Dartford Local Plan
Strategic transport modelling
Stage 1 - Base year model

On behalf of

DARTFORD
BOROUGH COUNCIL

Document Control Sheet

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For and on behalf of Stantec UK Limited				

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1   Introduction

1.1.1   Stantec have been appointed by Dartford Borough Council (DBC) to provide strategic modelling evidence in support of their emerging Local Plan.

1.2   Existing Local Plan

1.2.1   The current Dartford Local Plan comprises the Core Strategy 2011 and the Development Policies Plan 2017. The Core Strategy plans for approximately a 45% growth in households in the Borough (17,300 homes 2006 to 2026).

1.2.2   In 2018, the Council carried out a review of progress in achieving the policies contained in the Core Strategy which confirmed that the regeneration proposed has been taking place.

1.2.3   Core Strategy plans are materialising. Housing completions since 2015/16 in particular have been high in Dartford.
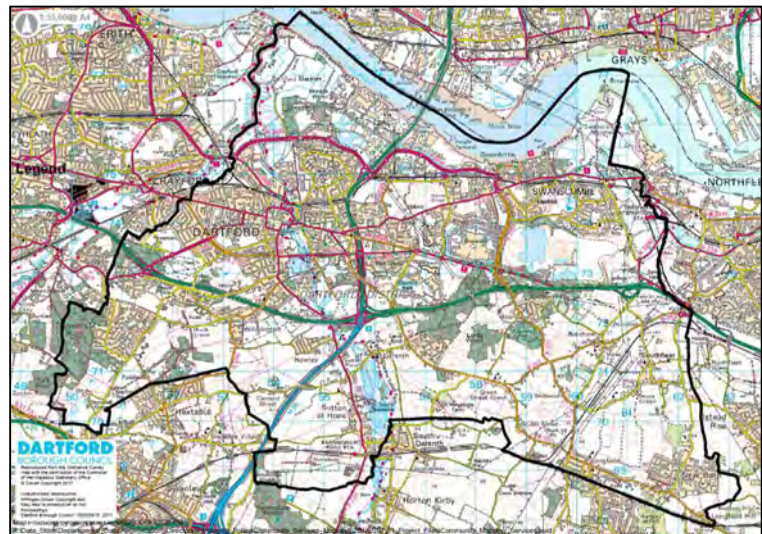
1.3   Local Plan review

1.3.1   The Council is carrying out a review of its Local Plan, with a time horizon for the Local Plan of 2036.

1.3.2   On current information, DBC consider that the existing permissions and identified sites will be capable of delivering the new homes required to meet local housing need.

1.3.3   On this basis, considerations for the new Local Plan are likely to relate to the intensity of development at these locations, rather than identifying alternative spatial locations. This means the Green Belt is expected to be maintained, with DBC advising there are no plans for strategic release for new housing.

1.3.4   DBC have been provided with the Dartford Cordon of the Lower Thames Area Model (DCLTAM) by Highways England (HE). At the outset of the appointment a cordon of the statutory consultation LTAM model was provided by HE and used. However, subsequently HE revised the LTAM model to take into account updated development and scheme assumptions and this was released as the supplementary consultation model. Taking into account the level of assignment changes within Dartford, the Stage 1 work was refreshed using an updated cordon of the supplementary consultation model (April 2020) provided by HE. This model will underpin the Lower Thames Crossing DCO submission by HE, and forms a key component of the DBC Local Plan review completed.

1.3.5   Stantec's remit is to review and update the DCLTAM to create a base year model and forecast year models for DBC Local Plan option testing.

1.4   Study objectives

1.4.1   The outputs from the technical work undertaken by Stantec have been, and will continue to be, derived following consultation with the two highway authorities; Kent County Council

(KCC) and Highways England (HE). This has been based upon a number of meetings with the two authorities and DBC and EDC.

1.4.2   From the commissioning brief, the purpose of the technical work produced by Stantec is:

"primarily to ensure new Local Plan policies are informed by robust evidence and option testing; that also supports development of a local strategy for sustainable transport, and; the identification of future transport infrastructure and appropriate mitigation measures by development. "

1.4.3   It is intended that the evidence base will enable DBC to compare different Local Plan options relative to each other, with respect to their demand on the transport network.

1.4.4   The evidence base developed therefore will inform the preferred strategic option for development in the Borough, having regard to the capacity of transport infrastructure, existing and planned.

1.4.5   The modelling exercise was undertaken in this context and is thus a different approach in places than may be used for a highway scheme appraisal for example.

1.5   Scope of this document

1.5.1   The purpose of this document is to detail the technical work completed during Stage 1 of Stantec's appointment as follows :

- Engagement with DBC and the highway authorities to agree a scope and methodology for Local Plan assessment.

- Data gathering with respect to existing traffic data and availability of modelling data.

- Review of the Dartford Cordon of the Lower Thames Area Model (DCLTAM) provided to DBC by HE.

- Adjustment of the DCLTAM with respect of the modelled network and zoning as appropriate.

- Adjustment of the DCLTAM base year model to reflect a 2019 base year model.

- Comparison of base year model data with observed traffic flow data.

1.6   Document structure

1.6.1   This document follows the structure summarised below :

- Section 2 summarises the engagement had with the highway authorities during the appointment.
- Section 3 details the derivation of the base year highway network used for this study.
- Section 4 details the derivation of the base year prior matrices used as the input to the matrix estimation completed during this study.
- Section 5 details the matrix estimation process completed.
- Section 6 summarises the assignment outputs.
- Section 7 provides a summary of the Stage 1 findings.

2   Engagement with local authorities

2.1.1   In developing a model for the purposes of Local Plan assessment it is important to engage with the highway authorities.

2.1.2   There has been extensive ongoing liaison between north Kent councils and the highway authorities. For example, immediately preceding the Stantec commission, Dartford hosted a Local Plan Transport Evidence discussion between the EDC, KCC, and Gravesham and Sevenoaks councils, with Bexley invited (16th April 2019). This was followed by a HE-Dartford Liaison Meeting with KCC, and (Highway England / Atkins, with EDC invited (15th May 2019).

2.1.3   On this basis an early meeting was convened to discuss the scope and methodology of modelling assessment proposed and to obtain buy-in from the appropriate officers.

2.2   Inception meeting

2.2.1   A meeting was held on 2nd August 2019 attended by :

- ▪ Dartford Borough Council

- ▪ Stantec UK (formerly Peter Brett Associates LLP)

- ▪ Ebbsfleet Development Corporation

- ▪ Kent County Council (H&T – Highways and Transportation)

- ▪ Highways England (Lower Thames Crossing team).

2.2.2   This meeting allowed a technical discussion between the various parties to agree the scope and methodology of assessment. The main points from the meeting were:

- The reasoning behind the geographical extent of the cordon provided.

    "..*the M2/M20 area of Kent that is important for the Lower Thames Crossing strategy such as A229 and some elements of the M2/M20 bifurcation strategy.*

    HB confirmed that it was appropriate and convenient to provide this cordon as a whole to Dartford and Gravesham districts, and KCC. The working relationship between the three authorities made this logical."

- The OD data informing the 0700-0800 was from the wider peak period.

    "*HB pointed out that the mobile telephone data did include data for the whole 0700-1000 peak period and using the AM 0700-0800 model for distribution would be reasonable. The main change would then be volumetric.*"

- The role, and agreed approach, to matrix adjustment using matrix estimation.

    "*HB outlined the two school of thoughts, contrasting keeping validation data versus looking for a better match of observed to modelled.*

    A consensus was agreed that most of the counts could be included in the ME process."

2.2.3   A second meeting was held on 4th October 2019. In this meeting the HE presence was the development control team, rather than the LTC team.

2.2.4 This meeting gave an update of the work since the August meeting, and also revisited some of the discussion that was previously undertaken.

2.2.5 Since that time, further meetings have been held, and further information has been provided to both KCC and HE, as the highway authorities, with respect to the base year modelling, forecast year baseline modelling and intended approach to the Local Plan option testing. During 2020 and January 2021 several meetings were held with highway authority officers to discuss study inputs, outputs and methodology.

2.2.6 In summary, agreement has been reached that the base year modelling described within this report is appropriate for carrying forward to the Local Plan forecast modelling and Local Plan option testing.

2.3 Data gathering

2.3.1 A portfolio of data has been collated in collaboration with the local authorities to facilitate the study as follows :

- Confirmation from officers with respect to the highway upgrades within Dartford since the Lower Thames Crossing base year model year (2016).
- Housing completions between 2016 and 2019
- Agreement with officers in respect of the additional routes of local and / or strategic importance that should be included in the DCLTAM.
- Traffic flow data available for the proposed cordoned network area, either from the local authorities, the DfT or from local TA documents.
- Traffic count data from a number of sources.

3 Base year model network

3.1.1 This chapter describes a review of the supplementary consultation version of the DCLTAM provided to DBC by HE.

3.2 Overview

3.2.1 The DCLTAM is a highway only Origin-Destination model. It comprises a network and a stacked matrix for the following scenarios:

- 2016 AM (0700-0800)
- 2016 IP
- 2016 PM (1700-1800)

3.2.2 The assignment methodology within the DCLTAM is 'deterministic' Wardrop Equilibirium (in SATURN, SUZIE=F), the same as adopted by HE for the LTAM.

3.2.3 Changing the DCLTAM to a stochastic ('SUE') assignment[1] (SUZIE=T) was considered, but not considered necessary. Hence, consistency with the HE's preferred assignment approach has been retained.

3.2.4 The SATURN parameters, including convergence parameters. were reviewed and considered acceptable and hence left unchanged.

