Appendix 3

Local traffic flows

Introduction

1. The purpose of this appendix is to provide some more detail of the data on the transport implications outlined in section 3 on the local highway network.

2. Unless otherwise stated the data presented in based on an analysis of the outputs from LTAM supplied to the Council in April 2022.

3. As outlined elsewhere the Council has a number of significant reservations about the transport modelling, in particular in relation to the scale of development. In therefore treats the results presented here, within the context of the limitations of any such model, as a minimum case – that is it would expect the actual impacts to be greater.

LTAM on the local road network

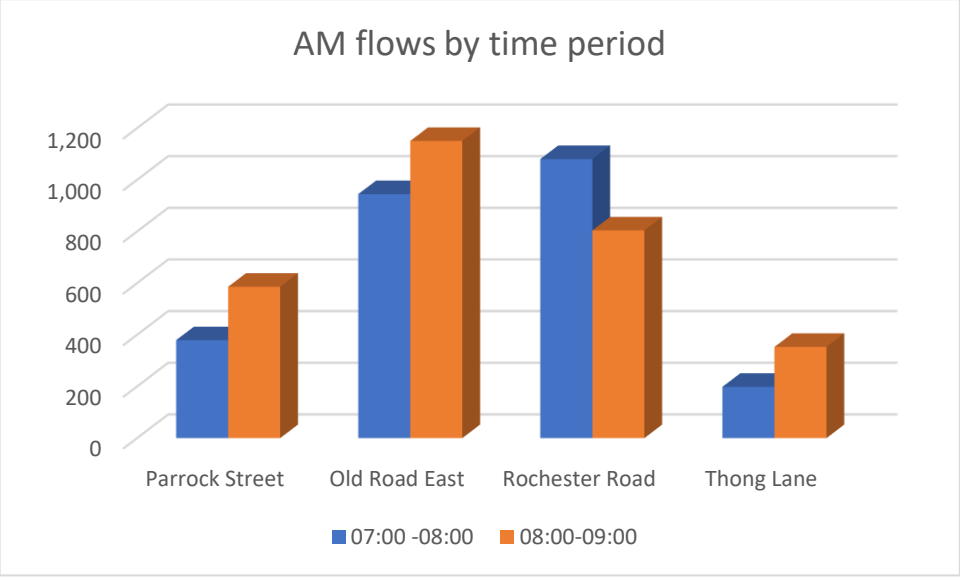
4. LTAM has been validated primarily on the strategic road network, and not in detail on the local road network. Its reliability at this level is therefore open to question at the local scale, which is not the prime purpose for which it has been built.

5. As a result of some work on possible cycle routes in Gravesend it is possible to compare 2016 as modelled by LTAM with 2022 as found by a two week survey by WSP. The question being asked is whether there any systematic differences granted that like is not being compared with like. It is a guide and not intended as detailed technical analysis.

6. Two questions for the 4 survey points in the Gravesend urban area were:

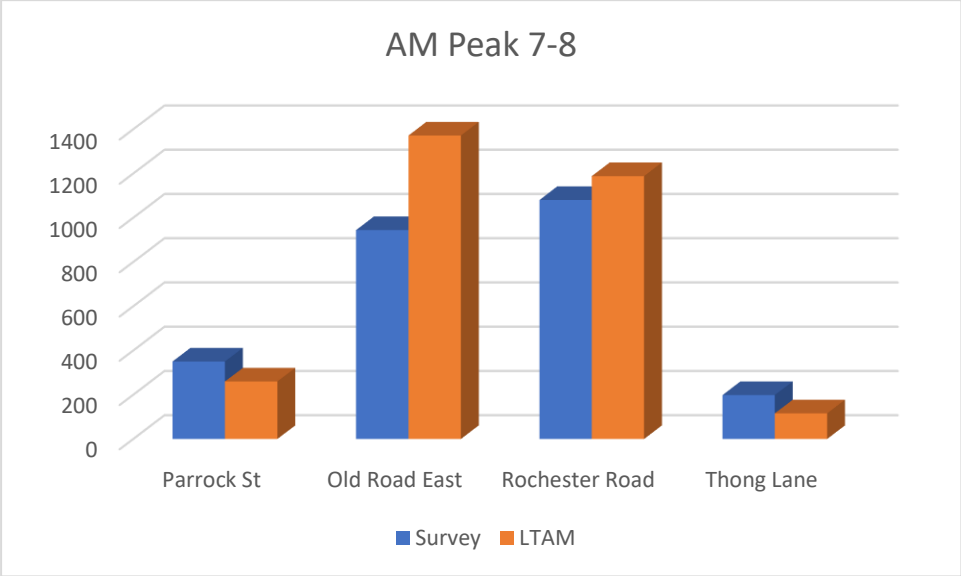
   - How does AM 7-8 peak hour compare with 8-9
   - Do the flows from the two sources show systematic variation

7. The LTAM figures were converted from PCU's to vehicles using the 2.5 conversion factor for HGV's, however due to low levels of them this is not that material.



8. The pattern between 07:00-08:00 and 08:00-09:00, as might be expected, is clear with greater flow between the later period. The exception is A226 Rochester Road which may be influenced by what is happening on the A2.

9. Comparing the flows between the 2022 survey and LTAM 2016 produces a consistent pattern, illustrated here by the AM peak.



10. For Parrock Street and Thong Lane, with the lowest flows, the survey data is below LTAM levels. For Old Road East and Rochester Road it is the other way round. Given the lack of detail of the network in LTAM it might be expected that there would be a tendency for LTAM to overestimate local roads, and on this evidence this would appear to be true for those links with a larger flow. This effect should less in the rural area as there are many less roads, and thus alternative routes. Some of the rural roads are very narrow and therefore physically incapable of taking much traffic.

11. To emphasise again this evidence is only being used to illustrate some general points and not a detailed comparison between LTAM and the survey.

