

Air Quality Valuation Workbook - Worksheet 3

Scheme Name: M4 J17 improvements

Present Value Base Year:

Current Year:

Proposal Opening year:

Project (Road/Rail or Road and Rail):

Overall Assessment Score:

Damage Costs Approach (Emissions)

Present value of change in NOx emissions (£):

Present value of change in PM2.5 emissions (£):

OR

Present value of change in PM10 emissions (£):

Impact Pathways Approach (Concentrations)

Present value of change in NO2 concentrations (£):

Of which:

Concentration costs:

Other impacts:

Present value of change in PM2.5 concentrations (£):

Of which:

Concentration costs:

Other impacts:

Total Change

Total value of change in air quality (£):

*positive value reflects a net benefit (i.e. air quality improvement)

Quantitative Assessment:

Impact Pathways Approach (Concentrations)

Change in NO2 assessment scores over 60 year appraisal period:
(between 'with scheme' and 'without scheme' scenarios)

Change in PM2.5 assessment scores over 60 year appraisal period:
(between 'with scheme' and 'without scheme' scenarios)

Damage Costs Approach (Emissions)

Change in NOX emissions over 60 year appraisal period (tonnes):
(between 'with scheme' and 'without scheme' scenarios)

Change in PM2.5 emissions over 60 year appraisal period (tonnes):
(between 'with scheme' and 'without scheme' scenarios)

OR

Change in PM10 emissions over 60 year appraisal period (tonnes):
(between 'with scheme' and 'without scheme' scenarios)

Qualitative Comments:

Increase in NOx and PM10 emissions over the 60 year appraisal period, due to overall increase in vehicle kilometres with the scheme in place.

Sensitivity Analysis:

Upper estimate net present value of change in air quality (£):

Lower estimate net present value of change in air quality (£):

Data Sources:

TAG Unit A3 Environmental Impact Appraisal, May 2022, Section 3 Air Quality Impacts.
 Traffic Data provided for opening year 2026 and future year 2036.
 Highways England speedband emissions factors (v9) based on Defra vehicle emission factor toolkit (EFT v11.0)
 NOx and PM10 emissions for 2026 and 2036 calculated within Traffic Reliability Area
 Beyond 2036 NOx and PM10 emissions assumed constant. 2036 emission factors used for future year emission calculations.