Greenpeace welcomes this opportunity to submit evidence.

As an organisation, we defend the natural world and promote peace by investigating, exposing and confronting environmental abuse, and championing responsible solutions for our fragile environment. We have 130,000 supporters in the UK, 2.8 million supporters worldwide and a presence in 41 countries. Our past campaign successes include the introduction of a moratorium on commercial whaling, a 50-year moratorium on mineral exploitation in Antarctica, bans on the dumping at sea of radioactive and industrial waste and disused oil installations and an end to large-scale drift net fishing on the high-seas. It is from our concern for the natural world and the risks to human life that we believe that the right to clean air should be enjoyed by all.

The UK air has broken legal limits for pollution every year since 2010. Diesel engines, including those in buses and HGV’s, are a major cause of air pollution – emitting harmful nitrogen oxide (NOx) and toxic particulates. 90% of NOx emissions on the roads are from diesel engines, of which 41% is from diesel cars. Meanwhile, our independent investigations work has shown that even after the dieselgate scandal the new emissions testing regime is still inadequate for ensuring car manufacturers meet emissions standards. We also show the poor track record of the industry in delivering changes to diesel vehicles that actually reduce their pollution emissions.¹ The government must urgently deal with the problem of diesel cars (alongside buses, HGVs and LGVs) if we are going to clean up our air.

In this submission we propose four solutions- the introduction of Clean Air Zones that have the capability of charging diesel cars, an increase in Vehicle Excise Duty (VED), a significant expansion of the UK’s electric vehicle (EV) infrastructure and a more ambitious phase-out date for petrol and diesel cars.

**Executive summary**

In this submission, we argue:

1. New ‘real world’ driving tests are still failing to accurately reflect emissions, as proved by Greenpeace’s investigations work
2. Diesel technology, even in Euro 6 vehicles, is not ‘clean’
3. The Government’s Air Quality plan is inadequate to deal with this issue
4. The only way to bring NO2 pollution into compliance with the law is through Clean Air Zones
5. We need to review Vehicle Excise duty
6. We must significantly expand EV charging infrastructure
7. The Government must be more ambitious in its phase-out of diesel and petrol cars

Exhibit 1- Greenpeace conducted an investigation to test the emissions levels of cars driven in typical driving conditions and the results were concerning. Testing of a VW Golf and Vauxhall Insignia was carried out by leading experts Emissions Analytics (EA) on behalf of Greenpeace. They were tested on well-used commuter routes into and out of London during the morning and evening rush hours.

The results showed that diesel cars do indeed perform worse than the RDE tests indicated they would. The VW failed to stay under the 168mg/km limit on both the morning and evening tests and was almost three times the limit when results were analysed for the most congested section of the route. The Vauxhall insignia passed both morning and evening tests but failed on the most congested section. The cars models were chosen because they had already undergone official RDE tests by their manufacturers, although they were not mandated to have passed these tests before sale at this point in time, so nothing here is suggesting illegality. The most concerning examples for each of the cars occurred during the congested section of the route with emissions of NOx 42% higher for the Vauxhall Insignia and 118% higher for the VW Golf during that section than levels detected in the urban section of those cars’ RDE tests.

1.1 While legislators have mandated tighter standards, the emissions testing regime remains inadequate. The problems of discrepancy between on-road and test performance of cars was supposed to be tackled by the Real Driving Emissions (RDE) tests, which as its name suggests, much more closely mimics actual conditions that cars have to negotiate. For NOx emissions, from 1 September, all new car models have to pass these stronger tests, and from 1 September 2019 all new cars will need to pass them too. This does mean that cars emitting up to 18 times more NOx than the prescribed limit will still be coming on sale over the next 2 years.

The International Council on Clean Transportation (ICCT) have identified a number of theoretical reasons why the new RDE tests will not pick up the emissions from cars in everyday use including that cars are not selected at random from manufactured vehicles, high engine loading is not covered (e.g. going uphill), cold temperatures, high altitude and performance decline as the vehicle ages. ICCT tests indicated that when run under these circumstances cars could significantly breach limits set for vehicles.

Failing to meet standards on the most congested roads and highest pollution locations means that RDE test cannot be relied upon to ‘clean up diesel’.

