A303 Amesbury to Berwick Down

TR010025

Volume 8

Deadline 6
8.37.14 - Responses to the ExA's Written Questions - Traffic and Transport (Tr.2)

APFP Regulation 5(2)(q)

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

July 2019

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

A303 Amesbury to Berwick Down

Development Consent Order 20[**]

Responses to the ExA's Written Questions - Traffic and Transport (Tr.2)

Regulation Number:	Regulation 5(2)(q)
Planning Inspectorate Scheme Reference	TR010025
Application Document Reference	8.37.14
Author:	A303 Amesbury to Berwick Down Project Team, Highways England

Version	Date	Status of Version
Rev 0	26 July 2019	Deadline 6 Issue

List of Chapters

14 Traffic and Transport (Tr.2)

Question Tr.2.1

The Stonehenge Alliance is concerned that the 'most likely scenario' may overestimate future traffic flows, with implications for the calculation of costs and benefits.

i. Please explain why the modelling has not considered a wider range of growth scenarios, including low growth.

ii. How sensitive are the assessment's conclusions to the Stonehenge Alliance's concerns about future traffic growth and congestion on the M3, outside the study area?

Highway Englands response

i. Please explain why the modelling has not considered a wider range of growth scenarios, including low growth.

1. The traffic forecasts for the scheme consider an appropriate range of growth scenarios. Core, high and low growth scenario forecasts have been prepared in accordance with guidance given in WebTAG (Web based Transport Analysis Guidance) unit M4 'Forecasting and Uncertainty'. This is in accordance with the National Policy Statement for National Networks (NPSNN) paragraphs 4.6 and 4.7 which note that it is expected that the 'national methodology' is followed in development of the local transport model (as stated in Highways England response to written representations [REP3-013] at paragraph 16.4.63).
2. As noted at paragraph 16.4.73 [REP3-013], the Department for Transport (DfT) has adopted a number of alternative scenarios for their National Road Traffic Forecasts 2018 (RTF18)[1] to provide the Department's strategic view of future road travel demand. The strategic view includes visions of both high as well as low growth. Accordingly, this expresses a view on forecasting uncertainty rather than implying that traffic forecasts may be overestimated which is implicit in the selective focus Stonehenge Alliance gives to a low growth scenario.
3. Section 4.1 of WebTAG Unit M4 states that 'most models will not be able to reflect, explicitly and fully, the uncertainty of national trends such as GDP growth, fuel price trends and vehicle efficiency changes as they will be

[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/740399/road-traffic-forecasts-2018.pdf

relying on the national models underlying National Trip End Modem (NTEM) forecasts. Therefore, it is best to test the impact of this uncertainty by using high and low growth scenarios instead'. At this time the DfT has not concluded its research into how these scenarios may best be considered in assessing individual schemes. WebTAG does not therefore mandate the use of additional scenarios. DfT has not included the forecasting inputs for their RTF18 scenarios as part of the associated (WebTAG databook nor in the Trip End Model Presentation Programme (TEMPro) data sets that would be required to undertake forecasts for these scenarios. The DfT has not developed guidance on how these would be appropriately used to inform decisions. Furthermore, as explained in more detail in response to (ii) below, it is not necessary to undertake additional scenario forecasts to understand the impacts of the scheme.

4. In conclusion, the traffic modelling has tested an appropriate range of growth scenarios. The implications of the different sensitivity tests which have been undertaken are reported in the Economic Appraisal Package (Appendix D of ComMA, [APP-302]), providing sufficient understanding of forecasting uncertainty in accordance with policy and guidance. The DfT is researching the use of different scenarios to articulate forecasting uncertainty and may develop guidance on how this should be used to inform scheme appraisal. The RTF18 forecasts include a range of scenarios and Stonehenge Alliance has selectively commented; the RTF18 report presents a forecasting uncertainty and does not indicate that the core scenario is likely to overstate traffic forecasts.

ii. How sensitive are the assessment's conclusions to the Stonehenge Alliance's concerns about future traffic growth and congestion on the M3, outside the study area?

5. The conclusions of the assessment are not sensitive to the Stonehenge Alliance's concerns about future traffic growth and congestion on the M3.

