

Fact sheet

Air quality around the West Footscray industrial fire



Environment
Protection
Authority Victoria

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Air quality observations and data summary for the West Footscray industrial fire

Monitoring locations and what was measured

There were five sites in the vicinity measuring PM_{2.5} particles. PM_{2.5} particles are particles that have a very small diameter and can be breathed into the lower parts of the lungs. The monitoring locations include the Footscray, Altona and Brooklyn ambient air monitoring stations which are part of Environment Protection Authority Victoria's (EPA) standard network. PM_{2.5} is a good indicator of exposure to smoke.

Data results were available on AirWatch (<https://www.epa.vic.gov.au/our-work/monitoring-the-environment/epa-airwatch>), which displayed the information as a map and table. See the end of this document further information about monitoring sites.

On Friday 31 August, EPA also deployed mobile monitoring (SmokeTrak) mounted on a vehicle which drove around the community to obtain additional information PM_{2.5} concentrations in the residential area around the fire. Two mobile sites were deployed on Thursday 30 August at Altona and Altona Gate. A third site was established on Friday 31 August at West Footscray and the Altona site was removed to reflect changes in the potential impacts of the fire.

Volatile organic compound (VOC) air sampling was undertaken at two sites on 30 and 31 August at Corrigan Avenue and Brooklyn Reserve.

Summary of data and observations

While smoke was clearly visible on Thursday and Friday (30 and 31 August 2018), the smoke remained at a high elevation which reduced the impact on the ground. As a result, generally low smoke levels were observed, with the exception of Brooklyn and Altona North, which did record some periods of air quality which were considered UNHEALTHY FOR SENSITIVE members of the community. Levels have decreased since then.

Monitoring at Altona Gate air monitoring stations recorded data which was considered in the LOW or MODERATE ranges.

The SmokeTrak vehicle-mounted air monitoring did detect some higher concentrations of particles along Millers Road; however, this data was not used to determine concentrations as the vehicle is constantly moving and the period of sampling is only several seconds, compared with the hourly monitoring at station monitoring sites.

For the VOC air monitoring, only benzene and toluene were detected, both well below adopted health guideline values. In emergencies, EPA uses the USEPA 8-hour Acute Exposure Guideline Levels for Airborne Chemicals (AEGL-1) to assess the levels of toluene and benzene and their impact on human health. AEGL-1 means for the general population the concentration threshold for a noticeable level of discomfort and irritation. For toluene, the AEGL-1 level is 252 µg/m³ and for benzene 28.7 µg/m³. Following the fire, the highest reading found for toluene was 7.7 µg/m³ and for benzene 8.7 µg/m³. EPA will continue to monitor VOC levels over the next few days.

Asbestos

During the fire itself, asbestos is not expected to pose a risk to the health of the surrounding community. This is because, during a fire, the amount of asbestos fibres released into the air is relatively low and asbestos fibres change their mineral structure after prolonged heating, losing their ability to impact on health.

During cleanup of the site, asbestos clumps and some fibres may remain on the site and present a risk if the ash or debris is disturbed, fibres can become airborne and hence can be inhaled. Cleanup of asbestos-containing sites is required to be carried out in line with applicable guidelines and regulations and will involve on-site monitoring of asbestos in air in line with Worksafe requirements.



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EPA has engaged specialist consultants to undertake asbestos air monitoring in the community to provide reassurance. Monitoring near the site on 31 August and 1 September has not identified any fibres. Further sampling for airborne asbestos will be undertaken during the coming few days and EPA will share these results in further updates. EPA uses an independent company who specialise in asbestos testing.

Health commentary

Precautionary health advice has been on the Emergency Management Victoria (EMV) website since the start of the fire.

