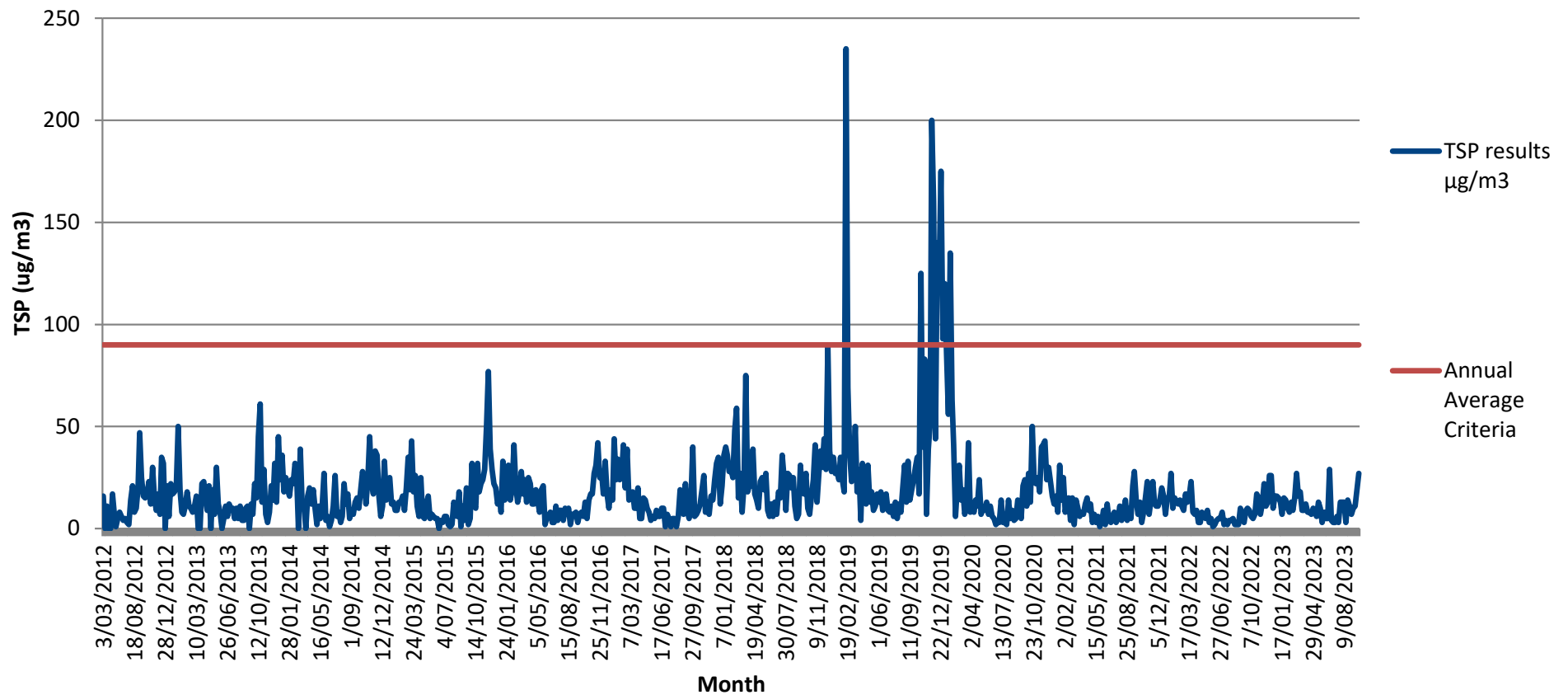
# Overview of quarry operations

## PM10 24 hour results 2012 to 2023 so far



# Overview of quarry operations

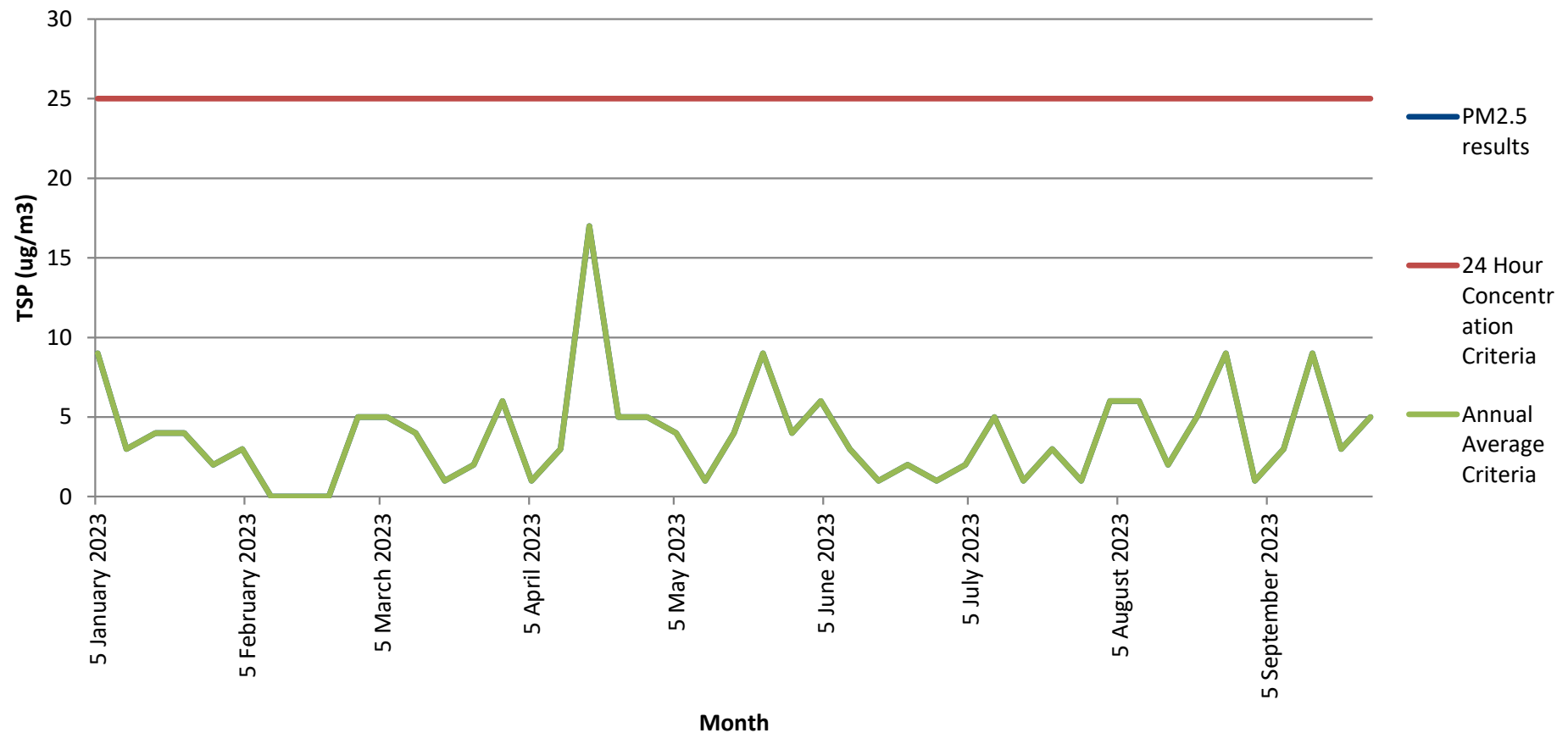
## Total Suspended Particulate (TSP) 24 hour results 2012 to 2023 so far





# Overview of quarry operations

## PM2.5 24 hour results for 2023 so far



## Noise monitoring

- Noise monitoring is undertaken by Spectrum Acoustics in accordance with the approved Noise Management Plan (NMP);
- It's worth noting that Mod 2 now only requires noise monitoring to occur when the quarry is operating so we recently recommenced monthly noise monitoring as shown in the following slides;
- All noise monitoring results obtained this year are compliant with the Consent;
- No blasting occurred during the reporting period, so therefore no blast monitoring has been undertaken;

# Overview of quarry operations

Table 2 Ardglen Quarry Noise Monitoring Results – 3 <sup>rd</sup> August 2023 (Day)				
Location	Time	dB(A), $L_{eq}$	Wind speed/ direction°	Identified Noise Sources
4. Thompson	10:45 am	49	2.2 m/s 298°	Birds (47), traffic (41), AQ (40)
13. McGhie	10:10 am	37	2.0 m/s 260°	Traffic (36), birds (31), AQ inaudible
14. Purtell	10:28 am	46	2.3 m/s 284°	Birds (44), traffic (42), AQ occasionally audible
16. Bojba	11:10 am	45	1.8 m/s 309°	Traffic (43), birds (42), AQ inaudible

