

Leeds Air Quality Strategy 2021 – 2030

Date: 21 July 21

Report of: Director of Resources

Report to: Executive Board

Will the decision be open for call in? Yes No

Does the report contain confidential or exempt information? Yes No

What is this report about?

Including how it contributes to the city's and council's ambitions

- In October 2020 Leeds was determined as being compliant with legal limits of Nitrogen Dioxide (NO₂) emissions. This outcome was a direct result of the level of fleet upgrade in the city since the announcement of the Leeds Clean Air Zone and was substantially aided by financial support packages issued by the Council with Clean Air Funding.
- The Council recognises that it must remain vigilant in tackling emissions from transport and in this respect it has made significant progress through:
 - Over £7.9 million paid to businesses to help them upgrade their fleet. This has resulted in a shift from less than 10% of taxis and private hire being hybrid or electric to over 50% of the fleet; over 90% of buses and over 85% HGVs being compliant.
 - Delivery of 35 Dual 50kW Rapid Electric Vehicle Charge Points (EVCPs). Since the first Rapid EVCPs was installed in late 2019 enough electricity to power 2.8 million miles of zero emissions driving has been discharged on this network alone.
 - Secured government funding to deliver residential electric vehicle charge hubs in areas that lack off street parking.
 - Installation of Electric vehicle charge hubs at the new Stourton Park & Ride and in Leeds Districts (due to complete by Summer 21).
 - Mandated installation of EVCPs in new developments in the Planning process.
 - Operation of a UK first 'try before you buy' Electric vehicle scheme for businesses, offsetting over 200,000 petrol/diesel miles. The scheme has already led to companies investing in their own electric vehicles.

- Operation of an electric bike 'try before you buy' scheme.
- Electrification of the Council's own fleet – currently operating the greenest fleet of any local authority with 332 electric vans in operation.
- Whilst transport is a significant contributor to poor air quality, it is not the only contributing factor. Consequently, the strategy brings into scope other harmful pollutants from other sources for targeted action and sets out the Council's approach to emissions from the Home, from Industry, Domestic and Agricultural activities.
- Reducing emissions and improving air quality directly contributes to two strands of the Best Council plan: Sustainable Infrastructure & Health and Well-Being. Measures that improve air quality usually have a positive carbon reduction impact. Accordingly, actions delivered under this strategy will also support the Council's net zero ambitions to meet the challenge of the Climate Emergency.

Recommendations

Executive Board is asked to:

- Approve the 2021-2030 Air Quality Strategy action plan (Appendix 1).
- Accept an annual progress report that confirms projects delivered and refreshes the air quality targets accordingly.
- Approve the extension of the Electric Vehicle trials service from October 21 to March 22.
- Support the development of a business case to bring electric vehicles on to the refuse fleet as part of the standard fleet replacement programme with the aim of bringing the first electric RCV onto fleet in 2022.
- Support a collaborative approach for action to address the direct impact of air pollution on health.
- To note that the Chief Officer, Sustainable Energy & Air Quality will be responsible for any actions arising and subsequent implementation.

Why is the proposal being put forward?

- 1 In 2015, the government identified Leeds as being non-compliant with legally binding limits on Nitrogen Dioxide and mandated Leeds City Council to introduce a charging Clean Air Zone. In response to this, the Council brought forward proposals for a charging Clean Air Zone proposal to achieve compliance with legal limits in the shortest possible time. The consultation and funding from government was premised on the measure being required to achieve compliance. The funding support coupled with the potential to be charged for driving polluting vehicles was the catalyst for a rapid transition to cleaner vehicles, which meant that compliance was achieved without the zone needing to come into effect. Without a basis for charging vehicles to achieve compliance, the CAZ was withdrawn. The Council has never accepted that legal compliance is sufficient in itself and therefore the work to improve air quality continues.

