



Report of the Cabinet Member for Corporate Service and Performance

Climate Change and Nature Scrutiny Performance Panel 8th March 2023

An update on Air Quality in Swansea

Purpose	To brief the Climate Change and Nature Scrutiny Performance Panel on work related to air quality.
Content	An update on air pollution levels measured across Swansea and policy/practical options for reducing such levels
Councillors are being asked to	Consider the information provided and give views
Lead Councillor(s)	Councillor David Hopkins
Lead Officer(s) & Report Author	Tom Price Team Leader Pollution Control and Private Sector Housing Tel: 01792 635600 E-mail: tom.price@swansea.gov.uk

1. Air Quality in Swansea Council

- 1.1 Swansea Council is required to submit an Annual Progress Report (APR) to Welsh Government (WG) each year advising upon the assessment of ambient air quality in accordance with the EU objective concentrations. Due to the Coronavirus pandemic, the APR has not been submitted in 2020, 2021 or 2022. Confirmation has been received from WG that a combined APR for 2020 & 2021 can be submitted along with the 2022 APR. These reports are currently being finalised by a third-party consultant (Bureau Veritas) for submission to WG.
- 1.2 The draft conclusions reached for the 2019, 2020 & 2021 datasets are that the objectives for benzene, lead and sulphur dioxide have been met and that there is no requirement to proceed any further in reporting upon these pollutants. The council no longer monitors for benzene and lead but continues to have two monitoring locations for sulphur dioxide.

- 1.3 All monitoring sites remain compliant with both the annual mean and daily mean exceedance (35 days permitted) for particulate matter PM10.
- 1.4 There are also three fixed monitoring locations for particulate matter PM2.5 in Swansea.
- 1.5 The main pollutant of interest, for exceeding the National Air Quality Objective Concentration in Swansea, is Nitrogen Dioxide (NO₂), for the annual mean Objective of 40µgm⁻³.
- 1.6 Monitoring data collected during 2019, 2020 and 2021 indicates that compliance with the annual mean concentration for NO₂ continues.
- 1.7 Acknowledgment is made to the Coronavirus pandemic and the effect of lockdown periods upon people's activities.

2. Air Pollution Concentrations Measured Across Swansea

2.1 Real-time monitoring data is available via <http://swansea.airqualitydata.com/> and data can be downloaded from this site. This website is scheduled for review and upgrade if resources allow. The Council's data can also be viewed and downloaded via the Welsh Air Quality Forum (WAQF) website <https://airquality.gov.wales/>

2.2 Nitrogen Dioxide

2.2.1 Swansea Council utilises both automatic and non-automatic monitoring methods when undertaking its Local Air Quality Management duties. Appendix A includes a map showing the location of the automatic monitoring sites and Appendix B includes a map showing the location of the non-automatic monitoring sites in Swansea.

2.2.2 The ratified 2019, 2020 and 2021 datasets show that there continues to be no exceedances of the annual mean NO₂ Objective at locations within Swansea.

2.2.3 Appendix C includes the annual mean data for the continuous monitoring locations.

2.3 Particulate Matter (PM10)

2.3.1 PM₁₀ is monitored at five locations in Swansea. The map in Appendix A shows their locations.

2.3.2 The National Air Quality Objective Concentration, for PM₁₀, is annual mean of 40µgm⁻³.

2.3.3 Monitoring data collected during 2019 and 2020 indicates that compliance with the annual mean concentration for PM10 continues. Appendix C shows the annual mean data for the continuous monitoring locations.

2.4 Particulate Matter (PM2.5)

2.4.1 PM_{2.5} is monitored at three locations in Swansea. The map in Appendix A shows their locations.

2.4.2 Currently, in Wales, there is no Air Quality Objective Concentration for PM_{2.5}

2.4.3 The World Health Organisation (WHO) guideline concentration for PM_{2.5} is 5µgm⁻³. These guidelines are of a high methodological quality and are developed through a transparent, evidence-based decision-making process. In addition to the guideline values, the WHO Global air quality guidelines provide interim targets to promote a gradual shift from high to lower concentrations ([https://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health))

2.4.4 See Appendix C for the annual mean data for the continuous monitoring locations.

3. Policy/Practical Options for Reducing Air Pollution

3.1 The Pollution Control & Private Sector Housing Team continues to monitor air quality across Swansea. During the Coronavirus pandemic, the demand upon provision of Environmental Health services increased dramatically and as teams progress through the recovery phase, more resources will be redirected towards collaborative air quality approaches.

