The preliminary SBC report on the impact of air pollution on health assessed rates of morbidity and mortality for certain illnesses broken down at ward level (see figure 8). Figures 9 and 10 show respiratory mortality and premature respiratory mortality in Slough respectively. Figures 11 and 12 show the standard mortality rates (SMR) for coronary heart disease (CHD) and premature cardiovascular mortality in Slough respectively.

Figure 8 - SBC Ward Boundaries for 2014

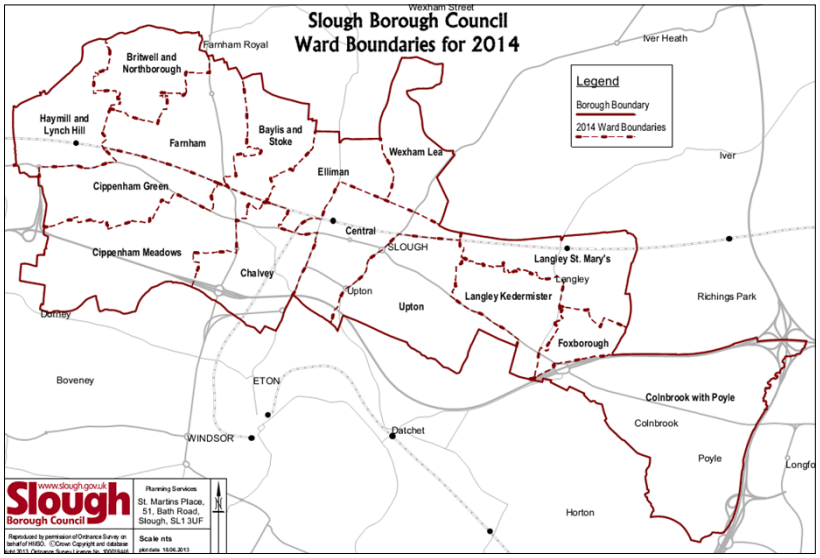


Figure 9 - Respiratory mortality (all ages) 2008-2012, by MSOA (data source [http://fingertips.phe.org.uk/)](http://fingertips.phe.org.uk/)

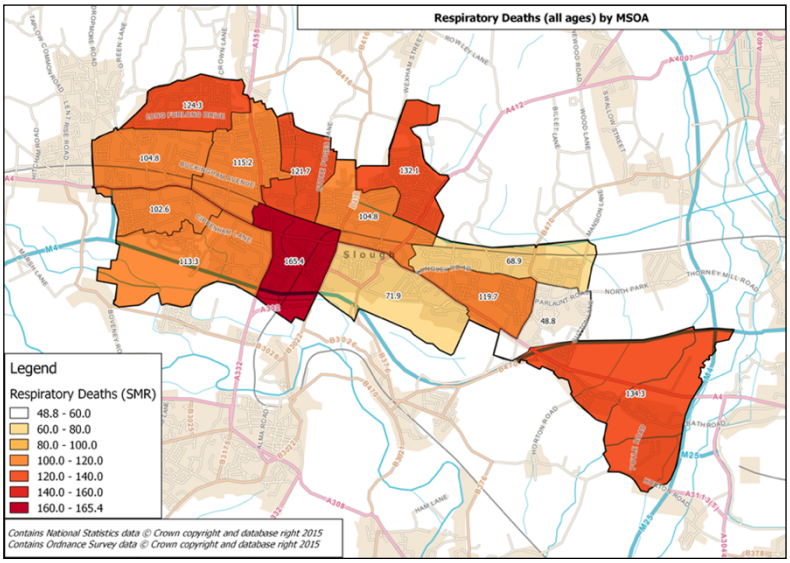


Figure 10 - Premature respiratory mortality in Slough 2009-2013

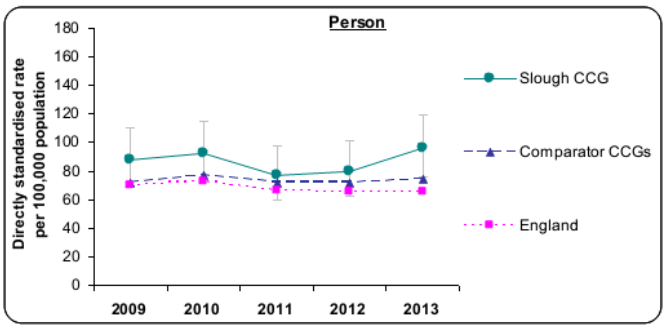


Figure 11 - SMRs for CHD (all ages) 2008-2012, by MSOA (data source [http://fingertips.phe.org.uk/)](http://fingertips.phe.org.uk/)

