



Inspector Paul Clark BA MA MRTPI
c/o Louise St John Howe
Programme Officer
PO Services
PO Box 10965
Sudbury
Suffolk
CO10 3BF

Our ref: DJT/30858/28112019

12 December 2019

Dear Mr Clark,

Aylesbury Vale District Council Local Plan Examination Main Modifications

Transport

Context

Transport Planning Practice (TPP) were commissioned by Hampden Fields Action Group (HFAG) to advise on transport matters in relation to the Hampden Fields development proposal and related developments on the eastern side of Aylesbury. HFAG and TPP participated in the Vale of Aylesbury Local Plan (VALP) 2013-2033 Examination hearings in summer 2018.

Following the hearing sessions in 2018, your Interim Findings were published in August 2018. We understand that, subsequently, further discussions took place with the planning authority Aylesbury Vale District Council (AVDC). AVDC has now prepared a number of Main Modifications which are considered necessary to make the VALP sound. These modifications are now being put forward for public consultation. The consultation is taking place over a six week period and representations are invited to the Main Modifications as well as the associated Sustainability Appraisal and Habitats Regulations Assessment. The comments below are made on the basis that the Sustainability and Environmental Appraisal should take full account of the Transport Assessment and Transport Strategy, which have now been included as Main Modifications.

Introduction

On behalf of HFAG, TPP reviewed the Transport Assessment carried out for the Draft VALP. It is worth restating that the concerns that were raised about the Transport Assessment at the hearings in 2018 remain unresolved. In particular, the Local Plan process is progressing, but the Transport Evidence Base remains flawed. The key concerns are set out below.

Soundness

Local Plans are required to be assessed against the tests of Soundness. According to the National Planning Policy Framework (NPPF) 2012 – the version which we believe that you have referred to in your Interim Findings - the key tests of the soundness which the Local Plan should satisfy are shown below:

- Positively prepared - this means that the Plan should be prepared based on a strategy which seeks to meet objectively assessed development and infrastructure requirements
- Justified - the Plan should be the most appropriate strategy when considered against reasonable alternatives, based on a proportionate, robust and credible evidence base.
- Effective - the Plan should be deliverable over its period and based on sound infrastructure delivery planning.
- Consistent with national policy - the Plan should be consistent with national policy.

In the 2019 version of NPPF the wording of these conditions is virtually identical.

Justification and Evidence Base

The first step in the process of preparing the Local Plan is to develop an evidence base. Paragraph 158 of the NPPF states that:

"Each local planning authority should ensure that the Local Plan is based on adequate, up-to-date and relevant evidence about the economic, social and environmental characteristics and prospects of the area."

Buckinghamshire Countywide Traffic Model

With respect to the transport evidence base supporting the Draft VALP, the main transport forecasting tool used is the Buckinghamshire Countywide Traffic Model. This model is currently operated by consultants Jacobs on behalf of Buckinghamshire County Council (BCC). Three reports were prepared by Jacobs, on behalf of BCC, in connection with the VALP:

- Forecasting Modelling Report, July 2016;
- Phase 2 Forecast Modelling Report, March 2017; and
- Phase 3 Technical Note, August 2017.

In connection with the Main Modifications, a new report "VALP Modelling, Revised Countywide Modelling for Buckingham, (Addendum to the Phase 3 Countywide Modelling Report)", was prepared by Jacobs in April 2019. The new modelling work is focussed on Buckingham and possible development sites near to Milton Keynes. There does not appear to be any substantive new evidence relating to Aylesbury.

