

EAST GRINSTEAD AND SURROUNDS
2016 SURVEY AND REVIEW OF TRAFFIC CONDITIONS

6 Days Total A22 Traffic Network;
2 Days Total B2110/B2028 Tuners Hill (TH) Junction
2 days Total A264/B2028 Dukes Head (DH) Junction

SECTION 1 - HEADLINE SUMMARY REPORT



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1.0 INTRODUCTION.

- 1.1. This report of the 2016 Jubb East Grinstead and Surrounds Traffic Surveys - 6 days of A22 Junctions [3 days 23rd, 24th, 25th February 2016, 3 days 7th, 8th, 9th June 2016] and 2 days 7th 8th June 2016 at Turners Hill Junction B2110/B2028 and Dukes Head A264/B2028 Copthorne Roundabout, follows on from 2 day survey for all these Junctions in 2014 and 6 day survey of A22 Junctions late February/early March 2015.
- 1.2. The report provides a comprehensive area wide assessment of the East Grinstead Town Transport Network and key junctions on routes to the M23 and M25 Motorways see East Grinstead and Surrounds Study Area Location Map page 1.4.
- 1.3. The Jubb EG and Surrounds Traffic Surveys and Reports now span 19 months across seasons of the year with:
 - Four separate surveys totalling 14 days of the severely congested A22 Junctions in November 2014, late February/early March 2015, late February 2016 exactly a year later, and June 2016.
 - Two surveys totalling 4 days of the overcapacity Turners Hill (TH) B2010/B2028 Junction and Dukes Head (DH) A264/B2028 Roundabout in November 2014 and June 2016.

In comparison with the Atkins Stage 3 A22 1 day survey in November 2011 5 years ago and similarly the 2012 Mid Sussex Transport Study (MSTS) Stage 1 of the TH B2010/B2028 and DH A264/B2028 Junctions which it identified as having serious traffic issues.

- 1.4. This series of Jubb Surveys and Reports of the A22 Traffic Network provides, it is believed, the most comprehensive survey ever of traffic conditions in and around East Grinstead. These were undertaken during the morning peak 0700-1000 hrs and between 1500-1900 hrs in the evening peak.
- 1.5. These assessments were undertaken to ascertain the present traffic conditions and the ability of the highway network to adequately cope with the already approved Mid Sussex District Council [MSDC] committed development and in addition has been used to assess the impact of the proposed Development at Hill Place Farm [HPF] East Grinstead planning application ref DM/15/0429 on the A22 traffic network.
- 1.6. The Junction Survey, Modelling and their Reports are compliant with the requirements of the National Planning Policy Guidance (NPPG) 6th March 2014 and 10th October 2014, West Sussex County Council (WSCC) Transport Assessment Methodology June 2007 guidance (an integral part of the Mid Sussex District Council (MSDC) Validation Criteria for planning application local requirements June 2015).The Reports provide an Up to Date picture of traffic conditions meeting the requirements of NPPF 158.

- 1.7. The 2016 6 day Surveys include In Car Video Survey and Static Camera data collection to capture the full extent of queue lengths and classified turning movements at the identified key junctions. This has enabled an accurate and holistic picture of existing traffic conditions to be collated.
- 1.8. Jubb have developed the LINSIG and ARCADY traffic models for the A22 junctions surveyed. LINSIG - Imberhorne and Felbridge Junctions. ARCADY - Lingfield Junction for the critical network peak hours and provides a quantitative assessment of existing and forecast network conditions 2021.

The Turners Hill [TH] Junction B2110/B2028 modelling used the geometric input for the linked roundabout model [ARCADY] submitted in support of the TH Neighbourhood Plan [THNP], was adopted to assess the operational efficiency of the proposed junction improvements.

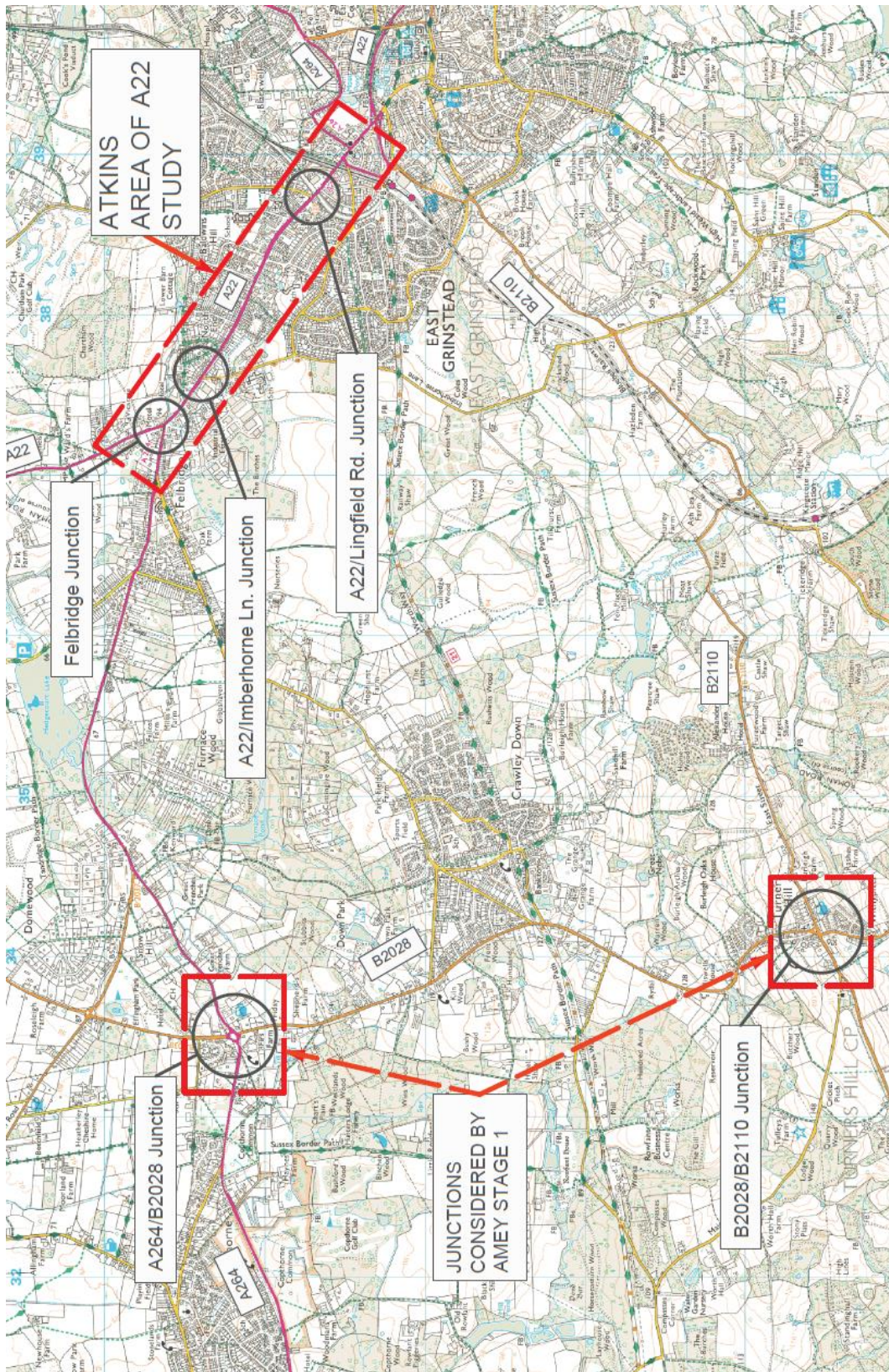
The A264/B2028 junction improvements as part of the consented Copthorne Village West (CVW) Residential Scheme (Ref 13/04127) to release the capacity at the Junction were incorporated. The ARCADY mode was adjusted to include the envisaged enhancements with the geometric input obtained from the TA accompanying the CVW Scheme.

- 1.9. Sections 3 and 4 shows the results of the 6 day Jubb 2016 A22 Junction Surveys with junction capacity modelling and comparing them to the Jubb 2015 6 day Survey and Extension Reports and also the Atkins Stage 3 1 day November 2011 Survey and Report nearly five years earlier. Sections 5 and 6 reports on the 2016 2 day Surveys and Modelling of the Turners Hill B2110/B2028 Junction and the Dukes Head A264/B2028 Junction Roundabout.
- 1.10. The key findings of the report demonstrates that the severe traffic conditions at these key Junctions continue with the:
 1. 2016 6 day survey showing that a further material deterioration in the A22 traffic conditions has taken place since Jubb March 2015 6 day survey. The modelling results of the existing 2016 traffic conditions against 2021 forecast conditions taking into account the cumulative impact of approved committed and allocated developments, Atkins Stage 3 Do Minimum' (DM) Mitigation and the proposed Hill Place Farm (HPF) development ref (DM/15/0429) concludes that
 - Proposed highway infrastructure improvements will not sufficiently mitigate the impact of the HPF development with a Severe Cumulative Residual Impact on the key junctions along the A22. Therefore the proposed HPF Development is Contrary to Paragraph 32 of the NPPF.
 2. The Jubb June Survey shows that the Turners Hill B2110/B2028 Junction continues to suffer from significant delay. Junction mitigation proposal contained within the Turners Hill Neighbourhood Plan will not resolve the severe

congestion issues but redistribute the queue around the approaches with increased queues and delays predicted along the B2028. This has a marked impact on the on Junction performance which represents a ' Severe Cumulative Residual Impact which is Contrary to NPPF 32.

3. The A264/B2028 Duke's Head Roundabout Capacity Tests for the June 2016 Surveys including Approved Committed Development (ACD) demonstrate that the proposed junction enhancements as part of the Copthorne Village West development will not provide sufficient spare capacity to accommodate the anticipated growth from the ACD and does not offer a long term highway solution.

East Grinstead and Surrounds Study Area Location Map



2.0 BACKGROUND.

2.1 Today and historically the A22 traffic network in and around East Grinstead [EG] suffers from severe traffic congestion which has been clearly identified and acknowledged in reports by local authorities and Jubb Consulting over the last decade. Particularly noted are

- The 2004 Mid Sussex Local Plan (MSLP) Chapter 12 'Future Development of EG' recognised in 12.5 page 203 that 'the existing highway network is no longer adequate to cope with the traffic demands now placed on it'.
- The West Sussex County Council (WSSC) Transport Plan 2011-2026 February 2011 page 62 concluded that 'EG suffers from acute congestion and safety issues at peak and off peak times due to current traffic behaviour which is dominated by private car'.
- The EG Traffic Management Study Stage 3 report by Atkins 3rd May 2012 for WSSC. The 1 day November 2011 survey identified that two A22 junctions are operating above practical capacity with two more over theoretical capacity. At the 3 Tiers meeting (WSSC, MSDC, EGTC) 18th July 2012 reviewing the report West Sussex County Council (WSSC) confirmed several A22 junctions were 'severe'.
- The MSDC District Plan 2014-2031 Pre-submission Draft November 2015 recognises in the Settlement Sustainability Review 4.4 page 11 that East Grinstead is subject to 'Severe Highway Constraints'.
- In 2014 and 2015 the Jubb November 2014 and March 2015 traffic survey reports, the most up to date and comprehensive of the EG Traffic Network, identified that traffic conditions had materially deteriorated in recent years since Atkins Stage 3 November 2011 survey with all A22 Junctions operating on or over theoretical capacity.
- In addition the Jubb November 2014 report identified that Turners Hill B2110/2028 Junction was a major node of congestion and the A264/B2028 Junction underperformed with a significant level of queuing. The survey reveals that traffic conditions at both junctions were far worse than those predicted for 2021 performance by Amey Stage 1 Mid Sussex Transport Study [MSTS] report December 2012.

- 2.2 During the last decade new highway provision and upgrading at East Grinstead has not kept pace with the rate of development and traffic growth and general traffic growth and the existing highway is no longer able to cope with traffic demands.
- 2.3 The East Grinstead Traffic Management Stage 3 report by Atkins May 2012 for WSCC see 2.1 above, recommended , as yet not implemented, infrastructure improvement plans 'do minimum' (DM) and 'do something' (DS) which is recognised by WSCC *would be challenging to implement particularly due to the requirement for limited third party land acquisition.*
- 2.4 *WSCC approach in the short term is to undertake detailed feasibility investigations of the Atkins 'Do Minimum' A22 junction improvements with a view to delivering these as soon as funding becomes available, which could include opportunities that arise through new development.* DM and DS were designed to provide solutions to address the existing November 2011 traffic conditions which have significantly deteriorated since and Atkins 2021 forecasted traffic conditions which they materially underestimated.
emphasis- statements made by C Owen WSCC to M Grist Jubb in a letter 9th February 2015 page 3
- 2.5 A ceiling in housing numbers was set that these solutions could accommodate, 765 units for DM from 1st April 2011 for the plan period with DS being able to accommodate 190 more a total of 955. At the 1st April 2016 MSDC reported 1,160 units built/occupied [688] and already approved committed development not built/occupied [472 units] indicating the DM ceiling has been exceeded already by 395 units 52% and 22%, 205 units above the DS threshold This excludes 192 units additional units in the East Grinstead Neighbourhood Plan [EGNP] going to referendum, expected to be delivered in next 5 years.
- 2.6 The Jubb 2014 and 2015 Traffic Reports prove that progressive significant deterioration in traffic conditions in and around East Grinstead has occurred since the Atkins Stage 3 November 2011 survey and demonstrate that traffic conditions are severe and unacceptable.
- 2.7 Taken as technical evidence by WSCC in June 2015 for consideration of planning applications at EG, the Jubb March 2015 A22 survey findings identified that
- Felbridge Junction MQ*'s were between 4.1 (PM) and 4.8 (AM) longer than November 2011 with queue lengths at A264 Copthorne Road arm reaching 1.1- 1.4km and records a Degree of Saturation (DOS) of 133-139% significantly over capacity. *MQ Maximum Queue in pcus [passenger car units] during peak periods

- Imberhorne Junction, the most congested surveyed total MQ's of AM 5.4 times higher and in PM 3.5 times higher than November 2011 with queues reaching an average of 900m reaching 1.3km on A22 London Rd South with DOS 131 – 144% significantly over theoretical capacity.
- 2.8 This report reviews the 2016 A22 Surveys carried out both in late February and early June and demonstrates further junction deterioration at Imberhorne and Felbridge Junctions. Imberhorne total junction MQ increases 8% and 14% respectively in AM and PM Peak.
- 2.9 The Jubb reports are Up To Date and meet the requirements of NPPF 158 as opposed to the Out of Date Atkins Stage 3 November 2011 Survey and 2012 MSTs Stage 1 Reports of nearly five years ago. The three Jubb 2014 and 2015 reports are compliant with:
- NPPG 6th March 2014 'Travel plans, transport assessment and statements in decision making'; and 10th October 2014 'Transport evidence bases in plan making and decision making' requirements and
 - WSCC Transport Assessment (TA) Methodology (June 2007) guidance for MSDC Validation criteria for planning applications local requirements June 2015 notably Sections 10.1 and 10.5.
- 2.10 In June 2015 WSCC confirmed that WSCC will include the Jubb East Grinstead and Surrounds November 2014 Survey and Review of Traffic Conditions and the Jubb Supplementary Report (March 2015) in the technical evidence that WSCC consider in relation to planning to planning applications in EG. This was again restated by Gill Steward Chief Operating Officer's WSCC, letter 3rd September 2015, to Mr Peacock.
- 2.11 Vectos, Linden Homes Ltd Transport Assessment (TA) for DM/15/0429 planning application 2nd February 2015 and Post Submission Highways Response 9th May 2015 has excluded the nearby severely congested A22 traffic network from its scope and is very limited and inadequate for the purposes of assessing the traffic implications of the scheme.
- 2.12 The Linden Vectos (LV) TA is at variance and non-compliant with NPPF paragraph 158, key points of the NPPG 6th March 2014, 10th October 2014 and the WSCC TA Methodology June 2007 guidance (an integral part of the MSDC Validation Criteria for planning applications local requirements June 2015). As a result the LV TA is seriously deficient and in breach of the MSDC Validation criteria for planning applications June 2015 for residential developments of 50 or more units.

- 2.13 The Jubb Extension July 2015 Report models the findings of the Jubb March 2015 6 day Supplementary Survey. It demonstrates that the Atkins Stage 3 'Do Minimum' (DM) infrastructure Improvement Plan which is deemed by Linden Homes Ltd as suitable mitigation for its planning application DM/15/0429 at Hill Place Farm does not offer sufficient betterment to overcome the congestions issues experienced along the A22 corridor taking into account the Already Approved Committed Development and DM/15/0429.
- 2.14 This detail modelling of the 2019 traffic conditions shows the above results in Severe Cumulative Residual Impact on the A22. Therefore the proposed development of HPF DM/15/0429 is Contrary to Paragraph 32 of the NPPF.
- 2.15 The Draft November 2015 East Grinstead Neighbourhood Plan (EGNP), which has currently completed Examination prior to public referendum in the autumn of this year includes all the Jubb reports in its Evidence Base, EGNP page 60. The Draft EGNP Examiners report 17th August 2016 states ' I am now satisfied having heard the submissions that both the Atkins and Jubb report contribute as part of the evidence base to the understanding of the scope of these issues.' I am satisfied that there is a significant highway infrastructure issue within the Neighbourhood Plan area'
- 2.16 The Examiners amendment of Policy EG11 - Mitigating Highway Impact states:
- 'Due to the identified highway constraints within the Neighbourhood Plan Area all new housing and business development proposals will be expected to
- Be supported by an appropriate assessment of the impact of the proposal on the highway network. Proposals which cause a severe cumulative impact in terms of road safety and increased congestion, which cannot be ameliorated through the appropriate mitigation will be refused. Appropriate mitigation could be in the form of a zero car development (where justified in a transport assessment) a travel plan, the provision of footpath and cycle links, junction and highway improvements or to the Highway Authority to carry out junction and highway improvements.
 - Include access arrangements that are appropriately designed and adequate Visibility Displays '.
- 2.17 The Mid Sussex District Plan 2014-2031 Submission in August 2016 page 4 paragraph 2.9 'The Challenge Facing the District' highlights that 'Transport Infrastructure is under particular strain with high levels of car ownership and car usage combining with narrow winding rural roads and congested towns and major junctions'. East Grinstead in particular has acknowledged congestion problems along the A22/A264.