3.3 Extent of cordon

3.3.1 The DCLTAM represents a cordoned area of the LTAM. The extent of the cordon was defined by HE and has been selected to allow a reasonable assessment of the traffic flows within the Dartford Borough. The extent of the cordon provided by HE is illustrated below.
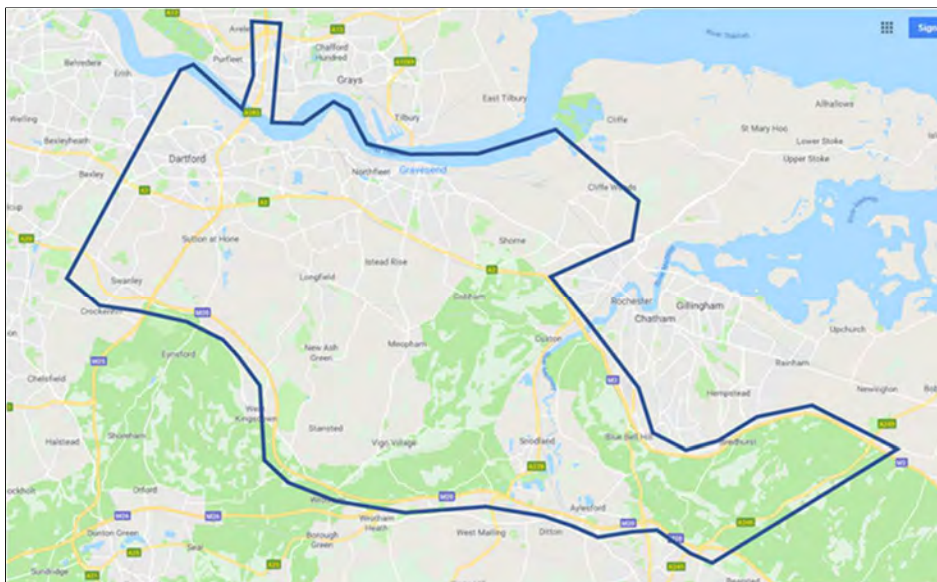
DCLTAM cordon from wider LTAM

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[1] The important difference between these two formulations is that Wardrop Equilibrium implicitly assumes that all users perceive travel cost in an identical manner - which is to say the definition of travel cost set by the modeller - whereas SUE allows different users to have different perceptions of what actually constitutes travel cost to them.

3.3.2   Hence, the DCLTAM cordon is wider in coverage than the DBC boundary and includes Dartford and Gravesham districts, as well as parts of Sevenoaks and Tonbridge and Malling districts and Medway unitary authority.

3.3.3   It is noted that the extent of the cordon to the east allows for route switching to occur east of the DBC boundary. To the west, the cordon provided is tighter, so that it does not include the London Boroughs, but nevertheless allows for sufficient route choice within the DBC boundary.

3.3.4   Notable features of the DCLTAM cordon are :

- It severs the B2174 and the A226 east of the B2174 / A226 / A207 roundabout. It would have been preferable to merge these two points into a single point of the A207. Nevertheless, this can be resolved through the use of the external load zoning points.

- The cordoning is inconsistent between model scenarios insofar as the external zone numbering is different. This is assumed to be a result of starting the cordoning process from different locations during the cordoning process.

- The DCLTAM cordon has 70 external points, including 18 north of the river and 9 representing the M2/A2, M25 (south of river) and M20/A20.

3.3.5   To overcome the differences in external zone numbering it was decided to re-cordon the DCLTAM. The opportunity was also taken to reduce the area cordoned. The resultant cordoned area is illustrated by the red (internal) and blue (external) links below.

3.3.6   The reduction of the geographic network did not remove any significant routing choices available to drivers prior to entering the DBC boundary.
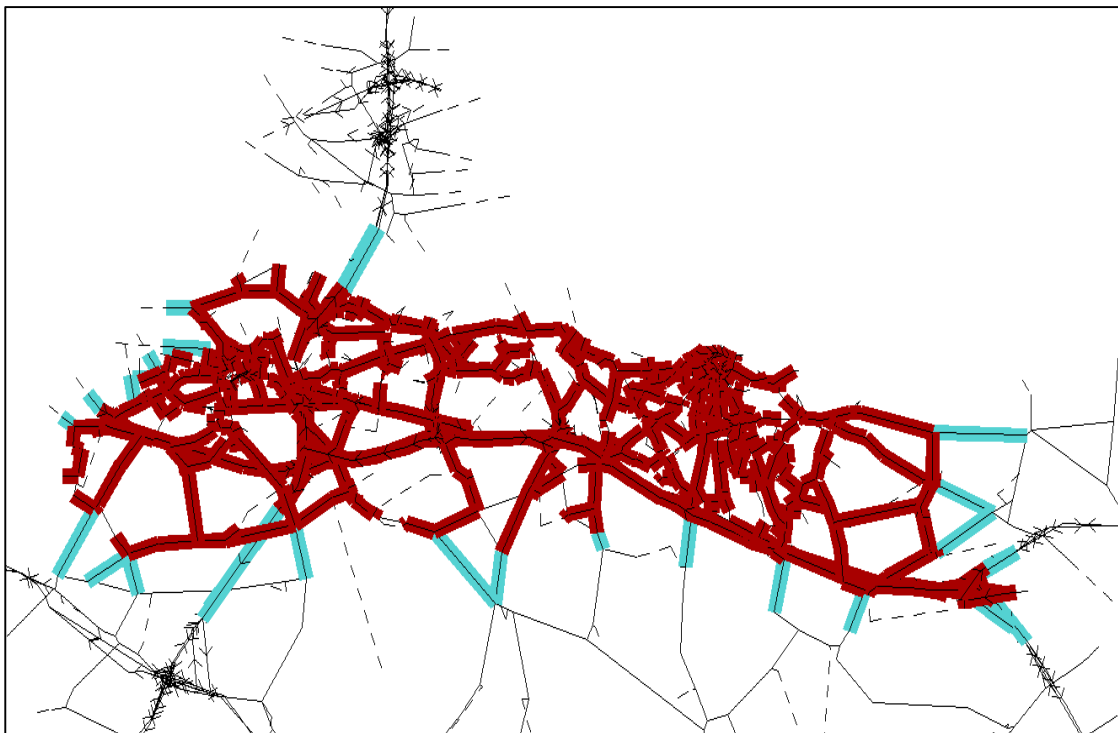
Reduced Cordon adopted for project

3.3.7   The reduced cordoned model has 30 external points. This includes 5 for the Dartford crossing / M25 south and 3 for the A2 / M2. These entry / exit points account for approximately two thirds of the external loading of traffic to the model.

3.3.8   The resultant cordon represents a suitable geographic scope for assessing the effect of Local Plan scenarios on the highway network within the DBC boundary.

3.4   DCLTAM network coverage

3.4.1   The DCLTAM network has been reviewed to consider the coverage that this provides. In summary, the DCLTAM network models the key routes and many local routes within the DBC boundary. The network coverage is appropriate for the purpose of identifying high level changes in traffic flow and route switching as a result of different Local Plan options.

3.4.2   DBC were consulted for local knowledge with regards to the network density and where reasonable assumptions, for a strategic model, could be made.

3.4.3   All of the A-roads and B-roads within DBC have been included within the DCLTAM (both those at the cordon, and those internal to the borough).

3.4.4   In addition, it was considered important to check the inclusion of other locally important routes within the DCLTAM. Examples of these include Overy St, St Vincents Lane, Highfield Rd, Darenth Lane, St James Lane, Gore Road and Alkerden Lane.

3.4.5   Hence, during discussions with the highway authorities it was agreed that a number of additional links be considered within the DCLTAM on the basis that they represent locally important routes and should be included in the assessment. These links comprise :

- The connections to Eastern Quarry from the east via the B259 Southfleet Road.
- Tiltman Avenue (connecting Ingress Park to Manor Way)

3.4.6   In terms of the B259, the forecasting network was checked to see if and how much it differed against the base network in terms of node structure (harmonisation). As the forecasting network did include the changes in this area, no amendment was made to the base model. It was noted that a SATURN difference plot would therefore have some gaps, but that was expected.

3.4.7   Tiltman Avenue is deemed more of a local loading point coupled with being a Fastrack route. It was therefore not included in the modelled network as commensurate with the strategic nature of the zoning. The above is consistent with the HE matrix loading onto the A226 in this area (via Tiltman Avenue and Manor Way) as an empty zone.

3.4.8   It is noted that there are trips described within the EDC/17/0110 planning application for the area. However, the total trips are not significant in the context of a strategic model at 124 trips during the morning peak hour and 74 trips during the evening peak hour.

3.4.9   Whilst the above is considered acceptable for the base year it may need to be revisited in the forecast year models on the basis that the surrounding area will be developed.

3.4.10   Other network links were considered for inclusion, but not felt to add significant benefit to the coding or would not be consistent with the zoning system. These included Brent Lane, Priory Hill / Priory Place, and Overy St spur to Fulwich Rd.

Network upgrades

3.4.11   With respect to highway upgrades that have been implemented between 2016 and 2019, and hence need to be reflected in an updated 2019 base year, these have been discussed with the local authorities.

3.4.12   In summary it was agreed that the A226 London Rd improvement at St Clements Way roundabout is the only significant consideration needed.

3.4.13   The A226 London Road scheme was also noted in the HE uncertainty log provided in the LTAM reporting. The coding change in the DCLTAM forecast network is deemed appropriate to use in the 2019 base year model and has hence been included. It is noted that much of the upgrade design relates to the bus rapid transit network, rather than adding significant highway capacity.

3.5   DCLTAM network coding

Speed flow curves

3.5.1   A number of links within the DCLTAM are represented by a speed flow curve. Those affected are illustrated below.

Links represented by speed flow curves

3.5.2   It could be argued that there is excessive coverage of the network using speed flow curves, with the east of the A282 / M25 area of the local road network being more suited to junction capacity only. However, the network coding as provided was retained with respect to speed flow curves.

Strategic Road Network (SRN)

3.5.3   The coding for the Strategic Road Network (SRN) and the merge / diverges from the A2 and M25 has been assumed to be appropriate. This is on the basis that the LTAM was developed with specific attention paid to the SRN to assess the effect of the LTC. Nevertheless, a few high level checks were made.