2. Diesel technology is not clean
2.1 Even Euro 6 diesel cars – the most up-to-date pollution standard – continue to vastly exceed legal limits in NOx emissions – and improvements between earlier diesel models and the latest Euro 6 models are not great.\(^2\) Consumer group [Which?](https://www.which.co.uk) tested real world NOx emissions of Euro 5 and Euro 6 models of all the main manufacturers and found that all of them are non-compliant, some by a huge margin.\(^3\)

![Exhibit 2- Tests by Which? that show that many Euro 6 models do not comply with legal NOx emission limits of 0.08g/km](https://www.transportenvironment.org/sites/te/files/2016_09_Dieselgate_report_who_what_how_FINAL_0.pdf)

3. The Government’s Air Quality plan is inadequate to deal with this issue

3.1 The UK Air Quality Plan fails to outline a satisfactory strategy to achieve clean air, defined at minimum as legal air, in our cities and towns. Crucially the plan fails to meet a key stipulation made by the High Court to outline the fastest route possible for achieving legal levels of air pollution. We are unsurprised that Client Earth has decided to take the Government back to court over its inadequacy. Additionally the plan shows no evidence that it will deliver improvements to air quality around Heathrow that would comply with legal requirements. The government has repeatedly ignored the health threat posed by air pollution and the latest Air Quality plan reinforces their preoccupation with the presentational risks and costs of meeting legal air quality laws rather than championing the significant opportunities presented to improve quality of life, reduce pressure on the NHS and position the UK at the forefront of the global transition to electric mobility and clean air. In the following sections, we propose some solutions which are essential in order to meet our air quality limits.

![4. The only way to bring NO2 pollution into compliance with the law is through Clean Air Zones](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/632916/air-quality-plan-technical-report.pdf)

4. The only way to bring NO\(_2\) pollution into compliance with the law is through Clean Air Zones

4.1 The Government’s Air Quality plan accepts that Clean Air Zones are the only route to compliance. As it states in the technical report: “All options, except charging CAZs, are shown to be similar to the baseline projection; bringing forward compliance in only a small number of zones where the exceedance is small. It is clear that charging CAZs have the greatest impact by bringing the majority of zones into compliance by 2021.” And that “A Network of Clean Air Zones (CAZs) is the most effective route to compliance for the majority of exceedances” and that “Evidence in the draft Plan technical report suggested that they were the quickest, most cost-effective way of meeting NO\(_2\) limit values on the majority of urban roads”\(^4\)

We should mandate local authorities to set up Clean Air Zones (CAZ) in all areas where there is a large network of roads that exceed legal limits because Government’s own assessment says they are the quickest and most cost-effective way of doing so\(^5\). Restricting polluting vehicles from city centres is a measure that is supported by the majority of the public, including Conservative voters\(^6\).

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3[https://www.which.co.uk/news/2017/03/which-tests-reveal-the-worst-diesel-cars-for-air-pollution/#intcmp=HP.hero.large.2.wcunews.caremissions.mar22](https://www.which.co.uk/news/2017/03/which-tests-reveal-the-worst-diesel-cars-for-air-pollution/#intcmp=HP.hero.large.2.wcunews.caremissions.mar22)


5[https://uk-air.defra.gov.uk/assets/documents/annualreport/air_pollution_uk_2015_Compliance_Assessment_Summary_Issue1.pdf](https://uk-air.defra.gov.uk/assets/documents/annualreport/air_pollution_uk_2015_Compliance_Assessment_Summary_Issue1.pdf)

4.2 At present the government is deflecting dealing with a national issue by placing responsibility at the local level. While local authorities’ know best the particular issues and challenges of their localities the funding shortage, under-skilling and lack of mandate for tougher measure will mean the air quality plan will fail if implemented in its proposed form. Local authorities will be ill-equipped to introduce CAZ unless three things are done.

I. As described above any areas breaching legal levels should have the legal requirement to implement a charging clean air zone. This should not be presented as the last option but a first step required by central government and the national plan.

II. Secondly, capital should be available to support the setup of clean air zones. In time the zones should ultimately be low cost or revenue neutral as money coming from charging will pay for some or all of the set up and running costs.

III. Thirdly, local authorities may not have the skills and personnel in place to design and implement effective clean air zones and so it should be the responsibility of central government to provide or facilitate and pay for these personnel.

4.3 The government is rightly concerned about charging people who bought diesel cars in good faith and people on lower incomes driving older diesel cars, but it is Greenpeace’s view that some charging is both necessary and justified. Air pollution causes the premature deaths of 40,000 people in the UK every year and has a particularly profound impact on the young and disproportionately affects those on lower incomes. The annual cost to the economy including the NHS is 20 billion pounds and drivers themselves often suffer the worst exposure to dirty air. There is therefore a strong justification and practical necessity for charging some cars in order to achieve clean air. Charging should not be seen just as a stick but as part of a holistic approach to the transformation of urban transport. In places where charging occurs there should be significant investment in alternative means of travel such as public transport, car sharing, cycling and walking.

Secondly, a targeted scrappage scheme should be put in place to help those on lower incomes who have to drive, in order to support a transition to cleaner electric and hybrid vehicles. Any scrappage scheme should also include a mobility credit which encourages drivers to shift to public transport, car sharing, e-bikes or conventional cycling.