2.18 The Mid Sussex Transport Study 2016 evidence to the plan (page 106) references 'MSDS 3 Interim Summary Report by AMEY November 2015 which comments (page 42) on the A264/A22 Felbridge Junction and the A264/B2028 Dukes Head Roundabout. These two junctions are included in Page 42 Table 8 list of Road Junctions with RFC [Ratio of Flow to Capacity] in excess of 100% in AM Peak 2031 after including the implementation of primary and secondary interventions agreed with MSDC and WSCC at MSTs Stage 1 and 2 and finalised the stage 3 report.

3.0 2016 A22 JUNCTION TRAFFIC SURVEY RESULTS.

3.1 Background.

3.1.1 During 2016 two separate A22 three day in car video/camera surveys were carried out at the Felbridge, Imberhorne and Lingfield Junctions. The first 3 days 23rd, 24th and 25th February 2016 were exactly the same period [Tues, Wed, Thurs] as a year earlier, (the first 3 days of the 2015 Jubb 6 day Survey) and the second later in the year 3 days during summer, the 7th 8th and 9th June.

3.1.2 Section 3.2 and 3.3 below reports the findings for these two 2016 3 day survey periods individually with 3.4 comparing the summary of the 2016 6 day Survey with the Jubb 2015 6 day Survey and the Atkins Stage 3 November 2011 Survey.

3.1.3 As per 2014/2015 surveys, the 3-day in car video surveys of 23rd, 24th and 25th February 2016 and 7th, 8th 9th June 2016 are adopted to capture the **true/actual** lengths of the Queue recorded at these junctions with the tables showing Maximum Queue pcu's [MQ] for the peak periods and the event time queue lengths for each junction during AM and PM survey periods of 07:00-10:00 and 15.00- 19.00.

3.1.4 The June 2016 survey was further backed up by 8 static cameras, as part of the turning counts surveys, located along the A22 corridors at the surveyed junctions to support the queue length evidence through the in car video surveys.

3.1.5 Referencing the Jubb 2015 March reports as a benchmark, the 2015 Survey key findings concluded that the 'Severe Congestion' had materially deteriorated over the four months since the first Jubb Survey in November 2014. All junctions were operating over 100% Degree of Saturation [DOS] and Theoretical Capacity, with pronounced adverse changes at the Felbridge and Imberhorne A22 Junctions.

- At the Imberhorne Junction all arms experienced substantially increased queues above Atkins 3 Nov 2011 survey with total MQ's AM 5.4 times higher at 338 pcu from 63 and PM 3.5 times higher 220 pcu from 63. This is reflected by a negative Junction Practical Reserve Capacity [PRC] of - [minus] 60% AM, and - [minus] 45.5% PM.
- With the A22 London Road South Arm AM MQ's queues increasing 726 % 167 pcu to 190 from 23, 8.2 times higher than Atkins Stage 3 results with queues reaching 1,310m long. This is reflected by a Degree of Saturation [DOS] of 144% AM Delay 637 secs, PM DOS 131% delay 499secs.

- The Atkins Stage 3 Nov 2011 Felbridge Junction total MQ AM 49 pcu considerably lengthens by 194 pcus to 243 5 times higher with PM 4 times higher at 218 pcu longer by 164 pcu from 54. This is reflected by the Felbridge Junction having an overall negative average - [minus] 51% Practical Reserve Capacity [PRC] * see the Jubb Extension report July 2015 A22 Junction Capacity modelling of Jubb March 2015 surveys Appendix A Table 1 page 1.21.
- The A264 Copthorne Road Arm MQ, the major contributor to the Felbridge Junction congestion, increasing 110 and 96 pcus AM and PM to 140 and 122 respectively with queues reaching 1,175m and 1,447m long recording a DOS of 138% and 133% with over a 500 sec delay.
- At the Lingfield Junction A22 London Road North AM MQ 160 pcus was similar to the Jubb November 2014 survey 167 MQ, with a 1.33 RFC, delay 1,051 secs but with an increase of 59 pcus 58% from the 101 pcus of Atkins Stage 3 Nov 2011. The March 2015 total Junction delay AM and PM varying from 631 secs AM to 755 secs PM. see the Jubb Extension report July 2015 A22 Junction Capacity modelling of Jubb March 2015 survey Appendix A Table 1 page 1.21

3.1.6 Benchmarked against the 2015 6 day Survey and referencing the Atkins Stage 3 November 2011 results the 2016 3 day late February and 3 day Early June Survey Results are reviewed and commented on in section 3.2, 3.3 and 3.4 below.

3.2 2016 3 Day Survey 23rd 24th 25th February Results.

3.2.1 Classified junction turning counts have been carried out on Tuesday, the 23rd February 2016. This was supported by a 3-day in car video survey between 23rd and 25th February following the three identified vehicular routes as per 2015 survey along the A22 corridor.

3.2.2 Appendix A Tables 1 and 2 (page 17 and 18) show the individual daily Maximum Queue [MQ] for each arm an total for each junction for the peak period with the survey average. These results are compared to the Atkins 3 Nov 2011 Actual and the Jubb March 2015 6 day survey results.

3.2.3 Exactly a year later in late February 2016 than the first 3 days of the 6 day 2015 survey, as anticipated by Jubb, the 3 day Survey 23rd, 24th, 25th February 2016 found that the East Grinstead Traffic Network and the A22 junctions 'Severe Congestion' of March 2015 **has markedly deteriorated further** as:

1. Appendix B indicates a persistent exit blocking was observed at the exit of A22 London Road North at Lingfield Road junction with a slow moving/queueing traffic of 1,310 metres consistently stacking back from Imberhorne Lane junction impeding the operation of the Lingfield Road Roundabout during the AM peak.

Similarly, a consistent queuing delay of 380m was recorded between Felbridge and Imberhorne Lane Junctions during both AM and PM Peak in each direction causing an exit blocking effect interfering the operation of the downstream junction.

3.2.4 The above is not surprising when recognising the limitations of the Junction layouts and the spacing between, the Lingfield Road/London Road [Lingfield] Junction and that at Imberhorne Lane/London Road [Imberhorne Lane] which is 1,310m and the Felbridge and Imberhorne Lane Junctions 380m.

3.2.5 The deterioration in traffic congestions since 2015 Survey is also shown on the table in Appendix A Tables 1 and 2 (page 17 and 18), which compares the Late February 2016 Survey Results for each junction Arm with the 2015 Survey showing that the

1. At Felbridge Junction, the congestions at A264 Copthorne Rd Arm have been aggravated since the 2015 survey with [see 3.2.2 above] The Queue Length reaching 951 metres with MQ surged to 158 pcu from 122 pcu extending 36 pcu 30%. This exposes a significant year on year decay in junction performance representing 6 times higher than Atkins Stage 3 November 2011 survey level.
2. Despite a similar level of queue length being recorded between 2015 and February 2016 Surveys in the PM Peak at the Imberhorne Junction a notably increase occurred at AM Peak as total MQ lengthen 40 pcu 12% to 378 pcu 6 times greater than Atkins Stage 3 November 2011 surveys 63 pcu.

This was largely due to an increase of 28 pcu (15%) in queuing traffic at the A22 London Road South from 190 pcu to 218 pcu nearly 10 times greater than the Atkins Stage 3 November 2011 Survey (23 pcu). With a queue length reaching 1,310m, a blocking back impact to the downstream junction was evident.

3. At the Lingfield junction, the A22 London Road North continues to suffer from severe delay and congestion with MQ's of 143 pcus and 149 pcus recorded respectively in AM and PM Peak ,approximately 40 pcus longer than the Atkins Stage 3 Nov 2011 survey with queue lengths continuing to reach 1.2km.

3.3 2016 3 Day Survey 7th, 8th 9th June Results.

3.3.1 Following on from the late February 2016 survey, 15 weeks later, a further data collection exercise was carried out in June 2016 including 3-days in car video and static camera surveys and 1 day classified junction turning count. A total of 8 static cameras and 5 ground staff were deployed to observe the operation of the A22 junctions.

3.3.2 The results of the 3 day Survey 7th, 8th and 9th June 2016 in Appendix A Tables 1 and 2, page 17 and 18 show over the four months that the PM Peak hour performance have decayed further at Imberhorne and Felbridge Junctions as

:

- The Imberhorne Junction in PM Peak, a total MQ of 292 was recorded 40% rise (84pcus) from the February 2016 level of 208 pcus, 33% higher than the March 2015 of 220 pcus and 4.6 time of Atkins Stage 3 November 2011 survey of 63 pcu.
- The A22 London Road (S) arm increased 73 pcus above February's 2016 109 pcu reaching 182 pcus 57 above March 2015 MQ 125 a 45% increase with queues in excess of 1km.
- Alongside the above overall AM Peak Imberhorne Junction total MQ 352 pcu was slightly above March 2015 338 pcu as a queue length of 1.31km was evident at the A22 London Road South with MQ of 218 pcu 12% increase upon the Feb 2016 level from 190 pcu in MQ.
- At Felbridge Junction the total PM Peak MQ's were recorded as 283 pcus, an increases of 35 pcu (14%) above the February 2016 248 pcu and 30% increase over March 2015 218 pcu. Majority of which was contributed by the heavily congested A264 Copthorne Rd arm as the queues lengthen further to 1.1km long of 183 pcu in MQ additional 25 pcus above February 2016 and 61 pcus (50%) above March 2015's MQ of 122 pcu.
- Overall during the AM Peak, the condition of Felbridge Junction was more subdued with the total junction MQ recording at 163 pcu, 42 pcus below the 205 pcus recorded in February 2016 and 80 below the 243 pcu in March 2015 mainly due to the decline in the A264 Copthorne Road arm to 84 MQ a 500m queue length even so the total Junction MQ is 3.3 times higher than Atkins Stage 3 November 2011 of 49 pcu.
- The Lingfield PM Peak MQ's has progressively increased on A22 London Rd (N) arms over the last three surveys 136 pcus (March 2015), 149 (February 2016)

and 182 (June 2016) over 19 months 46 pcu 34% with a 1.1km long queue however 73 units 67% above the Atkins Stage 3 November 2011 MQ of 109 pcus.

- Similarly the AM Peak performance for this arm records 160 pcu [2015 Survey] 143 [February 2016] followed by 152 pcu [June 2016] averaging 152 pcu 912m queue length well above 50% the Atkins Stage 3 November 2011 MQ of 101 pcu.

3.4 Comparison of 2016 6 day Surveys Results [3 days in Late February, 3 days Early June] with 2015 6 Days Late February and Early March 2015 and Atkins Stage 3 1 day November 2011 Survey Results .

3.4.1 The Jubb Survey Reports span late 2014, 2015 and 2016, cover 14 days over four separate survey periods across the seasons of the year and provides comprehensive and substantial evidence base for its findings.

3.4.2 In the background of acknowledged historic and present Severe Congestion on the A22 traffic network see Section 2.1 page 5 the Jubb Survey Reports evidence progressive and material deterioration in performance at the Felbridge, Imberhorne Junctions and Lingfield Junctions A22 London Rd (N) arm since the Atkins Stage 3 November 2011 1 day survey report 5 years ago.

3.4.3 Table 3.0 below compares the 2016 Jubb 6 day Survey results in maximum queue length with the Jubb 2015 6 day Survey Results and the Atkins Stage 3 one day November 2011 Survey result below

3.4.4 The Jubb 2016 6 day Survey Results of February and June show that in 2016 severe traffic congestion experienced along the A22 corridor reaches a new height at the Imberhorne Lane Junction during both AM and PM peak and at the Felbridge Junctions in the PM as

- Imberhorne Junction both AM and PM 2016 total Junction MQ's of 365 and 251 pcu respectively an increase of 8% to 14% above 2015 total Junction MQ's of 338 AM and 220 PM and are 5.8 times and 4.0 times greater than the Atkins Stage 3 November 2011 MQ's of 63 AM and PM.
- The principal change is the lengthening of the queues on the A22 London Rd (S) arm AM where MQ's increase AM 28 pcu 15% to 218 pcu with queues of 1.3km from 190 pcu 1.14 km long as MQ PM extend to 146 pcu 876m 21 pcu 17% above 125 in 2015. AM 9.5 times and PM 7.3 times greater than Atkins Stage 3 November 2011 MQ's.

Table 3.0

Comparison of Jubb 2016 A22 Junction Survey MQ AM PM Peak Results with Jubb 2015 Survey and Atkins Stage 3 November 2011 Survey Results.

| Junction | Atkins Stage 3 | | Jubb Survey | | | |
|--------------------------------|-----------------------------|-----|-------------|-----|-------------|-----|
| | Year 2011 Modelling Results | | 2015 Survey | | 2016 Survey | |
| | AM | PM | AM | PM | AM | PM |
| Felbridge Junction | | | | | | |
| A264 Copthorne Road | 30 | 26 | 140 | 122 | 107 | 171 |
| A22 Eastbourne Rd (N) | 9 | 16 | 54 | 36 | 21 | 33 |
| A22 London Road (S) | 10 | 12 | 49 | 60 | 56 | 62 |
| Total of All Arms | 49 | 54 | 243 | 218 | 184 | 266 |
| Imberhorne Junction | | | | | | |
| Imberhorne Lane | 15 | 16 | 92 | 39 | 84 | 42 |
| A22 London Rd (N) | 25 | 27 | 56 | 56 | 63 | 63 |
| A22 London Rd (S) | 23 | 20 | 190 | 125 | 218 | 146 |
| Total of All Arms | 63 | 63 | 338 | 220 | 365 | 251 |
| Lingfield Road Junction | | | | | | |
| A22 London Road (N) | 101 | 109 | 160 | 136 | 147 | 166 |

- In addition also there was a consistent queuing delay of 380m recorded, filling the road space between Felbridge and Imberhorne Lane Junctions during AM and PM. Notably at Imberhorne Junction A22 London Road (North) delays were much longer than the 2015 survey during both AM and PM Peak, whereas prolonged delay was evident at the Felbridge Junction along the A22 London Road South in the PM Peak.
- Felbridge Junction PM Peak total junction MQ substantially increases 48 pcu 22% above 2015 to 266 pcu, 4.9 times greater than Atkins Stage 3 November 2011 Survey of 54 pcu.
- The congestion experienced at the A264 Copthorne Rd has decayed with an increase of (40%) 49 pcus in MQ to 171 pcu with a queue length of 1,026m from 122 MQ 732m long in 2015 and over 6 times the Atkins Stage November 2011 Survey of only 26 pcu.
- In the AM Peak, a drop of 59 pcu in queue length was observed in the 2016 Survey from 2015 Total Junction MQ of 243 pcu to 184 pcu, still 3.8 times higher than the Atkins Stage 3 Study.

- The Lingfield Junction A22 London Rd (N) arm PM MQ increases 30 pcu 22% to 166 1 km long, from 136 pcu March 2015 816 m long with AM easing 8% to MQ 147 pcus 882m queue from 160 pcu 960m long.
- 3.4.5 The analysis and predictions of the Atkins Stage 3 May 2012 Report significantly underestimates the serious nature of traffic congestion and delay in and around East Grinstead. The first Jubb Survey Report of November 2014 identified this and that the A22 traffic conditions were severe and unacceptable.
- 3.4.6 The subsequent Jubb 2015 Survey and Reports showed a further material deterioration in A22 traffic conditions from November 2014 with the recent Jubb 2016 6 day Survey demonstrating that the A22 Traffic Network has now reached a new higher level of unacceptable severe congestion particularly AM and PM at Imberhorne and PM at Felbridge Junctions and the A22 London Rd (N) Lingfield Junction.