2013 Base Year Model

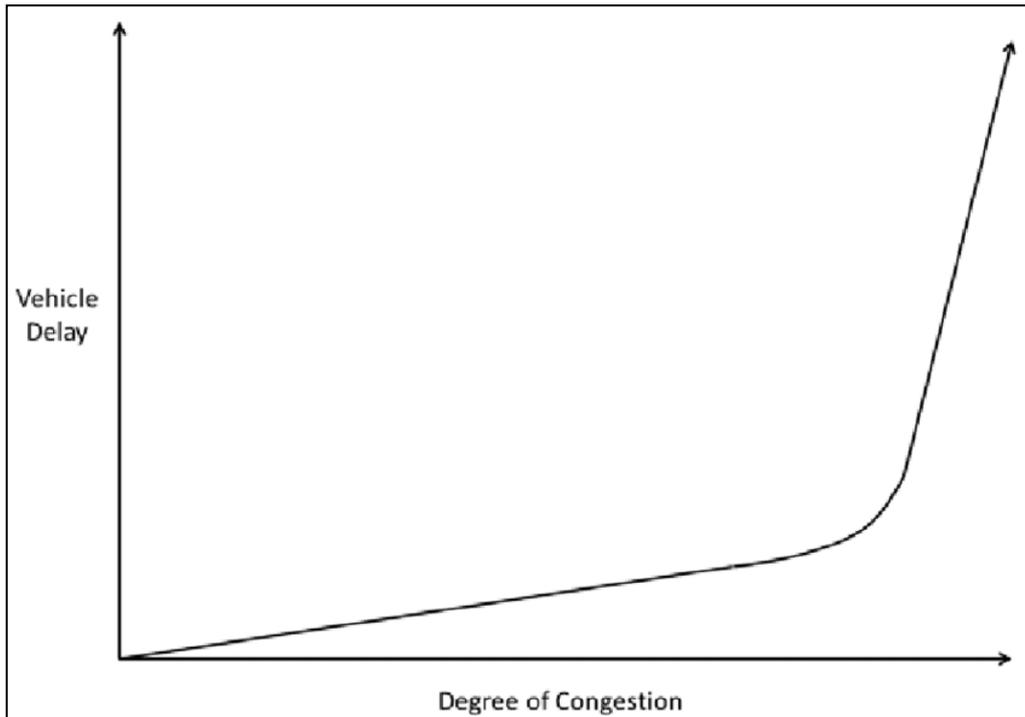
TPP have highlighted the following deficiencies which compromise the Countywide model as a suitable tool and evidence base:

- The model is based on synthetic estimates of origin-destination movements (trips between geographical zones). Observed data from roadside interview surveys or mobile phone data (MPD) was not used in the model validation.
- The 2013 Base Year model validation does not meet the Department for Transport's (DfT) WebTAG criteria:
 - For link flows on screenlines the guidance states that the difference between aggregated modelled and observed flows should be less than $\pm 5\%$. Results for five screenlines are presented with two directions of flow. In the AM peak only 3 of the 10 comparisons (30%) meet the WebTAG criteria.
 - For individual link flows, the guidance states that modelled flows should pass goodness of fit tests in $>85\%$ of cases. In the Countywide model in peak periods less than 60% of comparisons pass the goodness of fit tests.
 - For journey times only 50-60% of the routes in question are sufficiently accurately modelled to meet the WebTAG goodness of fit tests, rather than 85% as recommended by DfT.

The use of purely synthetic demand data is not recommended by DfT. No verification against observed data is provided by Jacobs. Hence, the validity of the demand matrices in the Countywide model has not been demonstrated. Consequently, the suitability of the Countywide model to underpin the Local Plan Transport Assessment has not been demonstrated.

As an example of the model performance, on the Aylesbury screenline (a series of roads often crossing a geographical feature such as a railway or river where modelled and observed flows can be compared) the modelled flows are systematically between 3% and 6% lower than traffic counts in AM, Inter and PM peak periods. This shortfall in traffic could be critical in assessing future year congestion in 2033.

In traffic models – and in reality - the relationship between growth in traffic and traffic delays is non-linear when flows are close to capacity (shown conceptually in the graph below). Hence, the shortfall of traffic in the Countywide model could be critical in forecasting the impacts of the proposed land-use changes.



