A26 and A264 Route Study Update

A report by Vicki Hubert (KCC) to the Tunbridge Wells Joint Transportation Board on 19 October 2015 summarising the key headlines of the traffic surveys undertaken for the A26 and A264 route studies, and how these assessments will be used in progressing improvement schemes.

1. Introduction

1.1 A Borough Transport Strategy is being prepared by TWBC and KCC. The core purpose of the document is to address the transport issues of the Borough and support the delivery of the Tunbridge Wells Local Plan (including the recently submitted Site Allocations Development Plan Document).

1.2 At the last meeting of the JTB on 20th July 2015, Members endorsed the recommendation that the document be taken forward for adoption by TWBC and approval by KCC. Members also agreed that further work be undertaken to provide details of the costs of schemes and potential funding sources, to be set out in an Infrastructure Delivery Plan which will be based on the Implementation Plan attached to the Strategy.

1.3 TWBC adopted the Transport Strategy on 6 August 2015. The work required to identify and cost schemes is being undertaken by Amey, KCC's Transport Consultants, and when this work has been completed and appended to the Transport Strategy, KCC Cabinet Committee Members will be asked to approve the document. This is likely to be in March 2016.

1.4 Amey have undertaken traffic surveys over the last few months in order to be able to show in detail the current situation. The data below provides an overview of the results for these key arterial routes into and through the town. This data will provide a sound evidence base for any proposed improvements to the corridors.

1.5 Please note that Amey have also undertaken pedestrian, cyclist and public transport audits of the two routes, and in depth studies of the crash records. This information will be invaluable as scheme ideas for improvements on the A26 and A264 progress.

2.0 ANPR Surveys

2.1 ANPR) surveys were carried on 20th May 2015 with the aim of capturing and analysing vehicle movements to and through Tunbridge Wells on the key radial routes. ANPR cameras were located at eight sites on the key routes, forming a wide cordon around the town to record inbound and outbound vehicle movements. The eight sites surveyed (inbound and outbound) were:

- A267 – Frant Road
- A26 (South) – Eridge Road
- A264 (West) – Bishops Down
- Speldhurst Road
- B2176 – Bidborough Ridge
- A26 (North) – London Road
- Longfield Road
- A264 (East) – Pembury Road

2.2 For each site, the volume of both inbound and outbound traffic (classified as light vehicles, heavy vehicles and Public Service Vehicles (PSVs)) was recorded in addition to the matched vehicles by time of day. Figure 1 below indicates the location of ANPR cameras across Tunbridge Wells.

