

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.

<b>Name or Brief Description of Proposal</b>	Southampton Local Plan for Compliance with NO <sub>2</sub> EU Ambient Air Quality Directive Within the Shortest Possible Time <b>(CAZ B Option)</b>
<b>Brief Service Profile (including number of customers)</b>	
<p>Southampton City Council is assessing the need for a Clean Air Zone because levels of air pollution within the administrative boundary and on roads under the authority of Southampton City Council were identified in the government’s plans as being above required European Union legal standards. The limit value for nitrogen dioxide is an annual average of 40ug/m<sup>3</sup>. The specific pollutant that Southampton City Council is assessing is nitrogen dioxide (NO<sub>2</sub>). The primary objective of the Clean Air Zone is to achieve compliance with the legal standards within the shortest possible time. Clean Air Zones can be charging, where vehicles are discouraged from entering the zone if they do not meet a minimum emission standard, or non-charging which is an area of targeted air quality improvement without charging.</p> <p>A consultation was held from 21<sup>st</sup> June 2018 for 12 weeks. An online survey was used to collect responses supported by physical copies, events and social media. Face-to-face meetings with residents, business and trade organisations were also held. The consultation was advertised through postcards, billboards, VMS traffic signs and other media. The preferred option consulted on was to introduce a citywide Class B Clean Air Zone. This would mean buses, taxis (private hire and hackney carriage), coaches and heavy goods vehicles that do not meet minimum emission standards (Euro 6/VI diesel or Euro 4 petrol) would be charged to enter the zone.</p> <p>A key outcome of the consultation was the review and reassessment of transport and air quality modelling which has highlighted that the introduction of a charging clean air zone is not necessary to achieve the objective of</p>	

reducing levels of nitrogen dioxide down to below legal levels in the shortest possible time.

The technical assessment has predicted that Southampton will achieve legal compliance for NO<sub>2</sub> levels by 2020 under the business as usual scenario (i.e. no further intervention). This ESIA is to assess the equalities impacts of a charging Clean Air Zone (Class B city wide). The proposal to introduce a charging Clean Air Zone in Southampton 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.

This ESIA is in reference to introducing 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 (Euro 6/VI diesel or Euro 4 petrol) will be charged to enter the zone.

<b>Vehicle Class</b>	<b>Proposed charge for non-compliant vehicles</b>
HGV, Bus, Coach	£100 per day
Taxi, Private Hire	£12.50 per day

For affected vehicles, a package of mitigation measures would be available to support the switch to Clean Air Zone compliant vehicles.

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### **Summary of Impact and Issues**

Air quality is a national public health priority. Of all environmental factors, it has the largest impact on health in the UK. The latest estimates suggest that air pollution (particulate matter and nitrogen dioxide) is an effect equivalent to 28,000 to 36,000 deaths in 2013<sup>1</sup>. Air pollution has health effects across the course of a person's life; from the underdevelopment of the unborn baby through to dementia in the later years of life. The strongest evidence of health impact is worsening symptoms of respiratory diseases including asthma, COPD and cardio-vascular disease.

<sup>1</sup>Associations of long term nitrogen dioxide concentrations with mortality (COMEAP 2018)

[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)  
Currently, nitrogen dioxide and particulates are the pollutants causing the largest health impacts in the UK. These pollutants are mostly associated with

road transport. The public health outcome framework indicator for air pollution is mortality attributable to particulate matter. For Southampton, this equates to over 100 deaths per year caused by long term exposure to particulate air pollution.

Poor air quality is known to have more severe effects on vulnerable groups including the elderly, children and people already suffering from existing conditions such as respiratory and cardiovascular conditions<sup>2</sup>.

Southampton is typically an urban environment with concentrations above the ambient background concentration of NO<sub>2</sub>. Evidence is limited as to the specific health benefits conveyed by reducing NO<sub>2</sub> concentrations below 40µg/m<sup>3</sup> though it is generally accepted that reducing concentrations toward the ambient background level, and below 40µg/m<sup>3</sup> annually will benefit health. The EU limit value for nitrogen dioxide (40µg/m<sup>3</sup> annual mean) is consistent with the World Health Organisations guideline value<sup>3</sup>. Ensuring Southampton meets air quality limits for nitrogen dioxide will help mitigate negative health impacts of poor air quality.

### **CAZ B 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>4</sup> than other groups. Therefore any increased costs of tickets as a result of pass-through costs could have a greater impact 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.

### **CAZ B 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>2</sup> World Health Organization, 'Review of evidence on health aspects of air pollution – REVIHAAP Project', 2013 [http://www.euro.who.int/\\_data/assets/pdf\\_file/0004/193108/REVIHAAP-Final-technical-report-final-version.pdf?ua=1](http://www.euro.who.int/_data/assets/pdf_file/0004/193108/REVIHAAP-Final-technical-report-final-version.pdf?ua=1)

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.

<sup>3</sup> World Health Organization, 'Ambient (outdoor) Air Quality and Health' (2 May 2018) [https://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health)

### Distributional Analysis

A distributional analysis has been carried out to inform the proposals. The aim of the distributional analysis is to explore how the impacts of the policy options are distributed amongst the different socio-economic groups (such as children and different income groups). It also assesses whether any key amenities are adversely affected through changes in access or surrounding air quality (e.g. schools, hospitals). This is included in the document E3 Distributional Analysis.

