Mossmorran – SEPA Monitoring Summary

12 March 2020

SEPA has an enhanced air quality monitoring programme in the area around Mossmorran that was in operation during the ExxonMobil Ltd. shutdown in 2019 and the restart in 2020.

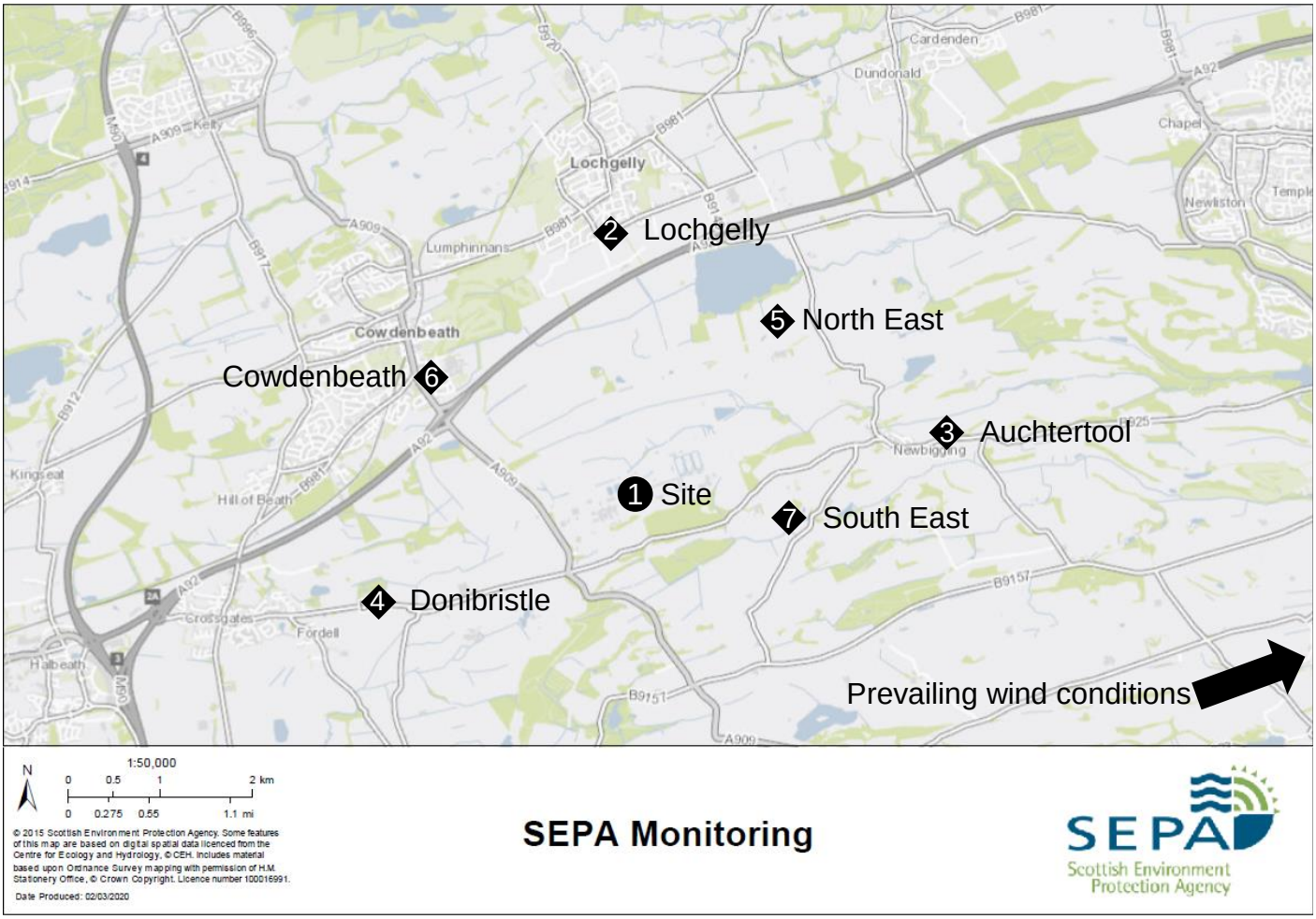
Data gathered is being used to inform relevant public agencies and the community. It provides up-to-date data that can be compared to the three-month programme of monitoring undertaken between January and April 2019 when the plant was in normal operation.

Noise monitoring was also conducted to gather data to assess compliance.

SEPA has had particulate monitors in communities in Lochgelly (site 2 - since 4 July 2019), Auchtertool (site 3 - since 14 August 2019) and Donibristle (site 4 - since 14 August 2019) to capture data downwind of the prevailing wind directions and also means we have comparable data from upwind of the Mossmorran Complex. Results from these monitors has been published on an ongoing basis on SEPA's Mossmorran Hub at sepa.org.uk/mossmorran.

In addition, SEPA deployed monitoring for:

- Particulate matter, oxides of nitrogen, sulphur dioxide and carbon monoxide downwind (site 5 – since 4 December 2019). This data cannot be released until we have completed our final quality assurance checks.
- Nitrogen dioxide and volatile organic compounds (including benzene) (sites 2, 4, 5 & 6 – 23 October 2019 to 20 December 2019 and 23 January 2020 to 20 February 2020). This data is collected using diffusion tubes and will be available once they have been analysed by an external laboratory.
- Noise, using static monitors (sites 2 and 7 – 24 January to 21 February 2020). Additional monitoring was carried out by noise specialists on the ground at various stages of the start-up. Noise data cannot be released as it may form part of a regulatory investigation.

