

## Summary Sheet

### Name of Committee and Date of Committee Meeting

Cabinet – 17 December 2018

### Report Title

Improving Air Quality in Rotherham

### Is this a Key Decision and has it been included on the Forward Plan?

Yes

### Strategic Director Approving Submission of the Report

Paul Woodcock, Acting Strategic Director of Regeneration and Environment

### Report author:

Tom Smith, Assistant Director – Community Safety and Street Scene  
01709 822902 or [tom.smith@rotherham.gov.uk](mailto:tom.smith@rotherham.gov.uk)

### Ward(s) Affected

Borough-wide

### Executive Summary

Air quality is now a major issue of growing interest and significance at a national and international level. There is categorical evidence that long-term exposure to everyday air pollutants contributes to cardiovascular disease (including heart diseases and stroke), lung cancer, and respiratory disease (including asthma and chronic bronchitis). In Rotherham, it is estimated that poor air quality directly contributes to over 100 deaths per year and affects the quality of life for people across the Borough.

The National Air Quality Plan, published by Department for Environment, Food and Rural Affairs (DEFRA) in July 2017, identified those Local Authorities with areas that are not compliant with the European Union (EU) Ambient Air Quality Directive were identified through national air quality modelling. 28 Local Authorities were included ('mandated') in the plan, including Rotherham Metropolitan Borough Council (RMBC) and Sheffield City Council (SCC). RMBC and SCC were 'jointly mandated' on the basis that the Parkway in both Sheffield and Rotherham was identified as being non-compliant.

This has placed Rotherham and Sheffield under a legal duty to improve the Borough's air quality by reducing NO<sub>2</sub> emissions below the legal limits in the shortest possible time. The Councils are required to submit a proposal to Government (an Outline Business Case) to demonstrate how they will reduce emissions in the shortest possible timescale, by 31<sup>st</sup> December 2018.

A feasibility study has been undertaken to locally assess air quality across Rotherham and Sheffield, to identify key locations where air quality is above the EU limits and to identify and assess mitigating actions to improve air quality at these locations. The findings of the study indicate that Sheffield will need to introduce a Category C charging zone (covering non-compliant buses, taxis, HGVs, LGVs), within (but including) the inner ring-road of the city centre, in order to achieve legal compliance by 2021. The study concludes however that a charging zone is not required in Rotherham for the Borough to achieve compliance.

The study identifies that measures will need to be taken at four specific locations across Rotherham to achieve compliance. The proposals in Rotherham therefore focus on changes to speed limits on the Rotherham section of the Parkway, improvements to the Rotherham bus fleet and the routing of buses on Rawmarsh Hill and Fitzwilliam Road, and the restriction of HGVs on Wortley Road.

These options are proposed to be accompanied by a number of additional measures, which aim to support businesses to improve their fleet and improve air quality, such as targeted support to upgrade vehicles.

The Council will seek Government funding, through the Outline Business Case, to deliver on these proposals.

Following submission of the Outline Business Case, a wide-ranging statutory consultation across Rotherham and Sheffield is proposed to begin in early 2019. The Councils will seek the views of people who live and work across both areas, and the views of Rotherham's businesses and residents. This consultation will inform the submission of a Full Business Case to Government later in 2019.

## **Recommendations**

1. That Rotherham Metropolitan Borough Council's (RMBC's) commitment to improve air quality in the Borough and to improve health outcomes for residents be endorsed.
2. That it be recognised that Rotherham and Sheffield's air quality challenge is intrinsically connected and therefore approves the development of a joint air quality plan and package of interventions with Sheffield City Council (SCC) to protect and improve the health and wellbeing of people living, working and visiting our areas.
3. That the evidence and analysis of the air quality challenge across the areas and the most challenging locations which breach legal limits for NO<sub>2</sub> pollution be supported and noted.

4. That approval be given to the proposed mitigating measures to bring Rotherham's air quality within the legal limit for NO<sub>2</sub> concentrations in the shortest possible time.
5. That authority be delegated to the Strategic Director, Regeneration and Environment, in consultation with the Cabinet Member for Jobs and the Local Economy and the Cabinet Member for Waste, Roads and Community Safety, to jointly submit, with Sheffield City Council, the Rotherham and Sheffield Outline Business Case to Government by 31st December 2018.
6. That, subject to approval of the implementation plan, authority be delegated to the Strategic Director, Regeneration and Environment, in consultation with the Cabinet Member for Jobs and the Local Economy and the Cabinet Member for Waste, Roads and Community Safety to commence procurement for any necessary infrastructure, goods and services to implement the mitigating measures.
7. That a further report on Rotherham's clean air proposals be submitted, should Government require significant changes once Government has assessed the proposals in our Outline Business Case.
8. That approval be given to the launch of a statutory consultation in early 2019 on the Borough's proposals to tackle NO<sub>2</sub> pollution.
9. That a further report be submitted on the finalised proposals, along with a Full Business Case, in 2019.

### **List of Appendices Included**

Appendix A Equality Impact Assessment

### **Background Papers**

- Committee on the Medical Effects of Air Pollutants (2018) *Associations of long-term average concentrations of nitrogen dioxide with mortality*,  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/734799/COMEAP\\_NO2\\_Report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/734799/COMEAP_NO2_Report.pdf).
- DEFRA (2017) *UK plan for tackling roadside nitrogen dioxide concentrations: detailed plan*,  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/633270/air-quality-plan-detail.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/633270/air-quality-plan-detail.pdf).
- Rotherham MBC *Air quality annual status report* –  
[https://www.rotherham.gov.uk/download/downloads/id/3526/2017\\_air\\_quality\\_annual\\_status\\_report.pdf](https://www.rotherham.gov.uk/download/downloads/id/3526/2017_air_quality_annual_status_report.pdf).
- RMBC *Air Quality Action Plan*–  
[http://www.rotherham.gov.uk/download/downloads/id/3525/rotherham\\_air\\_quality\\_action\\_plan.pdf](http://www.rotherham.gov.uk/download/downloads/id/3525/rotherham_air_quality_action_plan.pdf).

