

Author Details	
Name	Dr Andrew Boswell
Position	Scientist and Consultant
M3 Junction 9 Registration	20036820
Organisation	Climate Emergency Policy and Planning (CEPP)
Examination Principle Issues	Climate Change

DEADLINE D8

In so far as the facts in this statement are within my knowledge, they are true. In so far as the facts in this statement are not within my direct knowledge, they are true to the best of my knowledge and belief.

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1 DEADLINE 8 SUBMISSION

- 1 This submission provides responses to materials from deadline D6.
- 2 A section is provided on traffic modelling and cumulative carbon emissions. This is necessary to understand my later comments on the applicant's Tyndall Centre budget "contextualisation"; and why I submit that the Environmental Statement does **not** comply with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 which require that the applicant must provide the cumulative impacts of the project and other existing and/or approved projects.
- 3 This section will also give assistance to the ExA with respect to Winchester City Council's submissions. The section also provides new material on the under-reporting of emissions across the South East of England in the applicants traffic modelling, vital for understanding the scheme in the context of the Tyndall Centre carbon budgets.
- 4 A section is provided on comments on Applicant's "Tyndall Centre carbon budget in the context of the scheme" appendix. This includes correcting errors in the applicant's data and presentation; and extending the analysis to cumulative GHG assessment as the applicant only compares solus enumerations of the GHGs.
- 5 Once emissions are included from the related cumulative land based and road developments which the applicant itself has decided to include in the traffic model, the data clearly shows that the project's GHG emissions when viewed in the context of South East England do not make a meaningful contribution to the UK's trajectory towards net zero. The emissions are consistent with the IEMA guidance definition of "Major Adverse".
- 6 The analysis shows that the emissions of the road transport system in South East England are approximately 338% of the Tyndall Centre 6th carbon budget for the same area. This is hugely significant and critical given that the Tyndall Centre budgets are science-based budgets: they are more rigorous and demanding, but they also derive the emissions reductions needed to comply with Paris Agreement from the global carbon budgets from the Intergovernmental Panel on Climate Change (IPCC) (which the CCC budgets do not).
- 7 The final section provides comments on responses to ExQ3 questions, both from the Applicant and Winchester City Council.

1.1 Update on second NZS legal case

- 8 The second NZS legal case has gained permission to proceed to a full Judicial Review hearing at the High Court.

2 TRAFFIC MODELLING AND CUMULATIVE CARBON EMISSIONS

- 9 This section provides the ExA with information on the cumulative carbon emissions which are in the traffic modelling.

2.1 *Reasons for this material*

- 10 This is presented now for two main reasons:

(A) The applicant has provided a “Tyndall Centre Carbon Budget in the Context of the Scheme” appendix. In the contextualisation, the applicant takes forward a solus enumeration of the M3J9 carbon emissions (as calculated by the DS-DM subtraction). The contextualisation is therefore of the very limited solus enumeration of emissions.

However, the EIA regulations require the assessment of the likely significant impacts of the cumulative emissions from the scheme. The DS enumeration is a cumulative representation of the emissions in the scheme, and it is the applicant’s chosen traffic modelling scenario for the “with scheme” case. It is therefore helpful to understand what DS is in terms of elements in the traffic modelling, and also the same for DM.

(B) In [REP6-028] section 2, I provided an update on *R (Boswell) v Secretary of State for Transport [2023] EWHC 1710*, now with permission for a full hearing at the Court of Appeal. I noted that the carbon emissions from other related and locally committed development are expressed in both the DS and DM forecasts; however, these carbon emissions are subtracted out before the significance assessment which is based solely upon a carbon emissions figure based on the DS-DM subtraction. The explanation below will help the ExA understand the issues involved, and significance of the data lost by this subtraction procedure. And why my position is that the significance of GHGs in Chapter 14 is assessed solely on “scheme-only” (DS-DM) estimates [percentage figures in Table 14.7]. And why this does **not** comply with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 which require that the applicant must provide the cumulative impacts of the project and other existing and/or approved projects.

As a further update, the hearing at the Court of Appeal on the Boswell case is now set for January 16th 2024.

2.2 Assistance to the ExA w.r.t Winchester City Council's submissions

11 Further, I note that Winchester City Council in REP6-036 "Third Written Questions (ExQ3) – Response 27 October 2023" make the following comments:

- (1) In response to Q6.3.9: *"The council has set a target of 2030 to be carbon neutral as a district. Direct and indirect carbon emissions will arise from this project and the council sets out in its answer below that a lack of information from National Highways as to how the operational figure was derived in terms of end-user emissions would be very informative in this respect. As you see in Table 14.2.2 reproduced below, it is not possible to discern the local impact."*

I am not certain what WCC mean by "direct" and "indirect" in this context. It is possible that WCC mean "solus" (emissions from the scheme in isolation) and "cumulative" (emissions from the scheme with other related developments in the traffic modelling). In the narrative below, I deconstruct the traffic modelling and emissions data to show the solus and cumulative emissions across the South East England area, chosen by the applicant as the relevant study area, and this analysis may assist the ExA and WCC. It shows the totality of the emissions related to the scheme as modelled in the traffic model.

I believe Table 14.2.2 reproduced by WCC is an old table superseded by the data in Table 14.6 [REP2-027]. I effectively expand the updated data in Table 14.6 into annual linearly interpolated data which may also be of assistance to the ExA and WCC as it shows the actual annual figures hidden in the applicant's presentation.

- (2) In response to Q6.3.10: *"It is challenging to assess without greater transparency of how the operational carbon emissions were reached."*

Appendix 14.2 - Operational Greenhouse Gas Assessment Calculations' simply contains the table without any accompanying detail on what contributions arise from direct and indirect traffic flows.