3.5.4   Due to the presence of significant grade separated junctions for access to and egress from the strategic road network, it is noted the SATURN coding makes use of multi-nodes in an 'exploded' junction approach. Some high-level checks, such as saturation flows, were undertaken. For example, J1a is shown below.
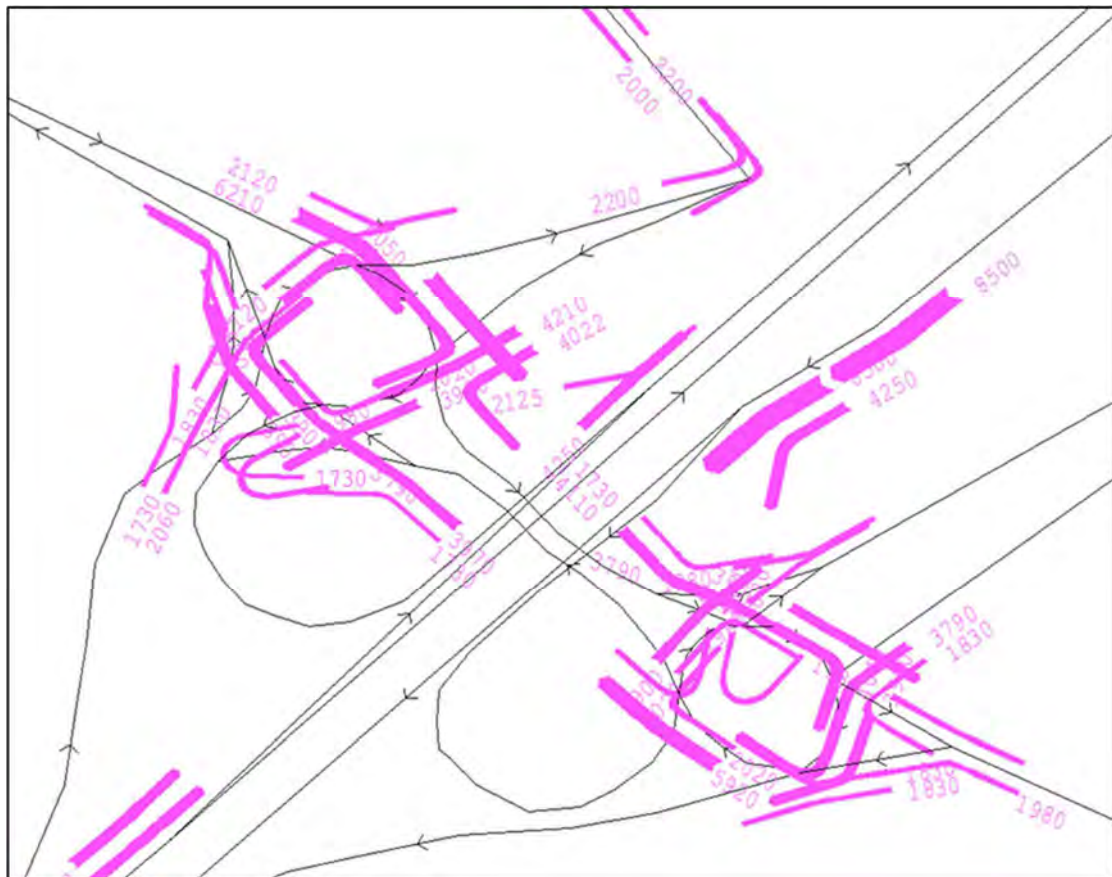
Junction 1a (M25) Littlebrook Interchange

Local highway network - general

3.5.5   A review of the local highway network was completed.

3.5.6   The non classified part of Cotton Lane (becoming Elizabeth St etc) is included in the LTAM. However, it is noted that this link, whilst a possible through route, is designed for access only, as indicated by the signage at the western end (Cotton Lane – Local Traffic).

3.5.7   The rural areas to the south of the A2 were checked that sufficient network coverage was included to ensure appropriate routing from external and outer zones.

3.5.8   Checks were extended over the Gravesham border (broadly the EDC area). The highway network coverage is reasonable. However, refinements to the zoning could be preferable in this area. This is discussed later in the report.

3.5.9   No specific HGV bans were noted. This was accepted as reasonable.

Local highway network - 44444s (SATURN user-defined time penalties)

3.5.10   A SATURN model can incorporate a 44444 cards (time penalties) to control routing. Time penalties may represent a proxy for any deterrent to using a particular link that the user may wish to represent. For example, they may be notional times designed to deter non-local drivers from using a route that would require local knowledge, or they may be "real" in that they represent the extra time for a lorry to drive down a windy road (SATURN Manual Chapter 6)

3.5.11 The LTAM does not include such 'penalties' to control routing. This reflects the lower priority focus that the LTAM would have on the 'deeper' urban area. Some decisions on including selective 44444 coding were made to include such coding, in the context of what a SATURN (strategic) model would typically be expected to represent. This is noted as somewhat subjective but as suggested in the SATURN manual, is a suitable approach; noting this input should be described in reporting.

3.5.12 The use of SATURN models needs to have a reasonable expectation of how detailed, for example, a town centre network can be reasonably represented. Therefore, in this project, penalties or simplifications have been considered for some of the more intricate urban areas of the network (higher density and / or where less through-traffic would be expected).

3.5.13 These turn / link penalties or bans have been incorporated to the 2019 model to be commensurate with the zoning system. Namely, if a link does not have a zone loading point ('connector') on it, and the use of the link as a realistic through-route is minimal or localised, the link can be removed. The links considered appropriate for such treatment are shown in red in the figure below and the rationales described further in the subsequent paragraphs
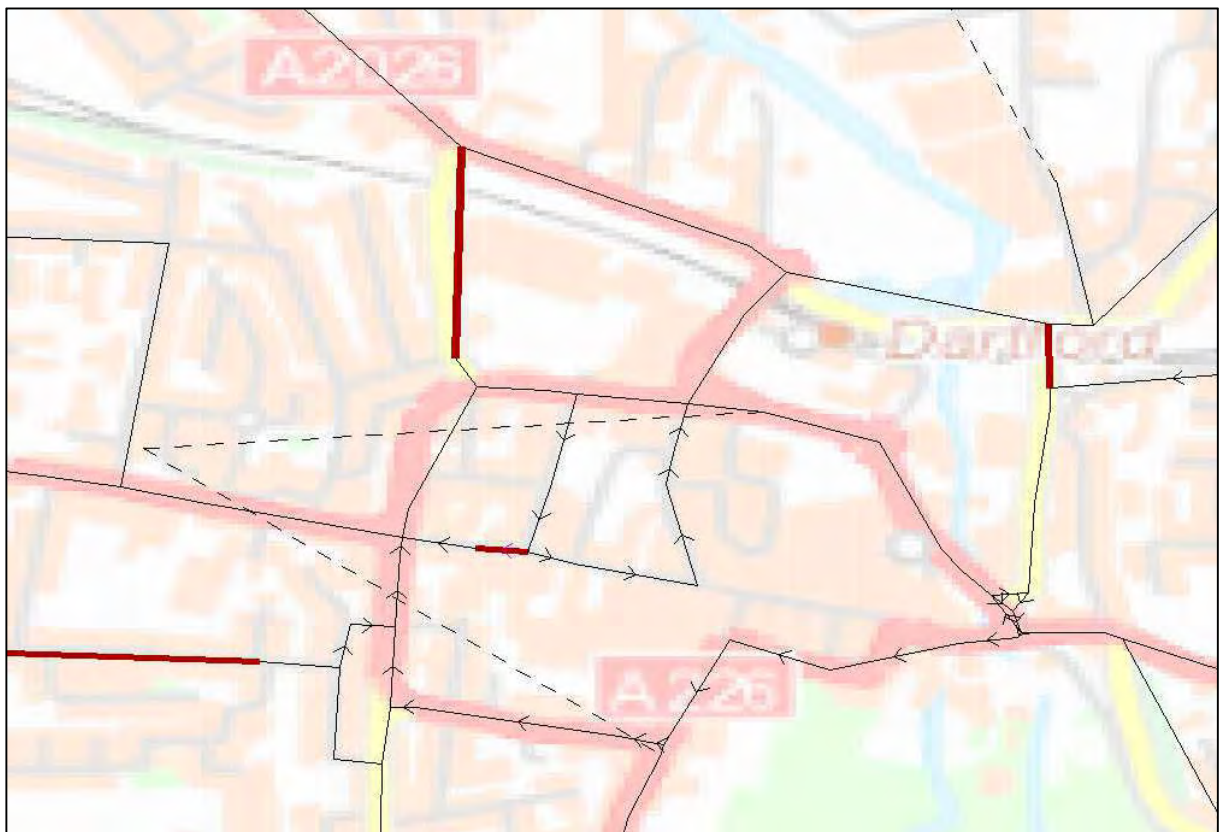
Use of SATURN 4444 cards in the network

3.5.14 The town centre (Spital Street and others) includes 'open' links in the LTAM network. However, as the zoning system is not commensurate with traffic being on that area of the network, the links were given a time penalty as a deterrent in the assignment.

3.5.15 Similarly the Summerhill Rd / Miskin Rd area was simplified. As the LTAM does not code it as a loading point, it was decided to remove it as a through-route in strategic model terms.

3.5.16 The LTAM coding of the roads under the railway bridges in the town centre was reviewed. The lower speeds on Priory Rd and Overy St, in comparison to Hythe St, were noted and adjusted to reflect the restricted highway width and speeds under the bridges.

Local highway network – other observations

3.5.17   Aside from the SRN junctions, the majority of the remaining highway network has been coded as single node junction coding. A number of exceptions occur such as the Watling St / Gore Road gyratory, the Overy Street / Overy Liberty / East Hill complex and the B255 towards Bluewater.

3.5.18   A sample of key junctions were investigated in further detail. For these junctions the junction type, lane arrangement, and saturation flows were checked. For signal junctions the timings were assumed appropriate as provided in the LTAM coding; noting paragraph 4.2.13 in the LTAM LMVR.

