REPORT TO:	**ENVIRONMENT & DEVELOPMENT SERVICES COMMITTEE**	**AGENDA ITEM: 11**
DATE OF MEETING:	**27th SEPTEMBER 2018**	**CATEGORY: DELEGATED**
REPORT FROM:	**STRATEGIC DIRECTOR SERVICE DELIVERY**	**OPEN**
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SUBJECT:	**DERBY CITY CLEAN AIR CONSULTATION**	**REF:**
WARD(S) AFFECTED:	**ALL**	**TERMS OF REFERENCE: EDS14**

1. Recommendations

1.1. Committee is recommended to endorse the conclusions of this report as forming the South Derbyshire response to Derby City Councils consultation for tackling poor air quality.

2. Purpose of Report

2.1. To provide members with an understanding of the current air quality challenges in Derby and the relative merits of the three air quality intervention options being considered by the city council.

2.2. To seek Committee approval of the proposed response by South Derbyshire District Council to the consultation.

3. Background and History

3.1. EU Directive 2008/50/EC contains legally binding Air Quality Limit Values for a number of airborne pollutants which are of particular concern to human health. These Limit Values are embedded in UK law through the Air Quality Standards Regulations and the government has pledged to retain these in UK law following Brexit.

3.2. Local authorities have been given the statutory duty to review and assess air quality within their administrative areas against these Limit Values. Where the Limit Values are not being met authorities must declare an Air Quality Management Area (AQMA) and then develop an Air Quality Action Plan to show how they are 'working towards' achieving the Limit Values.

3.3. The key airborne pollutants which have an adverse impact on health are respirable particulate (PM_{10}), fine particulate ($PM_{2.5}$) and nitrogen dioxide (NO_2). Road transport is estimated to be responsible for up to 70% of the harm associated with air pollution.

3.4. 69% of local authorities in England have declared an AQMA. Currently there are 556 AQMAs in the UK and the majority of these are due to exceedences of the Limit Value for NO_2 linked to road transport emissions.

3.5. Within Derbyshire eight AQMAs have been declared. One in Chesterfield, two each in Derby and Erewash and three in Bolsover. All are due to NO_2 exceeding the Limit Values due to road traffic emissions. No AQMAs have been declared in South Derbyshire.

3.6. The compliance date for the Limit Values was 2010. In 2015 the Supreme Court instructed the government to develop a national strategy to ensure that the NO_2 Limit Values are achieved within the 'shortest time possible'.

3.7. In December 2015, Defra released a National Air Quality Plan which outlined the requirement for the implementation of Clean Air Zones in five cities across the UK, including Derby, where the government considered that the Limit Values were not likely to be met in the short term.

3.8. Following further Supreme Court hearings, Defra published a revised National Plan in July 2017.

3.9. Defra also issued legal Directions in 2017 to Derby City Council and four other Councils to undertake a 'feasibility study' and publish a 'full business case' to identify the intervention option that will deliver compliance within the shortest possible time.

3.10. Defra also issued legal Directions to 33 other Councils requiring further work to be undertaken to determine whether NO_2 Limit Values on busy sections of roads are being exceeded and to develop recommended measures to meet the Limit Value.

3.11. Derby City Council has launched a public consultation on three potential intervention options supported by a number of technical reports including an air quality modelling report, a transport model forecast report and an economic appraisal report. The consultation has been issued with a caveat that the data provided in the consultation may be changed at any time as it still needs to be checked and approved by Defra.

3.12. The consultation closes on 24th September 2018, however Derby City have agreed to receive the approved consultation response from E&DS after the closing date.

4. Detail

4.1. One area of the city at Stafford Street, near to its junction with Friar Gate has been identified as being likely to still be breaching the Limit Value in 2020. The Direction requires the City Council to consider the potential for the introduction of charging Clean Air Zones, unless the authority are able to design other measures which can achieve the same air quality improvements.

4.2. The technical reports all include the beneficial impact of work already being done in the city as well as other committed projects in the pipeline. These include retro-fitting of Council's HGV fleet with emissions reduction technology, a cleaner taxis research and engagement programme, Early Measures funding for Cleaner Taxis and promotion of the use of electric and hybrid vehicles.

4.3. The three intervention options have been developed following stakeholder engagement events within the city.

4.4. As part of the feasibility study DCC have also developed a draft Low Emission Strategy to help inform the process of identifying measures to address the air quality issues.

4.5. The three options consist of;

- Option 1 – Traffic Management Options
- Option 2 – Clean Air Zone within the inner ring road
- Option 3 – Clean Air Zone within the outer ring road

4.6. A summary of each of the options is contained in Appendix 1.

Air Quality Implications

4.7. The Air Quality Modelling report has been published which provides computer predictions of the impacts on air quality of a number of scenarios. Having reviewed the contents of the report we have drawn the following conclusions:

4.8. Compared to a baseline of the work already committed to (including the Low Emissions Strategy), Option 1 will have little or no impact on air quality in most relevant communities in South Derbyshire; namely Mickleover, Littleover, Stenson and Chellaston. A small improvement in air quality is predicted on Shardlow Road, Alvaston and therefore there could be a resulting small improvement in air quality in Boulton Moor.

4.9. Option 3 would appear to have the impact of moving traffic onto the outer ring road and beyond. Whilst this creates a beneficial impact for air quality within the outer ring road, it is predicted to result in an adverse impact in Mickleover and Littleover. There would appear to be no significant adverse impact in Stenson, Chellaston and Boulton Moor.