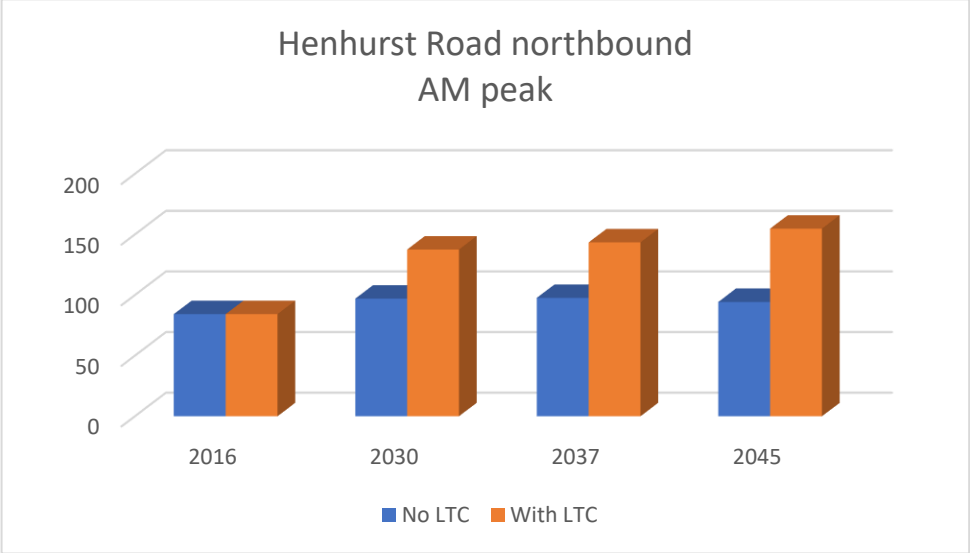
12. The following sets out some of the results of the analysis of LTAM data for 2030, 2037 and 2045 with and without Lower Thames Crossing. Given the limitations it is not possible to place too much weight on this, but it does provide a guide.

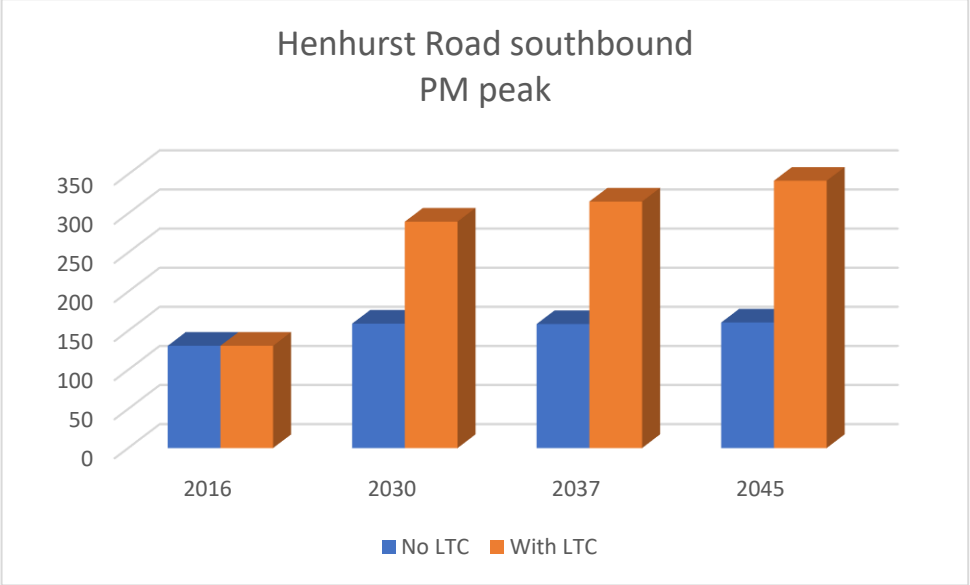
Local road flows south of the A2

13. This section looks at the changes in flows brought about by Lower Thames Crossing south of the A2. To keep length within bounds the focus is on the AM peak as the worst condition in most cases. As might be expected there are gains and loses. It needs to be kept in mind that that for small local roads a high shift in percentage terms may turn out to be low number of vehicles but if say the number of HGV's rises significantly that can be major issue in both environmental and safety terms. Unless otherwise stated figures are in PCU's. Note the vertical scales vary considerable and care needs to be taken in comparing graphs. References to growth and decline are relative to the no LTC world. That does not of course mean that there are no concerns over traffic levels now or in the future in a no LTC world. The focus is on changes brought about by LTC.

Henhurst Road

14. This leads south from the Marling Cross junction to Sole Street and Cobham. The route via Sole Street gives access off the A227 from Meopham for any traffic seeking east Gravesend, or the A122 when built, avoiding A2 Tollgate junction.

