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Examination Principle Issues	<ul style="list-style-type: none"> • Climate Change • Scope of Development and Environmental Impact Assessment • Benefit cost ratio (BCR) and case for scheme

DEADLINE D11 SUBMISSION

I am an independent scientist and environmental consultant, working at the intersection of science, policy, and law, particularly relating to ecology and climate change. I work as a consultancy called Climate Emergency Policy and Planning (CEPP).

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 INTRODUCTION

1.1 Deadline 11 (D11)

- 1 This is my submission for Deadline 11 which responds to “9.84 Applicant's Comments on Deadline 9 Submissions [REP10-010].
- 2 The applicant relies upon the recent decision letter by the SoS on M54-M6 scheme (decision letter referred to here as M54-M6-DL) and draws comparisons to the A57 scheme. Therefore, it is necessary to comment on that decision. I previously made some initial comments on the M54-M6-DL at Deadline 10 [A57/REP10-011].

I extend the analysis here. I apologise for some repetition, but consider it is helpful to lay out matters in full. However, to ease this, I have summarised the arguments in section 2 and provide an Appendix with more detail. Section 2 hopefully provides a high-level list of the matters of concern with the M54-M6-DL.

- 3 As background to commenting on M54-M6-DL, I previously provided in A57/REP10-011 background on the current legal challenge to the Government, now with permission to proceed to a full Judicial Review hearing, against the Net Zero Strategy, and outlined a number of propositions which occur in the Applicant’s submissions to the examination. I have summarised this issue in the next bullet.
- 4 The applicant relies upon the contention that because various national climate change policy documents and targets exist, it is guaranteed that the Government will meet its carbon reduction targets and targets set within them, and consequentially, the scheme will not have a material impact on the ability of the Government to meet its carbon reduction targets. This proposition is false on both counts (ie the general principle and its specific application to the scheme), although it is widely applied by the applicant, including with reference to the Net Zero Strategy (NZS), the Transport Decarbonisation Plan (TDP) and the UK’s National Determined Contribution (NDC) and international obligation under the Paris Agreement. The applicant’s statements with respect to the significance of the carbon emissions associated with the scheme and their material impacts on meeting Government’s carbon reduction targets relating to NN NPS 5.17 and 5.18 need to be re-examined in the context of this falsehood

1.2 Timings in the late stages of the examination

- 5 I noted at A57/REP10-011/6.1 that the applicant, in REP9-029 (and the remainder of their previous evidence), is in denial about there being no cumulative carbon assessment in the Environmental Statement.
- 6 I highlight the same below in the applicant's response in REP10-010.
- 7 I note the ExA's WQ3/8.1 requests "a detailed response to the climate change matters raised" by myself and several IPs. I hope that this will be forthcoming.
- 8 However, if the applicant's response does not address the issues with full engagement to structured and in-depth arguments from myself and other parties, then I can only conclude that the applicant cannot answer the points.
- 9 Further should a last-minute response be provided at Deadline 12, on the close of the examination, then such an approach would be prejudicial to myself and IPs who would be precluded a chance to comment on such a submission.

2 DECISION LETTER ON M54-M6 SCHEME

- 10 On 21 April 2022, the Secretary of State for Transport (SoST) issued a decision on the M54 to M6 Link Road (decision letter referred to here as M54-M6-DL). My concerns as to how this relates to the A57 scheme, and any reliance made of it by the applicant for the A57 schemes, is summarised below: each bullet corresponds to an expanded version in Appendix A.
- 11 M54-M6-DL/31 incorrectly relies upon the inevitable success of the NZS (and TDP). Given the on-going NZS judicial review, it is premature for weight to be given to any claims based on the notion that the NZS will inevitably succeed in securing the Government's carbon emissions reduction targets (see Appendix A/5.1).
- 12 Similarly, M54-M6-DL/37 incorrectly relies upon the inevitable success of meeting the UK NDC (which itself depends upon the success of the NZS). Again it is premature for weight to be given to any claims based on the notion that the NDC will inevitably succeed, and the UK will deliver its international obligations (see Appendix A/5.2).
- 13 Negative weight was given to increasing carbon emissions in the planning balance (M54-M6-DL/54); however, this was "offset" by the assertion that the Government could still meet their carbon reduction targets (ie under NN NPS 5.18). However, as above, it is premature to rely on this assertion (see Appendix A/5.3).
- 14 The UK Government is a drafter and signatory to the policy statements associated with each of the recent Intergovernmental Panel on Climate Change (IPCC) 6th Assessment (AR6) reports. M54-M6-DL does not reflect the urgency to deal with climate change, as laid out in

this report despite the Government being a signatory to the science summarised in the policy reports (see Appendix A/5.4).

15 M54-M6-DL/32-35 discusses the IEMA guidance. It selectively quotes from it, and does not follow it, especially on local/regional assessment and cumulative assessment (see section 3.4, and Appendix A/5.5).

16 The applicant has not followed the DMRB LA 104 on cumulative carbon assessment on the A57 scheme, and therefore M54-M6-DL/40 cannot be relied upon (see Appendix A/5.7).

17 The applicant relies upon the false “inherently cumulative” notion, and the applicant has not produced a cumulative carbon emissions assessment on the A57 scheme, and cannot rely upon M54-M6-DL/42-43 (see Appendix A/5.8).

