



Department
for Environment
Food & Rural Affairs



Department
for Transport

Supplement to the UK plan for tackling roadside nitrogen dioxide concentrations

A consultation

May 2018



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Purpose of this consultation

1. Clean air is one of the most basic requirements of a healthy environment for us all to live, work, and bring up families. Air quality has improved significantly in recent decades. Since 1970 sulphur dioxide emissions have decreased by 97%, fine particulate matter by 78%, and nitrogen oxides (NO_x) by 72%. Total UK emissions of NO_x fell by 27% between 2010 and 2016.
2. Whilst air quality has improved significantly, and will continue to improve thanks to the action we have already taken, there are some parts of our country where there are still high levels of air pollution.
3. The government has already taken significant action and has committed £3.5 billion to improving air quality and cleaner transport. We announced last year that we will end the sale of all new conventional petrol and diesel cars and vans by 2040. The shift to ultra low and zero emission vehicles is well under way, and will continue to gather pace over the coming years as we move towards 2040.
4. In July 2017, the government published the UK plan for tackling roadside nitrogen dioxide concentrations¹ (subsequently referred to as “the NO₂ Plan”). The NO₂ Plan set out actions to bring NO₂ air pollution within statutory limits in the shortest possible time. The government directed 28 local authorities with some of the worst NO₂ problems to produce local air quality plans to bring NO₂ levels within statutory limits in the shortest possible time.
5. Other local authorities in England have shorter-term NO₂ problems. NO₂ levels on local authority roads within these areas are expected to reduce to within the statutory limits (mainly through natural fleet turnover) by 2021. On 21 February 2018 the High Court found that the government should have legally required these local authorities to come up with proposals to improve air quality. We had previously considered that it was sufficient to take a pragmatic, less formal approach to such areas. However, in view of the Court’s judgment, we are taking a more formal line with them.
6. On 23 March 2018 the government directed 33 English local authorities with shorter-term NO₂ problems (“the third wave local authorities”) to carry out studies to find out whether there are measures they can take to reduce NO₂ air pollution in their areas in the shortest possible time. Government modelling has not identified any such measures. However, local authorities know their own areas best, and it is possible that local assessment will identify measures that could speed up compliance.
7. The third wave local authorities must submit the findings from their studies to the government by 31 July 2018 at the latest, setting out measures (where they exist) which will achieve compliance in the shortest possible time. Local authorities can also consider measures which have been implemented since 2015 (and which are therefore not reflected in the baseline national modelling), and assess whether these may already have brought forward their compliance with NO₂ legal limits. The government will consider the results, and will publish a supplement to the NO₂ Plan by 5 October

¹ <https://www.gov.uk/government/publications/air-quality-plan-for-nitrogen-dioxide-no2-in-uk-2017>

2018, setting out measures to bring NO₂ pollution within statutory limits in the shortest possible time in these local authority areas.

8. This consultation invites stakeholders to provide comments and, where possible, evidence on some of the potential measures that the third wave local authorities could take to reduce NO₂ pollution in their areas to within legal limits in the shortest time possible. The local authorities can then consider stakeholders' responses as part of their studies.
9. Within these local authority areas there are also some roads that are managed by Highways England. The consultation also invites stakeholders to provide comments and, where possible, evidence on measures that could supplement the action Highways England is currently taking to improve air quality on the Strategic Road Network, as set out in the NO₂ Plan (Detailed Plan, sections 7.2 and 7.4), with reference to these roads.
10. There may also be some road links in these local authority areas that under the Air Quality Standards Regulations 2010 ("the Regulations")² do not need to be captured in local authorities' feasibility studies following detailed scrutiny of the links in question, e.g. due to there being no public access or due to the link being less than 100m in length. Where this applies, local authorities will set this out in their feasibility studies and are unlikely to need to progress past the initial stages of the feasibility study process as a result.
11. At the point of publishing this consultation we expect that this applies to all of the road links in consideration in two local authorities – Kirklees and Peterborough. In the case of an additional local authority, Sefton, it appears that the single road link in exceedance is managed by Highways England (see paragraph 9, above), rather than the local authority. Accordingly we would expect that these three local authorities are likely to complete only the initial stages of their feasibility studies.
12. The Air Quality Standards Regulations 2010 require the government to consult the public whenever it is proposed to prepare, modify or review an air quality plan (such as the NO₂ Plan). This consultation discharges that duty.
13. The government has consulted on similar issues several times over the past two years. For example, we consulted on the Clean Air Zone Framework in October 2016³, on the NO₂ Plan itself in May 2017⁴, and on additional measures to support individuals and businesses affected by local NO₂ plans in November 2017⁵. Accordingly we are not anticipating that significant new evidence will emerge from this consultation, though we warmly welcome suggestions and will carefully consider all responses and communicate them promptly to the appropriate local authorities where relevant. Some of the third wave local authorities may also choose to conduct their own consultations if appropriate.
14. This consultation applies to England only.

