Supplementary File 6: Additional description of statistical methods

Adjusted effect estimates

Estimates were adjusted for age, gender, ethnicity, educational attainment, employment status and neighbourhood-level summaries of the outcomes collected in the baseline survey (Table 1), using the two-stage method described by Hayes and Moulton[37]. A regression model (linear for continuous outcomes, logistic for binary outcomes) was fitted to the individual-level outcomes, including the variables listed above and an indicator for the matched pair (London borough), but no indicator for intervention/control status. The residual differences between the observed mean or log proportion and that expected from the model were subjected to a paired t-test comparing the intervention and control arms.

Area-level effect estimates from the environmental audit and the routine crime data were adjusted for baseline using a cluster-level linear regression.

Subgroup analyses

The adjusted effect of the intervention on the primary health outcomes was estimated within subgroups of age, gender, ethnicity, educational attainment and employment status. Linear regression was used to test for heterogeneous effect of the intervention across subgroups. The cluster residuals described above were regressed on pair (borough), intervention status, the subgroup variable and all two-way interactions between these variables. An F-test was used to test for a significant interaction between the intervention and subgroup variables.