18 As above, the applicant has not provided a cumulative carbon assessment in the A57 application. M54-M6-DL/45,47-48 cannot be relied upon within the recommendation for the decision making on the A57 scheme (see Appendix A/5.9).

3 APPLICANT’S RESPONSE TO CEPP IN REP10-010

3.1 *National_Highways/REP10-010/7.1-7.4.1 – no response required*

3.2 *National_Highways/REP10-010/7.4.2 – data source*

19 The applicant has correctly identified the source of the data which I reproduced in a table at A57/REP9-038/10.

3.3 *National_Highways/REP10-010/7.4.3 – changes to legal and policy framework*

20 The applicant claims that it cannot fully revise an Environmental Statement “at every point that there is a change to the legal and policy framework”.

21 This proposition is arguable in some cases. However, it is not a general principle applicable in all cases. In the case of climate change legislation since 2019, there has been huge, very significant changes, and a proportionate approach would be to reassess against the large changes in legal and policy framework. A57/REP10-011/13 laid out there has been a doubling of UK ambition on the rate of carbon reduction, and that a number of new binding targets have been introduced to law. These cannot simply be dismissed as small, or relatively inconsequential changes. These amount to a shift in the tectonic plates of climate legislation in the UK.

22 As stated in A57/REP10-011/13, the applicant has not renewed its concept of what compliance with the NN NPS means in response to this shift of tectonic plates, and the new climate targets since 2019.

23 The applicant states that upgrading the Emissions Factor Toolkit (EFT) version is a proportionate response. In its essence, the EFT is just a software library which is continually updated, and has been for many years (the clue is in the version number v11). Whilst EFT v11 includes some recent policy impacts including on electrification, keeping up with regular software library updates is not the same as a thorough reconsideration of the compliance with carbon targets and significance of carbon emissions from the scheme under the NN NPS.

24 The applicant claims “to provide projections indicative of the Net Zero Strategy (NZS) / Transport Decarbonisation Plan (TDP) delivery pathway”. It is still not clear what the applicant is doing in the so called TDP Sensitivity test, however the applicant’s response at REP9-027/8.14.3/4 states:

“The TDP sensitivity test carbon emissions have been calculated by factoring the carbon emissions calculated based on Defra EFT v11 to reflect the rate of improvement in emissions shown in Figure 2 of the TDP. A factor is ‘‘applied’ to the carbon emissions calculated based on Defra EFT v11 for each year.”

This appears to mean that the carbon emissions calculated based on Defra EFT v11 are simply multiplied by idealised factors (one for upper bound and one for lower bound) based upon TDP Figure 2. The assumption behind this must be proposition 3 [A57/REP10-011/9]: the “overarching assertion of TDP success”. The logic is the TDP must succeed because the document has been published, and therefore the carbon emissions in the TDP upper bound and lower bound figures for the A57 scheme must also be delivered. With respect, this is clearly false as discussed in A57/REP10-011, and therefore this is not a proportionate approach to responding to recent legal and policy framework changes.

25 Further in being led by the science, the applicant is ignoring the recent IPCC policy reports, signed by the UK Government, which make a clear and unanimous case for very urgent action on Climate Change actioned the immediate and rapid reduction in carbon emissions (see Appendix A/5.4). The proportionate response would be to review the Environmental statement against the updated science and the legislative and policy changes.

26 The applicant incorrectly relies upon the recent M6-M54 decision for the reasons given in section 2 and Appendix A.

3.4 National_Highways/REP10-010/7.4.4 – IEMA guidance

27 I have previously laid how the applicant selectively quotes the IEMA guidance. This is another case in point.

28 The applicant claims that the scenarios used in its assessment of carbon aligns with IEMA guidance page 31 “What should be included when reporting on GHG emissions within an ES chapter”. This page lists five steps including “net emissions” and “significance”.

29 Page 21 of the guidance has a section on “Cumulative GHG emissions”, and “Net emissions” on page 31 has to be understood in that context. For example, page 21 says “Effects of GHG

*emissions from specific cumulative projects therefore in general should not be individually assessed, as there is no basis for selecting any particular (or more than one) cumulative project that has GHG emissions for assessment over any other". Individual, or solus, is precisely what the applicant has done, and is **only** what it is has done [A57/REP8-029/section 7].*

30 Page 21 also states “Where the contextualisation is geographically – or sector-bounded (e.g. involves contextualising emissions within a local authority scale carbon budget, or a sector level net zero carbon roadmap), then the consideration of cumulative contributions to that context will be within that boundary.” The applicant has constructed a traffic model where the cumulative presence of land-based and road developments is represented within the study area ‘boundary’ (this is not disputed, A57/REP8-029/49); however, it has **not** quantified, **nor** assessed the cumulative impacts on greenhouse gas emissions of these traffic model elements (A57/REP8-029/section 7). **The applicant has not followed IEMA guidance, nor EIA guidance, on cumulative assessment of carbon emissions.**

31 On “significance”, at Appendix A/5.5, that the concept of “significance” can only be understood in terms of securing the delivery of the NZS, TDP and NDC. We are near to the limit of carbon emissions which may be generated (the “remaining global carbon budget” in the scientific jargon), as the IEMA guidance states. Every gram of CO2 emitted is significant. However, the significance becomes very great in the current situation of an absence of a clear and demonstrated route to securing delivery of policy for net-zero. That is the case now, as evidenced by the legal action against the NZS.