4.10. There has been no air quality modelling of Option 2, however it is reasonable to assume that the impact of this Option would be to move traffic from the city centre to outside the inner ring road. This is likely to have an impact somewhere in-between that predicted for Options 1 and 3.

4.11. Therefore Option 1 represents the most positive air quality outcome for residents of South Derbyshire.

Economic Implications

4.12. An Economic Appraisal has considered the various economic impacts of air quality interventions. Specifically the Appraisal has considered upgrade costs, implementation costs and operating costs as well as monetarising the costs of changes in greenhouse gas emissions, welfare, congestion and exposure to poor air quality.

4.13. It is not possible to estimate from the report the impacts of each Option specifically within communities in South Derbyshire and the report only draws conclusions about the overall impact of the Low Emissions Strategy, Option 1 and Option 3.

4.14. A graph of the present value (PV) of the impacts of each of these scenarios is shown in Appendix 1. The report concludes that based on a cost benefit analysis the ranking of the options based on economic implications are:

- 1st Baseline (i.e. implement the Low Emission Strategy only), NPV £38.0million
- 2nd Option 1, NPV £8.3million
- 3rd Option 3, NPV -£374.7million

4.15. Again, there has been no assessment of Option 2, however it is reasonable to assume that the impacts of this would be somewhere between those of Option 1 and Option 3.

4.16. The Assessment shows that implementation of the Low Emissions Strategy with no further air quality interventions is the most economically advantageous option. However this will not deliver the air quality improvements necessary to achieve the Limit Value for NO_2 and therefore it is not an option under consideration. Option 1 is the next most advantageous.

5. Corporate Implications

5.1. The proposed clean air interventions in Derby could have environmental and economic impacts on South Derbyshire. In particular it links to the Corporate Plan theme of 'Place' and specifically aim PL6 "Deliver service that keep the District clean and healthy".

6. Community Implications

6.1. The proposed clean air interventions link to the Sustainable Community Strategy theme of Sustainable Development and in particular to the outcome measure of "Areas with poor air quality".

6.2. The conclusions of this report have no adverse impacts on groups of people with protected characteristics and should result in a beneficial impact in reducing inequality by finding the most sustainable solution to the current breaches of air quality standards.

6.3. The report has no impact on the Armed Forces Community Covenant.

7. Conclusions (Proposed Consultation Response)

7.1. We have reviewed the content of the air quality modelling technical report and the economic appraisal report published in support of the consultation on the three options for achieving compliance with Air Quality Limit Values in Derby. We have specifically considered the content of the reports with reference to the predicted impact of each option on the South Derbyshire communities in Mickleover, Littleover, Stenson, Chellaston and Boulton Moor.

7.2. Option 1 is predicted to result in a net beneficial air quality impact to communities within South Derbyshire. Option 3 is predicted to result in a net adverse impact to communities in South Derbyshire. Option 2 was not subject to detailed air quality modelling but its impact is likely to be somewhere in the middle of Options 1 and 3.

7.3. Option 1 is predicted to have a small net positive present value (PV) impact. Option 3 is predicted to have a large net negative present value impact. Again, Option 2 which was not included in the appraisal, is likely to be somewhere in the middle of Options 1 and 3.

7.4. Option 1 is the favoured Option for South Derbyshire District Council for the reasons outlined above.

7.5. We would also express our concern about the predicted potential adverse impacts of Options 2 and 3 on the residents of South Derbyshire. Both of these Options may result in increased exposure to our residents to NO_2, PM_{10} and $PM_{2.5}$.

7.6. We would draw your attention to the comment in the 2007 Air Quality Strategy for England, Scotland, Wales and Northern Ireland which, when discussing the potential health effects of respirable particulate, states that "*It is not currently possible to discern a threshold concentration below which there are no effects on the whole population's health*".

7.7. This comment was amplified in the 2016 publication from the Royal College of Physicians "The Lifelong Impact of Air Pollution" which also highlighted the rapid growth in our understanding of the health impacts of respirable particulates at relatively low levels since the publication of the 2007 Strategy. The report highlighted that "*many studies now available document serious effects at lower concentrations on population*" and that "*studies have now demonstrated that air pollution is involved in much more than symptom exacerbation and early death in older and frail bronchitis patients*".

7.8. It is our belief based on the evidence presented that the adoption of Option 3 and potentially Option 2 would lead to the increased exposure of South Derbyshire residents to PM_{10} and $PM_{2.5}$.

7.9. We acknowledge that both Options 2 and 3 will provide reductions in NO_2 exposure to a relatively small geographical area and population in central Derby. However, we are deeply concerned that the benefits of these reductions will be at the cost of increased exposure, and therefore adverse health impacts, to a much larger population group in the south of the city and to our communities in the northern area of South Derbyshire.

7.10. We would also express our concern that based on the evidence available, Options 2 and 3 will work against the Objectives contained in Defra's "UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations" which state "*The objective of the UK government alongside the devolved administrations is to transform the UK's most polluted towns and cities into clean and healthy urban spaces*".

7.11. We would object to the adoption of either Options 2 or 3 without assurances that they can be delivered without any adverse impact on the people of South Derbyshire.

8. Background Papers

8.1. Royal College of Physicians / Royal College of Paediatrics and Child Health, "Every Breath We Take: The Lifelong Impact of Air Pollution", 2016

8.2. DEFRA, "Air Quality Strategy for England, Scotland, Wales and Northern Ireland", 2007

8.3. Ricardo Energy & Environment, "Derby Clean Air Zone Air Quality Modelling Report (AQ3)", 2018

8.4. Ricardo Energy & Environment, "Economic Appraisal Methodology Report (E1)", 2018