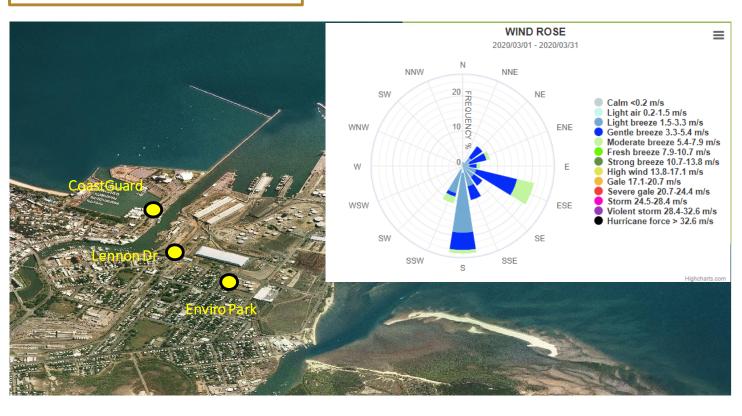
#### **AIR QUALITY MONITORING IN TOWNSVILLE**

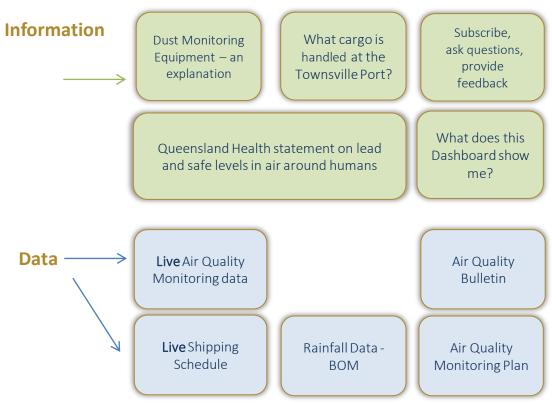
Air Quality Monitoring in Townsville is conducted separately by both the Department of Environment and Science (DES), and Port of Townsville Limited.

> Click here to visit the Port of Townsville's monitoring network

> > Click here to visit DES monitoring network

#### Air Quality Monitoring Locations





#### **Shipping Movements in March 2020**

Date In/Out	Vessel Name	Berths	Cargo	Date In/Out	Vessel Name	Berths	Cargo
26-1	ID PIONEER	A/8/3 NTH	Lead Ingots	14-25	TS ALPHA	10/A/3 NTH	Zinc Concentrates
28-1	ESPERANCE BAY	A/8	Fertilizer	16-16	YANGTZE HARMONY	A/4	Fodder, cattle
29-1	PHILOXENIA	1	Fuels	17-18	IVS SPARROWHAWK	A/8	Zinc Concentrates
29-3	AFRICAN ALKE	A/10	Sulphur	17-17	GALAXY ACE_1	9	Motor Vehicles
29-2	SAN SEBASTIAN	9	Sugar	17-18	DIAMANTINA	4	Fodder, cattle
2-3	GANADO EXPRESS	A/4	Fodder, cattle	17-18	PS TOKYO	1	Fuels
4-5	GOLDEN CREATION	1	Sulphuric Acid	18-24	INTERLINK MOBILITY	A/10/A/11	Zinc Concentrates
5-7	BROADGATE_1	A/11/3 NTH	Lead Concentrates	18-22	INASE	9	Scrap metal
5-6	THERESA MICRONESIA	9	Molasses	20-21	WUHU	A/3 NTH	Lead Ingots
5-7	BEAGLE	A/1	Fuels	20-20	GLOUCESTER EXPRESS	A/4	Fodder, cattle
7-9	JUMEIRAH BEACH	A/8	Fertilizer	20-21	GOLDEN RESOLUTION	A/1	Fuels
7-7	GLOBAL LEADER	9	Motor Vehicles	21-24	IKANJUBAL	A/8	Fertilizer
7-7	ARTANIA	10	Nil Cargo	21-22	GOLDEN SKY_1	A/1	Fuels
8-10	ARAWANA	10	Fodder	21-28	K&A SP	A/10	Zinc Concentrates
9-11	HANSA REGENSBURG	3 NTH	Containers	22-23	FLORA DELMAS	A/3 STH	Containers
10-17	COREWISE OL	8/A/3 STH	Zinc Concentrates	22-26	V DUE	A/9	Scrap metal
10-13	OCEAN IBIS	A/9	Sugar	24-24	HAWAIIAN HIGHWAY	A/4	Motor Vehicles
10-12	AKUNA	4	Cement	25-27	PACIFIC CONDOR	A/3 NTH	Tyres, copper refined
10-12	GREEN PLANET	1	Fuels	25-25	ASPHALT CARRIER	4	Bitumen
11-11	AMSTERDAM	10	Cruise	26-27	THERESA MICRONESIA	A/9	Molasses
11-12	OCEAN UTE	3 NTH	Fodder, cattle	26-26	GANADO EXPRESS	4	Fodder, cattle
11-12	WINDSPIRIT	A/10	Cruise	27-28	DANCEFLORA SW	A/9	Sugar
12-16	IVS MERLION	A/11/8/3 NTH	Lead Concentrates	28-31	HAINAN ISLAND	A/9	Urea
13-14	HARVEST LEADER	A/9	Motor Vehicles	29-31	AKUNA	4	Cement
13-14	VENUS LEADER	4	Motor Vehicles	30-31	NEW GUINEA CHIEF_1	10	Containers



#### **Port of Townsville - Overview**

First established in 1864, the Port of Townsville is operates eight berths handles around \$8 billion in trade; servicing more than 136 ports around the globe.

