

London, 30 June 2024: For immediate release

‘Clean Air in London’ is calling for an investigation into the Government’s failure to publish a ‘Pollution Alert’ warning the public about HIGH ozone air pollution in southern England on Wednesday 26 June 2024 in the hours immediately before the final Leaders’ debate [in Nottingham] before the General Election.

The Secretary of State (for Environment, Food and Rural Affairs (“Defra”)) is required under Section 21 of the Air Quality Standards Regulations 2010 to ‘inform the public by means of radio, television, newspapers or the internet’ when ozone air pollution concentrations exceed an ‘Information alert’ threshold of 180 micrograms per cubic metre ( $\mu\text{g}/\text{m}^3$ )<sup>1</sup>. Ozone concentrations were 183.8  $\mu\text{g}/\text{m}^3$  by end time 2pm, 194.6  $\mu\text{g}/\text{m}^3$  by 3pm, 191.6  $\mu\text{g}/\text{m}^3$  by 4pm and 192.4  $\mu\text{g}/\text{m}^3$  by 5pm in Haringey London on Wednesday 26 June 2024. No such ‘Pollution Alert’ was published<sup>2</sup>. HIGH was triggered separately for 8-hour rolling average concentrations of ozone under the ‘Daily Air Quality Index’<sup>3</sup> in Bournemouth and London by end time 5pm on 26 June 2024<sup>4</sup>.

Worse, the ‘risk of locally HIGH pollution in the southeast [of England] on Wednesday’ had been predicted by Defra in its forecasts on Monday 24 June<sup>5</sup> and Tuesday 25 June<sup>6</sup>. This risk was not mentioned by Defra in its forecast on Wednesday 26 June 2024<sup>7</sup>.

Ground-level ozone (“O<sub>3</sub>”) is the most-irritant gas for humans. Concentrations tend to be ‘LOW’ in the morning and build to ‘MODERATE’ or ‘HIGH’ during the afternoon as bright sunlight drives chemical reactions among combustion and other air pollutants in hot, still air.

Official health advice for HIGH air pollution is that ‘at-risk’ adults and children with lung problems, adults with heart problems, and older people should reduce strenuous physical exertion, particularly outdoors, and particularly if they experience symptoms. People with asthma may find they need to use their reliever inhaler more often. Anyone in the general population experiencing discomfort such as sore eyes, cough or sore throat should consider reducing activity, particularly outdoors.

Clean Air in Cities app reports hourly concentrations of ozone (“O<sub>3</sub>”) and fine particulate matter (“PM<sub>2.5</sub>”) for the previous and next 24 hours at your current location. Daily forecasts can be set in the ‘More’ tab. The app is free to download from the App Store<sup>8</sup> and Google Play<sup>8</sup>.

The UK experienced its first summer smog episode of the year between Monday 24 June and Thursday 27 June 2024 inclusive.

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<sup>1</sup> [https://www.legislation.gov.uk/uksi/2010/1001/pdfs/uksi\\_20101001\\_en.pdf](https://www.legislation.gov.uk/uksi/2010/1001/pdfs/uksi_20101001_en.pdf)

<sup>2</sup> <https://uk-air.defra.gov.uk/news>

<sup>3</sup> <https://uk-air.defra.gov.uk/air-pollution/daqi?view=more-info>

<sup>4</sup> <https://uk-air.defra.gov.uk/latest/measurement-summary-map?date=26%2F06%2F2024#summary>

<sup>5</sup> <https://twitter.com/cleanairlondon/status/1805128115607261321>

<sup>6</sup> <https://twitter.com/cleanairlondon/status/1805493760521842731>

<sup>7</sup> <https://twitter.com/cleanairlondon/status/1805856771837239403>

<sup>8</sup> App Store <https://tinyurl.com/CAICapple> and Google Play <https://tinyurl.com/CAICandroid>.