Note: Degree of congestion = traffic demand/junction traffic capacity
(Source: diagram based on "The Highway Capacity Manual delay formula for signalised intersections", R. Akcelik)

The guidance on "Transport Evidence Bases in Plan Making and Decision Taking" issued by the Ministry of Housing, Community and Local Government (MHCLG) states that the full WebTAG methodology is not appropriate for Local Plan assessments. However, the guidance also says that, where major new infrastructure is being assessed, the WebTAG methods should be employed.

The July 2016 Jacobs report comments:

"This model is considered sufficient by the districts and BCC in its current state as a basis for the subsequent development, and high level strategic assessment, of future year development scenarios. It may be necessary to develop a fully WebTAG compliant model at a later stage; however, this is not a requirement for this phase of work."

It is unclear when BCC and Jacobs might deem that the WebTAG-compliant model would be required. Given that the Local Plan modelling work has been carried out over a period of several years, a model enhancement should have been a high priority for the local authorities and should be used to assess the Main Modifications. **Please note that the model Base Year of 2013 is now six years out of date. It will certainly need to be updated very soon.**

Regarding the limitations of the Countywide model, AECOM – BCC's own transport consultants - have commented as follows (Aylesbury Transport Strategy, Technical Note 1, April 2016):

"Overall, the Countywide Strategic Transport Model has several key limitations that reduce the confidence in the use of the model in identifying existing and future transport issues. The use of purely synthetic demand data is not recommended and without verifying against observed data, the validity of the

demand matrices cannot be ascertained. Furthermore, the modelled and observed flow comparison and journey time validation suggest that the model does not have good representation of the observed traffic flows and delays within the network. Hence, it is unlikely that the model can be used to accurately identify existing and future transport issues in its current form.

Highway England Review of Countywide Model

In August 2016, consultants Mouchel, working for Highways England (HE) conducted a review of the Countywide Model. Their concern was to assess the adequacy of the model for assessing the impacts of the New Wycombe District Local Plan on the Strategic Road Network (SRN).

Mouchel identified that the model was not fully WebTAG-compliant, and drew attention to many of the same deficiencies which TPP have previously highlighted. For example (p2):

"It should be noted that in both AM and PM peak periods, modelled flows across nearly all of the screenlines are lower than the observed flows, indicating that there may not be enough traffic in the matrices and as a result the model may be under-reporting congestion both in the base year (2013) and in the future forecast year."

Mouchel concluded (p9):

"The Countywide Model does not meet the standard criteria for model validation and there is a concern that the model may be under-representing congestion."

and

"...it is concluded that due to the limitations with the model(s) there is insufficient evidence provided to determine the impact of the New Wycombe District Local Plan on the SRN. Ahead of the next stage of Local Plan consultation it is recommended that the model(s) should be updated, reviewed and amended."

In 2017, following further discussions, BCC and HE came to the following agreed position which enabled the Local Plan process to proceed:

"BCC and HE agree that, at the level required to understand the transport implications of a local plan, the work undertaken provides a suitable assessment. As the comment notes, Government guidance on "Transport evidence bases in plan making and decision taking" states that a fully WebTAG compliant assessment is not appropriate for most local plans:

"An assessment should adopt the principles of WebTAG by assessing the potential impacts of development within the framework of WebTAG objectives. For most Local Plan assessments the full methodology recommended will not be appropriate."

We have followed this approach, undertaking modelling in line with the principles of WebTAG, and using its objectives and frameworks. As suggested in the guidance, this has not necessarily gone as far as required by the full WebTAG methodology but provides suitable evidence at this stage. Should it be required (in the later stages of securing government funding, for instance), we (presumably BCC) may need to develop relevant parts of the modelling further in the future.

Furthermore, the impact of: the high level and long term nature of local plan proposals on the certainty of any forecast; and the lack of significant change to the Strategic Road Network proposed, mean that small changes in modelling work is un-likely to have a significant impact on the nature of HE's response at this stage."