Appendix A

Table 1

A22 Felbridge Junction PM Peak Comparison

| AM Peak (MQ) | Atkins Stage 3 | Jubb Survey | | | | | | | | | |
|-----------------------|-----------------------------------|------------------------|----------------|----------------|----------------|------------------------|----------------|----------------|----------------|-------------------------|----------------|
| | Year 2011 Modelling Results | Mar/ 2015 Survey | 23/02/ 2016 | 24/02/ 2016 | 25/02/ 2016 | Feb/ 2016 Survey | 07/06 /2016 | 08/06/ 2016 | 09/06/ 2016 | June/ 2016 Survey | 2016 Survey |
| A264 Copthorne Rd | 30 | 140 | 158 | 158 | 76 | 131 | 57 | 73 | 121 | 84 | 107 |
| A22 Eastbourne Rd (N) | 9 | 54 | 14 | 30 | 31 | 25 | 15 | 19 | 15 | 16 | 21 |
| A22 London Road (S) | 10 | 49 | 63 | 53 | 31 | 49 | 63 | 63 | 63 | 63 | 56 |
| Total of All Arms | 49 | 243 | 235 | 241 | 138 | 205 | 135 | 155 | 199 | 163 | 184 |

A22 London Road/Imberhorne Lane Junction AM Peak Comparison

| AM Peak (MQ) | Atkins Stage 3 | Jubb Survey | | | | | | | | | |
|-------------------|-----------------------------------|------------------------|----------------|----------------|----------------|------------------------|----------------|----------------|----------------|-------------------------|----------------|
| | Year 2011 Modelling Results | Mar/ 2015 Survey | 23/02/ 2016 | 24/02/ 2016 | 25/02/ 2016 | Feb/ 2016 Survey | 07/06 /2016 | 08/06/ 2016 | 09/06/ 2016 | June/ 2016 Survey | 2016 Survey |
| Imberhorne Lane | 15 | 92 | 97 | 108 | 87 | 97 | 47 | 89 | 77 | 71 | 84 |
| A22 London Rd (N) | 25 | 56 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 |
| A22 London Rd (S) | 23 | 190 | 218 | 218 | 218 | 218 | 218 | 218 | 218 | 218 | 218 |
| Total of All Arms | 63 | 338 | 378 | 389 | 368 | 378 | 328 | 370 | 358 | 352 | 365 |

A22 London Road/Lingfield Road Junction AM Peak Comparison

| AM Peak (MQ) | Atkins Stage 3 | Jubb Survey | | | | | | | | | |
|---------------------|-----------------------------------|------------------------|----------------|----------------|----------------|------------------------|----------------|----------------|----------------|-------------------------|----------------|
| | Year 2011 Modelling Results | Mar/ 2015 Survey | 23/02/ 2016 | 24/02/ 2016 | 25/02/ 2016 | Feb/ 2016 Survey | 07/06 /2016 | 08/06/ 2016 | 09/06/ 2016 | June/ 2016 Survey | 2016 Survey |
| A22 London Road (N) | 101 | 160 | 90 | 202 | 137 | 143 | 129 | 110 | 218 | 152 | 147 |

Table 2

A22 Felbridge Junction PM Peak Comparison

| PM Peak | Atkins Stage 3 | Jubb Survey | | | | | | | | | | |
|-----------------------|----------------|-----------------------------|-----------------|------------|------------|------------|-----------------|------------|------------|------------|------------------|-------------|
| | | Year 2011 Modelling Results | Mar/2015 Survey | 23/02/2016 | 24/02/2016 | 25/02/2016 | Feb/2016 Survey | 07/06/2016 | 08/06/2016 | 09/06/2016 | June/2016 Survey | 2016 Survey |
| (MQ) | | | | | | | | | | | | |
| A264 Copthorne Rd | 26 | 122 | 158 | 158 | 158 | 158 | 165 | 137 | 247 | 183 | 171 | |
| A22 Eastbourne Rd (N) | 16 | 36 | 16 | 16 | 56 | 29 | 40 | 37 | 34 | 37 | 33 | |
| A22 London Road (S) | 12 | 60 | 63 | 63 | 55 | 60 | 63 | 63 | 63 | 63 | 62 | |
| Total of All Arms | 54 | 218 | 237 | 79 | 111 | 248 | 268 | 237 | 344 | 283 | 266 | |

A22 London Road/Imberhorne Lane Junction PM Peak Comparison

| PM Peak | Atkins Stage 3 | Jubb Survey | | | | | | | | | | |
|-------------------|----------------|-----------------------------|-----------------|------------|------------|------------|-----------------|------------|------------|------------|------------------|-------------|
| | | Year 2011 Modelling Results | Mar/2015 Survey | 23/02/2016 | 24/02/2016 | 25/02/2016 | Feb/2016 Survey | 07/06/2016 | 08/06/2016 | 09/06/2016 | June/2016 Survey | 2016 Survey |
| (MQ) | | | | | | | | | | | | |
| Imberhorne Lane | 16 | 39 | 50 | 36 | 21 | 36 | 30 | 44 | 68 | 47 | 42 | |
| A22 London Rd (N) | 27 | 56 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | |
| A22 London Rd (S) | 20 | 125 | 115 | 125 | 86 | 109 | 111 | 218 | 218 | 182 | 146 | |
| Total of All Arms | 63 | 220 | 228 | 224 | 170 | 208 | 204 | 325 | 349 | 292 | 251 | |

A22 London Road/Lingfield Road Junction PM Peak Comparison

| PM Peak | Atkins Stage 3 | Jubb Survey | | | | | | | | | | |
|---------------------|----------------|-----------------------------|-----------------|------------|------------|------------|-----------------|------------|------------|------------|------------------|-------------|
| | | Year 2011 Modelling Results | Mar/2015 Survey | 23/02/2016 | 24/02/2016 | 25/02/2016 | Feb/2016 Survey | 07/06/2016 | 08/06/2016 | 09/06/2016 | June/2016 Survey | 2016 Survey |
| (MQ) | | | | | | | | | | | | |
| A22 London Road (N) | 109 | 136 | 159 | 143 | 145 | 149 | 218 | 218 | 110 | 182 | 166 | |

Appendix B

East Grinstead February 2016 Traffic Survey – AM Peak

| Dates: From 23/02/2016 to 25/02/2016 | | | | AM | | | | | |
|--------------------------------------|--------------------------|-------------------------|---------------------|-----------------------------|-------------------------------|------------------|-------------------------------|-------------------------------|-------------------|
| Time | Felbridge | | | Imberhorne Ln Junction | | | Lingfield Road Junction | | |
| | A264 Cophthorne Rd | A22 Eastbourne Rd | A22 London Rd | A22 London Rd (North) | A22 London Road (South) | Imberhorne Ln | A22 London Road (North) | A22 London Road (South) | Lingfield Road |
| | Length (m) | Length (m) | Length | Length (m) | Length (m) | Length (m) | Length (m) | Length (m) | Length (m) |
| 07:02 | | | | | 244 | | | | |
| 07:10 | 175 | | | | | | | | |
| 07:13 | | 188 | | | | | | | |
| 07:14 | | 145 | 180 | | | | | | |
| 07:16 | | | | | 221 | | | | |
| 07:17 | | | | | 233 | | | | |
| 07:21 | 391 | | | | | | | | |
| 07:23 | | | | | 792 | | | | |
| 07:24 | 359 | | | | 409 | | | | |
| 07:27 | | | | | 529 | | | | |
| 07:30 | 322 | | | | | 120 | | | |
| 07:31 | | | | | 937 | | | | |
| 07:32 | | | | | 1310 | | | | |
| 07:33 | 377 | | | | 1190 | | | | |
| 07:34 | | | | | 861 | 133 | | | |
| 07:35 | 343 | | | | | | | | |
| | 201 | | | | 1310 | | | | |
| 07:36 | | | | | 1310 | | | | |
| 07:37 | | | | | 1310 | | | | |
| 07:38 | | | | | 1310 | | | | |
| | | | | | 1310 | 325 | | 515 | |
| 07:39 | | | | | 1310 | 452 | | | |
| 07:40 | | | | | 1167 | | | | |
| | 519 | | | | 1310 | | | 305 | |
| 07:41 | | | | | | 525 | | | |
| | | | | | | 448 | | | |
| 07:42 | 687 | | | | 1091 | | | | |
| 07:46 | | 83 | 95 | 327 | | | | | |
| 07:48 | | 103 | | | | 430 | | | |
| 07:50 | | | | | 776 | | | | |
| | | 85 | | | 631 | | | | |
| 07:51 | | | | | | 291 | 420 | | |
| 07:52 | | | | | 1310 | 396 | | | |
| 07:53 | | | | | 1310 | | | | |
| 07:54 | | | | | 1065 | | 129 | | |
| 07:55 | | | | | | 482 | | | |
| | 951 | | | | | 607 | | | |
| 07:56 | | | | | 1310 | | | | |
| 07:57 | | | | | | | | 532 | |

| | | | | | | | | | |
|-------|-----|-----|-----|-----|------|-----|------|-----|-----|
| 07:58 | | | | | 1310 | | | | |
| 07:59 | | | | 301 | | | | | |
| 08:00 | | | | | 1259 | | | | |
| | | | | | 1310 | | | | |
| 08:01 | 186 | | | | | | | | |
| | 508 | | | | 1092 | | 152 | | |
| 08:03 | | | | | 1310 | | | | |
| 08:05 | | | | | | 578 | | | |
| 08:06 | | | | | | 461 | 597 | | |
| 08:07 | | | | | | 585 | | | |
| 08:09 | | 180 | | | | | | | |
| | | 86 | | | | 626 | | | |
| 08:11 | | | | | | 651 | 540 | | |
| 08:12 | | | | 241 | 1272 | | | | |
| 08:13 | | | | | 1310 | | 1061 | | |
| 08:14 | 951 | | | | | | | | |
| 08:15 | | | | | 1310 | | | | |
| 08:16 | | | | | 1310 | | | | |
| 08:17 | | | | | 1121 | | | | |
| 08:18 | | | | 380 | | | | | |
| | | | | 380 | | | | 459 | |
| 08:19 | 951 | | | 380 | 1310 | | | | |
| | | | | | 1105 | | | | |
| 08:20 | | | | 380 | 1310 | | 153 | | |
| 08:21 | | | | 380 | 726 | 425 | | | |
| 08:22 | | | | 380 | | | | | |
| 08:23 | | | | | | | | 512 | |
| 08:26 | | | | 380 | 1310 | | | | |
| 08:27 | | | 380 | | | | | | |
| 08:28 | | | | | | 393 | | 441 | |
| 08:29 | | | | | 1310 | | 232 | | |
| 08:30 | 455 | | | 380 | 1310 | | | | |
| 08:31 | | | | | 787 | | | | |
| | | | 316 | | 1310 | 488 | | | |
| 08:32 | | | 340 | | 1310 | | | | |
| 08:33 | | | | | 1310 | | | | |
| 08:34 | | | | | | | 684 | | |
| | | | | | 1310 | 568 | 168 | | |
| 08:35 | | | | | 1310 | | | | |
| 08:36 | 645 | | | | 1310 | 223 | | | 144 |
| 08:37 | | | | | 1310 | | | | 146 |
| 08:38 | 806 | | | | 1310 | | | | |
| 08:39 | | | | | 1310 | | | | |
| 08:40 | | | | | 1310 | | | | |
| 08:41 | 951 | 107 | | | | | 596 | | |
| 08:42 | | | | | | | | 625 | |
| 08:43 | | | | 310 | | | | | |
| 08:44 | | | | | 895 | | 1214 | | |
| 08:45 | | | | | 1016 | | | | |

| | | | | | | | | | |
|-------|-----|-----|-----|-----|------|-----|-----|--|-----|
| 08:46 | | | | | | 320 | | | |
| 08:47 | | | | | | 172 | 530 | | |
| 08:48 | | | 38 | | | | | | |
| 08:49 | | | | | | 129 | | | |
| 08:50 | | | | | | | | | 254 |
| 08:51 | | | 187 | | | | | | |
| 08:52 | 340 | | | 380 | | | | | 374 |
| 08:54 | 316 | | | | | | | | |
| 08:56 | | | | 380 | 887 | 116 | | | |
| 08:57 | | | | 380 | 1113 | | 157 | | |
| 08:58 | | | | | | | | | 206 |
| | 701 | | | | | | | | 151 |
| 09:00 | | | | | | | | | 291 |
| 09:02 | | | | | 793 | | | | |
| 09:03 | | | | | | 133 | | | |
| 09:04 | | | | | | | 740 | | |
| 09:05 | | | | | 935 | | 233 | | |
| 09:07 | | | | | 856 | | | | |
| 09:09 | | 103 | | | | | | | |
| 09:10 | | | 193 | | | | 724 | | |
| 09:11 | | | | | 301 | | 823 | | |
| 09:13 | | | | | 135 | 222 | | | |
| 09:14 | 285 | | | | | | 281 | | |
| 09:16 | | | | | | 111 | | | 114 |
| 09:17 | | | 92 | | 510 | | | | |
| 09:19 | | | | | | | 223 | | |
| 09:23 | | | | | | | 679 | | |
| 09:26 | | | 90 | | | | | | |
| 09:31 | | | | | | | 226 | | |
| 09:35 | | | | | | | | | 103 |
| 09:41 | | | | | | | 201 | | |
| 09:44 | | | | | | 150 | | | |
| 09:47 | | | | | | 183 | | | |
| 09:50 | 231 | | | | | | | | |
| 09:56 | | | | 189 | | | | | |
| 09:57 | 164 | | | | | | | | |

East Grinstead February 2016 Traffic Survey – Queue Length PM Peak

| Dates: From 23/02/2016 to | | | | PM | | | | | |
|---------------------------|-----------------------|-------------------------|---------------------|------------------------|----------------------|------------------|-------------------------|----------------------|-------------------|
| Time | Felbridge Junction | | | Imberhorne Ln Junction | | | Lingfield Road Junction | | |
| | A264 Cophthorne Rd | A22 Eastbourne Rd | A22 London Rd | A264 Cophthorne Rd | A22 Eastbourne Rd | A22 London Rd | A264 Cophthorne Rd | A22 Eastbourne Rd | Lingfield Road |
| | Length (m) | Length (m) | Length (m) | Length (m) | Length (m) | Length (m) | Length (m) | Length (m) | Length (m) |
| 15:00 | 515 | 180 | | | | | | | |
| 15:06 | 344 | | | | | | | | |
| 15:09 | | | 94 | | | | | 487 | |
| 15:12 | | | | | | 125 | | 246 | |
| 15:13 | 210 | | 102 | | | | | | |
| 15:14 | 133 | | | | 353 | | 432 | | |
| 15:16 | | | | 274 | | | | | |
| 15:17 | | | | 380 | | | | | |
| 15:18 | | 94 | | | | | | | |
| 15:20 | | | | | 235 | | 663 | | |
| 15:21 | | | 380 | | | | 856 | | |
| 15:22 | | | 380 | | | 99 | | | |
| 15:26 | 183 | | | | | | | | |
| 15:28 | | | | | | 101 | | | |
| 15:29 | | | | | | | | 550 | |
| 15:32 | | | | | 688 | | 271 | | |
| 15:33 | | | | | 514 | | 830 | | |
| 15:35 | | | | | 705 | | | | |
| 15:38 | | | | | | | 952 | | |
| 15:39 | | | 332 | | | | | | |
| 15:42 | | | | | | | 248 | | |
| 15:43 | | | | | 333 | 123 | | | |
| 15:44 | | | | | | | 395 | | |
| 15:48 | | | | | | 161 | | 743 | |
| 15:51 | 163 | | | | | | 434 | | |
| 15:56 | | | | | 156 | | | | |
| 15:58 | 198 | | | | | | 283 | | |
| 15:59 | | | | 380 | | | 191 | | |
| 16:00 | | | | | | | 199 | | |
| 16:02 | | | | | | 152 | | | |
| 16:07 | | | | | | 177 | | 509 | |
| 16:08 | | | | | | | 532 | | |
| 16:09 | | 91 | | | | | | | |
| 16:11 | | | | | 298 | | | | |
| 16:12 | | | 123 | | | | | | |
| 16:13 | 349 | | 298 | | | 126 | | | |
| 16:17 | | | | | | 169 | 827 | | |
| 16:19 | | | | | | | 244 | | |
| 16:20 | | | | | | | | 688 | |
| 16:21 | | | 91 | | | | | | |
| 16:24 | | | | | | 155 | | | |
| | | | | | | 272 | | | |
| 16:25 | | | | | | | | 680 | |

| | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 16:29 | | | | | 636 | | 741 | | |
| 16:30 | | | | | | | 685 | | |
| 16:31 | | | 312 | | | | | | |
| 16:35 | | | | | | | 709 | | |
| 16:37 | | | | | 452 | | | | |
| 16:38 | | | | | | | 372 | 563 | |
| 16:39 | 285 | | 98 | | | | | | |
| 16:43 | | | | | | | | 561 | |
| 16:46 | | 90 | | | | | | 587 | |
| 16:47 | | | | | 277 | | | | |
| 16:48 | 371 | | | | | | | | |
| 16:49 | | | | | 753 | | 232 | | |
| 16:52 | | | 93 | | | | 292 | | |
| 16:54 | 410 | | | | | | | | |
| 16:56 | | | 296 | | | | | | |
| 16:57 | | | | | | | | 560 | |
| 16:58 | 625 | | 380 | | | 127 | | | |
| 17:00 | | | | | | | 228 | | |
| 17:01 | | | | | 146 | | | | |
| 17:02 | | | | | | 217 | | | |
| 17:04 | 732 | 149 | | | | | | | |
| 17:05 | | | | | | | | 568 | |
| 17:06 | 655 | | | | | | | | |
| 17:07 | | | 380 | | | | | | |
| 17:08 | | | | | | | 548 | | |
| | 480 | | 380 | 380 | | | 636 | | |
| 17:09 | | | | | 277 | | | | |
| 17:11 | | | | | | 121 | | 466 | |
| 17:12 | | | | | | 301 | | | |
| 17:13 | | | | 380 | | | | | |
| 17:14 | | | | | | | 615 | | |
| 17:15 | | | | | 269 | | | | |
| 17:16 | | | | | | 136 | | | |
| 17:17 | | | 380 | 380 | | | | 590 | |
| 17:18 | | 95 | | 380 | | | | | |
| 17:19 | 847 | | | 380 | | | | | |
| 17:20 | 951 | | | | 470 | | | | |
| 17:21 | 327 | | 380 | 380 | | | 310 | | |
| 17:23 | | | | | | | | 825 | |
| 17:24 | | | | | | | | | 106 |
| 17:26 | | | | 380 | | | | | |
| 17:27 | | | 380 | | | | | | |
| 17:28 | | | | | | | 284 | 491 | |
| 17:32 | 951 | | | | | | | | |
| 17:33 | 802 | | | | | | | | |
| 17:34 | | | 380 | | | | | | |
| 17:36 | 951 | | 380 | 313 | | | | 497 | |
| 17:38 | | | | | 305 | | 218 | | |
| 17:39 | | | | | | | 425 | | |

| | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|--|
| 17:41 | | | | | | | | 485 | |
| 17:44 | | | | 380 | | | | | |
| 17:46 | | | | | | | 262 | | |
| 17:47 | 948 | | | | | | | 716 | |
| 17:49 | 880 | | | | | | | | |
| 17:50 | | | 380 | | | | | | |
| 17:52 | | | | | 325 | | | | |
| 17:53 | | | 137 | | | | | | |
| 17:55 | 842 | | | | | | | | |
| 17:57 | | | 380 | | 281 | | | | |
| 17:59 | | 273 | | | | | | | |
| 18:00 | | 334 | | | | 131 | | | |
| 18:01 | | | | 298 | | | | | |
| 18:02 | | | 380 | | | | | | |
| 18:05 | | | | | | | 423 | | |
| 18:08 | 443 | | 151 | | | | | | |
| 18:10 | 951 | | | | | | | | |
| 18:11 | 823 | | 380 | | | | | | |
| 18:14 | | | | | | | 349 | | |
| 18:17 | | | | | | | 249 | | |
| | | | | | | | 518 | | |
| 18:20 | 261 | | | | | | | | |
| 18:22 | | | | | | | 869 | | |
| | | | | | | | 239 | | |
| 18:24 | 669 | | | | | | | | |
| 18:26 | 951 | | | | | | | | |
| 18:33 | | | | | | | 537 | | |
| 18:35 | 220 | | | | | | | | |
| 18:36 | | | 145 | | | | | | |
| 18:39 | | | | | | | 224 | | |
| 18:40 | 951 | | | | | | | | |
| 18:43 | | | | | | | 208 | | |
| 18:49 | | | | | | | 286 | | |
| 18:52 | | | | | | | 445 | | |
| 18:54 | 897 | | | | | | | | |