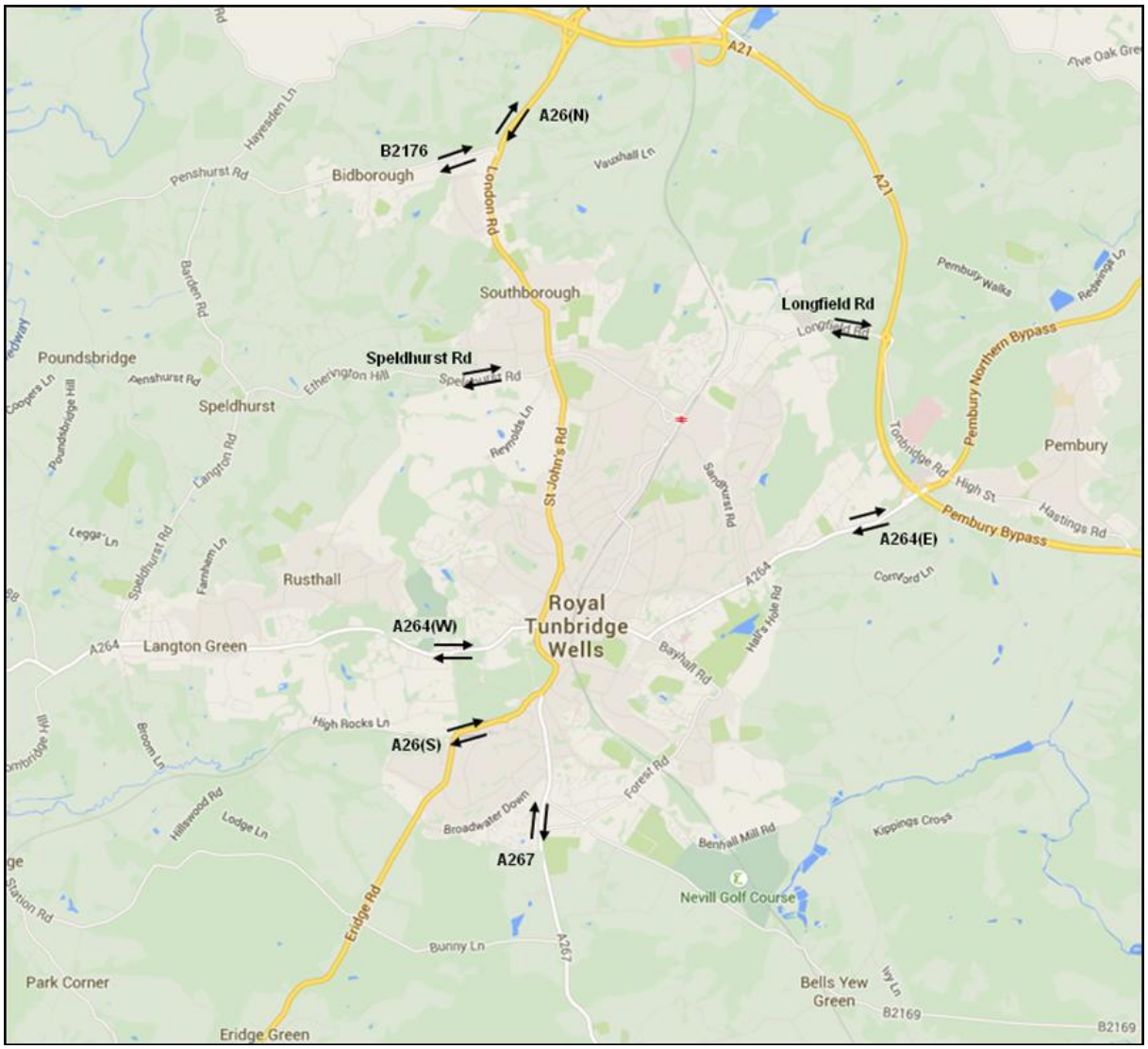

Figure 1 ANPR location across Tunbridge Wells

2.3 The cordon was selected in order to capture the majority of trips travelling through or to the town centre. It should be noted that there are a number of potential leakage points in the cordon where vehicles were not recorded, e.g. via Halls Hole Road, Bayhall Road and some routes through Hawkenbury, however, the cordon survey is expected to identify the main 'through town' movements in Tunbridge Wells.

2.4 The ANPR camera data was collated and analysed to determine the pattern of through traffic crossing the cordon. The analysis involved matching vehicles recorded at each of the cordon points. Matched vehicles recorded crossing different cordon points within a set time period of 40 minutes are then considered to be through-traffic.

2.5 Headline facts from the ANPR surveys:

i) The proportion of daily traffic entering the cordon on the A264 (E) and then leaving the survey cordon within the next 40 minutes is 14% (i.e. through-traffic).
ii) The A26 (N) has an AM inflow of around 800 vehicles of which approximately 24% are identified as 'through cordon' traffic. However if the B2176 and

Speldhurst traffic is removed the through movements reduce to around 14% (i.e. only 14% goes through the town centre).

iii) Longfield Road does not serve as an entry or exit for many 'through cordon' trips.

iv) 'Through traffic' accounts for approximately 8-11% of the total traffic through the cordon. This includes some entry-exit combinations that do not go near the town centre e.g. A26 (N) to B2176/Speldhurst Rd.

v) HGVs account for approximately 3% of the traffic crossing the cordon points throughout the day. Of the total inbound HGVs 28% were identified as through traffic.

3.0 Junction Turning Counts, Queue Lengths, and Junction Assessment Results

3.1 Junction Turning Count (JTC) surveys were carried out on Wednesday 29th April, Thursday 4th June, and Wednesday 1st July 2015 between the hours of 07:00 – 10:00 and 16:00 – 19:00. The JTC data is intended to provide a snapshot of existing traffic conditions, to determine the AM and PM peak hours, and to form the basis of the assessment of identified solutions at each junction. Queue length surveys were also undertaken on the approaches to the junctions during the same time period.