32 I contest the idea that the application is in line with the IEMA guidance page 31 “What should be included when reporting on GHG emissions within an ES chapter”, and especially for the bullets on page 31 for “net emissions” and “significance”.

3.5 *National_Highways/REP10-010/7.4.5 – graphical representations of emissions reductions*

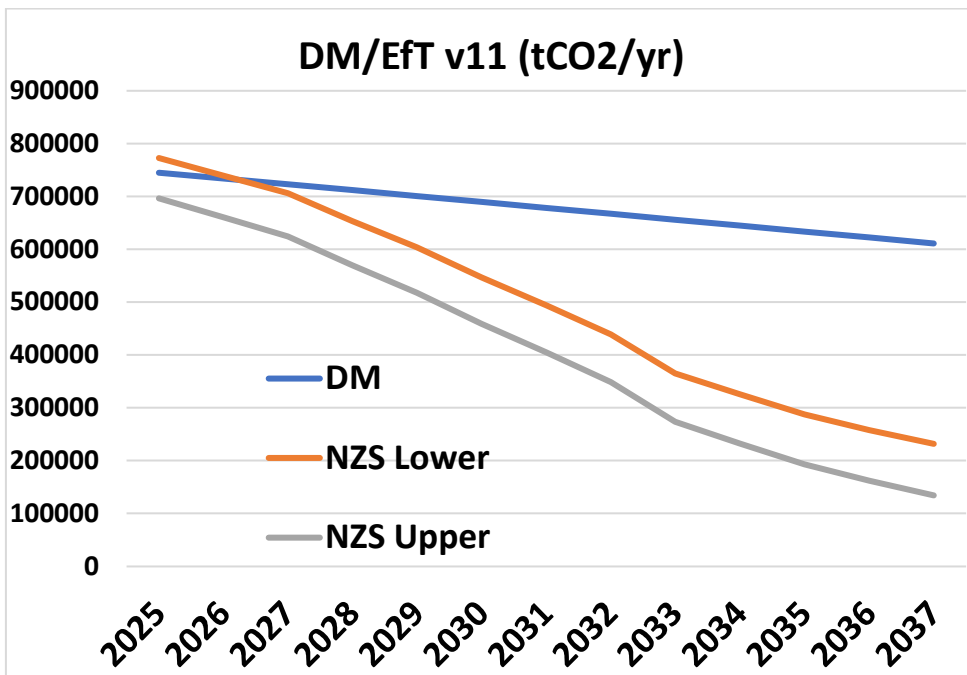
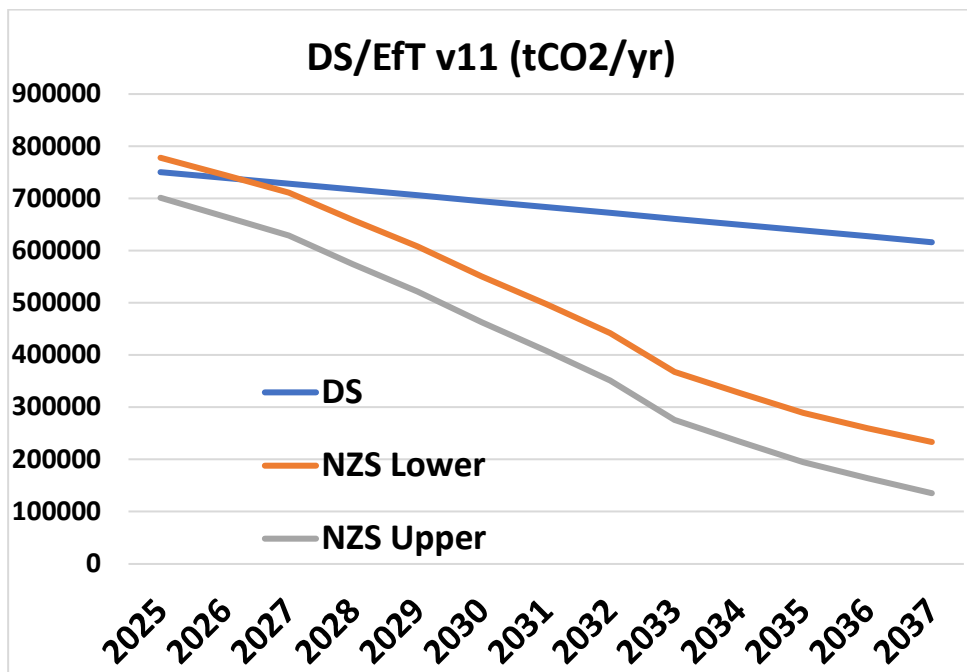
33 The provision by the applicant of year-on-year carbon emissions quantities for the 60-year appraisal period for the DS and DM models, when run with EfT v11, at REP9-027 Appendix A, is helpful. It is now possible to draw the graphs that I had intended at D9, and these are shown below.

34 This is based as before on the assumption that the traffic model study area represents a proxy for a notional local and regional area¹. For an indicative sense of this approach², the graphs below are presented with assumptions in the footnotes³

¹This would not be the same as the full transport carbon budget for the relevant local authority as the traffic model is configured to include only those network links of most interest. And the study area may also extend beyond the relevant local authorities out into the Strategic Road Network. However, working with this assumption it provides an image of the transport network in the local and regional area which provides a self-scaling model for further carbon budget and target assessment.

² Third possible approach to local/regional assessment as in A57/REP9-038/29.

