

**A66 Northern Trans-Pennine Project
TR010062**

**7.47 Deadline 8 Submission on
Climate Matters**

Planning Act 2008

Infrastructure Planning (Examination Procedure) Rules 2010

Volume 7

Deadline 8

16 May 2023

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Examination Procedure)
Rules 2010**

A66 Northern Trans-Pennine Project
Development Consent Order 202x

7.47 DEADLINE 8 SUBMISSION ON CLIMATE MATTERS

Planning Inspectorate Scheme Reference	TR010062
Application Document Reference	7.47
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Version	Date	Status of Version
Rev 1	16 May 2023	Deadline 8

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1 Deadline 8: Climate Matters Submission

1.1 Proper Forum for Challenge

- 1.1.1 The Applicant notes the representations made by Climate Emergency Planning & Policy (“CEPP”) at Deadline 6 [REP6-037] and at Deadline 7 [REP7-198] of this Examination. The Applicant notes also that each of these representations contains a request from CEPP to defer their substantive submission until a later stage in the Examination.
- 1.1.2 Although CEPP’s relevant representation, written representation and oral submissions have been received and responded to during Examination the requested deferred substantive submission has not yet been received. The Applicant wishes to note that CEPP’s D7 submission sets out a brief summary of points they wish to raise with respect to the Government’s revised Net Zero Strategy: Powering Up Britain and the Carbon Budget Delivery Plan. CEPP submits that the Secretary of State must consider the A66 Project in the context of the new policy documents, and goes on to set out purported issues or failings with these policies (at paragraph 3B(i) – (vi) of [REP7-198]).
- 1.1.3 To the extent that CEPP seeks to (in this submission, or any further submissions they seek to make) challenge the lawfulness of these new policy documents, the Applicant’s position is that the consideration of the Application for development consent for the A66 Northern Trans-Pennine Project is not the proper forum in which to make submissions of that nature. As CEPP will be aware, any challenges they may have to the Government’s policy documents can be made via judicial review of those policy documents directly and that is the appropriate forum to do so.

1.2 Contextualisation against Carbon Budget Delivery Plan

- 1.2.1 The Applicant notes that the Carbon Budget Delivery Plan (“CBDP”) was issued by Government on 30 March 2023. The CBDP sets out Government’s detailed proposals to enable the delivery of Carbon Budgets 4, 5 and 6 (i.e. to the end of 2037) in accordance with the UK’s net zero carbon commitment under the Climate Change Act 2008.
- 1.2.2 Therefore, the CBDP sets out detailed information on the package of proposals and policies that Government intends to deliver in order to meet the statutory net zero carbon commitment. The carbon budgets apply to the whole of the UK economy and society. The CBDP is based on an adjusted version of the Government’s Energy and Emissions Projections, which apply assumptions of future economic growth, fossil fuel prices, electricity generation costs, UK population growth and other key variables.
- 1.2.3 The Applicant notes paragraph 19 and Table 2 of the CBDP. Table 2 sets out projected sectoral emissions across the UK carbon budgets. As paragraph 19 goes on to explain (with our emphasis added):
- 1.2.4 *These figures represent the **projected** residual emissions, after proposals and policies set out in this report have taken effect. The figures shown for each carbon budget are total emissions over the five-year period. Alongside this, we have shown the actual emissions over the single year of*

*2021 to show current performance. **These are only projections and should not be interpreted as hard sectoral policy targets.** Within our overall carbon budgets it is vital to retain a degree of flexibility to adjust our plans as circumstances change given the complexity of the net zero system and the inherent uncertainty in any projections. Modelling cannot always take into account systemic feedback effects, which are hard to quantify. Other factors such as consumer behaviour, technological innovation and the speed and structure of future economic growth further contribute to intrinsic uncertainties of long-term sectoral emissions projections.*

- 1.2.5 Accordingly, the CBDP provides projected sectoral-based residual emissions. The CBDP confirms that these figures are only projections and are not to be interpreted as hard sectoral policy targets. The CBDP further sets out the reasons why it is necessary to retain flexibility within the overall carbon budgets.