- RMBC Transport Strategy – [https://www.rotherham.gov.uk/download/downloads/id/2687/rotherham\\_transport\\_strategy\\_2016-26.pdf](https://www.rotherham.gov.uk/download/downloads/id/2687/rotherham_transport_strategy_2016-26.pdf).
- WHO (2018) *How air pollution is destroying our health*, <http://www.who.int/air-pollution/news-and-events/how-air-pollution-is-destroying-our-health>.
- Ratcliffe, G and Basu S. (2014) An Air Quality Health Inequalities Impact Assessment for Rotherham Metropolitan Borough Council (available on request from Rotherham MBC)
- Sheffield City Council – “Air that is safe to breathe for all: Sheffield’s Clean Air Zone proposal”, report to Cabinet, 21<sup>st</sup> November 2018  
<http://democracy.sheffield.gov.uk/documents/s33102/Clean%20Air%20for%20Sheffield%20-%20Final.pdf>.

**Consideration by any other Council Committee, Scrutiny or Advisory Panel**  
Overview and Scrutiny Management Board – 12 December 2018

**Council Approval Required**

No

**Exempt from the Press and Public**

No

## **Improving Air Quality in Rotherham**

### **1. Recommendations**

- 1.1 That Rotherham Metropolitan Borough Council's (RMBC's) commitment to improve air quality in the Borough and to improve health outcomes for residents be endorsed.
- 1.2 That it be recognised that Rotherham and Sheffield's air quality challenge is intrinsically connected and therefore approves the development of a joint air quality plan and package of interventions with Sheffield City Council (SCC) to protect and improve the health and wellbeing of people living, working and visiting our areas.
- 1.3 That the evidence and analysis of the air quality challenge across the areas and the most challenging locations which breach legal limits for NO<sub>2</sub> pollution be supported and noted.
- 1.4 That approval be given to the proposed mitigating measures to bring Rotherham's air quality within the legal limit for NO<sub>2</sub> concentrations in the shortest possible time.
- 1.5 That authority be delegated to the Strategic Director, Regeneration and Environment, in consultation with the Cabinet Member for Jobs and the Local Economy and the Cabinet Member for Waste, Roads and Community Safety, to jointly submit, with Sheffield City Council, the Rotherham and Sheffield Outline Business Case to Government by 31st December 2018.
- 1.6 That, subject to approval of the implementation plan, authority be delegated to the Strategic Director, Regeneration and Environment, in consultation with the Cabinet Member for Jobs and the Local Economy and the Cabinet Member for Waste, Roads and Community Safety to commence procurement for any necessary infrastructure, goods and services to implement the mitigating measures.
- 1.7 That a further report on Rotherham's clean air proposals be submitted, should Government require significant changes once Government has assessed the proposals in our Outline Business Case.
- 1.8 That approval be given to the launch of a statutory consultation in early 2019 on the Borough's proposals to tackle NO<sub>2</sub> pollution.
- 1.9 That a further report be submitted on the finalised proposals, along with a Full Business Case, in 2019.

### **2. Background**

- 2.1 Air quality is now a major issue of growing interest and significance at a national and international level. There is now categorical evidence that long-term exposure to everyday air pollutants contributes to cardiovascular disease (including heart diseases and stroke), lung cancer, and respiratory disease (including asthma and chronic bronchitis).

- 2.2 The World Health Organisation (WHO) has recently reported that air pollution is now responsible for the deaths of 7 million people a year globally, with 90% of the world's population suffering from the implications of breathing toxic air<sup>1</sup>. In the UK, the Department of Health's Committee on the Medical Effects of Air Pollutants (COMEAP) recently reported the estimated annual number of deaths in the UK from human-made air pollution (PM2.5 and NO<sub>2</sub>) ranges from 28,000 to 36,000 deaths<sup>2</sup>. The Royal College of Physicians estimate that the health problems resulting from exposure to air pollution have a high cost to people who suffer from illness and premature death, to health services and to business which together cost an estimated £20bn every year<sup>3</sup>.
- 2.3 In Rotherham, it is estimated that poor air quality directly contributes to over 100 deaths per year and affects the quality of life for people across the Borough. An Air Quality Health Inequalities Impact Assessment for Rotherham Metropolitan Borough Council (Ratcliffe and Basu, 2014) found levels of ambient air pollution which are likely to negatively impact on health outcomes in Rotherham. In particular, ambient air pollution in Rotherham is contributing to more negative outcomes relating to Coronary Heart Disease and Circulatory Disease in the under 75 age groups, and to the rate of Low Weight Births. In addition, childhood asthma is specifically attributable to traffic related air pollution, and increases the probability of hospital admissions, visits to A&E and respiratory and cardiovascular disease. Incorporating health considerations into decision-making in relation to air quality across policy areas provides a collaborative approach to improving the health of the people of Rotherham. This ensures a 'Health in All Policies' (HiAP) approach within the Council; creating places which support and generate good health, which in turn support the achievement of goals in other sectors, such as Public Health.
- 2.4 Often the poorer and more vulnerable communities that are most exposed to and suffer the consequences of harmful air, in particular the young and old, the sick and lower income groups. Further, poor air quality is also an economic issue: the illnesses caused by poor air quality affect people of working age and we know this causes significant time off work and early retirement. Whilst this is difficult to quantify, studies by the Lancet have found that in low-to-medium income countries, air pollution reduces Gross Domestic Product (GDP) by up to 2% and drives up demand and costs on healthcare services<sup>4</sup>.
- 2.5 The UK has been in breach of the EU legal limit for nitrogen dioxide since January 2010 and, along with other major urban areas in the UK, air quality close to a number of roads in Rotherham and Sheffield breach those legal limits. DEFRA's data indicates that the Rotherham area currently has roads where the average concentration of NO<sub>2</sub> in 2017 exceeds the legal limit of 40µg/m<sup>3</sup>, in some places by as much as 30%<sup>5</sup>.

