

## Report Card 2022-23

The [Perth Air Quality Management Plan \(Perth AQMP\)](#) was released in December 2000. It aims to ensure that clean air is achieved and maintained throughout the Perth metropolitan region to 2030 and beyond.

The short-term and long-term actions within the Perth AQMP address a variety of issues through eight key initiatives: land use and transport planning, vehicle emissions management, health effects research and indoor air quality, monitoring and modelling, industrial emissions management, small to medium enterprise emissions management, haze reduction, and smoke management.

Some highlights include:

### [Active Transport Program](#)



The program informs and encourages the community to make more trips by walking, bike riding and using public transport in place of some car trips. Boosting the use of active transport options can make better use of walk and bike paths and public transport services, contribute to community health and wellbeing, and reduce car use and associated emissions and congestion.

[Principal Shared Paths \(PSPs\)](#) are high-quality, direct routes to accommodate movement on bicycles, other rideable devices, and by walking in Perth. They are typically located near major roads and railway lines as well as along ocean and river foreshores to accommodate commute and recreational trips.

[Your Move Schools](#) assists schools to run activities, build awareness and skills, and improve facilities so that more students can walk and ride. Community events held in [Bike Month](#) are another way to boost awareness and participation. [Your Move](#) makes it easier for all school, workplace, and local government program participants to interact, share and use the program resources.

#### Highlights 2022-23

- Opened in May 2023, a new section of PSP was built adjacent to the Mitchell Freeway between Civic Place, Stirling and Reid Highways, Balcatta. The 3.7 km section provides a direct and safe route for people riding and walking, and includes an underpass under Karrinyup Road.
- Eleven local governments in Perth were awarded \$5.2 million under the [WA Bicycle Network Grants Program](#) for projects in March 2023.
- Across Perth, 176 schools participated in the [Your Move Schools Program](#) in 2022. Schools implemented activities such as walk and ride to school days and bike skills training. Thirty-eight Perth schools received a [Connecting Schools Grant](#) to enhance bike facilities or develop students' road safety skills. Surveys of students in 72 of the participating schools in Terms 1 and 4 in 2022, showed an average increase in active travel of 7 per cent. Increasing the reach and engagement in the [Your Move Schools Program](#) is a key action to boost walking and riding by students under the [Active Travel to School Roadmap](#) launched in March 2023.
- [Bike Month](#) in October 2022 involved 40 events statewide. Events included community rides, bike maintenance skills sessions, bike breakfasts and ride to school activities.

### [RAC Intellibus® trial](#)



Australia's first and longest-running driverless vehicle trial started in 2016 and ended on 30 June 2023. The trial:

- helped public and policy makers understand the potential impacts and opportunities of automated vehicle technology, including road safety benefits
- enabled 28,755 passengers to experience automated vehicle technology first hand
- helped develop an understanding of what is needed to safely transition to automated vehicle technology
- indicated the importance of testing the technology on public roads and how it integrates with existing infrastructure
- helped develop a better understanding of what is required to ensure safe operation of the technology
- improved understanding of community attitudes and their intentions to use the technology in the future
- enabled RAC to engage with stakeholders to better prepare for the safe transition of automated vehicles onto our roads.

#### Highlights 2022-23

- Between 1 July 2022 and 30 June 2023, 2,076 passengers took a ride on the [RAC Intellibus](#) in South Perth, travelling more than 3,829 km.
- The [RAC Imagine Program™](#), with support from the City of South Perth, was launched in 2019 and included 1,125 students, parent helpers and teachers. Those who participated also rode the RAC Intellibus in 2022-23.
- Launched WA's first regional demonstration in Busselton and operated through a roundabout for the first time (2019).
- The [RAC Intellibus](#) i1 model joined an exhibition of motoring history which was displayed at the Motor Museum of Western Australia (WA) (2022).
- According to participants, the top three benefits of autonomous vehicles include:
  - enhanced freedom and independence
  - lower vehicle emissions
  - better fuel efficiency.

### [RAC Electric Vehicle for a week](#)



Launched in December 2022, the Electric Vehicle (EV) for a Week trial included 50 participants. A range of members were selected from across the state. The trial:

- provided more Western Australians the chance to experience life with an EV
- enabled members to integrate an EV into their everyday lives
- gave participants the opportunity to share their experiences to help us understand how they can be supported with transitioning towards a low or zero emissions vehicle
- provided learnings about the unique challenges facing our state as we transition towards a more sustainable future.