The Department for Environment, Food and Rural Affairs (“Defra”) identified the risk of HIGH air pollution in southeast England on Wednesday 26 June 2024<sup>9</sup> by 5am Monday 24 June 2024.

## Key points

- **High ozone levels:** Ozone levels are considered ‘HIGH’ when they exceed a running 8-hourly mean concentration of 161 micrograms per cubic metre (“ $\mu\text{g}/\text{m}^3$ ”) or 1-hour mean of 180  $\mu\text{g}/\text{m}^3$ . The latter breaches the ‘Ozone public information threshold’ set by UK (and European) air pollution law and happen typically at one or more monitors once or twice in a year in the whole UK.
- **Ground-level ozone:** Ozone is an area-wide pollutant meaning that a single monitoring site may represent the ozone concentrations that hundreds of thousands of people have been exposed to. It should not be confused with ‘stratospheric ozone’ or the ‘ozone layer’ which act as a protective layer filtering out dangerous ultraviolet radiation from the sun.
- **Health risks:** Ozone is the most-irritant gas for humans and poses significant health risks, particularly to vulnerable groups such as children, the elderly and those with pre-existing respiratory and cardiovascular conditions.
- **Government action:** Defra confirmed an undertaking to issue a press release when the first ozone air pollution episode occurs each year on 16 April 2012 but has never done so since<sup>10</sup>. It last did so on 21 April 2011.

## Quotes

Simon Birkett, Founder and Director of Clean Air in London (“CAL”) (@CleanAirLondon), stated:

“The UK experienced its first summer smog episode of the year between Monday 24 June and Thursday 27 June 2024 inclusive.

“Clean Air in London is calling for an investigation into the Government’s failure to publish a 24-hour ‘Pollution Alert’ warning the public about HIGH ozone air pollution in southern England on Wednesday 26 June 2024 in the hours immediately before the final Leaders’ debate [in Nottingham] before the General Election.

“Defra is required under Section 21 of the Air Quality Standards Regulations 2010 to ‘inform the public by means of radio, television, newspapers or the internet’ when ozone air pollution concentrations exceed an ‘Information alert’ threshold of 180 micrograms per cubic metre ( $\mu\text{g}/\text{m}^3$ )<sup>11</sup>. Ozone concentrations were 183.8  $\mu\text{g}/\text{m}^3$  by end time 2pm, 194.6  $\mu\text{g}/\text{m}^3$  by 3pm, 191.6  $\mu\text{g}/\text{m}^3$  by 4pm and 192.4  $\mu\text{g}/\text{m}^3$  by 5pm in Haringey London on Wednesday 26 June 2024. No such ‘Pollution Alert’ was published<sup>12</sup>. HIGH was triggered separately for 8-hour rolling average concentrations of ozone under the ‘Daily Air Quality Index’<sup>13</sup> in Bournemouth and London by end time 5pm on 26 June 2024<sup>14</sup>.

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<sup>9</sup> <https://uk-air.defra.gov.uk/>

<sup>10</sup> <https://www.theyworkforyou.com/wrans/?id=2012-04-16b.100484.h&s=ozone+%22ozone%22+2011-01-01..2012-12-31#g100484.r0>

<sup>11</sup> [https://www.legislation.gov.uk/ukxi/2010/1001/pdfs/ukxi\\_20101001\\_en.pdf](https://www.legislation.gov.uk/ukxi/2010/1001/pdfs/ukxi_20101001_en.pdf)

<sup>12</sup> <https://uk-air.defra.gov.uk/news>

<sup>13</sup> <https://uk-air.defra.gov.uk/air-pollution/daqi?view=more-info>

<sup>14</sup> <https://uk-air.defra.gov.uk/latest/measurement-summary-map?date=26%2F06%2F2024#summary>

“Worse, the ‘risk of locally HIGH pollution in the southeast [of England] on Wednesday’ had been predicted by Defra in its forecasts on Monday 24 June<sup>15</sup> and Tuesday 25 June<sup>16</sup>. This risk was not mentioned by Defra in its forecast on Wednesday 26 June 2024<sup>17</sup>.”

