

**Appendix 3. Equality Impact Assessment of the Air Quality Action Plan**

# Equality Impact Assessment (EIA)

**Document Control**

<b>Title Of Activity:</b>	Air Quality Action Plan
<b>Type Of Activity:</b>	Action Plan
<b>Lead Officer:</b>	MarieClaire Irvine Environmental Protection & Housing Manager
<b>Department:</b>	Environment
<b>Approved By:</b>	
<b>Date Completed:</b>	27/10/2017
<b>Scheduled Date For Review:</b>	The EIA will be reviewed together with the new Air Quality Action Plan

The Corporate Policy & Diversity team requires **5 working days** to provide advice on EIAs.

<b>Did you seek advice from the Corporate Policy &amp; Diversity team?</b>	Yes
<b>Does the EIA contain any confidential or exempt information that would prevent you publishing it on the Council's website?</b>	No

# 1. EQUALITY IMPACT ASSESSMENT CHECKLIST

The Equality Impact Assessment (EIA) is a tool to ensure that your activity meets the needs of individuals and groups that use your service. It also helps the Council to meet its legal obligation under the [Equality Act 2010 and the Public Sector Equality Duty](#).

Please complete the following checklist to determine whether or not you will need to complete an EIA. Please ensure you keep this section for your audit trail. If you have any questions, please contact the Corporate Policy and Diversity Team at [diversity@havering.gov.uk](mailto:diversity@havering.gov.uk)

## About your activity

<b>1</b>	<b>Title Of Activity</b>	Air Quality Action Plan
<b>2</b>	<b>Type Of Activity</b>	Action Plan
<b>3</b>	<b>Scope Of Activity</b>	<p>The Air Quality Action Plan (AQAP) 2017 – 2022 sets out actions Havering Council is currently undertaking or looking to undertake in order to improve air quality for its residents and businesses, as required by Directive 2008/107/EC of the European Parliament and of the Council of 15 December 2004. This AQAP does not replace a previous AQAP.</p> <p>The aims of Havering Council’s Air Quality Action Plan are;</p> <ul style="list-style-type: none"> <li>• To ensure compliance with EU Limit standards for Nitrogen Dioxide (NO<sub>2</sub>) and Particulate Matter (PM<sub>10</sub>) as stated in Directive 2008/508EC;</li> <li>• To improve air quality in the London Borough of Havering for its residents and businesses; and</li> <li>• To improve public knowledge and understanding on the issue of air pollution and educate on steps which can be taken to reduce individual exposure.</li> </ul>
<b>4a</b>	<b>Is The Activity New Or Changing?</b>	New
<b>4b</b>	<b>Is The Activity Likely To Have An Impact On Individuals Or Groups?</b>	Yes
<b>5</b>	<b>If You Answered Yes:</b>	EIA Completed
<b>6</b>	<b>If You Answered No:</b>	

<b>Completed by:</b>	MarieClaire Irvine Environmental Protection and Housing Manager Public Protection
<b>Date:</b>	02/11/2017

## 2. Equality Impact Assessment

The Equality Impact Assessment (EIA) is a tool to ensure that your activity meets the needs of individuals and groups that use your service. It also helps the Council to meet its legal obligation under the [Equality Act 2010 and the Public Sector Equality Duty](#).

For more details on the Council's 'Fair to All' approach to equality and diversity, please visit our [Equality and Diversity Intranet pages](#). For any additional advice, please contact [diversity@havering.gov.uk](mailto:diversity@havering.gov.uk)

Please note the Corporate Policy & Diversity Team require **5 working days** to provide advice on Equality Impact Assessments.

Please note that EIAs are public documents and must be made available on the Council's [EIA webpage](#).

### **Understanding the different needs of individuals and groups who use or deliver your service**

In this section you will need to assess the impact (positive, neutral or negative) of your activity on individuals and groups with **protected characteristics** (this includes staff delivering your activity).

Currently there are **nine** protected characteristics (previously known as 'equality groups' or 'equality strands'): age, disability, sex/gender, ethnicity/race, religion/faith, sexual orientation, gender reassignment, marriage/civil partnership, and pregnancy/ maternity/paternity.

In addition to this, you should also consider **socio-economic status** as a protected characteristic, and the impact of your activity on individuals and groups that might be disadvantaged in this regard (e.g. carers, low income households, looked after children and other vulnerable children, families and adults).