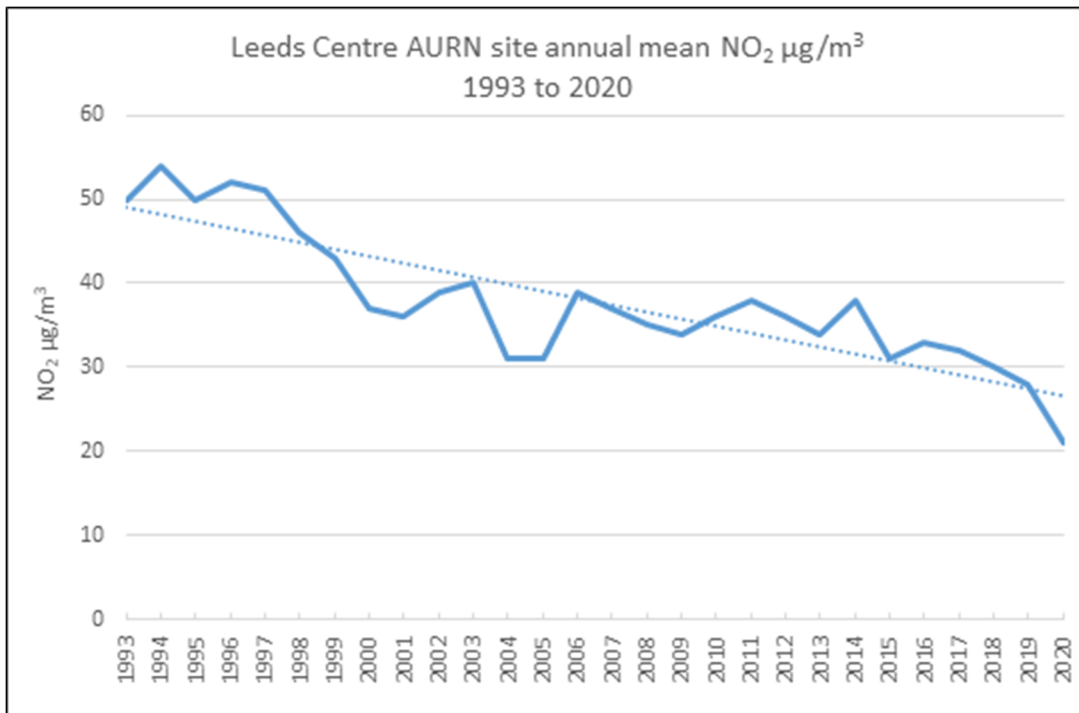
- 2 In October 2020 the Council made a commitment to bring forward a long-term air quality strategy in 2021 to assist in ensuring ongoing compliance with legal limits of NO₂ emissions, and to bring about further air quality improvements and associated benefits for Leeds citizens and visitors to the City aligned with World Health Organisation (WHO) targets.
- 3 Air quality is the largest environmental health risk in the UK. Air pollution levels shorten life and are linked to many forms of ill health, including higher risk of respiratory and cardiovascular diseases, especially for more vulnerable groups such as children and the elderly. Health can be affected both by short-lived, high-pollution events and by long-term exposure to lower levels of pollution. There are many actions that individuals can take that will collectively make a big difference to reducing emissions locally and nationally. Effective communication of health messages about air pollution and appropriate action can save lives and improve quality of life for many.
- 4 The recommendations contained within this report will provide a framework for continued compliance and improvement of the City's air quality.

What impact will this proposal have?

Wards Affected: All

Have ward members been consulted? Yes No

- 5 Over the course of the last five years there have been significant improvements in air quality across the city. More than 90% of buses and 80% of heavy goods vehicles now use cleaner Euro VI engines, a huge increase from the 3% of buses and 20% of HGVs that did so in 2016.
- 6 Ultra-low emission vehicles (electric, hybrid, hydrogen or liquid petroleum gas) are also surging in popularity among Leeds residents and businesses, having increased ten-fold since the start of 2016. The Department for Transport data shows that up to Q4 2020 there had been an increase of over 5,000 Ultra Low Emission vehicles registered in Leeds since Q2 of the same year, with 14,293 plug-in vehicles registered.
- 7 More than 2,300 of the city's licensed taxi and private hire cars are now ultra-low emission, up from around 830 in 2018.
- 8 The consequence of fuel switching, modal shift, and improvements in Internal Combustion Engine technology have resulted in improving air quality trends over time. The graph below shows measurements from our city centre monitoring equipment:



9 Through implementation of the Air Quality strategy we aim to continue reducing pollution levels in the city. Reducing levels of pollution will enable us to achieve the following objectives:

- To remain legally compliant with emissions of NO₂ and through further actions that we take we will reduce emissions further as far as possible.
- To eliminate Air Quality Management Areas (AQMAs) in the city.
- To achieve and continue to meet compliance with the WHO targets for PM_{2.5} and maintain compliance with the WHO targets for PM₁₀.
- To take pro-active action to address other harmful emissions.
- To work citywide, helping to reduce health inequalities.
- To ensure that citizens and other stakeholders are well informed about indoor and outdoor pollutants and how to mitigate exposure and reduce their own contribution.
- To use data to select the right interventions.

Progress and outcomes will be measured annually and reported to the Executive.

10 To aid in achieving the above objectives an Air Quality action plan (attached at Appendix 1) has been developed to enable the Council to record and track deliverables that will reduce emissions over time. The plan is intended to be dynamic and will be updated regularly and refreshed annually.

11 The plan includes the following headings:

- a. Transport
- b. In the Home
- c. Industry and Agriculture
- d. Public Health

e. Overarching

12 The activities and projects set out in the plan align to the following work-streams:

- Data and Intelligence
- Communications / Engagement / Awareness raising
- Alternative Fuel / Modal Shift
- Enforcement

13 The following paragraphs provide a summary of the plan:

a) Transport

14 The 'transport' section of the action plan primarily aims to ensure that the Council continues to reduce emissions of NO_x from transport, and brings into sharper focus the requirement to deliver projects that have a beneficial impact on levels of Particulate Matter, particularly PM_{2.5}. It is understood that particulates from transport are largely generated by tyre degradation, as such modal shift to alternative modes of transport, particularly active travel, are essential to reducing particulates.

15 Under this strand of the strategy, the Council will deliver a range of projects, including but not limited to:

- Connecting Leeds Active Travel / Highways / Improved Public Transport initiatives (the Transport Strategy that has recently been consulted on aims to increase walking by 33%, cycling by 400%, and bus patronage by 130% by the year 2030).
- Extension of the EV trials service to March 2022
- Development of a Hydrogen fuel switching strategy
- Transition of the Council's refuse collection fleet to electric / hydrogen over the next 5 years in line with the fleet replacement programme

16 As part of the development of the new waste depot suitable recharging infrastructure has been installed that will have the capacity to support up to 20 e-RCV charge bays. There are three refuse collection vehicles that are due to be replaced in this financial year and as such, the process to procure this small number of e-RCVs would enable both the council the opportunity to pilot their operational functionality and to collate more accurate data to support any further investment. Up to 15 further refuse collection vehicles will be due for replacement in 2022/23 when the existing fleet reach 7 years of age. The Energy Savings Trust have been engaged with regarding the development of the business case for e-RCV's to provide support and external evidence.

17 In addition to the strategic projects above there are a range of actions directly targeting increased use of active travel modes through e-bikes, cargo bikes and other sustainable means. Further, planning applications for new development are expected to include mitigation for air quality impacts and proposed parking spaces must provide electric vehicle charging points.

b) In the Home

- 18 The 'in the home' section directly targets particulates in the home, but also brings into scope Volatile Organic Compounds (VOCs) which mainly arise from household cleaning and personal care products. In respect of particulates, 38% of PM_{2.5} emissions occur within the home, compared to 12% coming from transport. These statistics are primarily driven by the growing popularity of wood burners. A study undertaken by the University of Sheffield identified the following:
- Average particle levels rose with a wood burner to between 27-195 micrograms per cubic metre of air – the WHO limit is 25µg/m³ over 24 hours.
 - Almost half (46%) indoor burners in the UK are owned by the highest A/B social grades.
 - There is a limited understanding from these households of the impact on air quality
 - Only 1/3 of people with indoor burners felt concerned about the impact it would have on their health and the health of others.
- 19 Consequently, raising awareness of AQ issues within the home is of paramount importance from a health perspective.
- 20 Activity in this area is largely focussed on data gathering and raising awareness due to home-based emissions being a new and emerging area of focus, with a view to developing tangible actions to deliver in future iterations of the action plan.

