

Improving Air Quality in Leeds

**Draft Scrutiny Report
May 2017**



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Introduction and Scope

Introduction

1. Air pollution in the UK is now regarded as the largest environmental risk linked to deaths every year and yet it is evident that general public awareness of the impacts of poor air quality on their health is lower compared to other health issues such as smoking or obesity.
2. At the beginning of the municipal year, the then-Director of Environment and Housing and the Executive Member for Environment and Sustainability raised the need to improve air quality as a key local priority for the Council and one which would benefit from further Scrutiny by the Environment and Housing Scrutiny Board.
3. In agreeing to undertake an inquiry into this matter, we also acknowledged the cross-cutting nature of this area of work and therefore extended invitations to the City Development and Adult Social Services, Public Health and NHS Scrutiny Boards to contribute to this inquiry too.
4. In scoping terms of reference for this inquiry, we were mindful of the work already being undertaken as part of the Council's existing breakthrough project on cutting carbon and improving air quality. As such, we sought to help inform and add value to the work of the breakthrough project and avoid duplication of effort. Linked to this, we also acknowledged that a Leeds Air Quality Action Plan was already in existence. We therefore agreed to also assess the progress made to-date in implementing this Plan and, as a live document, help to determine whether this Plan remains fit for purpose.
5. Importance was also placed around the need to comply with evolving national policies surrounding air quality. In particular, we were mindful of the Government Plan to improve the UK's air quality, as published by Defra in December 2015. Within this UK Plan, the Government set out its aims to reduce health impacts and crucially to also fulfil legal obligations to meet EU Directives on emissions. This Plan also set out the Government's intention to implement a new statutory programme of Clean Air Zones. Linked to this, a Joint Air Quality Unit involving Defra and the Department for Transport was also established to co-ordinate the implementation of the Clean Air Zones across the UK. In particular, its role was to support local authorities in their own planning for delivery of Clean Air Zones through providing financial, legislative and traffic and air quality emission modelling expertise.
6. We therefore acknowledged that the Council was, and remains committed to, working closely with Defra to secure consensus with the Joint Air Quality Unit on agreed methodologies to progress this work and so we were keen to also focus on this specifically during our inquiry. However, as well as considering implications surrounding Clean Air Zones, we also recognised the need to explore more broadly the extent to which air quality issues are being considered in the development of the Transport Strategy for Leeds.



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Scope of the inquiry

7. The terms of reference for this inquiry were formally agreed by the Environment and Housing Scrutiny Board in September 2016 meeting. In accordance with these, we set out to consider the following:
 - The current understanding of the scale of air quality issues affecting Leeds, including mapping of existing air pollution hotspots across the city.
 - Progress made against the existing Leeds Air Quality Action Plan and its links with the West Yorkshire Low Emission Strategy 2016 to 2021 (WYLES).
 - The key features of the Defra UK Air Quality Improvement Plan, published in December 2015, and its implications for Leeds (including targets and potential sanctions).
 - Existing and potential mechanisms used to engage the public and various stakeholder groups on the issue of air quality and the potential solutions.
 - The extent to which air quality issues are being considered in the development of the Transport Strategy for Leeds, with particular reference to the proposed introduction of Clean Air Zones.
 - Other potential local solutions to reduce the health impacts of exposure to air pollution and to also comply with evolving national policies surrounding air quality.
8. A number of evidence gathering sessions were held, most of which were undertaken as working group meetings to provide greater flexibility in accommodating the wide range of contributors to our inquiry. All Scrutiny Board members were invited to attend each working group meeting, including those representing the other two contributing Scrutiny Boards.
9. The last evidence gathering session took place on 15th March 2017.

Best Council Plan

10. Linked to the Best Council Plan, we acknowledge that the successful implementation of the Leeds Air Quality Plan contributes to the Council's cutting carbon and improving air quality breakthrough project, directly contributing to the sub areas of making low carbon Leeds a reality by planning for a more sustainable future and setting a revised and improved carbon target for 2050.

Desired Outcomes, Added Value and Anticipated Service Impact

11. As set out within our introduction, the main objective of our inquiry was to help inform and add value to the work being undertaken as part of the Council's breakthrough project on cutting carbon and improving air quality. In particular, we reviewed the progress made



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against the existing Leeds Air Quality Action Plan as well as determining whether this Plan remains fit for purpose, particularly in response to evolving national policies surrounding air quality.

12. In undertaking this work, we have welcomed the contribution of a wide range of key stakeholders and professionals in this field. In acknowledging their on-going commitment in striving to improve air quality, it was pleasing to hear directly from them that their engagement in our inquiry had also been mutually beneficial.
13. We were particularly pleased to have the opportunity to engage directly with the Head of the Joint Air Quality Unit at Defra and also with representatives from Public Health England. In doing so, this enabled Scrutiny Board Members and other stakeholder representatives to share views and ideas with them, particularly around collaborative national and local approaches towards improving air quality.
14. However, we would like to stress that our inquiry report can only be reflective of the evidence presented to Scrutiny within a specific and short timeframe and that whilst we have been able to explore the level of progress made to-date, we remain mindful that there is still a significant amount of work yet to be undertaken in establishing and embedding long term solutions to improving air quality both locally and nationally.
15. We are also mindful that further detailed analysis work linked to the modelling of air quality around the city was still on-going at the time of our inquiry and that, once available, this data will also be used to help inform the Council's on-going work around identifying other potential local solutions.
16. We also acknowledge the recent publication and consultation surrounding the draft UK Air Quality Plan for tackling nitrogen dioxide ([Link to the UK Air Quality Plan - May 2017](#)) and the recent publication by Defra of the Clean Air Zone Framework, setting out principles for setting up Clean Air Zones in England ([Link to the CAZ Framework - May 2017](#)). However, due to the timing of their publication, we have been unable to reflect on the implications of these particular documents as part of our evidence base.
17. In view of the complexities surrounding this matter and the need to respond appropriately to evolving national policies associated with air quality, it was always going to be difficult for Scrutiny to be in a strong position at the end of this municipal year to formulate recommendations around appropriate solutions for improving air quality. As such, we have structured our report differently in terms of outlining the 'preliminary' findings of Scrutiny based on the evidence considered so far and linked to this we have also shared our views around what further considerations are needed in moving forward and establishing appropriate local solutions for improving air quality in Leeds.
18. We also strongly advise on-going Scrutiny involvement in this area of work by successor Scrutiny Boards. We believe that Scrutiny still has a key role to play in assisting the Council to meet the requirement of submitting a feasibility business case to the