Given the size and complexity of the scheme, a far more detailed calculation which clearly implies the study area would be extremely helpful."

Again, the analysis and information below may assist.

I agree withheld information and loss of transparency for the public is an issue of serious concerns. It also may breach the EIA Regulations 2017 as now described.

2.3 Withheld information: Schedule 4 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, paragraph 6

Now that we are at Deadline 8, and WCC are saying that it does not have sufficient information: it is not possible for WCC and IPs to complete making comments on the application before the end of the examination. WCC, CEPP and other IP's have been prejudiced by this withholding of information¹ about traffic model.

The applicant should note that Schedule 4 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 on "INFORMATION FOR INCLUSION IN ENVIRONMENTAL STATEMENTS" states at paragraph 6 "A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved." The continued refusal to disclose information to WCC, CEPP and other IPs amounts to a breach of the 2017 Regulations.

As we are at the last deadline in the examination, it is now too late to correct the issue.

2.4 Overview of elements in the traffic forecasting

- 12 In order to understand what is being modelled, I start with a brief summary of the DS scenario, below.
- 13 The Applicant confirmed that there are only two transport models being used for the Scheme assessment. These are the strategic model and the operational model. The strategic model was developed using the 2015 base year South East Regional Traffic Model (SERTM), and it is this model that was used to calculate the greenhouse gas emissions [REP4-036].
- 14 At a simple breakdown, the **DS** scenario contains these elements:

- (1) **The baseline traffic model**, comprising the adjoining Strategic Road Network and local road network, calibrated against actual traffic counts and other data. Originally, the base (or calibration) date was March 2015 [REP1-025/3.4.2].

Legal note: The applicant has so far refused to disclose the operational carbon emissions for the baseline model at base year 2015 (see response to Q6.2.11 in REP5-026, and my response in REP6-028), despite clearly having the

¹

information. Evidence was given at REP6-028 of how this information has been published in all other road schemes DCO Environmental Statements of which CEPP is aware.

Now that we are at Deadline 8, and this information has not been published, it is not possible to IPs to make comments on it before the end of the examination. CEPP and other IP’s have been prejudiced by this withholding of information² about the baseline traffic model.

- (2) **Other schemes promoted by National Highways** in the near vicinity of the proposed scheme with high certainty that they are to be progressed i.e. progressed beyond preferred route announcement stage. For the M3J9, “Table 4-4: Forecast Highway Schemes” in REP1-025 includes these.

Table 4-4: Forecast Highway Schemes

Scheme	2027 Core, High and Low	2042 & 2047 Core, High and Low	2047 Optimistic
A31 Ringwood Widening	✓	✓	✓
M271 Redbridge	✓	✓	✓
M3 Junction 2-4a	✓	✓	✓
A27 Arundel Bypass		✓	✓
M4 Junctions 3-12	✓	✓	✓
A27 Segensworth Dualling	✓	✓	✓
Stubbington Bypass	✓	✓	✓
M27 Junction 9 and Parkway South Roundabout	✓	✓	✓
Whitehill and Bordon Relief Road	✓	✓	✓
M27 Junction 4-11 J4 S3	✓	✓	✓
A3024 Eastern Corridor improvements	✓	✓	✓
A3024 / Kingfisher Grange Access	✓	✓	✓
M27 J8	✓	✓	✓
Botley Bypass			✓
M27 Junction 10 Welborne			✓

Figure 1: REP1-025/Table 4-4 reproduced

² The applicant should note that Schedule 4 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 on “INFORMATION FOR INCLUSION IN ENVIRONMENTAL STATEMENTS” states at paragraph 6 “A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.”. CEPP’s position is that the operational carbon emissions for the baseline model at base year 2015 is a necessary part of the “description of the forecasting methods” and therefore the continued refusal to disclose this information amounts to a further breach of the 2017 Regulations.

- (3) **Local land based and road developments** in the study area. This is referred to by me as ‘other locally committed development’ in the study area.

For the M3J9, “Table 4-4: Forecast Highway Schemes” in REP1-025 includes roads in this category.

Land based developments included were based on discussions with the relevant planning authorities, of foreseeable developments promoted on a similar timeline to the scheme. An Uncertainty log was developed with input assumptions of these developments and infrastructure schemes, which enabled the selection of schemes for the core scenario [REP1-025/4.2]. Only those developments that were considered ‘near certain’ or ‘more than likely’, within the core area and considered ‘big enough’ were included in the modelling [REP1-025/Table 4-1]. All developments classed as ‘reasonably foreseeable’ and ‘hypothetical’, were excluded. The data was finalised at July 2020 [REP1-025/4.2.7].

A map is given at “Figure 4-1: Location of Developments” in REP1-025, and “Table 4-3: Uncertainty Log Development Summary” tabulates the related dwelling and jobs.

Table 4-3: Uncertainty Log Development Summary

Local Authority	Dwellings			Jobs		
	2027	2042	2047	2027	2042	2047
Basingstoke and Deane Borough Council	3,172	5,460	5,460	1,443	1,443	1,443
Test Valley Borough Council	5,159	5,906	5,906	4,905	6,363	6,363
Winchester City Council	5,339	8,854	8,854	6,259	11,110	11,110
Eastleigh Borough Council	4,735	8,358	8,358	6,132	12,614	12,713
Southampton City Council	1,799	1,799	1,799	7,541	9,002	9,002
Fareham Borough Council	1,147	6,000	6,000	6,409	6,409	6,409
Gosport Borough Council	1,079	1,198	1,198	5,034	5,610	5,610
Havant Borough Council	-	-	-	5,994	5,994	5,994
New Forest District Council	40	400	400	5,475	12,105	12,105
Portsmouth City Council	657	2,376	2,376	8,744	9,248	9,248

Figure 2: REP1-025/Table 4-3 reproduced

CEPP notes that although the traffic model purports to cover the whole of South East England, that the council areas for local land-based developments only covers a small part of the region.