When assessing the impact, please consider and note how your activity contributes to the Council's **Public Sector Equality Duty** and its three aims to:

- eliminate discrimination, harassment and victimisation;
- advance equality of opportunity, and
- foster good relations between people with different protected characteristics.

**Guidance on how to undertake an EIA for a protected characteristic can be found on the next page.**

## Guidance on Undertaking an EIA

<b>Example: Background/context</b>							
<p>In this section you will need to add the background/context of your activity. Make sure you include the scope and intended outcomes of the activity being assessed; and highlight any proposed changes.</p> <p style="text-align: right;"><i>*Expand box as required</i></p>							
<b>Example: Protected characteristic</b>							
<p>Please tick (✓) the relevant box:</p> <table border="1"> <tr> <td><b>Positive</b></td> <td></td> </tr> <tr> <td><b>Neutral</b></td> <td></td> </tr> <tr> <td><b>Negative</b></td> <td></td> </tr> </table>		<b>Positive</b>		<b>Neutral</b>		<b>Negative</b>	
<b>Positive</b>							
<b>Neutral</b>							
<b>Negative</b>							
<p><b>Overall impact:</b> In this section you will need to consider and note what impact your activity will have on individuals and groups (including staff) with protected characteristics based on the data and information you have. You should note whether this is a positive, neutral or negative impact.</p> <p><b>It is essential that you note all negative impacts. This will demonstrate that you have paid ‘due regard’ to the Public Sector Equality Duty if your activity is challenged under the Equality Act.</b></p> <p style="text-align: right;"><i>*Expand box as required</i></p>							
<p><b>Evidence:</b> In this section you will need to document the evidence that you have used to assess the impact of your activity.</p> <p>When assessing the impact, please consider and note how your activity contributes to the three aims of the Public Sector Equality Duty (PSED) as stated in the section above.</p> <p>It is essential that you note the full impact of your activity, so you can demonstrate that you have fully considered the equality implications and have paid ‘due regard’ to the PSED should the Council be challenged.</p> <ul style="list-style-type: none"> <li>- If you have identified a <b>positive impact</b>, please note this.</li> <li>- If you think there is a <b>neutral impact</b> or the impact is not known, please provide a full reason why this is the case.</li> <li>- If you have identified a <b>negative impact</b>, please note what steps you will take to mitigate this impact. If you are unable to take any mitigating steps, please provide a full reason why. All negative impacts that have mitigating actions must be recorded in the <b>Action Plan</b>.</li> </ul> <p style="text-align: right;"><i>*Expand box as required</i></p>							
<p><b>Sources used:</b> In this section you should list all sources of the evidence you used to assess the impact of your activity. This can include:</p> <ul style="list-style-type: none"> <li>- Service specific data</li> <li>- Population, demographic and socio-economic data</li> </ul> <p>Suggested sources include:</p> <ul style="list-style-type: none"> <li>- Service user monitoring data that your service collects</li> <li>- <a href="#">Havering Data Intelligence Hub</a></li> <li>- <a href="#">London Datastore</a></li> <li>- <a href="#">Office for National Statistics (ONS)</a></li> </ul> <p>If you do not have any relevant data, please provide the reason why.</p> <p style="text-align: right;"><i>*Expand box as required</i></p>							

## THE EIA

Background/context:
<p>Two European Directives set outdoor air pollution limits: Directive 2004/107/EC and the Air Quality Framework Directive 2008/50/EC. Different sets of Air Quality Regulations implement those standards in the London Borough of Havering. As of May 2016 the Greater London Authority introduced the London Local Air Quality Management (LLAQM) – the legal basis for the LLAQM system is Part IV of the Environment Act 1995, which sets out the London authorities’ local air quality management functions, together with the Mayor’s responsibilities and statutory guidance from the Secretary of State for the Environment, Food and Rural Affairs. The LLAQM released Policy Guidance and the accompanying Technical Guidance, which is based on the national Defra Guidance, but with a number of London specific amendments and information.</p> <p>The Air Quality Action Plan 2016 – 2019 sets out Havering Council’s approach to improving Air Quality within its Borough. This AQAP does not replace a previous document.</p> <p>The aims of Havering Council’s Air Quality Action Plan are;</p> <ul style="list-style-type: none"> <li>• To improve Havering’s air quality across the Borough via the implementation of several projects;</li> <li>• To improve public knowledge on air quality, its effects on human health and actions that can be taken to reduce individuals exposure; and</li> <li>• To provide the public with Havering specific air quality information and the action the Council is taking to improve it.</li> </ul>