³ The 2025 opening year data for each graph (ie DS and DM) is taken as the central point for 2025 in the NZS trajectory. The NZS upper and lower bound figures corresponding to the 2025 figure are also calculated, scaled to tCO2, and projected to 2037 using the spreadsheet on the NZS webpage.



35 The first observation is that neither of these views of the EfT v11 traffic model (ie DS or DM) remotely aligns with the NZS delivery pathway for the transport sector. The applicant’s

This essentially provides scaled projections for the data (DS or DM) and the NZS calculated on the basis of the study area as a local/regional area, normalised to 2025.

response to this has been to multiply the data by an idealised factor, each year, to make the curve fit (see my response above on the so called TDP Sensitivity test, and the applicant's response at REP9-027/8.14.3/4). As above, this is just the numerical application of proposition 3 [A57/REP10-011/9]: the “overarching assertion of TDP success” to the data: it aligns more with a mystical belief than with any evidence that it can be delivered.

The first DS/EfT v11 graph above (blue curve = DS) indicates that transport carbon emissions in the study area will not reduce to 2037 in line with the NZS. In fact, they are very misaligned with the NZS. Where TDP policies are successful, the blue line will move towards the orange and grey upper/lower NZS lines, but as there is no carbon quantification of TDP policies, nor data supporting that they are designed to secure their emission reduction objectives, it is impossible to make any claim about how much the blue will move towards the orange and grey lines.

36 The second observation is that this is true also for the DM/EfT v11 graph above (blue curve = DM). This indicates that transport carbon emissions in the study area will not reduce to 2037 in line with the NZS without the scheme either.

37 Together these observations, indicate that only a sustainable package implemented without the current scheme in place ('do-something-else'), that is designed to secure the required policy objectives, would have the potential to provide the required policy delivery mechanisms as I, and other IPs, suggest in the joint letter at A57/REP10-017.

3.6 *National_Highways/REP10-010/7.4.6 – electrification*

38 Whilst electrification may not be fully represented in EfT v11, the applicant again implies that they can fit the NZS trajectory by the application of the TDP factors to the data. As stated above, in doing this they are relying of proposition 3 that the TDP will inevitably be fully delivered: however, no evidence has been provided to support this proposition, and the NZS is being legally challenged on the same point (proposition 1).

3.7 *National_Highways/REP10-010/7.4.7 – electrification*

39 The comments at the previous bullet apply to the first sentence. On the second sentence, the year-on-year reduction in absolute carbon emissions is plotted above in the DS/EfT v11 graph above (blue curve = DS). This suggests that increasing electrification only outweighs carbon emission increases due to traffic growth between 2025 and 2040⁴ very slightly. The applicant acknowledges carbon emissions increases due to traffic growth, but the DS data provided is nowhere close to NZS alignment. I have discussed above, to fit a NZS trajectory, the applicant has to rely on proposition 3 that the TDP will inevitably be fully delivered, and no evidence has been provided to support this proposition.

⁴ Graph only to 2037

3.8 National_Highways/REP10-010 - cumulative assessment not addressed

40 A general point on the applicant's response is that they have not yet addressed bullets 47-96 of A57/REP8-029. This was noted at A57/REP10-011/6.1. I note here that the crux of the matter as to whether the environmental statement includes a quantification and assessment of the cumulative carbon emissions of the scheme which is compliant with the EIA Regulations has still not been addressed by the applicant in REP10-010 either.

4 CONCLUSIONS

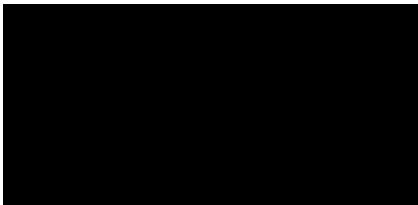
41 Even at this late stage, the applicant has not provided a cumulative carbon assessment which is compliant with the EIA Regulations.

42 The absolute emissions from the scheme either as DS or DM do not comply with the NZS trajectory.

43 No attempt to comply with the IEMA guidance in assessing carbon emissions over the local/regional level, and against local policy has been made.

44 The Environmental Statement is inadequate, and the SoST cannot 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, and that it meets legal, guidance and policy requirements.

45 The application should not be consented.



Dr Andrew Boswell,
Climate Emergency Policy and Planning, May 11th, 2022

5 APPENDIX A: DECISION LETTER ON M54-M6 SCHEME

46 I now make some further preliminary comments, without prejudice.

47 I start by highlighting areas where the M54-M6-DL makes reliance of the propositions 1-6 which are unevidenced, and under legal challenge, as I have previously explained [A57/REP10-011/2.1-2.5]. This will lay out some markers for the implications for the current Examination into the A57 Missing Link.

48 The propositions have been explained in A57/REP10-011.

5.1 *Incorrect reliance on the inevitable success of the TDP and the NZS (Propositions 1, 2, 3, and 4)*

49 At M54-M6-DL/31, the Secretary of State declares the “*background*” against which the Secretary of State has considered the Proposed Development:

“The Secretary of State considers that the majority of operational emissions related to the scheme result from vehicle usage and that the Transport Decarbonisation Plan includes a range of non-planning policies which will help to reduce carbon emissions over the transport network as a whole over time (including polices to decarbonise vehicles and radically reduce vehicle emissions) and help to ensure that carbon reduction commitments are met. Beyond transport, Government’s wider policies around net zero such as ‘The Net Zero Strategy: Build Back Greener’ (“Net Zero Strategy”), published by Government in October 2021 sets out policies and proposals for decarbonising all sectors of the UK economy to meet the net zero target by 2050. It is against this background that the Secretary of State has considered the Proposed Development.” (underline emphasis added)

50 It is clear from this statement, the SoS is predicating his decision on the basis of both overarching assertion and subsidiary assertion of success for both the TDP and NZS. However, it remains to be tested in Court whether the overarching assertion for NZS success is legitimate. It is, therefore, premature, and not legitimate, to predicate the decision on these assertions.