---

<sup>1</sup> WHO (2018) '9 out of 10 people worldwide breathe polluted air, but more countries are taking action', <http://www.who.int/news-room/detail/02-05-2018-9-out-of-10-people-worldwide-breathe-polluted-air-but-more-countries-are-taking-action>

<sup>2</sup> Committee on the Medical Effects of Air Pollutants (2018) *Associations of long-term average concentrations of nitrogen dioxide with mortality*, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/734799/COMEAP\\_NO2\\_Report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/734799/COMEAP_NO2_Report.pdf)

<sup>3</sup> Royal College of Physicians (2016) *Every breath we take: the lifelong impact of air pollution*, <https://www.rcplondon.ac.uk/file/2912/download?token=rhEZPBdI>

<sup>4</sup> The Lancet (2017) *The Lancet Commission on pollution and health*, [https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(17\)32345-0.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(17)32345-0.pdf)

<sup>5</sup> NO<sub>2</sub> level on some Rotherham roads in 2017 were 53µg/m<sup>3</sup>. 40µg/m<sup>3</sup> is the legal limit. DEFRA (2017) *UK plan for tackling roadside nitrogen dioxide concentrations* [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/633022/air-quality-plan-detail.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/633022/air-quality-plan-detail.pdf)

- 2.6 Rotherham Metropolitan Borough Council published its Air Quality Action Plan for 2016-20 in August 2016. The Plan focusses on those measures that reduce emissions from road traffic and industrial and domestic buildings. The Plan sets out the Council's priorities to improve air quality in Rotherham through:
- the mitigation of air quality impacts through the planning process (Development Control);
  - promoting low emission transport, in particular cleaner buses; taxi licensing; the installation of Electric Vehicle recharging infrastructure;
  - promoting travel alternatives to the private car, raising public awareness especially of the impact of diesel vehicles on air quality in our towns and cities;
  - improving the efficiency of the Rotherham MBC Vehicle Fleet; and
  - the production of a new RMBC Air Quality Action Plan during 2019 to take account of all the measures within air quality improvement proposals in this report.
- 2.7 Improving air quality is intrinsically linked to the way in which residents and visitors travel around the Borough. However, efficient and effective transport is also essential for the economic and social well-being of the Borough's residents and businesses. RMBC's Transport Strategy (2015-2026) clearly articulates this principle in acknowledging that the Council must address two fundamental challenges for transport across the Borough:
- To support economic recovery in the Borough and;
  - To adapt to and reduce the transport systems impact on safety, health and climate change to help safeguard its benefits for future generations.
- 2.8 These challenges are further articulated through the objectives of the Transport Strategy as follows:
- Integrated transport and land use - To support well designed new development that reduces the need to travel and is accessible to everyone by frequent public transport, walking and cycling.
  - Public transport (bus, tram & train) - To improve the public transport network so it provides an alternative to the private car.
  - Active transport network - To make the transport network safe and attractive for walking and cycling.
  - Travel behaviour change - To reduce car dependency & increase levels of walking, cycling, car share and public transport use.
  - Roads and Freight - To develop and manage an efficient road network for the movement of people and goods that can be shared by everyone.
  - Safer Roads - To make the transport network safe for everyone.
- 2.9 It is important therefore, that any proposed actions in Rotherham to improve air quality, should also take account of any potential impact on the economic recovery of the Borough, and any consequent impacts of this on the health and well-being of Rotherham's residents.
- 2.10 The Council has already taken a number of steps to improve air quality through actions identified in the Air Quality Action Plan and Transport Strategy. These have included:

2.11 **Clean Air Zone (CAZ) Early Measures Fund** – the Council secured £705k from government to promote sustainable travel behaviour through two work-streams:

- to install a minimum of 25 electric vehicle charging points across the Borough; and
- a marketing and communications campaign to raise awareness of the Council's commitment to improve air quality and to promote behavioural change, with particular focus on the uptake of electric vehicles.

2.12 **DfT's Sustainable Transport Access Fund** – A £7.5m South Yorkshire bid to promote and support a range of active travel initiatives, including:

- Cycleboost – Bike loans, Cycle training, Bike Doctor and maintenance sessions, Cycle parking facilities, and support to Cycle events held in the City including the partnership with British Cycling and HSBC (mass participation event and local led rides).
- Sustainable and Active Travel support for schools – a support package run by Modeshift STARS to promote walking and cycling behaviour for the journey to and from school.
- Independent Travel Training – providing personalised support for young people to use public transport and walk as an independent alternative to home to school transport.
- Support for a range of walking programmes primarily through the "Walk Rotherham" project.
- Busboost – a focussed support programme to encourage people to try public transport as an alternative to commuting by car.
- EcoStars – an award based system for vehicle fleets to encourage more economical driving habits.

2.13 A partnership across the South Yorkshire Local Authorities continues to deliver the 'Care4air' Campaign to encourage and influence changes that support cleaner air outcomes, using social marketing and other communications mechanisms.

2.14 The Council has undertaken work with Highways England to tackle air pollution from and around the M1. This includes the introduction of the current 60mph speed limit between J35A and J31 during the morning and afternoon peaks as an air quality mitigation measure.

2.15 A number of current and future infrastructure projects have also been delivered, or are in planning including:

- **National Productivity Investment Fund** – A £4.6m highway capacity scheme at the heart of the Town Centre to reduce traffic congestion.
- **Tram Train Pilot** – a revolutionary tram train pilot scheme utilising the regional heavy and light rail system. The project ensures an integrated transport solution between Rotherham, Meadowhall and Sheffield, complemented with park and ride opportunities in the Town Centre and Parkgate Shopping Centre.
- **Rotherham Interchange** – a refurbishment of the borough main transport interchange to encourage greater public transport use and improved bus service operation.



- **A630 Parkway Widening** – The Council is working with Highways England to deliver considerable capacity relief at the M1 Junction 33. The scheme will be complemented by a reduction in speed limit from 70mph to 50mph.

2.16 The Council is also committed to continue to work with the Sheffield City Region on the wider strategic transport ambitions for the functioning economic area.

### 3. Key Issues

3.1 The Department for Environment, Food and Rural Affairs (DEFRA) published its final National Air Quality Plan in July 2017, in response to a High Court ruling in December 2016<sup>6</sup>. This Plan details how compliance with the European Union (EU) Ambient Air Quality Directive will be delivered in the United Kingdom, through focussing on improving air quality in a number of Local Authority areas. Those Local Authorities that have areas that are not compliant with the Directive were identified through national air quality modelling. 28 Local Authorities were included ('mandated') in the plan, including RMBC and Sheffield City Council (SCC). RMBC and SCC were 'jointly mandated' on the basis that the Parkway in both Sheffield and Rotherham was identified as being non-compliant.

3.2 Both Local Authorities were therefore required to work together, supported by DEFRA's Joint Air Quality Unit (JAQU), to identify options to reduce levels of Nitrogen Dioxide below the legal limit of 40µg per cubic metre of air, on an annual average, in the 'shortest possible time'. The two Councils were required to undertake local feasibility studies to identify the measures that would reduce levels of nitrogen within the 'shortest possible time'. The Councils were required by DEFRA to include options for charging polluting vehicles, where this would deliver compliance in the shortest possible time.

3.3 Government's priority is therefore speed of delivery/impact and their modelling suggests that CAZs with charging for non-compliant vehicles are most likely to reduce emissions in the shortest possible time (i.e. being charged to enter a specific area encourages behaviour change and vehicle change most quickly). Government have made clear that they will test any interventions proposed by Rotherham and Sheffield against the assumed speed of impact that charging would have.

3.4 In terms of the Critical Success Factors set-out by Government, the two key (Gateway) criteria are:

- Achieve Statutory compliance with Air Quality legislation
- Proposed scheme(s) are deliverable in the shortest possible time and by no later than 2021 (subject to statutory obligations and in accordance with public law principles)

---

<sup>6</sup> DEFRA (2017) *UK plan for tackling roadside nitrogen dioxide concentrations*, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/633270/air-quality-plan-detail.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/633270/air-quality-plan-detail.pdf)

- 3.5 In order to meet our legal duties to deliver this improvement, RMBC and SCC are jointly required to submit an Outline Business Case (OBC) by the 31st December 2018 which demonstrates how we will reduce NO<sub>2</sub> emissions at the places in Sheffield and Rotherham which will be in breach of the legal limits in 2021. The Council's will then submit a Final Business Case in 2019, following consultation with residents and businesses.

### **Air Quality Feasibility Study**

- 3.6 Working with SCC and JAQU, the Council has undertaken a detailed Feasibility Study to fully understand its air pollution issues. This includes understanding the key sites where air quality breaches the legal limit; the main causes of air pollution at those sites; and using transport, air quality and development modelling projections to understand what the scale of the air quality challenge is likely to be in the coming years.
- 3.7 RMBC and SCC have updated their transport and air quality models, insofar as reasonably possible, within the timescales set by the Legal Directive, to make sure that the models reflect the latest position in terms of any future planned developments, infrastructure or changes to traffic growth and mix of vehicles using the road network.
- 3.8 The study has involved a comprehensive data assessment of air quality across Rotherham and Sheffield using: analysis of our locally collected air quality data; the latest data on transport flows in the city; data from Automatic Number Plate Recognition (ANPR) cameras in Rotherham and Sheffield; and local Behavioural Research.
- 3.9 Detailed local data has been collected to ensure that the Council's Transport Emissions and Air Quality models have the best possible data to identify and assess potential mitigating actions.
- 3.10 As part of the Feasibility Study, the Councils undertook Behavioural Research with drivers across the Rotherham and Sheffield area to better understand local attitudes to air quality, preferences for different types of cleaner vehicle (e.g. electric, cleaner petrol) and reactions to potential different levels of charging. This work included a quantitative survey of London-style Hackney drivers (Sheffield), private hire vehicle drivers, LGV drivers and private car users (512 respondents). It also involved a series of seven focus groups with Rotherham and Sheffield taxi and private hire operators, and LGV drivers (70 participants in total).
- 3.11 The evidence from the feasibility study indicates that Rotherham's NO<sub>2</sub> problem is:
- **Caused by road traffic** – the majority of NO<sub>x</sub> and NO<sub>2</sub> emissions in Rotherham come from the exhaust pipes of vehicles on our roads;

- **Disproportionately caused by particular types of vehicles** –all but the newest diesel vehicles and older petrol vehicles are the most polluting. Older non-retrofitted buses contribute significantly more in terms of NO<sub>x</sub> and NO<sub>2</sub> emissions compared with the newest Euro 6 standard buses (In the CAZ Study Area, buses are 1% of the vehicles but produce 5% of overall emissions), Private Hire taxis (3% of vehicles but 4% of emissions and trips heavily focused on Sheffield city centre), HGVs (3% of vehicles but 15% of emissions) and LGV (vans) (13% of vehicles but 26% of emissions) are disproportionately responsible for the level of NO<sub>2</sub> emissions from road transport.
- **Focused in particular locations across the Borough** – Rotherham has a number of sites across the Borough where NO<sub>2</sub> concentrations breach the EU legal limit, The evidence shows that the current expected improvements in the vehicle fleet, through drivers and operators replacing and upgrading to less polluting vehicles over time, will not bring emissions in most of these places within the legal limit by 2021.

3.12 The Council is therefore required by law to identify mitigating actions to improve air quality at these sites in the ‘shortest possible timescale’. The sites are as follows:

- Sheffield Parkway in RMBC area (A630) (8% reduction in NO<sub>2</sub> required)
- Rawmarsh Hill (A633), Rawmarsh (6% reduction in NO<sub>2</sub> required)
- Fitzwilliam Road (A630), Eastwood (2% reduction in NO<sub>2</sub> required)
- Wortley Road and Upper Wortley Road, Kimberworth and Thorpe Hesley (A629) (3% reduction in NO<sub>2</sub> required)

3.13 It is worth noting that the M1 remains a major cause of air pollution for Sheffield and Rotherham; however responsibility for the M1 falls to Highways England rather than the Local Authorities. Whilst Highways England have been involved with the development of Sheffield and Rotherham’s proposals the Council continues to urge Government to take a more robust, strategic approach with Highways England, to address emissions from the motorway network.