3.2 Whilst Swansea is currently compliant with WG's Air Quality Objectives, in-line with WG policy, the Council will continue to work towards reducing exposure where possible.

3.3 Air quality is considered as part of the Planning consultation processes by the team on a case-by-case basis.

3.4 Officers continue to respond to complaints regarding burning of waste, domestic combustion appliances and provide advice on the appropriate usage of fuels.

3.5 The Council has made a commitment to 'work with others to provide sustainable and low carbon transport and infrastructure, providing improved and cheaper connectivity and mobility and associated benefits at reduced environmental cost and improved air quality'.

- 3.6 Previous WG consultations, White Paper on a Clean Air (Wales) Bill and Reducing emissions from domestic burning of solid fuels, provided opportunities for all stakeholders to respond to the questions asked by WG on their future plans to tackle air quality. The council are currently involved in working groups providing input into proposed new Clean Air Powers.
- 3.7 The team continues to collaborate with outside organisations to look at funding possibilities to carry out research in the air quality field. Having been awarded financial assistance from the WG Local Air Quality Support Fund, collaborative research work is being carried out with Swansea University, Think Air and Vortex IoT to measure local air quality and noise within the city and to test potential interventions. The outcomes of these projects will be reported to WG and will potentially be submitted to peer reviewed publications.

4. Legal implications

- 4.1 None

5. Finance Implications

- 5.1 Revenue to fund the existing monitoring set out in this report is contained within existing budgets. Additional development of interventions would need to be addressed for additional funding opportunities.

6. Integrated Assessment Implications

- 6.1 The Council is subject to the Equality Act (Public Sector Equality Duty and the socio-economic duty), the Well-being of Future Generations (Wales) Act 2015 and the Welsh Language (Wales) Measure, and must in the exercise of their functions, have due regard to the need to:

- Eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Acts.
- Advance equality of opportunity between people who share a protected characteristic and those who do not.
- Foster good relations between people who share a protected characteristic and those who do not.
- Deliver better outcomes for those people who experience socio-economic disadvantage.
- Consider opportunities for people to use the Welsh language.
- Treat the Welsh language no less favourably than English.
- Ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.

- 6.1.1 The Well-being of Future Generations (Wales) Act 2015 mandates that public bodies in Wales must carry out sustainable development. Sustainable development means the process of improving the

economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the 'well-being goals'.

6.1.2 Our Integrated Impact Assessment (IIA) process ensures we have paid due regard to the above. It also takes into account other key issues and priorities, such as poverty and social exclusion, community cohesion, carers, the United Nations Convention on the Rights of the Child (UNCRC) and Welsh language.

6.2 There are no implications with regards to this report, which is for information and therefore an IIA screening form has not been completed.

Glossary of terms:

