

Greenhouse Gases Workbook - Inputs

Scheme details

Scheme name	ACP-2020-026 Assessment	<i>Scheme_name</i>
Opening year	2024	<i>Opening_year_in</i>
Scheme type (select from list)	road	<i>Scheme_type</i>
Current year	2025	<i>Current_year_in</i>

Emissions (tCO2e per year)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
Non-traded sector																											
Road without scheme															69318												
Road with scheme															69180												
Rail without scheme																											
Rail with scheme																											
Traded sector																											
Road without scheme															1972												
Road with scheme															1968												
Rail without scheme																											
Rail with scheme																											

Emission values

Non-traded values (£/tCO2e)

price base year	2010	CO2e_value_price_base_in																									
price base year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
Low	83.6	84.9	86.2	87.5	88.9	90.2	91.6	93.0	94.4	95.8	97.3	99.1	100.6	102.2	103.7	105.3	106.9	108.5	110.2	111.8	113.6	115.3	117.0	118.8	120.6	122.5	
Central	167.3	169.8	172.4	175.0	177.7	180.4	183.2	185.9	188.8	191.7	194.6	198.2	201.2	204.3	207.4	210.6	213.8	217.0	220.3	223.7	227.1	230.6	234.1	237.6	241.3	244.9	
High	250.9	254.7	258.6	262.6	266.6	270.6	274.7	278.9	283.2	287.5	291.9	297.3	301.9	306.5	311.1	315.9	320.7	325.6	330.5	335.5	340.7	345.8	351.1	356.5	361.9	367.4	

source: TAG data book v1.18 (May 2022), Table A3.4

Traded values (£/tCO2e) [same as non-traded - see note]

price base year	2010	CO2e_value_price_base_in																									
price base year		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Low		83.6	84.9	86.2	87.5	88.9	90.2	91.6	93.0	94.4	95.8	97.3	99.1	100.6	102.2	103.7	105.3	106.9	108.5	110.2	111.8	113.6	115.3	117.0	118.8	120.6	122.5
Central		167.3	169.8	172.4	175.0	177.7	180.4	183.2	185.9	188.8	191.7	194.6	198.2	201.2	204.3	207.4	210.6	213.8	217.0	220.3	223.7	227.1	230.6	234.1	237.6	241.3	244.9
High		250.9	254.7	258.6	262.6	266.6	270.6	274.7	278.9	283.2	287.5	291.9	297.3	301.9	306.5	311.1	315.9	320.7	325.6	330.5	335.5	340.7	345.8	351.1	356.5	361.9	367.4

source: TAG data book v1.18 (May 2022), Table A3.4

Note: the latest BEIS carbon values (Sep 2021) are no longer split into separate "traded" and "non-traded" series.

Appraisal period and discounting

Appraisal period (years)	60	Appraisal_period_length_in
PV base year	2010	PV_base_year_in
Outputs price year	2010	Price_base_outputs_in

Discount period 1	30	Discount period 1 in
Discount period 2	75	Discount period 2 in
Discount period 3	125	Discount period 3 in
Discount rate 1	3.5%	Discount rate 1 in
Discount rate 2	3.0%	Discount rate 2 in
Discount rate 3	2.5%	Discount rate 3 in

source: TAG data book v1.16 (September 2021), Table A1.1.1

Carbon budget 1 start	2008	Carbon_budget_1_start
Carbon budget 1 end	2012	Carbon_budget_1_end
Carbon budget 2 start	2013	Carbon_budget_2_start
Carbon budget 2 end	2017	Carbon_budget_2_end
Carbon budget 3 start	2018	Carbon_budget_3_start
Carbon budget 3 end	2022	Carbon_budget_3_end
Carbon budget 4 start	2023	Carbon_budget_4_start
Carbon budget 4 end	2027	Carbon_budget_4_end

GDP deflator	100.0	102.1	103.7	106.0	107.7	108.3	110.3	112.3	114.6	116.9	123.4	123.4	126.9	130.9	133.3	135.9	138.6	141.8	145.0	148.4	151.8	155.3	158.8	162.5	166.2	170.1
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source: TAG Data Book v1.18 (May 2022), Annual Parameters

[illegible]

Greenhouse Gases Workbook															
		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Appraisal period															
Opening year	2024														
Opening year		0	0	1	0	0	0	0	0	0	0	0	0	0	0
Appraisal period length (years)	60														
Appraisal period		0	0	1	1	1	1	1	1	1	1	1	1	1	1
Check	TRUE														
Emissions (tCO2e)															
Non-traded sector															
Road without scheme		0	0	69317.971	0	0	0	0	0	0	0	0	0	0	0
Road with scheme		0	0	69180.476	0	0	0	0	0	0	0	0	0	0	0
Road - change in emissions		0	0	-137.49524	0	0	0	0	0	0	0	0	0	0	0
Rail without scheme		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail with scheme		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail - change in emissions		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total change in non-traded emissions		0	0	-137.49524	0	0	0	0	0	0	0	0	0	0	0
Change over 60 years (tCO2e)	-137.4952417														
Traded sector															
Road without scheme		0	0	1972.4023	0	0	0	0	0	0	0	0	0	0	0
Road with scheme		0	0	1968.49	0	0	0	0	0	0	0	0	0	0	0
Road - change in emissions		0	0	-3.9123467	0	0	0	0	0	0	0	0	0	0	0
Rail without scheme		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail with scheme		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rail - change in emissions		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total change in traded emissions		0	0	-3.9123467	0	0	0	0	0	0	0	0	0	0	0
Change over 60 years (tCO2e)	-3.912346654														
Total change in CO2e emissions		0	0	-141.4	0	0	0	0	0	0	0	0	0	0	0
Change over 60 years (tCO2e)	-141.4075883														
Change in opening year (tCO2e)	-141.4075883														
Carbon budget periods															
Carbon budget 1 start	2008														
Carbon budget 1 end	2012														
Carbon budget 2 start	2013														
Carbon budget 2 end	2017														
Carbon budget 3 start	2018														
Carbon budget 3 end	2022														
Carbon budget 4 start	2023														
Carbon budget 4 end	2027														
Masks															
Carbon Budget 1		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Carbon Budget 2		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Carbon Budget 3		1	0	0	0	0	0	0	0	0	0	0	0	0	0
Carbon Budget 4		0	1	1	1	1	1	0	0	0	0	0	0	0	0

Greenhouse Gases Workbook - Worksheet 1

Scheme Name: ACP-2020-026 Assessment

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 (£):

£17,618

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

Quantitative Assessment:

Change in carbon dioxide equivalent emissions over 10 year appraisal period (tonnes):
(between 'with scheme' and 'without scheme' scenarios)

-141

Of which Traded

-3.912346654

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

-141

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

£501

(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	-3.912346654
Non-traded sector	0	0	0	-137.4952417

Qualitative Comments:

Sensitivity Analysis:

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

£26,427

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

£8,809

Data Sources: