

File Note



63 St Thomas Street
Bristol BS1 6JZ
United Kingdom
www.arup.com

t +44 117 976 5432
f +44 117 976 5433

Project title	Cheltenham Plan Transport Assessment	Job number
cc	John Rowley (CBC)	File reference
Prepared by	Gabor Jenei	Date
		22 January 2019
Subject	Response to Gloucestershire County Council Position Statement regarding the Inspector’s transport related questions of Cheltenham Plan Transport Assessment	

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Introduction / Background

In May 2017 Cheltenham Borough Council (CBC) invited proposals for a consultant team to undertake a local highways site assessment to provide the transport evidence base that would support the emerging Cheltenham Local Plan (CLP). Following the submission of proposals, CBC appointed Arup to undertake this work.

The assessment of the Cheltenham Plan started in August 2017 and the findings were reported in February 2018.

Arup has delivered three reports:

- Sustainable Transport Assessment on the 8th December 2017,
- Phase 1 Report on the 22nd of February 2018, and
- Phase 2 Report on the 22nd of February 2018.

The Phase 1 Report describes the assessment of the Cheltenham Plan using the Central Severn Vale (CSV) SATURN strategic highway model which was updated by Amey plc in 2017 and used to support the Joint Core Strategy (JCS) submission. The Phase 1 Report includes modelled highway flow diagrams, modelled highway flow difference diagrams and identification of key junctions to be taken forward for further assessment based on the following criteria set:

- Node inbound traffic volume increase more than 20%, or
- Node delay is above 60s, or
- Node delay increase is above 30s, or
- Node V/C ratio is above 85%, or
- Node V/C ratio increase is above 20%.

The Phase 2 Report presents the results of detailed junction modelling using industry standard 'LinSig' and 'Junctions 9' software.

This briefing note is written to address the relevant transport modelling matters raised by Gloucestershire County Council (GCC) in their draft position statement dated 17th January 2019. The relevant transport modelling matters raised by the inspector are included in Matter 8: Transport and are Key Issues 1, 2 and 4. Key Issues 3 and 5 are not relevant to the work undertaken by Arup.

A copy of the GCC position statement is provided in Annex A of this briefing note.

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Key Issue 1

Key Issue 1 raised by the Inspector raised the following matter for discussion:

To what extent has the impact of proposals within the Cheltenham Plan (CP) been assessed in accordance with the package of key transport and highway improvements in both the local and strategic networks proposed to accommodate the proposals in the Joint Core Strategy (JCS)?

GCC position Matter 1, paragraph 1:

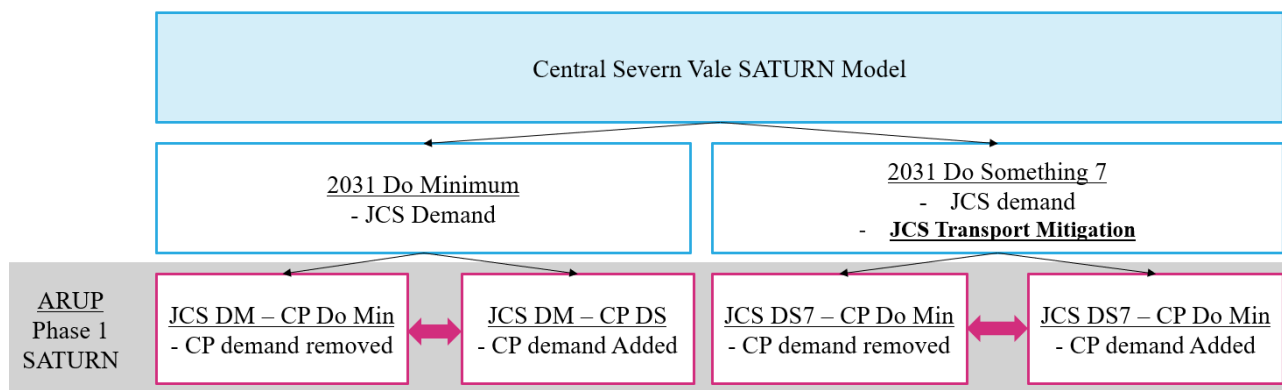
Arup updated the CSV Strategic Transport Model to forecast the demand as accurately as possible at the time the work was undertaken and agreed the methodology at the “Modelling Methodology Discussion” meeting with CH2M, Highways England & GCC on the 24th October 2017. The minutes of the meeting are provided in Annex B. In order to develop the ‘without Cheltenham Plan’ scenario the 3 specific non-strategic sites were removed from the forecast trip matrix. The ‘with Cheltenham Plan’ scenario was formed based on the ‘without Cheltenham Plan’ scenario by adding the Cheltenham Plan allocations.