#### Highlights 2022-23

Participants were surveyed before and after the trial on their knowledge and attitudes towards EVs. The survey found that more than:

- 85 per cent of participants feel they know more about EVs than the average person after their trial (more than double the pre-trial figure)
- 75 per cent of participants say it's easy to use a public charging station after their trial
- 90 per cent of participants say it is easy to charge at home now they have tried it (a jump from 52 per cent pre-trial).

Key survey results about changes in attitudes:

- Many participants who were 'cautious' pre-trial are now 'advocates', although some also became sceptics:
  - Advocates: 68 per cent post-trial (up from 37 per cent pre-trial)
  - Cautious: 8 per cent post-trial (down from 45 per cent pre-trial)
  - Sceptic: 24 per cent post-trial (up from 18 per cent pre-trial).
- More than 95 per cent of participants now feel that EVs are safe to drive (up from 85 per cent pre-trial).
- 100 per cent of participants are confident driving an EV after their trial (compared to 82 per cent pre-trial).
- 50 per cent of participants still experience range anxiety (down from 73 per cent pre-trial).



## State Government Electric Vehicle Strategy



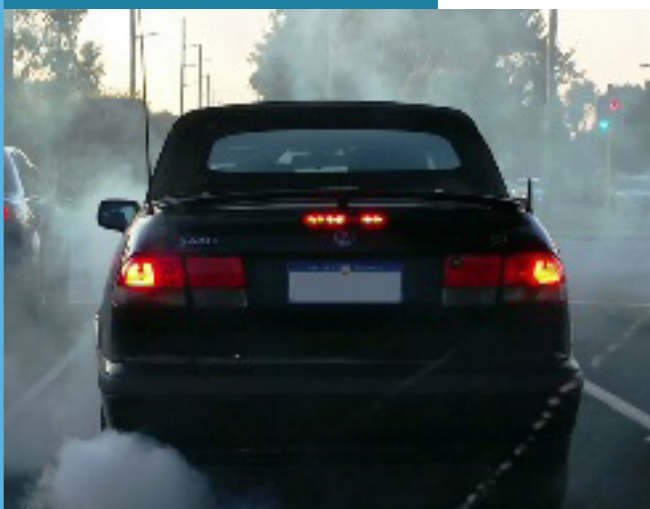
The \$21 million [State Electric Vehicle Strategy for Western Australia](#) was released in November 2020. The strategy provides a pathway for decarbonising road transport, improving air quality, and supporting a robust electricity system with increasing levels of renewable energy.

### Highlights 2022-23

The strategy continued to support the transition to lower emission transport. The following key milestones were identified to make EVs more affordable and easier to charge:

- The number of EVs on WA roads increased from 4,667 in July 2022 to 11,147 in June 2023.
- A total of 1,578 rebates of \$3,500 had been issued to make EVs more affordable by 30 June 2023.
- The first WA EV Network charging sites opened in April 2023. The remainder of the 98 chargers across the 49 sites are due for completion by mid-2024.
- Round 1 of the \$15 million [Charge Up](#) grant scheme closed on 31 July 2023. This supports local governments, not-for-profit organisations, and small and medium-sized businesses with grants of up to 50 per cent of installing charging infrastructure around WA. The scheme will see more than 250 chargers installed across WA.
- Synergy introduced an EV add-on electricity tariff to reward EV owners that charge their vehicles during periods of higher renewable energy output. This helps to reduce the lifecycle emissions from EVs and assists with transitioning the South West Interconnected System to renewable energy.

## Smoky Vehicle Reporting Program



This is a Department of Water and Environmental Regulation program that addresses public concerns about vehicle emissions. Major outcomes include:

- enabling the reporting of smoky vehicles, administered jointly by the Departments of Transport and Water and Environmental Regulation
- engaging with vehicle owners to undertake any necessary vehicle maintenance
- identifying vehicles that are at risk of breaching vehicle emission legislation.

### Highlights 2022-23

The [Smoky Vehicle Reporting Program 2022-23 Annual report](#) was published. Key findings in the report included:

- A total of 751 vehicles were reported in 2022-23 via the reporting form on the Department of Water and Environmental Regulation website.
- More than half of reported vehicle owners advised having repaired or serviced their vehicles.
- Reporter diversity increased slightly in 2022-23, with an average of 1.80 reports per reporter compared to 2.01 in 2021-22. Improving reporter diversity is important for more reliable reporting outcomes.
- Diesel vehicles continue to be over-represented in reports with 88 per cent of vehicles reported to be diesels. This ratio has gradually increased each year from 80 per cent five years ago.