(4) **Future year travel demand** based on national government regional growth rates which include a representation of likely growth rates excluding known planning developments already included in the traffic model [REP1-025/4.4].

(5) **The scheme** itself.

15 It can be seen from the above, and the underlying referenced data, that across the South East England, there is a very significant amount of related cumulative development occurring with the scheme under categories (2) and (3) above. The applicant has decided which related developments to include in the traffic modelling by the uncertainty log and other processes, briefly described above, And, in fact, not all of it is represented in the modelling.

16 When the carbon emissions for the scheme are enumerated, the cumulative carbon effect from these related, and included in the traffic model, developments is subtracted out (via the DS-DM calculation) before any assessment is made. The assessment carried out is therefore not cumulative and does not meet the requirements of the EIA Regulations 2017.

2.5 *Calibration and Validation (leading to under-reporting of GHGs)*

17 During calibration and validation of the model, network links are selected for inclusion in the final model via the Stage 3a and 3b processes (see REP1-025/3.5). This means that not all network links (ie roads) and the traffic on them in South East England are included in the model. For greenhouse gases (“GHGs”), this leads to an under-reporting of the total emissions in both the DS and DM scenarios.

18 This may be understood from “on the ground” data by comparing the applicant’s modelled data for DM and DS in the opening year at 2027 with the latest Government data for road transport emissions in South East England³.

³ UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, 6 July 2023, spreadsheet downloaded 6 July 2023, <https://assets.publishing.service.gov.uk/media/64a67b3a4dd8b3000f7fa546/2005-21-uk-local-authority-ghg-emissions-update-060723.xlsx>

MtCO2e/yr	Road Transport (A roads)	Road Transport (Motorways)	Road Transport (Minor roads)	Road Transport TOTAL
2005	8858.746	5809.904	6410.455	21079.1
2006	8683.838	5889.377	6278.346	20851.56
2007	8643.581	5923.83	6404.714	20972.13
2008	8282.392	5656.301	6182.107	20120.8
2009	8071.22	5482.25	5913.505	19466.97
2010	8024.143	5473.276	5720.444	19217.86
2011	7963.106	5449.841	5564.202	18977.15
2012	7799.786	5408.955	5483.963	18692.7
2013	7694.052	5349.258	5421.325	18464.64
2014	7765.684	5412.535	5548.322	18726.54
2015	8033.502	5689.692	5591.8	19314.99
2016	8236.73	5774.863	5724.365	19735.96
2017	8173.877	5773.898	5676.71	19624.48
2018	8034.262	5671.376	5462.434	19168.07
2019	7831.291	5494.259	5376.886	18702.44
2020	6208.617	4361.567	4461.265	15031.45
2021	6731.329	4771.565	4595.414	16098.31

Table 1: Latest Government data for road transport emissions in South East England (2005-2021)

- 19 [REP2-027] (“Chapter 14 (Climate) of the Environmental Statement (ES) (6.1, Rev 2)”, Table 14.6 gives the corresponding DM datum 4,157,875 tCO₂e in 2027 and the DS datum as 4,161,194 tCO₂e. [Note: tonnes as opposed to millions of tonnes: these figures are converted below.]
- 20 The pre-pandemic GHG levels for road transport in South East England were higher than 18.5 MtCO₂e between 2014 and 2019, whilst the forecast modelling in 2027 is 4.1 MtCO₂e. Whilst the assumptions in the traffic modelling for any reductions or increases between 2019 and 2027 (8 years) have not been disclosed by the applicant, it is reasonable to expect that there is no more than 0.5MtCO₂ decrease for these 8 years as the decrease between 2027 and 2042 (15 years) is less than 0.6MtCO₂ (see table below). Therefore as a rule of thumb for the purposes of this document, I estimate that the underestimate of road transport GHGs in the SERTM is 75% - in other words only one quarter of the road transport GHG emissions in South East England are being modelled and enumerated in the traffic model.
- 21 This is important for considering the applicant’s Tyndall Centre Carbon Budgets “contextualisation”.
- 22 This rule of thumb (“RoT”) adjustment will be used on the data going forward.

3 COMMENTS ON APPLICANT'S "TYNDALL CENTRE CARBON BUDGET IN THE CONTEXT OF THE SCHEME"

- 23 This section comments on document "8.22 Appendix A The Tyndall Centre Carbon Budget in the context of the Scheme" [REP6-023].
- 24 First, the title "The scheme in the context of the Tyndall Centre Carbon Budgets" would have been preferable, for it is the scheme which is being contextualised. Second, there are a number of basic errors in the applicant's presentation which must be corrected.
- 25 Having made the corrections, I then present further contextualisation taking into account (1) cumulative emissions, based on the related developments as defined in the applicant's traffic model, and as required by the EIA regulations, and (2) correction for the approximate 75% underestimate of road traffic emissions across the South East England area in the applicant's modelling, as described above.

3.1 Correction of Applicant's data

- 26 I start from the unmistakable observation that the annual DS-DM solus enumeration of the operational emissions for the scheme in the Environmental Statement increases between 2027 and 2042. This is evident from:
- (A) [REP2-027] ("Chapter 14 (Climate) of the Environmental Statement (ES) (6.1, Rev 2)", Table 14.6 where the applicant presents the (solus) operation emissions as 3,319 tCO₂e in 2027 and 4,691 tCO₂e in 2042 – an increase over time.
- (B) Linear interpolation of the Table 14.6 DM data (4,157,875 tCO₂e in 2027, 3,549,335 tCO₂e in 2042) and DS data (4,161,194 tCO₂e in 2027, 3,554,026 tCO₂e in 2042) over the 15-year opening year to design year period. The full linear interpolation for each intervening year will be shown below to explain this.