The 2018-19 year was a significant one for the Port of Townsville, with growth in trade driven by a rebound in the resources sector, a strong net profit of \$15.96 million and the advancement of a number of major infrastructure projects. Total trade throughput of 7.68 million tonnes is a 4.7% increase on the previous financial year. There were increases across a range of export commodities, in particular mineral concentrates, zinc ferrites, refined copper, smelted lead, sugar and cattle. Cruise ship visitation grew with 16 arrivals and a doubling the number of passengers and crew to almost 20,000 people.

Townsville is the number one port in Australia for copper, zinc, lead and sugar exports and services 70% of the Northern Australia population. More than 20 shipping lines operate out of the Townsville Port offering more than 40 different services. Townsville is also a strategic Navy port and facilitates cruise ship visits.

Commodities/cargo that passes over the Townsville Port's berths include:

#### **Imports**

Motor vehicles, shipping containers (general cargo), cement, sulphuric acid, fertiliser, copper, nickel, zinc, copper anode, petroleum products, sulphur, containers, tyres.

#### **Exports**

Sugar, timber, fertiliser, shipping containers (general cargo) cattle, refrigerated meat, magnetite, copper, lead, zinc, zinc ferrites, zinc oxide, silver, molasses, sand, gravel, coke, project cargo.



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OR

Visit the Port of Townsville Facebook page and click on "Sign up" at the top of the page.

OR

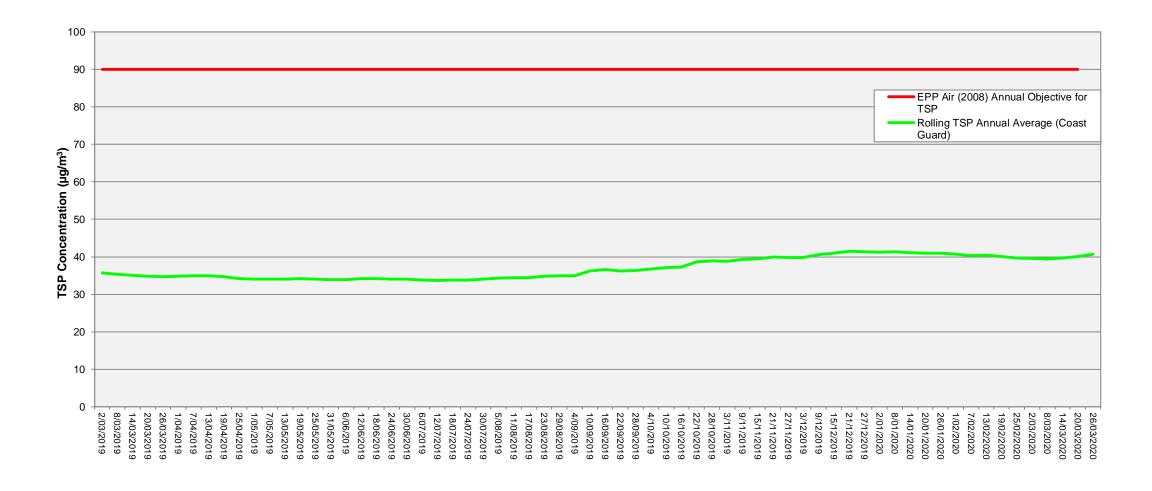
Phone 07 47 811 500 and asked to be added to the list.

#### Ask a Question / Provide Feedback

Send your enquiry or feedback to <a href="mailto:community@townsvilleport.com.au">community@townsvilleport.com.au</a>