The key sentence here is the last one which implies the, because the impacts of the New Wycombe District Local Plan allocations on the SRN were likely to be modest, HE were ultimately able to take a more relaxed view on the adequacy of the Countywide Modelling despite Mouchel's concerns.

2033 Forecasting Assumptions

All traffic forecasts for the modified version of the VALP are for 2033. A convention has been followed that the Do-Minimum scenario in all cases is based on a Reference Case land-use pattern. This only includes "committed" development. In addition, the Do-Something scenarios contain varying combinations of the housing and commercial development envisaged in the Draft VALP. A summary of the total increase in houses and jobs envisaged between 2013 and 2033 is shown below.

Table 1 – Forecast increase in households and jobs (2013 to 2033)

District	All figures in thousands							
	Phase 1 and 2		Phase 1		Phase 2		Phase 3	
	DM		DS1 and DS2		DS1/2		DS1	
	HH	Jobs	HH	Jobs	HH	Jobs	HH	Jobs
Aylesbury Vale	9.4	24.3	30.7	24.3	31.8	30.3	29.6	30.3
Chiltern	1.3	0	5.7	3.3	5.1	0	5.1	0.5
South Bucks	1.3	1.6	9.8	4.3	5.6	6.0	5.6	8.2
Wycombe	2.2	6.0	13.3	7.6	10.6	8.5	12.0	9.6
Total	14.2	31.9	59.5	39.3	53.2	44.8	52.4	48.6
Notes:								
1) DM = Do-Minimum, DS = Do-Something and HH = households								
2) In Phases 1 and 2 the difference between DS1 and DS2 is the location of 4,000 dwellings at either Haddenham (DS1) or Winslow (DS2). In Phase 3 the Haddenham and Winslow options were excluded.								
3) Numbers are subject to rounding								

The assumed Do-Minimum level of jobs growth between 2013 and 2033 for Aylesbury Vale – 24,300 jobs - is very high, and is not adequately explained in the traffic modelling reports. This projection seems to be inconsistent with the Do-Minimum housing growth – 9,400 dwellings. This implies that a very large increase in in-commuting to Aylesbury Vale by workers has been modelled in the Do-Minimum. No justification is given for this key assumption in the documentation.

It is not clear whether these unrealistic assumptions have distorted the traffic modelling for the Do-Minimum comparator against which the traffic impact of the Draft VALP housing allocations were tested. In the Do-Something scenarios the balance between increased housing and jobs is more rational. Again this suggests that the transport evidence base on which the Draft VALP was developed cannot be considered as robust.

Combined Stocklake/Eastern Link Road Business Case Traffic Model

In addition to the Countywide Traffic Model, BCC's consultants have developed a local traffic model to support appraisal and funding bids for the Stocklake Link Road and

Aylesbury Eastern Link Road (South). This model was calibrated and validated for a Base Year of 2014, but only for an area of north east Aylesbury sufficient to examine the potential traffic and environmental impacts of the ELR(S) scheme.

HFAG have consistently argued that this model is not adequate to look at the cumulative wider impacts of large developments in eastern Aylesbury (including Hampden Fields and Woodlands) across the whole of the town. The limitations of this model are particularly important, taking into consideration the major road schemes being considered by BCC and AVDC. This model was used to provide traffic forecasts for the Hampden Fields and Woodlands Planning Applications.

This traffic model is sometimes referred to, in correspondence, as the Aylesbury Traffic Model, which is really a misnomer. It is only calibrated and validated for an area covering about one quarter of the town.

Aylesbury Transport Strategy

As explained above, the evidence base used to demonstrate the effectiveness of the proposed orbital ring road strategy for the town (as set out in the Aylesbury Transport Strategy (ATS) and MM210 is not robust. No comprehensive origin-destination data collection has been undertaken to quantify the amount of through traffic. "Through traffic" can be defined as traffic that has both origin and destination outside the built up area, but is currently using Aylesbury's urban road system. Past studies for Aylesbury have concluded that this volume is, in fact, relatively modest.