However, the applicant has set the DS-DM enumeration at 3,319 tCO₂e in 2027, and for each subsequent year in the 5CB and 6CB ie 2028-2032 and 2033-2037. In other words, the applicant has flat lined the operational emissions when in fact they increase over time. This is INCORRECT.

- 27 The linear interpolation is shown next.
- 28 I note for later that the 15 years decrease in DS emissions is 14.64% (from 4,161,194 tCO₂e in 2027 to 3,554,026 tCO₂e in 2042) or less than 1% a year.
- 29 And the 15 years decrease in DM emissions is 14.59% (from 4,157,875 tCO₂e in 2027 to 3,549,335 tCO₂e in 2042) or less than 1% a year.

tCO ₂ e	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Do Minimum	4,157,875	4,117,306	4,076,736	4,036,167	3,995,598	3,955,028	3,914,459	3,873,890	3,833,320	3,792,751	3,752,182	3,711,612	3,671,043	3,630,474	3,589,904	3,549,335
Do Something	4,161,194	4,120,716	4,080,238	4,039,760	3,999,283	3,958,805	3,918,327	3,877,849	3,837,371	3,796,893	3,756,415	3,715,937	3,675,460	3,634,982	3,594,504	3,554,026
“B6 Operational Energy Use”	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Annual DS-DM (inc B6)	3,319	3,410	3,502	3,593	3,685	3,776	3,868	3,959	4,051	4,142	4,234	4,325	4,417	4,508	4,600	4,691
5-year CB (DS-DM (inc B6))	3,319					17,967					20,254					22,540
5-year CB (DS) (inc B6)	4,161,194					20,198,802					19,186,855					18,174,909
	4CB (one year only)					5CB					6CB					7CB

Table 2: Linear Interpolation (annual) of Applicant’s DS and DM data

Notes:

1. All figures derive from four datums in the [REP2-027]/Table 14.6: the DM datums (4,157,875 tCO₂e in 2027, 3,549,335 tCO₂e in 2042) and the DS datums (4,161,194 tCO₂e in 2027, 3,554,026 tCO₂e in 2042). To assist, these four datums are shaded on the table above. The linear interpolation of DM and DS between 2027 and 2042 is then calculated on the basis of these datums being end points.
2. [REP2-027]/Table 14.5 presents “B6 Operational Energy Use” emissions as 92 tCO₂e per year for this period. The applicant has included these emissions for their Tyndall carbon budget “contextualisation” in REP6-023, Appendix A. CEPP has also included these emissions in to the totals, as shown above.
3. The correct 5-year DS-DM (inc B6) figures for each carbon budget have been calculated – these replace the applicant’s incorrect figures on the following pages.
4. In addition to 5-year DS-DM (inc B6) figures for each carbon budget which are solus enumerations, 5-year DS (inc B6) figures are also calculated which are cumulative enumerations of road transport emissions across the traffic model area for the scheme. For example, 20,198,802 tCO₂e for the 5CB.

3.2 Under-reporting of GHGs

30 In a previous section, I have laid out an “Overview of elements in the traffic forecasting”. This provides the background to what is being modelled in the DS scenario. In essence it corresponds to the entire South East of England road traffic system geographically: however, as described above only approximately one quarter of the GHG emissions from that road traffic system are being modelled, leading to a 75% under-reporting (the rule of thumb, RoT) in the enumeration of “DM” and “DS”.

31 I now present corrected versions of the applicant’s Tables which may be used for a more accurate, and also cumulative contextualisation of the GHGs from scheme against the Tyndall Centre budgets.

	National Carbon Budgets			
	4CB	5CB	6CB	7CB
	1,950,000,000	1,725,000,000	965,000,000	-
Construction	37,070			
Solus Operation DS-DM	3,411	18,427	20,714	23,000
Cumulative Operation DS	4,161,286	20,199,262	19,187,315	18,175,369
Solus+Construction	40,481	18,427	20,714	23,000
Cumulative Operation + Solus Construction	4,198,356	20,199,262	19,187,315	18,175,369
% of CB (DS-DM based)	0.002%	0.001%	0.002%	-
% of CB (DS based)	0.22%	1.17%	1.99%	-
RoT Adjusted % of CB (DS based)	0.86%	4.68%	7.95%	

Table 3 : Corrected Applicant’s Table 2 (with cumulative emissions added)

32 When the cumulative emissions are enumerated based on the DS scenario which contains the related developments included in the traffic model, the emissions from the traffic model are 2% of the national 6th carbon budget.

33 Following the adjustment with the RoT to align the traffic model outputs with the Government’s data of road transport emissions, the emissions of the road transport system in South East England are approximately 8% of the national 6th carbon budget. This is a large amount when the population of South East of England is 9.294m in 2021 and the national UK population is 67.026m. If the South East of England emissions are scaled up on a population basis, then road transport nationally would consume 57% of the 6th carbon budget. The South East of England road transport is clearly blowing the 6th carbon budget.

	Tyndall Carbon Budgets			
	4CB	5CB	6CB	7CB
South East England	94,600,000	46,400,000	22,700,000	11,200,000
Construction	37,070			
Solus Operation DS-DM	3,411	18,427	20,714	23,000
Cumulative Operation DS	4,161,286	20,199,262	19,187,315	18,175,369
Solus+Construction	40,481	18,427	20,714	23,000
Cumulative Operation + Solus Construction	4,198,356	20,199,262	19,187,315	18,175,369
% of CB (DS-DM based)	0.043%	0.040%	0.091%	0.205%
% of CB (DS based)	4.44%	43.53%	84.53%	162.28%
RoT Adjusted % of CB (DS based)	17.75%	174.13%	338.10%	649.12%

Table 4: Corrected Applicant’s Table 3 (with cumulative emissions added)

34 For the Tyndall Centre carbon budgets, I note:

- (A) The applicant hasn’t contextualised the scheme against the the Tyndall 7CB data although the Environmental Statement has data for the M3J9 in the 7CB period (2038-2042), which finishes just 8 years from the net zero year of 2050.
- (B) The figures 0.57% and 0.574% on the applicant’s Table 3 **are WRONG**: the latter should read “0.043%” as on chart above.
- (C) The applicant has omitted the solus emissions data (which is shown on its Table 2) perhaps leading to the above error in the calculation of its percentage.

