

The **Public Sector Equality Duty** (Section 149 of the Equality Act) requires public bodies to have due regard to the need to eliminate discrimination, advance equality of opportunity, and foster good relations between different people carrying out their activities.

The Equality Duty supports good decision making – it encourages public bodies to be more efficient and effective by understanding how different people will be affected by their activities, so that their policies and services are appropriate and accessible to all and meet different people’s needs. The Council’s Equality and Safety Impact Assessment (ESIA) includes an assessment of the community safety impact assessment to comply with Section 17 of the Crime and Disorder Act and will enable the Council to better understand the potential impact of proposals and consider mitigating action.

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| <b>Name or Brief Description of Proposal</b>   | Southampton and New Forest District Council Local Plan for Compliance with NO <sub>2</sub> EU AQ Directive Within the Shortest Possible Time. |
| <b>Brief Service Profile (including number of customers)</b>   |   |
| <p>Clean Air Zones are areas where there is a focus on improving air quality by reducing harmful emissions. The creation of Clean Air Zones in major UK cities is part of the government’s Air Quality Plan which aims to improve air quality and address sources of pollution.</p> <p>Southampton is assessing the need for a Clean Air Zone because levels of air pollution in the area are above required European Union legal standards. The specific pollutant that Southampton City Council must reduce to legal levels is nitrogen dioxide (NO<sub>2</sub>). New Forest District Council must also produce a plan to reduce levels of air pollution to legal levels and are working in partnership with Southampton City Council to achieve this.</p> <p>The proposal to introduce a Clean Air Zone in Southampton and the New Forest will see the most polluting vehicles discouraged from entering the zone through charges. A significant source of nitrogen dioxide in the UK is road transport. The aim of the Clean Air Zone is to bring pollution down to legal levels by replacing older, more polluting vehicles with modern, cleaner vehicles and by encouraging a shift towards more sustainable and active transport.</p> <p>The preferred option is to introduce a citywide Class B Clean Air Zone. This means buses, taxis (private hire and hackney carriage), coaches and heavy goods vehicles that do not meet minimum emission standards will be charged to enter the zone.</p> |   |

## Summary of Impact and Issues

### Nitrogen Dioxide Impacts on Health

Air pollution is a major cause of death and illness worldwide with impacts ranging from increased hospital admissions to increase risk of premature death. Studies have shown that symptoms of respiratory conditions in children increase in association with long-term exposure to NO<sub>2</sub>. Reduced lung function growth is also linked to nitrogen dioxide at concentrations currently measured (or observed) in cities of Europe and North America (WHO<sup>1</sup>). Air pollution is also linked with a range of other conditions including diabetes, neurodevelopment, cardiovascular, cancer and obesity. The Royal College of Physicians produced a report in 2016 (RCP, 2016<sup>2</sup>) highlighting that while air pollution is harmful to everyone, some people suffer more than others because they:

- live in deprived areas, which often have higher levels of air pollution,
- live, learn or work near busy roads,
- are more vulnerable because of their age or existing medical conditions.

### Clean Air Zone Impacts on Health

The proposed preferred option for the introduction of a Clean Air Zone aims to achieve compliance with legal levels of nitrogen dioxide by reducing concentrations. This means that residents will be exposed to reduced levels of nitrogen dioxide as a result of the preferred option and will therefore see associated health benefits (reduction of the negative impacts identified above). The proposed scope of the Clean Air Zone is citywide and will therefore deliver benefits across the city.

### Clean Air Zone Impacts on Households

The preferred option is unlikely to directly impact households as private vehicles will not be subject to a charge, however the selected options may still have indirect effects on some households through impacts on businesses. For example, households which include individuals employed in freight/delivery operator businesses that are affected by the introduction of a Clean Air Zone. .

Furthermore, the extent that businesses pass on any additional costs to consumers could have a disproportionate impact on lower income households:

- Buses, as a cheaper mode of transport, are used more by lower income households<sup>3</sup> than other groups. Therefore any increased costs of tickets as a result of pass-through costs could have a greater impacts on these households.
- Taxis are often relied upon by disabled persons, who may therefore also face a disproportionate impact of any costs passed through.

