

ABC CLG EPA Report

August 2017

This report provides information and some interpretation from the EPA monitoring stations on the Le Fevre Peninsula for the months of April, May, June and July.

The EPA has provided additional information to assist readers to understand the data as presented, and has also included a new format for displaying wind direction dust level information together in what is called a polar plot.

How to interpret EPA air quality data

PM₁₀ levels and averaging period

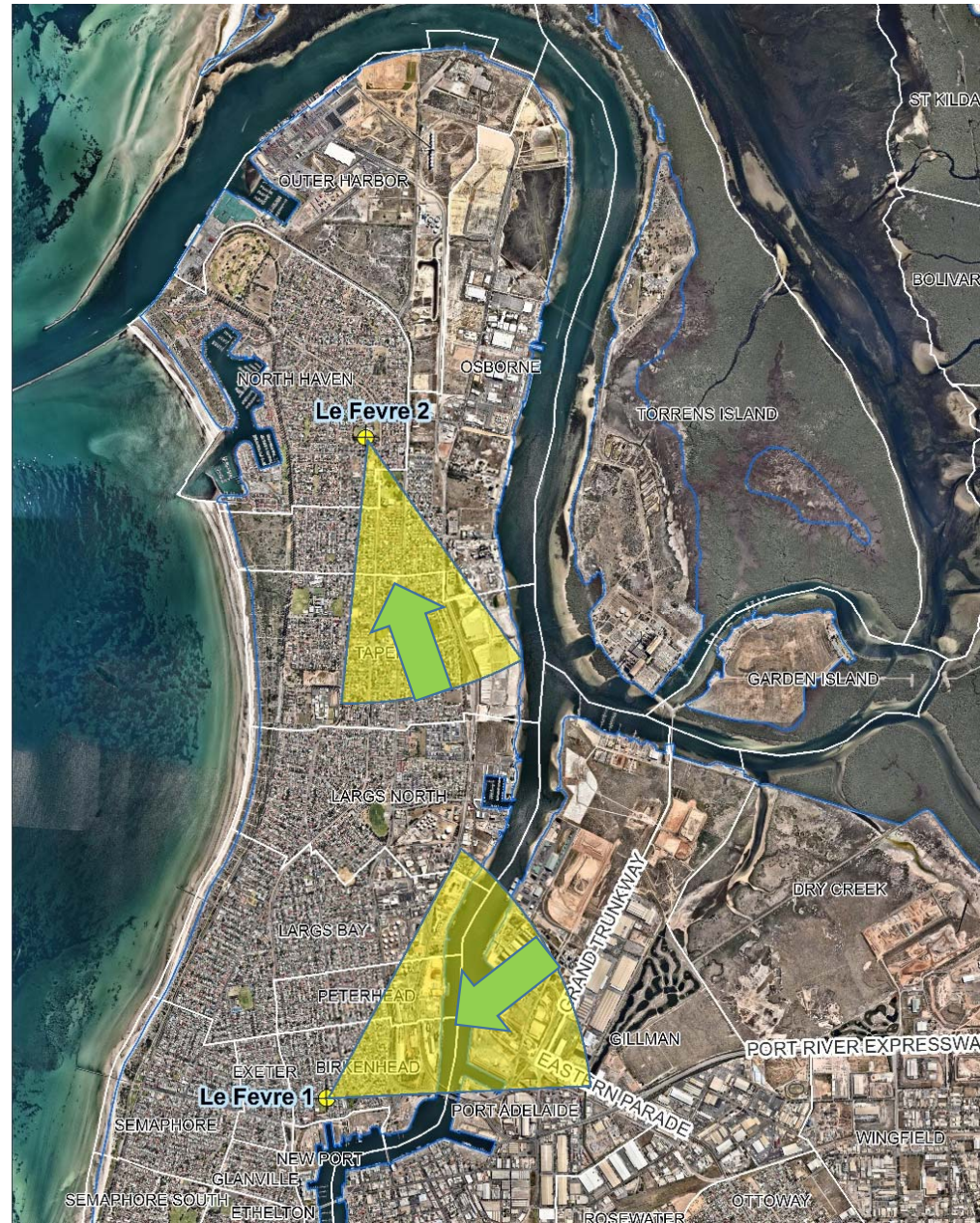
	1-hour average*	24-hour rolling average
What is it?	The average PM ₁₀ levels over a one-hour period.	An average of the hourly readings of PM ₁₀ levels over the previous 24-hour period.
How often is the average calculated	Every hour	The previous 24 one-hour readings are averaged each hour.
What does it say about air quality?	It tells us about dust levels over the previous 1-hour period.	It tells us about air quality over the previous 24 hours.
Does this type of data trigger any health advice or regulatory response?	No	Yes, if the levels are above relevant criteria**.
What is this data used for?	1-hour average data can quickly show when a dust event is happening. It can also indicate how severe it is.	Compliance reporting – 24-hour average data is compared to the SA's regulatory criteria and source identification Dust events – 24-hour average data may be used to alert residents for high dust levels or public health concerns or may trigger regulatory response.
Why don't all increased dust levels trigger regulatory response?	In Le Fevre, dust can originate from variety of sources such as motor vehicles, earthworks, domestic sources, wind blown natural dust or industrial activities such as ABC. Only when winds are blowing from the direction of ABC and PM ₁₀ levels are above criteria for that day, may the EPA trigger a regulatory response.	

* EPA real time monitoring display concentration for recent 1-hour average

** Ground level concentration criterion for PM₁₀ is 50 µg/m³

Graphical presentation

Wind direction would need to occur in the direction of the *green arrows* for the dust source to be from the Adelaide Brighton Limited site.