3.2 ***The A26/Yew Tree Road Junction*** currently operates over capacity during peak highway periods and observes significant queuing and delay. In particular the A26 approaches to the junction observe queues in excess of 300 metres during both the AM and PM peak periods. In addition, significant queuing was observed on both of the side road approaches, particularly in the AM peak. Approximately 5% of all traffic passing through the junction during the AM and PM peaks was classified as HGVs. The junction is already sensitive in terms of its operational capacity; particularly during the busier AM and PM peak hour periods with significant queuing occurring. This junction is one of the most critical junctions along the corridor, and has received funding from the South East Local Enterprise Partnership (through the Local Growth Fund bidding process) for capacity improvements. These planned improvements have been reported to the JTB previously and are currently at the detailed-design stage, prior to implementation in early 2016.

3.3 ***The A26/Grosvenor Rd junction*** is a three-arm priority roundabout with no formal pedestrian crossing facilities. The AM peak is the busiest period but both the AM and PM peak periods observe a similar level of traffic through the junction. Furthermore, the dominant flow is on the A26 approaches to the junction, with Grosvenor Road observing a smaller proportion of approaching traffic, particularly in the AM peak. The AM peak hour observers a higher proportion of HGV movements when compared to the PM peak with an average of 2.6%. During the AM peak period the queues extend back to Mount Ephraim Road, Lime Hill Road, York Road and Dudley Road, while in the PM peak period the queuing extends as far back as A264 Church Road. Modelling has been undertaken to study this junction, and the 2028 future year assessment indicates that the junction is anticipated to operate over capacity on the A26 London Rd (S) in the AM peak and on the Grosvenor Rd arm in the PM peak. As a result the level of congestion and delay currently observed at the junction would be significantly worse in 2026 without any form of capacity improvement measure at this junction.

3.4 ***The A26/London Rd/A264 Church Rd junction*** is a signalised crossroads arrangement with formal pedestrian crossing facilities provided across all four arms. The junction is located at a strategic point where the north-south A26 corridor meets the east-west A264. The AM peak is the busier period when compared to the PM peak period; however, the flows are generally balanced between all the approaches to the junction. The AM peak hour observers a higher proportion of HGV movements when compared to the PM peak with an average of 4.0%. Significant queuing occurs during the PM peak period where queues extend back to Mount Ephraim Road. This junction has been modelled, and results indicate that the junction currently operates close to the

theoretical operational capacity during the busier AM and PM peak highway periods. During the AM peak period, one link of the junction is currently operating close to 100% saturation. The results for the future year (2026) scenario show that the junction is likely to operate marginally over the saturation point of 100% during the AM peak period and operate close to full capacity during the PM peak period.

3.5 ***The A26 London Rd/Frant Rd roundabout*** is a three-arm priority arrangement with no formal pedestrian crossing facilities provided across the arms. The AM peak is the slightly busier period when compared to the PM peak period. The traffic flows indicate that the A26 approaches observe the dominant flow but are fairly balanced in terms of direction. The Frant Road arm of the junction observes a lower proportion of approaching traffic, particularly in the PM peak. The AM peak hour observers a higher proportion of HGV movements when compared to the PM peak with an average of 2.9%. Significant queuing is observed at the junction during the PM peak period in particular on the A26 London Road (N) approach. The AM peak observes less queuing in comparison with only occasional spikes in queuing traffic observed. Modelling results indicate that at present, the A267 Frant Rd operates close to operational capacity, while A26 London Road (S) arm operates slightly over the theoretical capacity during the AM peak period. The results indicate that all approaches at this junction currently operate with sufficient operational capacity during the PM peak period. The modelling results for the future year (2028) scenario indicate that due to the background growth in traffic, the problems in the queuing situation at the junction is likely to increase.