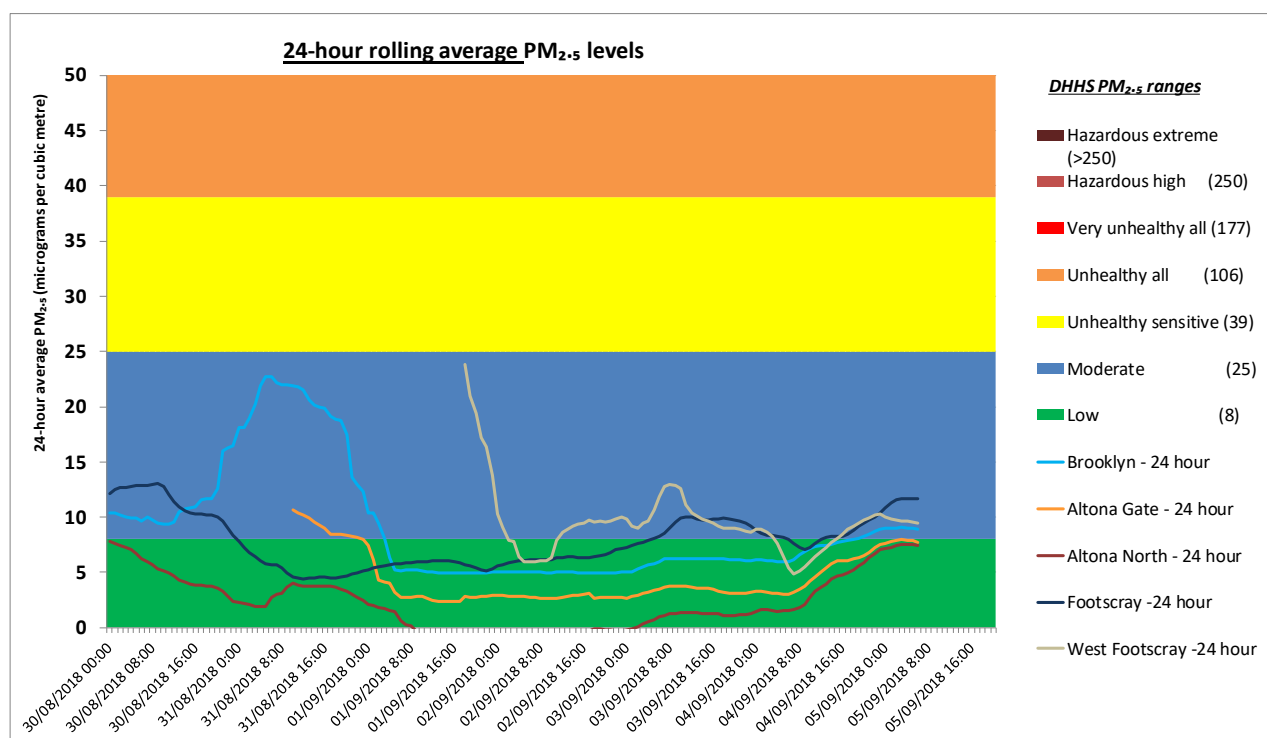
Smoke from the fire may result in acrid or solvent-like odours that may be detectable hundreds of metres from the site. EPA has provided the following advice regarding smoke:

- Smoke can affect people's health. Where possible, avoid exposure to the smoke.
- People with heart or lung conditions (including asthma), children, pregnant women and the elderly are more sensitive to the effects of breathing in smoke.
- People with existing heart or lung conditions (including asthma) should follow the treatment plan advised by their doctor.
- If you are experiencing any symptoms that may be due to smoke exposure, seek medical advice or call NURSE-ON-CALL on **1300 60 60 24**.
- Anyone experiencing wheezing, chest tightness and difficulty breathing should call **000**.
- Acetone and other solvents may be present on the site of the fire. EPA will be monitoring for volatile organic compounds to understand the composition of the smoke and assist in the recovery process.
- For further information, updates and advice relating to incidents affecting air quality in this area, please go to <http://emergency.vic.gov.au/respond>