6. The results from sensitivity testing, including low and high growth scenarios, are reported in section 5.7 of the Forecasting Report (Appendix C of the Combined Modelling and Appraisal Report (ComMA), [APP-301]) and in section 7 of the Economic Appraisal Package (Appendix D of ComMA, [APP-302]). The main traffic impacts forecast are evident in all forecast scenarios and for all forecast years, these are:

   a. the extensive delays along the A303 Amesbury to Berwick Down section which would be addressed by the scheme on busy days;

   b. the A303 traffic which currently diverts on busy days onto local roads causing congestion and consequential impacts for local communities adjacent to the scheme which would have no incentive to divert with the scheme in place and would therefore remain on the A303; and

c. reduced journey time along the A303 which would be exploited with some rerouting from the local roads, providing drivers with improved journey times, reducing accident rates locally from use of safer infrastructure and reducing traffic flows through some of the local communities.

7. RTF18 (Paragraph 2.4) explains the 'extreme' range of wider growth scenarios considered by DfT in developing their strategic view of future road travel demand. As set out in paragraph 6 above, all of the 2026 forecasts show comparable traffic impacts arising from the Scheme to the 2041 forecasts. The Examining Authority should take assurance that even under a much more extreme assumption (i.e. of no additional growth over that 15 year period) the nature of the traffic impacts would not materially differ.

8. Paragraphs 16.4.36 – 16.4.41 of the Applicant's Comments on Written Representations [REP3-013] explain that appropriate and proportionate assumptions based on DfT national modelling were applied to represent changes in speed from future congestion on the M3 east of Farnborough. Nevertheless the Applicant agrees that the method for representing congestion on the M3 is simplified relative to the methods applied in the fully modelled area, but, as explained below, the approach taken has no material implications for the assessment of Scheme impacts.

9. Highways England explained the relevance of congestion on the M3 for Scheme forecasts at Issue Specific Hearing 6 and such explanation is set out in more detail in the Summary of Oral Submissions note [REP4-034] which provides an analysis in Section 3.1. This explains that, because the road section is approximately 50 miles east of the Scheme, only around 20% of traffic using the Scheme whose routeing may be affected by M3 congestion also use this section of the M3. It also explains that the M3 congestion relates to peak commuter traffic and accordingly would only affect about 10% of daily traffic using the A303 between Amesbury and Berwick Down. In combination only approximately 2% of the daily Scheme traffic may be affected by M3 congestion (i.e. those heading eastbound at around 6 or 7 am in the morning or westbound at around 6 or 7 pm in the evening may be affected by M3 congestion respectively later or earlier in their journey). It can be concluded, therefore, that uncertainty in the accuracy with which congestion is represented on the M3 east of Farnborough has no material relevance for the assessment of Scheme impacts.

Question Tr.2.2

i. Does the use of the "*fastest day*" as the basis for assessing congestion on all other days over-emphasise the alleged benefits of the scheme in terms of time saving, as suggested by the Stonehenge Alliance?

ii. Would it be more realistic to base the busy day assessment on a more typical non-peak day, rather than assuming free flow conditions (represented by speeds of 95 kph)?

Highway Englands response

i. Does the use of the "*fastest day*" as the basis for assessing congestion on all other days over-emphasise the alleged benefits of the scheme in terms of time saving, as suggested by the Stonehenge Alliance?