### **Mitigating Actions**

3.14 The following specific mitigating actions are proposed in these areas:

### **Sheffield Parkway in RMBC area (A630)**

3.15 The findings of the Sheffield and Rotherham feasibility study indicate that Sheffield will need to introduce a Category C (CAZ C) charging zone in order to achieve legal compliance by 2021. Based on the evidence of the places that are in breach of the legal limits now and in 2021, it is proposed that the Sheffield CAZ will cover the area bounded by the inner ring-road<sup>7</sup>. Evidence indicates that the proposed Sheffield City Centre CAZ 'C' Charging Zone, would bring both the Sheffield and Rotherham sections of Sheffield Parkway into compliance by 2021. This assumes that the proposed 50mph speed limit, associated with the widening of the Parkway in Rotherham is introduced (see 2.16 above).

### **Rawmarsh Hill (A633), Rawmarsh**

3.16 It is proposed to introduce a Government-funded support package as part of the CAZ Business Case for the major bus companies to ensure that all buses operating on Rawmarsh Hill are upgraded or replaced to the Euro VI standard as a minimum. A Euro VI bus delivers an almost 95% reduction in emissions against earlier Euro standards.

3.17 However, even if all scheduled buses operating on Rawmarsh Hill were upgraded to Euro VI standard, full compliance would not be delivered. It has been identified that in order for full compliance to be delivered around half of the scheduled buses from Rawmarsh Hill would need to be diverted onto other routes. The Council therefore proposes to work with bus companies to divert a number of routes onto Barbers Avenue, and to improve the junctions at Dale Road and undertake minor works to Barbers Avenue itself, to support this measure.

### **Fitzwilliam Road (A630), Eastwood**

3.18 The Council proposes to seek funding to support the major bus operators to upgrade buses that operate on this route to the highest level of Euro VI bus that is available (Euro VI 6B).

### **Wortley Road and Upper Wortley Road (A629), Kimberworth and Thorpe Hesley**

3.19 The Council proposes a HGV ban on the northbound Upper Wortley Road and Wortley Road towards the M1 junction, through the use of a Traffic Regulation Order.

---

<sup>7</sup> •Sheffield City Council – “Air that is safe to breathe for all: Sheffield’s Clean Air Zone proposal”, report to Cabinet, 21st November 2018 <http://democracy.sheffield.gov.uk/documents/s33102/Clean%20Air%20for%20Sheffield%20-%20Final.pdf>

## **Additional Measures**

3.20 Whilst the above measures are expected to deliver compliance in Rotherham, RMBC and SCC have acknowledged the potential economic impact of charging proposals in Sheffield on Rotherham-based drivers and operators. With that in mind RMBC proposes a number of additional measures to support Rotherham-based drivers and operators to remove and replace the most polluting vehicles on the Borough's roads. The Council's Outline Business Case, the consultation and the Final Business Case, will seek to secure dedicated Government funding to support those most exposed to the charging CAZ.

### **Taxis and Private Hire Vehicles (PHV)**

3.21 Rotherham currently has around 57 licensed hackney carriages and 865 private hire vehicles (PHVs). The age of Rotherham's taxi fleet shows that 68% of hackney carriages and 55% of private hire vehicles are less than six years old, with only 0.6% and 1.3% respectively, older than ten years. Rotherham's Taxi Licensing scheme sets some of the highest vehicle standards in England. However, the majority of vehicles are still diesel and consequently contribute significantly to NOx emissions. Improving the taxi and private hire fleet on Rotherham and Sheffield's roads will therefore deliver significant reductions in NO<sub>2</sub> and benefits for communities across the Borough.

3.22 In acknowledging that many taxi and private hire vehicles, licensed in Rotherham, are reliant on trade into and out of Sheffield, a change in the Rotherham taxi fleet will contribute to improvements in air quality associated with proposals for Sheffield City Centre. Whilst there is no requirement for a Taxi or Private Hire Vehicle licensed in Rotherham to meet the emissions standard for the proposed Sheffield charging zone, clearly any taxi operating into or out of Sheffield will need to either meet the standard, or pay the appropriate charge, should the Sheffield proposal be implemented.

3.23 Research undertaken with Sheffield and Rotherham Private Hire drivers yielded the following information:

- That most drivers are likely to replace their vehicle 'when it reaches a certain age' (76%).
- That 73% of drivers agreed that the Councils should try to reduce air pollution, whilst only 40% of drivers agreed that the Councils should reduce the number of the most polluting vehicles in high pollution areas.
- Over half of PHV respondents (54%) were positive about the idea of buying a new petrol vehicle.
- Over half of PHV drivers (52%) liked the idea of using an electric vehicle.
- Many drivers suggested they would require a financial incentive to upgrade their vehicle.

- 3.24 As part of the Council's Outline Business Case (OBC), and in line with SCC's proposed approach, RMBC are proposing a support package for taxi drivers licensed in Rotherham, to provide a mixture of grant funding and interest-free loans. These will support drivers to change their vehicles to less polluting ones, which meet the new standards. The Council will seek Government funding to cover the cost of the grants and/or loans through our OBC. To deliver the air quality improvements as quickly as possible, the Council will specify a defined period within which funding can be accessed by drivers.
- 3.25 RMBC currently has no plans to change its existing Taxi Licensing Policy in regard to the age or emissions of vehicles. However, the existing policy makes provision, within Appendix I, to consider whether differential licensing fees for electric hybrid and ultra-low emission vehicles should be introduced. RMBC will consider this option, as the Outline Business Case progresses through consultation.