51 If the overarching assertion for NZS success is not legitimate, then the overarching assertion for the TDP success cannot be legitimate either. And the subsidiary scheme-specific assertions for the NZS and TDP are also not legitimate as a consequence.

52 It would also be premature for the ExA in its recommendations to the SoS to make any reliance on overarching or subsidiary assertions of success for the NZS and TDP on the A57 scheme.

5.2 *Incorrect reliance on the inevitable success of meeting the UK NDC (Propositions 5 and 6)*

53 At M54-M6-DL/37, the Secretary of State extends the overarching assertion of NZS success to an assertion of inevitable success in the UK meeting its NDC target of 68% carbon emissions reduction by 2030 compared to 1990:

“With regard to the Paris Agreement, the UK announced its Nationally Determined Contribution (“NDC”) in December 2020. NDCs are commitments made by the Parties (including the UK) under the Paris Agreement. Each Party’s NDC shows how it intends to reduce its greenhouse gas emissions to meet the temperature goal of the Paris Agreement. The UK’s NDC commits it to reduce net GHG emissions by at least 68% by 2030 compared to 1990. This represents an increase of ambition on the fifth carbon budget, which covers the period 2028-2032. The Net Zero Strategy: Build Back Greener, published by Government in October 2021, sets out how the UK will therefore need to overachieve on the fifth carbon budget to meet its international climate targets and stay on track for the sixth carbon budget. This strategy sets out the action Government will take to keep the UK on track for meeting the UK’s carbon budgets and 2030 NDC and establishes the UK’s longer-term pathway towards net zero by 2050. The Secretary of State is content that consenting the Proposed Development will not impact on the delivery of this strategy and will not lead to a breach of the UK’s international obligations in relation to the Paris Agreement or any domestic enactments or duties.” (emphasis added)

As the assertion of the inevitable success in the UK meeting its NDC target of 68% carbon emissions reduction by 2030 compared to 1990 is based upon the overarching assertion of NZS success, which is incorrect, the conclusions in M54-M6-DL paragraph 37 are also premature, and are also incorrect. **From the evidence that the Government has made available, it is clear that the delivery of the NZS is not secured, and therefore, neither is the delivery of the NDC secured.**

54 Further, the bolded statements “stay on track” and “keep the UK on track” are perplexing as they do not agree with the assessment of the Government’s advisors the Climate Change Committee who have advised that the UK is “off track” for meeting the 4th, 5th and 6th carbon budgets (see A57/REP10-011/Appendix D).

55 If the applicant wishes to refer to the NDC at some stage, it would be premature, and incorrect to assume (Propositions 5 and 6) that it can, inevitably, be delivered. There is no evidence that the NZS has been designed to secure its objectives, and the security of delivering the NDC is therefore compromised.

5.3 Negative weight for increasing carbon emissions in the planning balance

56 M54-M6-DL/54 states:

“Given that the scheme will increase carbon emissions, it is given negative weight in the planning balance. However, the Secretary of State considers that weight also needs to be given to the Transport Decarbonisation Plan that will mean operational

emissions reduce over time and that in relation to climate change adaptation the Proposed Development attracts positive weight in the planning balance.

57 However, there are a number of issues with this, and the applicant should not rely upon it for the A57 scheme. First, as above the SoS has already declared at M54-M6-DL/31, the background for the decision, and as in the previous section, the SoS is assuming the overarching and subsidiary assertions of success for the NZS, TDP and NDC (ie: Propositions 1-6). These assertions are not legitimate.

Second, the SoS then claims that weight needs to be given to the TDP. However, in terms of meeting national carbon budgets and targets, the Government have not demonstrated the overarching assertion of success for the TDP or NZS. Therefore, no weight can be given to the TDP against the negative impact of increasing emissions.

Third, the SoS claims positive weight should be given to climate adaptation. However, greenhouse gas emissions and the vulnerability of the project to climate change are specified as two distinct environmental factors, or receptors in the EIA Regulations (eg: see EIA Regulation Schedule 4 (4) and Schedule 4 (5)(f)). Therefore they are not transmutable environmental factors.

The seriousness of the negative weight of increasing carbon emissions can only be balanced against full security in delivering the carbon budgets and targets. To understand the full impacts of the scheme’s carbon emissions is not a luxury, it is an absolute necessity. This full knowledge and appraisal are required not only by the law, but also by the global scientific evidence as endorsed by the UK Government as below, by the precautionary principle, and by the principle of sustainability.

However, neither the NZS or TDP has been quantitatively demonstrated to be designed to secure the carbon budgets and targets. Failure to meet carbon budgets and targets cannot be balanced by the notion, even if true, that the particular scheme may be slightly more robust against the physical impacts of climate change.

58 For the A57 scheme, the result of this is that the scheme will increase emissions, and this has negative weight in the planning balance. There is currently no legitimate way to demonstrate positive planning weight for carbon emissions.