APR – Annual Progress Report

NO₂ – Nitrogen Dioxide

ugm⁻³ – micrograms per metre cubed

PM₁₀ – Particulate Matter <10microns

PM_{2.5} – Particulate Matter <2.5microns

WAQF – Welsh Air Quality Forum

WG – Welsh Government

WHO – World Health Organisation

Background papers: None

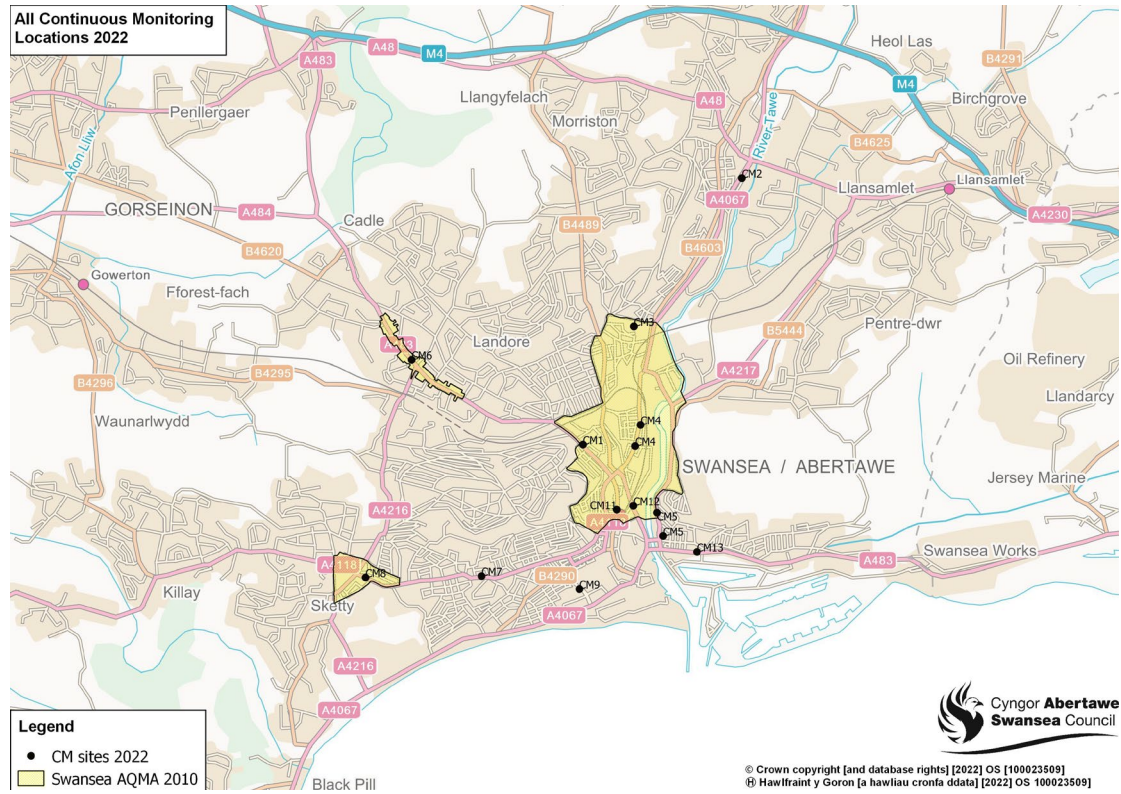
Appendices:

Appendix A - Map to show the location of the automatic monitoring sites in Swansea

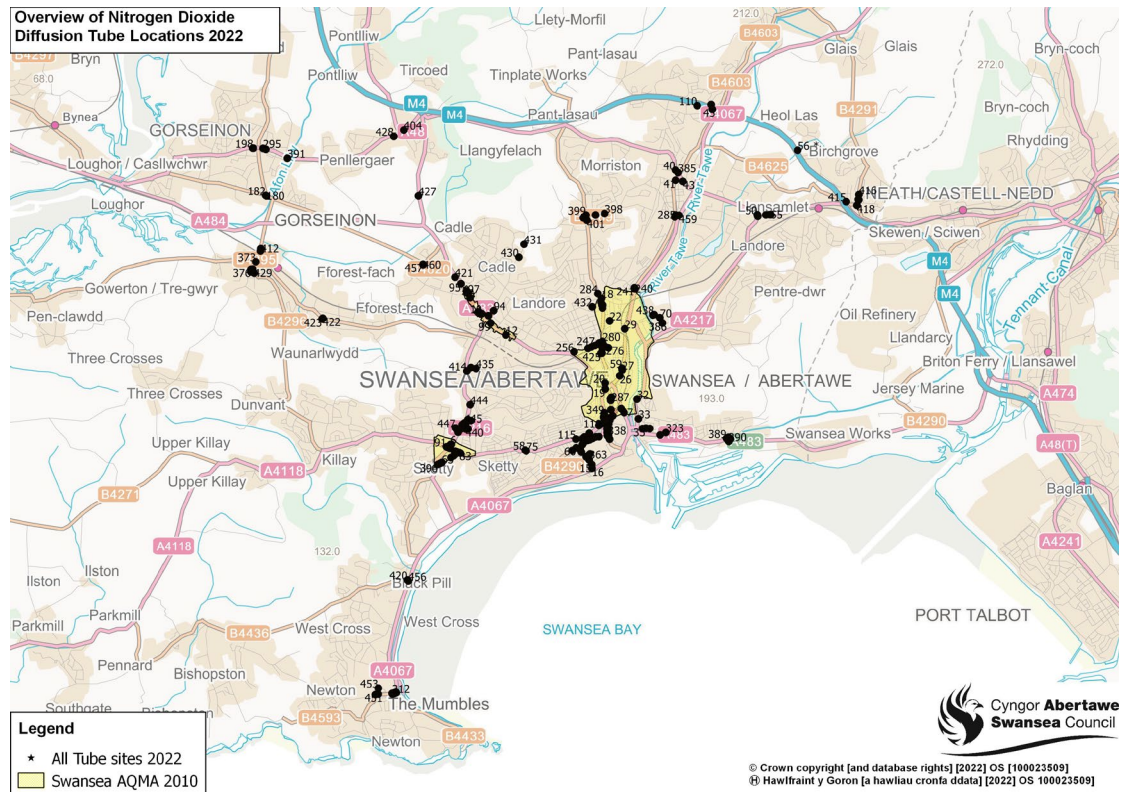
Appendix B: Map to show the location of the non-automatic monitoring sites in Swansea.