35 When the cumulative emissions are enumerated based on the DS scenario which contains the related developments included in the traffic model, the emissions from the traffic model are 84% of the Tyndall Centre 6th carbon budget.

36 Following the adjustment with the RoT to align the traffic model outputs with the Government’s data of road transport emissions, the emissions of the road transport system in South East England are approximately 338% of the Tyndall Centre 6th carbon budget.

37 This latter figure shows that the South East of England road traffic system is set to consume over 3 times the (total, whole economy) Tyndall Centre budget for the region during the 6CB, just a decade away. As this is based on the traffic system, including the scheme, it shows that the applicant’s modelling quite clearly shows that the road traffic system is not projected to be decarbonised anything like as rapidly as it should be if the scheme is built. Note that above I calculated that the annual emissions reductions of the DM and DS scenarios in the 15 years after opening in 2027 are both less than 1%. This very slow emissions reduction rate also shows that the scheme is not contributing to decarbonisation anything like as rapidly as required by the road transport sectoral emissions reduction trajectory.

- 38 Even if the road transport system was decarbonised 3.4 times faster than currently, it would still consume the entire whole economy Tyndall Centre budget for the South East of England. Road transport in South East of England would have to be decarbonised 10 times more rapidly to reach approximately a one third share of the carbon budget, closer to its current share of emissions.
- 39 From this it is clear that the project's GHG emissions when viewed in the context of South East England, including the cumulative land based and road developments which the applicant itself has decided to include in the traffic model, do not make a meaningful contribution to the UK's trajectory towards net zero, and therefore are consistent with the IEMA guidance definition of "Major Adverse"⁴.
- 40 This is consistent with IEMA based significance assessment that is also strongly pointed to when the emissions from construction and operation of the scheme are considered in the context of risk based approach to the delivery and security of the carbon budgets and targets – that is the contextualisations for the M3J9 construction emissions in the 4CB [REP5-031/section 6.5]; and the M3J9 operation emissions in the 6th carbon budget [REP5-031/section 6.6]⁵.

3.3 Science-based budgets (Tyndall) and scientific precision

- 41 I previously placed on record [REP4-043/19] that the legislative targets⁶, based on CCC, are not science-based. Science-based budgets are more rigorous and demanding, and are needed to comply with Paris Agreement⁷. The point is that the Tyndall Centre's "Factor of Two" research paper (see footnote) shows meeting the CCC targets is actually nowhere near enough to have any chance of keeping global average temperature to well under 2°C.

⁴ The IEMA guidance significance criteria for "Major Adverse" is:

"the project's GHG impacts are not mitigated or are only compliant with do-minimum standards set through regulation, and do not provide further reductions required by existing local and national policy for projects of this type. A project with major adverse effects is locking in emissions and does not make a meaningful contribution to the UK's trajectory towards net zero."

⁵ The key test being given at paragraph [REP5-031] 63(B) of that submission which concluded that "the [construction] GHGs [are] most likely contribute to an already large overshoot of the [Industry] sectoral reduction strategy". And its parallel at paragraph [REP5-031] 66(B) that "the [operation] GHGs [are] most likely contribute to an already large overshoot of the [Surface Transport] sectoral reduction strategy".

⁶ under the 2008 Act

⁷ A key issue is the "area under the curve" in the emissions trajectories. The near flat line trajectories in Figure 1 of the CCC 6th Carbon Budget Report "The Sixth Carbon Budget, The UK's path to Net Zero", December 2020, <https://www.theccc.org.uk/wp-content/uploads/2020/12/The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf> are inadequate and are based on policy targets like "Net Zero 2050". Science-based carbon budgets such as those from the Tyndall Centre (research that the UK Department of Business, Energy and Industrial Strategy supported) demonstrate that the area under their curve of their emissions trajectories is consistent with the global carbon budgets from the Intergovernmental Panel on Climate Change (IPCC) where the CCC do not. The Tyndall budgets are consistent with IPCC global carbon budgets of 1.7°C degrees of global heating. This is not 1.5°C because, essentially, there are not enough degrees of freedom in the system to produce budgets consistent with 1.5°C, the lowest end of the Paris target. See more in Tyndall's "Factor of Two" research paper, Kevin Anderson, John F. Broderick & Isak Stoddard (2020) A factor of two: how the mitigation plans of 'climate progressive' nations fall far short of Paris-compliant pathways, Climate Policy, 20:10, 1290-1304, DOI: 10.1080/14693062.2020.1728209.

42 The 1.5°C Paris Agreement target is now almost certainly breached⁸. October 2023 as a whole was 1.7°C warmer than an estimate of the October average for 1850-1900, the designated pre-industrial reference period as reported yesterday by the (EU official) Copernicus Climate Change Service⁹.

43 I also noted in response to ExQ1 6.1.11 [REP2-063] that :

“The precision of the scientific process of evaluating the significance of the emissions is enhanced by using different sources and scales of benchmark for comparison. Scale is important. Carbon emissions may have a global environmental impact, but their effect is quantified for EIA purposes from their source location, in this case the scheme and its study area. Greater precision results from evaluating the impacts over an area which is at a scale closer to the study area source of the emissions. I have calculated on other schemes that the accuracy of the comparison may be increased typically by around 10,000 to 100,000 times (ie four to five orders of magnitude) when absolute cumulative emissions are compared with a benchmark based the transport sector carbon footprint, or budget, over an area such as a local authority area.”