### Potential Positive Impacts

- Improved concentrations of nitrogen dioxide within the Clean Air Zone.
- Compliance with the European Union Ambient Air Quality Directive (EU AAQD) within the shortest possible time in Southampton is predicted under do minimum scenario.
- Health benefits as a result of improving air quality.

<b>Responsible Service Manager</b>	Steve Guppy, Service Manager – Scientific Service
<b>Date</b>	
<b>Approved by Senior Manager</b>	
<b>Date</b>	

### Potential Impact

<b>Impact Assessment</b>	<b>Details of Impact</b>	<b>Possible Solutions &amp; Mitigating Actions</b>
<b>Age</b>	<b>Health Outcomes</b> Poor air quality is known to affect sensitive groups including the young and elderly and those with existing conditions. Therefore improvements to air quality will benefit all residents but particularly these sensitive groups <sup>5</sup> .	N/A – positive impact

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<sup>5</sup> Royal College of Physicians Policy report. Every breath we take: the lifelong impact of air pollution. 2016: <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

Impact Assessment	Details of Impact	Possible Solutions & Mitigating Actions
	<p><b><u>Concessionary Bus Use</u></b>  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>  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>  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>  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>Disability</b></p>	<p><b><u>Home to School Transport</u></b>  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>  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><u>Concessionary Bus Travel</u></b>  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 will financially pressure some routes.</p>	<p><b><u>Concessionary Bus Travel</u></b>  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 CAZ B option, preventing routes becoming unviable.</p>
	<p><b><u>Taxi Use and Mobility</u></b>  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.</p>	<p><b><u>Taxi Use and Mobility</u></b>  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>Gender Reassignment</b></p>	<p>No discernible impact</p>	
<p><b>Marriage and Civil Partnership</b></p>	<p>No discernible impact</p>	

Impact Assessment	Details of Impact	Possible Solutions & Mitigating Actions
<b>Pregnancy and Maternity</b>	<p>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.</p>	<p>N/A – positive impact</p>
	<p><b>Birth Weight</b>  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>6</sup>. Very low birth weight in Southampton in 2015 was 1.26%, similar to the national average 1.57%<sup>7</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>	<p>N/A – positive impact</p>
<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>	<p>N/A – positive impact</p>
<b>Religion or</b>	<p>No discernible impact</p>	

<sup>6</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>7</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
<b>Belief</b>		
<b>Sex</b>	<p><b><u>Deaths from COPD by gender</u></b>  COPD incidence and earlier onset is associated with exposure to air pollution<sup>Error! Bookmark not defined.</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 discernible impact	
<b>Community Safety</b>	No discernible impact	
<b>Poverty</b>	<p><b><u>Lower Income Households</u></b>  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>8</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><b><u>SCC Licensed Taxi Drivers</u></b>  The IMD gives an indication of the overall levels of deprivation in each LSOA and takes into consideration several factors including crime and employment deprivation. Lower IMD values correspond to areas with higher deprivation. This data is</p>	<p><b><u>Low Income Household</u></b>  Positive health benefits conveyed to the poorest in society as a result of reducing concentrations of NO<sub>2</sub>.</p> <p><b><u>SCC Licensed Taxi Drivers</u></b>  Mitigation will provide operators with financial incentive to upgrade to CAZ compliant vehicles.</p> <p>Recent changes to the licensing policy for private hire vehicles has</p>

<sup>8</sup> <http://www.instituteofhealthequity.org/resources-reports/fair-society-healthy-lives-the-marmot-review>



Impact Assessment	Details of Impact	Possible Solutions & Mitigating Actions
	<p>available from the Department for Communities and Local Government: English Indices of Deprivation 2015. Matching taxi licence data to LSOAs, and assessing demographic data associated with the LSOA, the distribution of taxi drivers across the IMD appears to be highly skewed towards more deprived LSOAs: 40% of the taxi operators are registered in the most deprived LSOAs (quintile 1) and 79% in the three lowest quintiles.</p> <p>Affordability concerns are also reflected in the Taxi Operators Survey conducted by the SCC where 78% of the respondents stated that the cost to buy a low emission vehicle is the key barrier. Though the requirement for CAZ compliance is Euro 6 diesel/4 petrol rather than low emission which is potentially more achievable.</p>	<p>increased the maximum age of hybrid vehicles from 9 years to 12 years, providing a more attractive business case for operating a hybrid private hire vehicle.</p>
<p><b>Health &amp; Wellbeing</b></p>	<p>Health impacts associated with age, disability and pregnancy and maternity are previously discussed.</p> <p><b><u>Emergency COPD Admission 35 years+</u></b></p> <p>Emergency chronic obstructive pulmonary disorder (COPD) admissions for those 35+ are significantly higher at Redbridge in comparison to the Southampton average. There are also other areas across the city with significantly higher</p>	<p>N/A – positive impact</p>

Impact Assessment	Details of Impact	Possible Solutions & Mitigating Actions
	<p>emergency COPD admissions for this age group. The CAZ B option will deliver citywide improvements to air quality so will have a positive impact at all areas.</p> <p><b>Wellbeing</b> 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> 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>	<p>The document “E3 Distributional Analysis” reviews further distributional impacts of a charging Clean Air Zone including:</p> <ul style="list-style-type: none"> <li>• Population weight NO<sub>2</sub> concentrations according to LSOA.</li> <li>• Air quality impact on sensitive receptors.</li> <li>• Air quality and socio-economic characteristics.</li> <li>• Affordability for households and business</li> </ul>	