1. The "fastest day" has not been used to assess the travel time savings resulting from the proposed scheme. Consequently, it has not therefore been used to assess the economic benefits of the proposed scheme: either those arising from time travel savings or any other element. The "fastest day" as introduced in response to the Examining Authority's first round of Written Questions question Tr.1.11 [REP2-036] has been used purely for illustrative purposes to demonstrate that delay occurs throughout the year, and that there are periods of significant delay (corresponding to the 64 busiest days explicitly represented in the transport model).
2. As the Combined Modelling and Appraisal (ComMA) report [APP-298] and its appendices have demonstrated, in addition to a 'traditional' set of neutral time period models (average AM, Interpeak and PM hours), a "Busy Day" model has also been developed to assess the impacts of the scheme.
3. The development of the "Busy Day" model is fully in accordance with guidance set out in the Department for Transport's (DfT) Web-based Transport Analysis Guidance (WebTAG) unit M3-1, paragraph 2.5.1, which notes that "there may also be a need to model further time periods, such as off-peak times and weekends, if this materially affects the analysis of the scheme impacts, including economic and environmental and cannot be accommodated adequately by the appraisal 'annualisation factors'". As noted in both ComMA Appendix A 'The Transport Data Package' [APP-299] chapter 4 and Appendix B.1, and ComMA Appendix B 'The Transport Model Package' [APP-300] chapter 5 (and in particular travel times on the A303 set out in Table 5-6), travel conditions on 'busy days' are materially different to those of the average neutral periods.
4. The development, calibration and validation of the transport models is detailed in ComMA Appendix B 'The Transport Model Package' [APP-300]. For the "Busy Day" model, the report demonstrates that the model has been based on data that corresponds to the average of the July and August 2017

data for Fridays, Saturdays and Sundays. For the neutral time periods, which represent the "other days" noted in the question, the model has been developed based on the average Monday-Thursday weekday data collected in October 2017, aligned with the definition of a 'neutral period' given in WebTAG unit M1-2. The calibration and validation of the model to observed data is detailed in chapter 11 of the 'Transport Model Package' [APP-300] and demonstrates that the models satisfactorily represent the average of the observed conditions of both the busy and neutral periods. There is no material mis-statement of travel times or traffic volumes in either of the models, as judged by adherence to the criteria and acceptability guidelines set out in WebTAG unit M3-1.

5. As ComMA Appendix D 'The Economic Appraisal Package' [APP-302] notes for the purposes of economic appraisal, the forecast "Busy Day" model is annualised to represent the average conditions between 10:00-19:00 on the 64 busiest days of the year. The neutral month is annualised to represent the average conditions across the remainder of the year. There is therefore no mis-statement of time savings on the corridor arising from the scheme, nor from the consequential calculation of economic benefits.
6. This position was reaffirmed in oral submissions at Issue Specific Hearing 6 'Traffic and Transportation' and confirmed in the written summary of the oral submissions to the Issue Specific Hearing submitted at Deadline 4 [REP4-034].
7. Therefore, as set out above and in responses at Issue Specific Hearing 6, the "fastest day" has not been used as the basis for assessing congestion on the corridor. Consequently, there is no over-emphasis of travel time savings or economic benefits arising. This is evidenced by the representation of the average travel conditions in the transport model. Therefore, the suggestion by Stonehenge Alliance is to misconstrue the assessment of congestion and travel time savings.

ii. Would it be more realistic to base the busy day assessment on a more typical non-peak day, rather than assuming free flow conditions (represented by speeds of 95 kph)?

8. The "Busy Day" assessment is not based on an assumption that free-flow conditions are modelled. As noted above at paragraph 5 the "Busy Day" model represents average busy conditions for the 64 busiest days of the year, whilst the neutral time period models represent the average travel conditions for each of the three modelled time periods (i.e. days outside of the 64 busiest days).
9. As noted in paragraph 1 above, the "fastest day" has been introduced as a concept purely for illustrative purposes to respond to the Examining Authority's first round Written Question Tr.1.11. It is important to note that the data presented in response to Tr.1.11 are observed data. Were a different approach used and average time across the 50 fastest days of the

year used instead of the "fastest day" (which would represent an increase in average travel times of 35 seconds compared to the fastest day), then the data would still demonstrate delay occurring on the route throughout the year and the same periods of significant delay. For context, this would represent an average speed across the 50 fastest days of 90km/h, compared to 95km/h for the fastest day. The use of the fastest day concept as explained in response to Tr.1.11 did not, therefore, impact on whether or not a delay was shown.

10. The 2017 Base Year neutral model for the interpeak period (the least congested time period) represents a speed of 87km/h for the same section, demonstrating that the fastest day and free-flow conditions are not assumed. The 2017 Base Year Busy Day model represents a speed of 57km/h, demonstrating a material difference between neutral and Busy Day travel conditions in that period, affirming differences in observed travel times on the A303 corridor set out in Table 5-6 of ComMA Appendix B 'The Transport Model Package' [APP-300].