## **Buses**

- 3.26 Around 200 buses operate in Rotherham. On certain routes, the bus fleet contributes a significant amount to the total NO<sub>x</sub> emissions for example, transport modelling indicates that on Rawmarsh Hill, 19% of the total NO<sub>x</sub> and NO<sub>2</sub> is emitted by the bus fleet. It is clear therefore that, by delivering improvements to the bus fleet on targeted routes, air quality could be significantly improved across the Borough.
- 3.27 Ensuring that any proposals to improve air quality in one area do not have adverse effects on another area is a key consideration within the Outline Business Case. Both Councils are therefore keen to ensure that any improvement in the bus fleet due to a charging zone in Sheffield, does not negatively affect the quality of Rotherham's bus fleet.
- 3.28 The Council will therefore seek support to ensure that all scheduled buses, operating in any of the identified four areas in 3.12 above are upgraded or retrofitted to achieve the Euro 6 standard as a minimum. In addition, like Sheffield, it is the ambition that nearly all buses operating in Rotherham should meet the Euro VI standard, in order to significantly reduce NO<sub>x</sub> and NO<sub>2</sub> emissions across the Borough.
- 3.29 Initial discussions with the major Bus Operators have indicated that in order to deliver Euro VI standards the fleet operating in Rotherham and Sheffield will require retrofitting of engine technology and potentially a number of new buses. Bus operators are keen to work collaboratively with both Councils to seek additional funding support for retrofit engine technology and RMBC will be seeking this financial support through the OBC submission.
- 3.30 Through early engagement it should also be noted that certain bus operators have indicated their inability to retrofit vehicles due to their age. Further discussions including those through statutory consultation will be required in order to consider the potential implications of this fully.

3.31 The same approach will be undertaken for Coach Operators who have vehicles older than Euro VI standard based within the Council area.

### **Heavy Goods Vehicles (HGVs) and Light Goods Vehicles (LGVs)**

3.32 Heavy goods vehicles make up only about 3% of total traffic, but create 15% of the NOx emissions on Rotherham's roads. Light goods vehicles make up 13% of total traffic and create 26% of the NOx emissions from traffic.

3.33 As with taxis and private hire vehicles above, the implications for Rotherham-based businesses operating HGVs and LGVs in the proposed charging zone in Sheffield, need to be fully understood. The Council will work closely with the Borough's businesses throughout the consultation period to develop proposals on how to best to support a reduction in emissions associated with local HGVs and LGVs.

3.34 The Council recognises that there may be capacity challenges in the market with the speed at which retrofitted and clean HGVs can be delivered and will consider this as part of the OBC.

3.35 Modelling indicates that there are around 6,900 LGV trips by Rotherham residents or businesses into Sheffield City Centre every day. Should these vehicles be non-compliant, and travel within the inner ring road, they will pass through the CAZ, and will incur a charge.

3.36 Initial research undertaken with LGV drivers in Rotherham, shows that:

- The most common vehicle age driven by LGV drivers is 5 to 9 years old (41%).
- LGV drivers generally stated that they would replace their vehicles when maintenance costs reach a certain level.
- Most LGV drivers (87%) agreed that the councils should try to reduce air pollution whilst 58% agreed that the councils should reduce the number of the most polluting vehicles in high pollution areas.
- Half of LGV drivers said that LPG had little, or no, appeal to them as an alternative to their vehicle.
- Over half of LGV drivers said that electric vehicle alternatives potentially would appeal to them.
- Many drivers suggested they would require a financial incentive in order to upgrade their vehicle.

3.37 The range of companies, Small and Medium Enterprises (SMEs) and individuals which use LGVs is significant across the two Authority areas. Any support package that is offered will therefore need to be able to provide financial support across this diverse range of businesses. Whilst a number of larger businesses may have already upgraded, or be in the process of upgrading their fleets, given the movement towards Clean Air Zones in a number of English towns and cities, many small and medium enterprises will require support to enable them to upgrade or replace vehicles with less polluting technologies.

3.38 Both Councils will work closely with local SMEs, throughout the consultation to develop proposals on how to best support local LGV owners to retrofit or upgrade their vehicle. Approaches could include the following and would likely to involve targeting at smaller, local LGV owners and businesses:

- Seeking Government funding to provide grant or loan based financial support targeted at smaller local businesses dependent on a LGVs;
- Rollout of further electric charging points to support use of electric LGVs and incentives to support LGV owners to upgrade;
- Assessing the opportunity for sustainable 'last mile' alternatives for deliveries within the CAZ area;
- Considering how we could use time-limited exemptions to support LGV owners.

3.39 In order to resource the proposed additional measures, Rotherham will seek significant funding from Government's Implementation Fund and Clean Air Fund in order to support the scale of change that is needed to reduce NOx and NO<sub>2</sub> emissions.

#### **4. Options considered and recommended proposal**

4.1 The key decision, to submit the Outline Business Case to DEFRA, will outline in full the potential options that the Councils have jointly considered in order to reach to deliver reductions in nitrogen dioxide, in the shortest possible time.

4.2 Given that 'doing nothing' is not an option because of the scale of pollution and the legal directive to reduce NO<sub>2</sub> emissions in the shortest possible time, assessed options for the Rotherham and Sheffield mandated area have been as follows:

- **CAZ with no charging** – assessed to not deliver the impact needed across the Rotherham and Sheffield mandated area in the shortest possible time
- **Charging CAZ A (non-compliant buses, taxis) in Sheffield** – incentivises change for two of the most polluting vehicles but insufficient to bring air quality within the legal limit in the shortest possible time at multiple sites across the city's road network because of emissions from HGVs and LGVs
- **Charging CAZ B (non-compliant buses, taxis, HGVs) in Sheffield** – incentivises change for three of the most polluting vehicles but insufficient to bring air quality within the legal limit shortest possible time at multiple sites across the city's road network because of emissions from LGVs.
- **Charging CAZ C+ (non-compliant buses, taxis, HGVs, LGVs) in Sheffield** – incentivises change for four of the most polluting vehicles and includes additional measures in some local areas to improve compliance.



- **Charging CAZ D (non-compliant buses, taxis, HGVs, LGVs, private cars) in Sheffield** – whilst a charging CAZ D would achieve compliance, our Feasibility Study assessments indicate that a CAZ C with additional measures will achieve compliance in the shortest possible time without charging private car uses. It is the Council’s judgement that, based upon all the evidence available to us, introducing a CAZ D is not required. A CAZ D in Sheffield would have a significant and disproportionate impact on residents and lower income families.