“Ground-level ozone is the most-irritant gas for humans<sup>18</sup>. It is typically ‘LOW’ in the morning and builds to ‘MODERATE’ or ‘HIGH’ during the afternoon as bright sunshine drives chemical reactions among pollutants in hot, still air on longer days.

“The Government must ensure that people are warned and given health and other advice that includes steps to reduce pollution. Summer smog is a silent danger and so Metro Mayors and others must act to protect visitors, workers and residents in their cities if the Government fails to do so. The Health and Safety Executive should also look to its duties.”

“Official health advice for HIGH air pollution is that ‘at-risk’ adults and children with lung problems, adults with heart problems, and older people should reduce strenuous physical exertion, particularly outdoors, and particularly if they experience symptoms. People with asthma may find they need to use their reliever inhaler more often. Anyone in the general population experiencing discomfort such as sore eyes, cough or sore throat should consider reducing activity, particularly outdoors.”

“24-hour ‘Pollution Alerts’ are a minimum legal requirement and poor second best to the Government actively warning the public, as previous Governments have done, by sending a media release to environment editors, news desks and weather presenters when HIGH air pollution is expected or measured in the UK”.

“CAL will be taking up this matter with the next Government and others.”

## Recommendations for the public

**Stay informed:** Keep up to date with the latest air quality forecast and warnings. People may also choose to download the ‘Clean Air in Cities’ app from the App Store<sup>19</sup> or Google Play<sup>19</sup>.

**Reduce polluting activities:** Walk or cycle or choose public transport, avoid unnecessary car journeys, stop engine idling and refrain from burning wood or garden waste. Consider delaying barbecues.

**Limit exertion:** Reduce strenuous activities, especially during peak pollution times in the late afternoon. Check official health advice at <https://uk-air.defra.gov.uk/>.

**Protect vulnerable groups:** Ensure that children, the elderly and those with respiratory and cardiovascular conditions are properly warned. The general population should also be alerted. Always dial 999 in an emergency.

## Background and historical context

- **Episodes:** The UK typically experiences particle air pollution episodes during the winter or spring due to solid fuel burning or agricultural emissions respectively and sometimes Saharan Dust. Ozone episodes typically occur between late April and early October when bright sunlight drives chemical reactions among pollutants in hot, still air on longer days.

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<sup>15</sup> <https://twitter.com/cleanairlondon/status/1805128115607261321>

<sup>16</sup> <https://twitter.com/cleanairlondon/status/1805493760521842731>

<sup>17</sup> <https://twitter.com/cleanairlondon/status/1805856771837239403>

<sup>18</sup> Source: Encyclopaedia Britannica

<sup>19</sup> App Store <https://tinyurl.com/CAICapple> and Google Play <https://tinyurl.com/CAICandroid>.

- **Summer smog:** The UK's worst 'summer smogs' occurred in August 2003 and June/July 2006 highlighting the potential severity of such episodes. Between 221 and 567 deaths are estimated to have been brought forward attributable to ozone in England and Wales in the first two weeks of August 2003<sup>20</sup>.
- **Sources:** Ground-level (or tropospheric) ozone is a global air pollution problem and an important greenhouse gas<sup>21</sup>. It is a 'secondary' pollutant formed by sunlight driven chemical reactions involving carbon monoxide ("CO"), volatile organic compounds ("VOCs") (including methane ("CH<sub>4</sub>")) and nitrogen oxides ("NO<sub>x</sub>"). It is major constituent of photochemical smog.
- **Solutions:** The only practical management strategy is to control the emissions from human activities that lead to O<sub>3</sub> formation.

## Clean Air in London

Clean Air in London ("CAL") has campaigned since 2006 for full compliance, urgently and sustainably, with the World Health Organisation's air quality guidelines throughout London and elsewhere. This objective was widely achieved in London before the WHO updated its guidelines on 22 September 2021<sup>22</sup>. Details can be seen here <https://cleanair.london/>.