3.6 ***The A26 London Rd/Major York's Rd roundabout*** is a three-arm priority arrangement with no formal pedestrian crossing facilities provided at the junction, however, a zebra crossing facility is located approximately 50 meters north on the A20 London Rd (N) approach. The AM peak is the busiest period but both the AM and PM peak periods observe a similar level of traffic through the junction. Furthermore, the flows are generally balanced between all the approaches to the junction, with the exception of a dominant northbound flow on the A26 in the AM peak. The AM peak hour observers a higher proportion of HGV movements when compared to the PM peak with an average of 1.5%. The level of queuing observed at the junction during both the AM and PM peak period is greater on A26 London Road (S) and Major York's Road. Occasional spikes in queuing can be observed for all three arms of the junction. Modelling results indicate that at present, there is significant queuing on A26 London Road South during the AM peak period. The situation is anticipated to increase queuing and delay in the future year scenarios due to the background growth in traffic over time.

3.7 At the ***Crescent Rd/ Mount Pleasant Rd junction***, it can be seen that Crescent Rd is the most dominant arm in terms of flow with 1082 vehicles (2 way) in the AM peak and 1073 vehicles (2 way) in the PM peak. It is noticeable that the average percentage HGV is considerably lower in the PM peak (0.5%) than the AM peak (3.4%). The highest HGV movement proportionally is the turn from Crescent Rd to Mount Pleasant Rd North.

3.8 ***The Calverley Road/Crescent Road roundabout (Carrs Corner)*** data indicates that the highest turning movement in the AM peak at the Calverley Rd/ Crescent Rd junction is observed to be the left turn from Calverley Rd East with over 400 vehicles making the movement to Crescent Road. The reverse of this pattern is exhibited in the PM peak. The highest proportion of HGV movements was observed travelling from Calverley Rd W to Lansdowne Rd in the AM Peak (6.3%).

3.9 ***The A264 Calverley Road/Pembury Road/Bayhall Road/Prospect Road junction*** has a heavy straight ahead movement during both AM and PM peak hours. It is noticeable that the left turn from Calverley Rd to Pembury Rd in the AM and right turn

from Pembury Rd to Calverley Rd in the PM is low. This is due to traffic bypassing the junction by using Calverley Park Gardens. The highest proportion of HGVs are turning left to access Bayhall Rd from Pembury Rd (21.2% AM Peak) which is a relatively tight turn. The average percentage HGV using the junction is small in both the AM and PM peak hours at 4.3% and 1.7% respectively. The count data supports the suggestion that traffic is using Calverley Park Gardens as opposed to using the Pembury Rd/ Calverley Rd signalised junction. Over 450 vehicles (2way) were observed using Calverley Park Gardens during the AM Peak hour with a similar amount observed in the PM peak. During the AM peak, 29% of inbound traffic on the A264 Pembury Rd turns right onto Calverley Park Gardens. Flow volumes are fairly consistent in both peaks. The junction currently operates close to the theoretical operational capacity during both the AM and PM peak highway periods with all links of the junction are currently operating close to 100% saturation.

3.10 ***The A264 Pembury Road/Sandrock Road junction*** data shows that a considerable volume of traffic was observed to be making the left turn out of Sandrock Rd in both the AM and PM peak hours. This results in considerable queuing to/from Sandrock Road. The AM peak hour observers a higher proportion of HGV movements when compared to the PM peak with an average of 2.1%. Modelling of the junction has been undertaken Results show that the right turn from A264 Pembury Rd (N) to Sandrock Rd currently operates close to full theoretical capacity during the AM peak period with a queue of 7 vehicles which exceeds the stacking capacity of the right turn lane at the junction.

3.11 ***The A264 Pembury Road/Sandhurst Road*** data shows that north of the Sandhurst Road junction, over 2200 vehicles are observed travelling inbound in the AM peak. The PM peak exhibits similar flows which would indicate that traffic flows are not tidal. Over 330 vehicles are observed to be travelling from Sandhurst Road eastbound in both peaks with a high volume of right turning traffic from Pembury Rd North also recorded. Sandhurst Road eventually leads to the industrial parks to the north of the town which would explain the heavy demand at the junction. The highest proportion of HGV traffic was observed to be exiting Sandhurst Rd during the AM peak travelling southbound (9.2%). Very few HGV's were observed during the PM peak hour. Long queues were observed on Sandhurst Road during the AM and PM peaks with 39 and 38 vehicles respectively. Junction assessments indicate that the Sandhurst Rd approach to the junction operates significantly over capacity during both peak periods. This results in significant queues on the Sandhurst Rd arm due to vehicles being unable to find gaps to exit onto the A264 Pembury Road.