The preferred option also includes a number of measures designed to mitigate these possibilities.

### Clean Air Zone Impacts on Business and Sole Traders

The proposal is to charge non-compliant vehicles which are likely to be owned and/or operated by businesses or sole traders.

<sup>1</sup> <http://www.who.int/airpollution/ambient/health-impacts/en/>

<sup>2</sup> <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

<sup>3</sup> <https://www.ucl.ac.uk/transport-institute/pdfs/transport-poverty>

It is likely therefore that all businesses located in and around the CAZ will be affected to some extent, many indirectly. That extent will be determined by a number of

parameters, in particular by the location and type of the business, and also by what complementary funding and support is made available to affected businesses to mitigate any negative effects. A draft Economic Impact Assessment will be published with the outline Business Case.

**Potential Positive Impacts**

- The introduction of a Clean Air Zone using the preferred option will reduce emissions of nitrogen oxides (NO<sub>x</sub>) including nitrogen dioxide from HGVs, taxis, buses and coaches on a citywide scale that will deliver positive benefits for public and environmental health.
- Improve concentrations of nitrogen dioxide within the Clean Air Zone and into New Forest District Council.
- Deliver compliance with the European Union Air Quality Directive within the shortest possible time in Southampton and New Forest (below 40µg/m<sup>3</sup> at locations relevant to the EU AQ Directive).
- Health benefits as a result of improving air quality.
- Potential to deliver a reduction in noise and accidents due to reduced HGVs on the road (those cancelling/avoiding or choosing to utilise freight consolidation and delivery and service planning) and improve accessibility for other road users.

The overall economic impact assessment concludes a positive economic impact for the preferred option.

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| <b>Responsible Service Manager</b> | Steve Guppy, Service Manager – Scientific Service                     |
| <b>Date</b>                        | 24/05/2018  |
| <b>Approved by Senior Manager</b>  | Mitch Sanders, Service Director – Transactions and Universal Services |
| <b>Date</b>                        |   |

| Impact Assessment | Details of Impact   | Possible Solutions & Mitigating Actions |
|-------------------|---|---|
| Age               | <p><b><u>Asthma Incidence 0-14 year olds and 15 years+</u></b></p> <p>The preferred option will reduce NO<sub>2</sub> concentration across the city so all areas will see benefits for those suffering with respiratory conditions including asthma.</p> <p>Rates of asthma prevalence in 0-14 year olds significantly higher in Redbridge compared to the rest of Southampton. The preferred option will deliver compliance with the EU AQ Directive at exceedances identified in this area at the A33. NO<sub>2</sub> concentrations and asthma prevalence are associated therefore improving NO<sub>2</sub> concentrations will have a positive impact on this area of significantly increased asthma prevalence (see appendix 1).</p> <p>Rates of asthma prevalence 15 years+ similarly identifies Redbridge area as having a significantly higher prevalence than the Southampton average.</p> <p>The preferred option will reduce NO<sub>2</sub> concentration across the city so all areas will see positive impact in terms of asthma prevalence.</p> | N/A – positive impact                   |