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Government with proposed air quality measures by December 2018. Linked to this, it is vital that any proposed air quality measures contained within the business plan are being informed by robust data intelligence.

19. Throughout our inquiry, we have also been mindful of the pressure now being placed on the Government and consequently onto local authorities to have air quality measures put in place as soon as possible, with particular measures having tightly prescribed deadlines, such as Clean Air Zones, which Leeds is now required to have in place by the end of 2019. As such, Scrutiny also has a key role to play in ensuring that robust evaluation processes are in place to measure the impacts of each potential solution so that we can avoid any punitive measures that could have other unintended economic and health consequences on local businesses and residents.

Equality and Diversity

20. The Equality Improvement Priorities 2016 to 2020 have been developed to ensure that the council meets its legal duties under the Equality Act 2010. The priorities will help the council to identify work and activities that help to reduce disadvantage, discrimination and inequalities of opportunity to achieve its ambition to be the best city in the UK. Equality and diversity issues have therefore been considered throughout this scrutiny inquiry.



Preliminary Findings

21. In acknowledgement of the existing Leeds Air Quality Plan (see Appendix 1), we considered it appropriate to present our preliminary findings in alignment with the key enabling areas currently set out within the Plan. However, we have summarised our particular findings surrounding Clean Air Zones under a separate heading.

Developing our capability

22. Throughout our inquiry, we have continued to stress that any measures put in place to improve air quality must not be done at the expense of local businesses and residents. Linked to this principle, we note that the Government is putting the onus on local authorities to work closely with local people to create an approach which works for them.
23. As such, we were pleased to acknowledge that a key enabling factor reflected within the current Leeds Air Quality Plan is around developing our capability in understanding the scale of the problem to thereby identify appropriate measures and target these effectively.
24. Local Authorities are required to consider 7 pollutants when assessing air quality. Nitrogen oxides and particulate matter are of key concern – other pollutants include sulphur dioxide, carbon monoxide, lead, benzene, and 1.3 butadiene.
25. We acknowledge that detailed air quality monitoring has been carried out in Leeds for more than 20 years and that the Council now has a number of monitoring stations situated across Leeds collecting data on a range of pollutants. A map of these stations was shared during our inquiry.
26. We understand that particulate matter (both PM_{2.5} & PM₁₀) exposure levels across the city are meeting regulatory limits with monitoring stations at key sites showing Leeds is performing well against EU guidelines. However, local air quality monitoring shows nitrogen dioxide (NO₂) as the key pollutant of concern, with some areas exceeding regulations in terms of NO₂ concentrations. As such, we note that the majority of monitoring activity across the city continues to focus on tracking NO₂.
27. During our inquiry, we particularly stressed the need for robust monitoring to ensure that ‘hot spots’ and areas of particular concern are effectively being found and acted upon. We learned that the types of devices used for such monitoring are:
- Automatic monitoring stations –continuously monitor one or more pollutants in real time. Automatically transfer monitoring data. 10 situated across the city
 - Diffusion tubes – A simpler but less accurate monitoring method that measures the average level of NO₂ over a month. Approximately 70 across the city.



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28. We received a full list of monitoring stations across the city with accompanying data measurements arising from these monitoring stations. Interestingly we noted that the data was indicating that improvements have been made in the past 5 years, with concentrations of NO₂ generally reducing across the city.
29. However, we acknowledge that as part of the local Air Quality Monitoring Strategy, there are also Air Quality Management Areas (AQMA) where there is both higher than desired levels of pollution and where people are exposed to it for a significant time, predominantly through living in the area. Once established, each AQMA is assigned its own Air Quality Plan.
30. Leeds currently has 6 AQMAs, with the most recent declared in 2016. The full list of AQMAs can be found below – green indicating those recently revoked, and orange those newly included as AQMAs. All areas were declared due to annual average nitrogen dioxide (NO₂) concentrations being above the national Air Quality Objective of 40µg/m³. Linked to these, it was acknowledged that the principal source of this pollutant is vehicle emissions.

AQMA Name	Air Quality Objectives	City / Town		Area Description
6/2010 Queens Court, Morley	NO ₂ annual mean	1	Morley	Residential properties in Queens Court fronting and including Queen Street.
2/2010 Ladybeck Close	NO ₂ annual mean	2	Leeds	Residential properties - part of Ladybeck Close. Declared in 2001, but extended in 2010 to include Eastgate and York Road.
1/2010 Ebor Gardens	NO ₂ annual mean	3	Leeds	Residential properties on Burmantofts St. and Haslewood Close. Declared in 2001 and extended in 2010 to include Burmantofts St. and York Road.
3/2010 Caspar Apartments	NO ₂ annual mean	4	Leeds	Caspar Apartments. Originally declared in 2001, but extended in 2010 to include North St and slip road onto the A58(M)
4/2010 The Normans	NO ₂ annual mean	5	Kirkstall	Residential properties in the 'Normans' in the vicinity of, and including, Abbey Road.
5/2010 The Tilburys	NO ₂ annual mean	6	Leeds	Residential properties in the 'Tilburys' and 'Eustons' near to, and including, the M621 together with on and off slip roads.