3.12 ***The A264/A21 (NB) On/Off Slip roundabout*** is a four-arm priority junction currently operating comfortably within its theoretical capacity during both the AM and PM peak period.

3.13 ***The A264/A21 (SB) On/Off Slip/Tesco Access roundabout*** is a four-arm priority junction currently operating comfortably within its theoretical capacity during both the AM and PM peak period.

4.0 A264 Pembury Rd/Blackhurst Lane/Halls Hole Rd Junction

4.1 The junction of A264 Pembury Rd/Blackhurst Lane/Halls Hole Rd currently represents a key congestion 'hot spot' and queueing and delays caused by this junction have a significant impact upon the operation of other junctions within the study corridor. Peak hour queues at this junction have been recorded to extend back to the A264/A21 off-slip roundabout to the east and to the A264/Calverley Rd junction to the west. Stop line video surveys were undertaken on Thursday 4th June 2015 and analysed to determine whether the queuing is caused by poor discharge of vehicles from the junction or for other reasons. The analysis indicates that the A264 westbound (ahead

and left) lane, in particular, has a low rate of discharge from the stop line (known as saturation flow). The reasons for this appear to be slow left turn manoeuvres into Halls Hole Road which slow down subsequent straight ahead movements and also large gaps appearing in the discharging traffic during the green signal. The A264 outbound lane also has a low saturation flow as it incorporates slow left turn and right turn give-way manoeuvres.

4.2 In October 2014, the Consultants DHA Transport (on behalf of Tunbridge Wells Borough Council TWBC) undertook LINSIG modelling assessments for this junction. TWBC were seeking funding from the Local Growth Fund (LGF) for Phase 1 of its A264 Pembury Rd Capacity Improvement Programme. The existing situation (following introduction of signals) has been modelled and the results indicated that the critical A264 arms operated within capacity, the highest degree of saturation DOS being 89.6% on the A264 Pembury Rd East. However, significant queueing occurs on these arms which indicate that demand exceeds capacity on these approaches. Issues were encountered on the Hall's Hole Rd arm where a DOS of 147.6% was observed in the AM peak and 135.1% in the PM peak.

5.0 A264 Pembury Rd/Tonbridge Rd/High Street Junction

5.1 DHA Transport also undertook LINSIG modelling assessments for this junction. Do nothing and do something scenarios were tested at the junction. The do nothing scenario test indicated that the A264/Tonbridge Rd junction would operate considerably over its practical capacity on three of the four arms in both the AM and PM peak periods. The results suggested a degree of saturation (DOS) on the Tonbridge Rd arm of 127.4%.

5.2 General site observations indicate that the junction acts as barrier to A264 eastbound traffic when held at a red signal to allow other traffic and pedestrian phases to operate at the junction. Queueing traffic can be observed queueing back through the A264/A21 (SB) on/off slip/Tesco access roundabout and occasionally back to the A264/A21 (NB) on/off slip roundabout. These junctions are in close proximity to each other and therefore interact with each other in terms of their operation.

6.0 Conclusions

6.1 The assessment work summarised above has provided a robust indication of existing and, in some cases, future conditions. From these observations, a number of key locations have been identified as requiring improvements:

A26

i) Frant Road junction (with consideration for improved pedestrian/cyclist crossing facilities to link the town centre to the Pantiles); plus Major Yorks roundabout junction to be considered based on the impact of the Frant Road improvements i.e. both junctions considered as one package.
ii) Grosvenor Road junction (with improved pedestrian/cyclist crossing facilities).
iii) Cycle route improvements along the length of the A26. (This option will be explored following a DHA study for TWBC which is running in parallel to this work.)

A264

i) Tonbridge Road junction.
ii) Halls Hole Road junction.
iii) Cycle route improvements: Improve junctions in line with CROW manual/TFL guidelines.
iv) Lengthen right turn lanes into Sandhurst Road and Sandrock Road.
v) Carrs Corner (with improved pedestrian/cyclist crossing facilities).

6.2 TWBC, KCC and Amey are progressing scheme ideas for the above. Costed outline designs will be brought to the next meeting of the JTB for consideration.

7.0 Recommendation

7.1 That the report be noted.

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