| Impact Assessment        | Details of Impact  | Possible Solutions & Mitigating Actions   |
|--------------------------|--|---|
|                          | <p><b><u>Concessionary Bus Use</u></b><br/> Total concessionary bus journeys in Southampton (including senior citizen and disability passes) across four bus operators Apr 2017-Mar 2018 totalled 4,385,932.</p> <p>There are currently 27,442 senior citizen bus passes issued in Southampton. The cost to operators will not be passed onto those eligible for concessionary bus travel as the pass allows for free travel.</p> <p>However, measures to force emission improvements could potentially make some routes financially unviable and concessionary trips unavailable.</p> | <p><b><u>Concessionary Bus Use</u></b><br/> A fund will be available which offers non-compliant buses the option to retrofit to an accredited Clean Air Zone compliant standard.</p>  |
|                          | <p><b><u>Home to School Transport</u></b><br/> 41 Taxis with 4 seats, 2 Taxis with 6 seats, 1 Taxi with 7 seats and 3 Wheel Chair Accessible Taxis are used for Home to School Transport in Southampton. Currently, there is limited availability of accessible vehicles and capital costs are often higher than a standard vehicle.</p> <p>Measures to force emission improvements could make some services financially unviable and restrict access to suitable vehicles.</p>  | <p><b><u>Home to School Transport</u></b><br/> Will seek to identify opportunities to exempt or relax requirements to support a suitable supply of wheel chair accessible vehicles. Incentive schemes to be introduced to support the transition to compliant vehicles.</p> |
| <p><b>Disability</b></p> | <p><b><u>Home to School Transport</u></b><br/> 41 Taxis with 4 seats, 2 Taxis with 6 seats, 1 Taxi with 7 seats and 3 Wheel Chair Accessible Taxis are currently used for Home to School Transport in Southampton. There is limited availability of accessible vehicles, and capital costs are often higher than a standard vehicle. A Clean Air Zone could impact the numbers of specialist vehicles operating in the city.</p>   | <p><b><u>Home to School Transport</u></b><br/> Will seek to identify opportunities to exempt or relax requirements to support a suitable supply of wheel chair accessible vehicles. Incentive schemes to be introduced to support the transition to compliant vehicles.</p> |

| Impact Assessment                     | Details of Impact   | Possible Solutions & Mitigating Actions   |
|---------------------------------------|---|---|
|                                       | <p><b><u>Concessionary Bus Travel</u></b><br/>Total concessionary bus journeys in Southampton (including senior citizen and disability passes) across four bus operators Apr 2017-Mar 2018 totalled 4,385,932.</p> <p>There are currently 2,717 disability bus passes issued in Southampton. However, measures to force emission improvements could potentially make some routes financially unviable and concessionary trips unavailable.</p> <p><b><u>Taxi Use and Mobility</u></b><br/>In 2015, the latest data available on mobility, on average, adults (16+) with mobility difficulties use taxis or PHVs more than people who do not (16 trips per person vs. 10 trips per person). These figures have remained broadly stable since 2010. Taxi or PHV usage makes up 3% of all their trips, compared to just 1% for those without mobility difficulties. These figures have remained broadly stable since 2010. Though a charge will not be levied on taxis, other enforcement mechanisms including bus lane enforcement for non-CAZ compliant taxis will potentially add journey time for non-CAZ compliant wheel chair accessible vehicles.</p> | <p><b><u>Concessionary Bus Travel</u></b><br/>Offering non-compliant buses the option to retrofit to an accredited CAZ compliant standard through the Council's £2.7m Clean Bus Technology fund will ensure operators are not adversely economically impacted by the preferred option, preventing routes becoming unviable.</p> <p><b><u>Taxi Use and Mobility</u></b><br/>Will seek to identify opportunities to exempt or relax requirements to support a suitable supply of wheel chair accessible vehicles. Incentive schemes to be introduced to support the transition to compliant vehicles.</p> |
| <b>Gender Reassignment</b>            | No impact   |   |
| <b>Marriage and Civil Partnership</b> | No impact   |   |
| <b>Pregnancy and Maternity</b>        | Exposure to outdoor air pollution is linked to premature birth, stillbirth and organ damage during development. The proposal will improve air quality across the city with positive impacts in terms of pregnancy and maternity seen in wards with birth rates significantly higher than the Southampton average 2014-2016 (including Redbridge and Millbrook where the   | N/A – positive impact   |