## Resources

1. The Clean Air in Cities app is free to download from the appropriate store. App Store: <https://tinyurl.com/CAICapple> and Google Play: <https://tinyurl.com/CAICandroid>.
2. The app shows the current levels of ozone and fine particulate matter ("PM<sub>2.5</sub>") at your current location globally and illustrates the health impact of long-term exposure to PM<sub>2.5</sub> for populations in England.
3. Clean Air in London website includes many articles about smog and other air pollution episodes<sup>23</sup> and links to air pollution forecasting and monitoring websites and resources under the 'Smog' tab above the image on its website <https://cleanair.london/>.
4. CAL's thread on 'X' (formerly Twitter) about the June 2024 air pollution episode can be seen here: <https://twitter.com/cleanairlondon/status/1804069235338936398>
5. Thresholds for ozone under Air Quality Standards Regulations 2010 ("AQSR 2010")<sup>24</sup> and elsewhere
  - 240 micrograms per cubic metre (µg/m<sup>3</sup>) for 1-hour: 'Alert threshold' under AQSR 2010
  - 180 µg/m<sup>3</sup> for 1-hour: 'Information threshold' under AQSR 2010.
  - 161-240 µg/m<sup>3</sup> for running 8-hourly mean: 'High' under 'Daily Air Quality Index'<sup>25</sup>
  - 101-160 µg/m<sup>3</sup> for running 8-hourly mean: Moderate under Daily Air Quality Index

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<sup>20</sup> [https://cleanair.london/app/uploads/CAL-186-Introduction-to-smog\\_Defra-report-on-smog-2003-1.pdf](https://cleanair.london/app/uploads/CAL-186-Introduction-to-smog_Defra-report-on-smog-2003-1.pdf)

<sup>21</sup> <https://royalsociety.org/news-resources/publications/2008/ground-level-ozone/>

<sup>22</sup> <https://cleanair.london/policy/new-who-air-quality-guidelines/>

<sup>23</sup> <https://cleanair.london/?s=smog>

<sup>24</sup> [https://www.legislation.gov.uk/ukxi/2010/1001/pdfs/ukxi\\_20101001\\_en.pdf](https://www.legislation.gov.uk/ukxi/2010/1001/pdfs/ukxi_20101001_en.pdf)

<sup>25</sup> <https://uk-air.defra.gov.uk/air-pollution/daq?view=more-info>

- 100  $\mu\text{g}/\text{m}^3$  for running 8-hourly mean: World Health Organisation guideline (2021)<sup>26</sup> (Table 0.1)
- 60  $\mu\text{g}/\text{m}^3$  for average of daily maximum 8-hour mean O<sub>3</sub> concentration in the six consecutive months with the highest six-month running-average O<sub>3</sub> concentrations: WHO guideline (2021)

Air Quality Directive 2008/50/EC<sup>27</sup>.

6. Concentrations of ozone air pollution ( $\mu\text{g}/\text{m}^3$ ) between the following end times on Wednesday 26 June 2024 were:

End time	Shepherds Way, Bournemouth	Haringey, London
10am	154.1	112.8
11am	165.2	128.3
12 noon	170.2	155.3
1pm	170.8	171.0
2pm	168.8	183.8
3pm	164.2	194.6
4pm	157.1	191.6
5pm	149.9	192.4
	<b>Average 162.5</b>	<b>Average 166.2</b>
6pm	147.9	176.0
7pm	140.3	137.7
8pm	140.1	123.9

The rolling eight-hour average concentrations are shown in **Red**. Pollution alert levels are in **bold**.