TPP note with interest that the "South East Aylesbury Link Road (SEALR) Consultation Summary Document May 2018" remarks that, as part of the SEALR project, BCC is undertaking "a routine update" of the "Aylesbury Strategic Transport Model". Clearly a WebTAG-compliant model is required by DfT to underpin the full Business Case needed to release funding for the SEALR from Government. The opportunity is being taken to develop a new traffic model in order to support the planning application. Whilst this update refers to a local model focussed on Aylesbury, as opposed to the Countywide Model, it serves to highlight the limitations of the tools currently available to BCC and on which the transport assessment of the Draft VALP has been based to-date.

Regarding the ATS, the feasibility of introducing bus priority measures and park and ride services on the radial routes - Primary Public Transport Corridors (PPTC) - after the orbital roads are completed, has not been demonstrated. Therefore, the ATS is not truly multi-modal (or integrated) as would be expected for a Garden Town under MM031 and modified policies D1 and T1. Consequently, the true traffic impact of the Draft VALP land-use proposals appears to have been underplayed.

Effectiveness, Viability and Deliverability

According to the National Planning Policy Framework (NPPF) 2012 (Paragraph 154) "*Local Plans should be aspirational but realistic...*"

NPPF also states (Paragraph 173)

"Pursuing sustainable development requires careful attention to viability and costs in plan-making and decision-taking. Plans should be deliverable."

NPPF Paragraph 177 states

"It is equally important to ensure that there is a reasonable prospect that planned infrastructure is deliverable in a timely fashion."

The orbital roads strategy, which forms the largest part of the ATS, would involve completing an outer ring road around the town between 2019 and 2033. The ring road would involve construction of seven new link roads plus the Stoke Mandeville Bypass. The required capital investment is extremely large and the private and public sources of funding currently highly uncertain.

The recent High Court Judgement of Sir Duncan Ouseley with respect to the Manor Oak Homes site at Stoke Mandeville is important in this context. Ouseley was considering the Planning Inspector's dismissal of an appeal by the developer following a non-determination by AVDC. Ouseley upheld the dismissal and he states:

Paragraph 1: *"The appeal under S288 of the Town and Country Planning act 1990 concerns the approach which an Inspector should adopt to the granting of planning permission where highway infrastructure, necessary to make the development acceptable, depends in part on contributions from other developments, as yet without permission or contributions secured by agreement. It arose here in the context of an agreement on highway issues between the developer, highway authority and development control authority, which all three regarded as sufficient to dispose of the highways objection. The inspector did not accept that agreement as sufficient to deal with the highways issue because of the other as yet unsecured contributions."*

Paragraph 48: *"I am not persuaded that there is any deficiency in the reasoning of the Inspector. There is no basis for supposing that she did not accept the evidence about the status of the other sites, or did not accept that BCC regarded the prospect of the development of the other two sites, along with the S106 agreements as sufficiently certain for it, and the District Council, to withdraw its highways objection in the light of the DoU (Deed of Undertaking). No elaborate reasoning was necessary for her conclusion. She simply did not regard those factors as sufficient to persuade her that the necessary highway infrastructure would be in place to cope with the traffic impact of the development. That was sufficient."*

We note that typical construction periods for small and medium-sized road schemes are 2 to 3 years. This excludes all of the detailed feasibility work, the necessary planning processes and funding bids to the DfT and other bodies. Hence, the deliverability of orbital roads strategy and the associated junction improvements is highly questionable. Most certainly, the feasibility of delivering four of these major road schemes by 2021 (MM210) must be seriously challenged.