| Impact Assessment         | Details of Impact  | Possible Solutions & Mitigating Actions |
|---------------------------|--|---|
|                           | <p>EU AQD exceedance will be addressed).</p> <p><b>Birth Weight</b><br/> Traffic related air pollution is estimated to contribute to one-fifth of low birth weight at term cases. Southampton's low birth weight value in 2015 was 6.7%, similar to the national average 7.4%<sup>4</sup>. Very low birth weight in Southampton in 2015 was 1.26%, similar to the national average 1.57%<sup>5</sup>. Therefore, there is limited evidence that air pollution is currently affecting birth weight in the city, but the Clean Air Zone will continue to reduce risks.</p> | N/A – positive impact                   |
| <b>Race</b>               | <p>22.3% of the Southampton's population are non-White British, including 14% who are residents from Black or Minority Ethnic backgrounds.</p> <p>Citywide improvements in air quality will also mean all ethnic groups across the city will experience positive health benefits.</p>  | N/A – positive impact                   |
| <b>Religion or Belief</b> | No impact  |   |
| <b>Sex</b>                | <p><b>Deaths from COPD by gender</b><br/> COPD incidence and earlier onset is associated with exposure to air pollution<sup>2</sup>. In Southampton, COPD is attributed to the deaths of 103.47 males per 100,000 and 56.73 females per 100,000 in 2014-2016. Improving air quality as a result of the Clean Air Zone will benefit both males and females.</p>   | N/A – Positive Impact                   |
| <b>Sexual Orientation</b> | No impact  |   |
| <b>Community</b>          | No impact  |   |

<sup>4</sup><https://fingertips.phe.org.uk/search/birthweight#page/3/gid/1/pat/6/par/E12000008/ati/102/are/E06000045/iid/92531/age/29/sex/4>

<sup>5</sup><https://fingertips.phe.org.uk/search/birthweight#page/3/gid/1/pat/6/par/E12000008/ati/102/are/E06000045/iid/92532/age/29/sex/4>

| Impact Assessment  | Details of Impact  | Possible Solutions & Mitigating Actions |
|--------------------|--|---|
| Safety             |  |   |
| Poverty            | <p><b><u>Lower Income Households</u></b><br/> Nationally, the health impacts associated with air pollution are likely to fall to a greater extent on poorer households for a range of reasons<sup>6</sup>. Citywide improvements in Southampton's air quality will be greatest in and around the city centre and in vicinity of main roads, which score lower on the Indices of Multiple Deprivation scale (IMD) (i.e. are more deprived).</p> <p>For example, a number of the current Air Quality Management Areas (AQMAs) are located in some of the most deprived neighbourhoods, such as those in Redbridge, Bevois and Bargate. In addition, evidence shows that people resident in the most deprived neighbourhoods in the city are 2.7 times more likely to suffer from COPD and 1.4 times more likely to suffer from asthma compared to the least deprived neighbourhoods; conditions known to be exacerbated by poor air quality.</p> | N/A – Positive Impact                   |
| Health & Wellbeing | Health impacts associated with age, disability and pregnancy and maternity are previously discussed.   |   |
|                    | <p><b><u>Emergency COPD Admission 35 years+</u></b></p> <p>Emergency chronic obstructive pulmonary disorder (COPD) admissions for those 35+ are</p>  | N/A – positive impact                   |

<sup>6</sup> <http://www.instituteofhealthequity.org/resources-reports/fair-society-healthy-lives-the-marmot-review>

| Impact Assessment                       | Details of Impact   | Possible Solutions & Mitigating Actions  |
|---|---|--|
|   | <p>significantly higher at Redbridge in comparison to the Southampton average. There are also other areas across the city with significantly higher emergency COPD admissions for this age group. The preferred option will deliver citywide improvements to air quality so will have a positive impact at all areas.</p> |  |
|   | <p><b>Wellbeing</b><br/>The introduction of a charging scheme could be increase stress levels to those who perceive the financial implications to adversely affect them.</p>  | <p><b>Wellbeing</b><br/>Communications strategy will ensure the proposals including mitigation measures are accessible, accurate and clearly reported across all relevant groups.</p> <p>Mitigation measures will target those groups most financially affected and seek to provide assurances regarding delivery.</p> |
| <p><b>Other Significant Impacts</b></p> |   |  |