Appendix C: The annual mean data for the continuous monitoring locations.

Appendix A: Map to show the location of the automatic monitoring sites in Swansea



Appendix B: Map to show the location of the non-automatic monitoring sites in Swansea.



Appendix C: The annual mean data for the continuous monitoring locations.

Table to show annual mean NO₂ concentrations (µgm⁻³)

	CM1	CM2	CM3	CM4	CM5	CM11	CM12	CM13
2014	25	21.1	17.08	48.99	35.83	56.85	-	-
2015	23	20.5	14.75	40.24	33.71	50.9	-	-
2016	24.4	22.3	16.39	45.59	35.83	48.3	-	-
2017	20	20.6	13.41	40.04	32.19	44	25.73	-
2018	18.7	18.1	14.46	37.29	30.3	37.7	26.18	27
2019	24	23.5	13.1	34.8	34.6	44.5	27	28.5
2020	17.6	11.4	10.5	28.8	25.6	31.2	21.7	10.8
2021	19.2	21.3	11.3	31.4	35	35.3	26.2	23.8

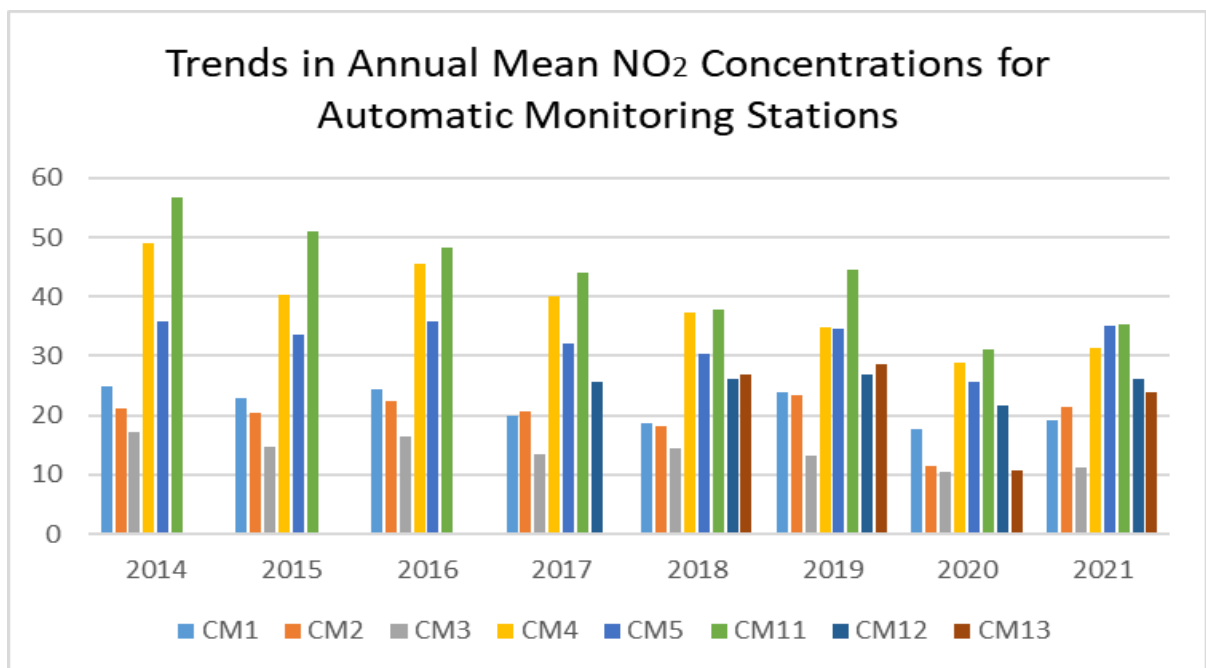


Table to show annual mean PM₁₀ concentrations (µgm⁻³)