Where is the dust coming from?

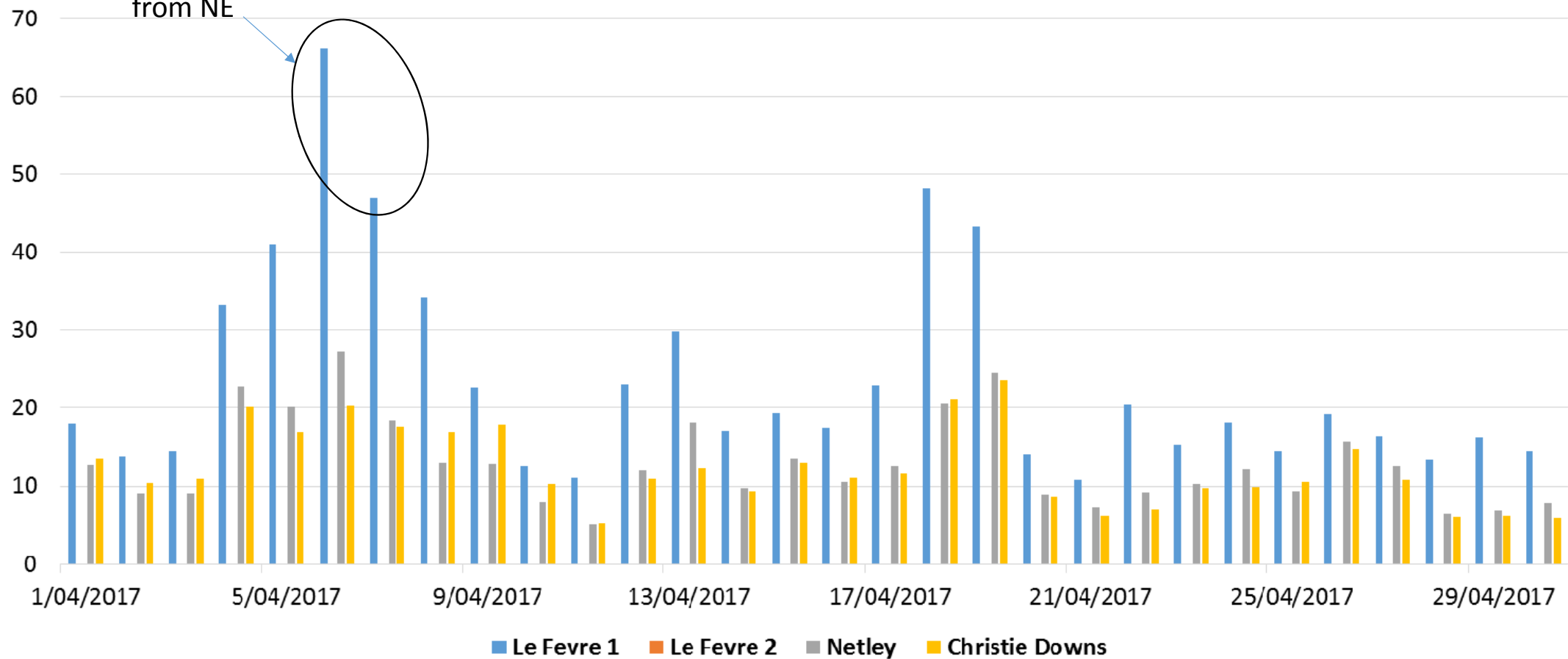
EPA scientists carefully examine monitored dust levels, weather data and any other available information to determine if a particular dust event would trigger any regulatory response

Information	What does it mean
Wind direction (forecast or observations)	Wind direction would inform where is the dust coming from (eg natural/regional dust)
Wind speed (forecast or observation)	Wind speed would determine how far dust can travel. Higher wind speeds (eg more than 30 km/hr) can potentially raise the dust levels in general.
Dust levels are recorded high at all monitors (for example, PM ₁₀ greater than 80 µg/m ³ for 1 hour)	Potentially a regional scale dust event in the city. Wind direction will tell source(s) of dust.
Dust levels high at one monitor and not others	Potentially a local dust event. Source can be interpreted from observed wind speed and direction
Other weather condition(s)	Other weather conditions such as rain or storm has an effect on dust levels (eg heavy rain may reduce the dust concentrations)

Monthly data summaries follow,
including graphs and wind roses
overlaying topography