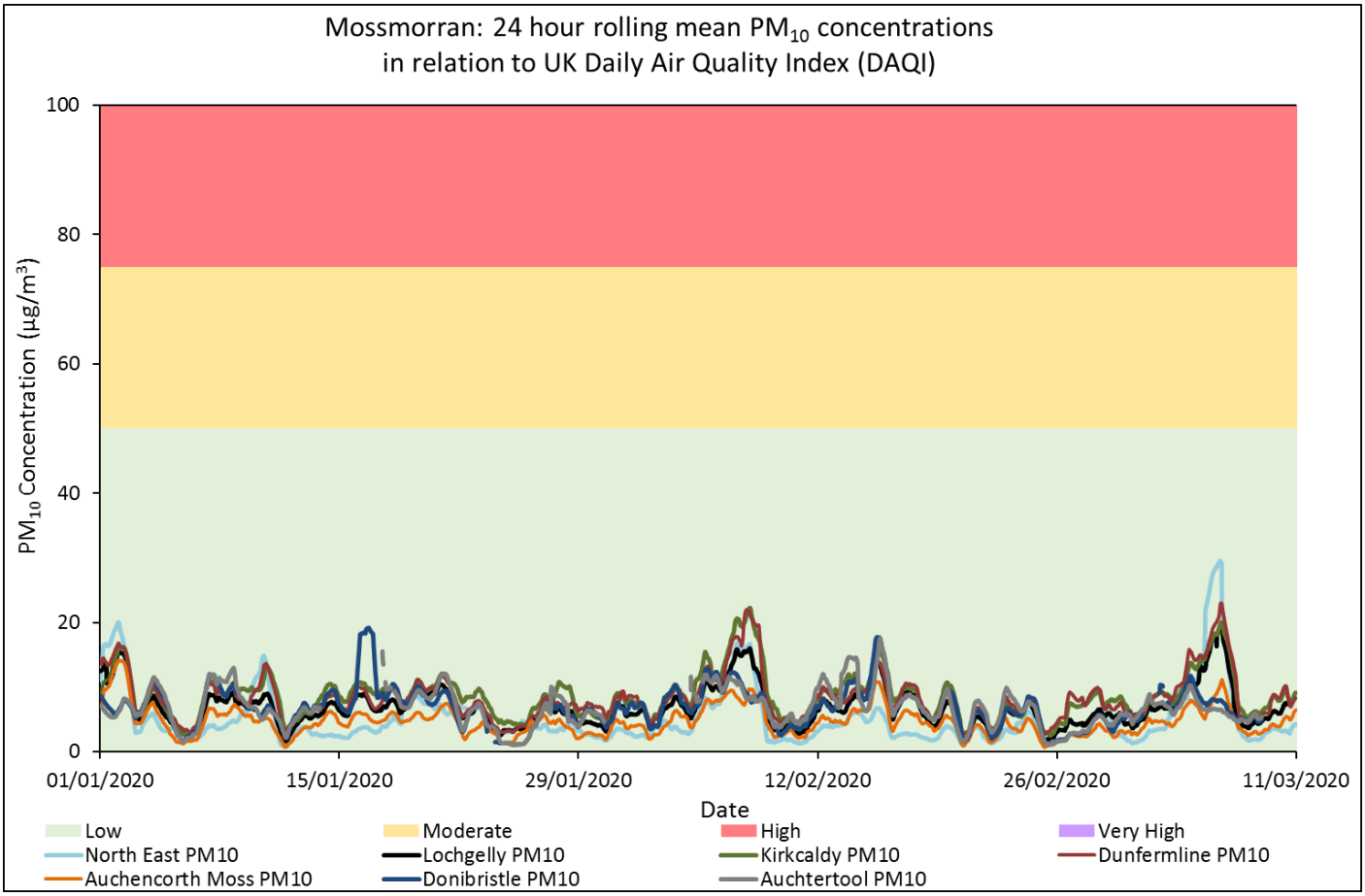


Our published data to date shows that no air quality standards were breached and that levels would be described as low using the Daily Air Quality Index, a national air quality classification system, as shown in the graph below.

The graph also shows:

- The recorded PM_{10}[1] concentrations at the Auchencorth Moss rural background site (shown in orange). This site is located in an elevated rural environment, 1.5 kilometres north west of the A701 at Leadburn and 18 kilometres south of Edinburgh city centre;
- The concentrations at the Fife Council automatic monitors at Dunfermline and Kirkcaldy.

Data from these additional sites puts these measured concentrations into a wider context by showing how particulate matter levels follow national trends (data available from the Scottish air quality database).



Since the start of 2020 there have been ten occasions where power issues or quality control self-checks on an individual unit has reset the unit. This is a control process to ensure no erroneous data is recorded. On each occasion there has been backup data from the ring of fixed and mobile monitors and there are no days where data as a whole has not been available.

Overall data collection was 94%. For a strict comparison against air quality standards there must be a data capture of 85% or greater throughout the calendar year.

Notes:

1. PM_{10}: Particulate matter is not made up of one type of substance; it is a classification of particles by size. It is measured in micrometres (µm). A human hair is approximately 100 µm wide. PM_{10} represents particles of less than 10 micrometres (µm) in diameter.

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