GCC position Matter 1, paragraph 5:

The primary aim of the Cheltenham Plan Transport Assessment was to identify the impact of the Cheltenham Plan on its own. Therefore, within Phase 1 the ‘without Cheltenham Plan’ scenario was compared against ‘with Cheltenham Plan’ scenario, both using the highway network excluding the JCS DS7 mitigation. Further to this the ‘without Cheltenham Plan’ scenario was compared against ‘with Cheltenham Plan’ scenario, both using the highway network including the JCS DS7 mitigation.

The Phase 1 Report, Section 6.3.2, Table 13 and Table 14 shows that Impact of the Cheltenham Plan on the highway network incorporating the mitigation package is a slight (0 – 3% change in Volume, 0 – 3% change in volume over capacity). The flow difference plots (Phase 1 Report, Appendix A, Drawing 020 to 023) also show very minor change in link volumes. Figure 1 below presents the assessed scenarios.

Figure 1: Model scenarios assessed



In Phase 2 the ‘with’ and ‘without’ scenarios were modelled excluding the JCS mitigation package assuming a ‘worst case scenario’. This was for the following reasons:

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- The DS7 mitigation package did not include delivery phasing. The mitigation measures are not a final and definitive list of infrastructure.
- The Phase 1 study shows that the JCS DS7 mitigation package is still a possible mitigation option of the 'with development' scenario.

GCC position Matter 1, paragraph 6:

Within Phase 1 the 'with development' and 'without development' scenarios were compared in the same way both excluding and including the DS7 schemes as illustrated in Figure 1.

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Key Issue 2

Key Issue 2 raised by the inspector raised the following matter for discussion:

Do the proposals for new development in the CP comply with scenario DS7 in the evidence base to the JCS?

GCC position Matter 2, paragraph 1:

Phase 1 work shows 1%-3% change in volumes, 1%-3% change in volume capacity ratio and plus 6 – 20 s in delay.

GCC position Matter 2, paragraph 2:

The detailed junction modelling did not include the mitigation measures included in the JCS DS7 and this was for the following reasons:

- Additional scope,
- Additional significant work extracting turning volumes, and
- Missing data – design signal timings

GCC position Matter 2, paragraph 3:

The evidence base considering the JCS DS7 mitigation included was presented in the Phase 1 report. Comparison of ‘with Cheltenham Plan’ scenario compared to ‘without Cheltenham Plan’ scenario provided in Table 13 and Table 14

Key Issue 4

Key Issue 4 raised by the inspector raised the following matter for discussion:

Does there need to be any assessment at the time of submission of relevant planning applications to determine how much development may proceed in advance of the JCS highway interventions being in place? If so, does this need to be made clear in any relevant CP policies?

As recommended in the Phase 2 report establishing how much each development can proceed prior to the JCS mitigations implemented further assessment is required.

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ANNEX A

This statement provides Gloucestershire County Council (GCC)'s position with regards to the "Inspector's Matters, Issues and Questions" received on 20th December 2018, (Matter 8: Transport) [ED009], in relation to the soundness of the Cheltenham Local Plan. It has been prepared for the purpose of informing the planned Examination Hearing Session scheduled for 28th February 2019, as identified in the draft hearings programme [ED008], and addresses a number of questions and issues (five) raised in highways terms, in light of the inspector's request, with the aim of facilitating a more efficient Examination in Public (EiP) process.

Inspector's Matters for Discussion - Matter 8: Transport

Key Issues 1 To what extent has the impact of proposals within the CP been assessed in accordance with the package of key transport and highway improvements in both the local and strategic networks proposed to accommodate the proposals in the JCS?

GCC Position –

In the opinion of the Local Highway Authority, to some degree the proposals within the CP have been assessed against the package of key transport and highway improvements required to accommodate the JCS proposals (generally referred to as Do Something 7 (DS7)). The assessment is referred to as the Sensitivity Test in the supporting Transport Assessment Phase 1 Report.