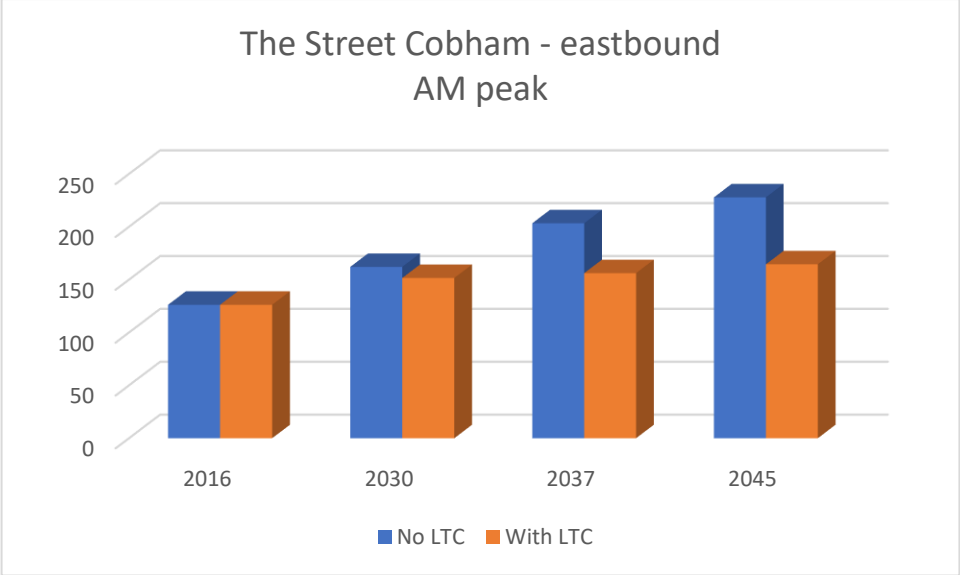


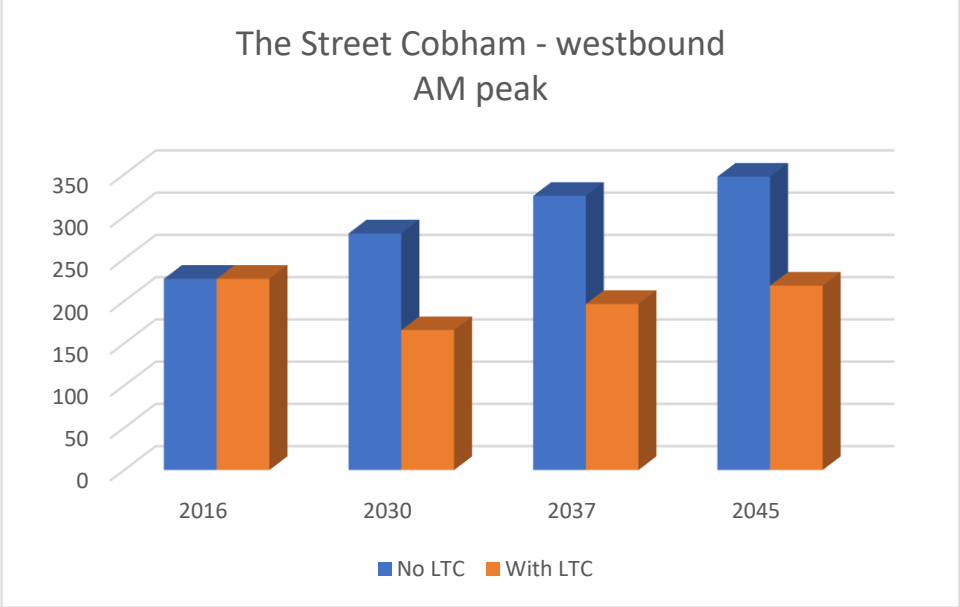


15. The pattern is clear of a significant increase in traffic with LTC. The proportion of HGV's increases from 1.8% to 4.5% in the northbound direction AM peak for 2045, and 3.7 to 7.7% southbound. This road, due to width once south of Jeskyns access, is not suitable for HGV's due its width and bends.

The Street, Cobham

16. This is the route through the conservation area of Cobham Village, which is very narrow with effective single line working. This is as a result of the limited gap between buildings and lack of forward visibility as well as traffic calming measures.

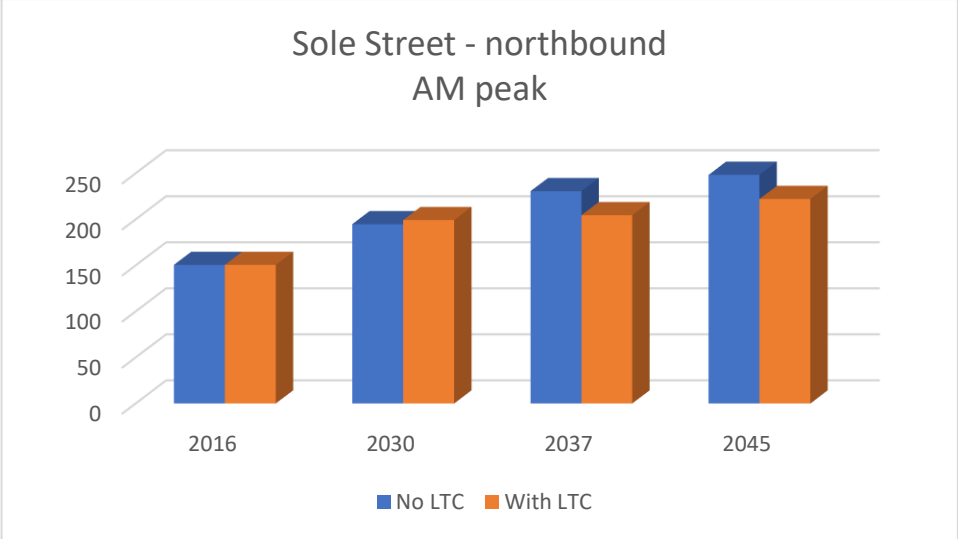


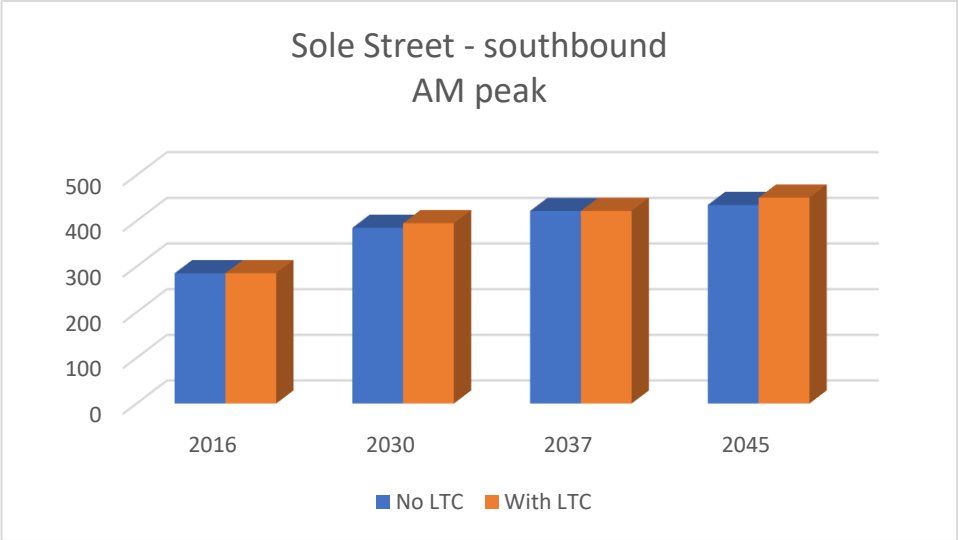


17. The clear message here is that there is a gain from a reduction in traffic, one of the obvious factors being the loss of the on/off slips on the A2 at the top of Halfpence Lane.