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Main Street, Pool-in-Wharfedale	NO ₂ annual mean	7 Pool-in-Wharfedale	Residential properties adjacent to Main Street.
Chapel Hill, Morley	NO ₂ annual mean	8 Leeds	Residential properties fronting Chapel Hill, Morley.

31. However, at the time of our inquiry, we were informed that further detailed analysis work linked to the modelling of air quality around the city was still on-going and that, once available, this data will be used to help inform further work around identifying other potential solutions locally.
32. As part of the local Air Quality Monitoring strategy, we do welcome the Council's drive to ensure that not only are we aiming to measure air quality effectively, but we intend on using and sharing this data to provide opportunities to reduce emissions; drive new technology development and establish partnership working across education, public sector, health, business and third sector groups to ensure that all are supported and will drive the capability of the city to deliver the required emission reductions. However, we recognise that the other enabling factors reflected within the Leeds Air Quality Plan are also pivotal to achieving this effectively.

Improved Promotion and Profile

33. Air pollution is now associated with much greater public health risk than was understood even a decade ago, and more associated adverse health effects are emerging. As such, air pollution in the UK is now regarded as the largest environmental risk linked to deaths every year and yet it is evident that general public awareness of the impacts of poor air quality on their health is lower compared to other health issues such as smoking or obesity.
34. Public Health England's Health Protection and Medical Directorate, via its Centre for Radiation, Chemical and Environmental Hazards (CRCE) provide advice on the link between air quality and public health to government departments and local partners. As well as providing a written submission to our inquiry, we very much welcomed the attendance of a representative from the CRCE element of Public Health England to our third evidence gathering session.
35. We were informed directly by Public Health England that both long and short-term exposure to air pollution are known to adversely affect health. Short-term exposure (over hours or days) to elevated levels of air pollution can cause a range of effects including exacerbation of asthma, effects on lung function, increases in hospital admissions and mortality. Epidemiological studies have shown that long-term exposure (over several years) reduces life-expectancy, mainly due to increased risk of mortality from cardiovascular and respiratory causes and from lung cancer.



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36. We also learned that estimates of the 'fraction of all-cause mortality attributable to air pollution' are now included in the Public Health Outcomes Framework (PHOF) as an indicator. For Leeds, we were informed that an estimated 4.3% of all-cause mortality is attributable to air pollution. However, the impact is better understood in terms of lifetime lost to the population, currently estimated at around 6 months on average for each person in the UK. It is not known how this effect is distributed across the population, although much of the impact is linked with cardiovascular deaths, and it is likely that air pollution places an additional burden on many people, being a contributory factor in bringing deaths forward, rather than being the sole cause of death for individuals.
37. We have come to appreciate that attributing health outcomes from exposure to individual constituent pollutants in emissions is not simple. Whilst the most consistent and convincing evidence suggests an important role for fine particulate matter (PM_{2.5}) in causing the observed adverse health effects, other outdoor air pollutants such as nitrogen dioxide (NO₂) and ground-level ozone are also known to cause adverse health effects.
38. In relation to NO₂, particularly at high concentrations, it was highlighted that this is a respiratory irritant that can cause inflammation of the airways (for example, cough, production of mucous and shortness of breath). We also understand that studies have shown associations of NO₂ in outdoor air with reduced lung development (lung function growth) and respiratory infections in early childhood and effects on lung function in adulthood.
39. We were particularly interested to note that the Committee on the Medical Effects of Air Pollutants (COMEAP) has also been considering how to quantify the mortality associated with long-term average concentrations of NO₂. Once complete, COMEAP is expected to publish its final recommendations on its website, which will provide further evidence of the benefits to public health that can feed into the Council's own efforts to raise awareness and seek to lower exposure to air pollution.
40. However, as well as targeting defined areas where exceedances of the air quality standard objective for NO₂ have been observed, Public Health England were particularly supportive of putting in place measures that will improve air quality as a whole. It was felt that attention to improving air quality over the wider area also acknowledges its transient nature; whereby the negative effects of air pollution may occur at locations other than where the emissions occur. It was also stressed by Public Health England that as there are no thresholds of effect identified for NO₂ and particulate matter, health benefits can be expected from improving air quality even below concentrations stipulated by EU and UK standards.
41. Whilst there are complexities surrounding the health impacts of various air pollutants, we believe that associated health messages and communication mechanisms should remain simple. By having a simple means of gathering clear information of the effects



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of air pollution in the local population, this will help empower people to make informed decisions on how to reduce exposure and if required, to better manage their health conditions.