5.4 The necessity of being led by the science

59 The sub-section is included for context on the previous section on the negative for increasing carbon emissions in the planning balance on the M54-M6-DL/54 which is also reproduced on the A57 scheme, and, as above, cannot be “offset” in the way M54-M6-DL/54 claims.

60 It is important to understand that the full knowledge and appraisal of carbon emissions for the A57 scheme must be “led by the Science” *as the global scientific evidence on Climate Change is endorsed by the UK Government.* As background, the Intergovernmental Panel on Climate Change (IPCC) has published three recent reports (all part of its 6th Assessment

Report, AR6): the UK Government is a drafter and signatory to the policy statements associated with each of these reports⁵. These form the latest scientific knowledge on Climate Change, represent a massive scientific endeavour, and are underwritten for their policy implications by our own government.

61 The implications of this scientific consensus extend to all levels of government and administration in the UK having been authorised by our national Government. As has been widely reported, the IPCC reports make a clear and unanimous case for very urgent action on Climate Change actioned the immediate and rapid reduction in carbon emissions – not over decades, but over years in the very near future (45% cuts by 2030⁶).

62 On April 4th 2022, Professor Jim Skea, OBE, CBE from Imperial College, London and Co-Chair of IPCC Working Group III said on the release of the latest report “*It’s now or never, if we want to limit global warming to 1.5°C (2.7°F); without immediate and deep emissions reductions across all sectors, it will be impossible*”. This means starting serious, evidence-based decarbonisation now in 2022 – not next year, nor the next, nor 2025, **but now**. The Application is not consistent with what the scientific consensus requires, as underwritten by our own Government. This would be especially true if it was considered that increases in carbon emissions this decade from the A57 scheme can somehow be offset in the planning balance against policy documents which have not been designed to secure their objectives (ie: the NZS and TDP).

5.5 IEMA guidance

63 M54-M6-DL/32-35 discuss the latest IEMA guidance. There are a number of issues.

64 The SoS selectively quotes IEMA. The IEMA guidance at section 6.4 on “Contextualising a project’s carbon footprint” has been ignored. As I describe at A57/REP9-038/2.3, IEMA say 1) assessment of a project’s carbon emissions against the carbon budget for the entire UK economy **is only a starting point of limited value** in the EIA process 2) local policies and budgets and targets should be used. This latter point is also in line with the EIA guidance (which itself is material guidance to the NN NPS as the NN NPS invokes the EIA Regulations) [A57/REP2-064/4.1].

The SoS decision at M54-M6-DL does not identify that local and regional assessment of carbon emissions has not been done, and therefore that the Application for that scheme is not consistent with the IEMA guidance, nor the EIA guidance.

⁵ The three latest Summaries for Policymakers are: August 2021 “Climate Change 2021: The Physical Science Basis”, https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM_final.pdf; February 2022 “Climate Change 2022: Impacts, Adaptation and Vulnerability”, https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_SummaryForPolicymakers.pdf; April 2022 “Climate Change 2022: Mitigation of Climate Change”, https://report.ipcc.ch/ar6wg3/pdf/IPCC_AR6_WGIII_SummaryForPolicymakers.pdf. Professor Skea is quoted from UN Press Release, “UN climate report: It’s ‘now or never’ to limit global warming to 1.5 degrees”, 4th April 2022, <https://news.un.org/en/story/2022/04/1115452>

⁶ “Global net human-caused emissions of carbon dioxide (CO2) would need to fall by about 45 percent from 2010 levels by 2030, reaching ‘net zero’ around 2050”, Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C, 2018, [REDACTED]

65 M54-M6-DL/33 correctly quotes the IEMA guidance with respect to “significance” that “*that GHG emissions have a combined environmental effect that is approaching a scientifically defined environmental limit and as such any GHG emission or reductions in these might be considered significant.*” However, the SoS then does not take the logical step that this statement from IEMA implies that securing the delivery of the NZS, TDP and NDC are vital. Simply we are near to the limit of carbon emissions which may be generated (the “remaining global carbon budget” in the scientific jargon). Instead the SoS assumes propositions 1-6, and therefore concludes that GHG emissions from the project are not significant. However, as propositions 1 -6 are false, the conclusion cannot depend upon them and is also false.

66 For the A57 scheme, it would be premature and incorrect for the applicant to use M54-M6-DL/32-35 to support claims such as:

- that comparisons of carbon emissions made solely against UK carbon budgets in line with the NSPNN, and consistent with the IEMA guidance;
- that any assessment made on such a singular comparison is legitimate to conclude that the carbon emissions from the A57 scheme will not have a material impact on the ability of Government to meet its legally binding carbon reduction targets.

5.6 Overview - the (non) Assessment of Cumulative of GHG emissions from the A57 scheme

67 First, it is important to note that I have shown in detail in REP8-029/section 7 that no cumulative carbon assessment has been made, and that the solus carbon assessment is based upon the wrong quantification which is an underestimate of the emissions. I have shown that the notion that the assessment made by the applicant is cumulative because the traffic model is “inherently cumulative” is false.

68 The applicant must provide a meaningful response to bullets 47-96, which cover the substance of my response in REP8-029 on there being no cumulative carbon assessment by the applicant. Crucially, the applicant must respond to sections 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7 and 7.8 which relate to whether the environmental statement includes a quantification and assessment of the cumulative carbon emissions of the scheme which is compliant with the EIA Regulations.

