

Q4.1.14 Modelled Traffic Effects: Lower Thames Area Model: TAG Compliance

Does any party disagree with the Applicant's conclusion that the LTAM is TAG compliant? If so, please explain why.

The National Policy Statement for National Networks (NPSNN, 2014) states at paragraph 4.6 that:

4.6 “Applications for road and rail projects should usually be supported by a local transport model to provide sufficiently accurate detail of the impacts of a project. The modelling will usually include national level factors around the key drivers of transport demand such as economic growth, demographic change, travel costs and labour market participation, as well as local factors. The Examining Authority and the Secretary of State do not need to be concerned with the national methodology and national assumptions around the key drivers of transport demand. We do encourage an assessment of the benefits and costs of schemes under high and low growth scenarios, in addition to the core case. The modelling should be proportionate to the scale of the scheme and include appropriate sensitivity analysis to consider the impact of uncertainty on project impacts”.

WebTAG is specifically referred to in the following paragraphs in the NPSNN:

- 4.5 (in relation to developing the Business Case),
- 4.7 (on updating WebTAG),
- 4.61 (on road safety),
- 5.207 (in relation to Strategic Rail Freight Interchanges), and
- 5.214 (in relation to Decision Making and mitigation).

Whilst GBC would not wish to argue that the LTAM is not TAG compliant, the issue is really whether the transport modelling includes appropriate sensitivity testing to consider the uncertainty when it comes to project impacts.

GBC (and others) have been consistent in raising concerns as to whether the LTAM adequately captures likely levels of growth in the area and the levels of traffic that will use the Lower Thames Crossing and associated road network.

Given the outputs from the LTAM feed into a range of other modules that inform assessments of environmental impacts, this also has implication for the Environmental Statement (ES) prepared under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 and Appropriate Assessment (AA) under the Habitats Regulations.

Regulation 14 and Schedule 4 of the 2017 Regulations require (amongst other things) that the ES provides a description of the likely significant effects of the proposed development on the environment and a description of any features or measures envisaged to avoid, prevent, reduce, or offset significant adverse effects.

There is potential therefore that if the Transport Assessment doesn't include appropriate sensitivity testing that captures uncertainty around levels of growth, the ES and AA may not adequately address significant adverse environmental effects.

GBC's understanding of WebTAG is that it has been developed to provide a Treasury Green Book complaint methodology to inform investment decisions based (at least in part) on the value for money of individual interventions and to allow comparisons to be made with alternative investments based on a level playing field. (See TAG overview at

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938759/tag-overview.pdf).

As GBC understands it, the inputs to the LTAM are based on outputs from the National Trip End Model (NTEM, accessed online via TEMPRo) for trips with a domestic origin/destination and the DfT's Road Traffic Forecasts (RTF) for HGV/commercial movements. TEMPRo provides the total number of trips for each LTAM zone (derived from MSOA derived data) used in the model for each year, which is grown by a factor derived from the NTEM.

Within the LTAM modelled trips are constrained or capped at a coarser district or county level, with national uncertainty dealt with through the application of High or Low Growth scenarios – which only appear to make a marginal difference in traffic flows.

Local uncertainty within the modelling is dealt with through the application of guidance set out in WebTAG Unit M4: Forecasting and Uncertainty (latest edition May 2023) and the associated Uncertainty Toolkit (see <https://www.gov.uk/guidance/transport-analysis-guidance-tag>).

The guidance provides criteria-based advice on what to include within the project Uncertainty Log based on whether developments are Near Certain; More Than Likely; Reasonably Foreseeable; or Hypothetical.

It appears that the purpose of including actual developments in the model is not to increase total generated trips within a district/unitary/county (which would imply double counting given TEMPRo etc. already factors in growth) but to ensure that likely major generators of trips close to a project, which could affect the way it performs, are taken into consideration.

The LTAM Uncertainty Log (See Annex A to APP-523: Lower Thames Crossing – 7.7 Combined Modelling and Appraisal Report - Appendix C) only includes those developments that the applicant considers to be Near Certain or More than Likely within the Core Scenario.

This appears to exclude substantial commercial development on Hoo Peninsula within Medway that already has outline planning permission and some other developments (See Medway Written Representation at Deadline 1 at REP1-256). This is likely to generate traffic on the A289 that would join the SRN at M2 junction 1 and potentially impact on the Lower Thames Crossing junction.

Clearly, WebTAG Unit M4 allows the applicant to run Alternative Scenarios which could include these developments as 'Reasonably Foreseeable' even if they are not considered as part of the Core Strategy, as has been done elsewhere – i.e.