#### Hi-Volume Sampler – General total dust levels (one in six days) at Coast Guard Site MARCH 2019 – MARCH 2020

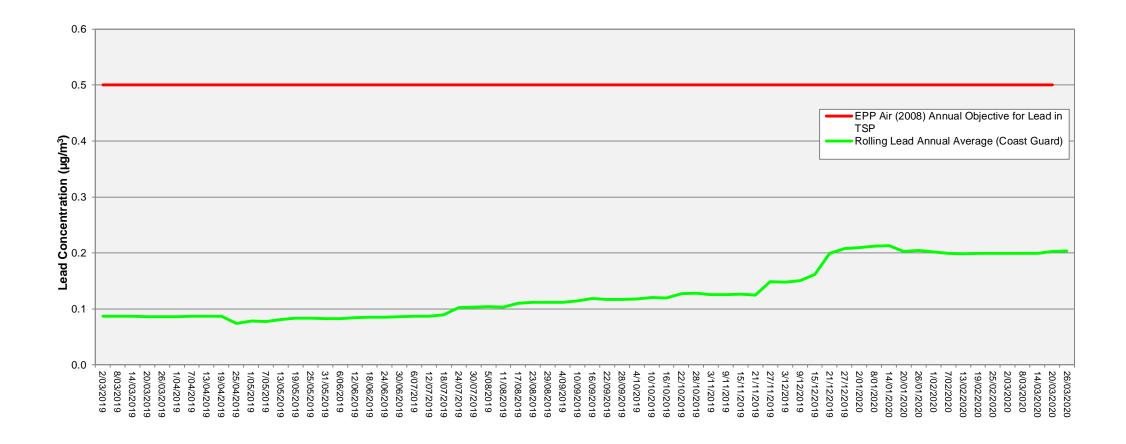




TSP Concentration units = micrograms per cubic metre per 24 hour period Rolling annual average = the moving average of the previous 11 results and the current result



### Hi-Volume Sampler – Lead in dust levels (one in six days) at Coast Guard Site MARCH 2019– MARCH 2020

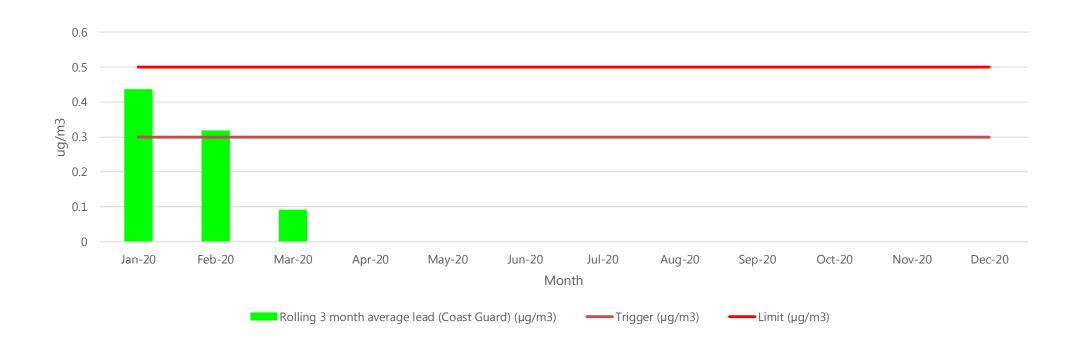


Note:

Lead Concentration units = micrograms per cubic metre per 24 hour period Rolling annual average = the moving average of the previous 11 results and the current result



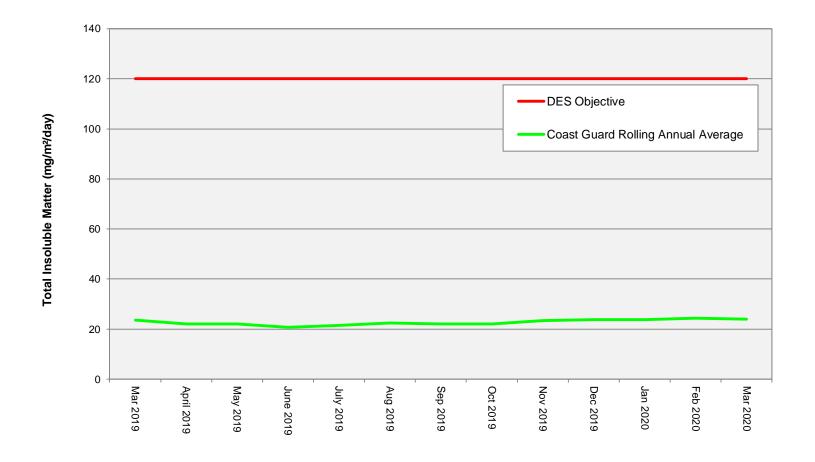
# Hi-Volume Sampler - Lead in dust levels (one in six days) at Coast Guard Site 2020



Note: Rolling 3 month average = the moving average of the previous 2 months and the current month result