² S.I. 2010/1001.

³ <https://www.gov.uk/government/consultations/implementation-of-clean-air-zones-in-england>

⁴ <https://www.gov.uk/government/consultations/improving-air-quality-reducing-nitrogen-dioxide-in-our-towns-and-cities>

⁵ <https://www.gov.uk/government/consultations/air-quality-additional-measures-to-support-individuals-and-businesses-affected-by-local-no2-plans>

Local authorities affected

15. The table below shows the third wave local authorities which have been directed to carry out studies.

Local authorities affected		
Ashfield	Kirklees	Sandwell
Basingstoke & Deane	Leicester	Sefton
Blaby	Liverpool	Solihull
Bolsover	Newcastle-Under-Lyme	Southend
Bournemouth	Oldham	South Gloucestershire
Bradford	Oxford	South Tyneside
Broxbourne	Peterborough	Stoke
Burnley	Plymouth	Sunderland
Calderdale	Poole	Wakefield
Cheltenham	Portsmouth	Walsall
Dudley	Reading	Wolverhampton

16. Annex A contains maps of each of these local authority areas, showing each road link where an NO₂ pollution problem has been identified and the year in which it is expected to resolve in the absence of further action. You may wish to consider the location of these road links as you respond to this consultation. Annex A also contains government information on the sources of pollution at each roadside location.

Potential measures

17. Examples of the potential measures that the third wave local authorities could explore are listed below⁶:

- Encouraging use of public transport, cycling, walking, park and ride schemes and car clubs, including via communications campaigns;
- Delivering measures to optimise traffic flow (e.g. via changes to traffic signalling); and
- Working with local businesses and accessing clean technology.

18. These measures are explained in more detail in pages 7-10 of this consultation document.

19. Local authorities will need to consider which measures could reduce NO₂ concentrations on the specific road links projected to be in exceedance, so that compliance can be achieved in the shortest time possible. This means they will need to consider the capacity for a measure to have an impact on NO₂ concentrations, the time it will take to deliver the measure and whether the measure can be targeted at the specific road link with an exceedance.

20. Charging zones are geographical areas where certain types of vehicles are charged to enter or move within the zone. Please note that **we do not consider that a charging zone would speed up compliance for any of the third wave local authorities** who are the focus of this consultation document⁷.

21. All local authorities have the power to introduce a charging zone to tackle air quality locally, should they wish to do so. However, for the purpose of this consultation, we are seeking evidence about measures which will speed up compliance in any of the third wave local authorities and, therefore, in shorter timeframes than charging zones can be implemented.

⁶ Further information about these measures can be found in the UK Plan for tackling roadside nitrogen dioxide concentrations (<https://www.gov.uk/government/publications/air-quality-plan-for-nitrogen-dioxide-no2-in-uk-2017>) and the Clean Air Zone Framework (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/612592/clean-air-zone-framework.pdf).

⁷ As set out in the Technical Report that accompanied the Draft UK Air Quality Plan for tackling nitrogen dioxide, implementation of a charging Clean Air Zone is expected to take longer than the time available to any of the third wave local authorities to bring forward compliance. See https://consult.defra.gov.uk/airquality/air-quality-plan-for-tackling-nitrogen-dioxide/supporting_documents/Technical%20Report%20%20Amended%209%20May%202017.pdf, Section 4.3.3.

22. Source apportionment data (see Annex A) indicates that the exceedances of NO₂ in the third wave local authority areas are largely attributable to transport rather than other sources. Accordingly we expect the supplement to the NO₂ Plan to focus on reducing transport emissions. However, we welcome evidence of measures in relation to other emission sources where these would help to deliver compliance in the shortest possible time in the relevant areas.⁸

Question 1: Are there other measures not set out in the list above that should be considered in order to help achieve compliance with legal limits for NO₂ in the shortest possible time in any of the roads in exceedance in the third wave local authority areas? Please provide any appropriate evidence to support your proposal. Any proposals should take into account the assessment criteria set out in the next section. If your response refers to a particular local authority or local authorities, please make this clear.