## Air Quality Monitoring and Modelling



The objectives of this program are to:

- introduce procedures for the ongoing development of current air quality models and the review of new modelling methods and techniques for application in Perth
- ensure that the existing monitoring network is maintained and improved and assesses trends in air quality
- develop future monitoring programs, based on the exposure to and impact of air toxics and acid gases, and evaluating monitoring options, such as mobile monitoring facilities.

This program, run by the Department of Water and Environmental Regulation, aims to ensure that the existing monitoring network is maintained and improved, and assesses trends in air quality. This program incorporates air toxics research, acid gases monitoring, evaluation of additional monitoring stations, and review of emerging air quality issues.

### Highlights 2022-23

- Progressed improvement of a chemical transport model to aid advanced regional air quality modelling for use in priority airsheds including Perth.
- Incorporated high resolution Sea Surface Temperature and land use data into the meteorological model used to drive the regional dispersion model.
- Continued to access the Pawsey Supercomputing Centre to assist with regional model development.
- Tested new real-time heavy metals sensors and real-time particle sensors for use in non-National Environmental Protection Measure applications.

## About the Air Quality Coordinating Committee

The Air Quality Coordinating Committee comprises representatives from State Government, industry, business, and the community. Its role is to monitor the implementation of the Perth Air Quality Management Plan and review the progress towards achieving its aims.

## AQCC members Membership as at 30 June 2023:

### State Government

- Daniel Nevin – Chair ([Department of Water and Environmental Regulation](#))
- Dr Peter Franklin – proxy ([Department of Health](#))
- Justin McKirdy ([Department of Transport](#))
- Katie MacWilliams ([Department of Biodiversity, Conservation and Attractions](#))
- Jacque Stone ([Department of Planning, Lands and Heritage](#))
- Joscyln Sloan ([Department of Energy, Mines, Industry Regulation and Safety](#))

### Community

- Professor Philip Jennings ([Conservation Council of Western Australia](#))
- Dr Sue Graham-Taylor (Pollution Action Network)
- Martin Chape (Community Member)

### Business and Industry

- Nick Jones ([WA Local Government Association](#))
- Chris Oughton ([Kwinana Industries Council](#))
- Anne Still ([Royal Automobile Club of WA](#))

The Air Quality Coordinating Committee met twice between July 2022 and June 2023.