4.3 Table 1 shows a summary of the Feasibility Study and the outcome of the modelling for the preferred option.

**Table 1: Feasibility Study Outcomes – Average concentration of NO<sub>2</sub>, µg/m<sup>3</sup> (EU limit of 40 µg/m<sup>3</sup>)**

Rotherham Sites	2017 Baseline	2021	
		Projected without measures	Projected with measures
A630 Parkway Rotherham	48	44	39.5
A633 Rawmarsh Hill Rotherham	49	42	38.4
A629 Wortley Road Rotherham	45	41	31.3
A630 Fitzwilliam Road Rotherham	45	44	37.6

4.4 Based on the outcomes of the Feasibility Study, a CAZ C charging zone with additional measures (‘CAZ C+’) is the preferred option to achieve legal compliance for Rotherham and Sheffield in the ‘shortest possible time’. The additional measures, that are specific to Rotherham, are those described in Sections 3.14 to 3.39 above.

4.5 The National Air Quality Plan implements the requirements of the EU Ambient Air Quality Directive (2008/50/EC), and the related Environment Act 1995 (Feasibility Study for Nitrogen Dioxide Compliance) Air Quality Direction 2017, placing obligations on the Council to comply with directions.

## 5. Consultation

5.1 A number of discussions have already taken place with the major Bus Companies in advance of formal consultation processes, and these will continue.

5.2 As previously discussed an initial behavioural study has been undertaken to support the development of the feasibility study and Outline Business Case. Whilst this research provided a number of insights into the motivation of vehicle owners, a more thorough consultation is required to validate these results further.

- 5.3 RMBC and SCC are jointly mandated by Government to produce an Outline Business Case that covers both Local Authorities. Sheffield's charging CAZ proposals require a statutory consultation to take place. Given the scale and scope of proposals, a full and robust consultation will be undertaken to ensure the views of residents and businesses are taken into account before the Full Business Case is produced.
- 5.4 Following submission of the Outline Business Case to DEFRA and acceptance of the case by DEFRA, a full public consultation about the proposals will take place in early 2019. This will inform the Final Business Case for submission to DEFRA later in the year.
- 5.5 The consultation will include opportunities for residents and businesses to engage with the proposals, and will include face to face consultation with the key businesses and stakeholders who are most impacted by the proposals.
- 5.6 The consultation will make a key contribution to the ongoing development and refinement of our Equality Impact Assessment, and seek to address any disproportionate impacts on any of our communities.

## **6. Timetable and Accountability for Implementing this Decision**

- 6.1 If the recommendations of this report are approved the Outline Business Case will be submitted to the Joint Air Quality Unit by 21st December 2018, jointly with Sheffield City Council. The Councils are legally directed to submit the Outline Business Case before 31<sup>st</sup> December 2018.
- 6.2 The preferred options contained within the Outline Business Case will be subject to public consultation, in early 2019, which in turn will inform the final stage of the work, which is the submission of a Full Business Case.
- 6.3 Following approval by the Joint Air Quality Unit, the final preferred options, detailed in the Full Business Case, will need to be implemented and demonstrate compliance by 2021.

## **7. Financial and Procurement Implications**

- 7.1 This report seeks approval for the principle of delivering a Clean Air policy and as such the financial and procurement implications arising from this decision at this time are limited. The Council has received funding of £120,563 from JAQU, via Sheffield City Council, as a contribution to costs incurred in the development of the Outline and Full Business Cases. This is to fund external costs in respect of data collection, internal staff time and other expenses, such as travel. JAQU have been approached for further funding, as the initial allocation will soon have been expended. It is expected that all costs incurred by the Council will be covered by grant.

7.2 In due course detailed proposals will be worked up which will have financial implications for the Authority; however, these proposals will be informed by the amount of external funding that is available. Specifically, the OBC will seek funding from the Government's Implementation Fund and Clean Air Fund. This will include funding for taxi drivers licensed in Rotherham to change their vehicles, including a mixture of grant funding and interest free loans. Government funding will also be sought for Bus, HGV and LGV Operators, to enable them to upgrade their vehicles. This will include grant or loan based financial support aimed at smaller local businesses dependent on LGVs and funding for additional electric charging points within the Borough.

## **8. Legal Implications**

8.1 Under Part IV of the Environment Act 1995, Local Authorities are required to have regard to any national strategy on clean air which is published by the Secretary of State; and to review and assess air quality in their areas and to report against objectives for specified pollutants of concern, to the Department for Environment, Food and Rural Affairs (DEFRA).

8.2 The Environment Act 1995 (Feasibility Study for Nitrogen Dioxide Compliance) Air Quality Direction 2017 set out the obligation for Rotherham Metropolitan Borough Council to carry out a Feasibility Study in relation to tackling roadside nitrogen dioxide concentrations, and to submit initial and final plans identifying the preferred option for delivering compliance in the 'shortest possible time', and setting out the value for money considerations and implementation arrangements by 31 March 2018 (Strategic Outline Case) and 31st December 2018 (Full Business Case).

8.3 However, Inception Guidance from the Joint Air Quality Unit states:  
*"Local authorities are required to undertake local assessments to consider the best option to achieve compliance within the shortest possible time. Under the terms of the Environment Act 1995 (Feasibility Study for Nitrogen Dioxide Compliance) Air Quality Direction 2017, the Government has directed that initial plans (equivalent to the Strategic Outline Case) be provided as soon as possible and by the end of March 2018 at the latest. The Direction further directs that the initial plan needs to be followed with a final plan no later than the end of December 2018. Where no public consultation is required we expect a Full Business Case by the end of December 2018. We recognise that where a significant public consultation is required it may not be possible to complete and submit the Full Business Case by December 2018. In that case, the Outline Business Case that outlines the final plan is to be provided at the earliest opportunity and no later than the end of December 2018 with the Full Business Case to follow shortly after."*

8.4 Therefore, because Sheffield's charging CAZ proposals require statutory consultation, the Councils are directed to submit the Outline Business Case before 31st December 2018 with the Full Business Case to be submitted following consultation in early 2019.