Air quality data

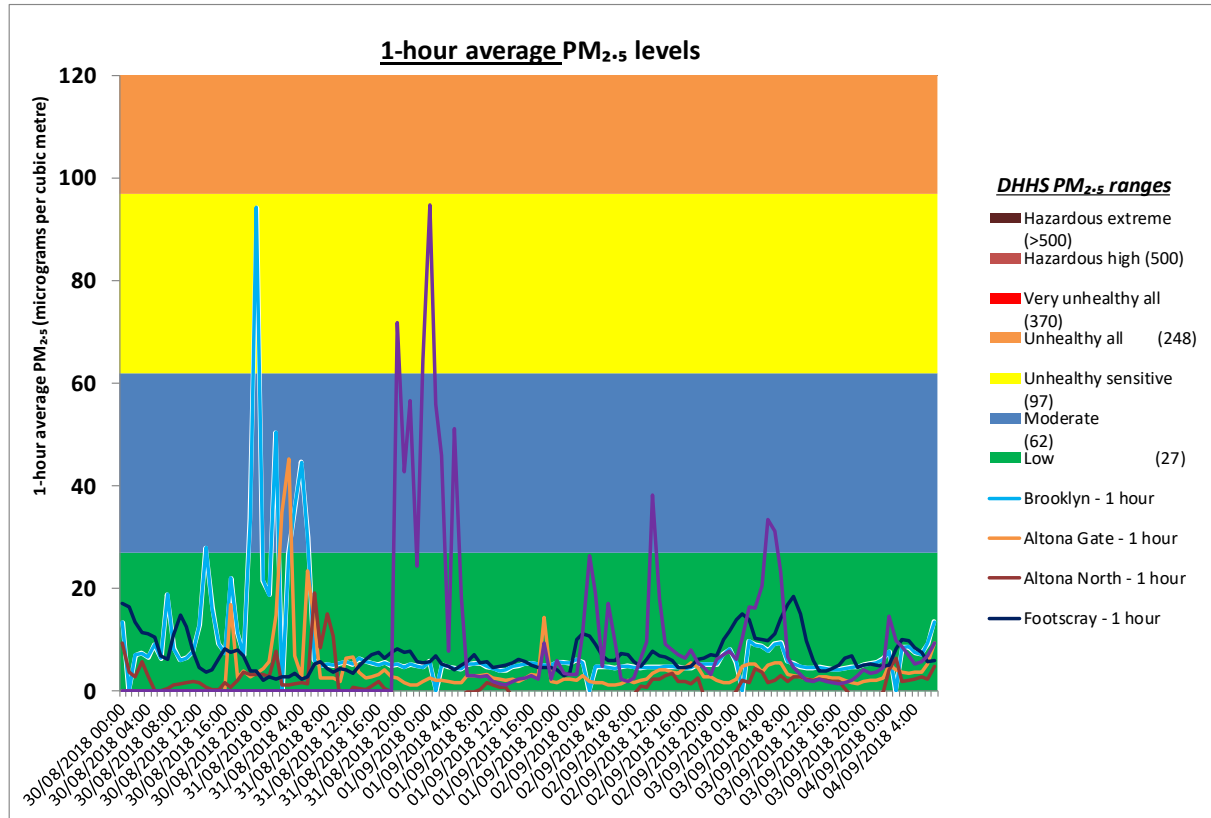
EPA air quality data collected from the period 30 August to 5 September 2018 is provided below.

PM_{2.5} 24-hour (µg/m³)