Assumptions and Limitations of the Contextualisation

- 1.2.6 To assist the Examination the Applicant is voluntarily providing a contextualisation of the A66 Project's GHG emissions figures against the CBDP table 2 projections. This contextualisation is provided in Section 1.2 below.
- 1.2.7 This is provided by the Applicant purely for contextualisation and does not form an assessment of GHG emissions. This is appropriate and proportionate, particularly given the limitations of the CBDP Table 2 projections as noted within the CBDP and for the following additional reasons noted by the Applicant:
- We note that the A66 Project values here are those presented within the ES Chapter 7, Climate [APP-050]. No additional analysis or data manipulation has taken place.
 - The Carbon Budget residual emissions provide additional context to the Project emissions, this is not an updated assessment of significance. The assessment of significance provided in ES Chapter 7, Climate [APP-050] is the only significance assessment. Accordingly, the contextualisation provided below does not alter the likely significant effects assessment of GHG emissions that is provided by the Applicant in Chapter 7 of the Environmental Statement [APP-050].
 - For the contextualisation presented in the section below, the approach that has been carried out is the same as that in the ES Chapter 7, Climate [APP-050]. Accordingly, the values provided in the section below are calculated by comparing annual A66 Project emissions against one years' worth of the estimated residual carbon budget emissions (i.e. one fifth of the Sixth Carbon Budget residual emissions). The approach is summarised below and within Appendix 1 of 7.8 Applicant's Response to Written Representations made by other Interested Parties at Deadline 1 [REP2-017].
 - The total Residual Emissions (after policy savings) in each of the budget periods have been taken as the values excluding international aviation and shipping. This is because in Table 1 international aviation and

shipping is excluded from the Fourth and Fifth Carbon Budgets but included within the Sixth Carbon Budget.

- The category of emissions provided within the CBDP that explicitly mentions “transport” is the “Domestic Transport” category. The CBDP does not confirm what areas of transport have been incorporated within this category, including whether this includes construction, maintenance, commercial vehicle or domestic end-user¹ emissions of the strategic road network (as opposed to the local roads network).
- On the assumption that the “Domestic Transport” category does include end-user use on the strategic road network, a contextualisation against those projections is given below.
- Specifically, it is also unclear whether the “Domestic Transport” category within the CBDP includes commercial transport of goods, i.e. via Heavy Duty Vehicles. The A66 Project GHG emissions values include both domestic and commercial vehicle emissions. Accordingly, the values presented below incorporate a contextualisation of both domestic and commercial vehicles against the “Domestic Transport” category. As provided in 3.8 Combined Modelling and Appraisal Report Appendix D – Stage 3 Transport Forecast Package [APP-240], there is a high proportion of HDV use on the Project, with HDVs currently comprising an average of 25% of total vehicles on most lengths of the route between Scotch Corner and Penrith, with the proportion for HDVs for the forecast year of 2044 ranging from 11%-16%. Accordingly, the figures presented below against the “Domestic Transport” category are considered to be over-precautionary as the GHG emissions from the A66 include a substantial proportion of HDVs when it may not be the intention of the CBDP to include these emissions within “Domestic Transport”.

1.2.8 Accordingly, the contextualisation provided below does not alter the assessment of GHG emissions that is provided by the Applicant in Chapter 7 of the Environmental Statement [APP-050].

Contextualisation against CBDP table 2

1.2.9 For ease of reference, the Applicant sets out the CBDP Table 2 projected sectoral-based residual emissions below, at Figure 1.

Figure 1: Summary of sectoral residual emissions across carbon budgets (MtCO_{2e}) taken from the CBDP Table 2

Sector	Current (2021, pa)	CB4 5-yr (average pa)	CB5 5-yr (average pa)	CB6 5-yr (average pa)
Agriculture and LULUCF	49	231 (46)	207 (41)	183 (37)
Buildings	88	350 (70)	320 (64)	217 (43)
Domestic Transport	109	546 (109)	422 (84)	254 (51)
Fuel supply	20	93 (19)	69 (14)	48 (10)
Industry	76	340 (68)	207 (41)	111 (22)
Power	54	143 (29)	63 (14)	42 (8)

¹ For the purposes of this submission “end-user” refers to the road users category, User Utilisation of Infrastructure (B9), of the PAS 2080 standard. Category B9 does not distinguish between HDVs and domestic road users.