Age: Consider the full range of age groups		
<i>Please tick (✓) the relevant box:</i>		<b>Overall impact:</b> Those most likely to be affected by air pollution are people with asthma, lung disease, COPD or a cardiovascular disease. Those who are more susceptible to air pollution in certain life stages are unborn babies (pregnant women), children (some children are particularly vulnerable i.e. those with an underlying chronic lung condition and cystic fibrosis) and older adults. Taking this into consideration, if the Air Quality Action Plan was implemented it would have the most positive impact on children aged 0 – 13 and adults aged 50+ (which represent approximately 55% of Havering’s population).
<b>Positive</b>	✓	
<b>Neutral</b>		
<b>Negative</b>		
<b>Evidence:</b>		
<b>2015</b>	<b>Number</b>	<b>Percentage of population (%)</b>
All persons	249,085	100.0
0-4 years	16,166	6.5%
5-9 years	15,170	6.1%
10-14 years	13,884	5.6%
15-19 years	14,729	5.9%
20-49 years	97,484	39.1%
50-59 years	32,943	13.2%
60-69 years	26,332	10.6%
70-79 years	18,383	7.4%
80-89 years	11,554	4.6%
90+ years	2,450	1.0%
<b>Sources used:</b> Mid-year population estimates 2015; Office for National Statistics (ONS); Produced by Public Health Intelligence.		

<b>Disability:</b> Consider the full range of disabilities; including physical mental, sensory and progressive conditions		
Please tick (✓) the relevant box:		<b>Overall impact:</b>  A potential positive impact has been identified on the grounds of this protected characteristic. The Air Quality Action Plan applies equally to all residents of Havering irrespective of disability.
<b>Positive</b>	<input checked="" type="checkbox"/>	
<b>Neutral</b>	<input type="checkbox"/>	
<b>Negative</b>	<input type="checkbox"/>	
<b>Evidence:</b>		
<p><sup>1</sup> Air pollution appears to increase the risk of several chronic diseases that contribute to the progression of disability. In multivariable-adjusted analyses, higher long-term NO<sub>x</sub> exposure was associated with significantly faster progression in disability. This data joins a growing body of evidence which suggests that exposure to Traffic-Related Air Pollution may accelerate aging-related declines in health.</p> <p><sup>2</sup> There may be a link between exposure to air pollution and dispensed medications for certain psychiatric disorders in children and adolescents even at the relatively low levels of air pollution in the study regions.</p> <p><sup>3</sup> High maternal exposures to PM<sub>2.5</sub> during pregnancy, particularly the third trimester, were associated with greater odds of a child having Autism Spectrum Disorder (ASD).</p> <p><sup>4</sup> Environmental toxicants affect the health of individuals with Developmental Disabilities across the life span. To being with, one quarter of Developmental Disabilities are wholly or partially attributable to environmental exposures. Furthermore, compared to the general population, persons with established Developmental Disabilities are more vulnerable to additional injury from subsequent exposures in part because they have less control over their exposure to and escape from toxicants.</p> <p><sup>5</sup> Ambient air pollution from traffic sources to be associated with risk of Parkinson's Disease, with a 9% high risk per interquartile range increase in modeled NO<sub>2</sub>. For participants living for ≥ 20 years in the capital city, ORs were larger than in provincial towns, whereas there was no association among rural residents.</p>		
<b>Sources used:</b>		
<p><sup>1</sup> Weuve, J., et al. (2016). <i>Exposure to Traffic-Related Air Pollution in Relation to Progression in Physical Disability among Older Adults</i>. Environmental Health Perspectives. Retrieved from the Environmental Health Perspectives Website: <a href="http://ehp.niehs.nih.gov/wpcontent/uploads/advpub/2016/3/ehp.1510089.acco.pdf">http://ehp.niehs.nih.gov/wpcontent/uploads/advpub/2016/3/ehp.1510089.acco.pdf</a></p> <p><sup>2</sup> Oudin, A., et al. (2016). <i>Association between Neighbourhood Air Pollution Concentrations and Dispensed Medication for Psychiatric Disorders in a Large Longitudinal Cohort of Swedish Children and Adolescents</i>. BMJ Open Website: <a href="http://bmjopen.bmj.com/content/6/6/e010004">http://bmjopen.bmj.com/content/6/6/e010004</a></p> <p><sup>3</sup> Raz, R., et al. (2015). <i>Autism Spectrum Disorder and Particulate Matter Air Pollution before, during and after Pregnancy: A Nested Case-Control Analysis within the Nurses' Health Study II Cohort</i>. Environmental Health Perspectives, Volume 123, No. 3. Retrieved from the Environmental Health Perspectives website: <a href="http://ehp.niehs.nih.gov/wp-content/uploads/123/3/ehp.1408133.alt.pdf">http://ehp.niehs.nih.gov/wp-content/uploads/123/3/ehp.1408133.alt.pdf</a></p> <p><sup>4</sup> Tyler, C., et al. (2008). <i>Environmental Health and Developmental Disabilities: A Lifespan Approach</i>. Family Community Health, Volume 31, No. 4, pp. 287-304. Retrieved from the Association of University Centers on Disabilities Website: <a href="https://www.aucd.org/docs/sdh/environmental_health.pdf">https://www.aucd.org/docs/sdh/environmental_health.pdf</a></p> <p><sup>5</sup> Ritz, B., et al. (2016). <i>Traffic Related Air Pollution and Parkinson's Disease in Denmark: A Case-Control Study</i>. Environmental Health Perspectives, Volume 124, Issue 3, March 2016. Retrieved from the Environmental Health Perspectives Website: <a href="http://ehp.niehs.nih.gov/1409313/">http://ehp.niehs.nih.gov/1409313/</a></p>		