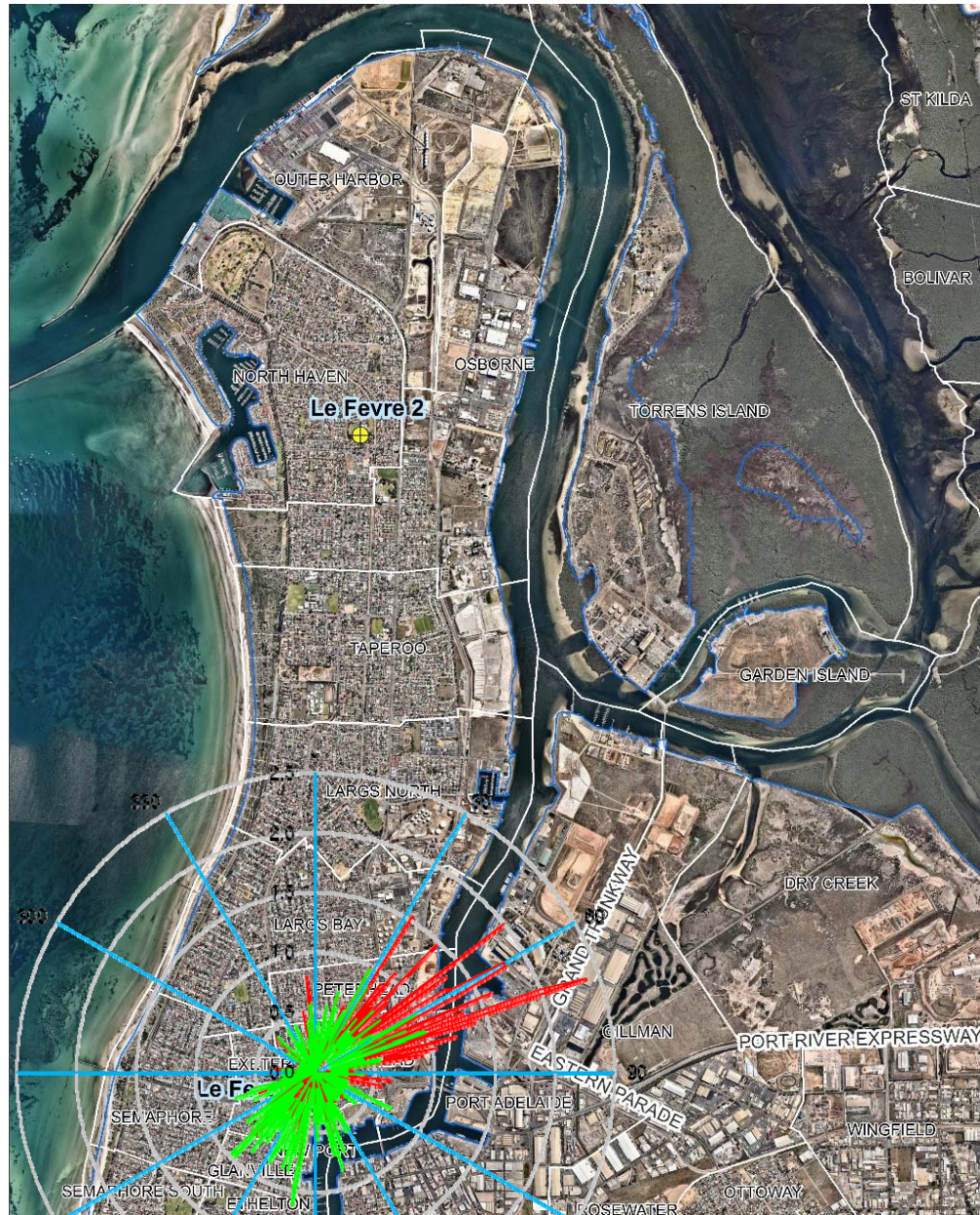
Daily PM₁₀ (µg/m³)-April 2017

High readings
from NE

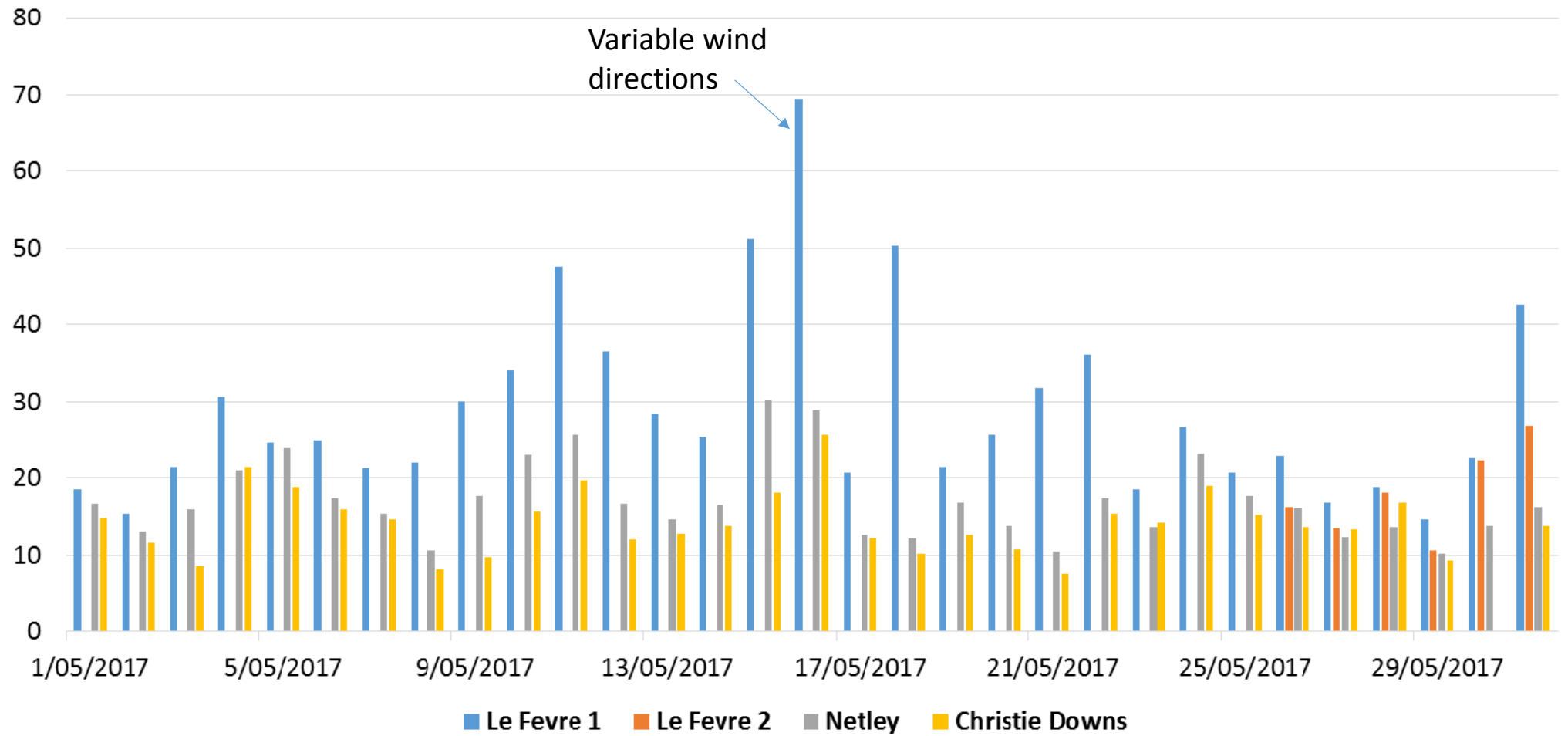