East Grinstead June 2016 Traffic Survey - June 2016

| Day 7th, 8th and 9th of June | | | AM | Time | | | Time | | | | |
|------------------------------|------------------------|-------------------------|------------------|------|-----------------------------|-----------------------------|------------------|------|-----------------------------|-----------------------------|-------------------|
| Time | Felbridge Junction | | | Time | Imberhorne Ln Junction | | | Time | Lingfield Road Junction | | |
| | A264 Cophorne Rd | A22 Eastbourne Rd | A22 London Rd | | A22 London Rd (North) | A22 London Rd (South) | Imberhorne Ln | | A22 London Rd (North) | A22 London Rd (South) | Lingfield Road |
| | Length (m) | Length (m) | Length (m) | | Length (m) | Length (m) | Length (m) | | Length (m) | Length (m) | Length (m) |
| 7:00 | | | | 7:00 | | | | 7:00 | | | |
| 7:01 | | | | 7:01 | | | | 7:01 | | | |
| 7:02 | | | | 7:02 | | | | 7:02 | | | |
| 7:03 | | | 88 | 7:03 | | | | 7:03 | | | |
| 7:04 | | | | 7:04 | | 613 | | 7:04 | | | |
| 7:05 | | | | 7:05 | | | | 7:05 | | | |
| 7:06 | | | | 7:06 | | | | 7:06 | | | |
| 7:07 | | | | 7:07 | | | | 7:07 | | | |
| 7:08 | | | | 7:08 | | | | 7:08 | | | |
| 7:09 | | | | 7:09 | | | | 7:09 | | | |
| 7:10 | | | | 7:10 | | | | 7:10 | | | |
| 7:11 | | | | 7:11 | | | | 7:11 | | | |
| 7:12 | | | | 7:12 | | 954 | | 7:12 | | | |
| 7:13 | | | | 7:13 | | | | 7:13 | | | |
| 7:14 | | | | 7:14 | | | | 7:14 | | | |
| 7:15 | | 90 | | 7:15 | | | | 7:15 | | | |
| 7:16 | | | | 7:16 | | | | 7:16 | | | |
| 7:17 | | | | 7:17 | | | | 7:17 | | | |
| 7:18 | | | | 7:18 | | | | 7:18 | | | |
| 7:19 | | | 380 | 7:19 | | 125 | | 7:19 | | | |
| 7:20 | | | | 7:20 | | | | 7:20 | | | |
| 7:21 | | | | 7:21 | | | | 7:21 | | | |
| 7:22 | | | | 7:22 | | | | 7:22 | | | |
| 7:23 | | | | 7:23 | | 512 | | 7:23 | | | |
| 7:24 | 343 | | | 7:24 | | | | 7:24 | | | |
| 7:25 | | | | 7:25 | | | | 7:25 | | | |
| 7:26 | | | | 7:26 | | | | 7:26 | | | |
| 7:27 | | | | 7:27 | | | | 7:27 | | | |
| 7:28 | | | | 7:28 | | | | 7:28 | | | |
| 7:29 | | | | 7:29 | | | | 7:29 | | | |
| 7:30 | | | | 7:30 | | 659 | | 7:30 | | | |
| 7:31 | | | | 7:31 | | | | 7:31 | | | |
| 7:32 | | | | 7:32 | | | | 7:32 | | | |
| 7:33 | | | | 7:33 | | 637 | | 7:33 | | | |
| 7:34 | | | | 7:34 | | | | 7:34 | | | |
| 7:35 | | | | 7:35 | | | | 7:35 | | | |
| 7:36 | | | 380 | 7:36 | | | | 7:36 | | | |
| 7:37 | | | | 7:37 | | | | 7:37 | | | |
| 7:38 | | | | 7:38 | | | | 7:38 | | | |
| 7:39 | | | | 7:39 | | | | 7:39 | | | |
| 7:40 | | 88 | 380 | 7:40 | | 509 | | 7:40 | | | |
| 7:41 | | | | 7:41 | | | 202 | 7:41 | | | |
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| 7:49 | | | 380 | 7:49 | 380 | | | 7:49 | | | |
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|------|-----|----|-----|------|-----|------|-----|------|------|-----|-----|
| 7:51 | 296 | | | 7:51 | | 977 | | 7:51 | | | |
| 7:52 | | | | 7:52 | | | | 7:52 | | | |
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| 7:59 | | 92 | | 7:59 | | | 95 | 7:59 | | | |
| 8:00 | | | | 8:00 | | | | 8:00 | | | |
| 8:01 | | | | 8:01 | | | | 8:01 | 228 | | |
| 8:02 | | | | 8:02 | | 1242 | | 8:02 | | | |
| 8:03 | | | | 8:03 | | | 254 | 8:03 | | | |
| 8:04 | | | 243 | 8:04 | | | | 8:04 | | | |
| 8:05 | 259 | | | 8:05 | | 1310 | | 8:05 | | | |
| 8:06 | | | | 8:06 | | | | 8:06 | | | |
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| 8:12 | 441 | | | 8:12 | 380 | 1310 | 282 | 8:12 | | | |
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| 8:14 | 334 | | | 8:14 | 380 | 1310 | | 8:14 | | | |
| 8:15 | | | 380 | 8:15 | | | | 8:15 | | | |
| 8:16 | | | | 8:16 | 130 | | | 8:16 | | 379 | |
| 8:17 | | | | 8:17 | | | 221 | 8:17 | | | 255 |
| 8:18 | | | | 8:18 | | 1310 | | 8:18 | | | |
| 8:18 | 577 | | | 8:18 | | 1224 | | 8:18 | | | |
| 8:19 | 316 | | | 8:19 | | 1310 | | 8:19 | | | |
| 8:20 | | | | 8:20 | | | 446 | 8:20 | | | |
| 8:21 | | | | 8:21 | 380 | | | 8:21 | | | |
| 8:22 | | | | 8:22 | 120 | | | 8:22 | | | |
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| 8:24 | | | 284 | 8:24 | 380 | 1310 | 163 | 8:24 | | | |
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| 8:34 | | | | 8:34 | | | | 8:34 | | | |
| 8:35 | | | | 8:35 | 290 | | | 8:35 | | | |
| 8:36 | 691 | | | 8:36 | | 660 | | 8:36 | 1310 | | |
| 8:37 | | | | 8:37 | | | 277 | 8:37 | 357 | | |
| 8:37 | | | | 8:37 | | | | 8:37 | 1310 | | |
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| 8:39 | | | | 8:39 | | | 537 | 8:39 | | | |
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| 8:43 | | | | 8:43 | | 459 | | 8:43 | | | |
| 8:44 | | | | 8:44 | | | | 8:44 | | | |

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| 8:57 | | | | 8:57 | | | | 8:57 | 261 | | |
| 8:58 | | | | 8:58 | | | | 8:58 | | | |
| 8:59 | | | | 8:59 | | | 129 | 8:59 | | | |
| 9:00 | | | | 9:00 | | | | 9:00 | | | |
| 9:01 | | | | 9:01 | | | | 9:01 | 467 | | |
| 9:02 | 363 | | | 9:02 | | | | 9:02 | | | |
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| 9:06 | 341 | | | 9:06 | | | 330 | 9:06 | | | |
| 9:07 | | | | 9:07 | | | | 9:07 | | 235 | |
| 9:08 | | | 191 | 9:08 | | | | 9:08 | | | |
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| 9:12 | | | | 9:12 | | 272 | | 9:12 | | | |
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| 9:20 | | | | 9:20 | | | | 9:20 | 458 | | |
| 9:21 | | | | 9:21 | | | | 9:21 | | | |
| 9:22 | 382 | | | 9:22 | | | | 9:22 | | | |
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| 9:37 | 703 | | | 9:37 | 380 | | | 9:37 | | | |
| 9:38 | | | | 9:38 | | | | 9:38 | | | |
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| 9:40 | | 114 | | 9:40 | | | | 9:40 | | | |
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| 9:43 | | | | 9:43 | | | | 9:43 | | | |
| 9:44 | | | | 9:44 | | | 133 | 9:44 | | | |
| 9:45 | | | 94 | 9:45 | | | | 9:45 | | | |
| 9:46 | 581 | | | 9:46 | | | | 9:46 | | | |
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| 9:48 | | | 380 | 9:48 | | | | 9:48 | | | |
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| 9:51 | | | 93 | 9:51 | | | | 9:51 | | | |
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East Grinstead June 2016 Traffic Survey - PM Peak

| Day | | 7th, 8th and | | PM | | | | | | | |
|-------|--------------------------|-------------------------|---------------------|-------|-----------------------------|-----------------------------|------------------|-------|-----------------------------|-----------------------------|-----------------|
| Time | Felbridge Junction | | | Time | Imberhorne Ln Junction | | | Time | Lingfield Road | | |
| | A264 Cophthorne Rd | A22 Eastbourne Rd | A22 London Rd | | A22 London Rd (North) | A22 London Rd (South) | Imberhorne Ln | | A22 London Rd (North) | A22 London Rd (South) | Lingfield Rd |
| | Length (m) | Length (m) | Length (m) | | Length (m) | Length (m) | Length (m) | | Length (m) | Length (m) | Length (m) |
| | | | 380 | 14:35 | | | | | | | |
| | | | 380 | 14:52 | | | | | | | |
| | | | | 14:53 | 380 | | | | | | |
| 15:00 | | | | 15:00 | | | | 15:00 | | | |
| 15:01 | 690 | | | 15:01 | | | | 15:01 | | | |
| 15:02 | | | | 15:02 | | | | 15:02 | | | |
| 15:03 | | | | 15:03 | | 233 | 162 | 15:03 | | | |
| 15:04 | | | | 15:04 | | | | 15:04 | | | |
| 15:05 | | | | 15:05 | | | | 15:05 | | | |
| 15:06 | | | | 15:06 | | | | 15:06 | 281 | | |
| 15:07 | | | | 15:07 | | | | 15:07 | | | |
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| 15:10 | | | | 15:10 | | | | 15:10 | | | |
| 15:11 | | | | 15:11 | | | | 15:11 | | | |
| 15:12 | | | 244 | 15:12 | | | | 15:12 | | | |
| 15:13 | 298 | | | 15:13 | | | | 15:13 | | 859 | 140 |
| 15:14 | | | 380 | 15:14 | | | | 15:14 | | 624 | |
| 15:15 | | | | 15:15 | | | | 15:15 | | 603 | |
| 15:16 | | | | 15:16 | | | | 15:16 | | | |
| 15:17 | | | | 15:17 | | | | 15:17 | | | |
| 15:18 | 386 | | | 15:18 | | | | 15:18 | 531 | | |
| 15:19 | | | | 15:19 | | 353 | | 15:19 | | | |
| 15:20 | | | | 15:20 | 380 | | | 15:20 | | | |
| 15:21 | | 91 | | 15:21 | | | | 15:21 | | | |
| 15:22 | | | | 15:22 | | | 126 | 15:22 | | | |
| 15:23 | | | | 15:23 | 380 | | | 15:23 | | | |
| 15:24 | | | | 15:24 | 380 | | | 15:24 | | | |
| 15:25 | | | 380 | 15:25 | | | | 15:25 | | | |
| 15:26 | | | 85 | 15:26 | | | | 15:26 | | | |
| 15:27 | | | | 15:27 | 380 | | | 15:27 | | | |
| 15:28 | | | | 15:28 | 380 | | | 15:28 | 840 | | |
| 15:29 | | | | 15:29 | 128 | | | 15:29 | | | |
| 15:30 | | | | 15:30 | | 475 | | 15:30 | 481 | | |
| 15:31 | | | 380 | 15:31 | | | | 15:31 | 659 | | |
| 15:32 | 423 | | | 15:32 | 380 | | | 15:32 | | | |
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| 15:37 | | | | 15:37 | 380 | | | 15:37 | | | 81 |
| 15:38 | | | | 15:38 | | | | 15:38 | | | |
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| 15:42 | 275 | | | 15:42 | | | | 15:42 | 1310 | | |
| 15:43 | | | | 15:43 | | | | 15:43 | 1310 | | |
| 15:44 | 992 | | | 15:44 | | 251 | | 15:44 | 1310 | | |
| 15:45 | | | 380 | 15:45 | | | | 15:45 | 319 | | |

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|-------|-----|-----|-----|-------|-----|------|-----|-------|------|-----|-----|
| 15:46 | | | 380 | 15:46 | 380 | | 142 | 15:46 | 785 | | |
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| 15:51 | | | | 15:51 | | | | 15:51 | 1310 | | |
| 15:52 | | 81 | 136 | 15:52 | | | | 15:52 | | | |
| 15:53 | 393 | | | 15:53 | 380 | | | 15:53 | 1310 | | |
| 15:54 | | | 380 | 15:54 | | | | 15:54 | | | |
| 15:55 | | | | 15:55 | | 171 | | 15:55 | | | |
| 15:56 | | | | 15:56 | | 447 | | 15:56 | 292 | | |
| 15:57 | | | | 15:57 | | | | 15:57 | | | |
| 15:58 | 179 | | | 15:58 | | | | 15:58 | | | |
| 15:59 | | | | 15:59 | | | | 15:59 | | | |
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| 16:04 | | | | 16:04 | | | | 16:04 | | | |
| 16:05 | | | | 16:05 | | | | 16:05 | | | |
| 16:06 | 737 | | | 16:06 | | | | 16:06 | 336 | | |
| 16:07 | | | | 16:07 | | | | 16:07 | | 556 | |
| 16:08 | | | | 16:08 | | | | 16:08 | | | |
| 16:09 | | | | 16:09 | | | | 16:09 | | | |
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| 16:17 | | 219 | | 16:17 | | | | 16:17 | | | |
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| 16:19 | | | | 16:19 | | | | 16:19 | | | 177 |
| 16:20 | | | 380 | 16:20 | | | | 16:20 | | | |
| 16:21 | 687 | | | 16:21 | | | | 16:21 | | | |
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| 16:24 | 864 | | | 16:24 | | 583 | | 16:24 | | | |
| 16:25 | | | | 16:25 | | | | 16:25 | 424 | | |
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| 16:31 | | | | 16:31 | | | | 16:31 | | | |
| 16:32 | 212 | | | 16:32 | | | | 16:32 | | | |
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| 16:37 | | | | 16:37 | | | | 16:37 | | | |
| 16:38 | | | | 16:38 | | 1192 | | 16:38 | | | |
| 16:39 | 191 | | | 16:39 | | | | 16:39 | | | |
| 16:40 | | | | 16:40 | | | | 16:40 | 373 | | |
| 16:41 | | | | 16:41 | | | | 16:41 | | | |
| 16:42 | | | | 16:42 | | | 262 | 16:42 | | | |

