

# Air Quality Around Mossmorran and Braefoot Bay 2021 – Summary Report



Image courtesy of SEPA

## What is air quality like around Mossmorran and Braefoot Bay and has it been affected by the industries in the area?

Monitoring has revealed no adverse effects on air quality from activities undertaken at the Mossmorran Complex, which includes ExxonMobil's Fife Ethylene Plant (FEP) and Shell UK Fife NGL plant, in 2021. Levels of air pollutants remain within the objectives set by the Scottish Government to protect human health.

This conclusion comes from evaluating data collected by SEPA and Fife Council at their air monitoring stations, along with additional data provided by INEOS along the Forth Estuary. SEPA's monitoring sites were chosen to reflect the location of residential communities, and included a downwind site to represent the most impacted direction from the Mossmorran Complex.

The quality of the air in the area is determined by measuring the amount of pollutants that are present. These pollutants can come from different sources or activities, including vehicles, industries, wood-burning and gas stoves. The measurements were compared to air quality objectives, which are set by the government to make sure the air we breathe is safe.

Pollutant	SEPA (4 monitoring sites)	Fife Council (4 monitoring sites)	INEOS
PM <sub>10</sub> *	Highest annual mean found at Little Raith: 11.9 µg m <sup>-3</sup>	Highest annual mean found at Cupar: 13.0 µg m <sup>-3</sup>	N/A
PM <sub>2.5</sub> *	Highest annual mean found at Little Raith: 6.3 µg m <sup>-3</sup>	Highest annual mean found at Cupar: 6.3 µg m <sup>-3</sup>	N/A
NO <sub>2</sub> **	Highest annual mean found at Little Raith: 4.1 µg m <sup>-3</sup>	Highest annual mean found at Cupar: 20 µg m <sup>-3</sup>	N/A
SO <sub>2</sub> **	Little Raith: 32.5 µg m <sup>-3</sup> (highest 15 minute mean)	N/A	N/A
CO <sup>#</sup>	Little Raith: 1.7 mg m <sup>-3</sup> (highest running 8 hour mean)	N/A	N/A
Benzene <sup>##</sup>	N/A	N/A	1 to 0.4 ppb

\*PM<sub>10</sub> and PM<sub>2.5</sub> are two different sizes of particulate matter. These are tiny particles which go deep into the lungs, affecting health in many ways.

\*\* NO<sub>2</sub> is nitrogen dioxide and SO<sub>2</sub> is sulphur dioxide, which are gases that can affect lung health.

# Carbon monoxide is a colourless, odourless gas. It can affect how well your blood carries oxygen.

## Benzene is a vapour, which has been associated with cancer.

In the table above, the highest average value out of all the monitoring sites is provided. The square colours indicate whether any air quality objectives were exceeded. Green means the objective for that pollutant was not exceeded. No pollutant objectives were exceeded. N/A indicates that no data were available. For more information on air quality objectives please see [www.scottishairquality.scot/air-quality/standards](http://www.scottishairquality.scot/air-quality/standards).

## How do emissions from the industries at Mossmorran and Braefoot Bay affect air quality?

Operations at ExxonMobil's Fife Ethylene Plant (FEP) and Shell UK Fife NGL plant at Mossmorran and Braefoot Bay can produce air pollutants. The emissions of air pollutants are regulated by the Scottish Environment Protection Agency (SEPA). All air quality monitoring stations found that air quality remained good throughout the year.

## Who evaluates air quality related to the Mossmorran and Braefoot Bay area?

The Mossmorran & Braefoot Bay Expert Advisory Group on Air Quality (AQ EAG) advises Fife Council on whether there are any air quality and related health impacts arising from operations at the Mossmorran Complex and the Braefoot Bay Marine terminal facilities.

The AQ EAG reviews air quality data collected from various sources, including air monitoring data from Fife Council, SEPA, INEOS, and emissions monitoring by ExxonMobil and Shell, as required by their permit.

The AQ EAG also considers the potential impact that any major plant changes could have on air quality and liaises with representatives from community councils and the local health service.

This summary and the full report are independently developed by the Institute of Occupational Medicine (IOM) for the AQ EAG as required under the planning permits for FEP and FNGL, and financed by the site operators. This summary has been approved by the Mossmorran and Braefoot Bay Community and Safety Liaison Committee's Expert Advisory Group on Communications. Fife Council covers costs of the administration of the Committee and constituent groups including the AQ EAG.

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For more information on the AQ EAG's reports, see [www.fife.gov.uk/kb/docs/articles/environment2/environmental-health/mossmorran-and-braefoot-bay](http://www.fife.gov.uk/kb/docs/articles/environment2/environmental-health/mossmorran-and-braefoot-bay)