5. Increase Vehicle Excise Duty on new Diesel cars

5.1 The £255m that the Government has committed for an air quality Implementation Fund, as well as establishing a Clean Air Fund for local authorities is a positive step, but does not go far enough.

The most impactful solution is through a permanent revision to Vehicle Excise Duty (VED) for new diesel cars. Policy Exchange has outlined how a one off first year rate of at least £800 added to the price of all new diesel cars would generate £500million a year. £800 is the estimate of the additional costs that diesel cars impose on the public purse though the health detriment they cause. In addition to funding the network of CAZs, this tax would:

reports-a7745756.html
7 https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution
• Capture the damage cost of NOx emissions from diesel cars compared to their petrol counterparts
• Ensure diesel drivers who bought in good faith aren’t unfairly punished
• Send a vital market signal towards a cleaner future and speed up the transition to EVs to secure the UK’s leadership in the sector

5.2 The remaining money from the £225 million could be used to fund a progressive scrappage scheme. If done in the right way, a targeted scrappage scheme could play an important role in removing the most polluting cars from our roads, helping diesel drivers who previously bought in good faith transition to cleaner vehicles, and promoting other low emission modes of transport. A targeted scrappage scheme should be focused on lower income drivers and small businesses in urban areas where sustainable transport alternatives are available. Diesel car owners should be able to exchange polluting vehicles with help towards costs of public transport, a less polluting hybrid or EV, or low emission car club membership.

6. **We must significantly expand EV charging infrastructure**

6.1 While the current Government does understand that the transition to electric mobility is underway and needs support we believe it has failed to grasp how fast this transition will take place in countries that encourage and embrace it. There is a danger the UK will be left far behind in the race for electric mobility with the economic benefits going elsewhere (see point 7 below). With the right policy, Britain could build upon its existing specialism in battery and smart grid technology development⁸, and secure a significant share of the estimated additional $1.5 trillion revenues expected to be generated globally by 2030 through shared mobility and data-connectivity services⁹.

It’s hard to overstate the scale of this economic opportunity. First, clearly those with the biggest commitments to, and investments in, EV technology and manufacture will benefit the most from a cleaner and healthier environment, and from the potential platform for export. Secondly, rather than exporting billions of pounds to other countries through the purchase of oil for transport, this spending could be recycled within the UK economy through domestically produced electricity - thus creating income and jobs here in the UK if suitable power construction supply chains are in place. Thirdly, in time the cost per mile of travel is likely to see significant falls, liberating consumer and business spending for other sectors of the economy.

6.2 **A national plan for dealing with air pollution should include policy to encourage a rapid transition from the internal combustion engine to EV’s.**

Such policy should:

• Provide administrative and financial support to significantly expand EV charging infrastructure and associated smart grid upgrade requirements across the UK

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• Establish a special task force to identify a holistic solution to issues including on-street parking charging, rapid charging, grid management, and strategic allocation of existing charging infrastructure funds to areas of greatest need

• Set out a financial and legislative framework that gives city and local authorities the power to build on-street charging infrastructure at a speed and scale. This framework should include powers and financial mechanisms to recoup investment in any upgrades to local electricity grids identified by a collaborative process involving local authorities, Ofgem, businesses and distribution network operators

• Unlock immediate bottlenecks through mandating business off-road parking, all new housing and supermarkets to install EV charging infrastructure

• Require EV manufacturers to provide and adhere to a clear cost reduction pathway to ensure taxpayer value for money as technology matures

• Provide additional funds for the Plug-In-Car Grant to ensure pipeline of support continues beyond March 2018

• Take additional steps to encourage public sector procurements of EVs

7. The Government must be more ambitious in its phase-out of diesel and petrol cars

7.1 The Government must bring forward the end date for new petrol and diesel car and van sales to 2030, not 2040. Given the failure of even the newest diesel technology to limit toxic air pollution, Greenpeace argues that is not acceptable to expect the public to wait nearly a quarter of a century for a phase-out. Moreover, 2040 is behind the curve of the global market, and of the action that other countries are taking. For example, Norway has set a target of only selling zero-emission vehicles from 2025, and the Dutch government recently confirmed plans to ban diesel and petrol vehicles by 2030. Meanwhile emerging economies India and China are both considering bans on diesel and petrol vehicles from 2030. Commercial players like BT Group and Uber are looking to move even faster than this, while the Dutch bank ING predicts that all new cars sold in Europe will be EVs by 2035.

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13 https://www.ing.com/Newsroom/All-news/Electric-cars-will-take-over-threatenig-European-car-industry.htm