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| 16:44 | 939 | | | 16:44 | 380 | | | 16:44 | 439 | | |
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| 17:00 | | | | 17:00 | | | | 17:00 | | | |
| 17:01 | 522 | | | 17:01 | | | | 17:01 | | | |
| 17:02 | | | | 17:02 | | 1275 | | 17:02 | | | |
| 17:03 | | | | 17:03 | | | | 17:03 | | | |
| 17:04 | | | 380 | 17:04 | 380 | | | 17:04 | | | |
| 17:05 | | | | 17:05 | 192 | 1009 | | 17:05 | | | |
| 17:06 | | | 380 | 17:06 | | | | 17:06 | | | |
| 17:07 | | | | 17:07 | | | 263 | 17:07 | | | |
| 17:08 | | | | 17:08 | | | | 17:08 | | | |
| 17:09 | | | | 17:09 | | | | 17:09 | | | 117 |
| 17:10 | | | | 17:10 | | | 313 | 17:10 | | | |
| 17:11 | | | | 17:11 | | | | 17:11 | | | |
| 17:12 | | | | 17:12 | | | 254 | 17:12 | | | |
| 17:13 | | | | 17:13 | | | | 17:13 | | 604 | 109 |
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| 17:17 | 335 | | 324 | 17:17 | 380 | | | 17:17 | 343 | | |
| 17:18 | 295 | | | 17:18 | 293 | 909 | | 17:18 | | 761 | |
| 17:19 | | | | 17:19 | | 676 | | 17:19 | 315 | | |
| 17:20 | 447 | | 380 | 17:20 | 380 | | | 17:20 | | | |
| 17:21 | | | | 17:21 | 380 | | | 17:21 | | | |
| 17:22 | | | | 17:22 | | | | 17:22 | 220 | | |
| 17:23 | 853 | | 380 | 17:23 | | | | 17:23 | | | |
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| 17:25 | | | 137 | 17:25 | | | | 17:25 | | | |
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| 17:32 | | | | 17:32 | | 512 | | 17:32 | | | |
| 17:33 | | | | 17:33 | | | | 17:33 | 249 | | |
| 17:34 | | | | 17:34 | | | 406 | 17:34 | 551 | | |
| 17:35 | | | | 17:35 | | 804 | | 17:35 | | | |
| 17:36 | | | 380 | 17:36 | | | | 17:36 | | | |
| 17:37 | | 220 | | 17:37 | | | 258 | 17:37 | | | |
| 17:38 | | | | 17:38 | | | | 17:38 | | | |

| | | | | | | | | | | | |
|-------|------|-----|-----|-------|-----|-----|-----|-------|-----|-----|-----|
| 17:39 | | | 380 | 17:39 | | | | 17:39 | | | |
| 17:40 | | | | 17:40 | | | | 17:40 | | | |
| 17:41 | | | | 17:41 | | | | 17:41 | | | |
| 17:42 | | | | 17:42 | | | | 17:42 | | 856 | |
| 17:43 | | | | 17:43 | 380 | | | 17:43 | | | |
| 17:44 | | 184 | | 17:44 | | | | 17:44 | | | |
| 17:45 | | | | 17:45 | | 777 | | 17:45 | | | |
| 17:46 | | | | 17:46 | | | | 17:46 | | 631 | |
| 17:47 | | | | 17:47 | 380 | | | 17:47 | 285 | | |
| 17:48 | 1351 | | 380 | 17:48 | 380 | | | 17:48 | | | |
| 17:49 | 766 | | | 17:49 | | | | 17:49 | | | |
| 17:50 | | | | 17:50 | | 762 | | 17:50 | 458 | | |
| 17:51 | | | | 17:51 | 380 | | | 17:51 | | | |
| 17:52 | | | | 17:52 | | | | 17:52 | | | |
| 17:53 | | | | 17:53 | | | | 17:53 | | 296 | |
| 17:54 | | | | 17:54 | | | 102 | 17:54 | | | |
| 17:55 | | | | 17:55 | | 710 | | 17:55 | 227 | | |
| 17:56 | | 103 | | 17:56 | 380 | | | 17:56 | | | |
| 17:57 | | | | 17:57 | 380 | | | 17:57 | | | |
| 17:58 | | | | 17:58 | | | | 17:58 | | | |
| 17:59 | | | | 17:59 | | | | 17:59 | 284 | | |
| 18:00 | 271 | | 186 | 18:00 | | | | 18:00 | | | |
| 18:01 | | | 237 | 18:01 | | | | 18:01 | | | |
| 18:02 | | 121 | 380 | 18:02 | | | 140 | 18:02 | | | |
| 18:03 | | | | 18:03 | | | | 18:03 | | | |
| 18:04 | | | | 18:04 | | | | 18:04 | | | |
| 18:05 | | | | 18:05 | | | | 18:05 | | | |
| 18:06 | | | | 18:06 | | 418 | | 18:06 | | | |
| 18:07 | | 211 | | 18:07 | | | | 18:07 | 299 | | |
| 18:08 | | | | 18:08 | 264 | | | 18:08 | | | |
| 18:09 | | | 135 | 18:09 | | | | 18:09 | | | |
| 18:10 | 968 | | | 18:10 | 380 | 221 | | 18:10 | | | |
| 18:11 | | | | 18:11 | | | | 18:11 | | | |
| 18:12 | 865 | | | 18:12 | 103 | | | 18:12 | | | |
| 18:13 | | | 380 | 18:13 | | | | 18:13 | | | |
| 18:14 | | 239 | | 18:14 | | | | 18:14 | | | |
| 18:15 | | | | 18:15 | | | | 18:15 | | | |
| 18:16 | 323 | | | 18:16 | | | | 18:16 | | | |
| 18:17 | | | | 18:17 | 380 | | | 18:17 | | | |
| 18:18 | | | | 18:18 | | | | 18:18 | | 639 | |
| 18:19 | 653 | | | 18:19 | 380 | | | 18:19 | | | |
| 18:20 | | | 211 | 18:20 | | | | 18:20 | | | |
| 18:21 | | | 380 | 18:21 | | 495 | | 18:21 | | | |
| 18:22 | 823 | | | 18:22 | | | | 18:22 | | | |
| 18:23 | | | 380 | 18:23 | | 281 | | 18:23 | | | |
| 18:24 | | | 193 | 18:24 | | | | 18:24 | | | |
| 18:25 | | | | 18:25 | | | | 18:25 | | | |
| 18:26 | | 84 | | 18:26 | | | | 18:26 | | | |
| 18:27 | | | | 18:27 | | | | 18:27 | | | |
| 18:28 | | | | 18:28 | | | | 18:28 | | | |
| 18:29 | 566 | | | 18:29 | | | | 18:29 | | | |
| 18:30 | | | | 18:30 | | | | 18:30 | | | |
| 18:31 | | 203 | | 18:31 | | | | 18:31 | | | |
| 18:32 | 1481 | | | 18:32 | 380 | | | 18:32 | | | |
| 18:33 | | | | 18:33 | | | | 18:33 | | | |
| 18:34 | | | | 18:34 | | | | 18:34 | | | 102 |
| 18:35 | 602 | | | 18:35 | | | | 18:35 | | | |
| 18:36 | | | | 18:36 | | | | 18:36 | | | |

| | | | | | | | | | | | |
|-------|-----|--|--|-------|--|--|--|-------|--|--|--|
| 18:37 | | | | 18:37 | | | | 18:37 | | | |
| 18:38 | 494 | | | 18:38 | | | | 18:38 | | | |
| 18:39 | | | | 18:39 | | | | 18:39 | | | |
| 18:40 | | | | 18:40 | | | | 18:40 | | | |
| 18:41 | | | | 18:41 | | | | 18:41 | | | |
| 18:42 | | | | 18:42 | | | | 18:42 | | | |
| 18:43 | | | | 18:43 | | | | 18:43 | | | |
| 18:44 | | | | 18:44 | | | | 18:44 | | | |
| 18:45 | | | | 18:45 | | | | 18:45 | | | |
| 18:46 | | | | 18:46 | | | | 18:46 | | | |
| 18:47 | | | | 18:47 | | | | 18:47 | | | |
| 18:48 | | | | 18:48 | | | | 18:48 | | | |
| 18:49 | | | | 18:49 | | | | 18:49 | | | |
| 18:50 | | | | 18:50 | | | | 18:50 | | | |
| 18:51 | | | | 18:51 | | | | 18:51 | | | |
| 18:52 | | | | 18:52 | | | | 18:52 | | | |
| 18:53 | | | | 18:53 | | | | 18:53 | | | |
| 18:54 | | | | 18:54 | | | | 18:54 | | | |
| 18:55 | | | | 18:55 | | | | 18:55 | | | |
| 18:56 | | | | 18:56 | | | | 18:56 | | | |
| 18:57 | | | | 18:57 | | | | 18:57 | | | |
| 18:58 | | | | 18:58 | | | | 18:58 | | | |
| 18:59 | | | | 18:59 | | | | 18:59 | | | |
| 19:00 | | | | 19:00 | | | | 19:00 | | | |

4.0 2016 A22 JUNCTION CAPACITY MODELLING REPORTS INCLUDING THE IMPACT OF DM/15/0429 AT HILL PLACE FARM.

4.1 Modelling Methodology.

4.1.1 The modelling approach adopted by Jubb is compliant with the Transport Assessment requirements stipulated in 'MSDC Validation Criteria for planning applications, local requirements June 2015 Transport Assessment for residential development of 50 or more units'. This references, for guidance, West Sussex County Council Transport Assessment Methodology [June 2007] see Section 10.5.

4.1.2 Jubb have developed the LINSIG and ARCADY traffic models for these junctions, LINSIG - Imberhorne and Felbridge Junctions, ARCADY - Lingfield Junction, for the critical network peak hours and provides a quantitative assessment of existing and forecast network conditions [2021].

4.1.3 Signal Staging plans and junction layouts have been abstracted from the transport study submitted in support of the neighbouring developments as defined for Lingfield Road Mini -Roundabout; Felbridge A22/A264 Junction; Imberhorne Lane/A264 Junction to establish a calibrated traffic model for the identified junctions.

4.1.4 To establish a baseline traffic condition, junction turning counts have been carried out at i.e. Lingfield Road Mini-Roundabout; Felbridge A22/A264 Junction and Imberhorne Ln/ A264 Junction on the 23rd February and 7th June 2016 respectively. A consistent level of vehicle movements were recorded between the February and June surveys with a fluctuation of less than 5% observed during peak periods, therefore to deliver a robust impact study, the average representation was adopted for flow input.

4.1.5 These were subsequently validated taking into account the observed exit blocking to replicate the lost capacity and thus replicate the observed average maximum queuing length obtained in Jubb 2016 Survey during the peak periods. The calibration and validation of the baseline traffic model has been carried out in compliance with Transport for London (TfL) Guidance on Traffic modelling.

4.1.6 An assessment year of 2021 is also proposed to be consistent with the Atkin Stage 3 Study. This is also in line with the built out rate proposed by Hill Place Farm Development. To project a future year baseline condition, the following factors have been taken into account:

- Committed Developments that will impose a cumulative impact on the A22 junctions in and around East Grinstead. These include 472 dwellings identified

within MSDC Housing Land Supply as at 1st April 2016 and a further 192 homes allocated within East Grinstead Neighbourhood Plan. The associated traffic generation and distribution were established in accordance with the methodology adopted within Atkins Stage 3 Report. In addition, traffic arising from consented 500 home development at Copthorne Village West was also included.

- Background traffic growths were also derived from TEMPRO 6.2 for East Grinstead Area to reflect the greater wealth, increased employment potential, and increased car ownership amongst other factors. To avoid any double counting with the committed developments, TEMPRO planning assumptions were subsequently adjusted to reflect a nil increase in housing provision.

4.1.7 Development traffic arising from Hill Place Farm Development was abstracted from Vectos Report "Modelling of the A22 Key Junctions" submitted in August 2016, for the purposes of the modelling. A two way flow level of 70 vehicles is anticipated traveling/dissipating through the key junctions along the A22 corridor during the peak hour.

4.1.8 The validated baseline models then adopted as a base to predict the cumulative impact of the approved committed developments in the area with the addition of the proposed HPF development and subsequently take into account of the proposed Do Minimum highway enhancements proposed within Atkins Stage 3 Report.

4.2 Modelling Results - Existing Traffic Conditions Jubb 2016 6 Day Survey v Jubb 2015 6 day Survey v Atkins Stage 3 1 day November 2011 Survey.

4.2.1 Appendix C - Traffic Table 1 shows the modelling results of Jubb's 2016 6 day Surveys and compares them with the Jubb 2015 and Atkins Stage 3 November Survey results.

4.2.2 The peak hour results confirm the conclusion of Section 3 that a further material deterioration in the A22 traffic conditions has taken place since Jubb March 2015 6 day survey and demonstrates that the A22 Traffic Network has now reached a new higher level of unacceptable severe congestion.

4.2.3 Imberhorne Junctions AM and PM and Felbridge Junction PM Modelling results show Junction Practical Reserve Capacity (PRC) becoming more saturated in 2016 compared against the 2015 junction performance as

- Imberhorne Junction AM and PM PRC records (minus) - 86.2% and (minus) - 63.8% and well exceeds the PRC junction deficit of 2015 of minus -60% and minus - 45.5% respectively;
- At Felbridge Junction, the junction performance declined significantly in the PM Peak with the outturn PRC values dropped to (minus) – 71.4% from (minus) 47.4% of the 2015 level. For AM Peak, despite a light betterment comparing to the 2015 modelling output, the junction continuously operates in excess of its design capacity with a PRC value of -36.10%; whereas
- At Lingfield Junction, a similar level of total junction delay was predicted between Year 2015 and 2016 level during both AM and PM peak with junction continuously running in excess of its design capacity.

4.2.4 In 2016, at the Imberhorne Junction, all arms are operating well over the 100% DOS ranging from 105% to 168% with the predominant deterioration in the queue length observed along the A22 London Rd (S) arm in both AM and PM peak as

- AM Peak - Degree of Saturation (DOS) reaches 167.6% with MMQ lengthening to 204 pcu of 1.2km long resulting in a delay of 833 secs (14 mins), far worse than the 2015 results of 144% in DOS, 190pcu of 1.1m long in MMQ and a delay of 637 sec (10 .5 min).
- PM Peak - DOS increases to 147.4%, MMQ 147 pcu 882m long with a 671m delay [11 mins] from 2015's DOS 131% MMQ 126 pcu 756m long and delay of 499 sec [8.3 mins].

4.2.5 It is important to comprehend the level of significant deterioration in network performance since the Atkins Stage 3 November 2011 survey. The Atkins Stage 3 report portrayed a much better performing network with MMQ on all arms ranged from 15-27pcu and a DOS between 68% to 78% during AM and PM Peak, whereas the recent 2016 Survey implies severe congestions with 80% of all arms running in excess of their design capacity with MMQ ranged between 39 to 204 pcus.

4.2.6 At Lingfield Road junction, significant queuing delays are projected to continue both on the A22 London Rd (N) and A22 London Rd (S).

- A22 London Rd (S) AM MMQ increases 32 pcu 18% to 211 pcu queue length 1.27 km, RFC 1.23, with 747 sec delay (12.5 min) from the 2015 survey and also increases 70 pcus 50% and 207 sec [3.5 min] delay since Atkins Stage 3 November 2011 survey.

- PM Peak The A22 London Rd (S) eases back from 2015's surveys 279 pcu to 200 a 1.2km queue with a 715 sec delay [12 min] in keeping with Atkins Stage 3 in November 2011 results.

4.2.7 The outturn performance indicators PM for the A22 Copthorne Rd deteriorated with 162 pcu predicted in MMQ of 972m long and a DOS of 154.3% rising from 2015 output of MMQ 125 pcu of 750m long and a DOS of 132.7%, consequently the resultant delays increases from 513 secs (8.4 mins) to 720 sec (12 mins), contributing towards the overall deterioration of the operation efficiency of Felbridge junction as the PRC value dropped to -71.4% from the 2015 level of -47.7%.

4.2.8 In comparison with the Atkins Stage 3 November 2011 AM and PM performance of the A264 Copthorne Rd arm MMQ's have lengthened in 2016 approx 4 to 5 times as DOS of below 100 (96% and 91%) in November 2011 records 122.5% AM and reaches 154.3% PM resulting in severe congestion.

4.3 Modelling Results the Impact of Approved Committed and Allocated Housing Development (ACD) on 2016 Existing Traffic Conditions.

4.3.1 Section 4.2 quantified and confirmed the 2016 Survey Results of further deterioration in the 'Severe Current Traffic Conditions that exist on the A22 traffic network'. The 'realistic and true bench mark for assessing the full current traffic conditions has to , in addition, recognise already Approved Committed and Allocated Housing development (ACD) in EG and Surrounding area which directly impacts the A22 junctions.

4.3.2 This is in accordance with NPPG 'Transport evidence bases in plan making and decision making ' 10th October 2014 and 'Travel plans, transport assessments and statements in decision making' 6th March 2014 when assessing the impact of planning application on the EG Traffic Network.

4.3.3 The ACD recognises 472 dwellings identified within MSDC Housing Land Supply as at 1st April 2016 and a further 192 homes allocated within East Grinstead Neighbourhood Plan together with the forecasted traffic flow from the new 500 home development at Copthorne Village West.

4.3.4 Appendix D Table 5.2 demonstrates that without any significant highway enhancements in place, traffic arising from the Already Approved Committed and Allocated Development will put further pressure on the A22 corridor and aggravate the "severe degree" of already oversaturated A22 Junctions, with an average of 30% deterioration in PRC or junction total delay.

4.3.5 The operational efficiency of junctions that are already suffering from capacity constraints are shown to be further violated after taking account the traffic arising from ACD with the predicted PRC values at

- Imberhorne Junction declined from minus - 86.2% to minus -111.6% in the AM from minus - 63.8% to minus - 77.8% in the PM. The DOS at A22 London Road (S) AM reaches 190.4% with MMQ 270 pcu 1.6km long and a delay of 975 sec ([16 mins] whereas in PM Peak the recording DOS shown as 160% resulting in 183 pcu in MMQ of 1.1km with a 777 sec delay [13 mins].
- Felbridge Junction deteriorates from minus -36.1% to minus - 50.2% in AM from minus - 71.4% to minus - 89.4% in PM with the predicted MMQ at the A264 Copthorne Rd increasing over 40pcus to 149 pcu in the AM of 894m long (DOS 135% and delays of 539 sec [9mins]) and 205 pcu in the PM of 1.2km long (DOS 170.5% with 838 sec delay (14 mins).
- At Lingfield Junction, the predicted total junction delay surged to 887.43 sec and 819.19sec from the 201 level of 584.95 sec and 546.16 sec peak with increased queue length respectively in the AM and PM.