April 2017

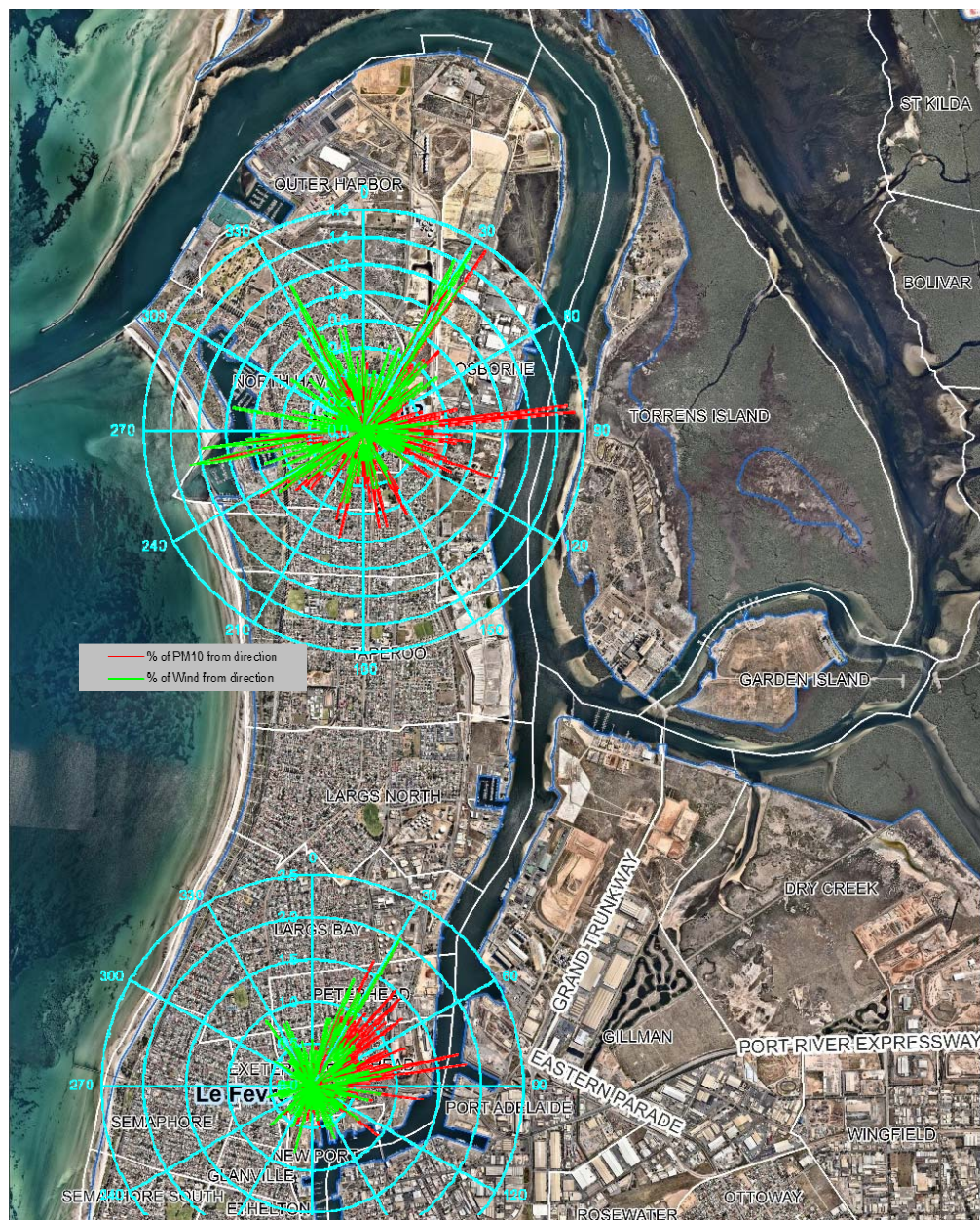
(No PM_{10} data from Le Fevre 2 for April 2017)



