

Technical Note

Didcot Garden HIF1

Road user emissions update since the Environmental Statement

Oxfordshire County Council

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Introduction

Since the Environmental Statement [CD A.15] was produced, Department for Transport (DfT) have updated the Emissions Factors Toolkit (EFT), with the latest version 12.0.1 being released in December 2023.

Road user GHG emissions for the Scheme have been modelled using the EFT v12 to determine their impact on the Scheme's GHG assessment. This does not constitute a change to the ES—the purpose of this sensitivity test is to demonstrate that the EFT v12 update does not affect the outcome of the assessment presented in the ES.

Changes under EFT v12

Table 1 presents the updated road user GHG emissions modelled using the updated EFT v12, compared to the GHG emissions reported in Chapter 15, Climate of the ES [CD A.15, Chapter 15].

Table 1: Comparison of road user GHG emissions as presented in the ES, and those modelled using the EFT v12

Reporting category	As reported in the ES		EFT v12 updated modelling	
	Opening year (tCO ₂ e)	Design year (tCO ₂ e)	Opening year (tCO ₂ e)	Design year (tCO ₂ e)
Do-Minimum (DM)	107,635	122,852	126,035	118,322
Do-Something (DS)	106,561	121,626	125,196	117,537
Variation (DS-DM)	-1,074	-1,226	-838	-785

Following the EF v12 update, road user GHG emissions in the opening year are around 18% higher than those reported in the ES. This increase is because the fleet mix has been updated in the latest EFT, reflecting a slightly older fleet than previous assumptions, and the new emission factors released are higher for older vehicles.

In the future year of 2034, total road user GHG emissions with the new EFT are around 3.5% lower than those reported in the ES, due to the fact that 99% of the petrol/diesel vehicle fleet are assumed to be Euro 6 emission standard by this time, and there are predicted to be around 18% electric vehicles in the fleet.

Comparison to carbon budgets

Table 2 presents the comparison of the Scheme road user GHG emissions against the relevant UK national carbon budgets, as presented in the ES [CD A.15, Chapter 15].

Table 2: GHG emissions against relevant carbon budgets, as presented in the ES

Carbon budget	Years	UK Carbon budget (MtCO ₂ e)	Construction emissions (tCO ₂ e)	Operational emissions (tCO ₂ e)	Total emissions (tCO ₂ e)	% of carbon budget
4 th Carbon Budget	2023-2027	1,950	154,842	-4,601	150,241	0.0077%
5 th Carbon Budget	2028-2032	1,765	-	-5,752	-5,752	-0.0003%
6 th Carbon Budget	2033-2037	965	-	-5,752	-5,752	-0.0006%

Table 3 presents the comparison of the Scheme road user GHG emissions, as updated using the EFT v12, against the relevant UK national carbon budgets.

Table 3: GHG emissions against relevant carbon budgets, as modelled using EFT v12

Carbon budget	Years	UK Carbon budget (MtCO ₂ e)	Construction emissions (tCO ₂ e)	Operational emissions (tCO ₂ e)	Total emissions (tCO ₂ e)	% of carbon budget
44 th Carbon Budget	2023-2027	1,950	154,842	-3,342	151,500	0.0078%
5 th Carbon Budget	2028-2032	1,765	-	-4,043	-4,043	-0.0002%
6 th Carbon Budget	2033-2037	965	-	-3,930	-3,930	-0.0004%

Both of these can be visualised in Appendix A.

Conclusions

These comparisons to the national carbon budgets demonstrate that the EFT v12 update has very little impact on the assessment presented in the ES. Therefore, there is no impact on the conclusions of the ES, that there is a minor adverse impact during construction (not significant) and a minor beneficial impact during operation (not significant). Within Appendix A I include a comparison between the previous ES data against the National Budgets, and the change against the National Budgets.