### Dust Deposition Gauge – General dust deposition levels (monthly) at Coast Guard Site MARCH 2019– MARCH 2020

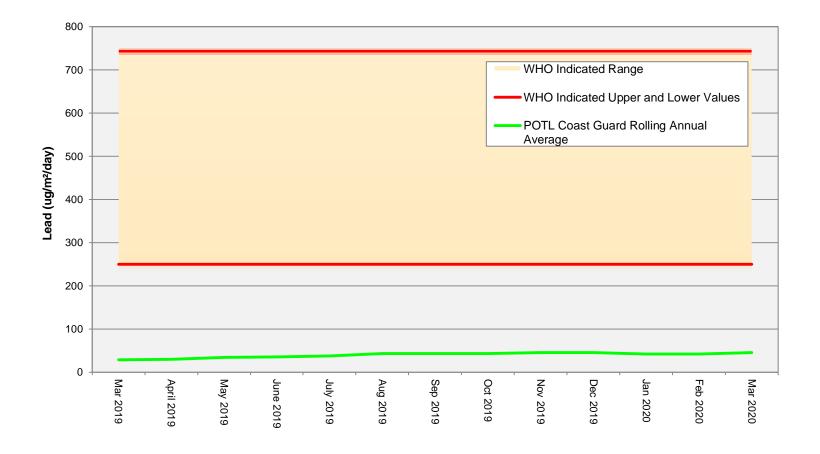


Note:

Total Insoluble Matter Concentration units = micrograms per square metre per day Rolling annual average = the moving average of the previous 11 results and the current result



### Dust Deposition Gauge – Lead in dust deposition levels (monthly) at Coast Guard Site MARCH 2019– MARCH 2020

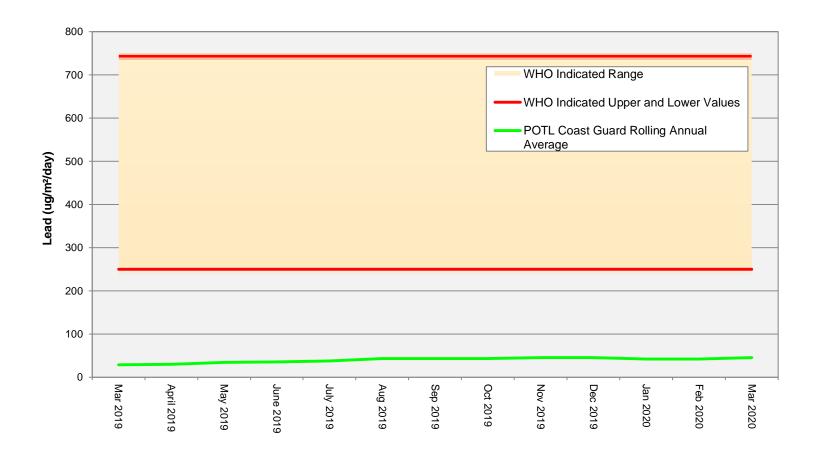


Note:

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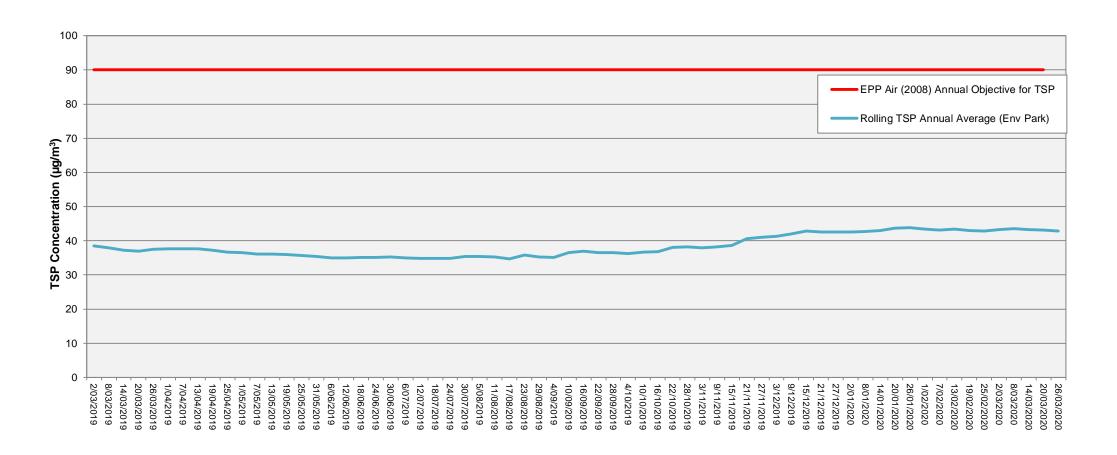
# Dust Deposition Gauge – General dust deposition levels (monthly) at Coast Guard Site 2020



Note: Total Insoluble Matter Concentration units = milligrams per square metre per day