The A22 London Rd approaches show significant deterioration during both AM and PM peak with an increase in excess of 50pcu observed in both directions.

4.3.6 The above analysis of Table 5.2 identifies the significant effect of the traffic demand arising from the ACD pipeline developments which has yet to impact the A22 network in the near future term. The cumulative impact of the ACD needs to be recognised and taken into consideration for major planning applications in East Grinstead such as that proposed development at Hill Place Farm DM/1/50429 as per the guidance by the NPPG and West Sussex County Council Transport Assessment Methodology [June 2007].

4.4 2016 Existing Traffic Conditions V 2021 Forecast Conditions including the Impact of ' Do Minimum [DM] Mitigation and the Proposed Hill Place Farm Development RefmDM/15/0429.

4.4.1 The benchmark year for reviewing the impact of the proposed HPF Development DM/15/0429 is 2021. This is consistent with the Atkins Stage 3 for predicting future traffic conditions of the A22 Traffic Network and the built out rate proposed by Hill Place Farm Development.

4.4.2 Appendix E Table 5.3 shows the forecast for 2021 traffic conditions for the A22 Junctions which includes the already Approved Committed and Allocated Housing Development [ACD] 1st April 2016 to which is added the impact of the proposed HPF development DM/15/0429 with the proposed Do Minimum [DM] Mitigation. This is compared to existing conditions seen during the Jubb 2016 traffic surveys concluding the result that:

- There is a dramatic escalation in the Severe Congestion at the Imberhorne Lane Junction with 5 of 6 arms deteriorating in performance as during
- The AM peak - Practical Reserve Capacity [PRC] has decreased from -86.2% of 2016 baseline condition to minus - 149.6% in 2021 (74%) with an extended delay of 1,135 secs [19mins] predicted at A22 London Rd (S) up from 833 secs [14 mins] and deteriorating DOS of 224.6% and increased MMQ of 335 pcus, 131 pcu , 64% worse than the baseline condition.
- The PM peak negative PRC decreases 53% from minus - 63.8% in 2016 to minus 97.8% in 2021 again with A22 London Rd (S) MMQ extending to 224 pcus length 1.3km.
- At Felbridge Junction the predicted operational efficiency deteriorated in the AM peak with negative PRC moving from AM from minus- 36.10% in 2016 to 2021 minus - 47.7%. Congestion on the A264 Copthorne Rd AM aggravated with an increase of 42 pcus in MMQ to 145 pcus in 2021 of 870m and a deteriorated DOS 133.0% with delays of 527 secs (8.7 mins).

4.4.3 The above profile concludes that the proposed 'Do Minimum' infrastructure improvement does not provide adequate mitigation for the proposed HPF development (Ref: DM/15/429). This is not surprising as

- The Atkins Stage 3 DO MINIMUM (DM) infrastructure improvement programme was designed to provide a solution to address the existing November 2011 traffic conditions and the forecasted 2021 congestion issues accommodating the 765 already committed housing units as at 1st April 2011 (which represents a ceiling limit). The Atkins Stage 3 report stated that it enabled the traffic network to operate within theoretical capacity in forecast year 2021 although congestion was not eliminated.
- At the 1st April 2016 MSDC 688 units have been built/occupied and already approved committed development not built/occupied [472 units] with an

additional allocated 192 dwellings for EGNP where there is a reasonable certainty will proceed in the next three years' making a total of 1,352 dwellings, 587 dwellings 77% above the DM ceiling.

- 4.4.4 As per paragraph 3.4.5 page 16 the analysis of the Atkins Stage 3 May 2012 Reports significantly underestimates the serious nature of traffic congestion and delay in and around East Grinstead illustrated by Section 3 and 4.4.3 above.

This is reinforced by Appendix F Tables 5.4 and 5.5 Comparison of Forecast A22 Traffic Network Conditions 2021 Atkins Stage 3 after DM mitigation V Jubb 's which includes the already Approved Committed Development, the proposed HPF DM/15/0429 planning application and the Atkins 3 DM mitigation. All Junctions identify substantial adverse difference in performances with Severe Congestion against the Atkins Stage 3 predictions.

- 4.4.5 The above detailed modelling based on the 6 days of 2016 surveys in late February and early June 2016 spanning the seasons, proves that the 2021 traffic conditions which take into account traffic from approved and allocated development, Hill Place Farm and the proposed mitigation [Do Minimum] would result in a Severe Cumulative Residual Impact on the A22 Traffic Network. Therefore the proposed Hill Place Farm Development is contrary to Paragraph 32 of the NPPF and should be refused.

APPENDIX C - TRAFFIC TABLE 5.1

**Existing Traffic Conditions Jubb 2016 Survey v 2015 Survey v Atkins 3 November 2011
Survey**

| Felbridge Junction | Atkins 3 Nov-11 | | | Jubb 2015 | | | | Jubb 2016 | | | |
|-----------------------|--------------------|--------|--------------|-----------|---------|--------------|---------|-----------|---------|--------------|---------|
| | MMQ | DOS% | Delay (s) | MMQ | DOS% | Delay (s) | PRC | MMQ | DOS% | Delay (s) | PRC |
| AM Peak | | | | | | | | | | | |
| A264 Copthorne Rd | 30 | 96.00% | 62 | 135 | 138.60% | 577 | -54.10% | 103 | 122.50% | 395 | -36.10% |
| A22 Eastbourne Rd (N) | 9 | 84.00% | 46 | 50 | 118.50% | 362 | | 14 | 89.20% | 62 | |
| A22 London Road (S) | 10 | 80.00% | 14 | 50 | 106.20% | 144 | | 57 | 106.50% | 145 | |
| PM Peak | | | | | | | | | | | |
| A264 Copthorne Rd | 26 | 91.00% | 45 | 125 | 132.70% | 513 | -47.70% | 162 | 154.30% | 720 | -71.40% |
| A22 Eastbourne Rd (N) | 16 | 77.00% | 37 | 32 | 103.50% | 147 | | 20 | 95.30% | 73 | |
| A22 London Road (S) | 12 | 86.00% | 19 | 53 | 104.80% | 125 | | 71 | 109.40% | 188 | |

| Imberhorne Ln Junction | Atkins 3 Nov-11 | | | Jubb 2015 | | | | Jubb 2016 | | | |
|------------------------|--------------------|--------|--------------|-----------|---------|--------------|---------|-----------|---------|--------------|---------|
| | MMQ | DOS% | Delay (s) | MMQ | DOS% | Delay (s) | PRC | MMQ | DOS% | Delay (s) | PRC |
| AM Peak | | | | | | | | | | | |
| Imberhorne Ln | 15 | 75.00% | 45 | 84 | 131.70% | 500 | -60.00% | 75 | 126.00% | 438 | -86.20% |
| A22 London Road (N) | 25 | 68.00% | 51 | 68 | 110.80% | 214 | | 56 | 112.80% | 163 | |
| A22 London Road (S) | 23 | 76.00% | 27 | 190 | 144.00% | 637 | | 204 | 167.60% | 833 | |
| PM Peak | | | | | | | | | | | |
| Imberhorne Ln | 16 | 78.00% | 48 | 52 | 118.10% | 335 | -45.5% | 39 | 107.10% | 187 | -63.80% |
| A22 London Road (N) | 27 | 74.00% | 27 | 45 | 118.30% | 126 | | 52 | 105.50% | 136 | |
| A22 London Road (S) | 20 | 72.00% | 26 | 126 | 131.00% | 499 | | 147 | 147.40% | 671 | |

| Lingfield Road Junction | Atkins 3 Nov-11 | | | Jubb 2015 | | | | Jubb 2016 | | | |
|-------------------------|--------------------|------|--------------|-----------|------|--------------|-------------------|-----------|------|--------------|-------------------|
| | Queue | RFC | Delay (s) | Queue | RFC | Delay (s) | Junction Delay | Queue | RFC | Delay (s) | Junction Delay |
| AM Peak | | | | | | | | | | | |
| Lingfield Rd | 57 | 1.18 | 420 | 18 | 0.98 | 124 | 630.68 | 11 | 0.94 | 99 | 584.95 |
| A22 London Road (N) | 101 | 1.28 | 660 | 161 | 1.33 | 1051 | | 134 | 1.19 | 623 | |
| A22 London Road (S) | 141 | 1.25 | 540 | 179 | 1.2 | 638 | | 211 | 1.23 | 747 | |
| PM Peak | | | | | | | | | | | |
| Lingfield Rd | 48 | 1.16 | 360 | 37.56 | 1.05 | 265 | 755.47 | 18 | 0.98 | 136 | 546.16 |
| A22 London Road (N) | 109 | 1.28 | 660 | 134 | 1.22 | 728 | | 106 | 1.17 | 567 | |
| A22 London Road (S) | 215 | 1.34 | 780 | 279 | 1.31 | 988 | | 200 | 1.22 | 715 | |

APPENDIX D TRAFFIC TABLE 5.2

Impact of Approved/Committed Development on Existing Traffic Conditions

| Felbridge Junction | Jubb 2016 | | | | Jubb 2016 + Approved Committed Houses Not Built (Existing Signal) | | | |
|-----------------------|-----------|---------|-----------|---------|---|---------|-----------|---------|
| | MMQ | DOS% | Delay (s) | PRC | MMQ | DOS% | Delay (s) | PRC |
| AM Peak | | | | | | | | |
| A264 Copthorne Rd | 103 | 122.50% | 395 | -36.10% | 149 | 135.20% | 539 | -50.20% |
| A22 Eastbourne Rd (N) | 14 | 89.20% | 62 | | 16 | 82.10% | 69 | |
| A22 London Road (S) | 57 | 106.50% | 145 | | 125 | 117.00% | 289 | |
| PM Peak | | | | | | | | |
| A264 Copthorne Rd | 162 | 154.30% | 720 | -71.40% | 205 | 170.50% | 838 | -89.4% |
| A22 Eastbourne Rd (N) | 20 | 95.30% | 73 | | 30 | 101.80% | 123 | |
| A22 London Road (S) | 71 | 109.40% | 188 | | 103 | 114.60% | 260 | |

| Imberhorne Ln Junction | Jubb 2016 | | | | Jubb March 2016 + Approved Committed Houses Not Built | | | |
|------------------------|-----------|---------|-----------|--------|---|---------|-----------|----------|
| | MMQ | DOS% | Delay (s) | PRC | MMQ | DOS% | Delay (s) | PRC |
| AM Peak | | | | | | | | |
| Imberhorne Ln | 75 | 126.00% | 438 | -86.2% | 89 | 131.50% | 501 | -111.60% |
| A22 London Road (N) | 56 | 112.80% | 163 | | 84 | 120.00% | 233 | |
| A22 London Road (S) | 204 | 167.60% | 833 | | 269 | 190.40% | 975 | |
| PM Peak | | | | | | | | |
| Imberhorne Ln | 39 | 107.10% | 187 | -63.8% | 75 | 121.70% | 386 | -77.80% |
| A22 London Road (N) | 52 | 105.50% | 136 | | 82 | 110.50% | 206 | |
| A22 London Road (S) | 147 | 147.40% | 671 | | 183 | 160.00% | 777 | |

| Lingfield Rd | Jubb 2016 | | | | Jubb March 2016 + Approved Committed Houses Not Built | | | |
|---------------------|-----------|------|-----------|----------------|---|------|-----------|----------------|
| | MQ | RFC | Delay (s) | Junction Delay | MQ | RFC | Delay (s) | Junction Delay |
| AM Peak | | | | | | | | |
| Lingfield Rd | 11 | 0.94 | 99 | 584.95 | 21 | 1.00 | 173 | 887.43 |
| A22 London Road (N) | 134 | 1.19 | 623 | | 191 | 1.27 | 865 | |
| A22 London Road (S) | 211 | 1.23 | 747 | | 329 | 1.37 | 1167 | |
| PM Peak | | | | | | | | |
| Lingfield Rd | 18 | 0.98 | 136 | 546.16 | 28 | 1.02 | 203 | 819.19 |
| A22 London Road (N) | 106 | 1.17 | 567 | | 196 | 1.32 | 1017 | |
| A22 London Road (S) | 200 | 1.22 | 715 | | 266 | 1.3 | 949 | |

APPENDIX E TRAFFIC TABLE 5.3

2021 Baseline + Impact of Approved Committed Dwellings + HPF + Mitigation DM]

V

Jubb 2016 Survey

| Felbridge Junction | Jubb 2016 | | | | 2021 Baseline + Approved Committed + Mitigation (Atkins DM) | | | | 2021 Baseline + Approved Committed + HPF + Mitigation (Atkins DM) | | | |
|-----------------------|-----------|---------|-----------|---------|---|---------|-----------|---------|---|---------|-----------|--------|
| | MMQ | DOS% | Delay (s) | PRC | MMQ | DOS% | Delay (s) | PRC | MMQ | DOS% | Delay (s) | PRC |
| AM Peak | | | | | | | | | | | | |
| A264 Coptorne Rd | 103 | 122.50% | 395 | | 83 | 114.00% | 287 | | 145 | 133.00% | 527 | |
| A22 Eastbourne Rd (N) | 14 | 89.20% | 62 | -36.10% | 13 | 83.00% | 47 | -27.10% | 11 | 71.00% | 34 | -47.7% |
| A22 London Road (S) | 57 | 106.50% | 145 | | 48 | 102.00% | 86 | | 60 | 103.00% | 102 | |
| PM Peak | | | | | | | | | | | | |
| A264 Coptorne Rd | 162 | 154.30% | 720 | | 119 | 127.60% | 467 | | 132 | 132.00% | 517 | |
| A22 Eastbourne Rd (N) | 20 | 95.30% | 73 | -71.40% | 23 | 96.50% | 75 | -41.80% | 27 | 99.00% | 90 | -46.6% |
| A22 London Road (S) | 71 | 109.40% | 188 | | 46 | 102.70% | 94 | | 60 | 105.00% | 127 | |

| Imberhorne Ln Junction | Jubb 2016 | | | | 2021 Baseline + Approved Committed + Mitigation (Atkins DM) | | | | 2021 Baseline + Approved Committed + HPF + Mitigation (Atkins DM) | | | |
|------------------------|-----------|---------|-----------|--------|---|---------|-----------|----------|---|---------|-----------|----------|
| | MMQ | DOS% | Delay (s) | PRC | MMQ | DOS% | Delay (s) | PRC | MMQ | DOS% | Delay (s) | PRC |
| AM Peak | | | | | | | | | | | | |
| Imberhorne Ln | 75 | 126.00% | 438 | | 107 | 139.70% | 585 | | 110 | 139.70% | 585 | |
| A22 London Road (N) | 56 | 112.80% | 163 | -86.2% | 44 | 112.40% | 109 | -141.00% | 52 | 113.90% | 126 | -149.60% |
| A22 London Road (S) | 204 | 167.60% | 833 | | 315 | 216.90% | 1103 | | 335 | 224.60% | 1135 | |
| PM Peak | | | | | | | | | | | | |
| Imberhorne Ln | 39 | 107.10% | 187 | | 93 | 131.00% | 498 | | 106 | 135.70% | 545 | |
| A22 London Road (N) | 52 | 105.50% | 136 | -63.8% | 57 | 105.90% | 139 | -70.60% | 53 | 104.50% | 118 | -97.80% |
| A22 London Road (S) | 147 | 147.40% | 671 | | 172 | 153.60% | 726 | | 224 | 178.00% | 904 | |

| Lingfield Rd RA | Jubb 2016 | | | | 2021 Baseline + Approved Committed + Mitigation (Atkins DM) | | | | 2021 Baseline + Approved Committed + Mitigation (Atkins DM) + HPF | | | |
|---------------------|-----------|------|-----------|----------------|---|---------|-----------|---------|---|---------|-----------|---------|
| | Queue | RFC | Delay (s) | Junction Delay | Queue | DOS% | Delay (s) | PRC | Queue | DOS% | Delay (s) | PRC |
| AM Peak | | | | | | | | | | | | |
| Lingfield Rd | 11 | 0.94 | 99 | | 19 | 99.10% | 111 | | 29 | 105.70% | 184 | |
| A22 London Road (N) | 134 | 1.19 | 623 | 584.95 | 16 | 69.90% | 24 | -13.40% | 16 | 69.70% | 24 | -19.90% |
| A22 London Road (S) | 211 | 1.23 | 747 | | 57 | 102.10% | 91 | | 90 | 107.90% | 174 | |
| PM Peak | | | | | | | | | | | | |
| Lingfield Rd | 18 | 0.98 | 136 | | 17 | 94.40% | 75 | | 19 | 97.20% | 90 | |
| A22 London Road (N) | 106 | 1.17 | 567 | 546.16 | 15 | 69.70% | 28 | -7.10% | 17 | 72.00% | 29 | -12.10% |
| A22 London Road (S) | 200 | 1.22 | 715 | | 36 | 96.30% | 44 | | 51 | 100.90% | 78 | |