Sector	Current (2021, pa)	CB4 5-yr (average pa)	CB5 5-yr (average pa)	CB6 5-yr (average pa)
Waste and F-gases	30	125 (25)	96 (19)	75 (15)
Greenhouse Gas Removals	N/A	0 (0)	-32 (-6)	-117 (-23)
Intl aviation and shipping (IAS)	20	217 (43)	210 (42)	184 (37)
Total excluding IAS	426	1829 (366)	1353 (271)	813 (163)
Total including IAS	446	2046 (409)	1563 (313)	997 (199)

ES Significance Assessment from Chapter 7

1.2.10 Similarly, for ease of reference, the Applicant sets out below at Figure 2 the assessment of significance of the A66 Project's GHG emissions as is provided within Table 7-24 of ES Chapter 7, Climate [APP-050]. As per DMRB LA 114, the A66 Project's assessment of significance of GHG emissions is determined by comparing emissions arising from the Project (i.e. net emissions) with National Carbon Budgets.

Figure 2: Assessment of significance as provided in Table 7-24 of ES Chapter 7, Climate [APP-050]

Project stage	Estimated total GHG emissions over carbon budget (tCO _{2e}) ('Do-something' Scenario)	Net CO ₂ project GHG emissions (tCO _{2e}) ('Do-something' - 'Do-minimum')	Relevant carbon budget		
			4th (2023-27)	5th (2028-32)	6th (2033-37)
Construction	518,562	518,562	0.027%	0.030%	N/A
Operation	77,162,187	2,190,452	N/A	N/A	0.019%
Total	77,680,749	2,709,014	0.027%	0.030%	0.019%

Contextualisation of the CBDP total residual emissions

1.2.11 The contextualisation provided below in Figure 3 is set out in the same format and using the same methodology as is given in paragraphs 7.11.18-7.11.23 of ES Chapter 7, Climate [APP-050].

1.2.12 Figure 3 contextualises the A66 Project's GHG emissions against the total residual emissions across all sectors as provided within Table 2 of the CBDP. Therefore, Figure 3 shows the A66 Project's GHG emissions as a proportion of the emissions available within the Fourth, Fifth and Sixth Carbon Budgets once Government policy measures have been applied (i.e. the residual emissions).

1.2.13 As has been explained throughout Examination, the Applicant's A66 Project GHG emissions figures are considered extremely precautionary. For instance, and relevant when reading Figure 3, the Applicant has modelled all construction emissions against both the Fourth Carbon Budget **and** the Fifth Carbon Budget in isolation, in order to account for a reasonable worst case scenario. Further details are provided on p. 84 of the Applicant's Response to Written Representations made by other Interested Parties [REP2-017].

1.2.14 In summary, Figure 3 shows that the A66 Project’s GHG emissions as an average annual proportion of residual emissions of the Fourth Carbon Budget is 0.028%; of the Fifth Carbon Budget is 0.038%; and of the Sixth Carbon Budget is 0.022%.

Figure 3: Contextualising A66 Project emissions against CBDP Plan Residual Emissions (after policy savings). Please note that the estimated total GHG emissions and Net CO₂ A66 Project GHG emissions are as provided in Table 7-24 of ES Chapter 7, Climate [APP-050].

Project stage	Estimated total GHG emissions over carbon budget (tCO ₂ e) ('Do-something' Scenario)	Net CO ₂ project GHG emissions (tCO ₂ e) ('Do-something' - 'Do-minimum')	Relevant carbon budget period Residual emissions (after policy savings)		
			4th (2023-27)	5th (2028-32)	6th (2033-37)
Construction	518,562	518,562	0.028%	0.038%	N/A
Operation	77,162,187	2,190,452	N/A	N/A	0.022%
Total	77,680,749	2,709,014	0.028%	0.038%	0.022%

1.2.15 Providing a more detailed explanation, for consistency with the ES methodology, an annual construction phase GHG emissions value has been contextualised against an annual residual emissions value for both Fourth and Fifth Carbon Budget periods. Annual estimated construction GHG emissions would represent 0.028% of the average annual residual emissions in the Fourth Carbon Budget, and 0.038% of the average annual residual emissions in the Fifth Carbon Budget.