42. Linked to this, we note the national Air Quality Index, which was developed by the COMEAP and is based on health evidence. Within this simple index, the 'Low' bands indicate air pollution levels where it is unlikely that anyone will suffer any adverse effects of short-term exposure, including people with lung or heart conditions who may be more susceptible to the effects of air pollution. The 'Moderate' band represents levels of air pollutants at which there are likely to be small effects for susceptible people only. Values for the 'High' bands are associated with significant effects in susceptible people. At 'Very High' levels of air pollution even healthy individuals may experience adverse effects of short-term exposure. This approach is beneficial for the general population as well as those with existing health conditions as it enables them to reduce their personal exposure by avoiding areas of higher pollution.
43. Public Health England also shared examples of other successful health communication services linked to air quality, which included services such as airTEXT, airALERT and the 'Know and Respond' service in Scotland. All of these services provide free information to everyone about the quality of outdoor air they breathe.
44. During our inquiry, we paid particular attention to the Council's own communication strategy as part of our scheduled Board meeting in December 2016. In doing so, we noted the 4 overarching themes of this Strategy - Raising awareness and sharing information; Consultation and engagement activity; Promoting active partnerships; and Organising events and activities. At that stage, the process to create a brand and strapline to the Council's campaign had started. However, since then, we acknowledge that the 'Clean Air Leeds' brand has now been launched. Linked to this, we welcome the use of the Council's website in setting out the Council's own progress in this area as well as signposting businesses to register their interest in the Council's air quality pledges and providing links to other informative websites, including Defra's Air Information Resource site, which includes a link to the aforementioned Air Quality Index.
45. However, we note that further work is still required linked to the second phase of website development, as outlined in December. In particular, we acknowledge that there is on-going work to maximise the use of social media so that the Council's messages are reaching as wide an audience as possible.
46. In consideration of the 'consultation and engagement activity' strand of the Strategy, we acknowledged that key stakeholders have been identified under 3 categories: businesses, residents and schools (parents and children). We noted and welcomed the wide range of existing and planned engagement activity linked to the Strategy. In particular, we were pleased to acknowledge the work being undertaken with schools as we recognise that much can be achieved in terms of educating children and



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encouraging them to ask their parents to make the right choices for their commute to school. During our inquiry, we welcomed the contribution of a Head Teacher whose primary school had piloted a 'Green Week' initiative that had a particular focus on Air Quality. In acknowledging the success of this initiative, we also discussed how the Council could assist in rolling out this initiative to other schools. By developing a menu of resources based on a modular approach, it was felt that this would enable Schools to have greater flexibility in driving forward the initiative themselves and also without the need for expensive specialist advisers. We are therefore pleased that the Council remains committed to strengthening partnership working with local schools, particularly in terms of also encouraging walking/cycling to school, a ban on engine idling near schools, and various other educational and awareness raising activities.

47. Linked to this particular enabling factor around improved promotion and profile, we recognise that in order to aid behaviour change, it is vital that we do achieve a greater level of acceptance so that actions and understanding go hand in hand. However, it should not just be about scaring people to change. It is important that we inspire people to change and to do that, we also need the innovation for alternative choices as well as the infrastructures in place to aid behaviour change.
48. Until residents, businesses and schools are aware of both the issues and the steps they can take to reduce their exposure, primarily through a modal shift to sustainable transport; the figures for premature deaths and health complications caused by pollution are unlikely to improve and could well continue to rise. This therefore brings into play the other enabling factors that are set out within the Leeds Air Quality Plan.

Increase the use of sustainable modes of transport

49. We acknowledge that the car is the most dominant transport mode within Leeds, accounting for 44% of journeys in 2011. It is evident that traffic congestion exacerbates emissions of air pollutants and yet we note that traffic levels and journey times are forecast to increase with housing and employment growth.
50. To improve the quality of air in Leeds, a modal shift to sustainable forms of transport is therefore vital. This means encouraging stakeholders to switch from jumping in the car each time they travel, to using public transport or active travel where possible, such as cycling, running or walking. Active travel options in particular will also help improve physical activity levels and will provide additional public health benefits too.
51. In trying to encourage more of Leeds' residents to use the public transport system to travel, it is clear that improvements must be made to the system in order to make it a more convenient, cost effective and therefore sustainable option.



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52. We heard directly from the Leeds Chamber of Commerce, who had also played an active role in the 'Transport Conversation' last summer and made a formal submission on behalf of its members. In particular, we noted that through their conversations with the business sector, employees would consider public transport alternatives if journey times, passenger comfort and convenience were guaranteed. As such, developing a more reliable public transport network would help to reduce commuter journeys.
53. During our inquiry, we therefore considered information surrounding current levels of the Bus, Train and Taxi and Private Hire (TPH) transport systems in Leeds, and updates on the actions planned to improve each particular segment.
54. In relation to the train transport system, we note that Leeds train station experienced 30 million passenger entries and exists between April 2015 and March 2016. We therefore acknowledge that the rail network is incredibly important to West Yorkshire's people, businesses and the economy. The train operators that use Leeds station are Northern, TransPennine Express, Cross Country, East Midlands Trains and Virgin East Coast Trains.
55. In terms of planned actions, we learned of the benefits that the new franchising of Northern and TransPennine Express will bring to Leeds passengers, which include a 52% increase in the number of seats on the TransPennine Express trains serving Leeds during the morning peak, thanks to longer trains and more frequent services. There will also be a 40% increase in the number of passengers that can be carried on Northern trains.
56. However, in Leeds, we acknowledge that buses are an essential component of the transport network and are the most used form of public transport. 15% of working residents travel to work by bus, compared with 3.5% of them using trains. They also provide a vital service to those without a car (currently around 32% of households). As such, we note that as part of a Public Transport Improvement Programme, £180m will be invested in bus travel in Leeds and the key points of this programme were shared during our inquiry.
57. Overall we recognise that failure to provide an adequate public transport system in supporting Leeds as a growing city and which connects communities and neighbourhoods, risks residents and businesses – particularly those in the suburbs – being isolated from the city and surrounding localities. It would also risk residents' ability to take economic opportunities in other neighbourhoods and the wider West Yorkshire region. Linked to this, we acknowledge that consultation has already been carried out through the Transport Conversation engagement work last summer which ran up to November 2016. In addition to this, two consultations were also carried out by the West Yorkshire Combined Authority (WYCA) on the West Yorkshire Transport and Bus strategies. Moving forward, we were also assured that the Council would be continuing to engage with residents about the longer term Leeds Transport Strategy as



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well as continuing to work with the West Yorkshire Combined Authority to help shape the West Yorkshire Transport and Bus strategies.

58. However, in terms of improving air quality, we have also come to acknowledge the risks associated with not upgrading buses, trains and TPH to lower emissions standards too, as this could jeopardise the Council's ability to comply with air quality standards which have been incorporated into national legislation by 2020. As such, we note that cleaning the public transport fleet has been recognised as a distinct enabling factor within the Leeds Air Quality Plan.

Clean the public transport fleet

59. During our inquiry, we received a brief overview of planned actions linked to cleaning up the public transport fleet in Leeds and also discussed the implications surrounding these.
60. In relation to buses, we learned that the total number of buses operating in Leeds is 689, of which only 12 of these were meeting Euro 6 standard in 2014. This means that in order to get all buses meeting Euro 6 standard by 2020, 677 buses would need to be replaced by new ones. As bus operators tend to view buses on a 15 year replacement cycle, this would result in 450 buses across all the operators needing to be replaced before their otherwise planned date. However, we note that a basic calculation of the reduction in emissions from replacing these 450 buses at lower Euro Standard engines with Euro 6 Standard engines, gives an emissions profile of 78% lower overall by 2020 than it would with a 'do nothing' scenario.
61. In terms of current initiatives, we learned that funding had been secured through the Clean Bus Technology Fund that is enabling the installation of 'retrofit' technology that will improve the emissions of over 50 buses that operate in the Leeds region, with high frequency buses serving areas with air quality concerns being targeted for this installation.
62. We also noted that the West Yorkshire Combined Authority, who was also a contributing stakeholder to our inquiry, continues to actively work with the bus companies to examine the potential options for improving the bus fleet, either via retrofit, updating buses to Euro 6 or changing some of the fleet to alternative fuel options. In discussing the role of the bus industry, we also welcomed input from the Chair of the Association of Bus Operators in West Yorkshire. In relaying the commitment of the bus industry in Leeds to be part of the air quality solution, we noted that it was also mindful that any traffic related air quality measures need to be assessed robustly so that there are no unintended consequences that may lead to buses no longer serving particular routes. In this regard, particular references were made to the proposed introduction of a Clean Air Zone.



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63. Linked to this, we also note that the City Development Scrutiny Board had undertaken a separate inquiry on advancing bus service provision which also involved discussions around air quality issues and initiatives. In conclusion, the City Development Scrutiny Board had recommended that the Director of Transport Services (WYCA) and the Director of City Development, working in collaboration with Bus Operators, provide a future update to Scrutiny on the implementation and impact of air quality improvement measures as outlined in the West Yorkshire Bus Strategy, Leeds Transport Strategy, and Bus 18 Programme objectives. In tracking this recommendation, we acknowledge that this information could also feed into the broader Scrutiny work around improving air quality in Leeds.
64. In relation to Taxi and Private Hire (TPH), we note that the current fleet in Leeds is made up of over 500 taxis and over 4000 private hire vehicles. The fleet is a mix of approximately 87% diesel, 6% petrol, just under 1% gas and Gas Bi-Fuel, and around 7% electric/hybrid vehicles. The average age of the fleet is 5.5 years. Of the diesel fleet, it is estimated that the current proportion of Euro 6 diesel vehicles is around 4% whilst the Euro 4 petrol vehicles in the fleet is 100%.
65. We also note that a growing number of hybrid and electric vehicles have been purchased in the Taxi and Private Hire sector. In May 2013, there were 44 Toyota Prius hybrid vehicles recorded across the fleet, which has significantly increased to 180 according to the most recent January 2017 figures. The Prius has now been joined by the hybrid variant of the Toyota Auris as the two most popular hybrid models. At present there are a small number of other hybrid/electric vehicles and estimates for the total number in the TPH fleet is approaching 400.
66. We recognise that the Taxi and Private Hire fleet have a disproportionate impact on air quality as they generate high mileage and use prominent routes within the city centre. As such, it is clear that by addressing challenges associated with this particular sector, this would result in substantial benefits.
67. As such, we were disappointed to learn that the Council had not been successful in an earlier application bid for funding through Defra's Air Quality Grant scheme which sought to provide assistance for purchases of ultra-low emission vehicles (ULEV's) in the Taxi and Private Hire Trade. As such there remains a continued need to consider how else uptake of ULEV's can be encouraged.
68. However, during our inquiry we did note that the Council had also worked with the West Yorkshire Combined Authority and partners to make a submission for the OLEV Clean Taxi Grant, which was focussed on the provision of infrastructure. The details of this West Yorkshire ULEV Taxi Scheme bid was shared during our inquiry, setting out the overall aim to transform TPH operations in West Yorkshire through a comprehensive package of investment in an extensive electric vehicle charge network. We understand that this bid was successful.



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69. Whilst acknowledging the progress already made and the on-going efforts of the Council and its partners to secure funding for future planned initiatives, it is evident that significant progress will still need to be made in cleaning up the local public transport fleet, particularly if we are to be expected to comply with the air quality standards that have been incorporated into national legislation by 2020.