44 In the case of M3J9, the applicant has assessed significance of the GHGs for the 6CB on a percentage benchmark comparison of 0.002%: this is based on a solus enumeration not compliant with the 2017 Regulations. When the percentage benchmark is calculated (1) on the basis of a cumulative enumeration of GHGs, (2) against the entire South East of England (as opposed to whole UK); (3) the Tyndall Centre science-based carbon budgets and (4) corrected for underestimations in the traffic modelling, then the percentage is 338%. The sensitivity factor in this case is 157513 (338/0.002).

⁸ “Many climate experts believe that outcome is inevitable. Global temperatures will climb higher than 1.5 degrees compared with 150 years ago, they say, though often only in private.”, from article Scientific American, Chelsea Harvey, “The World Will Likely Miss 1.5 Degrees C—Why Isn’t Anyone Saying So?”, <https://www.scientificamerican.com/article/the-world-will-likely-miss-1-5-degrees-c-why-isnt-anyone-saying-so/>

⁹ “Copernicus: October 2023 - Exceptional temperature anomalies; 2023 virtually certain to be warmest year on record”, The Copernicus Climate Change Service (C3S) supports society by providing authoritative information about the past, present and future climate in Europe and the rest of the World. According to Samantha Burgess, Deputy Director of the Copernicus Climate Change Service (C3S): “October 2023 has seen exceptional temperature anomalies, following on from four months of global temperature records being obliterated. We can say with near certainty that 2023 will be the warmest year on record, and is currently 1.43°C above the preindustrial average. The sense of urgency for ambitious climate action going into COP28 has never been higher”. From Copernicus website: <https://climate.copernicus.eu/copernicus-october-2023-exceptional-temperature-anomalies-2023-virtually-certain-be-warmest-year>

4 COMMENTS ON RESPONSES TO EXQ3

4.1 Applicant response, Q6.3.1, Carbon Plan(s) (Mitigation)

45 In response to part (i), the applicant provides a list which summarises all its climate mitigation measures. As CEPP have said before none of these measures mitigate operation emissions.

46 At part (ii), the applicant discusses its National Highways Net Zero Highways Plan (“NZHP”). Please note CEPP’s comments on [REP6-028/6.2] on the National Highways Net Zero Highways Plan. In brief, w.r.t. the NZHP:

(a) it is not a statutory document produced for the purpose of aligning the UK economy with the UK Carbon Budgets;

(b) it primarily only addresses carbon emissions from National Highways “own direct emissions” and from “maintenance and construction”;

(c) for emissions from vehicles using National Highways infrastructure, the NZHP itself says the document is merely *setting an ambition* and that “*many of the actions that will deliver this ambition are out of our direct control, but that does not mean we cannot play our part.*” ;

(d) it does not lay out a serious and quantified approach to reducing operational emissions from the UK road system as part of the relevant legislative and policy framework.

47 CEPP submit that the following claims made for the NZHP are false, and do not apply to operation emissions:

- (i) It “*accounts for new emissions resulting from road projects that are proposed*”. No comprehensive quantitative accounting of emissions from new road schemes has been undertaken.
- (ii) “*the carbon reduction trajectories set out within the plan include these new emissions when determining the scale of reductions needed to achieve net zero*” – No comprehensive enumeration of emissions from new road schemes has been undertaken against carbon reduction trajectories.
- (iii) “*This therefore demonstrates that new emissions from the Scheme do not impede on National Highway’s trajectory to net zero*”. No comprehensive enumeration of emissions from new road schemes has been undertaken against carbon reduction trajectories.
- (iv) “*The plan also shows that the construction of individual road schemes does not need to be net zero until 2040 in order for National Highways to meet their*

science-based carbon reduction targets.” No comprehensive enumeration or reasoned argument has been given.

- (v) *“it also sets out how National Highways can influence the reduction of end-road user emissions”. Whilst there might be some truth to this statement, the word “influence” makes it clear that no quantitative risk assessed security has been demonstrated for relevant carbon reduction trajectories, so proving the falsehood on the statements above.*

In summary, the response from the applicant to part (ii) is nothing more than unsubstantiated greenwash. No reliance should be given to the NZHP.

- 48 The same applies to the applicant’s response to part (iii) - no reliance should be given to the NZHP.

4.2 WCC response, Q6.3.1, Carbon Plan(s) (Mitigation)

- 49 In response to part (iv) WCC provide a draft DCO requirement and some narrative describing WCC’s “ask list”. In response to Q6.3.2, the applicant unconstructively refuses to make any additional mitigation measures, unfortunately rendering WCC’s initiative worthless.
- 50 CEPP was concerned, in any case, with this approach, as I have laid out how both the Industry sector (from construction) and the domestic Transport sector (from operation) have large, proposed emission reductions the delivery of which are each heavily risked [REP5-031]/7.2 in response to Q6.2.21. Therefore, mitigation efforts are also heavily risked for bringing the scheme emissions into line with national carbon budgets.
- 51 As said in [REP5-031] *“Time is short. Making up shortfalls such as 228,650,000 tCO₂e for surface transport in the 6th Carbon Budget starting in 2033, just 10 years away is not going to happen easily, nor overnight. When all the risks are considered, including the ones laid out in this submission, it is actually highly unlikely.”*
- 52 An as WCC say in [REP6-036]/Q6.3.9 response *“Reducing transport emissions to a carbon neutral level by 2030 is therefore a key challenge the council is facing. Any project that is working in the opposite direction will present further difficulties in achieving this challenging target.”*
- 53 With the greatest respect to WCC, I suggest that it is time for the Council to fully realise that the M3J9 is going to throw a very big spanner into the works w.r.t. to its Carbon Neutrality Action Plan (CNAP) and any possibility of transport emissions being at a carbon neutral level by 2030. As I said [REP5-031]/84 *“No amount of realistic mitigation or offsetting is going to bring this assessment down to the level of “minor adverse”.*

54 The Council either has to be true to its very commendable development of climate change policy, and that means coming out fully in opposition to the road, or it should own up to failing on its objective to show leadership on climate change.