<b>Sex/gender:</b> Consider both men and women	
<i>Please tick (✓) the relevant box:</i>	
<b>Positive</b>	<input checked="" type="checkbox"/>
<b>Neutral</b>	<input type="checkbox"/>
<b>Negative</b>	<input type="checkbox"/>
<b>Overall impact:</b> A positive impact has been identified on the grounds of this protected characteristic. The Air Quality Action Plan applies equally to all residents of Havering irrespective of sex / gender.	
<b>Evidence:</b> <p><sup>1</sup> Poor air quality apparently affects the running times of women in marathons. PM<sub>10</sub> was associated with decrements in performance of women. For every 10µgm<sup>-3</sup> increase in PM<sub>10</sub>, performance can be expected to decrease by 1.4%.</p> <p><sup>2</sup> Ambient air pollutions were more evident in males without an allergic predisposition and more associations were detected in females with allergic predisposition.</p> <p><sup>3</sup> Long-term (annual average) exposure to increased concentrations of fine particulate air pollution was associated with an increased risk of first cardiovascular events. In addition to the increased risk of coronary heart disease an associated between long-term exposure to air pollution and the incidence of cerebrovascular disease was identified. For each increase of 10 µg per cubic meter, there was a 35% increase in the risk of cerebrovascular events and an 83% increase in the risk of death from cerebrovascular causes.</p> <p><sup>4</sup> Among women with diabetes, increased risk was statistically significant for all cardiovascular outcomes measured and across all sizes of particulate matter. For each increase of 10 micrograms per cubic meter of air pollution a woman's risk of cardiovascular disease increased by 44% if she had type 2 diabetes.</p> <p><sup>5</sup> PM<sub>10</sub> and SO<sub>2</sub> emissions were associated with mortality from respiratory diseases, which had a stronger association in women, especially among the elderly, and showed a later effect on the outcome in men as compared to women. The risk of deaths tended to increase in men as time after exposure increased, whilst the opposite was observed in women from the same age bracket.</p>	
<b>Sources used:</b> <p><sup>1</sup> Marr, L. (2010). <i>Effect of Air Pollution on Marathon Running Performance</i>. Medicine and Science in Sports and Exercise, Volume 42, Issue 3, pp. 585 – 591, March 2010. Retrieved from the Medicine &amp; Science in Sports and Exercise Website:  <a href="http://journals.lww.com/acsm-msse/pages/articleviewer.aspx?year=2010&amp;issue=03000&amp;article=00025&amp;type=abstract">http://journals.lww.com/acsm-msse/pages/articleviewer.aspx?year=2010&amp;issue=03000&amp;article=00025&amp;type=abstract</a></p> <p><sup>2</sup> Dong, G-H., et al. (2011). <i>Gender Differences and Effect of Air Pollution on Asthma in Children with and without Allergic Predisposition: Northeast Chinese Children Health Study</i>. PLoS ONE. Retrieved from the PLoS ONE Website: <a href="http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0022470">http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0022470</a></p> <p><sup>3</sup> Miller, K., et al. (2007). <i>Long-Term Exposure to Air Pollution and Incidence of Cardiovascular Events in Women</i>. The New England Journal of Medicine, Volume 356, No. 5, pp. 447 – 458. Retrieved from the New England Journal of Medicine Website: <a href="http://www.nejm.org/doi/full/10.1056/NEJMoa054409#t=article">http://www.nejm.org/doi/full/10.1056/NEJMoa054409#t=article</a></p> <p><sup>4</sup> Hart, J., et al. (2015). <i>Effect Modification of Long-Term Air Pollution Exposures and the Risk of Incident Cardiovascular Disease in US Women</i>. The Journal of American Heart Association. Retrieved from the Journal of American Heart Association Website: <a href="http://jaha.ahajournals.org/content/4/12/e002301.full.pdf+html">http://jaha.ahajournals.org/content/4/12/e002301.full.pdf+html</a></p> <p><sup>5</sup> Oliveira, M.S.de., et al. (2011). <i>Differential Susceptibility According to Gender in the Association Between Air Pollution and Mortality from Respiratory diseases</i>. Cadernos de Saúde Pública, 27(9), pp. 1827-1836. Retrieved from the SciELO Brazil Website:  <a href="http://www.scielo.br/scielo.php?script=sci_arttext&amp;pid=S0102-311X2011000900016">http://www.scielo.br/scielo.php?script=sci_arttext&amp;pid=S0102-311X2011000900016</a></p>	



