

AREA ACTION PLAN PUBLIC EXAMINATION MARCH 2009
Response of TAG to questions raised by the Inspector for discussion
Appendix F2 reply from Colin Buchanan Consultants 10 02 09

Dear Mr Phillips

I refer to previous correspondence on highway matters and your request for responses to various questions.

The following shows your questions in ***bold and italic*** and the responses in plain type.

1. Surveyed Flows

What were the surveys used by the Consultants?

The surveys used were turning count surveys.

When were these surveys carried out (dates, period of time etc.)?

At what locations?

Surveys were conducted on 8th September 2008 between 07:30 and 09:30 in the am peak and between 16:00 and 18:00 in the pm peak.

The surveys were conducted at the following locations:

Junction	Description
A	A585 / Dock Street Roundabout
B	A585 / Denham Way Roundabout
D	A585 / Fleetwood Rd (Eros) Roundabout
F	A585 / Bourne Way
G	A585 / West Drive

The remaining junctions used historic survey data, these are:

Junction	Description	Year
H	A585 / B5412 Victoria Road / Morrisons	2007
I	A585 / B5268 Fleetwood Road / Norcross Lane	2006
J	A585 / B5412 Skippool Road	2007
K	A585 Mains Lane / Shard Road	2007
R	B5268 Fleetwood Road North / Bourne Road	2004
S	B5268 Fleetwood Road North / West Drive	2001
U	B5268 Fleetwood Road North / B5412 Victoria Road	2001
AA	A585 Mains Lane / A586 Garstang New Road	2007
AB	A585 Garstang Road / Windy Harbour Road	2007

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Were queuing times and number of cars queuing included in the survey?

No queuing surveys were conducted

2. *Growthed*

By what formula were the surveyed data growthed to 2008?

The surveyed data was growthed using the National Road Traffic Forecasts (NRTF) central growth factor. The growth factors used are:

Year	NRTF Central Growth Factor
2001 - 2008	1.1209
2006 - 2008	1.0308
2007 - 2008	1.0153

3. *In the computer studies on the junctions, calculations are made for Base Flows (surveyed plus consented) and for Base plus Robust (to include development proposals) Why is there no information given for the present situation (ie. in the surveyed data) e.g. queuing times at junctions?*

Surveyed plus consented flows were used as the base situation as this defines what the traffic flow through junctions will be in the future without any further planning consents. This provides an assessment scenario against which the impact of new development consents can be considered, allowing a comparison of with and without scenarios. The basis of the analysis was not to audit queues, but to ensure the throughput of the junctions was increased to accommodate the development proposals. Eg. In adding 100 vehicles to four approaches to a junction, there would be junction improvements to that junction to ensure the throughput is increased by 100 vehicles at each approach. This ensures there would be no increase in queues as a result of the developments.

4. *Change of flows between junctions.*

Why do the flows differ between entering a segment of the A 585 and leaving that segment?

e.g. Skippool – Shard Lane am going south (see Fig 1A)

leaving Skippool Junction on the A 585 S = 1302

arriving at Shard Lane from the A 585 N = 888

What happened to the 400+ vehicles?

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This happens on all the road segments included in the survey.

There are differences in flows entering and leaving segments on all segments between junctions because:

- not all the surveys were conducted at the same time. Therefore there would be some differences in vehicles leaving one junction and arriving at the next.
- there are also gains and losses between junctions through traffic turning in and out of side roads/accesses or stopping between junctions.
- the number of queuing vehicles between junctions would vary as you go deeper into the peak hour as the length of queues between junctions increases. i.e. as the queues increase between the junctions they are not recorded as arriving at the next junction within the same survey period.

This is a common situation when dealing with large networks and hence the focus in this study is not to deal with queues on approaches to the junction, but to ensure the junction capacity is increased in order to increase throughput by a level defined by the impact of the development on that junction.

In the scenario referred to here, there was an error in the data input at the Shard Road junction, which gave a large discrepancy. This was identified shortly after the public consultation exercise started and has now been rectified and the difference between traffic leaving Skippool Roundabout and arriving at Shard Road is now considerably smaller.

It should also be noted that the flows for Junction K (Shard Road) have been transposed on Figure 1A incorrectly. The table for Junction K adjacent to the link diagram (bottom right hand side of the diagram) is correct however the larger table showing flows at Junction K in the middle/top right hand corner of Figure 1A has the road names incorrectly labelled. Reference should therefore be made to the link diagram when referring to Junction K.

5 What is a PCU? How was the % of HGVs (c 11-12%) factored in to the calculations of delay and queuing times at the junctions?

A PCU is a 'passenger car unit'. Rather than undertake individual assessments of different vehicle categories, it is standard practice to standardise vehicle into a common unit. To convert to PCU's, each vehicle type has a factor applied to it equivalent to that set out below. So for example a surveyed HGV would be represented in the analysis as 2.3 PCU's and a car/light goods vehicle would be represented by 1 PCU.