## Contact the Air Quality Coordinating Committee

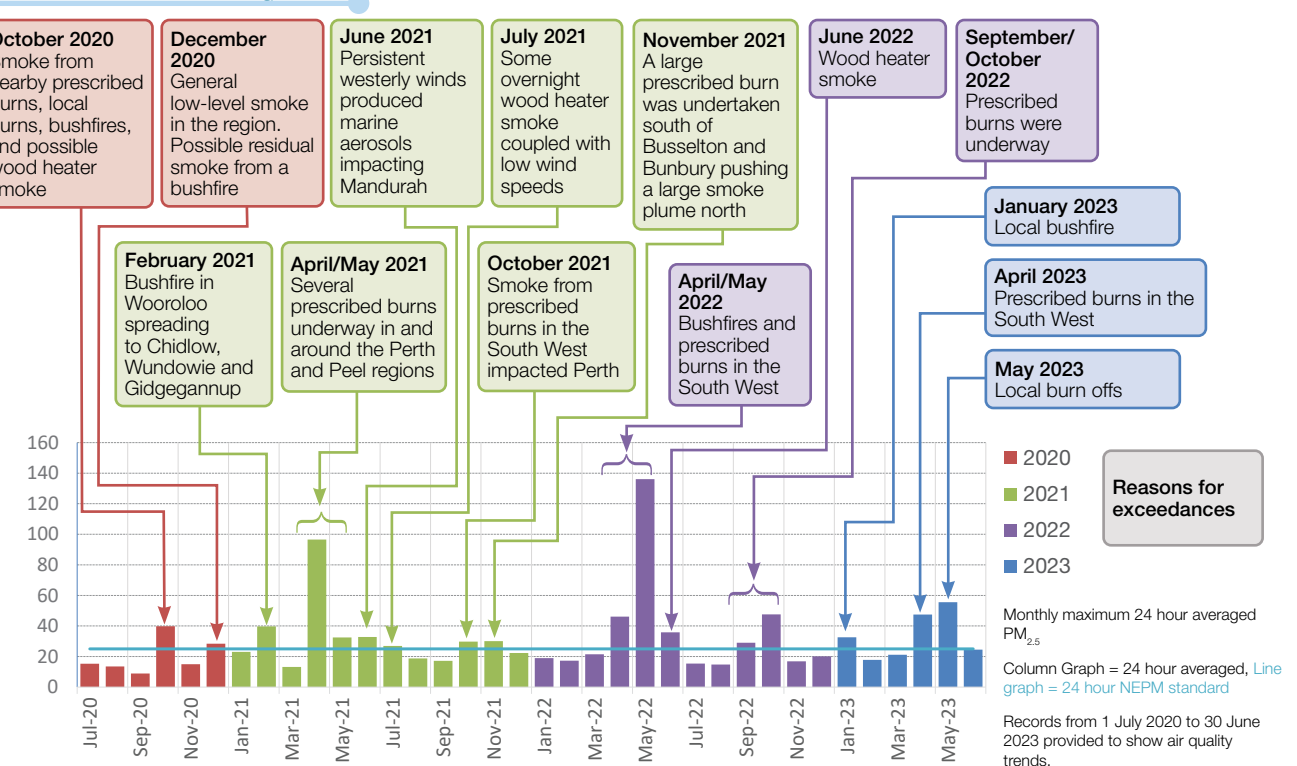
For more information, please contact the secretary:  
Phone: 6364 6581  
Email: [AQCCadmin@dwer.wa.gov.au](mailto:AQCCadmin@dwer.wa.gov.au)  
or visit the [Air Quality Coordinating Committee](#)

Further details on air pollutant trends in Perth can be found in the Department of Water and Environmental Regulation's [WA air monitoring reports](#). An [hourly update of air quality in WA](#) is also available.

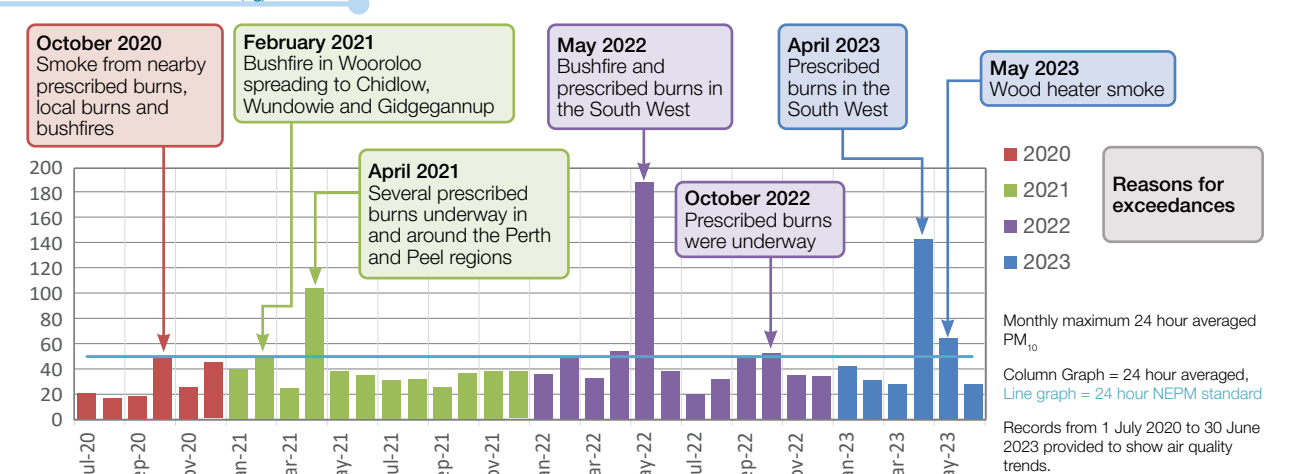
## Air pollutant trends 2020-23

The graphs below show the maximum levels for fine particle ( $PM_{2.5}$ ), coarse particles ( $PM_{10}$ ), ozone and nitrogen dioxide from 1 July 2020 to 30 June 2023, recorded at Perth monitoring stations (Armadale, Caversham, South Lake, Duncraig, Mandurah, Rolling Green, Quinns Rocks, Rockingham, Swanbourne and Wattleup). For comparison, the diameter of a human hair is seven times the diameter of the largest coarse particle ( $PM_{10}$ ). The high concentrations of particles were primarily due to natural dust and smoke haze. The precursors for ozone (an indicator of photochemical smog) are produced predominantly by motor vehicles and industry. Nitrogen dioxide in cities is predominantly caused by motor vehicles, and contributes to the formation of photochemical smog.