<b>Ethnicity/race:</b> Consider the impact on different ethnic groups and nationalities							
<p><i>Please tick (✓) the relevant box:</i></p> <table border="1"> <tr> <td><b>Positive</b></td> <td>✓</td> </tr> <tr> <td><b>Neutral</b></td> <td></td> </tr> <tr> <td><b>Negative</b></td> <td></td> </tr> </table>		<b>Positive</b>	✓	<b>Neutral</b>		<b>Negative</b>	
<b>Positive</b>	✓						
<b>Neutral</b>							
<b>Negative</b>							
<p><b>Overall impact:</b></p> <p>A positive impact has been identified on the grounds of this protected characteristic. The Air Quality Action Plan applies equally to all residents of Havering irrespective of ethnicity / race.</p>							
<p><b>Evidence:</b></p> <p><sup>1</sup> To the degree that racial/ethnic minorities are concentrated in urban areas, their potential exposure to air pollution may be increased. Likewise the potential exposure of minorities will be higher if they are concentrated in regions with more severely affected air quality. The evidence is substantial that African-, Asian-, and Hispanic-American populations are disproportionately exposed to levels of air pollution that are considered injurious to health.</p> <p><sup>2</sup> Air pollution levels are generally believed to be higher in deprived areas but associations are complex especially between sensitive population subgroups. We saw higher concentrations in the most deprived 20% of neighbourhoods in England (1.5 µg/m<sup>3</sup> higher PM<sub>10</sub> and 4.4µg/m<sup>3</sup> NO<sub>2</sub>). Concentrations in both countries were higher in neighbourhoods with &gt;20% non-White (England: 3.0 µg/m<sup>3</sup> higher PM<sub>10</sub> and 10.1 µg/m<sup>3</sup> NO<sub>2</sub>) after adjustment for urbanisation and other variables.</p> <p><sup>3</sup> Recent studies suggest that stress can amplify the harm of air pollution. We examined whether experience of racism and exposure to particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) had a synergistic influence on ethnic differences in asthma and lung function across adolescence. Analyses using multilevel models showed lower forced expiratory volume (FEV<sub>1</sub>), forced vital capacity (FVC) and lower rates of asthma among some ethnic minorities compared to whites, but high exposure to PM<sub>2.5</sub>, PM<sub>10</sub> and racism. Racism appeared to amplify the relationship between asthma and air pollution for all ethnic groups, but did not explain ethnic differences in respiratory health.</p> <p><sup>4</sup> Air pollution has a disproportionate impact on low-income and ethnic minority groups. The most deprived 10% of areas in England are subject to 41% high concentrations of nitrogen dioxide from transport and industry than average. The average black-British African person in the UK is exposed to 28% high levels of the pollutant PM<sub>10</sub> than the average urban white person. Research into the impact of the London Congestion Charge shows that more deprived areas experienced greater air pollution reductions and mortality benefits compared to the least deprived areas.</p>							
<p><b>Sources used:</b></p> <p><sup>1</sup> Nieves, L.A., and Wernette. D.R., (1996). <i>Ambient Air Pollution Exposure and the Incidence of Related Health Effects Among Racial/Ethnic Minorities</i>. Retrieved from the US Department of Energy Office of Scientific and Technical Information Website: <a href="http://www.osti.gov/scitech/servlets/purl/432915">http://www.osti.gov/scitech/servlets/purl/432915</a></p> <p><sup>2</sup> Fecht, D., et al. (2015). <i>Associations Between Air Pollution and Socioeconomic Characteristics, Ethnicity and Age Profile of Neighbourhoods in England and the Netherlands</i>. Environmental Pollution Journal, Volume 198, pp. 201 -210, March 2015. Retrieved from Science Direct Website: <a href="http://www.sciencedirect.com/science/article/pii/S0269749114005144">http://www.sciencedirect.com/science/article/pii/S0269749114005144</a></p> <p><sup>3</sup> Astell-Burt, T., Maynard, M., Lenguerrand, E., Whitrow, M., and Harding, S. (2013). <i>Effect of Air Pollution and Racism on Ethnic Differences in Respiratory Health among Adolescents Living in an Urban Environment</i>. Health and Place, 23, pp. 171-178. Retrieved from the University of Glasgow Website: <a href="http://eprints.gla.ac.uk/83063/">http://eprints.gla.ac.uk/83063/</a></p> <p><sup>4</sup> Client Earth. (2012). <i>Briefing to Association of Directors of Public Health: Air Pollution – A Key Public Health Issue</i>. Retrieved from the Client Earth Website: <a href="http://www.clientearth.org/reports/air-quality-briefing-ADPH.pdf">http://www.clientearth.org/reports/air-quality-briefing-ADPH.pdf</a></p>							