"*Traffic signal data from the existing LTC v2.1 and SERTM, RXHAM, M20 SMP models was used as a starting point and only amended if required during the calibration process.*"

3.5.19   However, an anomaly was spotted during the project with regards to the West Hill/Highfield Rd signal phases and timings, whereby a mainline flow (A226) was coded to be an opposed turn. This was addressed by seeking further information from KCC.
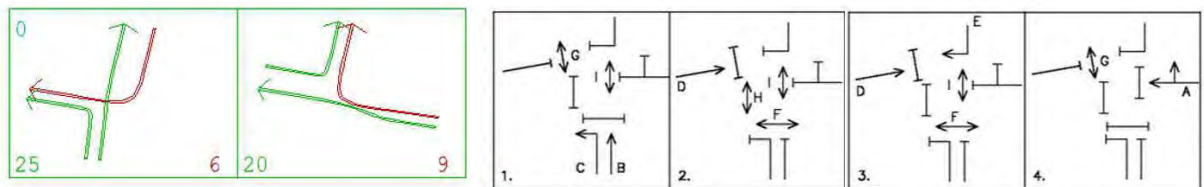
West Hill signals – LTAM coding and KCC information,

3.5.20   It is noted there are limitations of roundabout coding in SATURN with respect to graphically showing flaring, namely that the flare would just be an extra lane. In such cases a check on saturation flow is more relevant.

3.5.21   A coding error was identified on the Watling St / Gore Rd gyratory, which omitted the turning movement to continue the circulatory movement at the Watling Street arm. This was changed from the figure below left, to the figure below right.
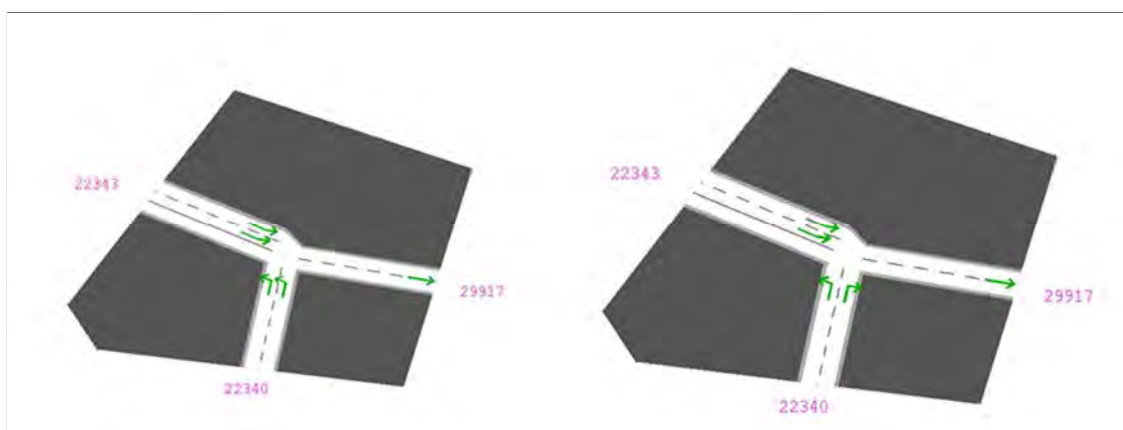
Correction of coding at B2500 Watling St

3.5.22   A similar error was noted with a right-hand turn included allowing movement from Westgate into Priory Hill, which is actually prevented by the central reservation.

3.5.23   The A206/A2026 roundabout is noted. This junction does not have the bypass lane onto Bob Dunn Way included, presumably due to not being convenient in a single node coding. Due to its proximity to the edge of the cordon this was left unchanged.

3.5.24   The Hythe Street / Westgate Road junction coding is noted. This has a filter (at signals) lane from Hythe Street into a dedicated lane on Home Gardens. SATURN assumes that a filter (at the signals) would meet a give-way. Therefore, for simplicity, maximum capacity was given to most easily reflect close to free-flow conditions.

3.5.25   It was further noted that some junctions were coded as dummy nodes or unlimited capacity, often for 3 arm priority junctions (e.g. Central Road with Temple Hill, A2026 Burnham Rd), within contained areas (e.g Temple Hill Square/St Vincents Ave) or regarding access to zones (e.g. Fleet Estate/Darenth Valley Hospital). Whilst it would be preferable to apply priority rules or saturation coding to each junction, the examples are not seen as a significant issue in distorting route choice. For example the former examples, the implication of completing the coding would only to be delay to the side-arm which would not have routing options.

3.5.26   However, if the missing saturation coding is on a through route this is more problematic. Such a case was noted at the Stone Place Rd / A226 junction. As part of the rat-run via Cotton Lane mentioned above, this was corrected.

3.5.27   A large number of 2 arm 'priority (or other)' and 'dummy' junctions are noted. Ideally these would not be in the network as they add unnecessary complexity and potentially distort the assignment. Due to the mid-link location of some of these nodes, it is assumed that these were used to shape the network rather than using 'curved links'.

3.5.28   Some of these nodes could be used if more detail is added. For example, 'Station' roundabout is a '2-arm roundabout at the moment, only reflecting the few traffic movements to / from Home Gardens.

3.5.29   There are also a number of 2-arm signalised junctions which, after investigating a number of locations, are identified to be pedestrian crossings.

3.5.30   Some junction type inconsistencies are noted. Examples of this include the A226 / Hedge Place Road / Stone Place Rd junction. In addition, such simplifications of staggered junctions (e.g A225 / Parsonage Lane) were also noted. Once again, the likely impact on routing was considered, and was the key driver of whether the network should be left unchanged.

3.5.31   A226 / Hedge Place Road / Stone Place Road could be updated. It is currently coded as two adjacent priority junctions, whereas in reality it is now a (single) signalised junction.

3.5.32   The Overy Street / Home Gardens / Overy Liberty junction has quite complex coding, endeavouring to reflect the adjacent signalised and (limited movement) priority junction. For simplicity, this coding was maintained but is noted.

3.6   Model routing

3.6.1   High level checks were undertaken of the distribution using select link analysis, and routing using node-to-node select links.

3.6.2   Examples included the 'ring-road' (east-west due to partial one-way), to and from the Temple Hill area, and the northern Dartford Bypass. An example of a select link analysis is shown as the figure below.
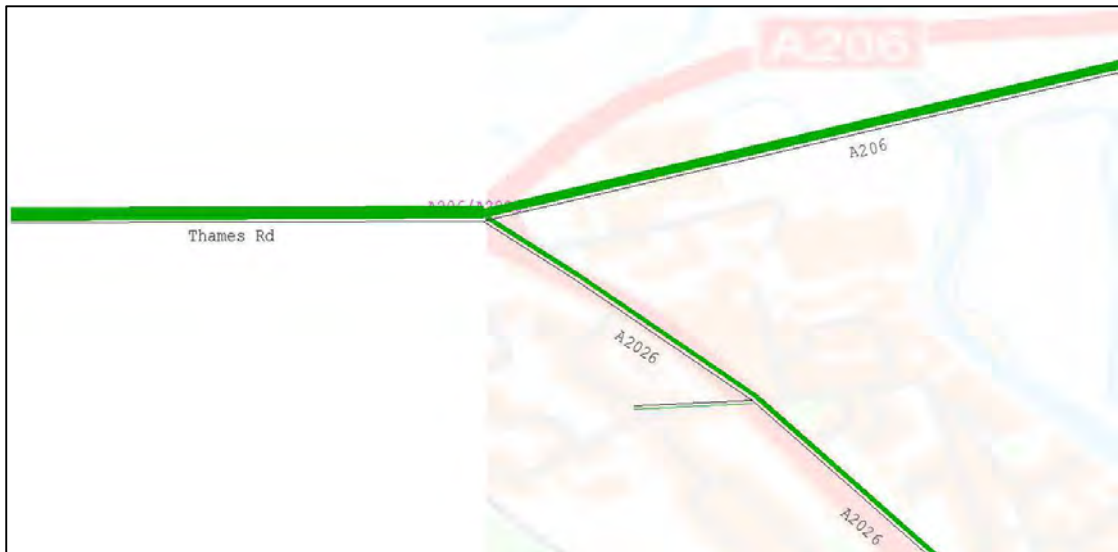
Select link analysis of A206 inbound to district

3.6.3   Whilst not explicitly recorded, the list of routes checked comprise :

- Routes across town centre (various node-to-node points)

- The links forming a north-south screenline (east-west movements) east of A282; A206 Crossways, A226 London Road, and A296 Watling St.

- Entry points from Gravesham District.

- The A206, A207 (A226 / B2174) and A2018 to/from Bexley (London Borough). These routes were considered in conjunction with the edge-of-cordon nature of this area. The A207 is shown below.
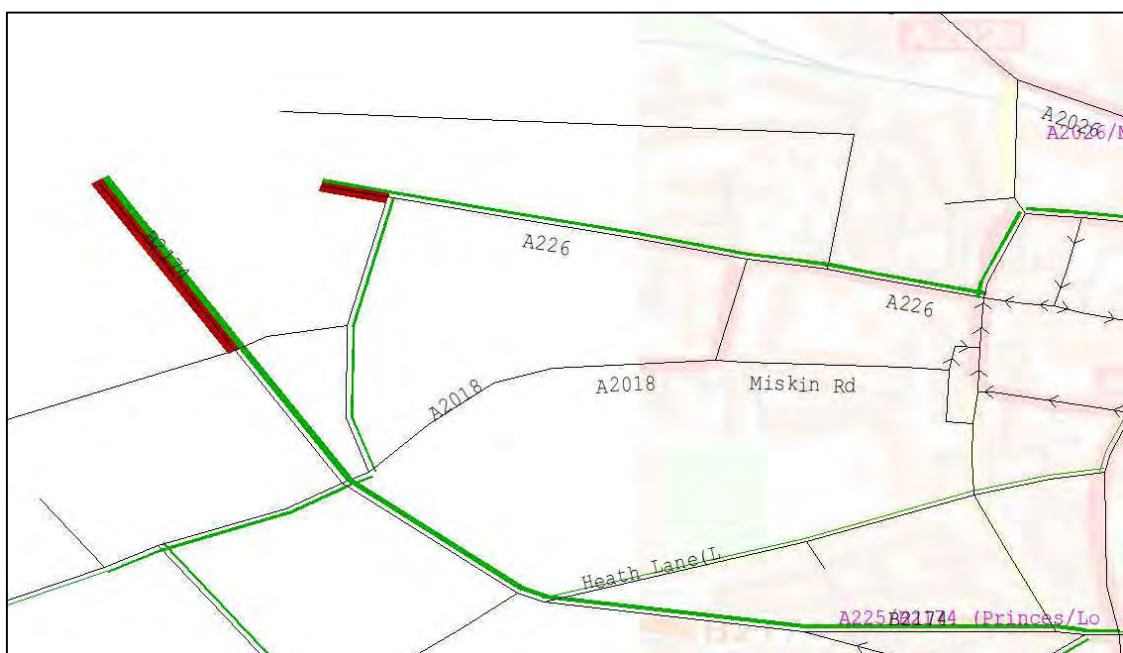
A207 (A226 / B2174) combined routing (AM eastbound)

3.6.4   Much of the routing checked was seen to be single routes between node pairs. There were some minor variations, but the 'route-choice' in the assignment was generally found to be simple, reflecting the relatively simple network and absence of major capacity issues within the model.

