

Delays and the costs to businesses caused by the traffic lights at the Grove Lodge roundabout

By Stephen Cranford

At the recent meeting and presentation by Highways England at the Pavilion on October 28th, much was made of the “Cost Benefit Analysis” of the A27 improvements

No mention was made of the cost of all the current delays caused by the junctions in Worthing, notably the Grove Lodge roundabout. I have already presented many examples of evidence that the roundabout performs very much better with the lights off. A subway or footbridge for students has been cited as “too expensive”.

But what about the cost to our businesses and residents?

In order to calculate a provable sum, we need some data.

Traffic flow data is recorded by the Department of Transport, at key “Count points” around the country.

This link gives the data for West Sussex, and it gives you explanations of how the Average Annual Daily Figures (AADF) are derived. They also give a breakdown of the numbers of different types of vehicles.

<http://www.dft.gov.uk/traffic-counts/cp.php?la=west+sussex#26302>

To make it easier to absorb I have compiled the data in to a spreadsheet. I have included data taken at several count points from 2000 to 2015

- A27 High Salvington (near Swandean Hospital)
- A27/A24 Warren Road (Offington Corner to Grove Lodge)
- A27 Upper Brighton Road (Grove Lodge to Lyons Farm)
- A24 Findon Valley (near the library / Lime Tree Surgery)
- A283 Steyning bypass, near Wiston
- A259 Brighton Road, near the Aquarena

Of note is the fact that (in keeping with my own observations) is that the traffic count has decreased since 2000, for some routes (A27 Grove Lodge to Lyons Farm) the flow volume has dropped by 25%, others by around 10%. I suspect that this is traffic using “rat runs” or residential roads to avoid the main congested routes.

Taking the Grove Lodge junction as a case study – I have proven that the traffic lights typically increase the journey time by 3 to 4 times. This is backed up with traffic satellite data and video recordings which I have observed and created:

I produced this video in 2014 which showed journey times were around 3 times longer with the traffic lights operating.

<https://www.youtube.com/watch?v=ZWDrrLBN4ZI>

This example (more recently) shows delays caused by the junction.

<https://www.youtube.com/watch?v=QENAAjinJYM>

And a most extreme example, where one journey took around 38 minutes. (Represented in real time for the full effect.)

<https://www.youtube.com/watch?v=M4NUH5y7xAs&t=974s>

Last year, 2015, the average daily vehicle flow rate for the A27 on either side of the Grove Lodge roundabout is around 33,000 vehicles a day. Of those, around 20% are commercial vehicles ranging from Vans to HGVs.

Journey times caused by the traffic lights can be up to 40 or even 50 minutes at their peak.

To give a “figure” for a cost to businesses we have to obtain an hourly costing from various organisations.

The Freight Transport Association (www.fta.co.uk) were able to supply vehicle running costs for commercial vehicles ranging from 7.5 tonne rigids to 44 tonne artic. Light Goods vehicles (up to 3.5t) are rated at the lowest banding in the absence of a figure for them.

For cars, we can presume that some of the passengers are also working: Taking an assumption that 10% of the cars drivers are also working, and that they are earning the minimum wage (£6.70 an hour) 7 days a week we can put those figures in.

For buses I have assumed a running cost of £0.50 a minute.

So – for a **ten minute** delay the cost of waiting at the lights is

Total = **£39,114** per day for commercial vehicles alone.

Per (6 day) week for commercial and (full 7 day) week for passenger traffic = **£237,560**

Per month = just under **£1 million**

Per year = **£11.9 million.**

This figure doesn't include other implications: People who are late for work. People who are delayed getting to their appointments. They are held up getting home. These costs have not been measured.

The Grove Lodge traffic lights were installed in **2006**, so it is a fair assumption that the cost to businesses alone has been **£120 million pounds** since they were put in.