### Hi-Volume Sampler - General total dust levels (one in six days) at Environment Park site MARCH 2019 – MARCH 2020

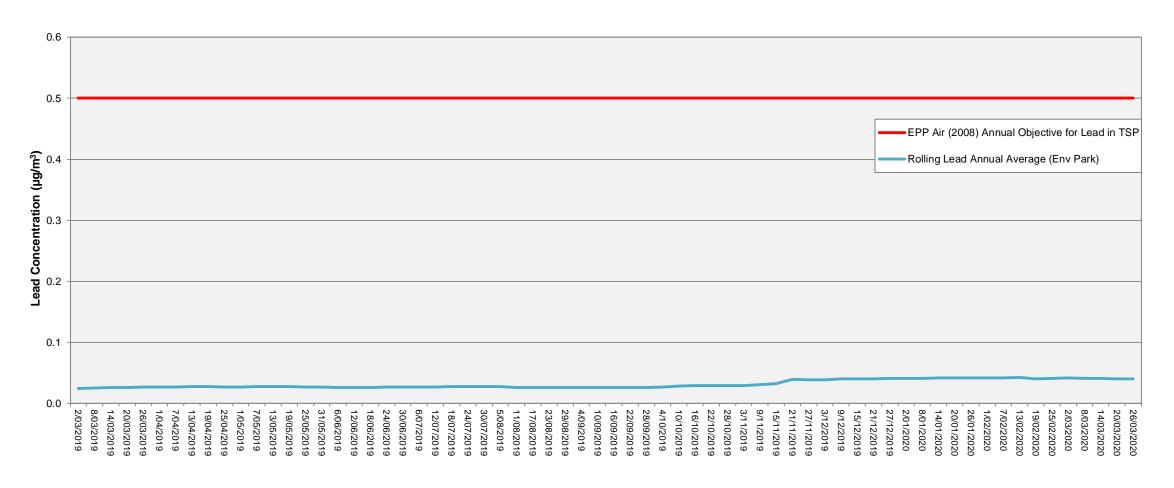


Note:

TSP Concentration units = micrograms per cubic metre per 24 hour period Rolling annual average = the moving average of the previous 11 results and the current result



#### Hi-Volume Sampler - Lead in dust levels (one in six days) at Environment Park site MARCH 2019– MARCH2020

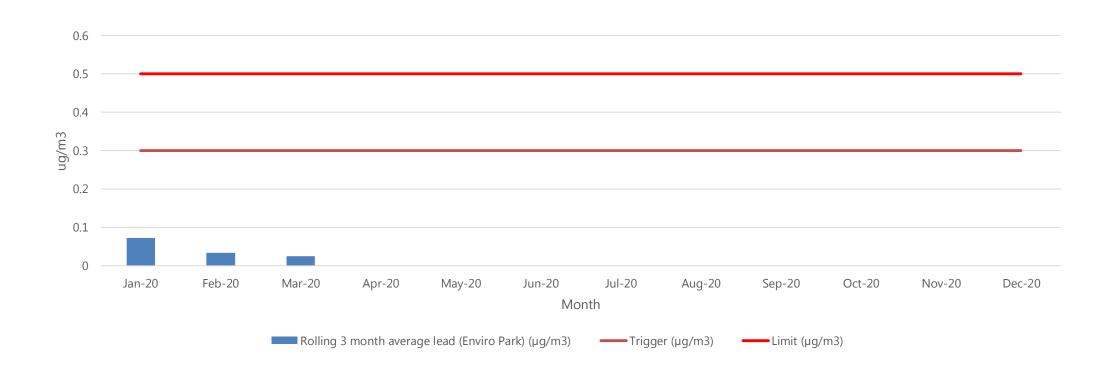


Note:

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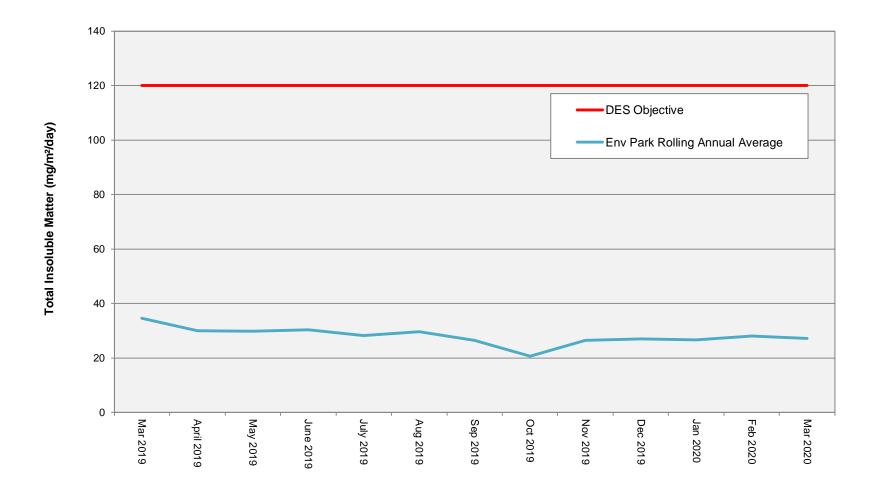
### Hi-Volume Sampler - Lead in dust levels (one in six days) at Environment Park site 2020



Note: Rolling 3 month average = the moving average of the previous 2 months and the current month result