Source: Defra UK-Air, Data, Data Selector<sup>28</sup>, Search Hourly Networks

7. Defra published six Air Quality Information bulletins when the information threshold for ozone was exceeded in 2023, seven in 2022, three in 2021, nine in 2020, seven in 2019 and seven in 2018:

<https://uk-air.defra.gov.uk/news>

These are akin to statistical bulletins not media releases. Obligations to inform the public exist under Regulation 21 (and Schedule 5) of the Air Quality Standards Regulations 2010. Explanation:

[https://cleanair.london/app/uploads/CAL-189-Defra-re-HIGH-OZONE-210411\\_FOI-RFI4781-Air-Quality\\_Letter-140612.pdf](https://cleanair.london/app/uploads/CAL-189-Defra-re-HIGH-OZONE-210411_FOI-RFI4781-Air-Quality_Letter-140612.pdf)

8. Defra has not sent a media release to environment editors or weather presenters warning about a HIGH ozone air pollution episode since 21 April 2011 when it coincided, surprisingly, with the first legal breach for the year of the daily limit value for particulate matter (“PM<sub>10</sub>”)<sup>29</sup>.

<sup>26</sup> <https://cleanair.london/app/uploads/CAL-423-New-WHO-AQGs-220921.pdf>

<sup>27</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0050&from=en>

<sup>28</sup> [https://uk-air.defra.gov.uk/data/data\\_selector](https://uk-air.defra.gov.uk/data/data_selector)

<sup>29</sup> <https://cleanair.london/olympics/government-issues-national-high-pollution-episode-warning-first-summer-smog-of-2011/>

9. The Mayor of London has published HIGH air pollution warnings on many occasions since 2016 and disseminated them widely across the London transport network<sup>30</sup>. The last one was issued on 13 June 2023<sup>31</sup>.
10. Soldiers on SAS selection and other endurance exercises may have died tragically during previous MODERATE or HIGH ozone air pollution episodes<sup>32</sup>. CAL has previously written to coroners, the Police, the Health and Safety Executive and others recommending that they should investigate whether air pollution caused or contributed to any of these deaths.
11. The HSE told CAL on 14 March 2024 that it holds no information about ozone and/or fine particulate matter as a contributing factor to deaths, illness or injury during or in the 48 hours after an individual participates in an endurance event or exercise e.g. elite or recreational athletes or members of the armed forces<sup>33</sup>. This is consistent with CAL's previous correspondence with HSE on the subject dating back to 2013.
12. Clean Air in London has published a 10 point 'Pollution Protocol' that those managing endurance or elite sporting events may wish to consider:
  - i. Be prepared. Air pollution can kill. People should be kept safe and have fun!
  - ii. Issue updates and health advice for runners and spectators at least daily when air pollution could be MODERATE or HIGH. Increase intensity of alerts during HIGH episodes.
  - iii. Ask runners to check advice and carry their medication e.g. asthmatics.
  - iv. Ensure sufficient first aid and other medical facilities and that emergency teams are briefed, prepared and in place along the whole course length.
  - v. Ensure adequate provision of water and energy bars or drinks for participants.
  - vi. Organisers should make efforts to understand air pollution e.g. difference between particles ("PM<sub>2.5</sub>" and "PM<sub>10</sub>") and gases (e.g. ozone), which may occur separately, and their effects.
  - vii. Organisers should undertake their own monitoring of particles ("PM<sub>2.5</sub>", "PM<sub>10</sub>" and particle number concentrations) and ozone ("O<sub>3</sub>") or commission and track specialist independent monitoring. Note that some official monitoring bulletins are reset each midnight so look LOW in the morning e.g. particles on the London Air website.
  - viii. Organisers should monitor activity on the event day and respond accordingly e.g. incidents.
  - ix. Medical professionals and emergency services should be warned to expect health effects one-three days afterwards e.g. via the UK Health Securities Agency's network.
  - x. Organisers should consider whether their event should be postponed or cancelled. They should also consider a 630am start for future endurance events particularly between April and October (in the northern hemisphere) when pollution levels (e.g. ozone) and temperatures may be lower. An 'after action review' should always be undertaken to learn lessons for future years and share knowledge with other organisers.
13. Official reports on smog episodes in 2003 and 2006 (and others):

