

Greenhouse Gases Workbook - Worksheet 1

Scheme Name: M4 J17 improvements

Present Value Base Year:

Current Year:

Proposal Opening year:

Project (Road/Rail or Road and Rail):

Overall Assessment Score:

Net Present Value of carbon dioxide equivalent emissions of proposal (£):

*positive value reflects a net benefit (i.e. CO2E emissions reduction)

Quantitative Assessment:

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

Of which Traded

Change in carbon dioxide equivalent emissions in opening year (tonnes):
 (between 'with scheme' and 'without scheme' scenarios)

Net Present Value of traded sector carbon dioxide equivalent emissions of proposal (£):
 (N.B. this is not additional to the appraisal value in cell I17, as the cost of traded sector emissions is assumed to be internalised into market prices. See TAG Unit A3 for further details)

*positive value reflects a net benefit (i.e. CO2E emissions reduction)

Change in carbon dioxide equivalent emissions by carbon budget period:

	Carbon Budget 1	Carbon Budget 2	Carbon Budget 3	Carbon Budget 4
Traded sector	0	0	0	4.609763078
Non-traded sector	0	0	0	665.840092

Qualitative Comments:

Assessment performed using GHG emissions calculation method (TAG Unit A3) not TUBA.
 Tailpipe emissions from all vehicles are calculated within the Traffic Model Area for the Non-Traded Sector.
 Non-exhaust CO2 equivalent (CO2e) emissions related to the charging of electric and plug-in hybrid vehicles forecast use within the Traffic Model Area reported in Traded Sector.

Sensitivity Analysis:

Upper Estimate Net Present Value of Carbon dioxide Emissions of Proposal (£):

Lower Estimate Net Present Value of Carbon dioxide Emissions of Proposal (£):

Data Sources:

TAG Unit A3 Environmental Impact Appraisal, May 2022, Section 4 Greenhouse Gases
 Traffic Data provided for opening year 2026 and the forecast year 2036.
 Carbon dioxide emissions for 2026 to 2036 based on linear interpolation between values calculated for 2026 and 2036
 Assessment assumes zero traffic growth beyond 2036
 Assessment assumes no change in carbon dioxide emission rates beyond 2036
 Highways England speedband emissions factors (v9) based on Defra vehicle emission factor toolkit (EFT v11.0)
 Carbon dioxide emissions for 2026 and 2036 calculated within Traffic Model Area