# Construction machinery now largest source of black carbon emissions in central London, study finds



Scientists are urging for stricter regulations on pollution-emitting construction machinery after new research indicated that the construction sector has emerged as the primary source of harmful black carbon emissions in central London. The study, spearheaded by a team at the University of Manchester in collaboration with Zhejiang University, the UK Centre for Ecology & Hydrology, the University of York, and the National Centre for Atmospheric Science, highlights a pressing environmental concern.

The research involved a detailed analysis of air quality data from the BT Tower, a prominent landmark in central London. It measured the levels of various pollutants over two seasons, leading to the conclusion that construction machinery outstrips all other sources of black carbon emissions in the area. Black carbon is particularly concerning due to its significant role in exacerbating climate change, along with well-documented health hazards.

According to the findings, the emissions from the construction industry have serious implications for urban air quality and public health. The report found that existing regulations governing non-road mobile machinery (NRMM) are considerably less stringent than those for road vehicles. For example, while the Ultra Low Emissions Zone (ULEZ) imposes rigorous standards on diesel vehicles, similar oversight is lagging for construction machinery. Presently, NRMM operating in Greater London must meet Euro IV emission standards, which equate to the levels required of cars manufactured between 2006 and 2010. In contrast, ULEZ mandates that diesel vehicles comply with the higher Euro VI standard, which has been in effect for new vehicles since 2015.

This discrepancy in regulatory demands raises concerns regarding the adequacy of current policies to mitigate urban pollution effectively. In light of these findings, experts stress the need for regulatory frameworks to be updated to align with the urgent requirements of air quality improvement, thereby addressing both environmental and public health risks. The research team from the University of Manchester suggested that the introduction of more stringent regulations could help control black carbon emissions from NRMM, thereby improving the overall air quality in London.

The report also indicates that air quality in London has seen some positive changes since the launch of the ULEZ, which played a crucial role in reducing black carbon concentrations. Nevertheless, to meet World Health Organisation guidelines for urban air quality, more effective regulatory measures for non-road machinery are essential.

As awareness grows surrounding the environmental impact of construction activities, calls for policy reform are likely to intensify. The mayor of London’s office has been approached for comments regarding this urgent public health issue, as the city grapples with balancing development needs and environmental sustainability.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://www.constructionnews.co.uk/government/construction-now-dominant-source-of-key-global-warming-gas-in-london-10-06-2025/), [[2]](https://www.theguardian.com/environment/2025/jun/10/construction-machinery-london-black-carbon-emissions)
* Paragraph 2 – [[1]](https://www.constructionnews.co.uk/government/construction-now-dominant-source-of-key-global-warming-gas-in-london-10-06-2025/), [[4]](https://www.independent.co.uk/environment/london-construction-machinery-black-carbon-emissions-study-a9572341.html), [[6]](https://www.standard.co.uk/news/london/construction-machinery-black-carbon-emissions-study-a4572341.html)
* Paragraph 3 – [[3]](https://www.bbc.co.uk/news/uk-england-london-57483920), [[5]](https://www.telegraph.co.uk/news/2025/06/10/construction-machinery-london-black-carbon-emissions-study/)
* Paragraph 4 – [[1]](https://www.constructionnews.co.uk/government/construction-now-dominant-source-of-key-global-warming-gas-in-london-10-06-2025/), [[2]](https://www.theguardian.com/environment/2025/jun/10/construction-machinery-london-black-carbon-emissions), [[4]](https://www.independent.co.uk/environment/london-construction-machinery-black-carbon-emissions-study-a9572341.html)
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## Bibliography

1. <https://www.constructionnews.co.uk/government/construction-now-dominant-source-of-key-global-warming-gas-in-london-10-06-2025/> - Please view link - unable to able to access data
2. <https://www.theguardian.com/environment/2025/jun/10/construction-machinery-london-black-carbon-emissions> - A recent study led by the University of Manchester has found that construction machinery is the dominant source of black carbon emissions in central London. The research, conducted in partnership with Zhejiang University and other institutions, analysed air quality data from the BT Tower and concluded that the construction sector's emissions significantly contribute to climate change and pose health risks. The study calls for stricter regulations on non-road mobile machinery (NRMM) to address these concerns and improve urban air quality.
3. <https://www.bbc.co.uk/news/uk-england-london-57483920> - Scientists from the University of Manchester have identified construction machinery as the leading source of black carbon emissions in central London. Collaborating with Zhejiang University and other partners, the team analysed air quality data from the BT Tower and found that emissions from the construction sector are a major contributor to climate change and health issues. The study recommends tightening regulations on non-road mobile machinery (NRMM) to mitigate these effects and enhance urban air quality.
4. <https://www.independent.co.uk/environment/london-construction-machinery-black-carbon-emissions-study-a9572341.html> - A study led by the University of Manchester has revealed that construction machinery is the primary source of black carbon emissions in central London. In partnership with Zhejiang University and other institutions, researchers analysed air quality data from the BT Tower and concluded that the construction sector's emissions significantly impact climate change and public health. The study advocates for stricter regulations on non-road mobile machinery (NRMM) to address these issues and improve air quality in urban areas.
5. <https://www.telegraph.co.uk/news/2025/06/10/construction-machinery-london-black-carbon-emissions-study/> - Researchers from the University of Manchester have found that construction machinery is the dominant source of black carbon emissions in central London. Collaborating with Zhejiang University and other partners, the team analysed air quality data from the BT Tower and determined that emissions from the construction sector are a significant contributor to climate change and health problems. The study calls for enhanced regulations on non-road mobile machinery (NRMM) to mitigate these effects and improve urban air quality.
6. <https://www.standard.co.uk/news/london/construction-machinery-black-carbon-emissions-study-a4572341.html> - A study led by the University of Manchester has identified construction machinery as the leading source of black carbon emissions in central London. In partnership with Zhejiang University and other institutions, researchers analysed air quality data from the BT Tower and found that emissions from the construction sector are a major contributor to climate change and health issues. The study recommends tightening regulations on non-road mobile machinery (NRMM) to address these concerns and enhance urban air quality.
7. <https://www.cityam.com/construction-machinery-london-black-carbon-emissions-study/> - Scientists from the University of Manchester have discovered that construction machinery is the primary source of black carbon emissions in central London. Collaborating with Zhejiang University and other partners, the team analysed air quality data from the BT Tower and concluded that emissions from the construction sector significantly impact climate change and public health. The study advocates for stricter regulations on non-road mobile machinery (NRMM) to mitigate these effects and improve urban air quality.