3.6.5   In addition, 'forests' and 'arboretums' (zone to zone routing) were checked. Whilst the SATURN software considers multiple routes, most 'forests' were loaded as a single 'tree' or two very similar 'trees' i.e. all movements between a single origin-destination (OD) pair used the same route.

3.6.6   This is expected as node to node routing (potentially multiple OD pairs) was generally single routes and this is broadly consistent with a deterministic assignment. An example, with an element of route-choice, is shown below.

Example forest

3.7   DCLTAM assignment

3.7.1   The DCLTAM has a high density of network coverage through the DBC area. The calibration and validation points were generally positioned on the SRN, as would be expected for the purposes of the LTC assessment.

3.7.2   The DCLTAM screenline (assumed unchanged from the statutory consultation model) includes a number of Dartford local roads as shown below. In addition, there are, as expected, many calibration and validation points on the SRN (A2 / A282 / M25) and some additional validation points on local roads.

Dartford screenline in DCLTAM

Count data locations in DCLTAM

3.7.3   The DCLTAM includes count data within the network files and the count locations are shown above as purple lines. It is noted that there is a lack of count points near the town centre, Temple Hill and the Princes Road (A225 / B2174 corridor). This would be expected due to the strategic nature of the DCLTAM, and the lower focus on the 'deeper' urban areas.

4   Base year model matrices (prior)

4.1.1   There are 144 internal zones in the DCLTAM received from HE, with 58 zones within the DBC boundary.

4.1.2   The number of zones was reduced to 98 through further cordoning as described previously in 3.3.5, maintaining 58 zones within the DBC boundary. The zoning system is illustrated below.

DCLTAM zoning system (Dartford district annotated with red boundary)

4.2   Zoning checks

4.2.1   The zone representing the A2026, and its surrounds, bounded by the River Darenth and the railway is noted to straddle a variety of junctions. Other zones, such as that covering Fleet Estate, could be split into more zones, to allow more specific loading to differing parts of the network. These are noted as possible enhancements if the model is developed further in the future although not considered necessary for the purposes of this study.

4.2.2   Checks were made where the zoning system either had multiple connectors (such as Rennie Way and University Way, Fleet Estate, Darenth Valley Hospital) or where a zone could be represented by two zones (such as Ingress Park and Greenhithe). Adjustments were tested for sensitivity, to decide whether a change should be made. Most possible adjustments were not deemed required for this study. However, the Ingress Park and Greenhithe zone was developed.

4.2.3   It is noted that the Ebbsfleet area has some relatively coarse zoning, particularly zone 7081, reflecting Springhead and the A226 near Ebbsfleet International station (4 connectors for the zone). However, as the routing from here into Dartford would not be expected to be affected by this, the zoning structure has been retained.

4.2.4   Empty, and minimally loaded zones were investigated. If trips were expected (possibly due to minor miscoding in the LTC matrices) seeding of the zone in the prior matrix was undertaken. This applies to the St Clements Lake development and the Northfleet sub-station / Ebbsfleet Green site. Some empty zones were expected due to the land parcel having not been developed at the date of the LTAM base year (2016).

4.2.5   King Edward Avenue off the A226 West Hill, and associated routing (zone 8120) was noted as an empty zone. This was deemed to not require addressing.

4.3   User classes

4.3.1   The DCLTAM is based upon 10 user classes as listed below.

- UCNAME(1) = 'Car Business all incomes'
- UCNAME(2) = 'Car Commute low income'
- UCNAME(3) = 'Car Commute medium income'
- UCNAME(4) = 'Car Commute high income'
- UCNAME(5) = 'Car Other low income'
- UCNAME(6) = 'Car Other medium income'
- UCNAME(7) = 'Car Other high income'
- UCNAME(8) = 'LGV'
- UCNAME(9) = 'HGV'
- UCNAME(10) = 'HGV2'

4.3.2   The 10 user classes listed above have been combined to derive 3 user classes as listed below.

- UCNAME(1) = 'Cars'
- UCNAME(2) = 'LGV'
- UCNAME(3) = 'HGV'

4.3.3   As the importance of the toll for the LTAM model is not replicated within Dartford Borough, the matrices could be combined.

4.3.4   In addition, the role of separating journey purposes is to allow for variation in route choice (based on time versus distance preferences) or to allow for variation in VOT (value of time) in scheme appraisal. Neither of these were deemed significant for the purposes of this study and hence the matrices could be merged.

4.4   Model zone adjustment

4.4.1   In terms of the DBC zones, a relatively large zone (zone number 7197) contains the town centre as shown below.
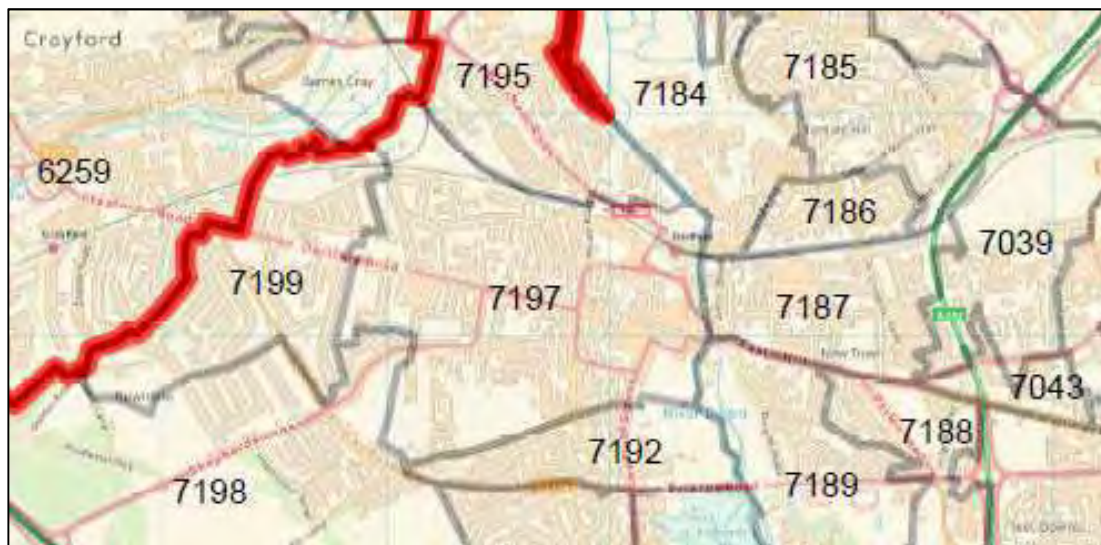
Dartford Town Centre zoning

4.4.2 The town centre zone was split into two extra zones to distribute the trips more specifically. Two loading points on the north and south of the ring road were chosen, adding the original zone loading point to the west of the town centre. The original zone loader maintained 10% of the trips, and the new zones had 45% of the trips each.

4.4.3 Whilst the town centre could be reflected by more zones (the railway station and council offices, Prospect Place retail and the Orchards shopping centre), it was considered important not to introduce undue complexity or spurious accuracy.

4.4.4 In addition, another larger zone (7119), which represented both Greenhithe and Ingress Park was split into two zones. This new coding is an approximation, but nevertheless, provides more granularity to the area.

4.5   Modelled peak hours

4.5.1 The DCLTAM is based upon the SRN peak hours of 0700-0800 and 1700-1800. An alternative AM peak hour of 0800-0900 was deemed required for this study to be more appropriate for the Local Plan testing of the local highway network.

4.5.2 To derive an 0800-0900 morning peak hour prior matrix, a hybrid of the AM and IP was initially considered as an appropriate proxy. However, it was noted in discussions with HE that the DCLTAM morning peak hour incorporates O-D information from the whole morning peak period (0700-1000).

4.5.3 On this basis, a volumetric adjustment, via matrix estimation (ME), is deemed reasonable. For the AM model it did seem reasonable to adjust the basic quarters (Internal-Internal, Internal-External, External-Internal, and External-External) to reflect the nature of the flows on the local roads versus the strategic routes. As the SRN is higher in the 0700-0800 than the 0800-0900, and vice versa for the local roads, a 5% decrease and increase respectively was applied.

4.5.4 The objective of the adjustment was to reduce the magnitude of ME adjustments.

4.6   Row and column totals

4.6.1 The number of trips per zone was noted and considered reasonable. One of the higher numbers was the town centre which has been split as described above.

4.6.2   Logic checks were undertaken on various zones such as Bluewater, Dartford Town Centre and the Hospital to check the AM and PM trips reflected expected loadings and tidality of trips.

4.6.3   For the Dartford district a logic check was undertaken of the proportion of each zone against the total for all the (Dartford) zones. This analysis is shown at Appendix A and indicates.

- The town centre zone ('7197') had the most trips

- The arrivals / departures from key destinations was logical

- There were some empty zones. For some of these zones where there have been completions since 2016, this is addressed by seeding zones before matrix estimation.