Reduce emissions from industry and businesses and the public sector

70. With regard to this particular enabling factor, we particularly welcome the Council's own objective to convert the authority's vehicle fleet to zero or lower emission vehicles, with a target of the entire fleet having been revised by 2025. It is projected that over 100 zero or ultra-low emission vehicles will be on fleet by end of 2016/17 and approximately 30% of fleet will be ULEV by 2020/21. Euro 6 will be the minimum standard where alternative fuel vehicles either are not available, or unsuitable operationally.
71. Linked to this, we also acknowledged that the Council is working with other organisations to support their development of low emission fleets, such as the NHS, Yorkshire Ambulance Service and the University of Leeds. We are pleased that the Council has also registered its own fleet with Eco Stars and is encouraging fleet operators to follow suit.
72. To assist in changing transport behaviour amongst fleet operators, we welcome that the Council has appointed a consultant to engage with individual businesses to help raise awareness of air quality issues, offer them advice and information and suggest ways they can reduce their contribution to emissions through a range of different actions (including signposting to the types of subsidies that may be available to them, such as the Workplace Electric Charge Point grant scheme announced by central government). Linked to this, we also recognise the role that the Leeds Chamber of Commerce can play in this regard, particularly in engaging smaller businesses.

Accelerate the uptake of cleaner vehicles within the domestic market

73. During our inquiry, we welcomed input from the Institute for Transport Studies at the University of Leeds. In particular, we discussed with them the various Euro Standards on vehicle engines, which were put in place at EU level to deliver reduced emissions both of greenhouse gases and of harmful pollutants. We also discussed issues arising from various laboratory tests which are used to help make direct comparisons between vehicles in terms of 'taking the road into the laboratory'. Linked to this, we



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acknowledged the Volkswagen scandal which had showed that deliberate cheating of the emissions tests was built into some vehicles.

74. Whilst acknowledging that the Euro Standards should have led to significant reductions in NO₂ emissions from vehicles, this has not proved to be the case and particularly for diesel vehicles. We learned that diesel vehicles are therefore causing harmful emissions far above what was assumed, thereby contributing to pollution levels that are damaging to public health.
75. In terms of trying to accelerate the uptake of cleaner vehicles within the domestic market, we recognise that one of the key challenges will be around translating key advice to the public around the different vehicle engine standards and the associated health impacts linked to NO₂ emissions, which links back to the previous enabling factor around improved promotion and profile.
76. However, it is widely accepted that in recent years, the significant growth seen in the numbers of diesel vehicles within the domestic market, as well as the business sector, has primarily been the result of earlier advice and tax incentives from previous governments that were mainly linked to fuel economy and carbon dioxide emissions. Those now driving diesel vehicles had therefore bought their vehicle in good faith. In doing so, we recognise that many may now struggle to switch to cleaner vehicles without financial support. We therefore discussed this particular issue directly with the Head of the Joint Air Quality Unit and in doing so, emphasised the important role that the Government now has to play in setting new policies and incentives that will help speed up the necessary technological advances and innovations required to make alternative cleaner vehicles more attractive, affordable and accessible.
77. We are mindful that the Government recently published its draft UK Air Quality Plan for tackling nitrogen dioxide and are now consulting on this Plan until 15th June 2017. As such, we would expect the Council to respond accordingly to this consultation and moving forward, we recognise the importance of reflecting the implications of national policies and actions stemming from the UK Air Quality Plan within our own local Air Quality Plan.
78. In the meantime, we note the Council's own commitment towards developing incentives for low emission vehicle take-up; improving traffic flow conditions and promoting eco-driving; and promoting the use of low emission vehicles for community groups and car clubs. A particular example of this relates to the introduction of the free parking scheme which offers free parking to owners of Zero and Ultra Low Emission vehicles at Council operated car parks. We understand that 253 permits have been issued to drivers since the scheme was launched at the end of March 2016, with approximately 10 applications per week currently being received.



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Building a low emission city

79. Existing City Centre transport strategy is developing an approach that aims to reduce through traffic as part of the City Centre Plan and consequently lead to reduced exposure to poor air quality in areas with high footfall.
80. In contributing to our inquiry, the Leeds Chamber of Commerce advised that it has always maintained that much of the transport within Leeds City Centre is transiting through on its way to points beyond the city centre. Whilst it shares the ambition of having a vehicle free City Square, it believes that this is unlikely to happen with the existing highways infrastructure and that interventions to free up the Armley Gyratory, M621 motorway junctions and other key pinch points around the city centre perimeter need to happen.
81. As such, particular recognition and support was given to the planned enhancements to existing and additional strategic bus park and ride schemes as part of the Public Transport Improvement Programme. This includes 1000 new park and ride spaces at Stourton with express bus serving the city centre.
82. However, in building a low emission city, we also discussed the importance of planning policy and regulations; improved travel planning and the need for air quality impacts from developments to be established as a key component when considering development proposals. In particular, the provision of electric vehicle charge points and support for sustainable and active travel options should also be considered as part of the planning approvals process. We therefore believe that this is an area that warrants further thought and attention moving forward.

Clean Air Zone

83. At the beginning of our inquiry, it was reported that the Government's plans for a Clean Air Zone had been based on identifying a geographical area that will enforce a minimum engine and emissions standard for vehicles. This is designed to encourage the use of 'cleaner' lower emission vehicles in areas where we are at risk of not meeting air quality standards as embedded in UK law. A Clean Air Zone will be designed to influence fleet operators to replace vehicles with newer, cleaner models in order to avoid paying a charge for entering the zone. This will reduce emissions and improve air quality in those areas.
84. Linked to this, we noted that the Government's original aim was to ensure that only the cleanest vehicles would be encouraged to enter Clean Air Zones. Vehicle standards used to assess compliance with a Clean Air Zone would therefore be based around 'Euro standards'. In their original plans, we noted that the minimum emission standards proposed for the most common conventional vehicles are set out in the table below.