c) Industry and Agriculture

- 21 Environmental Health has a statutory role regarding air pollution, prevention and control work that includes ensuring that certain industrial processes in the city are following best practice models to reduce emissions where practically possible. This function includes provision of related permits to around 200 sites across the city. Environmental Health actions are outlined in the industry section of the Leeds Air Quality Plan. The plan also contains an action for Environmental Health to establish a baseline for quantifying and identifying agricultural practices in Leeds and their impact on air quality. This will then inform how the Council can better understand both Industrial and Agricultural pollution impacts and develop ongoing opportunities to influence and shape best practice in these sectors.

e) Public Health

- 22 This section sets out the framework for ensuring that Council departments and partner agencies with influence on Air Quality outcomes are joined up with Public Health, and ensures that processes for monitoring of health impacts and health outcomes are embedded.

f) Overarching

- 23 The overarching actions have cross-cutting themes focussing mainly on the importance of improving data/intelligence and raising awareness of air pollution on health.
- 24 To measure emissions the Council currently operates:

- Ten real time NO₂ monitors which allow the 1-hour mean air quality objective to be assessed as well as the annual mean air quality objective.
- Three real time PM monitors which allow the 24-hour mean and annual mean air quality objectives to be assessed.
- One real time SO₂ monitor which allow the 15- minute mean, 1-hour mean and 24-hour mean objectives to be assessed.
- Approximately 260 diffusion tubes which provide a monthly and annual concentration for NO₂.
- Project specific diffusion tube sampling for new transport schemes.

25 In terms of communication and engagement there will be a particular focus on engaging the medical profession in a variety of different ways, for example through promotion of supporting literature and the delivery of a Medical Conference certified by the Royal College of Medicine.

26 By delivering the overarching actions we can improve our data and insight to develop relevant campaigns and target interventions where they are needed the most.

g) Government Asks

27 It's clear that support is required from Central Government to enable the Council to continue to meet its obligations in respect of managing air quality in the city. The asks to Central Government are set out below:

- Requirement for better information regarding emissions from industrial point sources to establish clear baselines from which to determine and measure improvements. Government to obligate industry to publish its actual emissions as opposed to its allowance.
- Support and investment to relocate and update the MET mast equipment to facilitate data and intelligence regarding the impact of sources of origin and pollution episodes in conjunction with weather conditions.
- An immediate need exists to tighten building regulations on energy efficiency and carbon reduction at a national level to support local planning guidance and implementation of clearer and more stringent requirements of developers both domestic and industrial.
- Support to offer greater flexible public transport ticketing.
- Government support for the West Yorkshire Mayoral campaign for bus deregulation.
- Increased funding to deliver:
 - Active travel initiatives, including school streets and other similar initiatives
 - Alternative fuel infrastructure, including hydrogen and the electric charging infrastructure
- Additional national campaigns, legislation and associated fines for idling.
- Updating and amending national guidance and training programmes (including refresher training) to physicians and medical professional through national representative bodies (GMC etc.) and all training institutions highlighting the risks

and how to communicate to patients with specific conditions ways to manage and reduce their exposure to poor air quality in general and also response to specific events.

- 28 The Council will use its existing officer and political networks in its lobbying efforts to increase support for the asks outlined above.