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<sup>30</sup> <https://www.london.gov.uk/programmes-and-strategies/environment-and-climate-change/pollution-and-air-quality/monitoring-and-predicting-air-pollution>

<sup>31</sup> <https://www.london.gov.uk/mayor-london-issues-high-air-pollution-alert>

<sup>32</sup> <https://cleanair.london/pollution/clean-air-in-london-statement-in-relation-to-inquest-into-deaths-of-three-sas-soldiers/>

<sup>33</sup> [https://www.whatdotheyknow.com/request/information\\_held\\_or\\_considered\\_a#incoming-2590485](https://www.whatdotheyknow.com/request/information_held_or_considered_a#incoming-2590485)

[https://cleanair.london/app/uploads/CAL-186-Introduction-to-smog\\_Defra-report-on-smog-2003-1.pdf](https://cleanair.london/app/uploads/CAL-186-Introduction-to-smog_Defra-report-on-smog-2003-1.pdf)

[https://cleanair.london/app/uploads/CAL-186-Introduction-to-smog\\_Defra-report-on-smog-2006-1.pdf](https://cleanair.london/app/uploads/CAL-186-Introduction-to-smog_Defra-report-on-smog-2006-1.pdf)

Annual reports:

<https://uk-air.defra.gov.uk/library/annualreport/>

Others in Note 9 of this update including about episodes during festival bonfires:

[https://cleanair.london/app/uploads/CAL-186-Introduction-to-smog\\_Defra-report-on-smog-2006-1.pdf](https://cleanair.london/app/uploads/CAL-186-Introduction-to-smog_Defra-report-on-smog-2006-1.pdf)

#### 14. Parliamentary questions

Department of Health and Social Care has confirmed on 23 May 2023 (UIN 185733) that it emailed media releases to journalists or weather forecasters about air pollution four times in each of 2018 and 2019 and once in 2022:

<https://questions-statements.parliament.uk/written-questions/detail/2023-05-18/185733/>

Defra responded (UIN 185734) to the same question on 25 May 2023 and provided no details:

<https://questions-statements.parliament.uk/written-questions/detail/2023-05-18/185734/>

#### 15. Environmental Audit Committee inquiry into Outdoor and indoor air quality targets including a 21-page submission from Clean Air in London (see paragraphs 80 – 87 about air pollution warnings):

<https://committees.parliament.uk/work/7686/outdoor-and-indoor-air-quality-targets/>

#### 16. Timeline: CAL has published many articles about smog and air pollution episodes on its website.

19 May 2018: Code Yellow for Liverpool Marathon and Great Manchester Run

<https://cleanair.london/policy/codeyellow-for-liverpool-marathon-and-great-manchester-run/>

24 July 2012: Mayor of London urged to warn all those affected by smog (with details of information requests about the Government's preparations for London 2012 Olympics smog)

<https://cleanair.london/olympics/mayor-of-london-urged-to-warn-those-affected-by-smog/>

21 April 2011: High air pollution warning: First summer-smog of 2011.

<https://www.gov.uk/government/news/high-pollution-episode-warning-first-summer-smog-of-2011>

<https://uk-air.defra.gov.uk/news?view=149>

<https://uk-air.defra.gov.uk/news>

<https://cleanair.london/olympics/government-issues-national-high-pollution-episode-warning-first-summer-smog-of-2011/>

20 April 2009: Is it still Government policy to issue smog alerts for London?

<https://cleanair.london/policy/is-it-still-government-policy-to-issue-smog-alerts-for-london/>

## 17. Air quality forecasts for ozone

[https://atmosphere.copernicus.eu/charts/packages/cams\\_air\\_quality/products/plume\\_cams\\_eu\\_ozone?base\\_time=202406230000&lat=51.5084&lon=-0.125533&station\\_name=London](https://atmosphere.copernicus.eu/charts/packages/cams_air_quality/products/plume_cams_eu_ozone?base_time=202406230000&lat=51.5084&lon=-0.125533&station_name=London)

