**Problems with the traffic modelling for Canterbury District’s Local Plan**

**Dr Geoff Meaden**

**Question “f” - Have the overall transport implications of the Local Plan been adequately assessed, including any traffic congestion effects?**

Given the importance of traffic modelling to the successful outcome of spatial planning and thus of the local Plan, and because I am no doubt speaking on behalf of various people and groups, I trust that you will allow me to make a fairly detailed statement here.

If the people of Canterbury were asked which single thing they would like to emerge from the LP it would a resolution of the Traffic congestion. For local people this is easily the most pressing spatial concern. The inquiry has, of necessity, spent about 6 days sorting out housing concerns so I hope that we can give this matter of transport the attention that it deserves. What we do not wish to face is 15 more years of a city in gridlock.

At the outset I wish to say that the Canterbury Society thinks that the Council, through the Local Plan, has made some considerable and welcome attempts to address traffic-based problems. So, to answer question e) we sincerely believe that to a major extent the Canterbury District Transport Strategy does provide an appropriate basis for the LP. However, the optimal functioning of a transport system depends nowadays on information gained through traffic modelling, and it is this subject that I wish to address.

Although I have some academic and perhaps nerdy interest in spatial modelling, I am not a qualified traffic modeller, so I will not comment directly on the methodology of the modelling per se. I simply wish to comment on the analysis of the results obtained. It is important to note that what I say here about traffic modelling will have repercussions throughout the Local Plan and the DTS.

In their evidence on traffic modelling the Council has presented three reports produced by Jacobs (CDLPs 8.1, 8.7 and 8.8). I do not need to say much about docs 8.7 or 8.8 because these simply describe how a base traffic model for Canterbury District was established and how it was validated. But there are three important points that I should mention:

1. For the purpose of the Jacobs modelling, and the subsequent Amey modelling, Canterbury District was divided into numerous zones. The zones for the actual city of Canterbury were quite detailed but for the rural areas beyond and for the Whitstable and Herne Bay areas the zones were very generalised. This has the affect of producing modelled output that cannot easily be compared across the District. So those interested in the Herne area will find that there modelling is really quite crude.
2. Cycling and walking were not included by Jacobs in their modelling. For a District Transport Strategy and a Local Plan that seeks to resolve congestion problems significantly through the large scale promotion of cycling and walking this is a very important omission. CDLP 8.7 says “Slow modes (cycling and walking) can be fully incorporated in the model at a later date if required but were not in the original scope of work.” (Page 1.1). But cycling and walking have never been fully incorporated into any of the VISUM modelling, and again this omission greatly diminishes the value of the modelling.
3. The veracity of the data inputs must be seriously challenged. We have very little detail on the data because the reports pretty much skip over this, but we do know that some of it is at least 15 years old having been secured from the 2001 census and apparently not all of it has been updated. Through reading around this subject there are constant reminders about the importance of furnishing traffic models with timely data. We have, through freedom of information requests, tried to secure more information on the data but have been turned down because of the volumes of data that might need to be extracted. Whilst we have some sympathy here, our requirements were for rather basic information, but still they were refused by KCC Highways.

For reasons that I will explain in a minute, I need to take you briefly through our concerns with the main Jacobs modelling (CDLP 8.1). They modelled three spatially variable development scenarios and those three options are shown in the first of my handouts. If you look at the differences between the options it is clear that Option 1 is the option that largely reflects that being preferred by the Council. Both of the other two options use development scenarios where the SHLAA sites are more plentiful and are more dispersed throughout the District. From what I know about spatial modelling, for transport optimisation a more dispersed pattern of developments usually results in a more efficient transport network.

As I read through the CDLP 8.1 it was clear that in marginal terms the more dispersed development options were indeed achieving better results, so imagine my surprise when I reached the Conclusion (CDLP 8.1 - page 31) and read that “Option 1 currently appears to have a marginally better performance than the other options...” How could this be? Well if you now turn to my second sheet (which is based page 30 of the CDLP 8.1) you will see that Jacobs has produced a summary of the findings of each option. And you can see that, for Option 1 they have selected to highlight one neutral and five positive points, whereas for option 2 it is one neutral and five negative points and for option 3 it is one neutral and four negative points. No wonder Jacobs were able to recommend the Option that most closely resembled the Council’s preferred Option.

But then I thought that I ought to check this in a slightly more objective manner – and we get a bit nerdy here. If you turn back to the first sheet you will see a table. Here I have listed 13 variables taken from the published Jacobs data – these were in fact all the variables that could be fairly (comparably) used. To the right I have shown for each Option the raw score for that variable, plus a W, M or B indicating whether that variable was worst, medium or best for the variable (in terms of traffic conditions) and appended is also a score of 1, 2, or 3 according to the variable’s ranking. This method may seem rather crude but it is the only way of comparing lists of variables whose units of measurement are not the same. At the foot of the Table are total scores for each option. You will note my suspicions were confirmed and Jacobs results strongly appear to be a fabrication of the truth. So, although there is not a big difference between scores, Option 1 is shown to be the least preferred development scenario.

It might not come as a surprise to most of us that, soon after this Jacobs report was published, their contract to carry out further traffic modelling for both KCC and the City Council was not renewed. And indeed sir, soon after then the Council whitewashed all mention of the Jacobs work from their DTS, LP and their infrastructure Delivery Plan. So, the Council might say - why should I have mentioned the Jacobs modelling at all. This is for four reasons:

1. Some of the Council’s documentation still refers to this Jacobs modelling.

2. It is apparently the only spatially based modelling that has been attempted and which has been put before this Inquiry,

3. The modelling gives an indication that a more dispersed pattern of future developments would be preferable, and

4. The data from this modelling forms a large part of the data-base for the more recent Amey modelling.

At some point in 2013, with the Local Plan and the District Transport Strategy due (or perhaps overdue), the Council must have been in something of a stressed situation when Jacobs disappeared from the scene. They had no credible traffic modelling evidence, and they had to come up with something else rather quickly.