Sole Street

18. Sole Street is both the name of the street and the place and contains the railway station on the Medway Towns to Victoria line.

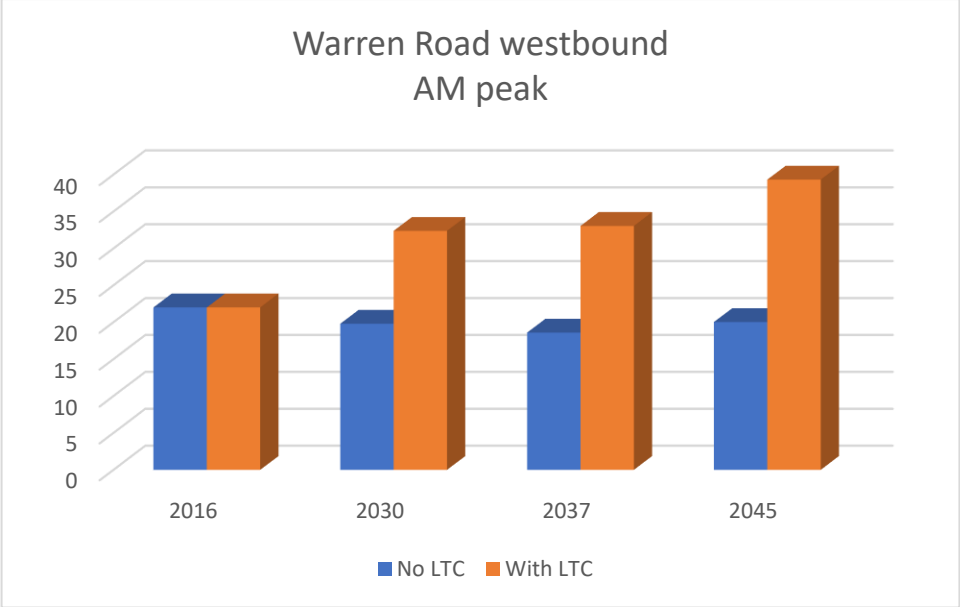


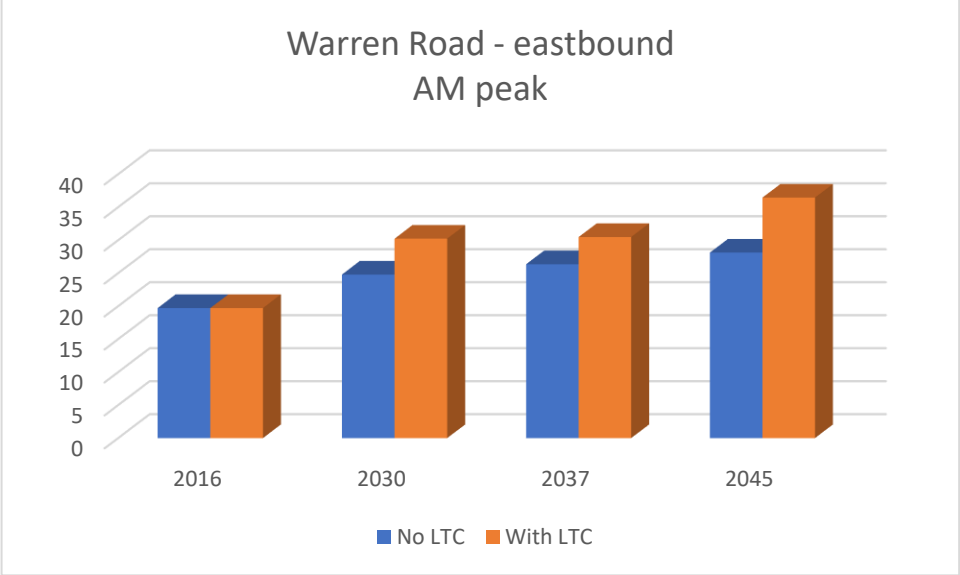


19. Southbound LTC does not seem to make much difference, but northbound there is a decrease. It has not been explored in detail but at first sight the flow on Henhurst Road does not seem to sit well with the flows on Sole Street and The Street. Northbound

Warren Road

20. Cobhambury and Warren Roads make up the link from A228 at Cuxton to Cobham, which then feeds either to the A2 via Halfpence Lane or via Cobham village. The link is of variable width and has a number of pinch points in Cuxton and under the railway bridge on Cobhambury Road.