## 18. Air quality monitoring data for ozone

Hourly bulletins

[https://uk-air.defra.gov.uk/latest/period\\_plots?POL=O3&days=7](https://uk-air.defra.gov.uk/latest/period_plots?POL=O3&days=7)

<https://londonair.org.uk/london/asp/publicbulletin.asp>

<https://www.airqualityengland.co.uk/>

Regional measurement summary

<https://uk-air.defra.gov.uk/latest/measurement-summary-map>

## 19. Why is Defra publishing monitoring data for ozone at six monitoring sites in London on its regional webpage but only four on its graphs for pollutants?

<https://uk-air.defra.gov.uk/latest/currentlevels?period=current&region=15#levels>

[https://uk-air.defra.gov.uk/latest/period\\_plots?POL=O3&days=7](https://uk-air.defra.gov.uk/latest/period_plots?POL=O3&days=7)

## 20. NO<sub>x</sub> titration effect<sup>34</sup>

Where high concentrations of NO locally scavenge O<sub>3</sub>, a process leading to the formation of NO<sub>2</sub>. Close to the sources this titration process can be considered as an O<sub>3</sub> sink. In addition, high NO<sub>2</sub> concentrations deflect the initial oxidation step of VOC by forming other products (e.g. nitric acid), which prevents the net formation of O<sub>3</sub>. Because of these reactions, a decrease in NO<sub>x</sub> can lead to an increase in O<sub>3</sub> at low VOC/NO<sub>x</sub> ratios, as is the case in cities.

## 21. New WHO air quality guidelines

The World Health Organisation (“WHO”) published new air quality guidelines on 22 September 2021.

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<sup>34</sup> <https://royalsociety.org/-/media/policy/publications/2008/7925.pdf>



<https://cleanair.london/policy/new-who-air-quality-guidelines/>

22. The London Air Quality Network reported on ozone episodes in May 2024:

[https://londonair.org.uk/london/asp/publicepisodes.asp?species=All&region=0&site=&postcode=&la\\_id=&level=All&bulletindate=09%2F05%2F2024&MapType=Google&zoom=9&lat=51.4750&lon=-0.119824&VenueCode=&bulletin=explanation&episodeID=OzoneEarlyMay2024&cm-djitdk-djitdk=](https://londonair.org.uk/london/asp/publicepisodes.asp?species=All&region=0&site=&postcode=&la_id=&level=All&bulletindate=09%2F05%2F2024&MapType=Google&zoom=9&lat=51.4750&lon=-0.119824&VenueCode=&bulletin=explanation&episodeID=OzoneEarlyMay2024&cm-djitdk-djitdk=)

[https://londonair.org.uk/london/asp/publicepisodes.asp?region=0&site=&postcode=&la\\_id=&level=All&bulletindate=09%2F05%2F2024&MapType=Google&zoom=&lat=51.4750&lon=-0.119824&VenueCode=&bulletin=explanation&episodeID=OzoneMidMay2024&pageID=page1&cm-djitdk-djitdk=](https://londonair.org.uk/london/asp/publicepisodes.asp?region=0&site=&postcode=&la_id=&level=All&bulletindate=09%2F05%2F2024&MapType=Google&zoom=&lat=51.4750&lon=-0.119824&VenueCode=&bulletin=explanation&episodeID=OzoneMidMay2024&pageID=page1&cm-djitdk-djitdk=)

23. Air quality forecasts for fine particulate matter

[https://atmosphere.copernicus.eu/charts/packages/cams\\_air\\_quality/products/plume\\_cams\\_eu\\_particulate\\_matter\\_2.5um\\_web?base\\_time=202406240000&lat=51.5084&lon=-0.125533&station\\_name=London](https://atmosphere.copernicus.eu/charts/packages/cams_air_quality/products/plume_cams_eu_particulate_matter_2.5um_web?base_time=202406240000&lat=51.5084&lon=-0.125533&station_name=London)