However, there are flaws in the way the impact has been assessed which results in an over estimation of background growth. This is due to the carrying forward of certain necessary assumptions made at the time of the DS7 model runs required to take account of the identified housing need which would be met by the CP within the context of the overall the JCS. At the time when the traffic modelling exercise was undertaken in support of the JCS evidence base, only 3 specific non-strategic sites were identified within the CP area (Lansdown, North Place and Portland Street and Prestbury Road) with the remainder of the development related traffic growth associated with the smaller sites spread evenly across the CP highway network area.

The CSV 2031 'Do Minimum' model and 'Do Something' model (scenario DS7) have been used to support the development of the CP. The modelling exercise has been undertaken in two phases. Phase 1 identifies junctions on the highway network where traffic impacts caused by the proposals for new development in the CP might be significant. Phase 2 investigates the potential mitigation strategies that may be required as a result of these developments. The modelling works were documented and named as 'Transport Assessment Phase 1 Report' and 'Transport Assessment Phase 2 Report'.

The 'Transport Assessment Phase 1 Report' does provide the model results of those junctions impacted by the CP proposals based on the 2031 DM. It also describes a sensitivity test whereby the CSV 2031 DS7 was taken as a base reference to identify the differences between the JCS assumptions and the CP allocations. The 'Transport Assessment Phase 2 Report' presents the comparison of a 'with development' scenario, known as 'Do Something (DS)', against the 'without development scenario, known as 'Do Minimum (DM)'. It is of concern that the DM scenario was not a modified DS7 scenario. Both scenarios appeared to assess the traffic impact of the Cheltenham Plan allocations on the 2031 DM highway network, disregarding the network mitigation measures identified and included within the JCS DS7 scenario.

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In summary, the impact of proposals within the CP has been assessed taking the DS7 scenario into consideration but only as a sensitivity test. The schemes included in DS7 have not been considered when assessing the impact of the CP. It is considered that the further modelling work should be completed where the package of transport and highway improvement, if any, are explored in addition to those already identified in the JCS evidence base.

Key Issues 2 Do the proposals for new development in the CP comply with scenario DS7 in the evidence base to the JCS?

GCC Position –

In the opinion of the Local Highway Authority, whilst the proposals in the CP comply with the assumed level of growth used in DS7, the spatial distribution of this growth differs significantly from the original assumptions. The sensitivity test in the Phase 1 Report does indicate that the spatial distribution of these specific sites does result in a transport impact at the Old Gloucester Road / B4063 junction.

In the 'Transport Assessment Phase 2 Report', the modelling assessment carried out a comparison of a 'with development' scenario, known as 'Do Something (DS)', against the 'without development' scenario, known as 'Do Minimum (DM)'. Both scenarios assessed the traffic impact of the CP allocations on the 2031 DM highway network, disregarding the network mitigation measures identified and included within the JCS DS7 scenario.

In conclusion, the evidence base to support the CP contains flaws where the transport impacts were not accurately assessed. It is considered that the Phase 1 modelling work should clarify / rectify the methodology used and expand the modelling outcome to identify if and/or how the sites now identified in the CP result in different or additional transport impacts to those already identified in the JCS evidence base. The Phase 2 modelling work should investigate/clarify the transport mitigation measures, if any, to accommodate the site-specific development in the CP in addition to DS7.

Key Issues 3 Does the CP include policies which adequately manage the delivery of development so that severe transport impacts do not arise?

GCC Position –

Only draft policies HD7 and HD8 refer to the need to assess impact and identify measures to mitigate the traffic impact of the sites covered by these policies, Priors Farm Fields and Old Gloucester Road respectively. The need to assess the individual impacts of other new developments (whether employment, mixed use or residential) on the transport network is not implicit in the draft policies. The 'silence' on the need to assess impact and identify measures in the site specific policies on the other sites could imply that any impacts have already been fully assessed at the plan making stage and that suitable mitigation measures have been identified, are capable of implementation, costed and funding sources secured.

Policy INF1 in the adopted JCS 2011-2031 does go some way to ensure that the delivery of development can be managed through identifying and securing appropriate mitigation (and phasing)

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For clarity purposes it would be useful that mention in made in the CP to the application of Policy INF1 to non-strategic allocations.