4.7   Base year prior matrices

4.7.1   The DCLTAM base year model represents a 2016 scenario for 0700-0800 and 1700-1800 time periods. For the purposes of the Local Plan assessment a 2019 base year has been derived for the base year with a morning peak hour of 0800-0900.

4.7.2   Consideration has also been given to developments that have moved forward between 2016 and 2019. DBC have provided information on the completions between 2016 and 2019. These developments were considered and grouped into either adjustments to the prior matrix or developments which could be included within the matrix estimation process.

4.7.3   For the former, seeding of the relevant zones was completed to include appropriate trips to reflect the 2016-2019 completions. The latter group were developments that were incorporated into wider 'existing' zones with no new zone connector required.

4.7.4   The prior matrix adopted is the 2016 DCLTAM matrix, adjusted as described above.

5 Matrix estimation

5.1.1 The following section describes the matrix estimation process undertaken to derive base year 2019 trip matrices.

5.2 Matrix estimation inputs

5.2.1 In terms of matrix estimation, this was discussed at an early meeting with the local authorities and it was suggested that an incrementally increasing number of counts be incorporated to the estimation process. This incremental ME was attempted for an earlier version of the DCLTAM (Statutory Consultation model) and confirmed that use of all of the count data provided the best fit outcome. On this basis, the full ME, using all count data, has been undertaken.

5.2.2 A new dataset of counts for AM 0800-0900 and PM 1700-1800 peak hours has been compiled covering both the SRN and local road network.

5.2.3 This dataset includes data from the following sources:-

- Recent TA's (51 links)
- Dft (27 links)
- Webtris (52 links)
- DBC supplied data from a town centre study (107 links)
- KCC supplied data from a study of the Fastrack area (74 links)

5.2.4 In addition, this data was supplemented from data available in the reporting for the A2 Bean and Ebbsfleet study (A2BE).

5.2.5 The observed count data compiled originates from a number of different years and these have all been factored to represent 2019 data.

5.2.6 The matrix estimation (ME) sought to add as much of the above count data as possible, but with removal of inconsistent counts, or adjacent links where the relatively coarse zoning did not reflect loading points. The figure below illustrates the links for which count data was included in the ME process.

ME links

5.2.7   Matrix estimation was used to incorporate the uplift in traffic between 2016 and 2019. Furthermore, for the AM model the change in time period has also been predominantly adjusted via the ME process.

5.2.8   Matrix estimation was undertaken on the car matrix only.

5.3   Matrix estimation outputs

5.3.1   Following updating of the base year model from the Statutory Consultation LTAM to the Supplementary Consultation LTAM, an updated Stage 1 report was issued to KCC and HE highway officers during October 2020. Comments were received and correspondence exchanged.

5.3.2   KCC have indicated that the Stage 1 base year model approach undertaken and demonstrated is acceptable for input to the modelling work to identify the effect of the Local Plan on the local highway network.

5.3.3   Following the issuing of the updated Stage 1 report, HE officers provided a number of comments with respect to the matrix estimation undertaken. In summary, whilst HE officers accept that Webtag guidance need not be followed for the Local Plan purposes, they requested additional information with respect to the effect of the matrix estimation exercise completed.

5.3.4   In particular, the information outlined in Table 5 of WebTAG Unit M3.1 was requested by HE to demonstrate the effect of matrix estimation. Table 5 is shown below for reference.

Table 5 Significance of Matrix Estimation Changes	
Measure	Significance Criteria
Matrix zonal cell values	Slope within 0.98 and 1.02 Intercept near zero R_2 in excess of 0.95
Matrix zonal trip ends	Slope within 0.99 and 1.01 Intercept near zero R_2 in excess of 0.98
Trip length distributions	Means within 5% Standard deviations within 5%
Sector to sector level matrices	Differences within 5%

5.3.5   The following sections summarise outputs from the model that were issued to Highways England to provide further information with respect to the matrix estimation effects.

5.3.6   On receiving the additional information, Highways England have confirmed their acceptance of using the model for Local Plan forecasting to assess the impact of the Local Plan on the road network. HE have provided this confirmation on the basis that the scale of changes made to the strategic road network during the matrix estimation process are generally small when compared to the original LTAM data.

5.4   Matrix estimation outputs – Matrix zonal cell values

5.4.1   The zonal cell values have been plotted as a scatter graph for the AM and PM peak hours. The x axis scale represents the pre matrix estimation cell values, whilst the y axis represents

the post matrix estimation cell values. Hence, if the matrix estimation results in every cell staying exactly the same, a straight line would be plotted with a gradient of 1.00.
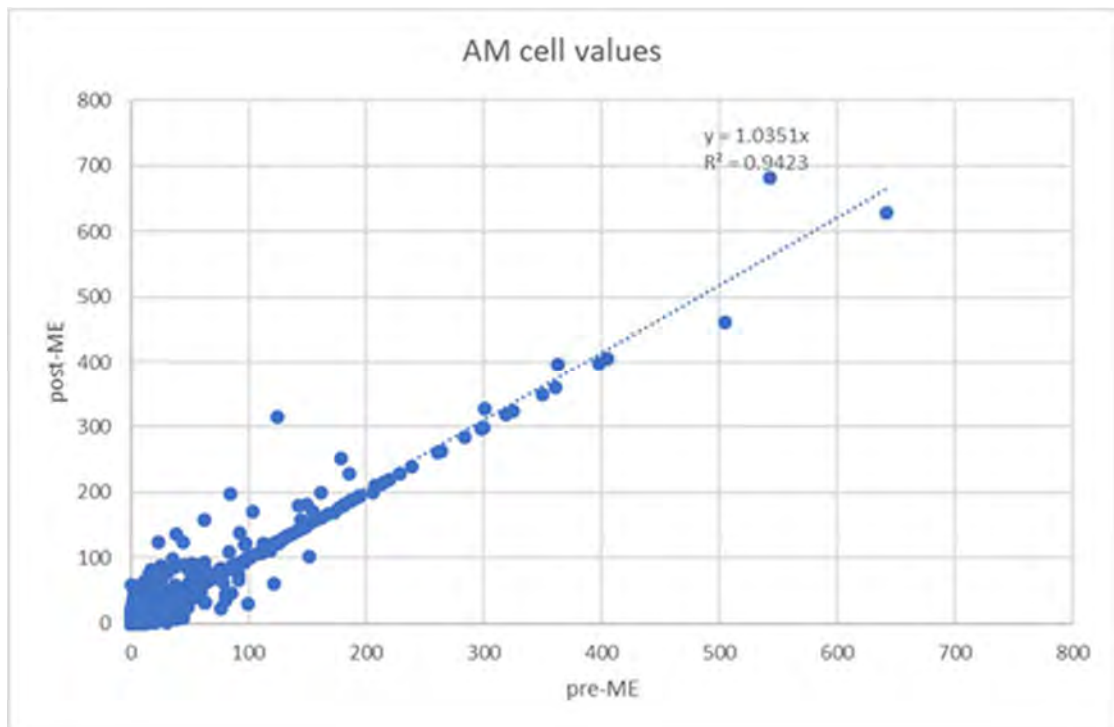
Matrix zonal cell values (AM)[2]
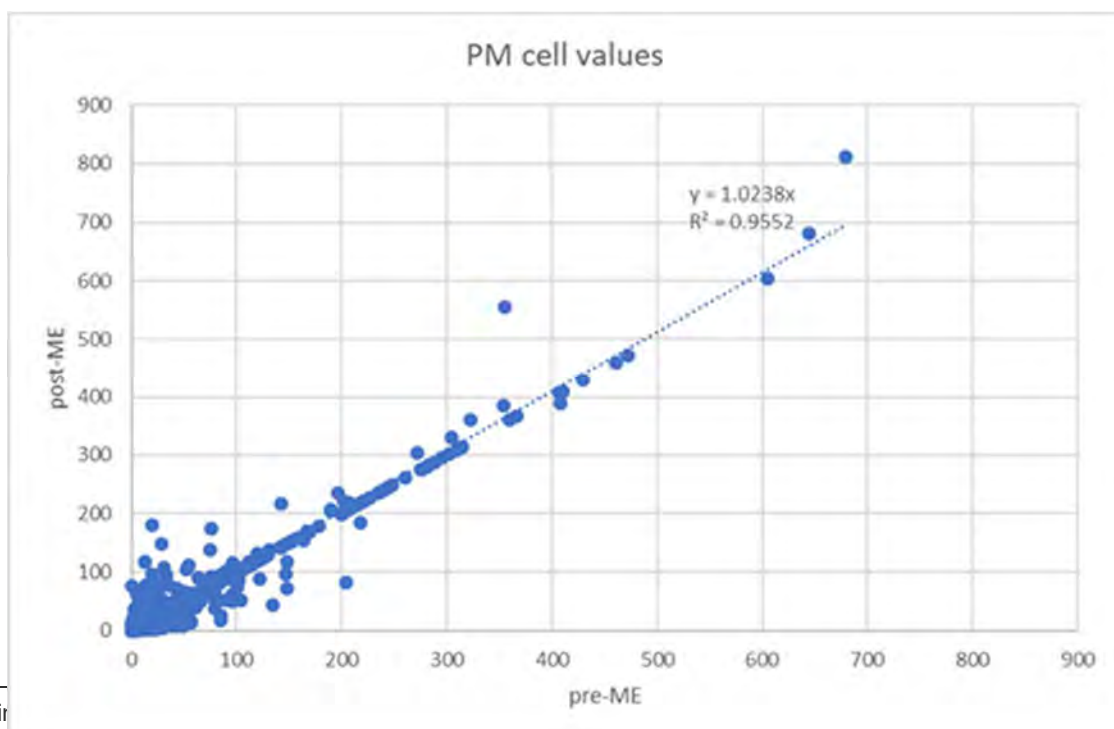
[2] 2 high i

Matrix zonal cell values (PM)

5.4.2   It is noted from the AM graph above that :

- The slope is 1.04 to one decimal place. This is marginally outside the target range, advised by Table 5, of 0.98 to 1.02. However, the value is greater than 1.00 and this is consistent with the expectation that a 2019 peak hour of 0800-0900 would give greater cell values than a 2016 peak hour of 0700-0800 in general.