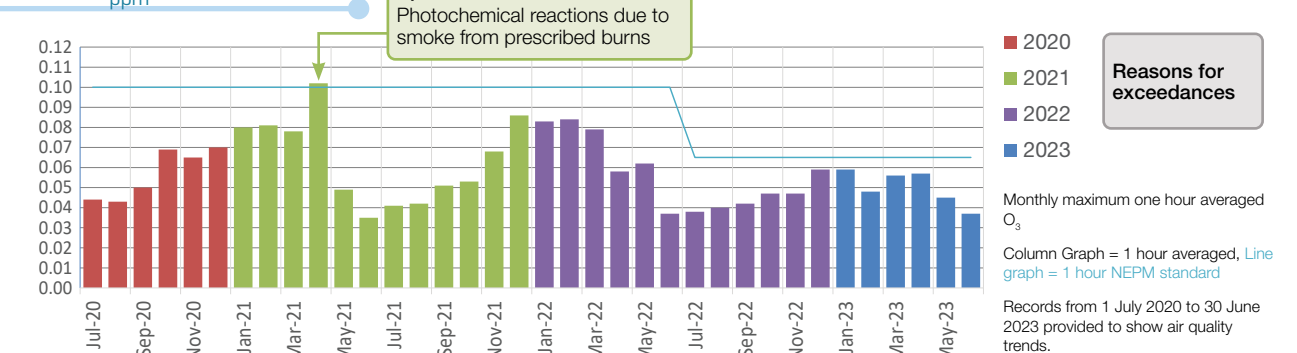
### $PM_{2.5}$ Particles $\mu g/m^3$



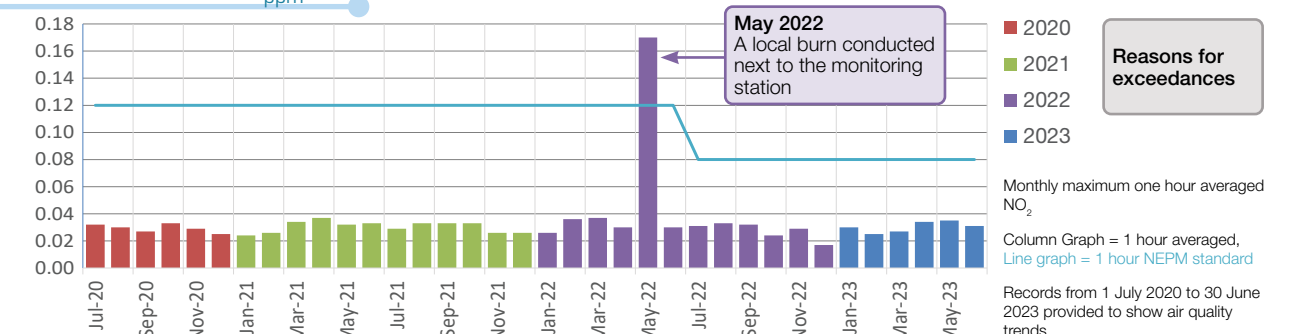
### $PM_{10}$ Particles $\mu g/m^3$



### Ozone ppm



### Nitrogen dioxide ppm



#### Explanation for amendments to monitoring standards

The [National Environment Protection \(Ambient Air Quality\) Measure](#) monitoring standards were amended for ozone and nitrogen dioxide. The amendment took effect on 18 May 2021, taking into account the latest scientific evidence about the health impacts, that includes:

- Establishing an  $O_3$  standard with an 8-hour averaging period that reflects the health evidence and its use internationally, with a numerical value of 65 ppb.
- Strengthening  $NO_2$  reporting standards for 1-hour and annual average  $NO_2$  to 80 ppb and 15 ppb respectively, bringing forward standards initially proposed for 2025. This will make them tighter than the World Health Organization guidelines. This reflects the most recent health evidence emerging about the health impacts of  $NO_2$ .