11. It should therefore be recognised that neither the modelling nor the appraisal of benefits assumes free-flow conditions or a comparison with free-flow conditions. The modelling represents average travel conditions in the Busy Day and in the neutral period and is therefore a realistic assessment of travel times and conditions and thus a realistic appraisal of the economic impacts of the scheme.

Question Tr.2.3

The Stonehenge Alliance's position is that without the inclusion of the 'contingent valuation' of removing the A303 from WHS (which they say is inherently flawed) the BCR for the scheme is "*an appallingly low 0.31*". The Applicant's position is that the economic case for the scheme is a matter for the Government and the Road Investment Strategy and the ExA should focus on evaluation of the planning merits.

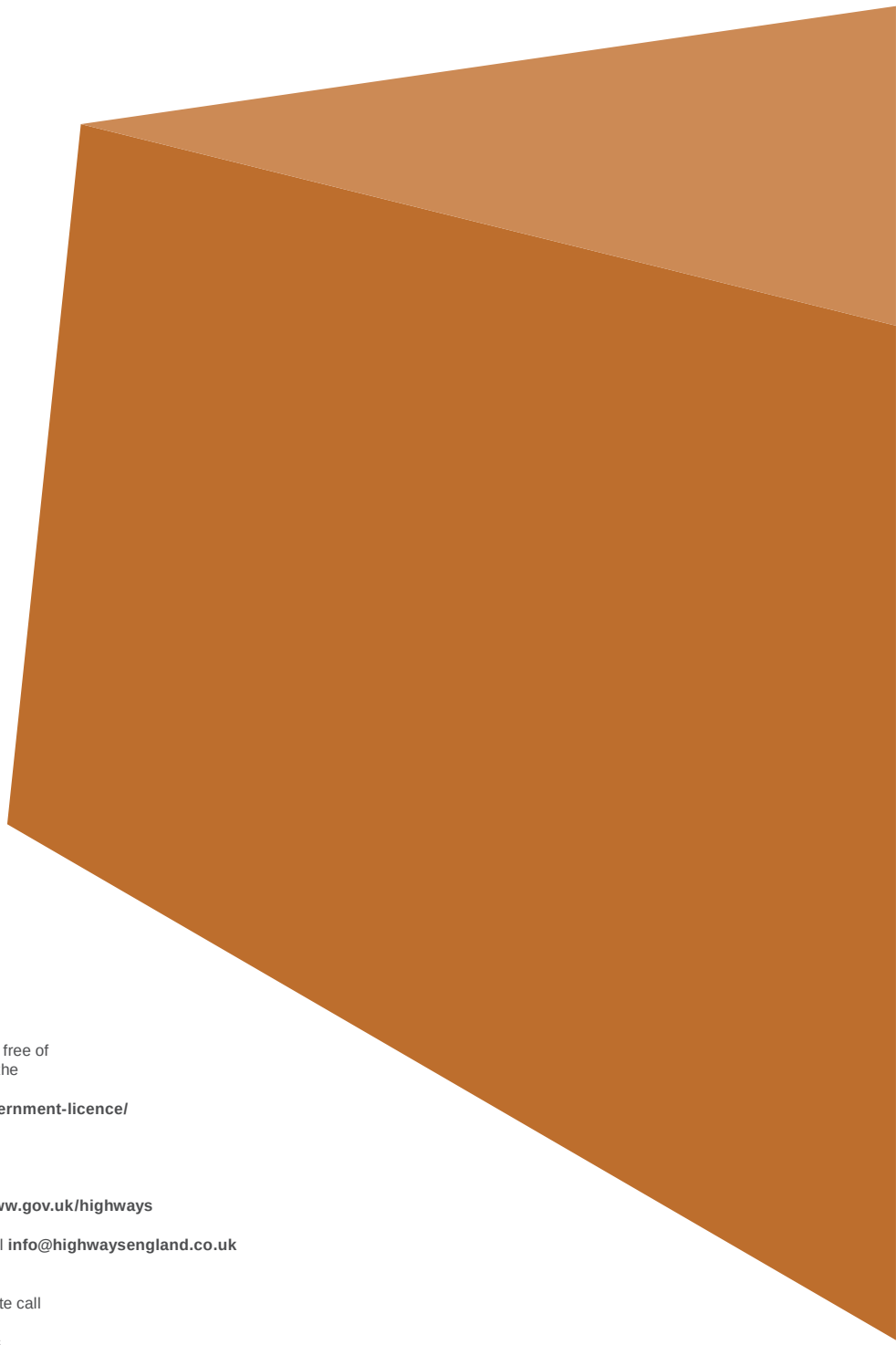
How is this compatible with the advice in paragraph 4.5 of the NPSNN which states that "*The* [economic case prepared for a transport business case] *will be important for the examining authority and the Secretary of State's consideration of the adverse impacts and benefits of the Proposed Development*"?