Further, in Appendix 1 of my Proof of Evidence [CL2.2], from paragraph 5.5, I also look at the impact of the updated IEMA guidance for assessing the significance of GHG emissions in Environmental Impact Assessment (EIA). There, I conclude the following:

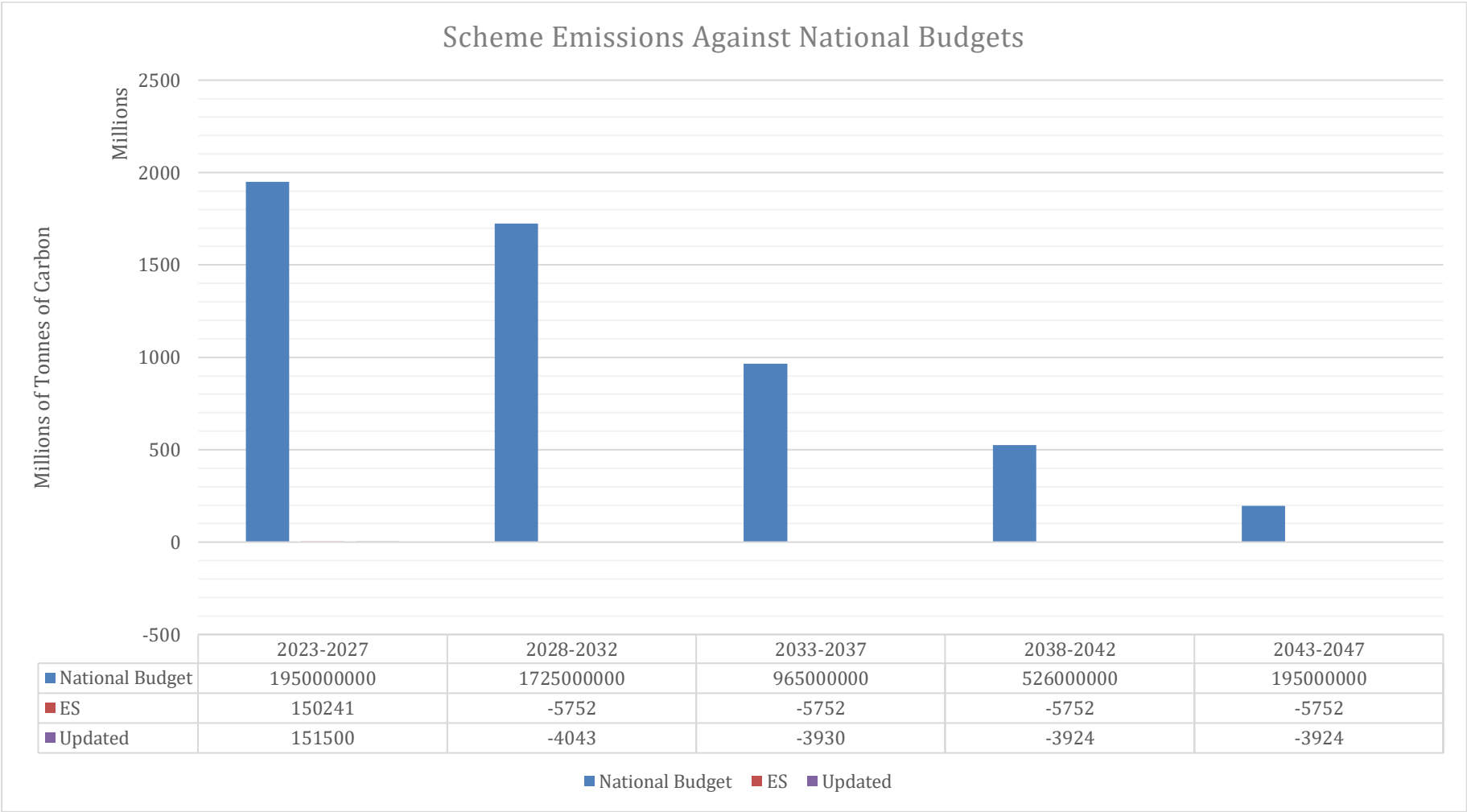
[paragraph 5.8] The Scheme is considered to be in line with existing and emerging policy requirements, as laid out in this section. It is also considered to be in line with good practice design standards, following the GHG mitigation measures implemented during construction (as outlined in section 15.9 of the ES [CD A.15, Chapter 15]).

[paragraph 5.9] During operation, the Scheme is shown to have a beneficial impact on GHG emissions.

[paragraph 5.10] Therefore, I consider that applying the updated IEMA guidance on assessing significance of GHG emissions would not have a material impact on the outcome of the GHG assessment as presented in the ES.

I do not consider the sensitivity testing outlined above to have any impact on these conclusions.

Appendix A: Carbon Impact Against Budgets



Technical Note: Road user emissions update since the Environmental Statement