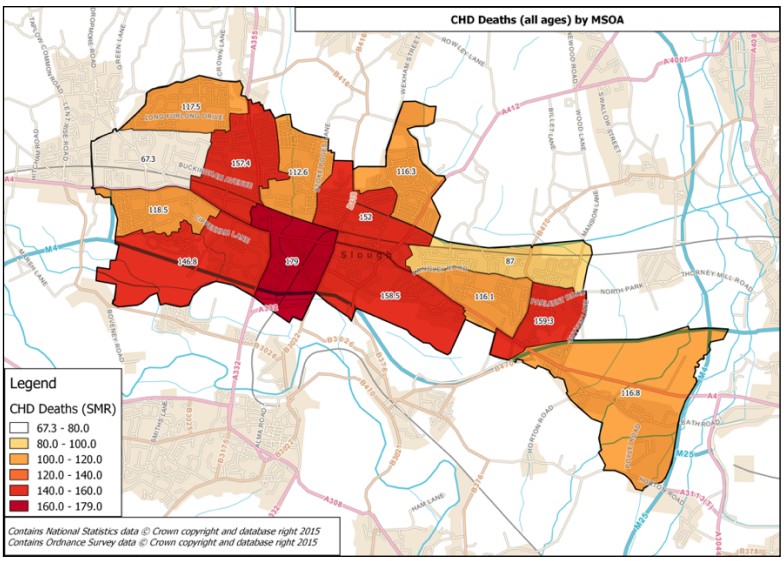
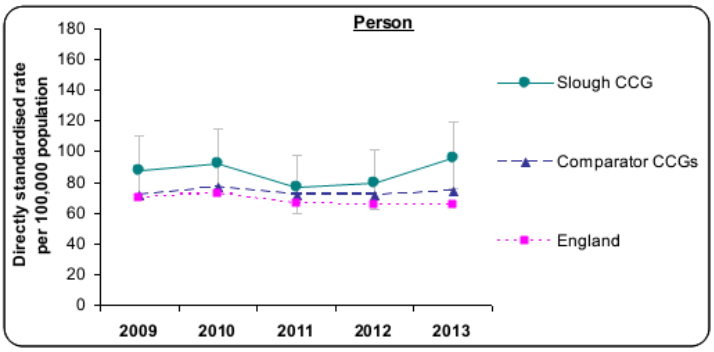


Figure 12 - Premature cardiovascular mortality in Slough 2009-2013



The SBC Public Health Report states – "although above findings regarding air pollution and respiratory and cardiovascular health in Slough are suggestive of a general pattern of a disease surrounding areas with poor air quality, it is very difficult to draw direct inferences from these data alone. This is due to multiple confounding factors associated both with disease burden and with poor air quality, such as smoking prevalence, socioeconomic deprivation, etc.

However, given established evidence on the health effects of air pollution, the high levels of pollution in some localities and the wide disparity in cardiovascular and respiratory health across the borough, it is clear that improving air quality in the most affected areas could play an important role in increasing quality of life for people with respiratory disease and reducing Slough's health inequalities in the long term. This may also offer important economic benefits, in terms of reduced hospital admissions and deaths prevented.

- Adverse health effects of air pollution, particularly those resulting from PM and NO_2, are well established both internationally and in the UK.
- Robust methods of quantifying the national and local impact of air pollution, and likely impact of reductions in air pollution, have been developed and implemented at a local level.
- Air quality in Slough is worse than the England average, with very high levels of pollutants concentrated around major roads and transport hubs. Several localities in
- the borough are exposed to levels of NO2 and PM that far exceed levels recommended by the European Commission.
- Slough is disadvantaged by a poor respiratory and cardiovascular health profile, with a burden of disease that is higher than expected rates based on regional and national averages.
- Slough also is affected by large geographical inequalities in respiratory and cardiovascular health, which correlate roughly with areas of high air pollution.
- The proportion of overall deaths in Slough that can be attributed to particulate air pollution is estimated at 6.8%. This is higher than the South East region and England as a whole, and is more comparable to London.
- Reducing air pollution in the borough provides an important opportunity to reduce the attributable burden of disease and possibly to reduce health inequalities.
- Established infrastructure for measuring air quality in Slough is an important asset that could facilitate research to evaluate the impact of the Low Emissions Strategy on air quality and health outcomes. This project may be possible with adequate academic and financial support in the medium to long term and would make an important contribution to the evidence base in this area. "