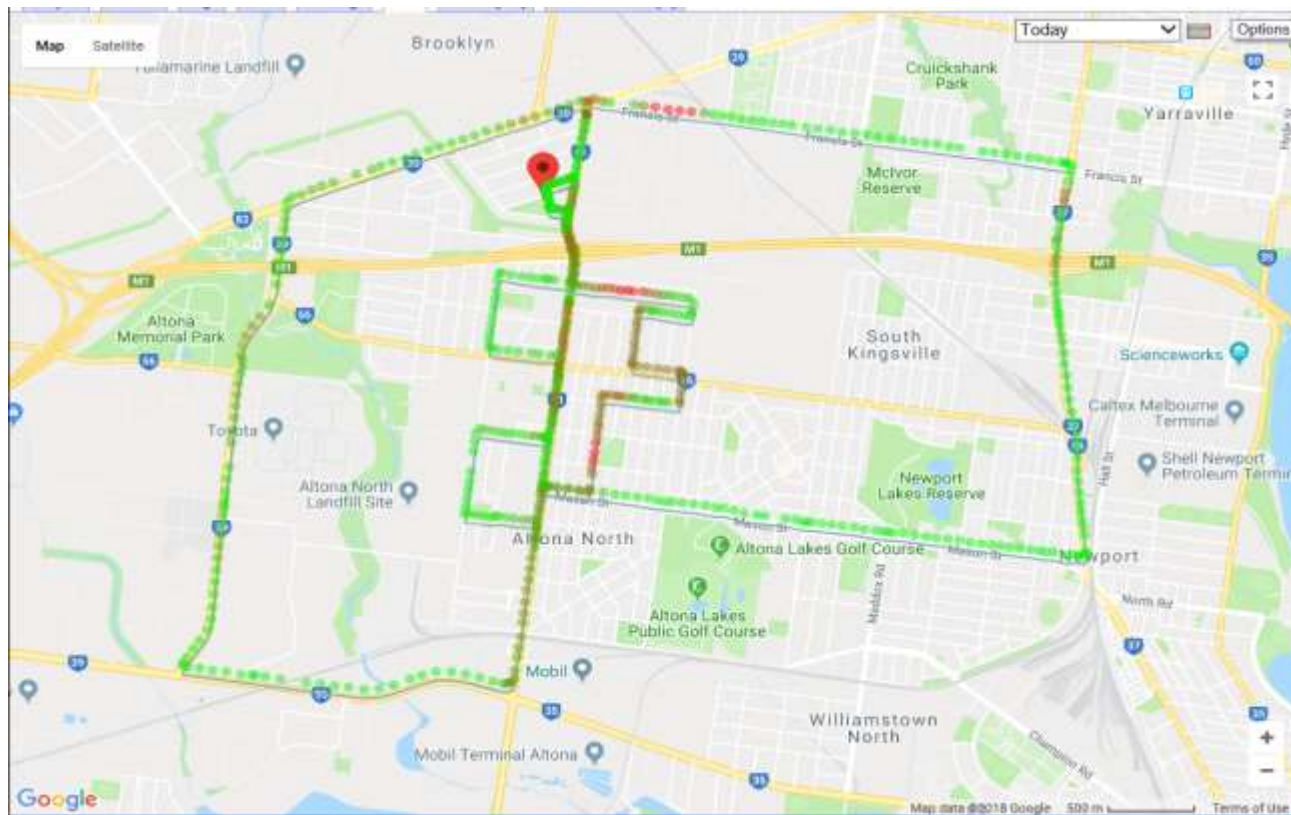


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PM_{2.5} 1-hour (µg/m³)



SmokeTrak results







Green dots show low levels of PM_{2.5}. Red dots show higher levels of PM_{2.5}. These are largely due to traffic sources.

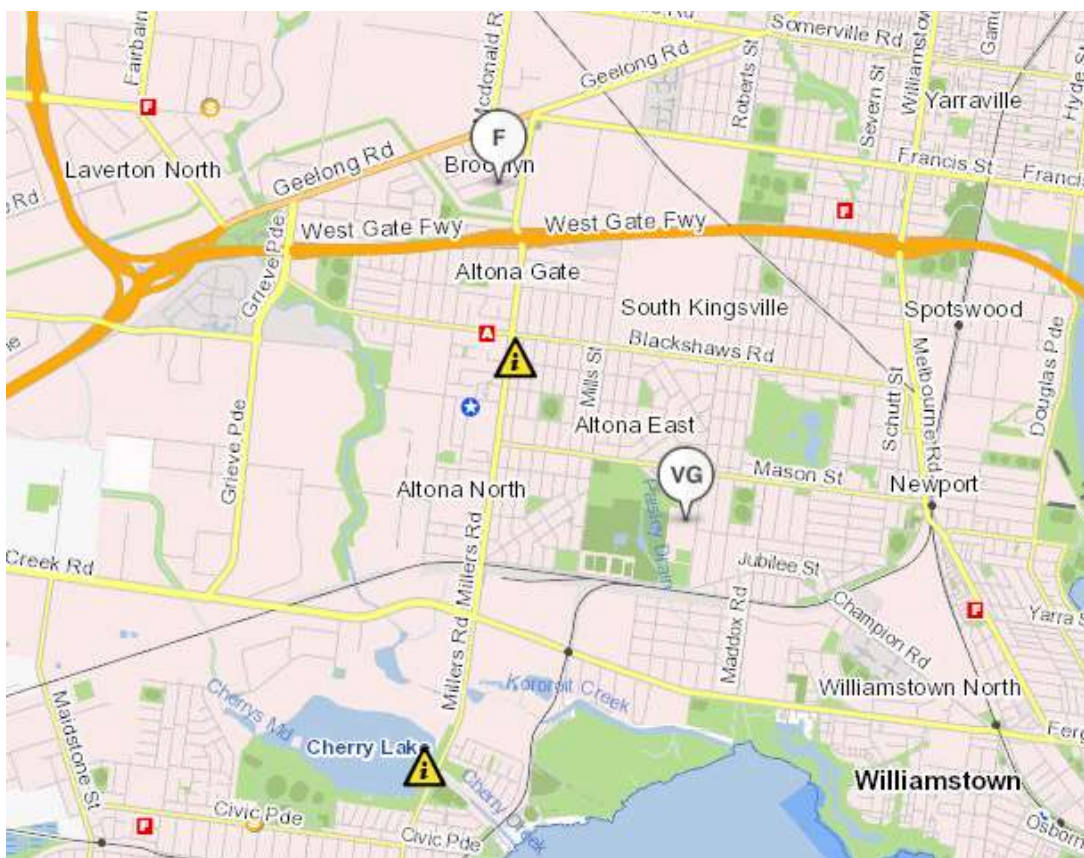
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EPA air quality monitoring sites