Daily PM10 ($\mu\text{g}/\text{m}^3$)-May 2017

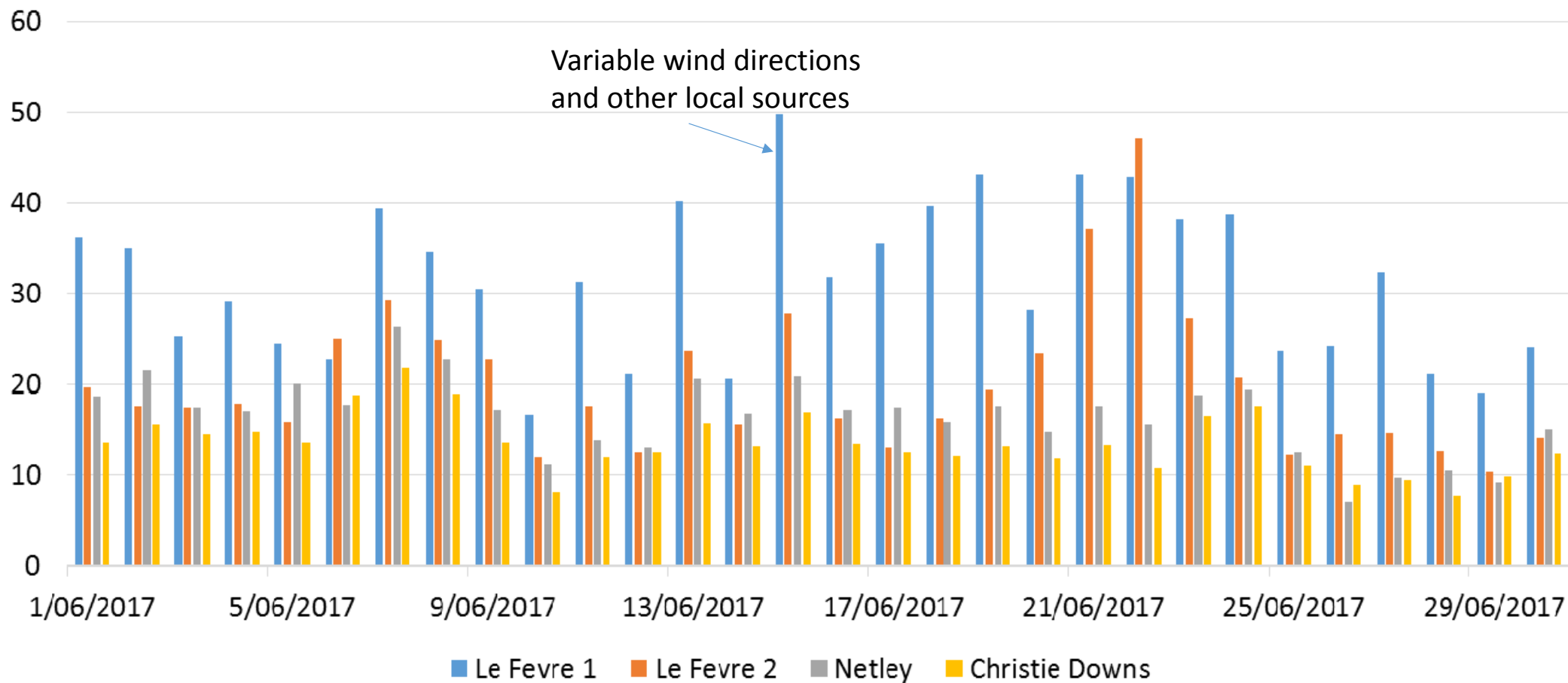


May 2017



Daily PM10 ($\mu\text{g}/\text{m}^3$)-June 2017

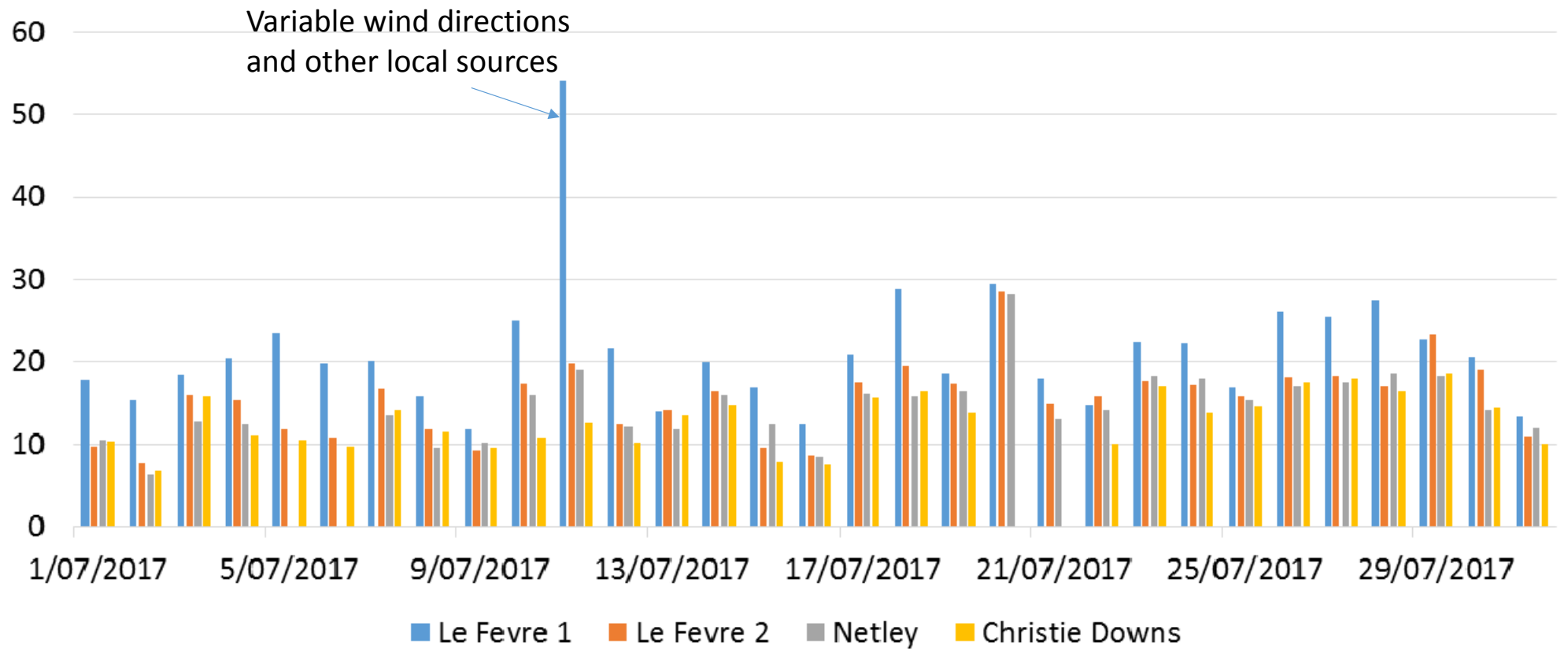
Variable wind directions
and other local sources