- **3 Junction 9 Improvement:** where an 'Optimistic Growth' scenario was modelled, which included developments that were 'Reasonably Foreseeable' - [https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/TR010055/TR010055-000584-M3J9_7.13_Transport%20Assessment%20Report%20\(Rcv%201\)%20\(Clean\).pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/TR010055/TR010055-000584-M3J9_7.13_Transport%20Assessment%20Report%20(Rcv%201)%20(Clean).pdf)
- **A66 Northern Trans-Pennine Project:** where for the High Growth scenario, they factored in 'Reasonably Foreseeable' site – see 7.2.4 at <https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/TR010062/TR010062-000269-3.8%20Combined%20Modelling%20and%20Appraisal%20Report.pdf>
- **A303 Amesbury to Berwick Down:** where an Alternative Scenario was run to sensitivity test a proposed development at Boscombe Down (7,500 jobs) -

<https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-000455-7-5-ComMA-Appendix-D.pdf>

Whilst GBC understands the applicant’s position in respect of modelling or assessing potential impacts as set out in REP2-061, given highway interventions ‘upstream’ of Lower Thames Crossing on the A289 etc. have yet to be agreed, this is not a satisfactory situation given the scale of the development permitted and its potential impact on highway capacity.

GBC has made further comments in respect of this in its response to ISH4 Action Point 4, which should be read in conjunction with this note.

In any event, GBC has concerns about whether the transport modelling adequately captures likely levels of growth in the area and the implications of this for EA and AA.

This is a matter of concern because the growth assumptions in the NTEM appear to be significantly below what Government expects local planning authorities to deliver in this area.

As part of its work on the emerging Local Plan, GBC requested information from the Department for Transport on the household growth assumptions used in NTEM v7.2 and v8.0 for the period 2021 – 2039 for Gravesham and adjoining authorities.

This information is reproduced below, along with estimates of annual Local Housing Need produced by Turleys in March 2023 (see <https://lpdf.co.uk/wx-uploads/files/newsletters/Revised%20Standard%20Method%20Analysis%20-%20Turley%20-%20Mar2023.pdf>)

Table comparing NTEM v7.2 and v8.0 inputs in terms of household growth with annual housing requirement derived from DLUHC Standard Method

District/Unitary	NTEM increase in households 2021/39		Annual local housing need (dwellings) Standard Method March 2023	Total local housing need (dwellings) 2021/39 (18 years)
	NTEM v 7.2 Core Scenario	NTEM v 8.0 Core Scenario		
Dartford	10,763	10,306	776	13,968
Gravesham	6,633	2,618	701	12,618
Maidstone	14,310	10,338	1,226	22,068
Medway	15,239	10,049	1,667	30,006
Sevenoaks	3,080	3,013	712	12,816
Tonbridge and Malling	11,363	5,998	830	14,940

NB. Household figures should not be directly equated to numbers of dwellings – a factor of 0.97 is normally applied to reflect vacant dwelling stock.

In considering the above figures, GBC is not challenging the national methodology and national assumptions around the key drivers of transport demand. It is however legitimate to have regard to what are quite large differences in potential development levels and ask whether these would have implications for traffic generation at the local level.

This is particularly the case because these could introduce areas of uncertainty around project impacts particularly where model outputs are used to inform environmental assessment in relation to areas such as noise, air quality and nitrogen deposition etc. where impacts could be under reported.

Whilst GBC is not a local highway authority and not fully conversant with WebTAG, it is not clear whether the applicant is limited to using TEMPRO based growth levels in undertaking its transport and associated environmental assessment anyway.

Paragraph 7.1.7 of WebTAG Unit M4: Forecasting and Uncertainty (May 2023) states:

*7.1.7 “NTEM represents the Department’s central assumption of growth in travel demand between any two given years. **When modelling for business cases is submitted to the Department, scenarios assuming central growth in demand (such as the core scenario, described in section 3) must be controlled to the growth in travel demand in the NTEM dataset at an appropriate spatial area (usually Local Authority / District level).** There is a standard way of adjusting growth in demand to represent high and low growth assumptions, described in section 4”.*

GBC would contend that there is a difference between modelling to feed into a Treasury Green Book compliant business case and understanding the impacts of a project for the purposes of Environmental Impact Assessment or Appropriate Assessment

In answering the question therefore as to whether the LTAM is TAG compliant, GBC considers that it probably is. However, the subsidiary question is whether LTAM provides sufficiently robust outputs to feed into the ES and AA, if it is based on growth levels below those that another part of Government is asking local authorities to deliver.

GBC has provided further comment on this issue, with particular reference to the divergence in the input data for traffic growth used in the LTAM modelling, derived from NTEM and TEMPRO, and the growth that can be expected from housing developments using the DLUHC Standard Method for housing need assessments, in its response to Action Point 4 following ISH4.

GBC therefore considers that the applicant should have undertaken sensitivity testing in this area, including an assessment of the impact of incidents and how the network would perform under these conditions. An incident at either crossing will result in increased loadings at the other and the environmental impact of such events also needs to be understood, as a worst-case scenario, given one of the scheme objectives is to improve resilience.