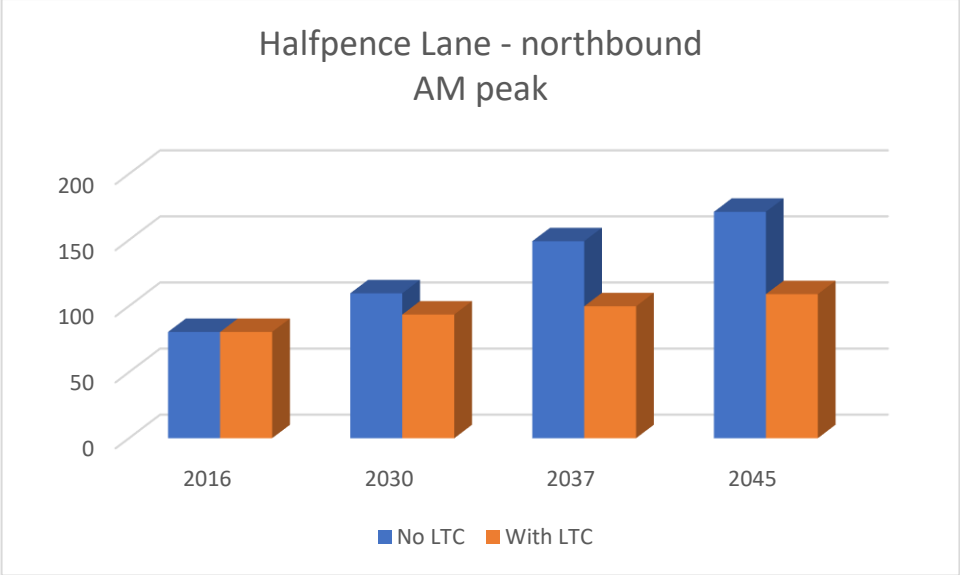


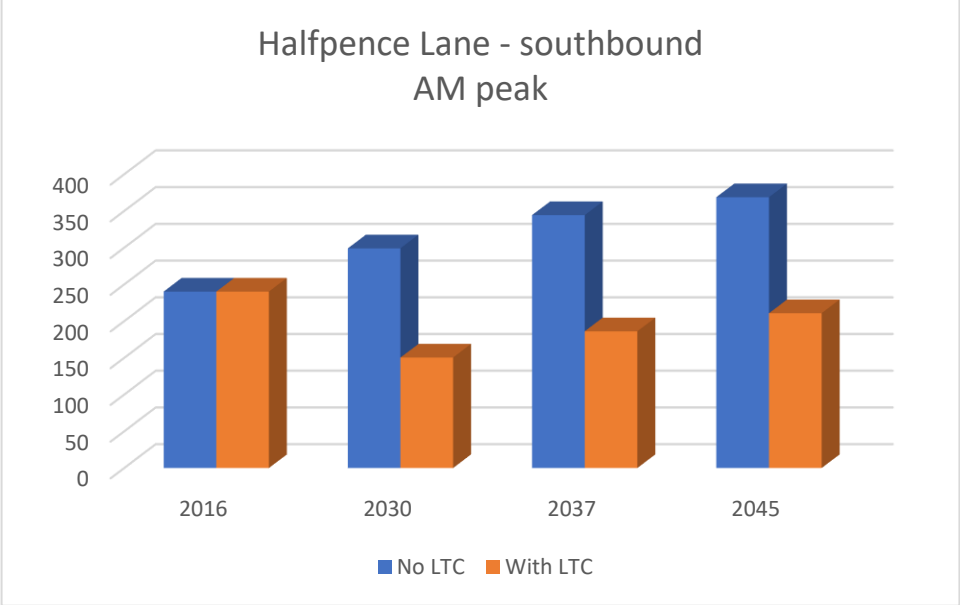


21. Both these graphs show an increase inflow, with westbound growing the most. The base is however low. This suggests this route is being used as an alternative if there is congestion on the M2/A2. In the event of congestion on M2 it might come under considerable pressure for A228 traffic seeking to avoid it.

Halfpence Lane

22. This is the link north from the east end of Cobham village to what is now the A2, but the LTC world will be the extended Darnley Lodge Lane linking to Marling Cross junction, unless continuing to Shorne via Brewers Road or joining the A289/A2 (local road).

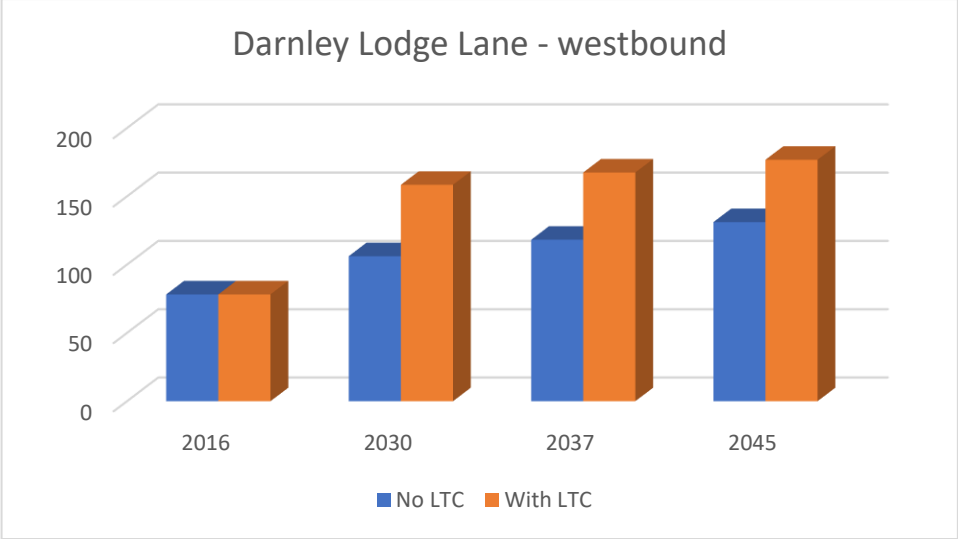


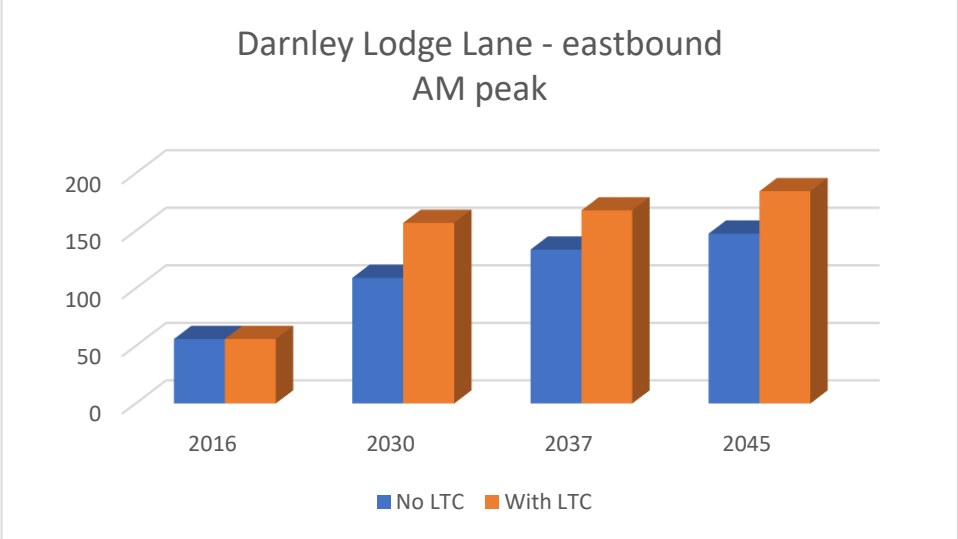


23. As can be seen the loss of the junction seems to result in a significant reduction in flow and therefore benefit.

Darnley Lodge Lane

24. The section of road included here is that from Halfpence Lane to Thong Lane, which allows comparisons to be made. In the LTC world it will link through to the Marling Cross junction, collecting traffic from various slip roads as it does so.