Policy INF1: Transport Network

1. Developers should provide safe and accessible connections to the transport network to enable travel choice for residents and commuters. All proposals should ensure that:

- i. Safe and efficient access to the highway network is provided for all transport modes**
- ii. Connections are provided, where appropriate, to existing walking, cycling and passenger transport networks and should be designed to encourage maximum potential use**
- iii. All opportunities are identified and taken, where appropriate, to extend and/or modify existing walking, cycling and public transport networks and links, to ensure that credible travel choices are provided by sustainable modes**

2. Planning permission will be granted only where the impact of development is not considered to be severe. Where severe impacts that are attributable to the development are considered likely, including as a consequence of cumulative impacts, they must be mitigated to the satisfaction of the Local Planning Authority in consultation with the Highway Authorities and in line with the Local Transport Plan.

3. Developers will be required to assess the impact of proposals on the transport network through a Transport Assessment. The assessment will demonstrate the impact, including cumulative impacts, of the prospective development on:

- a) Congestion on the transport network**
- b) Travel safety within the zone of influence of the development**
- c) Noise and/or atmospheric pollution within the zone of influence of the development**

4. Where appropriate the local planning authority may require applications to be accompanied by a Travel Plan that has full regard to the criteria set out in the NPPF.

This policy contributes towards achieving Objectives 1, 2, 3 4, 5, 6, 7 and 9.

However, GCC do not consider that the current transport evidence needed to support the CP is sufficiently robust and that, as a result of further modelling, further site specific policies may be required to limit the significant impacts of development until such time that certain mitigation measures (whether in DS7 or which could be identified as a result of further transport modelling work to support the CP) have been constructed.

As described above, the highways modelling carried out as part of the JCS evidence base included all of the CP development growth. The package of key transport and highway improvements in both the local and strategic networks tested in DS7 are designed to be capable of delivering all of the local need up to 2031.

In addition, the evidence base to support the CP, the Phase 2 modelling work is inadequate wherein the traffic impacts have been identified but the package of mitigation measures, if any, have not been explored.

Key Issues 4 Does there need to be any assessment at the time of submission of relevant planning applications to determine how much development may proceed in advance of the JCS highway interventions being in place? If so, does this need to be made clear in any relevant CP policies?

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GCC Position –

Ideally, in the opinion of the LHA, to ensure that housing trajectories are achieved, the assessment of how much development can proceed in advance of the JCS highway (and site specific) interventions should be determined in the CP. However, if such work is considered too onerous, it should be made clear to landowners and developers that whilst sites have been allocated, the evidence required to allow implementation would fall to them at the planning application stage.

5 Is the safeguarding of the former Honeybourne rail line (Policy TN)1 justified?

GCC Position –

As highlighted in the representations that were made (April 2018) in relation to the Pre-Submission Reg. 19 consultation, GCC's view is that this is a vital corridor which currently provides a spinal traffic-free section of the National Cycle Network and the County Strategic Cycleway.

Whilst the policy advocates its protection as a corridor, the qualities of this route can be eroded through poor development delivery onto its alignment, insufficient attention to issues of natural surveillance through development on its peripheries, and the quality and availability of lateral connections and routes. The role of the former Honeybourne Line route will strengthen and change as more trips occur to and from the west of the town, due to the proposed development outlined in the JCS.

The GCC recommendation therefore is that this policy recognises the importance of ensuring that new development should strengthen the route's qualities, and that opportunities to extend the route north eastwards to Bishop's Cleeve continue to be investigated.

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ANNEX B

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Minutes

ARUP

Project title	Cheltenham Transport Assessment	Job number 256784-00
Meeting name and number	Cheltenham Transport Assessment - CSV 1/17	File reference 9.0_Minutes
Location	Highways England, Brunel House, 930 Aztec West	Time and date 10:00 24 October 2017
Purpose of meeting	Discuss methodology and preliminary results	
Present	Rachel Sandy (Highways England) Andrew Ball (Ch2M) Jamie Mattock (Gloucestershire County Council) Brian Walker (Gloucestershire County Council) Ben Watts (Gloucestershire County Council) James Eastham (Arup) Gabor Jenei (Arup)	
Apologies	Ben Robinson (Arup)	
Circulation	Those present Plus John Rowley (Cheltenham Borough Council) Ben Robinson (Arup) Ben Pritchard (Arup)	

Action

1.1 Introductions

Introductions around the table and apologies from Ben Robinson that he is unable to make it due to illness.