<b>Religion/faith:</b> Consider people from different religions or beliefs including those with no religion or belief	
<i>Please tick (✓) the relevant box:</i>	
<b>Positive</b>	<input type="checkbox"/>
<b>Neutral</b>	<input checked="" type="checkbox"/>
<b>Negative</b>	<input type="checkbox"/>
<b>Overall impact:</b> No differential impact has been identified on the grounds of this protected characteristic. The Air Quality Action Plan applies equally to all residents of Havering irrespective of religion / faith.	
<b>Evidence:</b>	
<b>Sources used:</b>	

<b>Sexual orientation:</b> Consider people who are heterosexual, lesbian, gay or bisexual	
<i>Please tick (✓) the relevant box:</i>	
<b>Positive</b>	<input type="checkbox"/>
<b>Neutral</b>	<input checked="" type="checkbox"/>
<b>Negative</b>	<input type="checkbox"/>
<b>Overall impact:</b> No differential impact has been identified on the grounds of this protected characteristic. The Air Quality Action Plan applies equally to all residents of Havering irrespective of sexual orientation.	
<b>Evidence:</b>	
<b>Sources used:</b>	

<b>Gender reassignment:</b> Consider people who are seeking, undergoing or have received gender reassignment surgery, as well as people whose gender identity is different from their gender at birth	
<i>Please tick (✓) the relevant box:</i>	
<b>Positive</b>	<input type="checkbox"/>
<b>Neutral</b>	<input checked="" type="checkbox"/>
<b>Negative</b>	<input type="checkbox"/>
<b>Overall impact:</b> No differential impact has been identified on the grounds of this protected characteristic. The Air Quality Action Plan applies equally to all residents of Havering irrespective of gender reassignment.	
<b>Evidence:</b>	
<b>Sources used:</b>	

<b>Marriage/civil partnership:</b> Consider people in a marriage or civil partnership	
<i>Please tick (✓) the relevant box:</i>	
<b>Positive</b>	<input type="checkbox"/>
<b>Neutral</b>	<input checked="" type="checkbox"/>
<b>Negative</b>	<input type="checkbox"/>
<b>Overall impact:</b> No differential impact has been identified on the grounds of this protected characteristic. The Air Quality Action Plan applies equally to all residents of Havering irrespective of marriage / civil partnership.	
<b>Evidence:</b>	
<b>Sources used:</b>	