Vehicle	Bicycle	M/c	Car	LGV	Bus	HGV
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Rate	0.2	0.4	1.0	1.0	2.0	2.3
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So a right turning HGV would typically have the same impact on the capacity of a junction as 2.3 cars/light goods vehicles.

6 Saturation flow on exits.

Was it assumed that there would be infinite saturation flow on the exit link from all junctions? If traffic was queuing back from one junction, what affect would that have on the previous one?

The queuing on the A585 junctions is quite significant and frequently queues will start from one junction and travel through a number of junctions up stream. Again, this makes consideration of junction capacity more appropriate than actual queue lengths. So for example if cars queue from junction A towards an upstream junction B, depending on the time of day and as a result of daily variations that queue will vary and indeed at times may extend the full length between the junctions. Designing to mitigate for such daily variations is difficult based on queue lengths. A robust position would be to say if you add 100 vehicles as a result of development on the link between junction A and junction B you will on the assumption junction A operates at capacity increase queuing between the two junctions by 100 vehicles. If however, you increase the capacity at junction A by 100 vehicles there should be no increase in queues. You would similarly have to increase the capacity of junction B so that you don't increase the queuing between junction B and C, and so on.

7 *What formula is used to calculate the number of cars leaving a new estate during peak am times and returning during peak pm rimes? How is this formula justified?*

When a development is proposed, a vehicle trip rate has to be established. This is done by finding similar developments around the Country which are comparable to the one proposed. A widely recognised database of development sites called the TRICs database was used to identify comparable developments for which traffic flow data was available. This database contains information on similar developments throughout the country that have been surveyed to determine their trip rates. We then use the database to find an average trip rate and 85th percentile trip rate (Robust) that is suitable for developments proposed here. Once those trip rates are agreed with the HA/LCC as highway authorities the trip rate is used to calculate how many trip the development will create.

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8 Why was no consideration given to

A Traffic to and from the Waste processing Plant?

B Traffic arising from the proposed developments in North Blackpool (in Bispham and along Faraday Way) which will feed into the Norcross Roundabout.

The study considered the impact of traffic in the peak hour. The impact of traffic from the Waste Processing Plant was not considered material in the peak hour. These are also consented developments which would be included in the base. So for example at a junction the total traffic flow may be 2,000 vehicles and the proposed AAP developments added an additional flow of 100 vehicles. Given that junctions like Norcross Roundabout operate in the peak periods at capacity, the 2,000 vehicles actually defines the capacity of the junction and not the demand. When demand exceeds the capacity and you have queuing at the junction. The study in mitigating for the AAP developments has sought to increase the capacity of this junction by 100 vehicles. In doing so the AAP developments would not add to the queues as explained above. By adding additional consented developments as referred to above the effect would be increased queuing as a result of these non AAP developments. The AAP would then through adding capacity to the junction of 100 vehicles would return the junction back to operating conditions which would reflect a situation should the AAP not have been implemented. The addition of further consented trips would have therefore have little effect on the mitigation measures identified in the AAP.

9 Why are the GP Practice and the Care Home included under Consented Schemes?

There were planning applications for both developments at the time of the transport assessment and was considered that it was likely that they will receive planning permission. The Care Home has received outline-planning consent but the PCT has recently withdrawn its planning application for a health centre.

For the purposes of this study they were therefore included as consents. These developments were considered to be local facilities, which have little impact on the critical junctions and therefore would have little impact on the STS outcomes.

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10 Why under proposed development is a District Centre assessed for traffic generation but not a Local Centre so that comparisons can be made? The computer output was generated well before the Addendum was produced.

The Council considered representations on the submission documents including an alternative proposal for a district centre and taking into account the findings of the Fylde Coast Retail Study. It was concluded that there was a planning justification for the proposed district centre. The Council proposed a change in the Addendum for a district centre.

11 Where is all the data analysed and presented?

The analysis of the data is contained within the Sustainable Transport Strategy and the supporting technical transport documents are available for viewing on the Council's website and at the Civic Centre

12 This is stated to be a draft analysis. Does this imply that the results are still subject to confirmation? Also many runs are shown as preliminary. Does this imply that further refinement is required? Has the HA and LCC commented on the methodology used and the output generated?

The STS is a fluid document that will adapt to changing circumstance and will be managed by the Steering Group.

The HA have expressed some concerns in their representation on the Addendum and following their further input the document for the hearing.

13 Do the computer generated figures take into account at any stage the proposed modifications to the junctions? Have these modifications been approved by the HA and LCC?

Proposed junction modifications have been defined in the STS. The outputs from the figures have been used to define the scale of highway improvements. The figures have been prepared in discussion with the HA and LCC. The HA have made further representations and are seeking additional junction assessments. These have been presented to the HA and a formal response on their acceptability to the HA is awaited.

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I do hope that this is of assistance to you.

Yours sincerely

Philippa Clarke