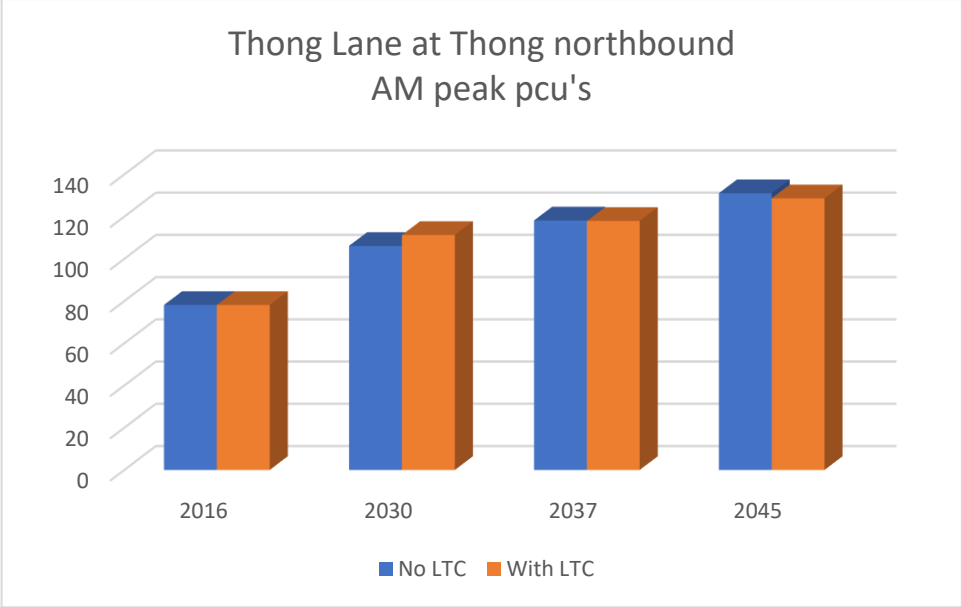
25. As can be seen there is an increase in flow, which is no doubt in part the result of drivers avoiding the restrictions of Cobham Village and using this as a more commodious route. When HS1 (CTRL) was built this was designed to remain a narrow country lane, but the pressure of traffic has forced into be widened. It is in the event of A2 congestion a route into east Gravesend via Thong.

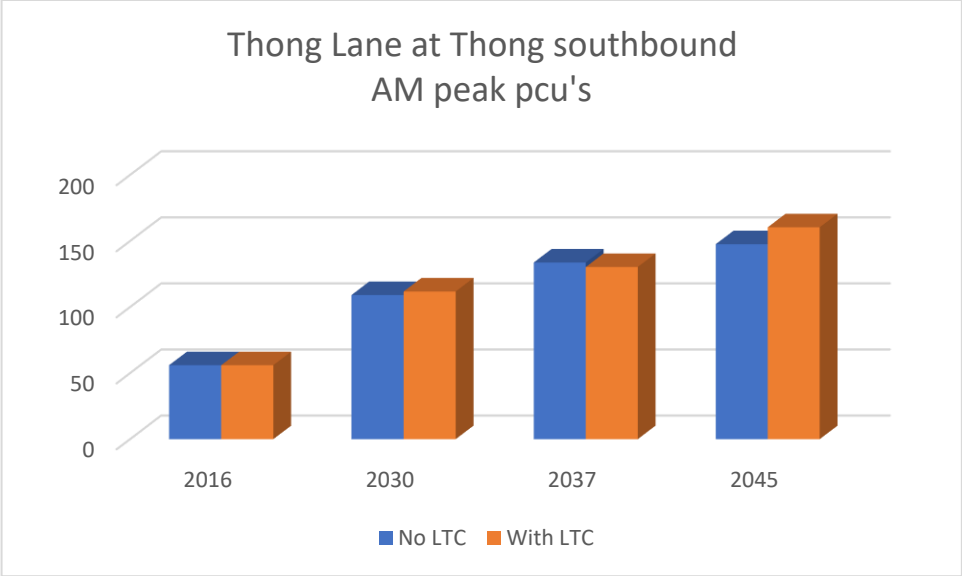
North of the A2

26. Whilst south of the A2 is very rural north of the A2 has Thong Lane defining the urban edge of the Gravesend and the A226 as a major route in its own right.

Thong Lane in Thong

27. This is the rural part of the route leading through the width restricted village and conservation area of Thong itself. For those living in Riverview Park area or further north it is a route to reach the A2 currently, London or coastbound. It is also a route for reaching Shorne Woods County Park by road from the urban area.