Social and Equality Impacts

- 29 The improvement of air quality will have a positive impact on residents facing poverty and inequality in the district. These residents generally live in inner-city areas which suffer from poorer air quality through a combination of intensive traffic corridors, industry and the concentration of development. There is strong evidence that greater exposure to air pollution is correlated with a greater risk of developing long term health conditions. Poor health is linked to time off work and reduced productivity and can contribute to lower income. By implementing the air quality strategy, the Council will improve the health of residents facing poverty and inequality and balance these areas with more affluent parts of the city which enjoy relatively good air quality.
- 30 The National Clean Air Strategy 2019 acknowledges that deprived communities are more likely to experience adverse health effects from poor air quality because they are more exposed to air pollution, for example, by being close to major roads. Public Health England recognises a lack of access to green space as a health inequality. Researchers at Imperial College London and the National Institute for Public Health and the Environment in the Netherlands found big differences in air pollution across communities in England, with deprived areas and those with high ethnic minority representation the worst affected. The research highlighted the fact that inequalities in exposure to air pollution are mainly an urban problem, suggesting that measures to reduce environmental air pollution inequality should focus on cutting vehicle emissions in deprived urban neighbourhoods.
- 31 Equality, diversity, cohesion and integration issues have been described in further detail in the attached EIA. In summary, the EIA concludes that poor air quality has a disproportionate effect on Black and Minority Ethnic communities as they are more likely to live in inner-city areas with poorer air quality. Children (can be particularly adversely affected. Older people are also more susceptible to the health impacts of poor air quality and there is some emerging evidence of the increased prevalence of dementia. There are no discernible specific impacts of air quality on the protected characteristics of gender identity, sexual orientation, and sex.
- 32 One of the main issues with regards to equality is that of communicating appropriately and reaching all parts of the community in a clear and understandable way on how they can reduce their exposure to air pollution and reduce emissions. This will include engaging with health professionals, equality hubs, ward councillors, the Locality team and ensuring the strategy and communications are clear and accessible to all.

What consultation and engagement has taken place?

- 33 Significant statutory and non-statutory consultation was carried out to inform the development of the Leeds Clean Air Zone proposals. There was a huge emphasis on Air Quality related issues in this consultation and it generated one of the largest responses that Council has ever had to a consultation exercise. Much of the activity carried out to date to get to a position of legal compliance with NO₂ has been driven by carefully considering the replies and shaping the outcomes because of those consultation exercises.

- 34 Whilst additional public consultation is not legally required for the purpose of this Air Quality strategy, given the clear benefits that arise from it, the Council has undertaken the following:
- Report to the Executive in October 2020.
 - Liaison with stakeholder groups in the City.
 - Contact with members of the public and academia.
 - City-wide Clean Air Leeds communications campaign.
 - Ipsos Mori NO₂ plan user-research.
- 35 The consultation carried out so far reveals support to the continued legal compliance with NO₂ levels however, many stakeholders wish to see the Council go further due to the health and equality benefits that improving air quality delivers.

What are the resource implications?

- 36 The Council was successful in retaining over £5m Clean Air Funding following the joint decision between the Council and Central Government to discontinue the Leeds Clean Air Zone in October 2020. c£5m of this funding has been earmarked for a series of financial support grants to operators of Heavy Goods Vehicles, Non-scheduled Buses and Coaches, and Taxi and Private hire vehicles which will deliver continued air quality improvements over the short term.
- 37 Staff in the Sustainable Energy & Air Quality service are also funded for the remainder of this financial year, this allows for capacity to manage the existing financial support schemes and to mobilise the delivery of actions contained within the strategy.

What are the legal implications?

- 38 The requirements of the Air Quality Directive have, in 2020, been met by Leeds City Council. It is nonetheless obliged to ensure that compliance is maintained thereafter. The steps outlined in the Air Quality Strategy provides for a non-statutory mechanism to ensure continued compliance and offer improved Air Quality for the citizens of Leeds.
- 39 The matters contained within this report are open for Call In.

What are the key risks and how are they being managed?

