



[Read more. Create a free BBC account.](#)

[Register](#) or [Sign in](#)

# London Ulez expansion: Do clean-air zones reduce air pollution?

⌚ 1 day ago

BBC Verify



By Mark Poynting

<https://www.bbc.com/news/science-environment-66610600>

1/13

## Owners of the most polluting vehicles now have to pay a charge to drive anywhere in London.

The expansion of the Ultra Low Emission Zone (Ulez) is one of many policies intended to improve air quality in the UK and Europe.

## What is the aim of clean-air zones?

In many UK cities, including all London boroughs, air pollution far exceeds limits recommended by the World Health Organization (WHO).

The Mayor of London said this was why Ulez needed to be expanded to cover outer London.

ADVERTISEMENT

Have you heard of Super All-Wheel Control?

Yes

No

Not sure

NEXT

There is **very strong evidence** that air pollution can damage human health. The UK government considers it the largest environmental risk to public health.

High levels of air pollutants - for example, nitrogen dioxide (NO<sub>2</sub>) and tiny particles known as fine particulate matter (PM2.5) - can cause and worsen breathing problems such as asthma. Pollutants can also affect people with heart conditions.

A major source of these pollutants is road transport - from exhausts, tyres and brakes.

Tackling climate change, which is driven by greenhouse gas emissions, such as carbon dioxide, isn't the main goal of clean-air zones.

- Ulez: What is it, and why is its expansion controversial?
- Ulez expansion: Contested claims examined
- Check: Is my car Ulez compliant?

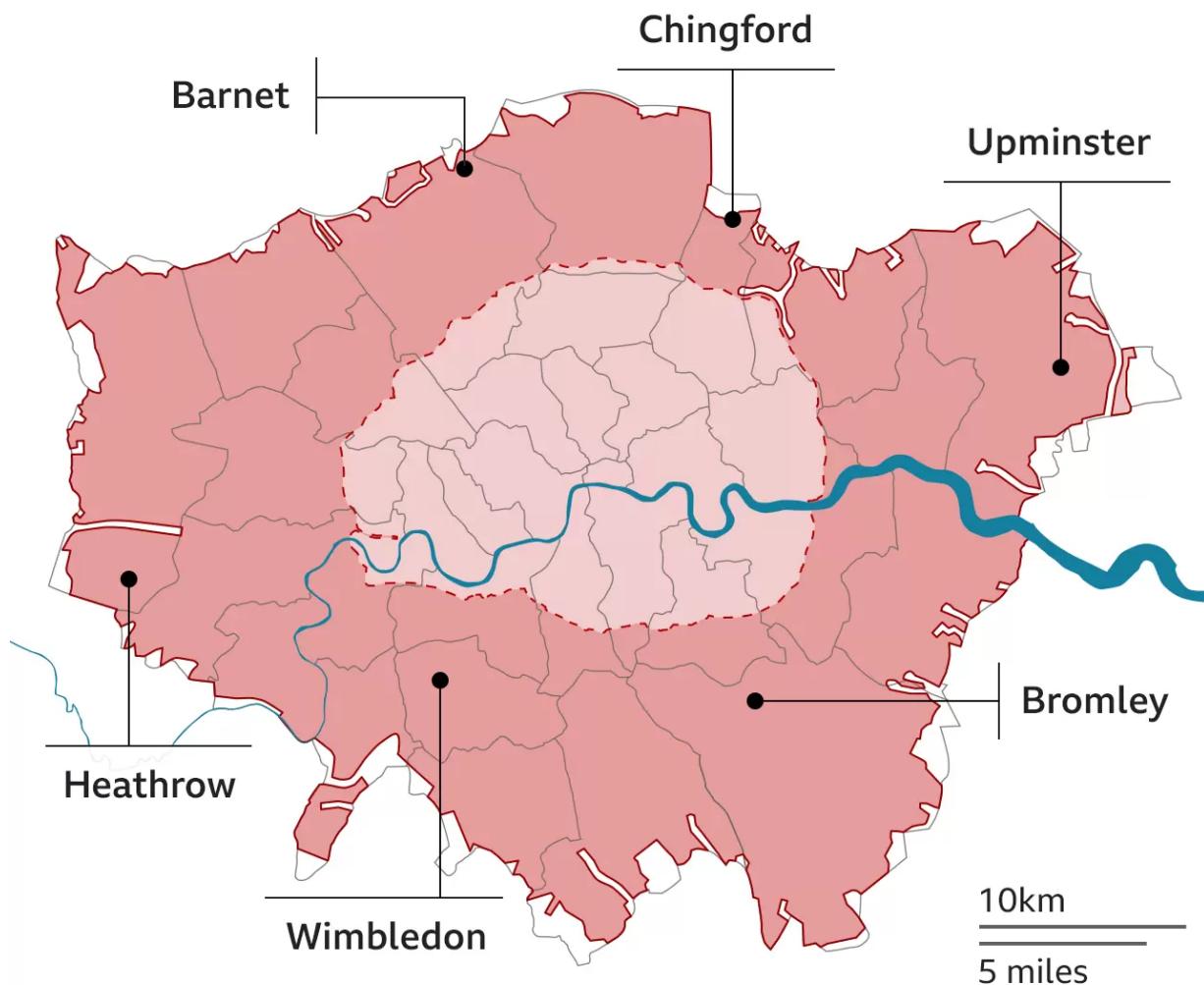
## Do clean-air zones work?