4.3 Applicant response, Q6.3.2, Mitigation

55 The Applicant claims that additional mitigation measures are not required, and it will not be providing additional mitigation in the form of a Carbon Fund or a hydrogen fuelling hub.

4.4 Applicant response, Q6.3.5, Carbon Budget

56 The applicant refuses to provide any funding in response to WCC for carbon offsetting.

4.5 WCC response, Q6.3.5, Carbon Budget

57 The WCC response is superseded by the applicant's refusal to make the requested funding, see above.

58 With the greatest respect to WCC, CEPP makes the further comments that offsetting is generally a discredited approach to dealing with carbon emissions. CEPP would not support this approach.

59 As above, the Council either has to be true to its very commendable climate change policy development, and that means coming out fully in opposition to the road, or it should own up to failing on its objective to show leadership on climate change.

4.6 Applicant's response, Q6.3.6, Assessment (Tyndall budgets)

60 The applicant's "contextualisation" at Appendix A using Tyndall Centre budgets is riddled with errors, and provides no meaningful contextualisation. It also only provides a solus contextualisation (not a cumulative one). Please see the full section in response to Appendix A elsewhere in this document.

4.7 Applicant's response, Q6.3.7, Climate Change

61 Please see my pre-emptive response to Q6.3.8 at [REP6-028]/7.1 where I already advised the ExA and parties, to save time, that the postponing the ban of new sales of petrol and diesel cars from 2030 to 2035 will not affect the modelling of GHG emissions for the scheme.

4.8 Applicant's response, Q6.3.8, Climate Change

62 Please see my pre-emptive response to Q6.3.8 at [REP6-028]/7.1 where I already advised the ExA and parties, to save time, that the postponing the ban of new sales of petrol and diesel cars from 2030 to 2035 will not affect the modelling of GHG emissions for the scheme.

4.9 Applicant's response, Q6.3.12, Climate Change

63 The question is on the second Net Zero Strategy legal case, and so is the applicant's response.

64 However, the issue of delivery risk, and the lack of any substantive risk assessment to climate change policies, was clear in the first Net Zero Strategy judgment as I laid out at [REP4-043/24-25] including paragraph 249 of the judgment where the judge said that risk of delivery was "obviously material".

65 It follows from this that the delivery of the NZS, now CBDP, is not fully secured.

66 Further the CCC 2023 Progress Report makes it abundantly clear that the delivery of the CBDP is not fully secured when it states:

"The rate of emissions reduction will need to significantly increase for the UK to meet its 2030 NDC and the Sixth Carbon Budget. If the UK is to achieve its NDC, the rate of emissions reduction outside the electricity supply sector must almost quadruple, from 1.2% annual reductions to 4.7%."

67 One of the central concerns of my submissions is that there has been an assumption in recent road DCO decisions that the delivery of NZS, now CBDP, is fully secured when this is quite clearly not the case. For this reason, I have taken considerable care to lay out for the SoS, the decision maker for this DCO, the legal and policy implications of this, as they relate to the approval process for this scheme.

68 As the delivery of the NZS cannot credibly be considered to be fully secured, the public has a legitimate expectation that the SoS will not basing this DCO decision on this assumption.

Having made the step of not relying the decision on this assumption, the SoS must then make his/her own reasoned assessment of the significance of the emissions from the scheme without reliance on the assumption. Recently, SoSs have used the IEMA significance criteria, and referred to the IEMA guidance, to support their assessment.

To assist the SoS, I have also laid out considerable information on indicative approaches to making this significance assessment in the absence of the security of NZS policy delivery. In [REP4-043], I laid this out in terms of "is there any emissions space available for a project such as M3 Junction 9", and in REP5-031, I formalised this with consideration of the CCC 2023 Progress Report risk data on "secured" and "to be secured" emissions for the relevant sector residual emission trajectories.

69 I have emphasised (1) that the sector residual emission trajectories are not hard targets but do provide immensely valuable contextual information. And (2) that I am providing an indicative approach and it should not be interpreted that I am claiming it is the only

approach. The issue is for the applicant, and failing that for the SoS, to find the right, lawful approach.

- 70 What is clear is that the assumption that the delivery of NZS, now CBDP, is fully secured is no longer credible. The applicant continues to provide information and responses on that basis. The applicant continues to assess the scheme as “Minor Adverse” and has not engaged in the issues around the highly risked status of the NZS/CBDP.
- 71 The question asks “whether this changes your position” w.r.t to second Net Zero Strategy legal case. However, as described above a judgment on the second NZS case is not needed, to make it necessary for the applicant to change from continuing to assess the scheme as “Minor Adverse” on the basis that the NZS/CBDP is fully secured, when it clearly is not from the first NZS legal case and the 2023 CCC Progress Report.
- 72 When I engage the issue of the highly risked status of the NZS/CBDP, I have found that the contextualisation which I have given leads to the conclusion that the significance assessment for the M3J9 must be “Major Adverse”.