8.5 The definition of the term 'shortest possible time' is an issue that has been considered at length by both RMBC and SCC. The judgement passed in a recent High Court case set out the following threefold approach:

- Aim to achieve compliance by the soonest date possible;
- Choose a route to that objective which reduces exposure as quickly as possible;
- Take steps which mean meeting the value limits is not just possible, but likely.

Whilst the definition of 'shortest possible time' is open for interpretation, it is clear that compliance needs to be achieved as quickly as possible and by 2021. The deadlines set for the Council are therefore crucial and must be complied with.

- 8.6 Omitting to submit plans in line with the prescribed deadlines is a risk to the Council and gives rise to potential legal challenge by way of Judicial Review. Action to manage and improve air quality is legally required. The Ambient Air Quality and Cleaner Air for Europe Directive (2008/50/EC) sets legally binding limits for concentrations in outdoor air of major air pollutants that impact public health including fine particulate matter (PM10 and PM2.5) dust and nitrogen dioxide (NO<sub>2</sub>) gas: annual limit of 40µg.m<sup>-3</sup> for NO<sub>2</sub> and daily limit of 50µg.m<sup>-3</sup> for PM10 (which is not to be exceeded more than 35 times a year). Not achieving the air quality targets nationally means not complying with EU law and consequently, this is a risk for the Council.
- 8.7 Not achieving the air quality targets nationally means not complying with the law and consequently, this is a risk for the Council. There is the potential for the UK Government to be fined if EU limit values are exceeded. Potentially the fines which can be imposed are significant. The reserve powers in the Localism Act to passport fines to local authorities and public bodies (where they have failed to take action when they could) is significant and helps to highlight the need for a clear line of sight between legal obligations and local authority responsibilities to improve air quality and provide clarity on the role local authorities play. The Government however, can only pass the fines on if they can show that a local authority has not taken appropriate steps to comply with EU and UK law. Failing to do so, would mean RMBC is in breach of the above legislation.
- 8.8 There is the potential for legal challenge by way of Judicial Review from members of the public generally, or from environmental groups for failing to meet legally binding limits of fine particulate matter and nitrogen dioxide.
- 8.9 There is also a legal responsibility for Rotherham and Sheffield to:
- "...carry out a consultation in relation to the implementation of a charging clean air zone under section 170 of the Transport Act 2000. A local authority (or joint local authorities) must consult such local persons and such representatives of local persons as they consider appropriate about the charging scheme. For instance, coach, bus and taxi operators, businesses using HGVs & non-compliant vehicles, would need to be consulted if a CAZ C is considered necessary to achieve compliance. The consultees would need to be expanded to include members of the public if a CAZ D is considered necessary to achieve compliance. It would make good business sense to include members of the public in the consultation exercise and to include options for a CAZ C and CAZ D charging zone in the consultation documentation".*

## **9. Human Resources Implications**

- 9.1 There are no direct HR implications arising from this report.
- 9.2 However, the majority of Council employees live in and around the Rotherham area, therefore; improvements in air quality and health outcomes for residents will in turn impact positively on the health of the workforce, contributing to the Council's commitment and overall strategies relating to employee health, safety and wellbeing.

## **10. Implications for Children and Young People and Vulnerable Adults**

- 10.1 The implications of poor air quality for the health and well-being of children and young people, and for the adult population, are significant. Poor air quality is strongly linked with poor health outcomes, and with increased mortality rates.
- 10.2 The proposed actions to deliver improvements in air quality will therefore impact positively on the lives of children, young people and vulnerable adults.

## **11. Equalities and Human Rights Implications**

- 11.1 An initial Equality Impact Assessment (EIA) has been undertaken in support of this report, and the proposals outlined within it (see Appendix A). The EIA will be regularly reviewed and updated throughout the consultation process and will be finalised following the proposed public consultation, prior to agreement of the Final Business Case.

## **12. Implications for Partners and Other Directorates**

- 12.1 The UK Government's Public Health Outcomes Framework for England (2012) recognises the burden of ill-health resulting from poor air quality as well as other public health concerns. It sets out a range of indicators which local authorities must consider when carrying out their public health functions, with the principal aims of improving overall healthy life expectancy and reducing inequalities in life expectancy. Air pollution is the largest environmental risk to the public's health, contributing to reduced life expectancy, weighted towards the most disadvantaged, who are more likely to be exposed to higher levels of air pollution.
- 12.2 The interventions outlined in this report present a real opportunity to reduce concentrations of contaminants at a faster rate than would otherwise be achievable and to realise the optimum benefits for public health. The legal thresholds should be viewed as a minimum requirement rather than a target, as no level of air pollution is safe.
- 12.3 From a public health perspective, the CAZ and associated interventions should be viewed as working alongside other policies that consider health implications, whether through reducing harmful exposures or promoting healthier lifestyle choices.

### 13. Risks and Mitigation

13.1 As part of the OBC, the Councils will have a full and detailed risk register which assesses the risk against our proposals and sets out appropriate mitigations.

13.2 As a joint study, submission is dependent on the approval of the OBC by both RMBC and SCC.

### 14. Accountable Officer(s)

Tom Smith, Interim Assistant Director, Community Safety and Street Scene  
Paul Woodcock, Acting Strategic Director, Regeneration and Environment

Approvals obtained on behalf of:-

	<b>Named Officer</b>	<b>Date</b>
Strategic Director of Finance and Customer Services	Jon Baggaley	20 <sup>th</sup> Nov 2018
Assistant Director of Legal Services	Liz Anderton	27 <sup>th</sup> Nov 2018
Head of Procurement (if appropriate)	Karen Middlebrook	27 <sup>th</sup> Nov 2018
Head of Human Resources (if appropriate)	John Crutchley	19 <sup>th</sup> Nov 2018

This report is published on the Council's website or can be found at:-

<http://moderngov.rotherham.gov.uk/ieDocHome.aspx?Categories=>