Preliminary Findings

Vehicles which do not meet these standards will be charged to enter the Clean Air Zone in line with the class of Zone in place.

Vehicle Type	NOx Emissions limit
Bus/coaches	Euro VI
HGV	Euro VI
Van (1305-3500kg)	Euro 6 (diesel) Euro 4 (petrol)
Car/light commercial (up to 1305kg)	Euro 6 (diesel) Euro 4 (petrol)

85. Essentially, this means that newer diesel vehicles will not be affected by the Clean Air Zone as Euro 6 engine standards were applied to new vehicles from September 2015 onwards. Euro 4 engine standards for petrol vehicles apply from 2006, as such much older petrol vehicles will also be unaffected by the Clean Air Zone plan as harmful emissions from petrol vehicles are much lower than those from diesel.
86. We noted that a consultation on the Government's original draft Clean Air Zone framework was carried out at the end of 2016 and details of the Council's submission to this consultation was shared during our inquiry.
87. In support of the key issues that had been raised by the Council within its consultation submission, we were able to discuss these directly with the Head of the Joint Air Quality Unit during our inquiry. However, since our final evidence gathering session in March 2017, we remain mindful that the Government has now published an updated Clean Air Zone Framework outlining the principles in place for setting up Clean Air Zones in England. As such, we recognise that further work is now needed to consider the implications of this new framework and how this will inform our preparations moving forward for the introduction of a Clean Air Zone for Leeds.



Moving Forward: Key Considerations

88. Reflecting on our preliminary findings, this section of our report briefly outlines what further considerations we believe are needed in moving forward and establishing appropriate local solutions for improving air quality in Leeds.
- We acknowledge the urgent need for the Council to work closely with key stakeholders in considering and reflecting on the implications surrounding the Government's recently published draft UK Air Quality Plan for tackling nitrogen dioxide. In particular, to consider the expectations being placed on local authorities and also the level of input to be expected nationally to help speed up the necessary technological advances and innovations required to make alternative cleaner vehicles more attractive, affordable and accessible. The result of this work should then be reflected accordingly in the Council's response to the consultation process.
 - Following the recent publication of the updated Clean Air Zone Framework, we recognise the need to consider the implications of this and in particular, to assess how this new framework will now be informing local preparations for the introduction of a Clean Air Zone.
 - We acknowledge that, once available, the detailed analysis work linked to the modelling of air quality around the city will need to be shared with key stakeholders and used to help inform further work around identifying other potential solutions locally.
 - In raising the profile of air quality, further consideration is still needed by the Council, in conjunction with Public Health, on how associated health messages and communication mechanisms can remain simple and be used to empower people to make informed decisions on how to reduce exposure. Linked to this, we recognise the value in maximising the use of social media so that the Council's messages are reaching as wide an audience as possible.
 - Stemming from the success of the 'Green Week' pilot initiative and in recognition of the merits in raising the profile of air quality amongst children and parents, further consideration is needed on how the Council can roll this out to other schools, which may include work to develop of a menu of relevant resources for schools based on a modular approach.
 - It is recognised that the Taxi and Private Hire fleet have a disproportionate impact on air quality due to their high mileage and use of prominent routes within the city centre. As such, continued efforts to target this particular sector and address the challenges associated with cleaning up this vehicle fleet would result in substantial benefits.
 - In building a low emission city, we recognise that further thought and attention is now needed to strengthen links with planning, including improved travel planning and the need for air quality impacts from developments to be established as a key component when considering development proposals.



Evidence

Dates of Scrutiny

Scrutiny Working Group – Scoping exercise – 21st July 2016
Scrutiny Board Meeting – Agreeing terms of reference – 22nd September 2016
Scrutiny Working Group – Session 1 of the inquiry – 17th November 2016
Scrutiny Board Meeting – Session 2 of the inquiry – 8th December 2016
Scrutiny Working Group – Sessions 3 of the inquiry – 1st March 2017
Scrutiny Working Group – Session 4 of the inquiry – 15th March 2017

Reports and Publications Submitted

- Session 1 working group briefing paper from the Programme Officer, Sustainable Energy & Climate Change – 17th November 2017
- Session 1 working group briefing note - Leeds Air Quality Action Plan – 17th November 2017
- Briefing note - Frequently Asked Questions on Clean Air Zones
- Report of the Director of Environment and Housing – Air Quality Communications Update – 8th December 2016.
- Session 3 working group briefing note - Air Quality in Leeds – 1st March 2017
- Public Health England - The impact of poor air quality on health in Leeds – 1st March 2017
- Session 3 working group briefing note - Clean Air Zones – 1st March 2017
- Session 3 working group briefing note - Overview of Transport Related Initiatives – 1st March 2017
- Draft Leeds Air Quality Action Plan – (version dated 15th March 2017)



Evidence

Witnesses Heard

- Councillor Lucinda Yeadon, Executive Member for Environment and Sustainability
- Councillor Richard Lewis, Executive Member for Regeneration, Transport and Planning
- Councillor Rebecca Charlwood, Executive Member for Health, Wellbeing and Adults
- Neil Evans, Director of Resources and Housing, Leeds City Council
- Polly Cook, Executive Programme Manager, Strategy and Resources, Leeds City Council
- Kevin McGready, Advanced Health Improvement Specialist, Leeds City Council
- Andrew Hall, Head of Transportation, Leeds City Council
- Andrew White, Taxi & Private Hire Licensing, Citizens and Communities, Leeds City Council
- Susanna May, Head of the Joint Air Quality Unit, DEFRA and Department of Transport
- Dr James Tate, Associate Professor, Institute for Transport Studies (ITS), University of Leeds
- Dr Judith Y T Wang, Associate Professor in Transport Engineering – Resilient Transportation, University of Leeds
- Jane Astrid Devane, Shire Oak School
- Keith McNally, Chair of the Association of Bus Operators in West Yorkshire and member of the Confederation of Passenger Transport UK (CPT)
- Ian Williams, West and North Yorkshire Chamber of Commerce (Transport Policy Lead)
- Neale Wallace, Head of Transport Operations, West Yorkshire Combined Authority
- Helen McAuslane, Consultant in Health Protection, Public Health England (Yorkshire and the Humber)
- Adrienne Dunne, Principal Environmental Public Health Scientist – Public Health England
- Richard Dyer, Friends of the Earth - Clean Air Team