<b>Pregnancy, maternity and paternity:</b> Consider those who are pregnant and those who are undertaking maternity or paternity leave	
Please tick (✓) the relevant box:	
<b>Positive</b>	✓
<b>Neutral</b>	
<b>Negative</b>	
<b>Overall impact:</b> A positive impact has been identified on the grounds of this protected characteristic. The Air Quality Action Plan applies equally to all residents of Havering irrespective of pregnancy, maternity and paternity.	
<b>Evidence:</b>	
<p><sup>1</sup> The results suggest that pre-natal exposure to air pollution might be associated with high respiratory need and airway inflammation in newborns. Such alterations during early lung development may be important regarding long term respiratory morbidity.</p> <p><sup>2</sup> Based on the novel S-T model, a small statistically significant association was observed for Particulate Matter (PM<sub>10</sub>) and small for gestational age (SGA), particularly with exposure in the first and third trimesters. Similar effects on SGA were also found for Nitrogen Dioxide (NO<sub>2</sub>) and Particulate Matter (PM<sub>2.5</sub>) and Carbon Monoxide (CO) in later pregnancy, but overall no increased risk was observed. Findings suggest an association between air pollution exposure and birth of a smaller for gestational age infant, particularly in the later stages of pregnancy.</p> <p><sup>3</sup> Air pollution can affect your general health during pregnancy. It can cause coughing, burning eyes and tightness in the chest. These problems can be worse if you have asthma.</p> <p><sup>4</sup> The study suggest that exposure to high levels of air pollution during early pregnancy and the full gestational period was associated with increased prevalence of Hypertensive Disorders of Pregnancy (HDP).</p> <p><sup>5</sup> The study suggests that maternal CO and SO<sub>2</sub> exposure during pregnancy may be a risk factor for pre-eclampsia and eclampsia.</p>	
<b>Sources used:</b>	
<p><sup>1</sup> Latzin, P., Röösli, M., Huss, A., Kuehni, C.E., and Frey, U. (2009). <i>Air Pollution During Pregnancy and Lung Function in Newborns: A Birth Cohort Study</i>. European Respiratory Journal. Volume 33, Number 3, pp. 594 – 603. Retrieved from the European Respiratory Journal Website: <a href="http://erj.ersjournals.com/content/erj/33/3/594.full.pdf">http://erj.ersjournals.com/content/erj/33/3/594.full.pdf</a></p> <p><sup>2</sup> Hannam, K., McNamee, R., Baker, P., Sibley, C., and Agius, R. (2014). <i>Air Pollution Exposure and Adverse Pregnancy Outcomes in a Large UK Birth Cohort: Use of a Novel Spatio-Temporal Modeling Technique</i>. Scandinavian Journal of Work, Environment and Health, 40(5), pp. 518 – 530. Retrieved from the Scandinavian Journal of Work, Environment and Health Website: <a href="http://www.sjweh.fi">www.sjweh.fi</a></p> <p><sup>3</sup> Retrieved from the March of Dimes Website: <a href="http://www.marchofdimes.org/pregnancy/air-pollution-and-pregnancy.aspx">http://www.marchofdimes.org/pregnancy/air-pollution-and-pregnancy.aspx</a></p> <p><sup>4</sup> Xu, X., Hu, H., Ha, S., and Roth, J. (2013). <i>Ambient Air Pollution and Hypertensive Disorder of Pregnancy</i>. Journal of Epidemiol Community Health 2014; 68, pp. 13 – 20. Retrieved from the Journal of Epidemiol Community Health Website: <a href="http://jech.bmj.com/content/68/1/13">http://jech.bmj.com/content/68/1/13</a></p> <p><sup>5</sup> Woodruff, T.J., Morello-Frosch, R., and Jesdale, B. (2008). <i>Air Pollution and Preeclampsia Among Pregnant Women in California, 1996 – 2004</i>. Journal of Epidemiology and Community Health, 67(2): pp. 147 – 152. Retrieved from the Journal of Epidemiology and Community Health Website: <a href="http://journals.lww.com/epidem/fulltext/2008/11001/Air_Pollution_and_Preeclampsia_Among_Pregnant.860.aspx">http://journals.lww.com/epidem/fulltext/2008/11001/Air_Pollution_and_Preeclampsia_Among_Pregnant.860.aspx</a></p>	

