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26th July 2022

A47 North Tuddenham to Easton Examination,
National Infrastructure Planning,
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For the attention of Rachel Dominey and Kevin O’Hanlon, Senior Planning Officers DfT

By email only to: A47NorthTuddenhamtoEaston@planninginspectorate.gov.uk .

A47NTE – Traffic Forecasts and Carbon emissions.

I refer to the letter dated 19 July 2022 from the Department for Transport (DfT) requesting comments to the responses to the Department's earlier letter of 27 June 2022.

The following discusses matters in the National Highways (NH) submission dated 8 July 2022.

In addition to commenting as invited, I also take the opportunity to provide an update of the Norwich Western Link (NWL) since my letter of 8 July 2022.

National and Local Carbon Budgets Targets

NH continues to state that *“The carbon budgets are set at a national geographical scale. **The NPSNN does not require assessment against any local or regional targets.** The only statutory targets are those set at a national level”*. [Emphasis added]

This statement again fails to recognise paragraph 4.4 of NNNPS which states *“In this context, environmental, safety, social and economic benefits and adverse impacts, should be considered at national, regional and **local levels.** These may be identified in this NPS, **or elsewhere**”*. [Emphasis added]

NH provides a reference to making assessments against national targets only at the footnote on page 6 in the 8 July 2022 response citing *“This point was also explored in recent decision letters such as at the M54 to M6 Link Road where the Secretary of State accepted that the only statutory carbon targets are those at a national level”*.

This extract is selective in failing to quote the full sentence at paragraph 46 of the M54 to M6 Link Road decision letter which reads *“The Secretary of State accepts that the only statutory carbon targets are those at a national level **and notes that neither the Applicant nor any other party has suggested that there are non-statutory carbon targets at any other level that may need to be considered**”*. [Emphasis added]

The A47NTE differs in this respect that the interested parties have suggested sub-national targets from early in the DCO examination of the scheme. It is beside the point that only ‘emerging’ rather

than adopted or statutory budgets were available at a sub-national level during the examination. If, as I contend, such an assessment was necessary to understand the true significance of the emissions, then it has to be carried out regardless of whether the budgets were finalised or have a statutory underpinning or not.

The Applicant has had ample opportunity to make such an assessment and was given extensive details to enable this from another interested party, Dr Andrew Boswell, at the examination as early as 1 September 2021 in his written submission ref REP1-023.

This submission by Dr Boswell not only referenced 3 readily accessible sets of data but made indicative assessments against them across the Local Authority areas of Breckland, Broadland, Norwich and South Norfolk, which corresponds to NH study area.

Norfolk County Council (NCC) indicated at the adoption of LTP4 Strategy in November 2021 that it would provide carbon targets in its forthcoming Implementation Plan. It is a significant omission that the Applicant never referred to this emerging set of sub-national targets.

The Secretary of State is now advised that the emerging carbon reduction targets in the draft Implementation Plan have been authorised through the formal adoption by NCC on 19 July 2022 of the Local Transport Plan (LTP4), providing a further set of sub-national carbon targets for consideration.

National Carbon Budgets

NH provides a table of Carbon budgets in its 8 July 2022 response which purports to compare the previously reported differences between the Do Something (DS) and Do Minimum (DM) scenarios for the proposals against the upper and lower trajectories in the government’s Transport Decarbonisation Plan (TDP).

The Applicant has provided no explanation of how these comparative ranges have been calculated and what the results show or indeed prove.

It is noted that the Applicant refers to the method as “a sensitivity assessment using the TDP trajectory” and I refer to Dr Boswell’s submission of 8 July 2022 in which he highlights that this is not a sensitivity test but rather the application of unproven factors to the traffic model data.

The Applicant must explain how correctly quantified carbon emissions for the A47NTE scheme compare to what is necessary to remain within the trajectory range in TDP. I have added additional rows to the table which show, without agreeing to either the DS - DM figures or the trajectory figures, the increases from the scheme in relation to the TDP trajectory range for each of carbon budget periods.

	Carbon Budgets - Upper Trajectory		
	4 th (2023 – 2027)	5 th (2028 -2032)	6 th (2033 – 2037)
National Carbon Budget (tCO _{2e})	1,950,000,000	1,725,000,000	965,000,000
Scheme DS – DM (tCO _{2e})	111,626	40,695	41,771
DS – DM based on TDP upper trajectory (tCO _{2e})	110,673	35,963	34,833
Scheme - Percentage above/below upper trajectory (tCO _{2e})	+0.85%	+11.63%	+16.61%

	Carbon Budgets – Lower Trajectory		
	4 th (2023 – 2027)	4 th (2023 – 2027)	4 th (2023 – 2027)
National Carbon Budget (tCO _{2e})	1,950,000,000	1,950,000,000	1,950,000,000
Scheme DS – DM (tCO _{2e})	111,626	40,695	41,771
DS – DM based on TDP lower trajectory (tCO _{2e})	110,486	35,209	32,699
Scheme - Percentage above/below lower trajectory (tCO _{2e})	+1.21%	+13.48%	+21.72%

(Note for clarity, it should be noted that the upper trajectory is the slower rate of carbon reductions to achieve net zero by 2050.)