⁸ Regulation 26(5A) of the Regulations requires the Secretary of State to include in an air quality plan an assessment of the need to apply lower emission limit values for medium combustion plants than those set out in Directive 2015/2193/EU (as transposed by the Environmental Permitting (England and Wales) (Amendment) Regulations 2018) where this would effectively contribute to a noticeable improvement in air quality. Section 7.3.16 of the NO₂ Plan details the action that is already being taken in respect of medium combustion plants as an emissions source.

Assessment criteria

23. As set out above, the most important objective of the measures proposed in this consultation is to **achieve compliance in the shortest possible time** in each of these areas. In practice, in most cases this will mean that it must be possible for a local authority to implement the measure within two years. Achieving compliance in the shortest possible time is the main criterion for assessing proposals.

24. Where more than one option is identified that could achieve this objective in a local authority, it will also be relevant to consider a range of secondary objectives in order to choose the preferred option. These secondary objectives include:

- **Strategic and wider air quality fit.** Consideration should be given to how each option interacts with other local policies already in place, for example under the Local Air Quality Management system, and what additional strategic aims it could help achieve.
- **Distributional impacts.** Consideration should be given to whether the proposed measure could have a disproportionate impact on any particular group of people.
- **Achievability.** Consideration should be given to whether the option can be delivered given the potential resources available to the local authority (for example, staffing levels and management structures).
- **Value for money.** It will be important to think about options that deliver good value for money, considering all of the economic costs and benefits. As with other secondary objectives, this consideration should only be used where a local authority is choosing between options which deliver compliance in the shortest possible time.
- **Supply side capacity and capability:** The success of the chosen option will depend on a number of external constraints, so it will be important to assess commercial capacity or capability limitations.
- **Displacement:** It will also be important to consider the potential for displacement (where a measure would displace traffic from one polluted road onto other roads). This is particularly relevant if the displaced traffic could cause NO₂ levels on other roads to rise above legal limits, whether within or outside the local authority area.

25. We welcome evidence in relation to all of the above criteria as part of your response.

Question 2: Are there other secondary objectives that should be taken into account when choosing between proposals which deliver compliance in the third wave local authority areas in the shortest possible time?

Discussion of potential measures

Encouraging use of public transport, cycling, walking, park and ride schemes and car clubs

26. The introduction of local air quality interventions may encourage people to switch to other modes of transport which includes a wide range of less polluting options:
27. **Public transport.** Local authorities could consider measures to encourage uptake of travel on public transport, including buses, trains and ultra low emission taxis. For example, they could implement bus priority schemes, improve local bus services or make use of technology such as travel planning apps or integrated ticketing to make public transport more convenient.
28. **Cycling and walking.** Some of the third wave local authorities could consider improving access to cycling and walking infrastructure, making it safer and more attractive to choose an active mode of travel for short and medium distance journeys. Bike hire could be made more widely available, for example at railway stations, giving people more choice to make the 'last mile' of their journey by more sustainable means.
29. **Park and ride schemes.** Where the problem in an area is caused by journeys being made to and from key locations such as hospitals, shopping centres, large workplaces and transport hubs, investing in park and ride facilities could provide individuals with low emission alternatives to single-occupancy car journeys, offering potential savings to the individual while improving air quality.
30. **Car clubs.** Car clubs provide access to shared vehicles for members on a pay as you drive basis. They provide the opportunity to access a newer, less polluting vehicle for regular or occasional use. Most car clubs enable members to reserve a vehicle online or via an app, and then to unlock that vehicle and drive off. Local authorities could consider how increasing the availability of car clubs near a particular road link or publicising existing car club availability could improve air quality.
31. **Communications campaigns:** There is also scope for local communications plans to influence people to make different travel choices and reduce NO₂ pollution. This could include encouraging people to switch to other modes of transport, as well as anti-idling campaigns. For example, where the cause of the problem on a road with an exceedance is a school, local authorities could support the school to develop travel plans, working with teachers and pupils directly through a range of activities to support behaviour change among children and their parents as well as school staff.

Question 3: Could encouraging the use of public transport, cycling, walking, park and ride schemes and/or car clubs help achieve compliance with legal limits for NO₂ in the shortest possible time on the roads in exceedance in any of the third wave local authority areas? We welcome views from stakeholders on how government can support the local authorities in implementing such measures. If your response refers to a particular local authority or local authorities, please make this clear.

Question 4: How can any of the third wave local authorities encourage local people to choose less polluting forms of transport? If your response refers to a particular local authority or local authorities, please make this clear.