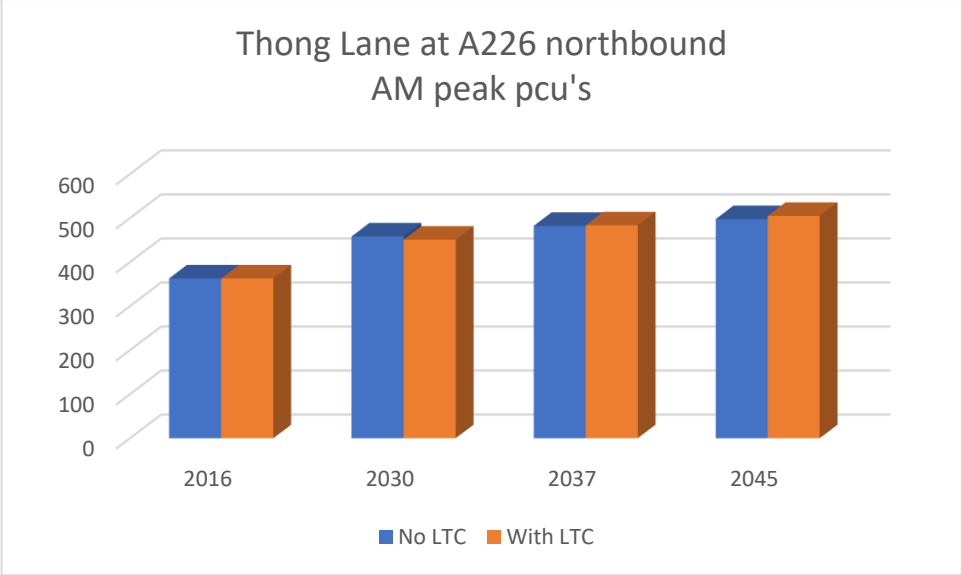


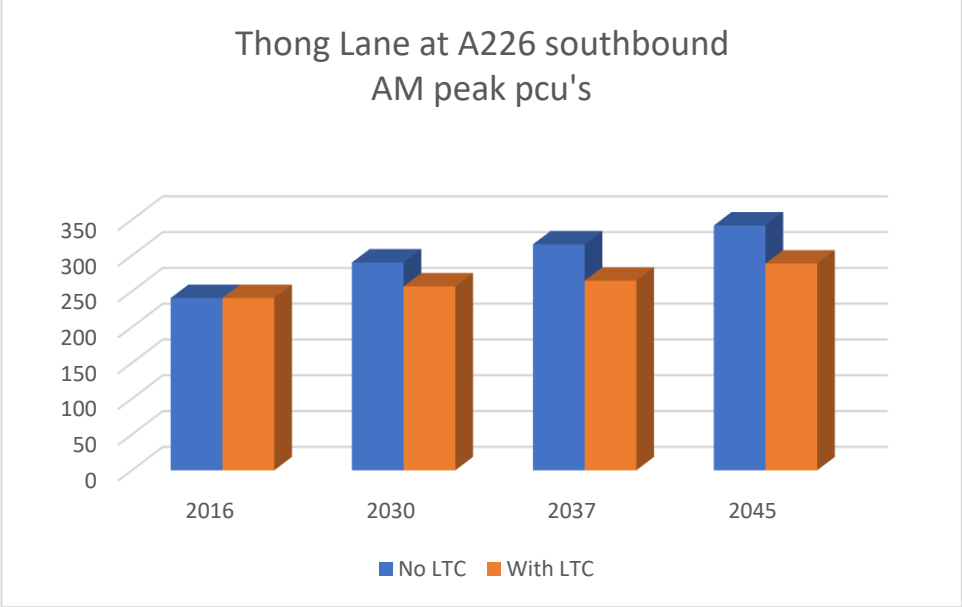


28. LTAM is showing a growth in traffic in the do nothing case, to which LTC does not seem to make a great deal of difference. It is assumed that the possibility of a car park close to the A2 has not explicitly been taken into account.

Thong Lane at A226 Rochester Road

29. This is the northern part of Thong Lane which is now an urban road, with footways. It collects traffic from the housing development west of it and has traffic calming measures. It is also access to Secondary School (Thamesview), which will be reflected more in the 8-9 time period.