Most studies show that clean-air zones reduce air pollution.

Ulez has covered central London since 2019 and was increased to cover a wider area of inner London in 2021 before the latest expansion.

# London Ultra Low Emission Zone expansion

New Ulez zone  Previous boundary



Source: TfL

BBC

By October 2022, Ulez had reduced NO<sub>2</sub> levels next to the roadside by an estimated 46% in central London and by 21% in inner London, according to a [City Hall report reviewed by Imperial College London](#).

Air quality also improved in places on the boundary of the Ulez area - a finding noted in [research into German low-emission zones](#) - suggesting drivers were being persuaded to switch to less-polluting vehicles rather than simply driving further to avoid the zone.

Ulez has had a smaller effect away from roadsides. A [2021 study](#) suggested the first stage of Ulez - which [covered only central London](#) - reduced NO<sub>2</sub> levels by less than 3% when averaged across London, and resulted in insignificant changes to PM<sub>2.5</sub>.

However, the study highlighted that Ulez had been part of a wider air-quality scheme, including an original low-emission zone - which has covered all of London since 2008 - and measures to switch to cleaner buses and taxis. Taken together, these measures have [greatly improved air quality in the capital](#).

Reductions in air pollution have also been reported as a result of other clean-air zones, such as those in [Birmingham](#), [Berlin](#) and [Amsterdam](#).

A small number of studies have reported more mixed results. A [2015 review of several zones across Europe](#) suggested that schemes including restrictions on cars tended to be more effective than those targeting only heavier vehicles.

The methods used for the studies vary, but many take into account other factors that can affect air pollution, such as weather patterns, traffic volumes and longer-term improvements from the declining use of coal, for example.

## Will the Ulez expansion work?

About [90% of cars seen driving in outer London](#) already meet the emissions standards. Generally, [exempt cars](#) are those first registered after 2005 for petrol, and after September 2015 for diesel.

The charge for more-polluting older vehicles is [usually £12.50 a day](#) to drive within the zone, with some exceptions.

Although air pollution is higher in inner London, it has a [greater effect on health in outer London](#), perhaps because the population there has a higher proportion of more vulnerable elderly people.

Modelling commissioned by [Transport for London](#) projects that the expansion of Ulez will reduce emissions of nitrogen oxides from transport by 6.9% in outer London. Levels of fine particulate matter will be less affected.

This is expected to reduce NO<sub>2</sub> levels in outer London by 1.5% on average.

That suggests that on its own, the expansion of Ulez will have a relatively small effect on air pollution - and air quality would still [fall well short of WHO standards](#).

But even [small improvements can have health benefits](#).

And clean-air zones can have a greater impact when combined with other road transport policies aimed at cleaner travel, according to a [Public Health England report](#).

Reductions in air pollution from other areas - such as from agriculture, construction and wood burning in homes - are also needed to bring air quality to safer levels, the report says.

