

Air Quality Valuation Workbook - Worksheet 3

Scheme Name: Melksham

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:

Decrease in assessment score for NO2 and PM2.5 concentrations over the 60 year appraisal period, due to reduction in concentration at the majority of receptors.

Sensitivity Analysis:

Upper estimate net present value of change in air quality (£): £3,426,706

Lower estimate net present value of change in air quality (£): £107,688

Data Sources:

TAG Unit A3 Environmental Impact Appraisal, May 2019, Section 3 Air Quality Impacts.
Impact pathway approach followed for the local air quality affected road network (ARN)
Traffic Data provided by Atkins for opening year 2028 and design year 2043
Assessment assumes no change in NOx and PM2.5 emission rates beyond 2030. 2030 emission factors used for 2043
Calculated based on Defra vehicle emission factor toolkit (EFT v10.0)