- The R^2 value is 0.94. This is marginally outside the range target of 0.95+.

5.4.3   It is noted that the AM statistics are close to the target range advised by Table 5. It is considered that the reason they lie just outside of the range is predominantly influenced by the change in year, and the change in modelled hour, being sought by the matrix estimation process in this instance.

5.4.4   On the basis of the information above, it is not considered that the AM output statistics are significantly adrift of the target ranges in the context of a borough wide strategic model being used for a relative comparison of Local Plan options.

5.4.5   It is noted from the PM graph above that :

- The slope is 1.02 to one decimal place. This is within the target range of 0.98 to 1.02. In addition, the fact that the value is greater than 1.00 is consistent with the expectation that a 2019 peak hour would give greater cell values than a 2016 peak hour.

- The R^2 value is 0.96 to one decimal place. This is consistent with the range target of 0.95+.

5.4.6   On the basis of the information above it is noted that the PM statistics are consistent with the target ranges as advised by Table 5.

5.5   Matrix estimation outputs – Matrix zonal trip ends

5.5.1   Similarly to the zonal cell values above, the trip end values have been plotted as scatter graphs for the AM and PM peak hours.

5.5.2   The graphs below show the pre matrix estimation values plotted along the X axis and post matrix estimation values plotted along the Y axis. Separate graphs are provided for rows and columns.

5.5.3   The purpose of the graphs is to demonstrate the difference between the pre and post matrix estimation row and column totals (trip end values).
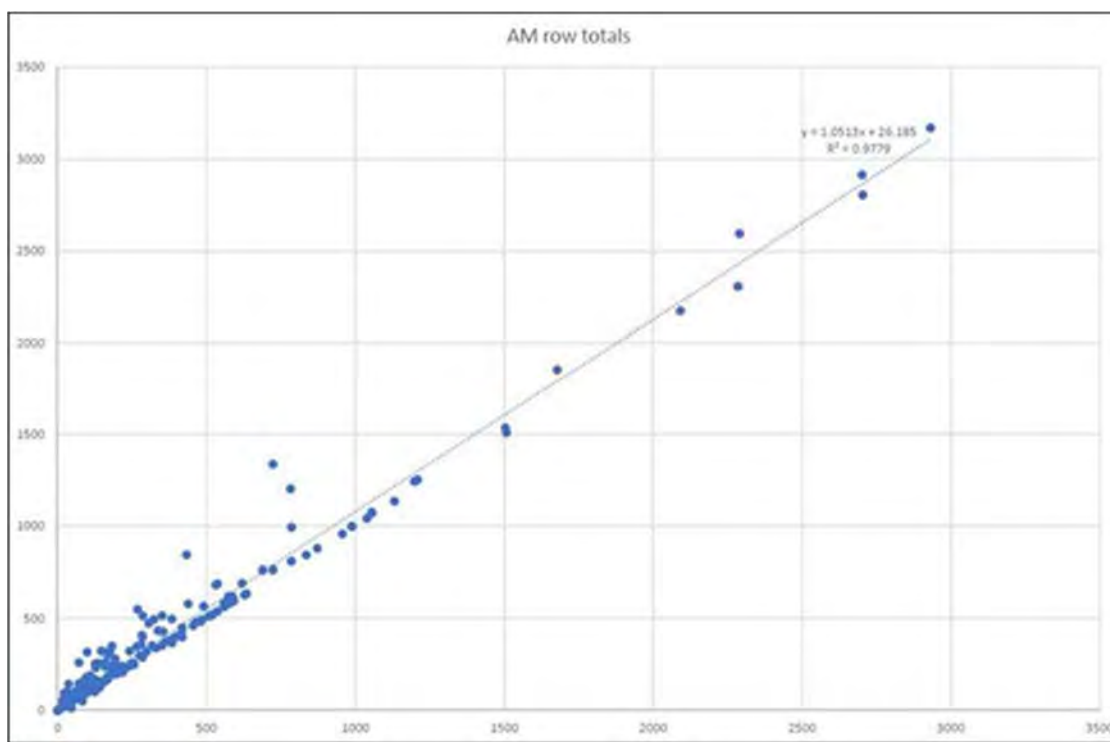
AM row totals -pre (X-axis) and post (Y-axis) matrix estimation
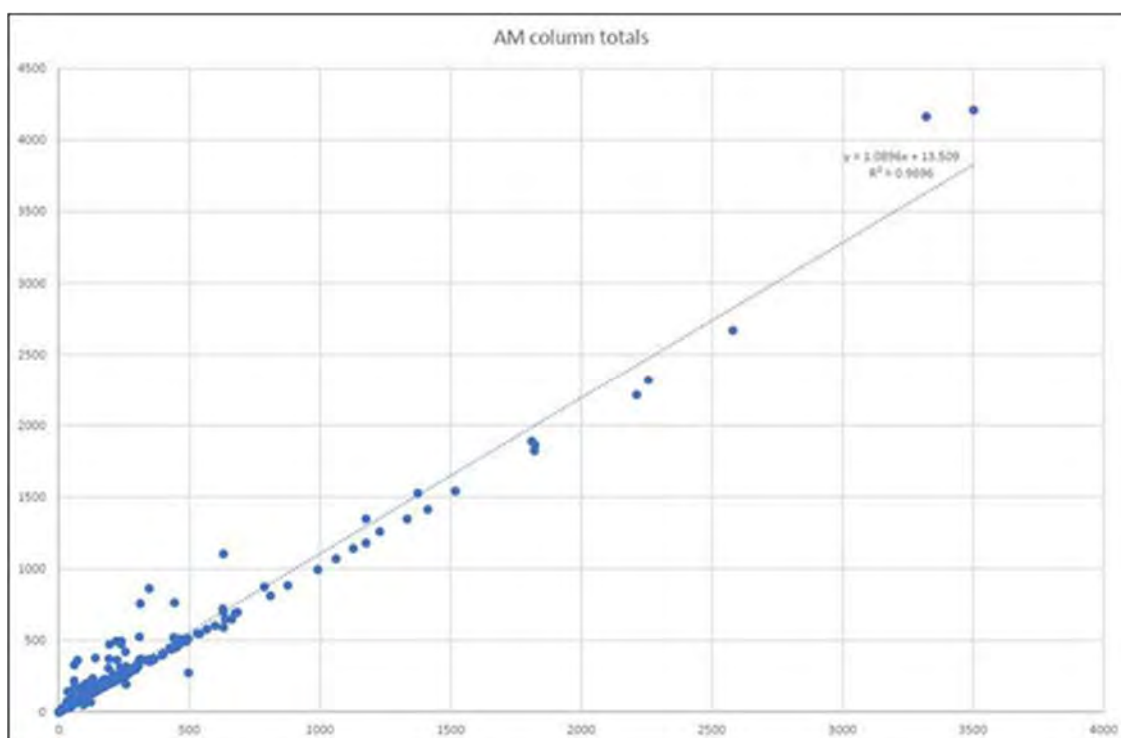
AM column totals -pre (X-axis) and post (Y-axis) matrix estimation

5.5.4   It is noted from the AM graphs above that :

- The slope is 1.05 and 1.09 (to one decimal place) for rows and columns respectively. Whilst this is in excess of the target range of 0.99 to 1.01 advised by Table, it is nevertheless greater than 1.00. This is consistent with the expectation that a 2019 peak hour of 0800-0900 would give greater row and column totals than a 2016 peak hour of 0700-0800.

- The R^2 value is 0.98 and 0.97 (to one decimal place) for rows and columns respectively. This is consistent with the target range of 0.98+ for rows, but marginally outside the range for columns.

5.5.5 It is noted that the AM statistics are close to the target range advised by Table 5. It is considered that the reason they lie just outside of the range is predominantly influenced by the change in year, and the change in modelled hour, being sought by the matrix estimation process in this instance.

5.5.6 On the basis of the information above, it is not considered that the AM output statistics are significantly adrift of the target ranges in the context of a borough wide strategic model being used for a relative comparison of Local Plan options.
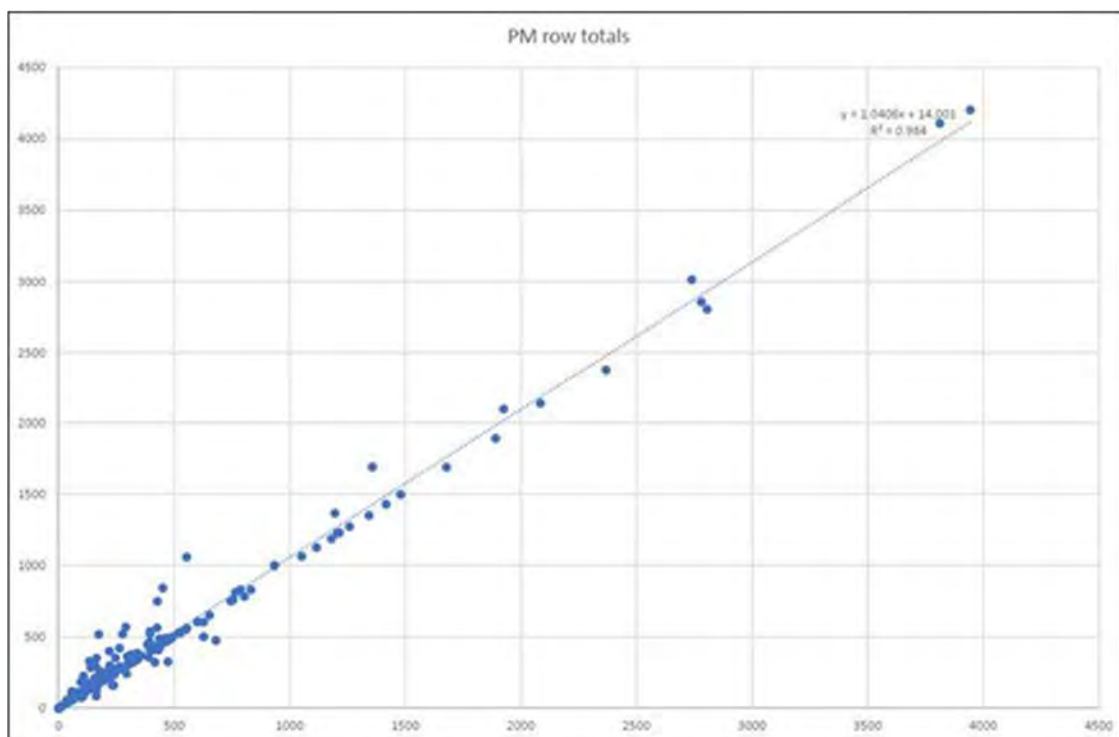
PM row totals -pre (X-axis) and post (Y-axis) matrix estimation

PM colum totals -pre (X-axis) and post (Y-axis) matrix estimation

5.5.7   It is noted from the PM graph above that :

- The slope is 1.04 (to one decimal place) for both rows and columns. Whilst this is in excess of the target range of 0.99 to 1.01 advised by Table, it is nevertheless greater than 1.00. This is consistent with the expectation that a 2019 peak hour would give greater row and column totals than a 2016 peak hour.