Highway Englands response

1. The Applicant rejects criticisms of the Contingent Valuation (CVR) study as "inherently flawed". Detailed and robust responses on methodological concerns raised on the CVR are contained throughout its submissions, including in part 13 of its Comments on Written Representations [REP3-013] and in the Applicant's Deadline 4 submissions in response to the Deadline 3 submissions of Paul Gossage and the Stonehenge Alliance [REP4-036].
2. For the avoidance of doubt, the Applicant's position is not that the whole economic case is a matter solely for the Government and the Road Investment Strategy. The Applicant's position is that it is important to be clear on the purpose of the CVR: it is primarily relevant to the assessment of the value for money and the decision to invest in the Scheme, which is a matter for Government and the Road Investment Strategy. The CVR's assessment of value for money does not form the basis of the Examining Authority's (ExA) assessment of the heritage impacts of the Scheme, which is done in the context of the National Policy Statement for National Networks (NPSNN), Environmental Impact Assessment (EIA) and the World Heritage Site (WHS) Convention. The Applicant has set this out in its previous submissions to the Examination, in particular in answer to First Written Question SE.1.25 [REP2-035], its submissions at the Traffic and Transport issue specific hearing ([REP4-034] agenda item 8) and its responses to Stonehenge Alliance (at item 11.1.12) and Jon Morris (at item 3.1.1) at Deadline 5 [REP5-003]. More detail follows.
3. The Applicant agrees that, as per paragraph 4.5 of the NPSNN, the information in the economic case (which forms part of the business case forming the basis for the investment decision on the Scheme) on economic, environmental and social impacts of the Scheme is important to the Examining Authority and the Secretary of State's consideration of the adverse impacts and benefits of a proposed development.

4. That information is contained in the: Environmental Statement [APP-038 to APP-292], Case for the Scheme [APP-294], Combined Modelling and Appraisal Report [APP-298] and its Appendix D [APP-302].
5. However as set out in the answer to First Written Question SE.1.25 [REP2-035] (see in particular paragraph 4), it is also important to be clear on what the different parts of that information do and therefore their relevance to the decision on the DCO application.
6. The CVR study is a key part of the assessment of value for money of, and therefore the investment decision for, the Scheme. However although it forms part of the information referred to in paragraph 4.5 of the NPSNN, the monetisation of heritage benefits it contains is not primarily relevant to the decision on whether to grant development consent for the Scheme, because those benefits do not need to be monetised in order to be taken into account in the planning balance.
7. The contingent valuation study does not seek to say that its results are the economic benefits deriving from the Scheme, but instead seeks to quantify the heritage benefits for valuation purposes.
8. However the question of value for money does not form the basis of the ExA's assessment of the heritage impacts of the Scheme, which is done in the context of the NPSNN, EIA (including the Heritage Impact Assessment (HIA)) and the WHS Convention.

If you need help accessing this or any other Highways England information, please call **0300 123 5000** and we will help you.



This document is also available on our website at **www.gov.uk/highways**

If you have any enquiries about this publication email **info@highwaysengland.co.uk** or call **0300 123 5000***.

*Calls to 03 numbers cost no more than a national rate call to an 01 or 02 number and must count towards any inclusive minutes in the same way as 01 and 02 calls. These rules apply to calls from any type of line including mobile, BT, other fixed line on payphone. Calls may be recorded or monitored.