So, Amey was then contracted to step into the breach. However, according to a meeting I had with CCC and KCC, at which I wished to question what was going on in respect to traffic modelling, there was not time for Amey to carry out what would represent “valid traffic modelling”, so all this company did was to take over the now aging Jacobs data, update it in places and do traffic modelling that only looked at one spatial development option, i.e. the one that pretty well matches, though with many minor variations, the present preferred development option. For this one development scenario they created a base model, then they modelled what they called a “do minimum” scenario, which only modelled future developments that were already in the pipeline, and finally they modelled a “Do something” scenario that included all the developments that were planned to come forward in the future, including a raft of infrastructure measures plus employment and retail development proposals.

However, all we now have for Canterbury District in respect of traffic modelling is some Jacobs output that marginally shows, in traffic terms, that a dispersed pattern of development would be preferable, and the Amey modelling output that only shows what the traffic implications would be of the present preferred option, plus a “Do Minimum” option. I will examine some of the results of this modelling output when we look at the inspector’s next question.

The present District Transport Strategy (CDLP 8.6) has been carefully worded so as to appear that the VISUM modelling (pages 30 to 32) has been carried out comprehensively. But it completely overlooks the fact that it has no answers to the concerns of the people of Canterbury. Thus we have no idea about how the present development scenario would compare with others – although we do have a very strong idea (from Jacobs) that the present development option would not best resolve traffic congestion. To illustrate these faults with the modelling, last Thursday I jotted down three statements that Mr Moore made:

Firstly, “We hope that our developments will keep the traffic levels as they are at the present time”. Well, because of data deficiencies and a lack of proper modelling we have no idea of what present traffic levels are. But we do know that there is constant traffic congestion and it is not getting any better.

Secondly - “Where are the best sites in terms of sustainable travel?” Again we cannot answer this question because valid spatially-based modelling has not been done. We have no information on journey times for a variety of development options. We cannot pinpoint which type or size of development scenario might best minimise traffic congestion. We cannot identify pinch points in traffic flows. We have no idea how the present development sites might compare with other configurations

Thirdly - “Our traffic proposals will mitigate against development in the wrong places.” Well again how will the Council know this? Where is the objective evidence? How can the Council know where the wrong places are?

This leads me to a further point. I have made a number of requests to the Council in an effort to sort out this transport modelling problem, but they seem oblivious to the fact that a problem exists. I have made pleas at Council meetings, and made various comments in response to both the District Transport Strategy and the Local Plan. Each time my pleas have been shrugged off. The third sheet I gave out gives examples of this. These are consultation comments I made in response to the District Transport Strategy. If you look at comments 672, 673 and 674 you can see that the response given by the Council to these are all the same “Alternative development scenarios were modelled in a previous options report.” I can only assume that these responses are referring to their whitewashed Jacob’s Report, and as I have demonstrated, this modelling shows that to configure development approximately as is now being considered is the worst option. There has been no other modelling put before the Examination. So, the Council are claiming that the preferred option for strategic developments in Canterbury district is that derived from the Jacobs modelling , i.e. Option 1, when in fact there is no objective evidence for this.

Finally - it is important to see how the modelling as carried out to-date measures up to NPPF guidance:

* Paragraph 34. *Plans and decisions should ensure developments that generate significant*

*movement are* ***located where the need to travel will be minimised*** *and the* ***use of sustainable transport modes can be maximised.”*** It is impossible to work out those locations where "travel will be minimised" or "transport modes can be maximised" unless a number of development scenarios have been modelled. All other Local Plans that I have looked at contain a range of spatial modelling.

* Paragraph 154. “*They (Local Plans) should address the* ***spatial implications*** *of economic, social and environmental change”.* The spatial implications of this single development scenario have only been addressed with respect to actual terms rather than relative terms, yet in planning exercises it is mainly the relative implications that are important.
* Paragraph 158. “*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”.* In transport terms this Plan is not based on up-to-date data, nor is there adequate evidence on which reasonable decisions can be made.
* Paragraph 182*. To be found sound the plan must be justified, thus “the plan should be the most appropriate strategy,* ***when considered against the reasonable alternatives****.”* With respect to transport and transport efficiency and the locations of proposed developments, the draft Local Plan has no evidence that reasonable alternatives have been considered.
* Further to these examples of NPPF guidance that have not been followed, the inspector, and the Council will be aware that there are a range of Transport Planning Practice Guidance Notes, that prescribe a range of similar strictures within which the Local Plan should have been made, but which have not been adhered to. I will not repeat them here but they have been included in our written submissions.

In conclusion, the modelling carried out for the Council by either Jacobs or Amey has provided evidence that the present strategic developments, in conjunction with some of the infrastructure, will significantly increase road traffic in many parts of the District. This is to the extent that congestion is unlikely to be reduced even with the adoption of many of the sustainable transport ideals. Modelling has been based on what is now very outdated data, it has not effectively included cycling and walking and it has been carried out through the District at variable levels of detail. No spatially-based comparative modelling has been carried out so the Council has no true ideas how alternative development scenarios might affect traffic flows, travel times and potential congestion. This modelling fails to live up to the NPPF criteria of being positively prepared, justified or effective and we have thus demonstrated that traffic modelling is presently inadequate and both the DTS and the LP are thus unsound.