If anything this submission by NH indicates that the increases in emissions generated by A47NTE are higher than both the upper and lower trajectories in TDP, meaning that **the targets will not be met.**

NH continues to use the national carbon budgets for all sectors, but this is over simplistic and ignores the later TDP and the Net Zero Carbon Strategy (NZS) carbon targets bespoke to transport.

National Transport Emission Targets

The Government’s Energy White Paper – “Powering of Net Zero Future” published in December 2020 noted transport emissions at 124.4MtCO_{2e} in 2018 and set out 6 non-planning policies to achieve net zero by 2050. The Department of Business, Energy and Industrial Strategy (BEIS) followed this with trajectories to achieve net zero for each sector, the latest version of which is v1.1 05 04 2022. Worksheet 3v sets the upper and lower trajectories for transport.

The transport emissions were 28% of the total emissions in 2018 of which domestic road transport accounted for 92%.

As a comparative to the overall national budgets across all sectors, I include the predictions for transport for each carbon budget period based on worksheet 3v.

	4 th (2023 – 2027)	5 th (2028 - 2032)	6 th (2033 – 2037)
National Carbon Budget (tCO _{2e})	1,950,000,000	1,725,000,000	965,000,000
Lower end of NZS range for all transport	556,800,000	401,100,000	215,100,000
As percentage of National Budgets	28.55%	23.25%	22.29%
Lower end of NZS range for road transport @ 92%	512,300,000	369,000,000	197,900,000
As percentage of National Budgets	26.27%	21.39%	20.51%
Upper end of NZS range for all transport	500,900,000	337,200,000	146,000,000
As percentage of National Budgets	25.68%	19.55%	15.13%
Upper end of NZS range for all transport @ 92%	460,800,000	310,200,000	134,300,000
As percentage of National Budgets	23.63%	17.98%	13.91%

It should be noted that the percentage of transport to the whole is required to reduce with both the upper and lower end of the range. This indicates that transport emissions are required to reduce faster than other sectors to met the overall budget targets.

I consider that use of and comparison with the total national carbon budgets for all sectors for planning applications of road schemes is no longer applicable with the publication of the government tables for transport.

Significance

NH claim that the scheme will not have a material impact on the Government's ability to meet its carbon reduction targets, thus enabling the Secretary of State to approve the DCO under paragraph 5.18 of NNNPS quoting that the DS – DM of A47NTE is approximately 0.004% of the combined 4th, 5th and 6th carbon budgets¹.

As discussed above, I consider that the comparison should be against the road transport pathway to net zero which adjusts this figure to 0.02% [total DS-DM emissions, 194,092 ÷ total NZS lower trajectory 1,079,200,000 = 0.018%] and 1.18% against the local targets in the local LTP4 [194,092 ÷ LTP4 targets 2023 to 2037 16,474,840 = 1.18%].

These figures need to be seen in the context that they relate to a small fraction of the emissions from the scheme, the DS – DM fraction. It ignores the impact of the carbon emissions inherent in the DM scenario which result from other concurrent land-based developments and road schemes including A47 Blofield to North Burlingham, A47 Thickthorn Junction and the Norwich Western Link planned in the study area.

The basic premise of NNNPS is that the non-planning policies will “ensure that any carbon increases from road development do not compromise its overall carbon reduction commitments”.

If the hypothesis holds true any excess above the budgets must be due to the carbon emissions in the DM scenario which result from both the land-based developments and road schemes in the traffic model, including other large road schemes over similar timescales.

If the results of such analysis fall outside the upper and lower trajectories, I suggest the increases of 0.02% and 1.18% from the A47NTE scheme will further add to the challenges and jeopardise the ability of Government to meet its carbon reduction plan targets.

No attempt has been made to determine this in A47NTE. Such an assessment is necessary to understand the true significance of emissions from the development and therefore should be carried out.

I provide an indicative method below in which I use comparison of the A47NTE DM emissions against known budgets which are the national transport trajectories and LTP4, based on the respective lengths of roads.

In this exercise, I have first established the length of roads for each comparative.

The UK road network is 398,839 kilometres (excluding Northern Ireland)².