69 The applicant may be tempted to draw a comparison between the A57 and the M54-M6 applications, and claim that M54-M6-DL/39-51 would provide support. I lay out below why this would be an incorrect comparison.

5.7 The applicant does not follow the DMRB

70 At M54-M6-DL/40, the SoS says “*the Secretary of State notes the Applicant’s responses set out that the assessment of cumulative impacts of the scheme on climate was undertaken in line with DMRB guidance*”.

71 DMRB LA 104 is clear how cumulative assessment should be done. First it provides a definition of “cumulative effects” on page 7:

“Impacts that result from incremental changes caused by other present or reasonably foreseeable actions together with the project.

NOTE: For the purposes of this guidance, a cumulative impact can arise as the result of:

- a) the combined impact of a number of different environmental factors specific impacts from a single project on a single receptor/resource; and/or*
- b) **the combined impact of a number of different projects** within the vicinity (in combination with the environmental impact assessment project) on a single receptor/resource.” (emphasis added)*

72 The receptor in question here is greenhouse gas emissions under EIA Regulations Schedule 4.

73 Then under the “Cumulative effects” section of DMRB LA 104:

3.19 EIAs must include cumulative effects in accordance with the requirements of the EIA Directive 2014/52/EU [Ref 1.N].

3.20 Non-statutory environmental assessments shall include cumulative effects.

3.21 Environmental assessments shall assess cumulative effects which include those from:

- 1) a single project (e.g. numerous different effects impacting a single receptor); and*
- 2) **different projects (together with the project being assessed).***

3.21.1 Cumulative effects should be assessed when the conclusions of individual environmental factor assessments have been reached and reported.

*3.21.2 **The assessment of cumulative effects should report on:***

- 1) **roads projects which have been confirmed for delivery over a similar timeframe;***
- 2) **other development projects with valid planning permissions or consent orders, and for which EIA is a requirement; and***
- 3) **proposals in adopted development plans with a clear identified programme for delivery.***

3.22 *The assessment of cumulative effects shall:*

- 1) *establish the zone of influence of the project together with other projects;*
- 2) *establish a list of projects which have the potential to result in cumulative impacts; and*
- 3) *obtain further information and detail on the list of identified projects to support further assessment.”*

74 It is quite clear from both the definition, and the summary definition at 3.21 that the meaning of the “different projects”, or cumulative quantification and assessment, is that the carbon emissions of all the relevant developments in the study area under 3.21.2 and 3.22 should be summed together.

75 The applicant is **correct** that the architecture of its DS traffic model potentially provides for this calculation. The applicant is **incorrect** that its selected architecture for its DS-DM quantification, based on the outputs of this model, provides a cumulative quantification or assessment. This is an example of where the notion at A57/REP8-029/51 does not hold true. This has all been explained in A57/REP8-029, section 7.

76 In summary, the applicant has not followed DMRB LA 104, nor complied with it with respect to making an EIA Regulations compliant cumulative assessment of carbon emissions. The applicant has not only not followed its own industry guidance, but it has also not met the legal requirements of the EIA Regulations.

77 The applicant, therefore, cannot rely upon M54-M6-DL/40.

5.8 *The false “inherently cumulative” notion*

78 M54-M6-DL/42 says: *“The Secretary of State notes that the Applicant’s response of 26 January 2022 set out that the traffic model used to support the scheme assessment is inherently cumulative with regard to operational carbon emissions. This is because traffic models include data on the emissions resulting from the Proposed Development and the adjoining Strategic Road Network and the local road network as well as other schemes promoted by the Applicant in the vicinity of the scheme that have a high certainty of being progressed.”*

79 M54-M6-DL/43 says: *“With regard to operational carbon, the Applicant’s approach to assessing the impact on carbon emissions is to consider the changes in carbon emissions resulting from the Proposed Development by comparing changes in the road traffic on the Strategic Road Network and local road network between the ‘without scheme scenario’ and the ‘with scheme scenario’, with the former providing the baseline for assessment. The Applicant considers that this takes into account the Proposed Development and all other developments likely to have an influence on the Proposed Development and on the area the*

Proposed Development is likely to influence. The Applicant considers that as both the with and without scheme scenario includes all likely developments and traffic growth factors it is inherently cumulative.”

80 On the A57 scheme, I have shown in A57/REP8-029/section 7 that the applicant has only made a solus quantification and assessment of carbon emissions from the scheme. The solus quantification is the wrong solus quantification and is an underestimate of emissions from the scheme in isolation. No cumulative assessment has been done. This is because the notion at A57/REP8-029/51 does not hold true in the traffic model architecture used by the applicant.

81 At A57/REP8-029/63, I explain that the “influence” of all other developments **is not the same** as **quantifying** their environmental impact, in this case on the EIA receptor of global GHG emissions, which is what the EIA Regulations require.

82 The applicant has not established for the A57 scheme what is claimed for the M54-M6, and therefore, cannot rely upon M54-M6-DL/42 and M54-M6-DL/43.

5.9 Cumulative assessment of the impact of carbon emissions

83 M54-M6-DL/45 starts: “The Secretary of State considers that as there is no single prescribed approach to assessing the cumulative impacts of carbon emissions, there are a number of ways such an assessment can acceptably be undertaken and that this does not necessarily need to be done at RIS level.” (underline emphasis added)

84 The applicant may seek comfort from the underlined sentence. However, the point is that no cumulative carbon assessment has been done at all for the A57 scheme, so whether a prescribed approach has been followed is academic.