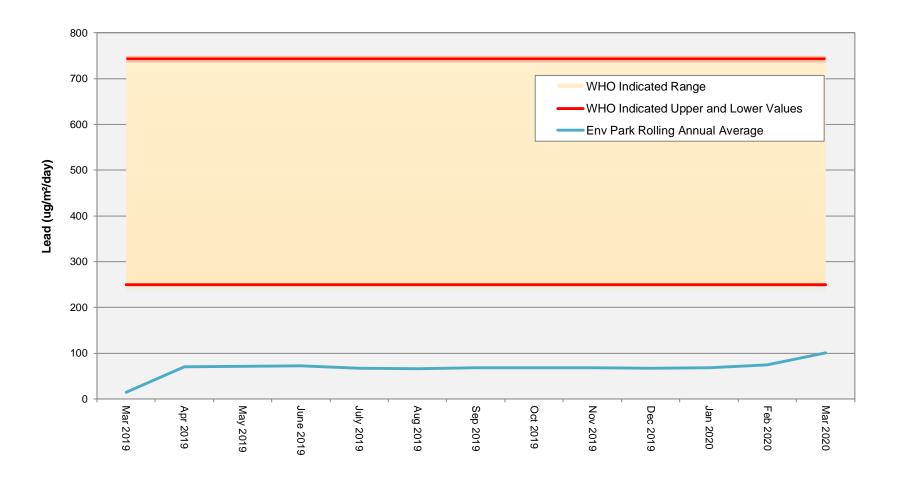
### Dust Deposition Gauge - General dust deposition levels (monthly) at Environment Park site MARCH 2019– MARCH 2020



Note: Total Insoluble Matter Concentration units = micrograms per square metre per day Rolling annual average = the moving average of the previous 11 results and the current result



### Dust Deposition Gauge – Lead in dust deposition levels (monthly) at Environment Park site MARCH 2019 – MARCH 2020

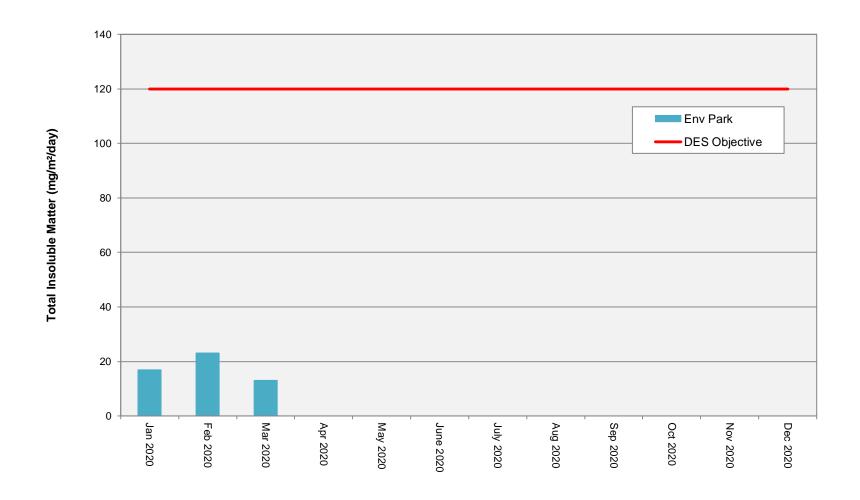




Lead Concentration units = micrograms per square metre per day Rolling annual average = the moving average of the previous 11 results and the current result



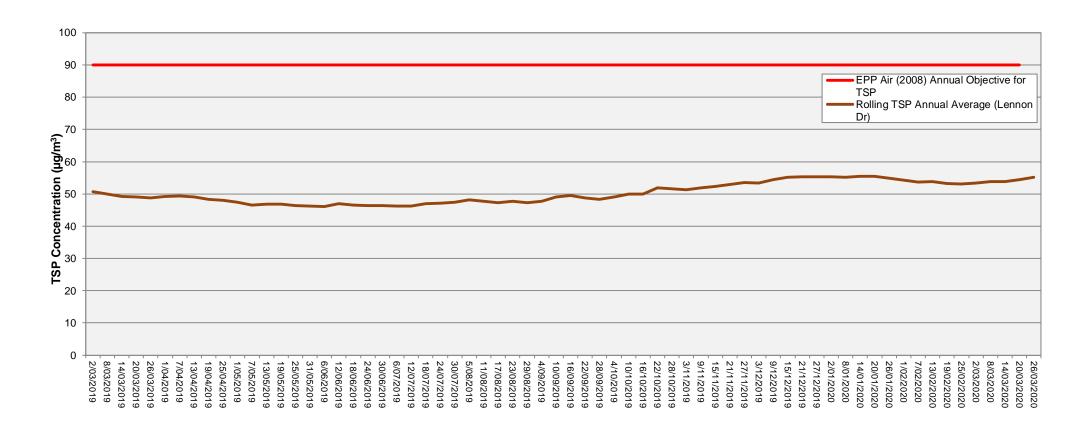
# Dust Deposition Gauge – General dust deposition levels (monthly) at Environment Park Site 2020