	CM1	CM2	CM6	CM7	CM8	CM9	CM10
2014	20.29	13.18	19.02	17.18	18.28	17.27	14.49
2015	20.2		16.25	14.76	18.72	16.62	11.98
2016	19.14		12.91	13.2	15.28	14.4	11.93
2017	18.9		10.61	11.13	11.43	9.74	12.11
2018	19.69		9.9	12.46	14.65	11.39	
2019	18.38		17.35	15.13	18.55	15.47	
2020	18.28		17.7	15.9	14.9	18.3	
2021	18.1		16.5	14.5	15.2	15.4	

Graph to Show the Annual Mean PM₁₀ Monitoring Results

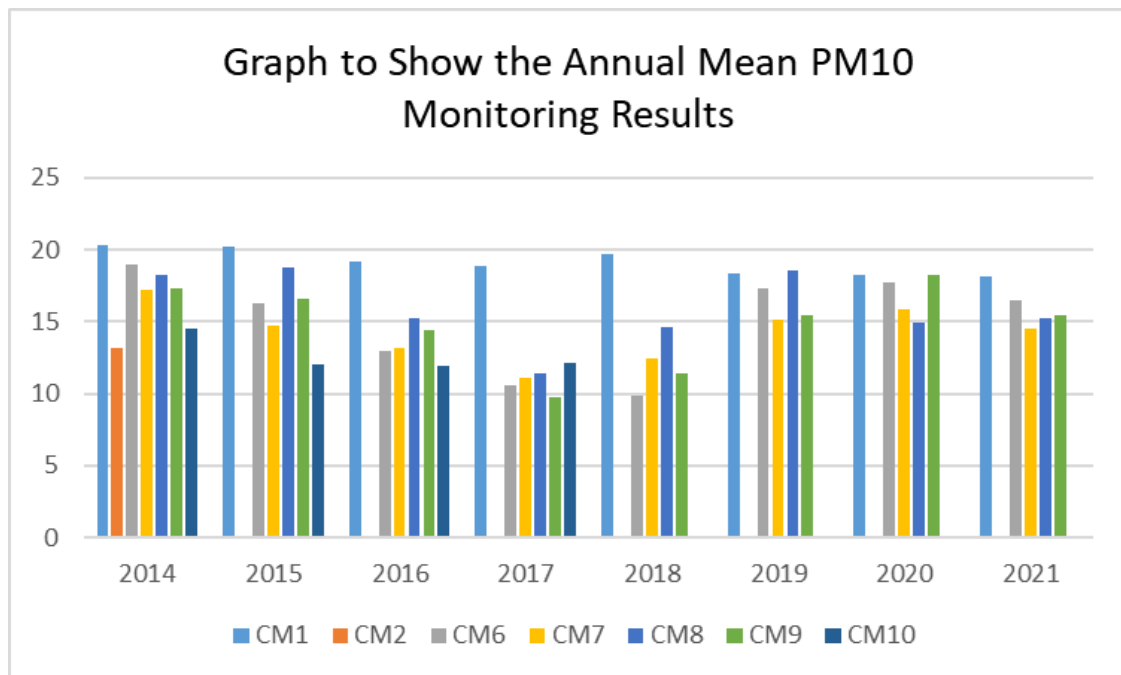


Table to show annual mean PM_{2.5} concentrations (μgm^{-3})

	CM1	CM2	CM13
2014	12.8		
2015	12.8		
2016	13.37	10.14	
2017	14.6	9.95	
2018	12.86	10.86	7.28
2019	10.27	9.39	9.31
2020	7.97	11.47	10.89
2021	9.1	11.8	11