Delivering measures to optimise traffic flow

32. Poor traffic flow can contribute to congestion in city and town centres which in turn increases emissions and air quality problems. NO_x emissions are typically higher when an engine is under higher loads, such as during acceleration. Measures to tackle road congestion, which reduce stop-start traffic and thus acceleration events, can also have air quality benefits. Such measures could include:
33. **Changing traffic signalling.** This could include optimising traffic signal operation to reduce traffic at a particular problem area or installing intelligent traffic management systems such as SCOOT (Split Cycle Offset Optimisation Technique) to speed up traffic flow. Local authorities could also consider traffic signalling strategies to highlight pollution levels and suggest alternative routes.
34. **Improving road and junction layouts.** Depending on the local situation, it may be possible for some of the third wave local authorities to reduce NO₂ pollution by changing road layouts at congestion and air pollution pinch points. For example, local authorities could improve junctions or consider removal of road humps, reroute traffic via alternative routes or develop bus priority schemes to improve reliability and journey times, making buses more attractive as an alternative route.
35. In some instances third wave local authorities have already carried out or are in the process of carrying out such work and will need to assess if this has impacted on NO₂ concentrations. Local authorities will also need to ensure that changes to road layouts do not create further problems e.g. by increasing traffic flow or displacing congestion elsewhere.

Question 5: Could measures to optimise traffic flow help achieve compliance with legal limits for NO₂ in the shortest possible time in any of the roads with an exceedance in the third wave local authority areas? We welcome views on how government can support local authorities in implementing such measures. If your response refers to a particular local authority or local authorities, please make this clear.

Case study: Brighton & Hove

Using funding from the Local Sustainable Transport Fund, Brighton & Hove City Council made improvements to the A270 Lewes Road corridor, which was amongst the worst areas for air quality in the city. The scheme included traffic signals with bus and cycle priority, bus and cycle lanes in both directions for 5km, and new real-time information at bus shelters. A personalised travel planning team spoke to over 8000 people on doorsteps and over 2000 people at events, offering services such as eco-driver training (where drivers are taught driving techniques that maximise fuel efficiency and so reduce emissions of air pollutants).

Working with local businesses and accessing clean technology

36. There may be scope for local authorities to work with local businesses, including key employers, freight operators and taxi operators. It may be particularly relevant for local authorities to consider these types of measures where the source of their NO₂ pollution problem is vehicle types such as light goods vehicles (LGVs), heavy goods vehicles (HGVs) or taxis. There may also be scope for some of the third wave local authorities to encourage cleaner vehicles, including ultra low emission vehicles (ULEVs). Possible measures could include:
37. **Work-based travel schemes.** Employers can have an important role in encouraging people to switch to less polluting forms of transport. For example, some of the local authorities could work with local employers to encourage them to promote car sharing or Cycle to Work Schemes, which offer employees the opportunity to hire a bike from their employer.
38. **HGVs and LGVs.** There may also be scope for some of the local authorities to work with freight and delivery businesses which operate in their local areas, to change current patterns and reduce pollution. Operators of HGVs and LGVs might improve deliveries by changing the timing of deliveries or the route, improving loading options, or upgrading to ultra low, zero emissions or alternatively fuelled vehicles. Alternative transport modes such as rail or water may be an option for some commodities. Local authorities could also consider making better use of freight consolidation centres or promoting new ones, with low or zero emission last mile delivery, so that fewer vehicles need to enter congested urban centres. Since late 2016 up to £4m funding has been available for low emission vans and HGVs between 3.5 and 44 tonnes, which are eligible for Plug-in van grants worth up to £20,000 for the first 200 vehicles purchased using the grant.
39. **Retrofitting technologies:** Retrofitting refers to all or part of an engine being modified with pollution-reducing and/or fuel saving technologies. Some retrofitting technologies have the potential for significant reductions in emissions of NO₂ (as well as other emissions). The majority of retrofitting in the UK to date has focused on large vehicles such as buses. It may be particularly relevant for third wave local authorities to consider retrofitting buses where the cause of the NO₂ exceedance on a particular road is large numbers of buses: in such cases, retrofitting buses on that specific route could reduce levels of pollution. Local authorities would need to consider industry capacity to retrofit vehicles in the timescale required.
40. **Increasing the uptake of low emission vehicles.** The government is already supporting local authorities to encourage the take up of ULEVs through its Go Ultra Low City Scheme, where eight authorities (among them Oxford, which is one of the third wave local authorities) are trialling local measures and incentives such as preferential parking schemes, demonstrating ULEV uptake in their own fleets, and providing a range of electric chargepoint options, including for those without off-street parking. The government is also providing funding to authorities across the country to support ultra low emission taxis and buses and related chargepoint infrastructure. In addition, the 2017 Autumn Budget announced further measures to support consumer demand for ultra low emission vehicles, including the creation of a new £400m Charging Infrastructure Investment Fund (£200m government investment to be matched by private investors), regulatory measures to accelerate the deployment of chargepoints and an extra £100m for the Plug-In Car Grant. Local authorities will need

to consider how any measures to increase the uptake of low emission vehicles could be targeted to reduce NO₂ emissions on road links with exceedances.