Note: Total Insoluble Matter Concentration units = milligrams per square metre per day



### Hi-Volume Sampler - General total dust levels (one in six days) at Lennon Drive site MARCH 2019 – MARCH 2020

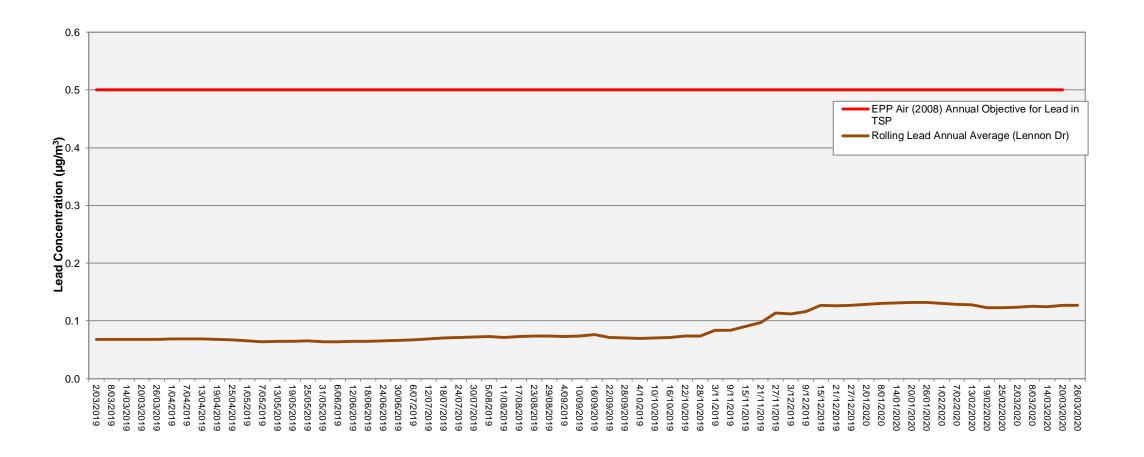


Note: TSP Concentration units = micrograms per cubic metre per 24 hour period

Rolling annual average = the moving average of the previous 11 results and the current result



### Hi-Volume Sampler - Lead in dust levels (one in six days) at Lennon Drive Site MARCH 2019 – MARCH 2020

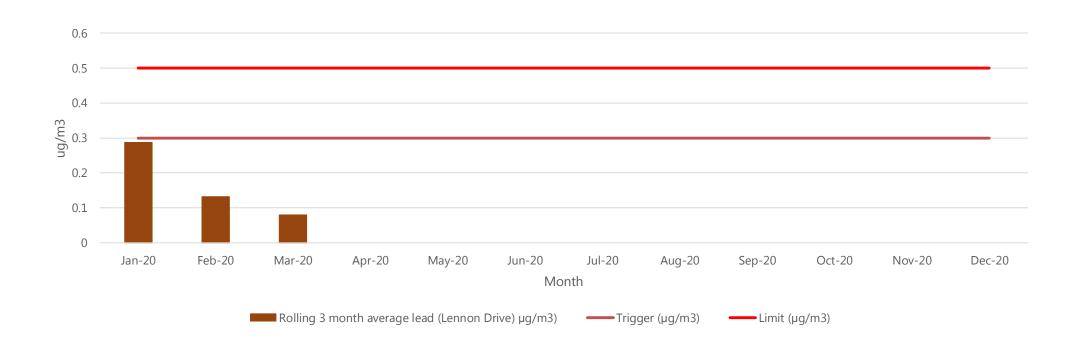


Note:

Lead Concentration units = micrograms per cubic metre per 24 hour period Rolling annual average = the moving average of the previous 11 results and the current result



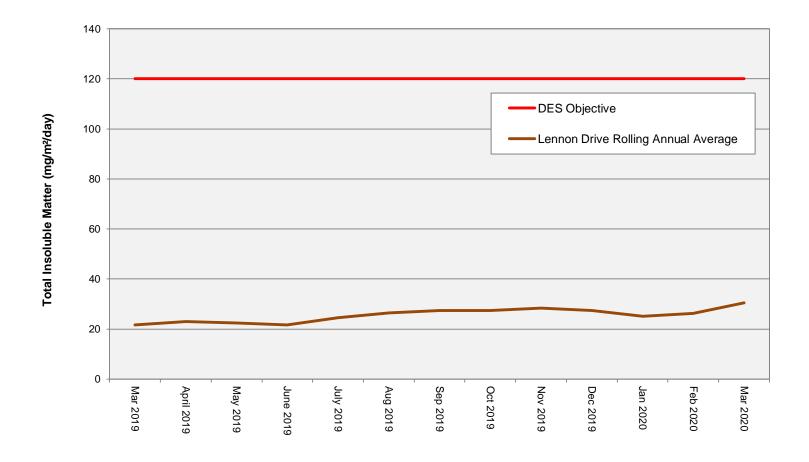
# Hi-Volume Sampler - Lead in dust levels (one in six days) at Lennon Drive Site 2020