85 M54-M6-DL/47 includes “As well as being a requirement of the NPSNN, the Secretary of State considers that assessing a scheme against the carbon budgets is an acceptable cumulative benchmark for the assessment for EIA purposes with regard to both construction and operation.”

86 M54-M6-DL/48 includes “Overall, the Secretary of State considers that the information provided by the Applicant with regard to the impact of the scheme on carbon emissions (including the cumulative effects of carbon emissions from the scheme with other existing and/or approved projects in relation to construction and operation) is sufficient to assess the effect of the development on climate matters and represents the information that the Applicant can reasonably be required to compile having regard to current knowledge.”

87 The applicant may seek comfort from the above quotes. However, the point is that no cumulative carbon assessment has been done at all for the A57 scheme, so these quotes are not relevant.

5.10 Local and regional carbon assessment

88 M54-M6-DL/46 says “*The Applicant considered that it was unable to produce a baseline at a local or regional scale and that there was therefore no reasonable basis upon which it can assess the effects of carbon emissions for anything other than at the national level. 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.*”

89 I have made it clear above that the IEMA guidance, and EIA guidance, strongly advocates local and regional assessment of carbon emissions.

90 The applicant may claim that an assessment against local/regional targets cannot be undertaken for the A57 scheme. Such a claim reveals that the applicant’s intention is “can’t do” rather than “can do”, and it would also suggest that the applicant has not looked very far to find the relevant targets and to develop methods to assess against them, even despite the urgency implied by the rapidly changing landscape of climate legislation and targets.

Such an intentionally negative approach goes against the IEMA and EIA guidance outlined above, and any technical innovation to meet it as outlined below.

91 A quantitative approach can be undertaken, based upon two readily available sets of data, beyond local authority set targets themselves. The first is the BEIS UK local authority and regional carbon dioxide emissions national statistics⁷ which are published annually. These provide the actual recorded carbon footprint, currently for each year from 2005 to 2019, and are broken down into sector and sub-sector, so that for transport the road transport total may be easily calculated. The second is the SCATTER local authority budgets from the Tyndall Centre at the University of Manchester. Whilst these do not directly provide a transport sector budget, it may easily be derived for a starting year (eg: 2019) based on the BEIS transport proportion for the same area. In each case, budgets for a benchmark area may be derived by summing the relevant, constituent local authority areas. Both these data sets have been available for several years now, but the applicant has not bothered to investigate their potential.

92 A third quantitative approach may also be undertaken based on the existing data in the Environmental Statement, and making the assumption that the traffic model study area represents a proxy for a notional local and regional area. This would not be the same as the full transport carbon budget for the relevant local authority as the traffic model is configured to include only those network links of most interest. And the study area may also extend beyond the relevant local authorities out into the Strategic Road Network. However, working with this assumption it provides an image of the transport network in the local and regional area which provides a self-scaling model⁸ for further carbon budget and target assessment.

⁷ <https://data.gov.uk/dataset/723c243d-2f1a-4d27-8b61-cdb93e5b10ff/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-to-2019>

⁸ For example, it can be considered as local/regional area to test against the NZS transport sector trajectory

93 Local and regional assessment may be pursued more qualitatively too. The overall objective is to ensure that the SoS is 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. Well-reasoned, qualitative assessment could provide useful information to the SoS. Failing to even attempt it goes against the IEMA and EIA guidance. A qualitative assessment could easily be generated against the climate policies, and budgets where they exist, at the local councils, including looking at individual policies within the transport planning documents, and assessing compliance, but the applicant has not attempted it.

94 The applicant cannot rely upon M54-M6-DL/46. It is against the guidance for EIA assessment, and I have suggested carbon targets at the local and regional levels that the applicant could use.

5.11 Cumulative impact on climate adaptation

95 M54-M6-DL/49-51 covers this issue. I have no comments.

5.12 M54-M6-DL Conclusions

96 M54-M6-DL/52 states “*The Secretary of State is content that the Applicant has adequately assessed the likely significant effects of the Proposed Development on climate and its cumulative impacts on climate taking account of both construction and operation as required by the 2017 Regulations and this information has been taken into consideration when assessing whether development consent should be granted.*”

97 I have shown in detail in REP8-029/section 7 that no cumulative carbon assessment has been made, and that the solus carbon assessment is based upon the wrong quantification which is an underestimate of the emissions. M54-M6-DL/52 is therefore not helpful to the applicant on the A57 scheme.

98 M54-M6-DL/53 includes “*the Secretary of State considers that the Proposed Development is consistent with existing and emerging policy requirements to achieve the UK’s trajectory towards net zero*”.

99 As with M54-M6-DL/31, it is clear from this statement, the SoS is predicating his decision on the basis of both overarching assertion and subsidiary assertion of success for both the TDP and NZS. However, it remains to be tested in Court whether the overarching assertion for NZS success is legitimate. It is, therefore, premature, and not legitimate, to predicate the decision on these assertions. It would also be premature to make any reliance on overarching or subsidiary assertions of success for the NZS, TDP and NDC on the A57 scheme.

100 M54-M6-DL/54 on the negative weight of the carbon emissions from the scheme has already been dealt with in an earlier section of this appendix.