1.2.16 Operational GHG emissions have been contextualised against the residual emissions value for the Sixth Carbon Budget only, by taking the modelled operational emissions value (i.e. the net operational emissions for the future modelled year of 2044) against the average annual residual emissions value in the Sixth Carbon Budget. On this basis, annual estimated net operational GHG emissions would represent 0.022% of the average annual residual emissions in the Sixth Carbon Budget

Contextualisation of the CBDP Domestic Transport emissions

1.2.17 Figure 4 contextualises the A66 Project’s GHG emissions against the residual emissions associated with the “Domestic Transport” sector within the CBDP. However for the reasons noted above at paragraph 1.2.7, this contextualisation is provided for information only and the Applicant notes the limitations associated with this information. By way of summary of those limitations, it is unclear based on the CBDP whether construction and maintenance of the strategic road network ought to be considered against the “Domestic Transport” sector; similarly, it is also unclear whether commercial vehicles such as HDVs are to be included. Given the high-proportion of HDVs that use the A66 (with HDVs currently comprising an average of 25% of total vehicles on most lengths of the route between Scotch Corner and Penrith and estimated to be between 11 – 16% with the Project in place in 2044), the GHG emissions figures presented in Figure 4 incorporate a substantial proportion of HDV emissions when it may not be the intention of the CBDP to incorporate these within the “Domestic

Transport” sector. The values below therefore ought to be treated as over-precautionary.

- 1.2.18 The contextualisation presented in Figure 4 is provided for the Design Year of the Project (2044).
- 1.2.19 For the purposes of this contextualisation, Figure 4 presents the net “end-user” emissions figures extracted from Table 7-23 of ES Chapter 7, Climate [APP-050] against the average annual residual emissions projections associated with the “Domestic Transport” sector from the CBDP. These are presented across the 5-year carbon budgets for the period when operation activities are anticipated to take place, shown for the full 5-year budget and as a proportion of 1-year.
- 1.2.20 In summary, the values shown in Figure 4 identify that the A66 Project would comprise 0.066% of the average annual residual emissions for domestic transport in the Sixth Carbon Budget in terms of net end-user² emissions.

Figure 4: Contextualisation of end-user emissions against the Domestic Transport residual emissions reported within the Carbon Budget Delivery Plan. Net GHG emissions for End-Users (B9) as provided in Table 7-23 of ES Chapter 7, Climate [APP-050].

Project Element	Net tCO ₂ e emissions ('Do-something' – 'Do-minimum')	6th Carbon Budget (2033-2037)
Domestic Transport Residual Emissions, 5-yr total (tCO ₂ e) ³		254,000,000
Domestic Transport Residual Emissions, 1-yr (tCO ₂ e)		50,800,000
Net End-User Emissions for 2044	33,745	0.066%

Summary

- 1.2.21 This submission provides contextualisation of the A66 Project’s emissions against the residual emissions projections given in the CBDP. The Applicant has noted the limitations and assumptions associated with compiling these projections, including an overly precautionary approach of comparing construction, maintenance and operation of the strategic road network and HDV emissions against the “Domestic Transport” category in the CBDP. This submission is provided for contextualisation and information only and does not provide an assessment of significance; nor does it alter the assessment of significance provided in Chapter 7, Climate, of the ES [APP-050]. All A66 Project values used in the Figures above have been taken directly from Chapter 7 and noted in Figure captions.

² As noted above at footnote 1, reference to “end-user” in this submission refers to the road users category within PAS:2080 (User Utilisation of the Infrastructure), which includes any vehicles using the road such as domestic cars and HDVs

³ As per Table 2 of the Carbon Budget Delivery Plan