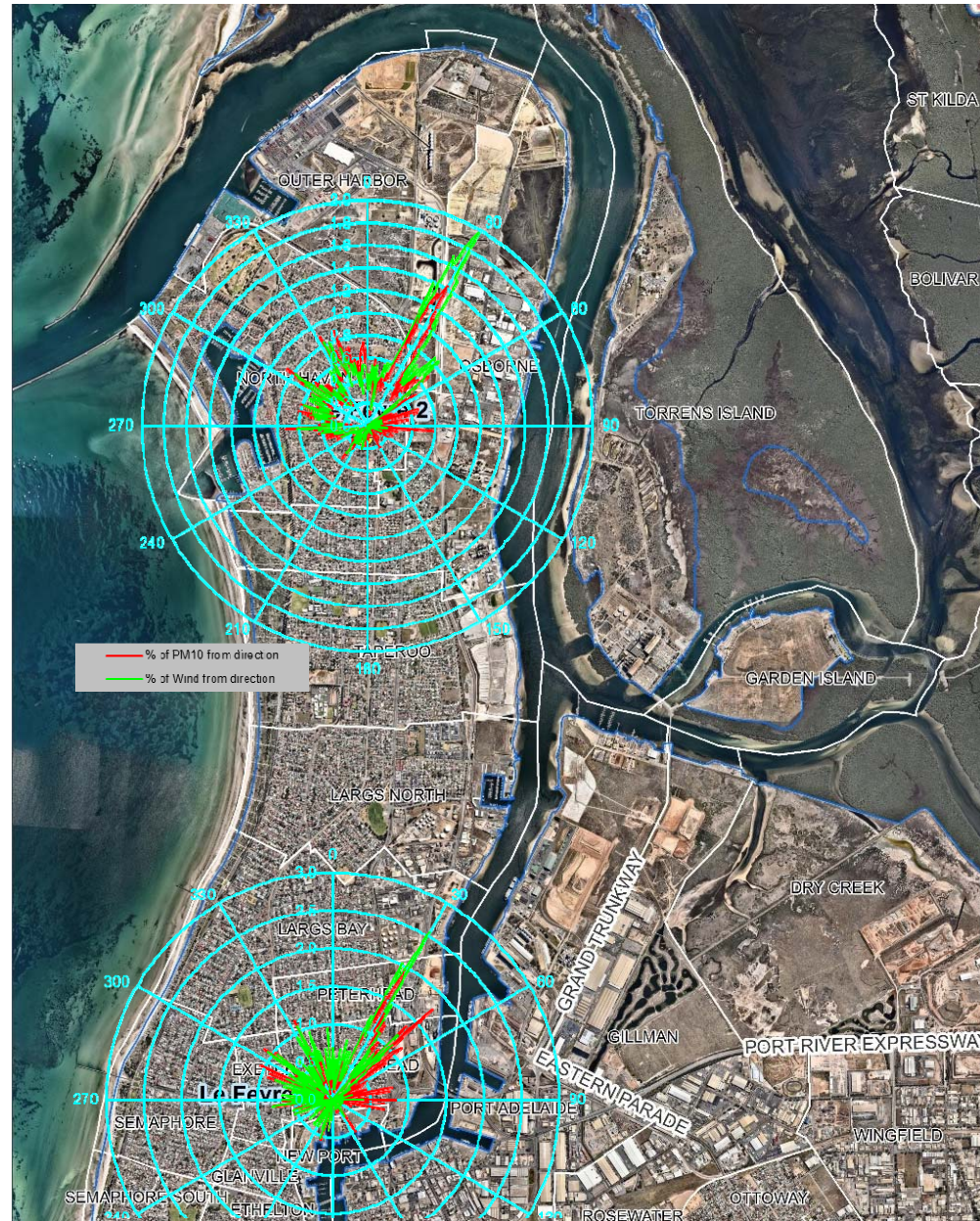
June 2017



Daily PM10 ($\mu\text{g}/\text{m}^3$)-July 2017



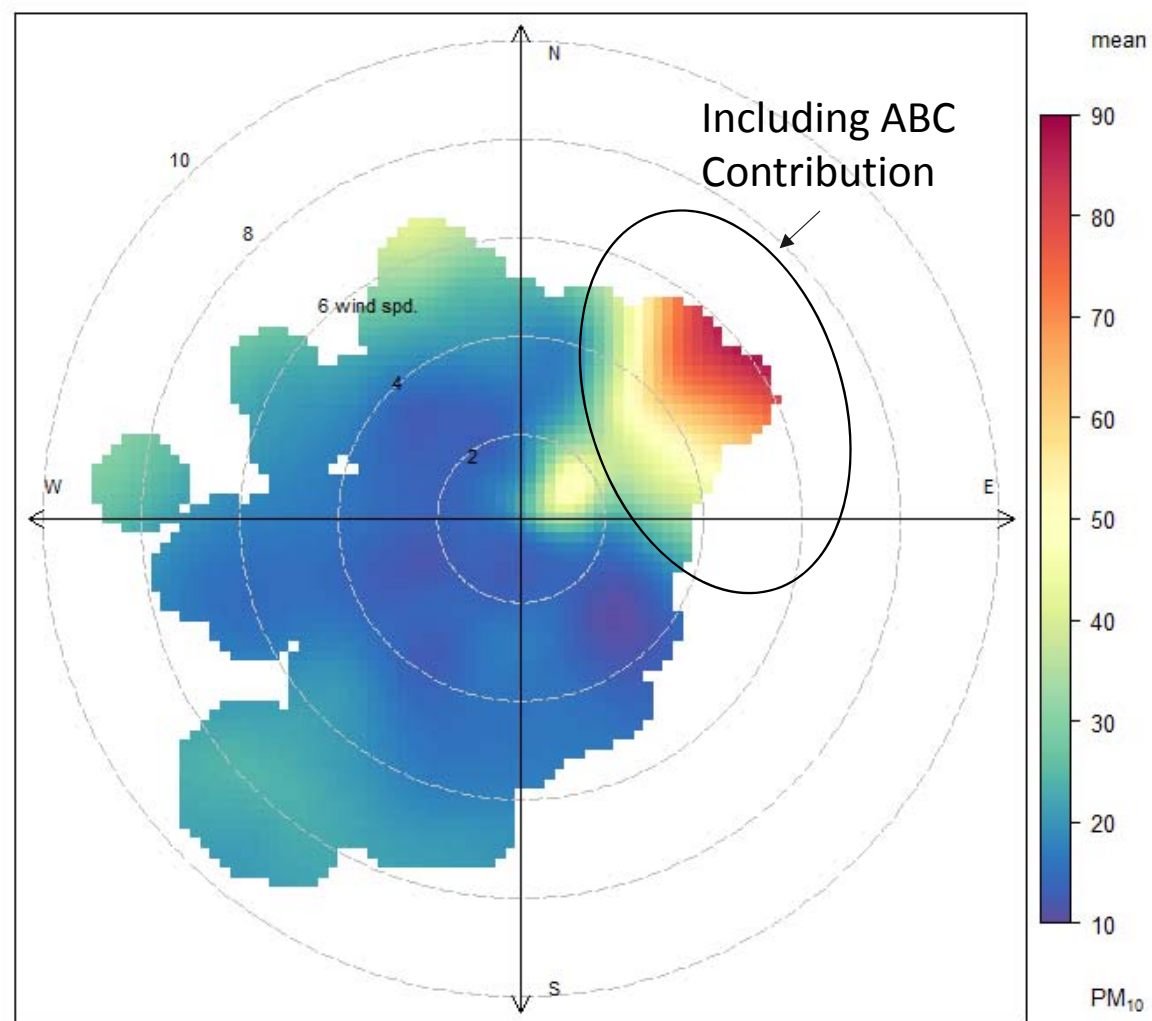
July 2017



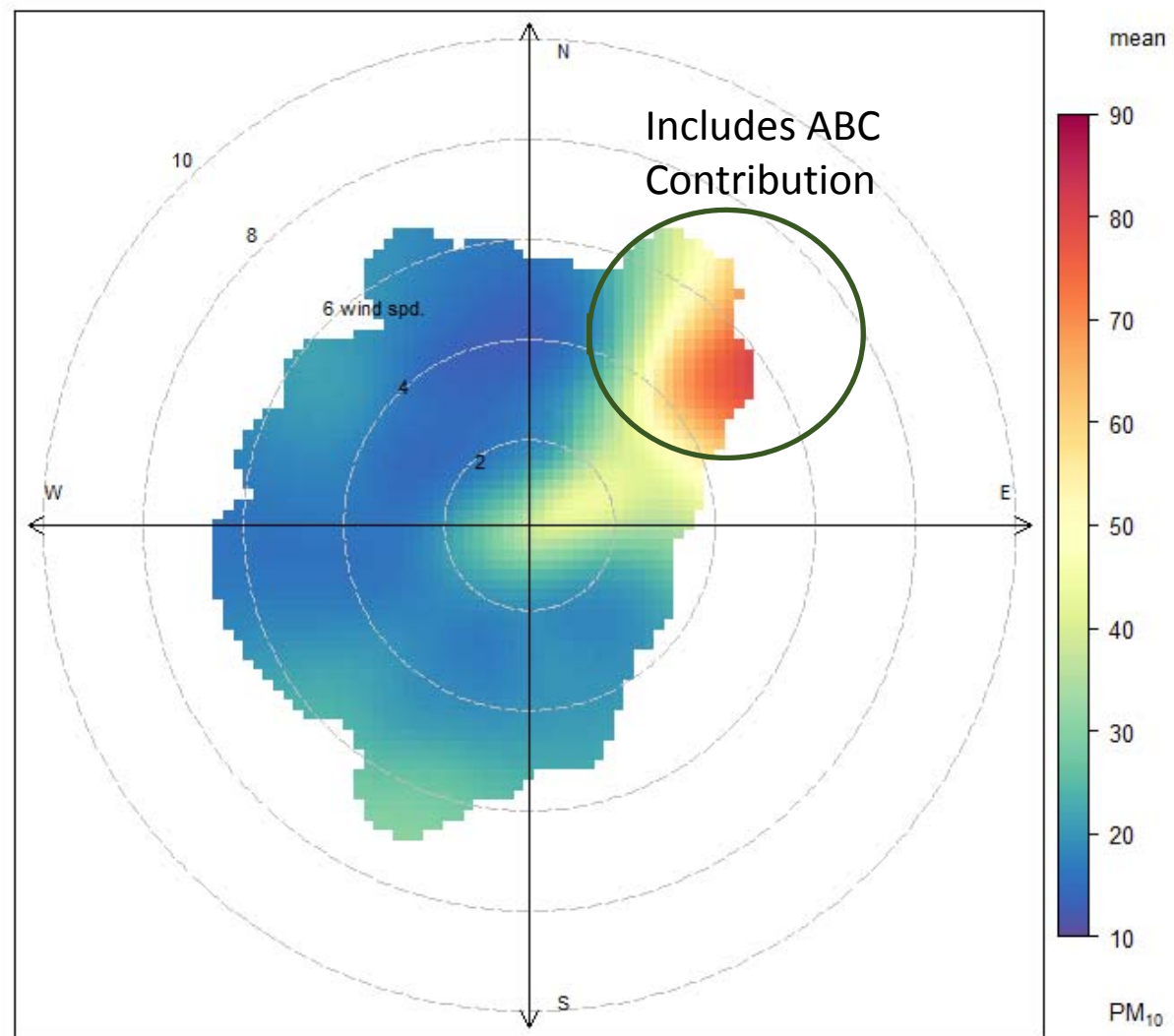
Polar Plot(s) – New format

The following graphs are a different way of displaying the information which combines levels of dust and wind direction. The EPA would welcome feedback on this method of displaying the information.

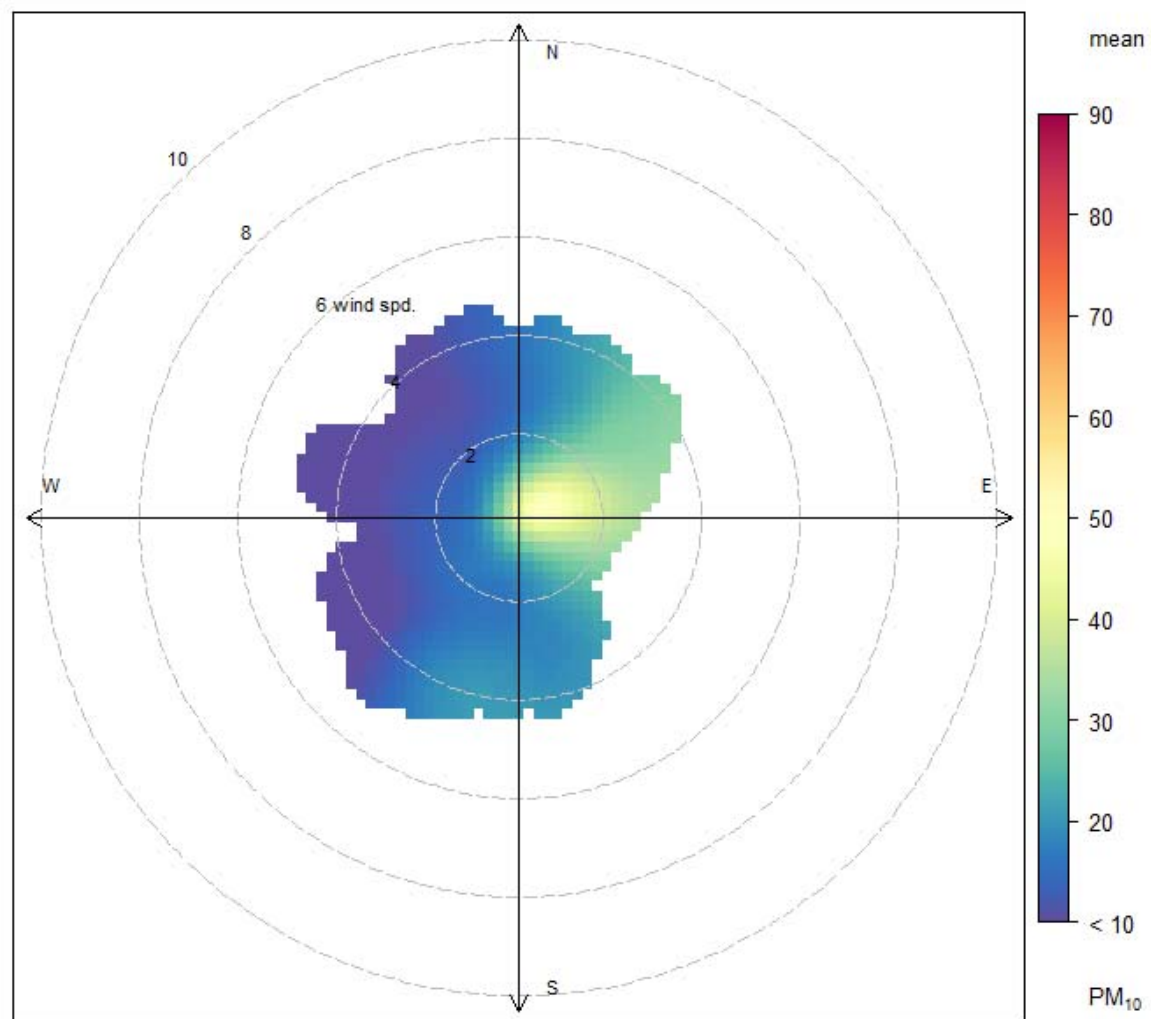
April 2017



May 2017



June 2017



July 2017

Other local sources