Consistency with National Policy

NPPF Paragraph 162 states that

"Local planning authorities should work with other authorities and providers to:

- *assess the quality and capacity of infrastructure for transport, water supply, waste water and its treatment, energy (including heat), telecommunications, utilities, waste, health, social care, education, flood risk and coastal change management, and its ability to meet forecast demands; and*
- *take account of the need for strategic infrastructure including nationally significant infrastructure within their areas...."*

However, the land-use plans in the current Draft VALP appear not to have been integrated with the plans for the Oxford to Cambridge Expressway, which was being assessed by the National Infrastructure Commission, and is now being studied by Highways England. Therefore, the VALP, which looks forward to 2033, largely ignores the transformative impacts that such a road scheme could have on accessibility in this area.

Conclusion

The transport strategy for Aylesbury, as outlined in the Draft VALP, has not been adequately justified for the following reasons:

- Evidence Base and Justification - there can be little confidence in the evidence base (principally prepared using the Countywide Traffic Model) as used by BCC to assess the traffic impacts of the proposed land-use changes and transport mitigation measures. The Countywide model fails to meet DfT WebTAG criteria. It is ultimately being used to assess multi-million pound transport infrastructure interventions (including a full ring road around Aylesbury). It is demonstrably not fit for purpose. This conclusion has been reached by two other major transport planning consultancies, in addition to TPP.
- Evidence Base and Justification - the planning and land-use assumptions used in defining the Do-Minimum or Reference Case, against which the traffic impacts of the Draft VALP were assessed, appear unreasonable.
- Effectiveness and Deliverability - the effectiveness and deliverability of the orbital roads strategy, which lies at the heart of the Aylesbury Transport Strategy (ATS) and requires significant investment, have not been adequately demonstrated.
- Effectiveness and Deliverability - the feasibility of introducing bus priority measures and park and ride services on the radial routes (PPTC), after the orbital roads are completed, has not been adequately demonstrated. Therefore, the transport strategy is not truly multi-modal (or integrated) as would be expected for a Garden Town.
- Effectiveness and Deliverability - because bus priority measures have not been modelled in detail, the true traffic impact of the Draft VALP land-use proposals appears to have been underplayed in assessing the Draft VALP and the ATS.
- Consistency with national policy - the land-use plans and transport strategies in the Draft VALP have failed to take into account the opportunities presented by the Oxford to Cambridge Expressway. The Government announced the preferred corridor for the Expressway in September 2018 and the scheme is being developed by Highways England.

Inspector's Interim Findings (29 August 2018)

In addition to the concerns raised above, a number of issues raised in your Interim Findings and relating to NPPF (2012), still do not appear to have been addressed by AVDC and BCC. These are summarised below.

- Paragraphs 50 and 51: TPP have raised the issue that reasonable alternatives should have been considered before an appropriate transport strategy is selected and incorporated into the Local Plan. According to NPPF, to be considered sound

the following condition must be satisfied: "...the plan should be the most appropriate strategy, when considered against the reasonable alternatives, based on proportionate evidence." (para 182).

- Paragraph 51: Presumably the comparison of alternatives would be expected to include a range of possible solutions with consideration of the relative environmental impacts of the alternatives. With respect to the ATS no such evidence has been provided by AVDC or BCC.
- Paragraph 52: your comment here, with respect to the Woodlands Development and the Eastern Link Road, regarding the impacts on the flood plain, serves to emphasise the importance of following procedures before drawing up a Local Plan.

In summary, the Draft VALP, as modified, contains a range of land-use and transport proposals which, if implemented, would have a transformative impact on Aylesbury and the wider District. As your Interim Findings highlighted, the VALP should not be considered "sound" until the transport issues outlined above are adequately addressed. It follows that a considerable amount of additional technical work and public consultation is required to meet with the requirements of NPPF.

Yours sincerely

David Thompson
Transport Planner
For Transport Planning Practice Ltd

dir: 020 7608 0006
mob: 07824 622197
email: David.thompson@tppweb.co.uk