Note: Rolling 3 month average = the moving average of the previous 2 months and the current month result



### Dust Deposition Gauge - General dust deposition levels (monthly) at Lennon Drive Site MARCH 2019 – MARCH 2020

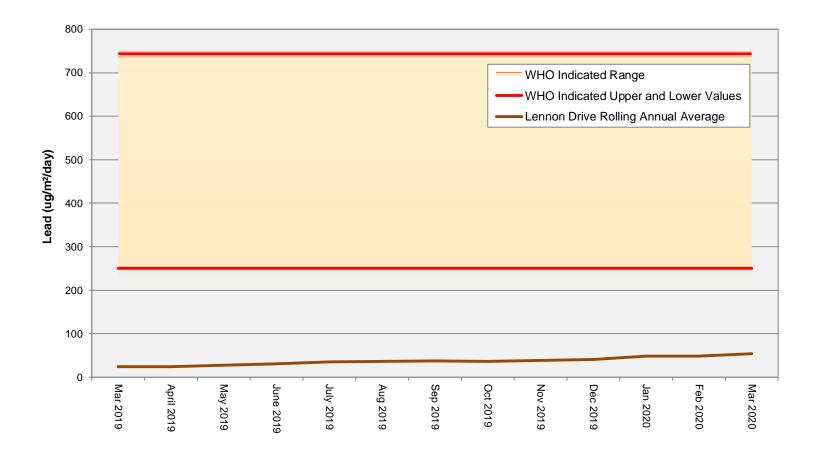


Note:

Total Insoluble Matter Concentration units = micrograms per square metre per day Rolling annual average = the moving average of the previous 11 results and the current result



### Dust Deposition Gauge – Lead in dust deposition levels (monthly) at Lennon Drive Site MARCH 2019 – MARCH 2020

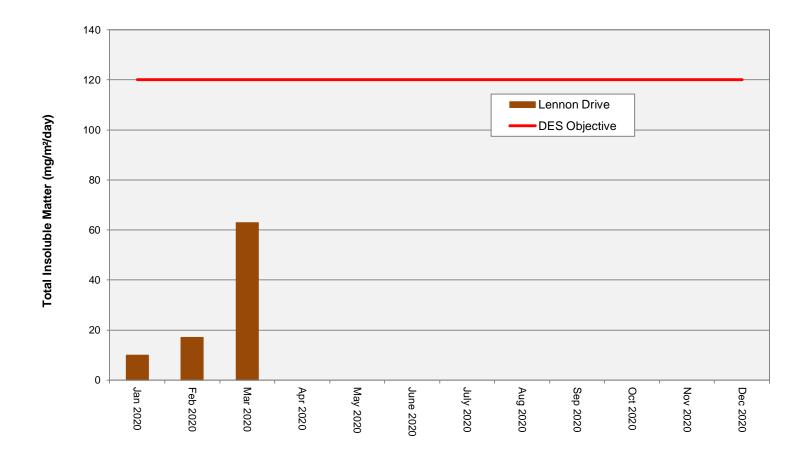


Note: Lead Concentration units = micrograms per square metre per day

Rolling annual average = the moving average of the previous 11 results and the current result



# Dust Deposition Gauge – General dust deposition levels (monthly) at Lennon Drive Site 2020



Note: Total Insoluble Matter Concentration units = milligrams per square metre per day





This statement/advice was provided by Queensland Health in relation to blood lead levels in Townsville in April 2016

Environmental limits for lead are set using a number of possible criteria including potential health effects.

Blood lead level within the Australian population have been decreasing over time as the use of lead – particularly in petrol and paint - has been phased put. The most recent NHMRC guidance document suggests that a blood lead level of less than 5  $\mu$ g/dL is what should be expected in the general population.

Elevated blood lead levels are notified to Queensland Health for investigation. Previously this level was 10  $\mu$ g/dL but since the beginning of 2016 has been reduced to 5  $\mu$ g/dL. This is not an indication of a safe blood level, but is a trigger level that requires investigation into what in the individual's environment is contributing to the level.

Based on studies recognised by the World Health Organisation into the relationship between lengthy exposure to ambient air lead levels and increases in blood lead levels, the current 12 month rolling average for measurements (as at March 2016) at the Townsville Coast Guard Site could be expected to add between 0.36  $\mu$ g/dL and 0.6  $\mu$ g/dL to a person's total blood lead level. This increment is only about 10% of the level that would require further investigation. Along with other normal exposure, this would not be expected to exceed that level, is well within the expected community range, and below the level that would trigger further investigation.

The highest rolling annual average in recent years (recorded in May 2014 at the Townsville Coast Guard Site) yields a predicted result of between 1.14  $\mu$ g/dL and 1.9  $\mu$ g/dL, still well under the level which should trigger concern.