Vision: Towards a city where transport and industry has a positive impact on health

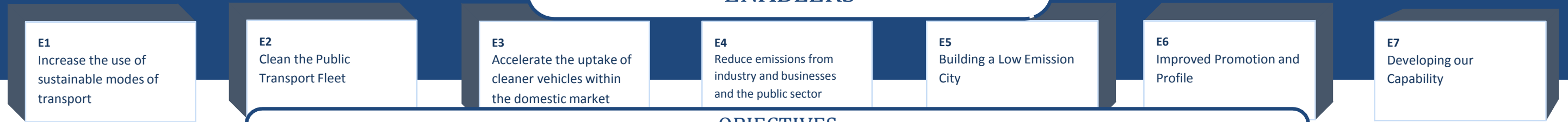
AIMS

1. Improved air quality
2. Improved health and wellbeing and reduced health inequalities
3. Lower carbon pollution and reduced noise impacts
4. Leeds developed as a skills and business base for low emission technology

CONTRIBUTING TOWARDS

1. A city that is fair, open and welcoming
2. An economy that is prosperous and sustainable
3. A city where all communities will be successful

ENABLERS



OBJECTIVES

<p>E1.1 Increase public transport patronage through improved promotion and infrastructure as well as through the creation of new facilities including new train stations and P+R</p> <p>E1.2 Improve cycling and walking infrastructure and develop training</p> <p>E1.3 Encourage the use of car sharing</p> <p>E1.4 Encourage the use of sustainable modes through travel planning</p> <p>E1.5 Promote the use of alternative modes (rail/water) for freight</p> <p>E1.6 Work with others to facilitate active travel, including linking with healthy schools / cycle to work schemes</p> <p>E1.7 Undertake further feasibility on mass transportation options</p>	<p>E2.1 Promote the electrification of railways and encourage the regeneration of the aging diesel rolling stock.</p> <p>E2.2 Promote the adoption of retrofit equipment to reduce bus emissions</p> <p>E2.3 Promote the conversion of buses to low emission alternatives</p>	<p>E3.1 Develop incentives for low emission vehicle take-up</p> <p>E3.2 Improve traffic flow conditions and promote Eco-driving</p> <p>E3.3 Promote the use of low emission vehicles for community groups and car clubs</p>	<p>E4.1 Promote the conversion of taxis and private hire vehicles to low emission alternatives</p> <p>E4.2 Promote the conversion of HGVs to low emission alternatives</p> <p>E4.3 Convert the Authority's vehicle fleet to low emission vehicles</p> <p>E4.4 Work with partners to support the conversion of other public sector fleets for example NHS</p> <p>E4.5 Consider staff incentives to change their own vehicles</p> <p>E4.6 Cleaning up emissions from industry e.g. construction / energy.</p>	<p>E5.1 Development of public EV recharging and gas refueling infrastructure</p> <p>E5.2 Development access to a Public Transport Smart Card for charging vehicles</p> <p>E5.3 Develop a City Centre transport strategy that reduces through traffic</p> <p>E5.4 Promote EV recharging in residential & commercial premises through partnership working with developers and through planning</p> <p>E5.5 Promote sustainable modes through partnership working with developers and through planning</p> <p>E5.6 Develop ways to smarten the grid to adapt to future vehicle technology needs</p> <p>E5.7 Increase the creation and use of green spaces</p>	<p>E6.1 Capitalize on national events to raise awareness</p> <p>E6.2 Increase social media engagement.</p> <p>E6.3 More targeted marketing and communications plans.</p> <p>E6.4 Engage with Government to influence national plans and funding</p> <p>E6.5 Engage with the LEP, WYCA and neighboring authorities to ensure that there is a coordinated & strategic approach</p> <p>E6.6 Develop our own staffs' understanding of air quality issues</p> <p>E6.7 To engage with local communities to raise awareness of the impacts of air pollution on health and to increase understanding to improve healthy behaviours</p>	<p>E7.1 Improving measurement of air quality</p> <p>E7.2 Develop an apprenticeship programme to skill vehicle repairers and servicing staff</p> <p>E7.3 Engage with business to understand how Leeds can become a centre of excellence for technology innovation</p> <p>E7.4 Work with the universities to set out a research programme that could aid our understanding and be ready to bid for funding.</p> <p>E7.5 Maximize funding and resources through partnerships and effective bids.</p> <p>E7.6 Engage with partners in other sectors to reduce emissions, including Health and Third Sector</p> <p>E7.7 To engage with the health sector to target vulnerable people</p>
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PRIMARY SUCCESS MEASURES
KEEPING ON THE RIGHT TRACK

Increased awareness of air quality issues.
Reduced emissions from transport

Increased numbers using sustainable modes of transport
Increased number of children walking and cycling to school.

Increased take-up of low emission vehicles
Associated life years lost

**Scrutiny Board (Environment and Housing)
Inquiry into Improving Air Quality in Leeds
May 2017
Report author: Angela Brogden**

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