<b>Socio-economic status:</b> Consider those who are from low income or financially excluded backgrounds	
<i>Please tick (✓) the relevant box:</i>	
<b>Positive</b>	<input checked="" type="checkbox"/>
<b>Neutral</b>	<input type="checkbox"/>
<b>Negative</b>	<input type="checkbox"/>
<p><b>Overall impact:</b></p> <p>A positive impact has been identified on the grounds of this protected characteristic. The Air Quality Action Plan applies equally to all residents of Havering irrespective of socio-economic status.</p>	
<p><b>Evidence:</b></p> <p><sup>1</sup> The results showed the worst of the pollution is found overwhelmingly in the most deprived wards. Of the 11,400 tonnes of carcinogenic chemicals emitted to air in England in 1999 66% of carcinogen emissions are in the most deprived 10% of wards, 82% of carcinogen emissions are in the most deprived 20% of wards and only 8% of carcinogen emissions are in the least deprived 50% of wards.</p> <p><sup>2</sup> A new report by leading think tank Policy Exchange shows that children living in the worst places in London for air quality are nearly 50% more likely to be eligible for free school meals than the London average. Residents of the most polluted areas are also around 25% more likely to be on income support than the London average.</p> <p><sup>3</sup> Reliance on open fires or traditional stoves can lead to deadly indoor air pollution.</p> <p><sup>4+5</sup> Low-income households are more likely to suffer from poor indoor air quality due to small rooms, non-working/unused kitchen extract and MVHR fans, location of home – ventilating a home by opening windows and doors in areas of high level outdoor pollution and overcrowding. Homes made more ‘air-tight’ to save energy can result in higher indoor temperatures during the summer months. For those residents in polluted areas, if they try to dissipate the heat by opening windows, this will increase their exposure to external particulate matter.</p>	
<p><b>Sources used:</b></p> <p><sup>1</sup> Friends of the Earth., Policy and Research Unit. (2001). <i>Pollution and Poverty – Breaking the Link</i>. London. Friends of the Earth.</p> <p><sup>2</sup> Policy Exchange. (2012). <i>Something in the Air</i>. London. Policy Exchange. Retrieved from the Policy Exchange website: <a href="http://www.policyexchange.org.uk/images/publications/something%20in%20the%20air.pdf">http://www.policyexchange.org.uk/images/publications/something%20in%20the%20air.pdf</a></p> <p><sup>3</sup> Key Facts: Poverty and Poor Health. Retrieved from the health Poverty Action Website: <a href="https://www.healthpovertyaction.org/info-and-resources/the-cycle-of-poverty-and-poor-health/key-facts/">https://www.healthpovertyaction.org/info-and-resources/the-cycle-of-poverty-and-poor-health/key-facts/</a></p> <p><sup>4</sup> Arcc Network. (2015). Researchers at UCL have found that Low-Income Households are more likely to suffer from Poor Indoor Air Quality than High-Income Households. Retrieved from the Arcc Network Website: <a href="http://www.arcc-network.org.uk/wp-content/so-what/So-what-UCL-indoor-air-quality.pdf">http://www.arcc-network.org.uk/wp-content/so-what/So-what-UCL-indoor-air-quality.pdf</a></p> <p><sup>5</sup> Shrubsole et al. (2015). <i>Impacts of Energy Efficiency Retrofitting Measures on Indoor PM2.5 Concentrations across different income groups in England: A Modeling Study</i>. Advances in Building Energy Research. Retrieved from the UCL Website: <a href="http://discovery.ucl.ac.uk/1461248/1/ABER_Final%20all%20in%20accepted%20doc.pdf">http://discovery.ucl.ac.uk/1461248/1/ABER_Final%20all%20in%20accepted%20doc.pdf</a></p>	

## Action Plan

In this section you should list the specific actions that set out how you will address any negative equality impacts you have identified in this assessment.

Protected characteristic	Identified negative impact	Action taken to mitigate impact*	Outcomes and monitoring**	Timescale	Lead officer
None.					

\* You should include details of any future consultations you will undertake to mitigate negative impacts

\*\* Monitoring: You should state how the negative impact will be monitored; how regularly it will be monitored; and who will be monitoring it (if this is different from the lead officer).

## Review

The EIA for the AQAP will need to be reviewed every 3 years with each new AQAP being created. The current AQAP will be adopted by the Council in Autumn 2016 and will need updating in Autumn 2019. It will be reviewed by the Environmental Protection Officer or equivalent undertaking Air Quality duties at that time.