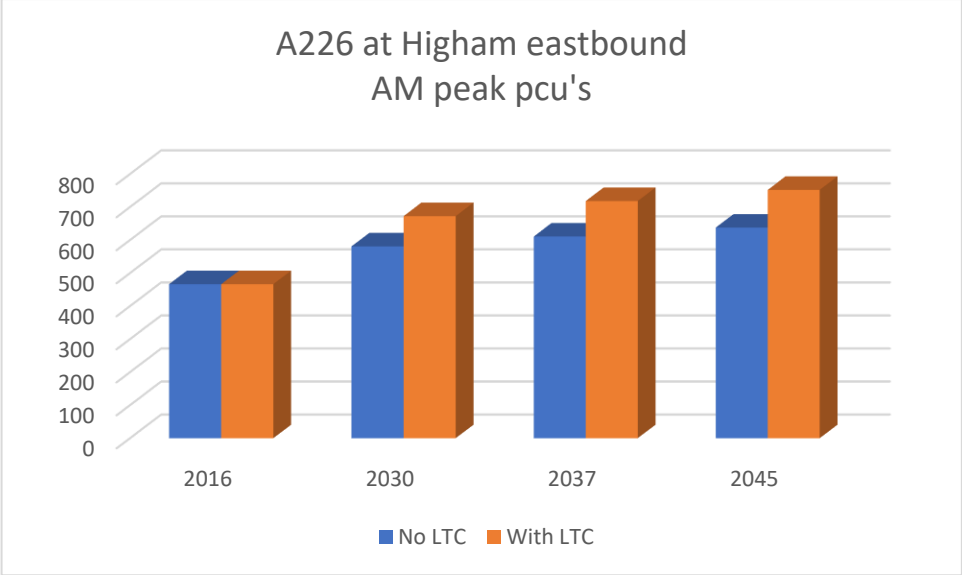


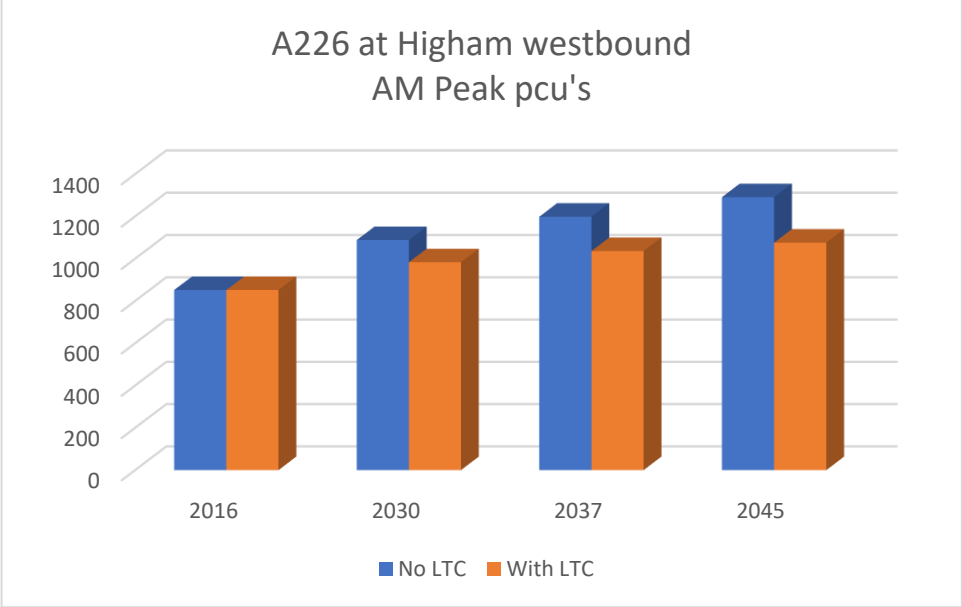


30. The impact northbound is marginal, and a slight reduction southbound, which may due to the lack of connectivity to the A2.

A226 Rochester Road at Chalk

31. This is the section of road just east of the Thong Lane junction. To the west is the Lion Roundabout which offers routes into Gravesend Town Centre (A227) or a bypass in the form of Old Road East and West (B261) to Northfleet.

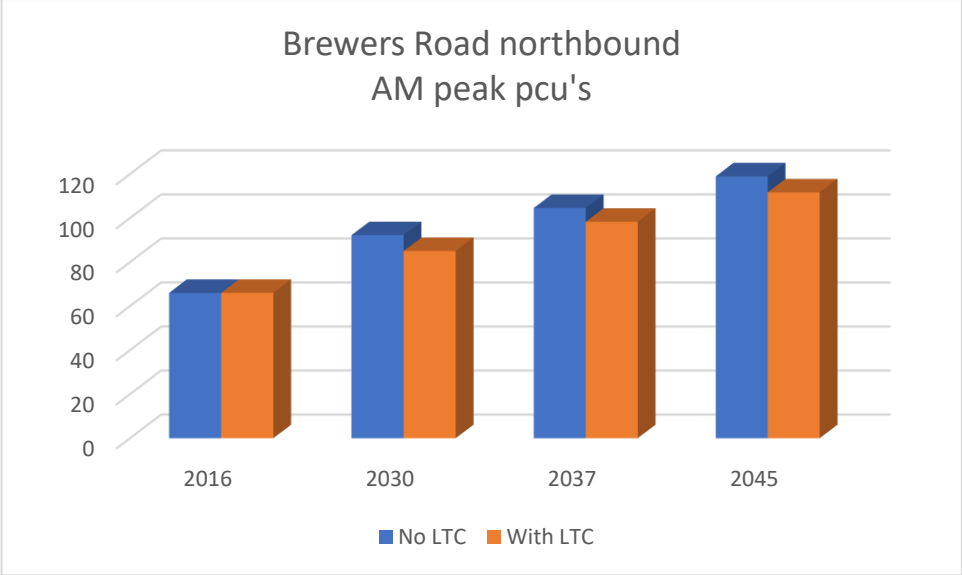


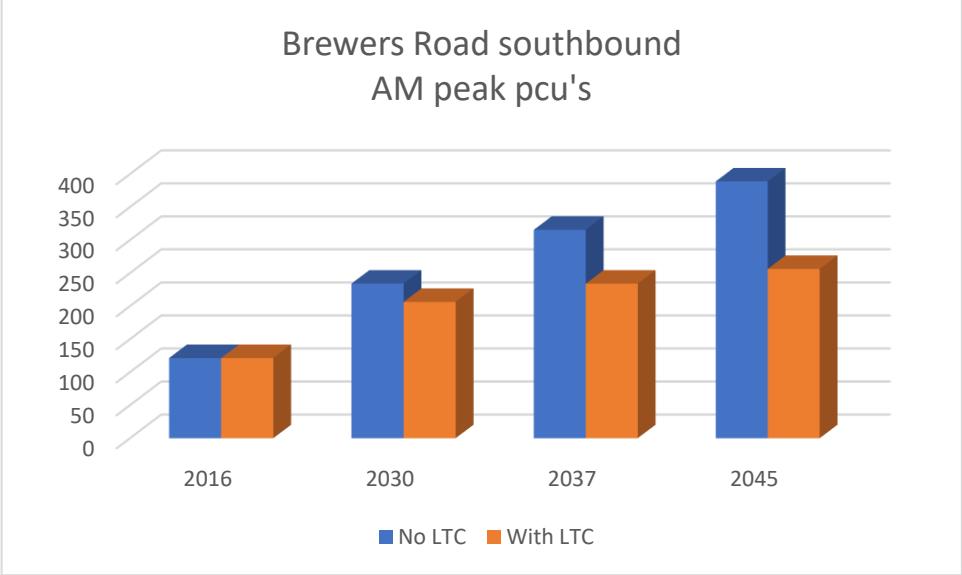


32. Eastbound LTC causes an increase in traffic, whereas westbound there is a reduction. A key variable here will be the amount of traffic on the A289 which may seek to avoid the A2 if there is congestion. Currently this is related to the A2 past Gravesend but in the future will be whether the A122 junction arrangements 'work'.

Brewers Road

33. This is the section of road north of the A2 (or in the future with LTC the A289/A2 (local road)) junction. This is the route to Shorne Ridgeway, Shorne and Higham.





34. There are slight reductions northbound, but larger southbound. The loss of direct access to the A2 is an obvious factor here. It is also the access to the Shorne Woods Country Park, and the routes to Shorne village or Higham are narrow roads.