4.10 Applicant’s response, Q6.3.13, Assessment

- 73 The degree of weight to be attached to the findings of the Climate Change Committee is a matter for the decision maker.
- 74 The CCC 2023 report discusses many things as expert advisors to the Government on Climate Change. These include: the risks to the delivery of the UK 2030 NDC; the 4th, 5th and 6th carbon budgets, and the 2050 Net Zero target. These risks are assessed at the sectoral level as well as the economy wide level. The UK 2030 NDC is an international obligation of the UK – it relates to Planning Act 2008 s104(4). The 4th, 5th and 6th carbon budgets are legal requirements set under the Climate Change Act – they relate to Planning Act 2008 s104(5) and Planning Act 2008 s104(6).
- 75 CEPP submit that the applicant is not correct to submit that “limited weight should be given to the progress report”. Further, it would be most unusual, and challengeable, for a Secretary of State to give limited weight to the findings of the Government’s own expert advisors.

4.11 Applicant’s response, Q6.3.14, Assessment

- 76 The Applicant ignores the issue here which is that the LGVs and HGVs are not subject to variable demand modelling.
- 77 Instead, the Applicant makes two obvious points which are entirely what would be expected, and are not in dispute:

(A) demand is consistent between the Do Minimum (without Scheme) and Do Something (with Scheme); and

(B) HGV and LGV travel demand is subject to rerouting within the traffic assignment models.

- 78 The applicant says that “*the level of HGV and LGV demand is informed by the Department for Transport (DfT) regional Road Traffic Forecasts for goods transport*”. However, the case for the scheme states “*projected development of the region’s ports is anticipated to substantially increase heavy goods vehicle (HGV) movements and as demand for freight grows*” under “Need and Scheme objectives” [REP1-019/9.2.2]. This would appear to be growth beyond the RFT forecasts.
- 79 The Applicant has also failed to assess induced HGV traffic. This is especially unacceptable as the Applicant has justified the scheme (in the Case for the Scheme) on projected growth in strategic freight from the ports.
- 80 The Applicant has therefore only included and considered the ‘benefits’ of increasing HGV traffic along the route, but has not assessed, quantified or costed the harms of encouraging and increasing HGV traffic along the route.
- 81 In claiming to have followed TAG guidance, the applicant tries to shift the problem. However, even if the TAG guidance has been followed with LGVs and HGVs not being subject to variable demand modelling, then the TAG guidance is wrong and responsible for the appraisal error of including increases in LGVs and HGVs as benefits of the scheme whilst not for costing the harms of these increases.

4.12 Applicant’s response, Q6.3.15, Assessment

- 82 I think the applicant means Q6.3.6 and Appendix A in “contextualisation using other net zero trajectories in ExAQ3 6.1.6 in this document” and is referring to its Tyndall Centre “contextualisation”. I have addressed this in a special section.
- 83 On the REP4-037 “Appendix A – (Carbon Budget Delivery Plan)”, please see my comment at [REP5-031/section 6]. The applicant’s “contextualisation” assumes that climate policy is 100% secured. Since the IEMA guidance was published, vital new knowledge has emerged of the risk assessment of the NZS/CBDP. The materiality of this has appeared in the first NZS legal case judgment, and then in the publicly assessable detail of the CCC 2023 Progress Report. IEMA at Table 1 refers to “Sectoral budgets or reduction strategies”, and the point which I am making is that, following the first NZS case and the 2023 CCC Progress Report, *sectoral reduction strategies* now must also include risk assessment of the policies and proposals within them.
- 84 The SoS, in making his/her decision, must refer to the latest information at the time of the decision. I have endeavoured to put the relevant information before the examination to assist with this. In claiming the IEMA doesn’t “reference the risk of delivery” is just harking back to the February 2022 world when the IEMA guidance was published – a lame excuse.

85 With reference to ExAQ2 6.2.17, please see my response to the applicant at [REP6-028/6.4].

86 Finally, the Applicant assists my position in stating “*Given this, it would seem prudent for the Secretary of State to expressly address delivery risk of the sectoral reduction strategies in any decision.*” This is precisely what I have been advocating, and it is encouraging that the applicant submits this.

4.13 Applicant’s response, Q6.3.16, Assessment

87 Please see response above to Q6.3.15.

4.14 Applicant’s response, Q6.3.17, Assessment

88 Please see response above to Q6.3.15, and my response to the applicant at [REP6-028/6.4] on ExAQ2 6.2.17.

4.15 Applicant’s response, Q6.3.18, Assessment

89 Please see response above to Q6.3.15, and my response to the applicant at [REP6-028/6.4] on ExAQ2 6.2.17.

90 On “*This is that the difficulties in meeting carbon budgets, or in this case, the relative risk of the CBDP is matter for the Secretary of State to take into account. The Applicant maintains that it is not for individual applicants to second-guess the deliverability of government policy.*” Please see [REP6-028/68(K)] where I agree this is a matter for the SoS and is why I have from the outset respectfully emphasised issues in my submissions for the Secretary of State’s attention.

91 On “*this is an opinion of CEPP, not a legal requirement*” under “Breach of statutory duty”, please see [REP6-028/71] where I submit that section 104 Planning Act 2008 has to engage for the M3J9 because:

(A) the current data before the SoS shows that there is a realistic and serious possibility that approval of the Scheme would lead to a breach of its international obligations, breach of any statutory duty or be unlawful. This current data comprises the entirety of Environmental Statement, my evidence, and the evidence of other parties. The potential breaches have been identified in my data in terms of the risk assessed sector residual emissions trajectories and whether the construction and operation emissions are possible under the current situation as revealed by the CCC 2023 Progress Report (and the Government’s own Risk Tables). This gives a “full a picture as possible” of the situation, and the SoS is not being expected to look elsewhere. The SoS is being asked to reach a

reasoned conclusion on that data. The point is that the SoS, under Regulation 21 must examine the environmental information provided to the examination in full.

(B) the SoS has no risk assessment information currently before him/her that would demonstrate that such a breach is not certain.

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