- 40 Air Quality is recorded as a risk on the Council's corporate risk register and is reported on a regular basis. Recently the impact and probability of the risk has been reduced due to Air Quality improvements in the City.
- 41 In the unlikely event of a deterioration in NO₂ emissions the Council could be re-mandated to implement a Clean Air Zone. The key risk area in this regard is the City's bus fleet. It is imperative that the private operators that work in the City maintain a high percentage of Euro 6 or better vehicles on fleet. Discussions with Bus Operators in this regard thus far have been largely positive, specifically the risk of a perverse impact from the Bradford CAZ will continue to be discussed and managed.
- 42 Central Government may take a decision to make the current legislation tighter in respect of NO₂ emissions. The AQ action plan will ensure the Council can respond positively if any changes occur.

- 43 In the unlikely event of breaching the Air Quality Directive requirements, the Council will need to take the necessary steps to ensure that compliance is achieved in the shortest time possible. This is a continuing obligation.

Does this proposal support the council's 3 Key Pillars?

Inclusive Growth

Health and Wellbeing

Climate Emergency

- 44 Inclusive Growth: Clean Air supports the Inclusive Growth agenda by addressing health inequalities which can create barriers to work, training, and education.
- 45 Health and Wellbeing: It is well documented that poor air quality leads to adverse health outcomes. Any improvement to air quality or limitations to exposure have positive health outcomes.
- 46 Climate Emergency: Most measures that target reductions in pollution also have a positive carbon reduction impact. For example, meeting compliance with NO₂ limit values was estimated to have achieved a 47,594t carbon saving. Individual measures and projects delivered under the umbrella of the Air Quality will have a carbon impact assessment as part of the business case in order that the benefit is recorded.

Options, timescales and measuring success

a) What other options were considered?

- 47 Option 1: Do nothing. This option was discounted because there are no safe levels of air pollution and continual improvement is required to ensure positive health outcomes for all citizens and visitors to the City.
- 48 Option 2: Disseminate the remaining Clean Air Funding and stop there. This option was discounted because it only focusses on Transport related emissions from specific segments of the fleet and does not take into account other sources of air pollution. Nor does it allow the scope to include wider actions that can be taken to address the cleanliness of the City's fleet.
- 49 Option 3: Consult on introducing a strengthened Clean Air Zone. In order to do this, consultation would have to be started from scratch as the new proposal would no longer be about achieving compliance but improving air quality. If there was support for this proposal, it is highly unlikely that there would be government funding available for its implementation or to support vehicle upgrades because the city is already compliant with legal levels of NO₂. As a result this option is not considered viable. There are however further air quality improvements being considered as part of the new Transport Strategy.
- 50 Option 4: Develop a long-term air quality strategy. This option was selected because it offers a holistic and sustainable approach to tackling a broader range of emissions and exposure.

b) How will success be measured?

- 51 Overarching implementation of the Action Plan will sit within the Council's Sustainable Energy & Air Quality service. The service will meet with task owners on a regular basis to track progress and update the plan.

- 52 Progress will be reported to the Executive on an annual basis.
- 53 PM and NO₂ monitoring stations are in place to ensure ongoing NO₂ compliance and to record any changes.
- 54 Diffusion tubes will continue to be utilised at strategic locations around the city. Data from diffusion tubes will inform any required interventions.
- 55 Quarterly fleet make-up monitoring via the National NO₂ plan using ANPR cameras (CAZ network).
- 56 A reduction in the number of AQMAs with an aim to eventually eradicate all AQMAs.
- 57 Implementation of the Air Pollution and Health Action Plan under the governance of the Leeds Health Protection Board.
- 58 Increased awareness about the issues associated with wood burners and other sources of burning.

c) What is the timetable for implementation?

- 59 Upon the recommendations being approved by the Executive, implementation of the Air Quality Strategy Action Plan can occur instantly. Resources are in place to start delivery of the actions contained with the Strategy.
- 60 The Action Plan will be refreshed every 12 months with an accompanying report to the Executive to report progress.

Appendices

- 61 Appendix 1: Leeds Air Quality Strategy action plan 2021 – 2030 (Revision 1).
- 62 Appendix 2: Equality and Diversity Impact Assessment

Background papers

- 63 None.