Explained that JE and GJ were involved in the modelling aspects of the project and potentially some questions may have to respond too after the meeting via email.

1.2 Methodology

Overview

Outlined process of using DS7A as the basis of the modelling.

Trip rates for the developments based on TRICS trip rates.

Prepared by James Eastham
Date of circulation 25/10/2017
Date of next meeting TBC

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Each new development was in a new zone specifically for that development and the trip distribution was taken from the parent zone, or a similar zone close by.

Discussion followed over whether the Do Nothing, Do Minimum or Do Something matrices should be used as a basis for the assessment and which network should be used.

JE/GJ

Outcome of this discussion was that two DM and two DS matrices are required for the assessment. There should be a DM and DS matrices with all the unallocated Cheltenham sites removed and then matrices with these included to allow a comparison of the impact of these sites on the road network to be undertaken.

BR/JE

This approach also allows the determination of the mitigation required at a local level and whether the JCS mitigation removes the requirement for these measures. This approach will also highlight any additional mitigation beyond that for the JCS required.

BR

For those sites which are existing car parks, the trips from these car parks were removed and reallocated to other car parks in Cheltenham so they are not lost to the road network. Need to check that those car parks trips reallocated to have the necessary capacity.

Trip Rates Formulation

Trip rates based on TRICS database and the modified to account for modal splits.

BR/JE

Noted that previous studies for the JCS had used the JCS trip rates. Arup to provide a comparison table showing the trip rates used and the JCS trip rates.

JE/BR

Also noted that in the DS scenario the JCS trips were reduced to account for improvements in sustainable transport in the DS scenario reducing the number of car trips for internal movements, these being movements within Cheltenham, Gloucester or Tewksbury. Any trip rates used need to account for this change between the DM and DS scenarios. Internal trips reduced by approx. 10% and overall results in a 2-3% reduction in trip rates

BR

Need to check trip rates for the Lansdown Road and Land at 100-102 Prestbury Road as the number of trips is very low for the number of houses on these sites. If there is a legitimate reason for this then need to provide a justification for this.

Cut Off Levels

Explained the cut off levels applied to the development sites. Those generating less than 20 trips were excluded from the assessment as

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the number of trips generated by these sites will get lost in the existing traffic and have limited impact on the operation of the network

1.3 Preliminary Results

Preliminary results based on the DS scenario show limited impact from the additional sites in terms of traffic flow, generally less than 60 PCUs and on most links any increase in vehicles is less than 20 PCUs

Difference plots of total time on links shows the sites have limited impact on the roads with the JCS mitigation

1.4 Any Other Business

In the August meeting, sites were included that were employment rather than residential. Have these sites been removed from the assessment?

BR

When using zones for generating distribution need to ensure the zones used are not JCS zones

1.5 Actions

- Email Brian Walker with the spreadsheet listing development sites and whether included in the modelling; JE/BR
- Brian Walker email the development log listing those developments included in the various model scenarios and the zones they are associated with. Indication of trip rates, or number of trips would be useful for inclusion; BW
- Provide a table comparing the trip rates used for the Arup assessment and the JCS trip rates; BR/JE
- Consider the trip rates utilised in the DM and DS as the JCS trip rates takes into account improvements in bus and NMU infrastructure reducing reliance on cars. In affect two separate trip rates are required for the DM and DS scenarios; BR/JE
- When redistributing car park trips, did we consider the capacity of the car parks reassigning trips to?; BR
- Develop two DM matrices, one with none of the Cheltenham unallocated sites included and one with them included. Then assign these to the DM network; JE/GJ
- Undertake the above for the DS matrices and network JE/GJ

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<ul style="list-style-type: none">• Check the trip rates for the Lansdown Road and Land at 100-102 Prestbury Road as the trips in Appendix A1 seem low considering the number of residential units proposed. If this is correct, then nee to provide justification for this		Action
		BR

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DOCUMENT CHECKING (not mandatory for File Note)

	Prepared by	Checked by	Approved by
Name	Gabor Jenei	Tom Metcalfe	Andrew Jenkins
Signature			