Case Study: West of England Partnership – freight consolidation

The Department for Transport's Local Sustainable Travel Fund enabled the expansion of a pre-existing freight consolidation centre for Bristol and Bath, operated by DHL. During 2014/15, the freight consolidation scheme served 133 retailers in Bristol and Bath, preventing over 2,074 delivery trips to the two city centres and saving carbon dioxide emissions estimated at over 23,000 tonnes. In 2016, the annual NO_x emission reductions in Bristol alone was 358.62kg.

Question 6: Could working with local businesses and accessing clean technology help achieve compliance with legal limits for NO₂ in the shortest possible time in any of the roads with an exceedance in the third wave local authority areas? We welcome views on how government can support local authorities to work with business to reduce pollution. If your response refers to a particular local authority or local authorities, please make this clear.

How you can have your say

Who can respond?

41. This is a public consultation which is open to anyone with an interest in providing comments. It is likely to be of particular interest to local authorities, environmental groups, the transport and public health sectors, and other organisations with an interest in air quality.

How to respond

42. This consultation will run for 4 weeks from 29 May 2018 to 23:59 on 26 June 2018.
43. When considering the content set out above, please consider the questions listed below, which form the basis of this consultation.
44. Please respond to the consultation through <https://consult.defra.gov.uk/airquality/supplement-to-the-uk-no2-plan> or by emailing AirQualityPlanSupplement@defra.gsi.gov.uk.
45. You are encouraged to provide full answers that explain your opinions fully.
46. The Government will aim to publish a summary of responses within 12 weeks of the consultation end date.

Questions for consultation

Question 1: Are there other measures not set out in the list above that should be considered in order to help achieve compliance with legal limits for NO₂ in the shortest possible time in any of the roads in exceedance in the third wave local authority areas? Please provide any appropriate evidence to support your proposal. Any proposals should take into account the assessment criteria set out in the next section. If your response refers to a particular local authority or local authorities, please make this clear.

Question 2: Are there other secondary objectives that should be taken into account when choosing between proposals which deliver compliance in the third wave local authority areas in the shortest possible time?

Question 3: Could encouraging the use of public transport, cycling, walking, park and ride schemes and/or car clubs help achieve compliance with legal limits for NO₂ in the shortest possible time on the roads in exceedance in any of the third wave local authority areas? We welcome views from stakeholders on how government can support the local authorities in implementing such measures. If your response refers to a particular local authority or local authorities, please make this clear.

Question 4: How can any of the third wave local authorities encourage local people to choose less polluting forms of transport? If your response refers to a particular local authority or local authorities, please make this clear.

Question 5: Could measures to optimise traffic flow help achieve compliance with legal limits for NO₂ in the shortest possible time in any of the roads with an exceedance in the third wave local authority areas? We welcome views on how government can support local authorities in implementing such measures. If your response refers to a particular local authority or local authorities, please make this clear.

Question 6: Could working with local businesses and accessing clean technology help achieve compliance with legal limits for NO₂ in the shortest possible time in any of the roads with an exceedance in the third wave local authority areas? We welcome views on how government can support local authorities to work with business to reduce pollution. If your response refers to a particular local authority or local authorities, please make this clear.

Confidentiality and data protection

47. A summary of responses to this consultation will be published and placed on the Government website at: www.gov.uk/defra.
48. The summary will include a list of names and organisations that responded but not personal names, addresses or other contact details. Information provided in response to this consultation document, including personal information, may be subject to publication or release to other parties or disclosure in accordance with the access to information regimes e.g. Freedom of Information Act 2000 (FOIA) and the Data Protection Act 1998.
49. If you want information, including personal data, that you provide to be treated as confidential, please say so clearly in writing when you provide your response to the consultation why you need to keep these details confidential. If we receive a request for disclosure under the FOIA, we will take full account of your explanation, but we cannot provide an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as a confidentiality request.
50. This consultation is being conducted in line with the “Consultation Principles” as set out in the Better Regulation Executive guidance which can be found at: <https://www.gov.uk/government/publications/consultation-principles-guidance>.
51. If you have any comments or complaints about the consultation process, please address them to:

Consultation Co-ordinator
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17 Smith Square,
London, SW1P 3JR.

Or email: consultation.coordinator@defra.gsi.gov.uk.