APPENDIX F TRAFFIC TABLES 5.4 AND 5.5

COMPARISON OF FORCAST A22 TRAFFIC NETWORK CONDITIONS 2021

Atkins Stage 3 Nov 2011 Surveys v Jubb 2016 Survey

| Table 4 - AM Peak | Atkins 3 Do Minimum (DM) | | | Jubb 2016 Survey x Growth + Committed Development + HPF + Atkins 3 DM | | | % Increase | |
|---------------------------|--------------------------|---------|-----------|---|---------|-----------|------------|-----------|
| | DOS% | Q (pcu) | Delay (s) | DOS% | Q (pcu) | Delay (s) | MMQ | Delay (s) |
| Felbridge Junction | | | | | | | | |
| A264 Copthorne Rd | 88 | 18 | 43 | 133 | 145 | 527 | 706% | 1126% |
| A22 London Road (N) | 82 | 9 | 40 | 71 | 11 | 34 | 22% | -15% |
| A22 London Road (S) | 90 | 14 | 20 | 103 | 60 | 102 | 329% | 410% |
| Imberhorne Ln | | | | | | | | |
| Imberhorne Ln | 87 | 19 | 59 | 140 | 110 | 585 | 479% | 892% |
| A22 London Road (N) | 96 | 20 | 99 | 114 | 52 | 126 | 160% | 27% |
| A22 London Road (S) | 92 | 34 | 43 | 225 | 335 | 1135 | 885% | 2540% |
| Lingfield Road | | | | | | | | |
| Lingfield Road | 99 | 22.00 | 3 | 106 | 29 | 184 | 32% | 6033% |
| A22 London Road (N) | 85 | 16.00 | 0 | 70 | 16 | 24 | 0% | - |
| A22 London Road (S) | 97 | 37.00 | 2 | 108 | 90 | 174 | 143% | 8600% |

| Table 5 - PM Peak | Atkins 3 Do Minimum (DM) | | | Jubb 2016 Survey x Growth + Committed Development + HPF + Atkins 3 DM | | | % Increase | |
|---------------------------|--------------------------|---------|-----------|---|---------|-----------|------------|-----------|
| | DOS% | Q (pcu) | Delay (s) | DOS% | Q (pcu) | Delay (s) | MMQ | Delay (s) |
| Felbridge Junction | | | | | | | | |
| A264 Copthorne Rd | 85 | 17 | 35 | 132 | 132 | 517 | 676% | 1377% |
| A22 London Road (N) | 72 | 16 | 31 | 99 | 27 | 90 | 69% | 190% |
| A22 London Road (S) | 84 | 12 | 15 | 105 | 60 | 127 | 400% | 747% |
| Imberhorne Ln | | | | | | | | |
| Imberhorne Ln | 81 | 18 | 50 | 136 | 106 | 545 | 489% | 990% |
| A22 London Road (N) | 87 | 17 | 68 | 105 | 53 | 118 | 212% | 74% |
| A22 London Road (S) | 85 | 27 | 36 | 178 | 224 | 904 | 730% | 2411% |
| Lingfield Road | | | | | | | | |
| Lingfield Road | 87 | 17.00 | 1 | 97 | 19 | 90 | 12% | 8500% |
| A22 London Road (N) | 90 | 22.00 | 1 | 72 | 17 | 29 | -23% | 2800% |
| A22 London Road (S) | 82 | 24.00 | 0 | 101 | 51 | 78 | 113% | - |

5.0 TURNERS HILL JUNCTION B2110/B2028 TRAFFIC SURVEY RESULTS AND CONDITIONS.

5.1 Existing Traffic Conditions June 2016.

5.1.1 On the 23rd March 2016 MSDC resolved 'to make' the Turners Hill Neighbourhood Plan. The Plan recognises that both M23 Junctions 10 and 10A can be accessed via Turners Hill as can Crawley, Gatwick and East Grinstead, Brighton and London. Over 27,000 vehicles cross the centre of the village in a 12 hour period during a normal working day.

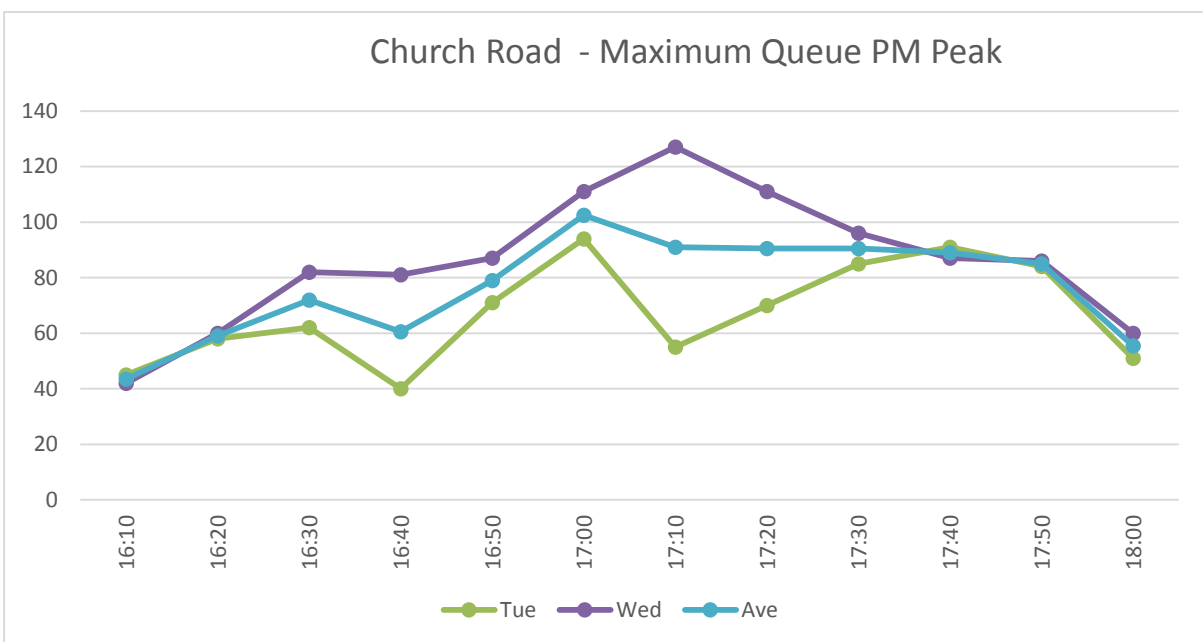
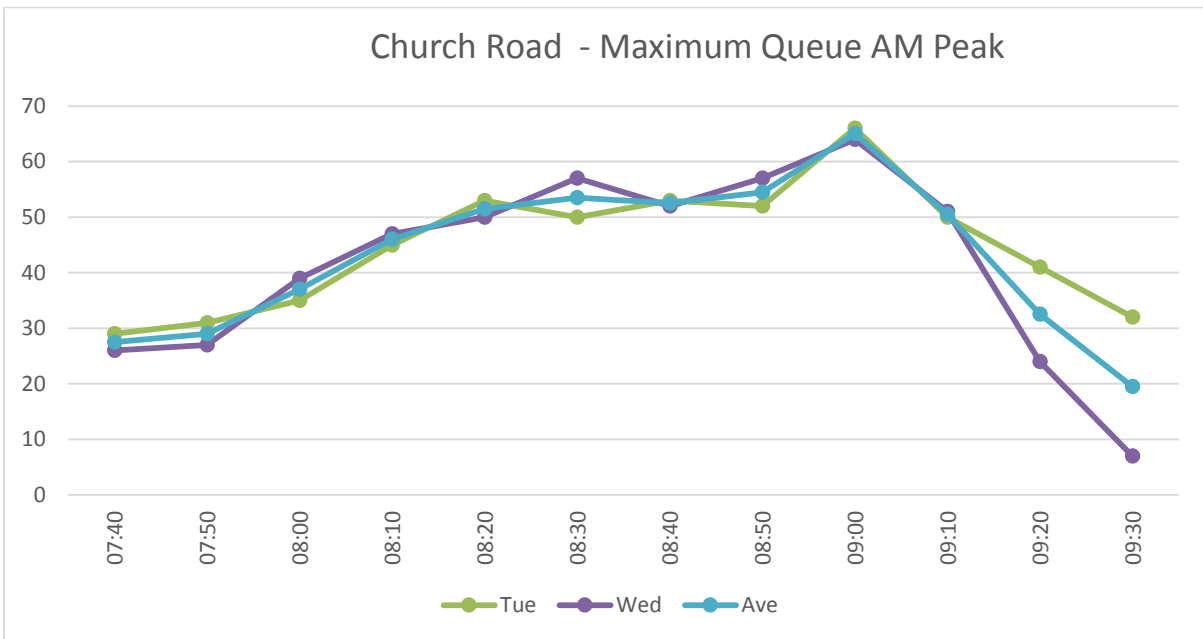
5.1.2 The Jubb 2 days' Survey on the 7th and 8th June 2016 , 19 months after the Jubb 2 day 4th 5th November 2014 survey confirms the B2110/2028 Junction continues to be a major node of traffic congestion on the local highway network, operating over capacity with significant delays.

5.1.3 Since the Jubb November 2014 survey, the B2110/B2028 junction continues to suffer from severe traffic congestion and significant queueing delay for prolonged periods with Church Lane operating at an average queue length of 41 vehicles 246m observed in the AM Peak and for the PM the observed queue reaching 79 vehicle 474m. The recorded queue lengths are summarised as follows

Table 5.1 the Recorded Queue Length

| Mean Maximum Observed Queue | Tue 7th June | | Wed 8th June | | Average | |
|--|--------------|---------|--------------|---------|---------|---------|
| | AM Peak | PM Peak | AM Peak | PM Peak | AM Peak | PM Peak |
| East St | 7 | 6 | 6 | 5 | 7 | 6 |
| North Street East | 5 | 5 | 5 | 5 | 5 | 5 |
| Lion Ln | - | - | - | - | - | - |
| Church Ln | 41 | 66 | 41 | 91 | 41 | 79 |
| North Road (S) Right Turn into Church Ln | 31 | 12 | 30 | 24 | 31 | 18 |

5.1.4 The observed Maximum Queue during the period of 07:30-09:30 and 16:00-18:00 is illustrated below:



5.2 June 2016 Survey Methodology and Findings.

5.2.1 A total of 4 CCTV camera masts, 2 site officers and 2 enumerators were deployed at this location to capture the turning movements and the full extent of the queue length on the 7th and 8th of June. This is in accordance with the best practice in the industry.

5.2.2 According to the survey company, this junction suffers from the worst congestion they have ever come across in their 20 years industry experiences. The junction is observed to be “completely” saturated with severe delays and queue length. During the survey, the enumerators and site officers observed that:

1. B2110 Church Road, queues started to build from around 07.30 and quickly into double digits and steadily increasing to a peak of the mid 60's vehicles by around 09.00.
2. B2110 East Street, queues on this arm were heavily influenced by those turning right into North St triangle, once North street was full (approximately 6 cars) those wishing to turn right would effectively stop other vehicles reaching the junction. Compounding the problem were the parked vehicles east of the Public house which prevented two way running.
3. At B2028 North St, vehicles travelling SB towards the junction were often slow moving coming up the hill. This is due to the reduced road width North of the church and is exacerbated by the heavies / buses that use that road which causes queues to form either into the junction (if travelling NB) or further downstream travelling SB. Indeed it was observed queues travelling SB that would start approximately 200 Metres before they could reach the junction because of the heavies reducing the flows and restricting the road width. The consequence of this was once the traffic was able to run both directions this released a flood of vehicles into the Turners Hill junction adding to an already congested site.
4. Heavy vehicles that use this junction would often cause restricted movements to other vehicles and cause more queueing due to the size of the vehicle.
5. The school run started around 07.50, many parents chose to park in the public house car park and walk their children to school. Many parents we spoke to said they felt this was not only safer because the risk of an accident crossing the junction but also because of the time savings from not using the junction to make the straight ahead moves.
6. One of the site officers was also approached by the lady on the crossing patrol who is also a parish councillor – she said that at times she feared for her safety as drivers using the junction were taking some unnecessary risks using it.

7. The approach to the centre point of the junction is uphill in both directions and the visibility is compromised because of the number of vehicles and the road layout itself.
8. In the PM peak, the queues on B2110 Church Road were often recorded at a length of 60-90 vehicles stretching $\frac{1}{2}$ mile down the road. Due to the severe congestion, it was observed that drivers tend to stay at distance to the front traffic in a bid to allow their vehicle slow rolling rather than stop-start. This results in the actual length of the queuing traffic being much longer than what could be expected for the number of vehicles recorded (6m per vehicle.)

5.3 Impact of the Turners Hill (TH) Neighbourhood Plan Proposal of Introducing Two Mini Roundabouts on the B2010/B2028 Junction Performance and 'Without' and 'With' the Impact of the MSDC Approved Committed Developments 1st April 2016 on the Junction.

- 5.3.1 The THNP proposes mitigation by replacing the B2110/B2028 complex priority junction with two mini roundabouts (refers to THNP Section 10 Traffic and Transport pages 33-39).
- 5.3.2 The proposal makes the crossroads into a 'T' Junction by closing a section of road in front of the Crown PH and so increasing the size of the village green. By using a mini-roundabout on Church Road, chicanes on East Street and Lion Lane will allow the area to be a 20mph village zone.
- 5.3.3 To model this, the geometric input for the linked roundabout model (ARCADY) submitted in support of the THNP was adopted to assess the operational efficiency of the proposed junction arrangements. The recorded arrival traffic are comparable on both Jubb survey days 7th and 8th June 2016 therefore an average representation is adopted as the input flow.
- 5.3.4 Table 5.2 below summarises the outturn junction performance 'without' and 'with ' MSDC Approved Committed Developments [ACD] at the 1st April 2016. The ACD includes the traffic flows to the B2110/B2028 junction from the 545 ACD units at Copthorne; 94 ACD units for Crawley Down; and the 91 ACD units from Turners Hill.

Table 5.2 ARCADY Results for the Proposed Double Mini-Roundabouts

| THNP Measurements | | AM | | | | PM | | | |
|--|----------------|-------------|-----------|------|--------------------|-------------|-----------|------|--------------------|
| Junction | Arm | Queue (PCU) | Delay (s) | RFC | Junction Delay (s) | Queue (PCU) | Delay (s) | RFC | Junction Delay (s) |
| Double Mini RAs - Year 2016 | | | | | | | | | |
| Northern RA | North Road (N) | 4.99 | 30.48 | 0.84 | 18.57 | 137.86 | 600.44 | 1.18 | 310.39 |
| | East St | 2.14 | 16.74 | 0.69 | | 10.98 | 87.87 | 0.99 | |
| | Mid Link | 0.56 | 4.29 | 0.36 | | 0.66 | 4.68 | 0.4 | |
| Southern RA | Mid Link | 3.46 | 17.07 | 0.78 | 647.89 | 7 | 31.90 | 0.89 | 30.33 |
| | Selfield Rd | 269.86 | 1488.60 | 1.47 | | 5.88 | 39.65 | 0.87 | |
| | Church Ln | 1.15 | 10.93 | 0.54 | | 1.14 | 11.75 | 0.53 | |
| Double Mini RAs - Year 2016 + Committed Dev | | | | | | | | | |
| Northern RA | North Road (N) | 7.44 | 43.63 | 0.89 | 24.62 | 169.78 | 744.71 | 1.24 | 389.19 |
| | East St | 2.3 | 17.92 | 0.7 | | 17.51 | 141.09 | 1.02 | |
| | Mid Link | 0.59 | 4.38 | 0.37 | | 0.7 | 4.83 | 0.41 | |
| Southern RA | Mid Link | 4.03 | 19.34 | 0.81 | 666.63 | 7 | 32.12 | 0.89 | 32.89 |
| | Selfield Rd | 279.36 | 1559.13 | 1.49 | | 7.06 | 47.18 | 0.89 | |
| | Church Ln | 1.27 | 11.57 | 0.56 | | 1.24 | 12.41 | 0.56 | |

5.3.5 As can be seen above in Table 5.2, based upon the Jubb 2016 survey the proposed new junction form at Turners Hill (on page 49) will not resolve the severe congestion experienced at this location but move the queue around the arms with increased delays predicted along the B2028. The significant congestion problems are clearly identified at the Southern RA Selfield Street arm in the AM and at the Northern RA North Road (N) Arm in the PM.

- 'Without' Approved Committed Developments [ACD] shows: For a baseline 2016 performance, a prolonged queue of approximately 270 pcus (1,620m long) is predicted at Selfield Rd arm during the AM Peak with a RFC value of 1.47 and severe delay of 1,488 sec nearly 25 mins, whereas for the PM peak, North Road [N] arm presents a RFC value of 1.18 with MMQ reaching 138 pcus (828m long) and a delay of 608 secs 10 mins.
- Test 'With' Approved Committed Developments [ACD] (which does not include any predicted traffic from the proposed development at Hill Place Farm, planning application DM/15/0429,) shows a further adverse impact on the Junction performance as.
 - At the Southern RA AM Peak the predicted total junction delays slightly worsens to 667 secs [11 mins] with significant congestion predicted on the Selfield Rd arm, delay reaching 1,559 secs [26 mins] as RFC records 1.49 with MMQ of 279 pcu 1,674 m.