Table 2 Ardglen Quarry Noise Monitoring Results – 27 <sup>th</sup> September 2023 (Day)				
Location	Time	dB(A), $L_{eq}$	Wind speed/ direction°	Identified Noise Sources
4. Thompson	10:30 am	43	1.7 m/s 298°	Traffic (41), AQ (37), birds (35)
13. McGhie	9:55 am	33	0.8 m/s 286°	Traffic (31), birds (30), AQ inaudible
14. Purtell	10:12 am	46	1.0 m/s 294°	Birds (43), traffic (42), AQ occasionally audible
16. Bojba	10:50 am	50	6.6 m/s 318°	Traffic (50), birds (35), AQ occasionally audible



# Overview of quarry operations

Table 2				
Ardglen Quarry Noise Monitoring Results – 20 <sup>th</sup> October 2023 (Day)				
Location	Time	dB(A), <sub>Leq</sub>	Wind speed/ direction°	Identified Noise Sources
4. Thompson	11:40 am	38	2.1 m/s 321°	Birds (36), traffic (32), AQ occasionally audible
13. McGhie	11:00 am	32	2.2 m/s 286°	Birds (31), traffic (26), AQ inaudible
14. Purtell	11:20 am	41	1.8 m/s 300°	Traffic (39), birds (32), AQ occasionally audible
16. Bojba	10:41 am	47	1.4 m/s 285°	Traffic (46), birds (40), AQ inaudible

## **Flora and Fauna**

- The quarry footprint and extent of clearing did not alter during the reporting period;
- Regular inspections occur to ensure the site is managed appropriately from a bush fire perspective;
- Ongoing rehabilitation planting / maintenance on site;
- Ongoing feral animal control on site;

## **Incidents and complaints**

- During 2023 so far the quarry recorded no incidents (as detailed in the consent) and received no complaints regarding the quarry operation;



## Rehabilitation

- Significant rehabilitation work has occurred as detailed in the revised Landscape Management Plan (LMP);
- The Doughboy Hollow Rehabilitation Strategy was recently finalised and approved by DPE. This process has commenced and will be ongoing for many years;
- As part of the planting that occurred in 2019, 2020 and 2021, Daracon have planted almost 1000 small tree and shrub species including regular inspection and watering (as required);
- Ongoing formal inspections of the rehabilitated areas occur regularly which are incorporated into the AEMR;

# Overview of quarry operations

Images of offset planting progress (lower offset area)





## **Proposed works for the remainder of 2023 into 2024**

- Continued environmental monitoring (Air quality, Noise and Water) and regular inspections;
- Continued Community engagement;
- Inspection and maintenance of planting in accordance with the revised LMP;
- Ongoing processing and export of previously quarried material to various projects / clients;
- Currently planning to undertake crushing, screening and blending of existing materials on site to test and validate the geotechnical parameters of various road bases and other construction materials for sale;
- Construction, preparation and preliminary work continuing to occur on site;
- Entering the 'Extension Area' in early 2024;



## Mod 2 update

- The consent modification (Mod 2) was approved on the 16<sup>th</sup> March 2021. Daracon continue to work on several relevant actions associated with the revised consent including:
- A copy of Mod 2 is located on the Daracon website here:  
<https://daracon.com.au/services/quarries>
- We're working through all the revised conditions associated with Mod 2 in detail including ongoing liaison with DPE, other regulatory authorities (EPA, Crown Lands, LPSC etc) and the community going forward;
- All approved Management Plans are displayed on the Daracon Website detailed on the previous slide;
- If you'd like a hard copy of any Management Plans, please let us know and we'll print them out and deliver to you;

# Planned quarry activities for 2024

- A groundwater monitoring network was installed during 2021 with monitoring ongoing;
- We will not commence quarrying in the 'extension area' until we've addressed all necessary conditions within Mod 2, which we hope to have resolved by early 2024;
- As usual, we'll keep the CCC updated with our progress with all quarry related activities;

## 2022 Independent Environmental Audit

- In accordance with the Mod 2 Consent (Schedule 5, Condition 5), we completed an Independent Environmental Audit (IEA) during 2022;
- The IEA was completed by an independent auditor from James Bailey and Associates (JBA), approved by DPE;
- The IEA occurred between May and August 2022;
- Following the completion of the IEA, and following further input from DPE, the IEA report was accepted by DPE, and a copy exists on the Ardglen quarry website here:

<https://daracon.com.au/services/quarries>

- A full summary of the findings is also included in the 2022 Annual Environmental Management Report (AEMR) also included on the webpage listed above;
- If you'd like a hard copy of the IEA or AEMR, please let us know and we'll print it out and deliver to you;



# Questions?