The five sites are:

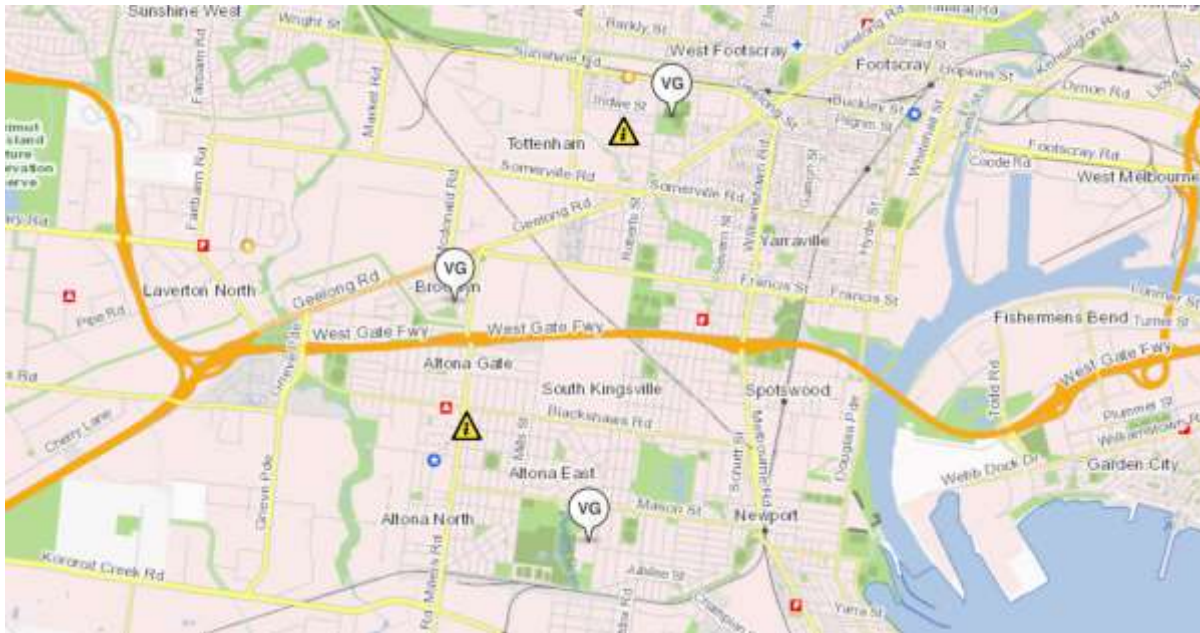
1. EPA standard site at Brooklyn Reserve (particle monitoring with nephelometer).
2. EPA standard site at Footscray (particle monitoring with BAM)
3. EPA standard site at Altona North (particle monitoring with Nephelometer).
4. Incident air monitoring site at Altona (station was moved to West Footscray on Friday evening, 31 August) (particle monitoring with ADR). 
5. Incident air monitoring site at Altona Gate (particle monitoring with ADR). 

The monitoring sites are shown on AirWatch as per the maps below. Map 1 includes the location in  Altona near Cherry Lake, and map 2 shows where this station was moved to in West Footscray. 



Map 1: West Footscray industrial fire air monitoring locations.

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Map 2: West Footscray industrial fire air monitoring locations.

Access to information and support

- Incident information and updates: [emergency.vic.gov.au](https://www.emergency.vic.gov.au)
- Up-to-date air quality information: [epa.vic.gov.au/airwatch](https://www.epa.vic.gov.au/airwatch)
- Information about the impacts of smoke: [epa.vic.gov.au/smoke](https://www.epa.vic.gov.au/smoke)
- Call EPA 24-hours a day on **1300 372 842** (1300 EPA VIC)