

Real-world Emissions Testing Update

The AIR Index Urban NO_x Van Ratings

Nick Molden, Co-Founder AIR
EPUK Conference, Birmingham

13 November 2019

The current scattergun approach to solving the air quality crisis...

Southampton scraps plan for emissions charging zone

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Bristol clean air diesel ban plan approved
5 November 2019



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There are fears cash will not be spent on better transport or reducing pollution
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By Nick Statham Local Democracy Reporter
15:33, 21 OCT 2019 | UPDATED 16:00, 21 OCT 2019




...has one big problem


The basis for all CAZ policy today is...

Euro standards

- Based on laboratory testing
- Don't reflect actual emissions
- Threatening CAZ effectiveness



Department
for Environment
Food & Rural Affairs



Department
for Transport


Clean Air Zone Framework


Principles for setting up Clean Air Zones in England


May 2017

Irish government's NOx-based car tax plan welcomed

18/10/2019 in Environment News



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The Irish government's plans to introduce a tax based on a vehicle's NOx emissions, has been welcomed by the AIR Alliance, publishers of the AIR Index.

The proposed NOx-based approach would replace the current one per cent diesel surcharge and is set to be applied to new car purchases and used imports from January 1, 2020.

...they should be based on real world emissions

The AIR Index: on-road emissions not laboratory tests...

AIR sources vehicles independently

- Tested to CWA17379 protocol
- 2 matching vehicles
- 3 tests on paved streets
- At least 5 x 10km valid trips
- Cars and LCVs rated 'A' to 'E'
- Results published freely



...a legal framework to enable effective policy

AIR Index ratings illustrate the Euro 6 problem: RDE & pre-RDE

33 mg/km



URBAN NO_x **A** B C D E 0 - 80 mg/km
BEST WORST

2018 Land Rover Discovery
HSE Luxury

137 mg/km



URBAN NO_x **B** C D E 80 - 168 mg/km
BEST WORST

2017 Nissan Qashqai
Acenta

231 mg/km



URBAN NO_x **C** D E 168 - 270 mg/km
BEST WORST

2015 MINI Hatch

429 mg/km



URBAN NO_x **D** E 270 - 600 mg/km
BEST WORST

2017 Ford Focus
Titanium

651 mg/km



URBAN NO_x **E** 600+ mg/km
BEST WORST

2017 Renault Clio
Dynamique Nav



A



B



C



D



E

The AIR Index urban NO_x ratings for vans



- First ever AIR Index urban NO_x van ratings
- First insight for policy makers into van emissions
- First insight for fleet owners to inform van choices
- Results are both disturbing and also encouraging
- They show retrofitting can have a real impact

EXCLUSIVE PREVIEW - EP UK ANNUAL CONFERENCE 2019

The AIR Index urban NO_x ratings for vans...

- 10 vans rated (small, medium & large)
- All are Euro 6, pre-RDE diesels*
- Only three are 'A' rated (0-80 mg/km)
- Five are 'D' (270-600 mg/km) or 'E' rated (600+ mg/km)
- The worst is 17x the cleanest



Volkswagen Crafter
53 mg/km Urban NO_x



Mercedes Citan
902 mg/km Urban NO_x



** plus one Euro 5 van*

How the AIR Index can improve CAZ policy



Example – ULEZ, London: free for Euro 4 (petrol) and Euro 6 (diesel) cars, 120,000/day

	Today	Enhancement with the AIR Index
Policy:	Euro standards	Choose on-road emissions level <270 mg/km i.e. allow AIR Index 'A' to 'C'
Restrictions:	Can still pay to enter	Discourage/manage access for 'D' and 'E'
NO_x Reduction:	27% v pre-ULEZ ¹	89% v pre-ULEZ ¹

¹ Emissions Analytics estimate

...a massive boost using the AIR Index

Allow Independent Road-testing (AIR)'s core mission

*'To help reduce the negative impacts of **vehicle emissions** in the short and long term.'*

Our initial focus is to enable NO_x solutions for today and into the future

Implementation commenced:

1. Comparative, realistic and repeatable CO₂ data to prevent 'Petrolgate'
2. Cabin air quality and health exposure ratings that can be trusted



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