Norfolk has 10,016.3 kilometres of roads³.

¹ REP3 – 014 paragraph 14.8.8

² 2021 figure from RDL0203

³ Figure from 2021 RDL0202a

The length of roads in the study area (NATS 2015) is not given in the application but the study area is shown at figure 4.1 in document '7.1 Case for the Scheme', covering central Norfolk incorporating parts of Breckland, Broadland and South Norfolk and the whole of Norwich.

Unfortunately I have been unable to find the road lengths for the individual Local Authorities (LAs) but note that the County Council maintains a list of streets which is annotated within the LAs. The total length of the listed streets is 14,197km and I have had to ignore that this differs from the highway statistic above of 10,016km for Norfolk, assuming that the extra relates to footpaths etc.

The street lengths for the 4 LAs is 7,764km which I have adjusted to reflect 50% reduction for Breckland, 30% reduction for Broadland and 80% reduction for South Norfolk. The result gives 3,614 km which I have rounded down to 3,500km. (It is noted that a spreadsheet on Carbon emissions for the NWL OBC, obtained under a FOI request, is calculated on a road length in the NATS 2019 study area of 1,527km (50% of the one-way link lengths) although this may change with the Addendum to the OBC as below.

The following table summarises the comparisons.

	4 th (2023 – 2027)	5 th (2028 -2032)	6 th (2033 – 2037)
Scheme DM (tCO _{2e})	2,848,032	4,640,659	4,508,084
Lower end of NZS range for road transport @ 92%	556,800,000	401,100,000	215,100,000
Upper end of NZS range for all transport @ 92%	460,800,000	310,200,000	134,300,000
Scheme DM pro rata (÷ 3,500km x 398,839km)	324,544,639	528,821,656	513,714,204
	Within range	Above range by 32 – 70%	Above range by 139 – 280%
LTP4 for whole of Norfolk	7,820,270	5,633,480	3,021,090
Scheme DM pro rata (÷ 3,500km x 10,016km)	8,150,254	13,280,240	12,900,848
	Over target by 22%	Over target by 136%	Over target by 327%

This comparison shows that there are flaws in the basic premise of the NH data.

NH states that its figures for carbon emissions are conservative and likely overestimated as the uptake of new electric vehicles in future years is expected to be higher than the proportions used in the Scheme assessment.

I wholly accept that this is probably correct but question why NH therefore continues with outdated and inadequate data.

The data is issued by various government departments and NH which must raise the question whether it is still fit for purpose to give confidence and assurances to the public that carbon reductions are being accurately assessed in road projects within the National Network.

It is crucial for the public to understand and have confidence in Transport Planning Examinations, particularly in the implications for climate change.

I would respectfully suggest that the current methodology and outdated data used and vigorously defended by NH is simply not trustworthy.

NWL Update

Finally, I would draw attention to the implications of changes to the traffic modelling for the NWL project being undertaken by NCC. The NCC Cabinet approved an Addendum to the OBC previously submitted to DfT in July 2021 which provides revised traffic vehicle kilometres as;

	OBC	Addendum
Opening Year 2025 (v/km)	4,087,222,971	48,850,573
Design Year 2040 (v/km)	4,766,655,716	137,491,452

No details have been provided as to why these changes are necessary or even what they mean.

In the 8 July 2022 response NH states under **Traffic models (different models by the Applicant and NCC)** – *“The ‘Applicant’s Response to the Relevant Representations’ (REP1-013) explains why the Applicant and NCC used different traffic models, but that checks have been made to ensure they align; the traffic models use a consistent traffic modelling methodology, but are independent of one another and will vary due to different development timelines (e.g. base year model, assumptions as to opening year) and different effects on the surrounding local network.”*

No evidence has been provided to the public, the examination, or the SoS, to support this position, especially the claim that the traffic models align. I refer to my submission of 8 July 2022 which presented examples showing that the traffic models quite clearly give different descriptions of the transport network in the study area, and are inconsistent with major misalignments in project levels of traffic.

Notwithstanding the misalignment between NH modelling of the A47NTE and NCC’s modelling of the NWL, NCC has now produced further data which is internally inconsistent itself as shown above. The SoS must be satisfied that the material provided by the Applicant is sufficient for him to reach a reasoned conclusion on the significant effects of the proposed development on the environment. Carbon emissions are a significant issue in recent DCO decisions, and the Applicant has not made, nor engaged, satisfactorily in clarifying the issues involved in the different traffic models.

No doubt the Secretary of State must seek clarification as to the impact of these latest and significant NWL revisions have an on A47NTE Environmental Statement and Climate.

Yours sincerely,



Bryan Robinson (IP reference 20028154)