- At the Northern RA, PM North Road (N) MMQ increases 22% 32 pcus to 170 pcus 1,020m long incurring 745 sec delay over 12 mins with RFC 1.24

5.4 Conclusion.

- 5.4.1 Following on from the Jubb November 2014 survey, the June 2016 Survey demonstrates that the B2110/B2028 junction continues to suffer from significant queueing delay. Junction mitigation proposal contained within the Turners Hill Neighbourhood Plan will not resolve the severe congestion issues but redistribute the queue around the approaches with increased queues and delays predicted along the B2028.
- 5.4.2 Notably at the Southern RA 'Selfield Rd' arm, including ACD, MMQ of 279 pcus stretching 1,674m long is predicted during the AM Peak whereas in the PM a MMQ of 170pcus reaching 1,020m long is anticipated at the Northern RA 'North Rd (N) arm resulting in over 12 min delay and RFC 1.24, a much higher level of congestion than historically and currently experienced in June 2016.
- 5.4.3 In comparing the post implementation of the proposed THNP 'mini' roundabouts solution to the June 2016 Survey, it reveals that a dramatic rise in queue length from 41pcu to 279 pcuHr 1674m long in the AM, nearly a 7 times increase, and an 115% increase from 79pcu to 170 pcu in PM .This marked adverse impact on Junction performance represents a 'Severe Cumulative Residual Impact which is Contrary to NPPF 32.

6.0 A264/B2028 JUNCTION DUKES HEAD ROUNDABOUT TRAFFIC SURVEY RESULTS AND CONDITIONS.

6.1 June 2016 Survey Methodology and Findings.

6.1.1 A total of 4 CCTV cameras and 2 enumerators were deployed at location to capture the turning movements and the full extent of the queue length on the 7th and 8th June 2016. This in accordance with the best practice in the industry.

6.1.2 The recorded peak hour turning movements are consistent on both survey days and observed fluctuations can be comfortably accommodated as part of the daily variation. Queue surveys were carried out at the junction with the turning counts to capture the maximum and spot queue during /at every 5 minutes segment.

6.1.3 This was used to calibrate the derived turning movements and validate the associated junction modelling. A consistent queuing delay in excess of 20 vehicles was identified in the PM Peak along the Turners Hill Northern Approach and the A264 Snow Hill. Whereas in the AM, queue length of approximately 20pcu observed at the B2028 Southern Approach.

6.1.4 The averages of the June 2016 Mean Maximum Observed Queues for each arm shown in Table 6.1 below together with the recorded turning movements were adopted for the purposes of junction modelling in Table 6.2.

Table 6.1 Summary of Queue Length Survey.

| Mean Maximum Queue | Tue 7th June | | Wed 8th June | | Average | |
|-----------------------|--------------|----|--------------|----|---------|----|
| | AM | PM | AM | PM | AM | PM |
| Turner Hill North | 7 | 21 | 7 | 24 | 7 | 23 |
| Snow Hill | 18 | 22 | 10 | 26 | 14 | 24 |
| The B2028 | 21 | 6 | 18 | 10 | 20 | 8 |
| Copthorne Common Road | 13 | 8 | 12 | 9 | 13 | 9 |

6.2 Baseline Traffic Conditions.

6.2.1 Table 6.2 below shows that based upon the Jubb 2 day November 2014 survey the A264/B2028 Dukes Head Roundabout already operated at and in excess of its design capacity (RFC 1.0) at two arms during the AM and PM Peak hour with delays of around 3 mins per vehicle on the Snow Hill AM and Turners Hill Road [N] PM arms which both recorded MMQ of 25 vehicles + in both peak periods.

6.2.2 The results of the June 2016 surveys shown in Tables 6.2 confirms congestion remains relatively unchanged in the PM from the November 2014 survey with similar delays and RFCs around 3 mins and 0.99 at Snow Hill and Turners Hill Rd (N) arms resulting in an observed MMQ of 24 pcus (144m long). For the AM Peak, it shows some easing of congestion, with a decrease of 5% in traffic travelling through the junction. Despite a fall in MMQ and delays on Snow Hill and Turners Hill Rd (S) arms, the RFC values remained at 0.94 and 0.98 respectively well above the recommended threshold of RFC 0.85.

6.2.3 Excluding the impact of MSDC Approved Committed Developments from Turners Hill, Crawley Down, Copthorne and East Grinstead at 1st April 2016, the June 2016 Junction performance is still worse than the AMEY Stage 1 Mid Sussex Transport Study 2012 prediction for AM 2021 (which included Committed Development) of 9.4 sec junction delay and a RFC value of 96.8%. see appendix 5 Jubb Report November surveys Headline summary Jan 2015.

Table 6.2 Year 2014 and Year 2016 Baseline Traffic Condition

| Year 2014 Model | AM | | | | Junction Delay | PM | | | | |
|--|----------------|-------------|-----------|------|----------------|----------------|-------------|-----------|------|----------------|
| | Observed Queue | Queue (PCU) | Delay (s) | RFC | | Observed Queue | Queue (PCU) | Delay (s) | RFC | Junction Delay |
| Existing Layout – Year 2014 November Survey (Tue 4th Nov) | | | | | | | | | | |
| Turners Hill Rd (N) | 25+ | 19.21 | 92.02 | 0.97 | 80.34 | 25+ | 26.52 | 159.76 | 1.01 | 98.3 |
| Snow Hill | 25+ | 26.87 | 175 | 1.02 | | 25+ | 21.03 | 134.75 | 1 | |
| Turners Hill Rd (S) | 25+ | 23.05 | 128.8 | 1 | | 25+ | 20.72 | 116.53 | 0.99 | |
| Copthorne Common Rd | 6 | 3.14 | 8.66 | 0.76 | | 7 | 2.64 | 7.51 | 0.73 | |
| Year 2016 Model | AM | | | | Junction Delay | PM | | | | |
| | Observed Queue | Queue (PCU) | Delay (s) | RFC | | Observed Queue | Queue (PCU) | Delay (s) | RFC | Junction Delay |
| Existing Layout - Year 2016 Base Average (Tue 7th and Wed 8th June) | | | | | | | | | | |
| Turners Hill Rd (N) | 7 | 5.56 | 36.77 | 0.85 | 6.25 | 23 | 22.08 | 143.29 | 0.98 | 77.16 |
| Snow Hill | 14 | 12.54 | 76.52 | 0.94 | | 24 | 22.44 | 163.88 | 0.99 | |
| Turners Hill Rd (S) | 20 | 21.55 | 110.04 | 0.98 | | 8 | 8.42 | 66.06 | 0.91 | |
| Copthorne Common Rd | 13 | 14.3 | 43.42 | 0.94 | | 9 | 8.6 | 22.52 | 0.9 | |

6.3 The Impact on A264/B2028 of Copthorne Village West Development 500 Dwellings including Proposed Mitigation and the Impact of Other MSDC Approved Committed Developments etc 1st April 2016 on the Junction.

6.3.1 It is understood that junction improvements by means of entry widening are proposed as part of the consented Land West of Copthorne Village Residential Scheme (Ref 13/04127) to release the capacity at this location.

6.3.2 The ARCADY model was adjusted to incorporate the envisaged enhancements with the geometric input obtained from the original TA accompanying the Copthorne Village West scheme. Excluding the Approved Committed Developments at Turners Hill, Crawley Down,

East Grinstead and the further 45 dwelling at Copthorne Table 6.3 shows the impact of the 500 dwelling CVW development.

Table 6.3 Impact of the CVW Development

| | AM | | | | PM | | | |
|--|-------------|-----------|------|--------------------|-------------|-----------|------|--------------------|
| | Queue (PCU) | Delay (s) | RFC | Junction Delay (s) | Queue (PCU) | Delay (s) | RFC | Junction Delay (s) |
| Improved Layout - Year 2016 Base Average (Tue 7th and Wed 8th June) + CVW Development | | | | | | | | |
| Turners Hill Rd (N) | 3.67 | 23.99 | 0.79 | 64.77 | 7.37 | 47.83 | 0.89 | 34.85 |
| Snow Hill | 2.61 | 14.95 | 0.73 | | 2.92 | 20.23 | 0.79 | |
| Turners Hill Rd (S) | 15.34 | 78.50 | 0.95 | | 8.29 | 63.43 | 0.90 | |
| Copthorne Common Rd | 34.76 | 98.94 | 0.99 | | 9.70 | 25.19 | 0.91 | |

6.3.3 In comparison with the 2016 June Survey traffic condition, Table 6.4 below summarises the outturn junction performance of the improved junction layout taking into account the impact of MSDC Approved Committed Development as at 1st April 2016.

Table 6.4 Comparison Study

| | AM | | | | PM | | | |
|--|-------------|-----------|------|--------------------|-------------|-----------|------|--------------------|
| | Queue (PCU) | Delay (s) | RFC | Junction Delay (s) | Queue (PCU) | Delay (s) | RFC | Junction Delay (s) |
| Improved Layout - Year 2016 Base Average + Committed Dev | | | | | | | | |
| Turners Hill Rd (N) | 3.8 | 24.86 | 0.80 | 113.26 | 11.17 | 73 | 0.93 | 59.93 |
| Snow Hill | 3.62 | 19.26 | 0.79 | | 4.03 | 26.81 | 0.85 | |
| Turners Hill Rd (S) | 41.09 | 195.96 | 1.01 | | 11.95 | 89.44 | 0.94 | |
| Copthorne Common Rd | 55.67 | 151.54 | 1.01 | | 23.10 | 57.20 | 0.97 | |
| Existing Layout - Year 2016 Base Average (Tue 7th and Wed 8th June) | | | | | | | | |
| Turners Hill Rd (N) | 5.56 | 36.77 | 0.85 | 64.25 | 22.08 | 143.29 | 0.98 | 77.16 |
| Snow Hill | 12.54 | 76.52 | 0.94 | | 22.44 | 163.88 | 0.99 | |
| Turners Hill Rd (S) | 21.55 | 110.04 | 0.98 | | 8.42 | 66.06 | 0.91 | |
| Copthorne Common Rd | 14.3 | 43.42 | 0.94 | | 8.6 | 22.52 | 0.9 | |

6.3.4 The Approved Committed Developments [ACD] includes Copthorne Village West [Ref 13/04127] 500 dwellings and 45 other units, 94 units in Crawley Down, 91 units in Turners Hill and 66 units at East Grinstead's 664 units.

6.3.5 As can be seen above, the operational efficiency at Turners Hill Rd (S) and Copthorne Common Rd deteriorates while taking into account the proposed junction improvements and traffic arising from the identified ACD:

1. Copthorne Common Rd arm AM MMQ increases 4 times to 56 pcus from 14 resulting in 336m long queues with delays of nearly 3 mins and an RFC of 1.01 against existing June 2016 performance of 0.94 RFC and November 2014 Jubb Survey results of RFC 0.76.

2. Turners Hill Rd (S) MMQ nearly doubles from 22 to 41 pcus stretching 246m long with delays of over 3 mins and RFC of 1.01 in excess of theoretical capacity against June 2016 RFC of 0.98 and November 2014 Survey results of RFC 1.0*.
3. Whereas, in PM Peak, performance of both arms deteriorated with RFC values of 0.97 and 0.94 respectively increasing from 0.9 and 0.91 well above the recommended capacity threshold of 0.85 in RFC.

6.3.6 Having reached the recommended and design capacity, the modelling demonstrates that the proposed junction enhancement has not adequately mitigated the impact of the already approved and committed developments with increased queueing length and delays predicted.

6.4 Conclusion.

6.4.1 The Capacity Tests for the June 2016 Surveys with the Approved/Committed Developments demonstrates that the proposed junction enhancements will not deliver sufficient spare capacity to accommodate the anticipated traffic growth from the ACD in the area and thus does not offer a long term highway solution. Congestion is predicted to be aggravated with severe delay and queue length at both Turners Hill Road and Copthorne Common Road.

7.0 CONCLUSION.

- 7.1 Including the Jubb 2016 6 day Survey of the A22 Traffic Network and 2 days at Turners Hill B2110/B2028 and the A264/B2028 Copthorne (Dukes Head) Junctions, four separate surveys were completed across the seasons over 19 months providing 14 days data collection of the A22 Traffic Network and 4 days at the adjacent junctions., They provide a comprehensive area wide assessment on the developing condition of the acknowledged severe congestion that exists on at key junctions in and around the East Grinstead [EG] on routes to the M23 and M25 motorways.
- 7.2 Over that period, demonstrated by the Jubb 2016 surveys, the congestions experienced along the EG and Surrounds Network is progressively and materially deteriorating.
- Sections 3 and 4 of the report details that congestion on the A22 has now reached a new higher level of unacceptable severe congestion, particularly AM and PM at Imberhorne and PM at the Felbridge Junction, with the Lingfield Junction continuing to experience significant queuing delays on the A22 London Rd (N) and A22 London Rd (S) arms. These Junctions face further pressure arising from the significant effect of the already Approved Commitment and Allocated Development.
 - Section 5 of the report also concludes that the Turners Hill B2110/B202 Junction used by EG residents to avoid the A22, continues to suffer from significant queuing delay and that the Junction mitigation proposed by the Turners Hill Neighbourhood Plan will not overcome the severe congestion issues but redistribute the queue around the approaches with increase delays projected along the B2028.
- 7.3 The Atkins Stage 3 Do Minimum (DM) infrastructure Improvement Plan proposed for A22 mitigation was designed to accommodate a EG housing ceiling limit of 765 dwellings from the 1st April 2011 for the plan period. Already at the 1st April 2016 1,160 dwellings have been built and already approved committed development, 395 52% above the Atkins Stage 3 ceiling with more being approved during 2016 This identifies how inadequate the DM solution is to mitigate EG traffic congestion.
- 7.4 This conclusion is reinforced by Appendix F Tables 5.4 and 5.5 ' Comparison of Forecast A22 Traffic Network Conditions 2021 Atkins Stage 3 after DM mitigation V Jubb's which took into account the cumulative effect of the already Approved Committed Development, the proposed HPF DM/15/0429 planning application and the Atkins 3 DM mitigation. All Junctions identify substantial adverse difference in performance with Severe Congestion against the Atkins Stage 3 predictions.

- 7.5 Both of the East Grinstead Neighbourhood Plan [EGNP] which is awaiting for a referendum in October 2016 and the emerging MSDC District plan 2014-2031 submitted to the Planning Inspectorate for examination recognise the severe capacity deficiency inherent within EG highways infrastructure. See paragraphs 2.7 and 2.8 pages 6 and 7.
- 7.6 The Jubb Junction Survey and Modelling Reports are compliant with the requirements of the National Planning Policy Guidance (NPPG) 6th March 2014 and 10th October 2014 and West Sussex County Council (WSSCC) Transport Assessment Methodology June 2007 guidance (an integral part of the Mid Sussex District Council (MSDC) Validation Criteria for planning application local requirements June 2015). The Reports provide an Up to Date picture of traffic conditions meeting the requirements of NPPF 158.
- 7.7 Against this background the benchmark year for reviewing the impact of the proposed HPF development DM/15/0429 is 2021. This is consistent with Atkins Stage 3 for predicting future traffic conditions on the A22 traffic network and the build out rate proposed by the Hill Place Farm Development planning application DM/15/0429.
- 7.8 Appendix E Table 3 shows the forecast for 2021 traffic conditions at the A22 key junctions taking into account the cumulative impact of the already Approved Committed and Allocated Housing Development , the proposed HPF development DM/15/0429 and the proposed Atkins Stage 3 DM mitigation. This is then compared to existing conditions observed during the Jubb 2016 traffic surveys in accord with the NPPG 'Transport evidence base in plan making and statements in decision making 10th October 2014 and Travel plans, transport assessments and statements in decision making 6th March 2014' and also WSSCC TA Methodology (June 2007) guidance (an integral part of the MSDC Valuation Criteria for planning applications for local requirements June 2015).
- 7.9 The future year study reveals that there will be a dramatic escalation between 2016 and 2021 in the degree of Severe Congestion at the Imberhorne Lane Junction with 5 of the 6 arms deteriorating in performance during:
- The AM peak - Practical Reserve Capacity [PRC] has decreased from -86.2% of 2016 baseline condition to minus - 149.6% in 2021 (74%) with an extended delay of 1,135 secs (19 mins] predicted at A22 London Rd (S) up from 833 secs (14 mins) and deteriorating DOS of 224.6% and increased MMQ of 335 pcu 131 pcu 64% worse than the 2016 baseline condition.
 - PM peak negative PRC decreases 53% from minus - 63.8% in 2016 to minus - 97.8% in 2021 again with the A22 London Rd (S) MMQ extending to 224 pcu length 1.3km.

- 7.10 At Felbridge Junction traffic conditions deteriorate in the AM peak with negative PRC declining from minus - 36.1% in 2016 to 2021 minus - 47.7%. Congestion on the A264 Copthorne Rd AM aggravated with an increase of 42 pcu in MMQ to 145 pcu in 2021 870m long and a deteriorated DOS 133% with delays of 527 secs (8.7 mins).
- 7.11 The limited capacity and nature of the existing EG highway network has a significant impact on the delivery of future growth in and around East Grinstead.
- 7.12 The National Planning Framework states at Paragraph 7 there are three elements to sustainable development, Economic, Social and Environmental Sustainability. The NPPF goes on to say that these three elements are mutually dependent and they should be sought jointly and simultaneously through the planning system.
- 7.13 The approval of the major development proposed at Hill Place Farm alongside the already Approved Committed and Allocated Developments will put further pressure on the already oversaturated A22 network that already acknowledged suffering from severe congestion conditions. The proposed 'Do Minimum' Infrastructure Improvement Plan does not provide adequate mitigation to resolve the congestions issues and offer sufficient reserve capacity to accommodate the proposed HPF development.
- 7.14 In view of this, such development will further compromise the sustainable economic, social and environmental growth of East Grinstead, and thus is in contrary to NPPF Paragraph 7.
- 7.15 The analysis demonstrates that with the Do Minimum highway intervention, the proposed Hill Place Farm development DM/15/0429 would result in a Cumulative Residual Impact on the A22 corridor that would be considered severe under the NPPF Paragraph 32 and therefore should be refused on highway and transport ground.

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