- [Ulez: Your common questions answered](#)
- [Ulez scrappage scheme: What you need to know](#)

## Related Topics

[Transport for London](#)    [UK air pollution](#)    [Pollution](#)

[Mayor of London](#)    [London](#)    [London transport](#)    [London Ulez](#)

[BBC Verify](#)    [Air pollution](#)

Recommendations by Taboola

**BBC**

## How an advanced civilisation vanished 2,500 years ago

**BBC**

## The surprising truth about frozen fruit

**BBC**

## How the world's oldest university was lost for 800 years

**BBC**

## String theory - a simple way to understand the universe

---

## The Most Unreliable Cars You Should Avoid At All Cost!

ADVERTISEMENT

We have used a combination of sources like Consumer Reports, Reviews to build a list of cars that you'd better avoid.

Forbes | Sponsored

[Read More](#)

---

## 37 Shoddiest Cars To Avoid At All Costs!

ADVERTISEMENT

Forbes | ADVERTISEMENT

[Read More](#)

---

## The World's Richest Soccer Clubs By The Numbers

ADVERTISEMENT

Forbes | ADVERTISEMENT

[Read More](#)

---

## Baseball Will Never Be The Same

ADVERTISEMENT

Forbes | ADVERTISEMENT

[Read More](#)**BBC**

## Woman wakes up to tonnes of waste dumped on drive

**BBC**

## The medieval 'ghost town' frozen in time

## Top Stories

⦿ **LIVE** Deadly hurricane barrels into Florida and Georgia

'Downtown Cedar Key is underwater' - resident

1 hour ago

► Watch as fierce winds tear through coastal towns

2 hours ago

ADVERTISEMENT

## Get the news that matters to you

Keep connected with your  
BBC account

[Sign in](#) or [Register](#)

[In pictures: World's largest container ship visits Teeside port](#)

### Features



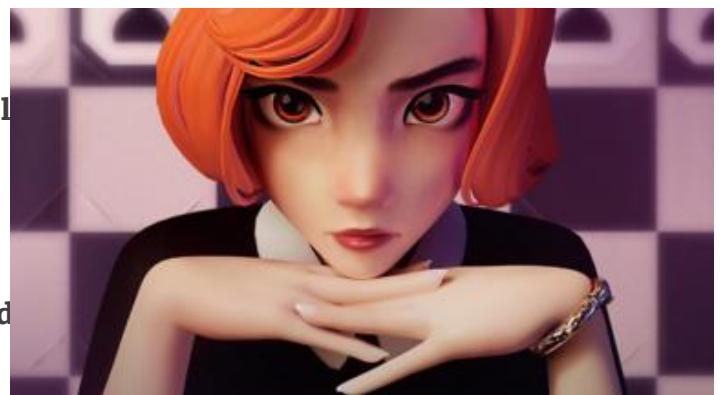
Russia's kamikaze drones raining down on Ukraine



Nagorno-Karabakh: 'People are fainting in bread queues'



Nine boats in 24 hours: At sea with Tunisia's coast guard



What's behind Netflix's expansion into gaming?



'Dying by the dozens every day' - Ukraine losses climb



Can pop stars stop politicians using their music?





African music legend sings tune of Mali's coup leaders



## Elsewhere on the BBC



The new Napoleon film stirring debate



Stunning photos of a new African wonder



Why electric crops may soon be on the menu

## Most Read

- 1** Wave of drone strikes hits several Russian regions

- 2** Australia to hold historic referendum in October

- 3** Iranian weightlifter banned for photo with Israeli
- 4** 'Downtown Cedar Key is underwater' - resident
- 5** Canada warns LGBT travellers of US risks
- 6** Rare super blue Moon set to light up the skies
- 7** Judge dismisses legal action over de Armas trailer
- 8** Burger King faces legal claim over size of Whopper
- 9** Former BBC boss Mark Thompson named head of CNN
- 10** Russia's kamikaze drones raining down on Ukraine

ADVERTISEMENT



ADVERTISEMENT









## BBC News Services

 On your mobile

 On smart speakers

 Get news alerts

 Contact BBC News

Home	Sport	Worklife	Future	Music	Weather
News	Reel	Travel	Culture	TV	Sounds

[Terms of Use](#) [About the BBC](#) [Privacy Policy](#) [Cookies](#) [Accessibility Help](#) [Parental Guidance](#) [Contact the BBC](#)

[Get Personalised Newsletters](#) [Why you can trust the BBC](#) [Advertise with us](#) [Do not share or sell my info](#)

© 2023 BBC. The BBC is not responsible for the content of external sites. [Read about our approach to external linking.](#)