

# Robert Mansfield's Technical Report on the A31 Brightwells Access Works

Farnham town centre is about to undergo a large amount of building and redevelopment work starting this autumn. Planning permissions have been agreed after much debate as far as the Brightwells scheme is concerned and with less for the Woolmead redevelopment.

As part of the Brightwells scheme it was agreed that there should be a temporary bridge from the A31 Farnham By pass into the site across the River Wey. To construct this trees have already been cut down adjacent to the Bypass, and the next stage will be the construction of foundations and the bridge itself.

The most recent amendment to the planning permission is that this temporary bridge would be 2 lane wide to allow easy and safe access in and out of the site with no construction traffic queuing on the eastbound Bypass.

Information at the Public Enquiry indicated that the bridge would take 12 to 14 weeks for construction and then another 8 to 10 weeks to dismantle at the completion of the project. In order to construct this bridge it will be necessary to close one lane eastbound on the A31. I have not been party to the traffic management arrangements but would expect:

## The problems

1. Closure of the lane from the Firgrove Hill Bridge through the Hickleys Corner traffic signals to beyond the construction site for 24 hours during the two periods.
2. Some readjustment of the traffic signal phasing at Hickleys Corner. There can be only a small change in timings because of the high existing flows from Station Hill and from the Town Centre.
3. The major problem will be the capacity of the traffic signals at Hickleys Corner. These operate on a sophisticated program which minimises the overall delay to traffic on all approaches. Recent counts by traffic engineers for the developers gave an am peak flow eastbound entry flow on the A31 of 1,361 vehicles per hour (vph) and an eastbound exit flow of 1,811vph. This latter includes the traffic exiting South Street onto the Bypass eastbound and that exiting Station Hill onto the Bypass eastbound. The mid morning flows are nearly as high.
4. The maximum flow possible on a single traffic lane is about 2,400 vph, but this is with no obstructions or stop-go conditions.
5. The present signal timings are variable during the day but approximate to
  - Green: for A31 35 seconds; South Street 22 seconds; Station Hill 22 seconds;
  - Intergreen: 3 times 3 seconds so 9 seconds.Full cycle time is usually therefore 88 seconds  
Hence the traffic green time for the A31 eastbound is 35 divided by 88, or 40% of the time.
6. The maximum capacity for the single lane eastbound lane will therefore be 40% of 2,400 vph or 960 vph.  
The present 2 lane flow is 1,361 vph and from observation that is near to capacity. Capacity is defined by whether all vehicles get through a junction within the first cycle.
7. The junction already operates at very nearly full capacity and it is not possible reduce this by 41% (1,361 – 960 divided by 960) without very serious consequences.

8. Some longer distance traffic will divert to other routes, A3, M3 etc but much of the traffic on the A31 is local and long delays, queues and frustration for drivers will be common.
9. It is not sensible to estimate how long the delays will be but many people will be aware of long delays whenever there is one lane closed for grass cutting and this is always carried out outside the peak periods. Delays of 20 or 30 minutes are not uncommon.
10. Delays on the Bypass always have an immediate effect on the town centre. Gridlock has occurred recently when there was only a single lane for A31 eastbound traffic through the Shepherd and Flock traffic signals.
11. I would expect town centre gridlock to occur throughout the day.
12. Traffic flows from Station Hill onto the A31 should be similar to that at present but this assumes no change in the traffic signal timings and that the single lane A31 eastbound from Hickleys Corner is not congested. If the timings exiting Station Hill and South Street are changed from the present of about 22 seconds to say 20 seconds but maintaining the same 88 seconds cycle time, then the flow reductions would be 10 percent on these roads. The maximum flows on the A31 entering the junction would be 39 divided by 88 times 2,400 which is 1,063 vph. This would still be much less than the present traffic demand of 1,361vph by a factor of 28 percent. The increase of signal timing to the A31 would increase traffic flow by about 9.7 per cent.
13. In essence you cannot put a quart into a pint pot without an overflow. 'Overflow' in this case will be drivers seeking alternative roads around north and south Farnham, through the town centre, or a lack of trips into Farnham.

### **Mitigating measures**

It is late in the planning process to carry out any substantial measures, but there are a few which could assist.

1. Drivers should be encouraged by signing to enter and exit Farnham via Firgrove Hill and Longbridge.
2. New signage on the A31 and A325 stating: '**Major works will take place from date X to date Y on the A31 Bypass eastbound. Do not divert into town centre**'.
3. Signs on A31 and A325 stating: '**Town centre is for local traffic only and no through traffic**'. This should be controlled and implemented by number plate recognition cameras.
4. Construction of temporary mini roundabouts at the exit of Wagon Yard Car Park and the junction of Longbridge with Union Road as well as changes to the one way systems would allow Central Car Park and Wagon Yard Car Park users to leave Farnham without going around the gyratory or using Hickleys Corner.
5. Control of the construction timings so that major HGV movements from the Brightwells Development and Woolmead are not at the same time.
6. Any changes that result from the possible pedestrian priority scheme should be introduced only after the completion of construction of both sites.
7. All parking for construction vehicles on the Brightwells site must be within the site itself.
8. Finally even at this late stage it may be possible to construct narrow lanes in both directions on the Bypass and reduce the width of the central. This would allow 2 lanes eastbound but lane closures would be required to construct the new narrow lanes and to reduce the width of the central reserve. It would be expensive.

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9 May 2018