- The R^2 value is 0.98 and 0.99 (to one decimal place) for rows and columns respectively. This is consistent with the target range of 0.98+.

5.5.8   It is noted that the PM slope statistics are close to the target range advised by Table 5. It is considered that the reason they lie just outside the range is predominantly influenced by the change in year being sought by the matrix estimation process.

5.5.9   On the basis of the information above, it is not considered that the PM output slope statistics are significantly adrift of the target ranges in the context of a borough wide strategic model being used for a relative comparison of Local Plan options. It is noted that the PM R^2 statistics are consistent with the target range.

5.6   Matrix estimation outputs – Trip length distributions

5.6.1   With respect to trip length distribution, the graphs below show the distribution of trips in 2000m increments, comparing pre and post Matrix Estimation trip lengths.

5.6.2   In addition, the Sum Product has been used to calculate the weighted mean trip distance as follows:

- In the AM this is calculated as 16.43km pre matrix estimation and 16.03km post matrix estimation, a difference of 2.47%. This fits within the 5% range advised by Table 5.

- In the PM this is calculates as 16.13km pre matrix estimation and 16.06km post matrix estimation, a difference of 0.43%. This fits within the 5% range advised by Table 5.

PM peak hour

Pre estimation   Post estimation

Distance band	Pre estimation	Post estimation
0 to 2000	1.4%	1.3%
2000 to 4000	12.7%	12.4%
4000 to 6000	15.8%	15.9%
6000 to 8000	7.2%	7.6%
8000 to 10000	7.1%	7.3%
10000 to 12000	7.5%	7.3%
12000 to 14000	4.4%	4.6%
14000 to 16000	5.6%	5.5%
16000 to 18000	8.2%	8.1%
18000 to 20000	4.1%	4.0%
20000 to 22000	2.6%	2.6%
22000 to 24000	3.0%	3.3%
24000 to 26000	3.9%	4.0%
26000 to 28000	1.3%	1.4%
28000 to 30000	1.0%	1.0%
30000 to 32000	1.1%	1.1%
32000 to 34000	1.2%	1.3%
34000 to 36000	1.6%	1.6%
36000 to 38000	1.7%	1.7%
38000 +	8.6%	8.3%

AM peak hour

Pre estimation   Post estimation

Distance band	Pre estimation	Post estimation
0 to 2000	1.1%	1.2%
2000 to 4000	13.5%	13.6%
4000 to 6000	15.2%	16.2%
6000 to 8000	7.5%	8.5%
8000 to 10000	6.9%	6.8%
10000 to 12000	7.0%	6.6%
12000 to 14000	3.9%	4.1%
14000 to 16000	5.6%	5.2%
16000 to 18000	8.2%	7.3%
18000 to 20000	3.7%	3.6%
20000 to 22000	2.9%	3.0%
22000 to 24000	3.4%	3.3%
24000 to 26000	3.2%	3.1%
26000 to 28000	1.5%	1.7%
28000 to 30000	1.0%	1.1%
30000 to 32000	1.4%	1.4%
32000 to 34000	1.4%	1.6%
34000 to 36000	1.6%	1.7%
36000 to 38000	1.9%	1.8%
38000 +	9.0%	8.4%

5.6.3   It is noted from the graphs above that the differences between the pre and post matrix estimation models are minor, and generally within a few tenths of a percent difference.

5.7   Matrix estimation outputs - Sector to sector level matrices

Sectors

5.7.1   The trip matrices have been considered on the basis of being divided into the following 9 sectors for the cordon model area:

External sectors

- Routes to the north (A282 / M25 heading north)
- Routes to the east (east of Gravesham BC)
- Routes to the south (south of Dartford BC and Gravesham BC boundaries)
- Routes to the west (west of Dartford BC boundary)

Internal sectors (internal to the cordon model)

- Dartford BC – west of A282 / M25
- Dartford BC – east of A282 / M25
- Gravesham BC
- Non Gravesham (south)
- Non Gravesham (east)

AM - Internal / External sector movements

5.7.2   A high level overview of sector to sector movement has been considered below, based upon movements between Internal and External sectors as summarised below. The top table shows the number of trips making each movement pre matrix estimation, whilst the bottom table shows the post matrix estimation.

2016 (0700-0800) Pre matrix estimation	External	Internal	Total
External	35,291	19,614	54,904
Internal	24,733	27,309	52,042
Total	60,024	46,923	106,947

2019 (0800-0900) Post matrix estimation	External	Internal	Total
External	36,067	21,138	57,206
Internal	26,930	32,178	59,108
Total	62,998	53,316	116,314

5.7.3   The differences and percentage differences between the pre and post matrix estimation matrices are shown below.

Differences	External	Internal	Total
External	777	1,525	2,301
Internal	2,197	4,869	7,066
Total	2,974	6,393	9,367

Percentage differences	External	Internal	Total
External	2.2%	7.8%	4.2%
Internal	8.9%	17.8%	13.6%
Total	5.0%	13.6%	8.8%

5.7.4   It is noted that the post matrix estimation matrix is 8.8% greater than the pre matrix estimation matrix. This is likely to be influenced by the change of year and change of peak hour being sought by the matrix estimation process.

5.7.5   It is further noted that the External-External sector (longer distance / strategic network traffic) changes by only 2.2% whilst the Internal-Internal (shorter distance / local network traffic) changes by 17.8%. This is to be expected on the basis that the matrix estimation process includes a significant number of local road data points to adjust the matrix for local traffic movements.

PM - Internal / External sector movements

5.7.6   A similar summary has been extracted for the PM matrices. The top table shows the number of trips making each movement pre matrix estimation, whilst the bottom table shows the post matrix estimation.

2016 (1700-1800) Pre matrix estimation	External	Internal	Total
External	36,520	23,478	59,998
Internal	21,797	32,446	54,243
Total	58,317	55,924	114,241

2019 (1700-00) Post matrix estimation	External	Internal	Total
External	37,600	24,606	62,206
Internal	22,828	35,812	58,640
Total	60,428	60,417	120,846

5.7.7   The differences and percentage differences between the pre and post matrix estimation matrices are shown below.

Differences	External	Internal	Total
External	1,080	1,128	2,208
Internal	1,031	3,366	4,397
Total	2,112	4,494	6,605

Percentage differences	External	Internal	Total
External	3.0%	4.8%	3.7%
Internal	4.7%	10.4%	8.1%
Total	3.6%	8.0%	5.8%

5.7.8   It is noted that the post matrix estimation matrix is .8% greater than the pre matrix estimation matrix. This is likely to be influenced by the change of year being sought by the matrix estimation process.

5.7.9   It is further noted that the External-External sector (longer distance / strategic network traffic) changes by only 3.0% whilst the Internal-Internal (shorter distance / local network traffic) changes by 10.4%. This is to be expected on the basis that the matrix estimation process includes a significant number of local road data points to adjust the matrix for local traffic movements.

9 sectors

5.7.10   Further to the analysis above, a disaggregated 9 sector movement matrix was investigated based upon the 9 sectors described above. The disaggregation is provided as Appendix D. The key points are noted as:

■   The AM matrix increases by 8.8%. This will be influenced by the change in year and change in modelled hour being sought by the matrix estimation process.

■   The PM matrix increases by 5.8%. This will be influenced by the change in year being sought by the matrix estimation process.

■   The AM yellow area of the matrix contains 35,291 trips pre and 36,067 trips post matrix estimation. This is a difference of 777 trips (2.2%)

■   The PM yellow area of the matrix contains 36,520 trips pre and 37,600 trips post matrix estimation. This is a difference of 1,080 trips (3.0%)

■   Hence, the strategic traffic movements (yellow shaded areas) generally change by only a modest amount.

■   The larger differences in the pre and post matrix estimation sector to sector movements are typically related to journeys with an internal origin or internal destination (or both).

■   The differences in sector to sector movements would be expected to be larger for a matrix estimation process that is changing the model year and the AM peak hour, than it would be for the case where these are kept the same.

6   Model assignment

6.1.1   Following the network adjustments and matrix estimation process described in previous sections, a 2019 base year model assignment has been completed. The output from this is included at Appendix B.

6.1.2   Whilst this report does not represent a Local Model Validation Report (LMVR) in the usual sense, it nevertheless uses similar techniques for comparing observed traffic flows and modelled traffic data.

6.1.3   The comparison of traffic flows described below is completed in the context of the DCLTAM being used by DBC for a strategic development control exercise, rather than a specific scheme appraisal. The model purpose is to inform a relative comparison of the impact of Local Plan development scenarios on the transport network.

6.2   Model acceptability guidelines

6.2.1   The modelled traffic flows are compared to the observed data to assess the "goodness of fit" of the DCLTAM. Modelled flows are compared to the observed flows through the use of the GEH statistic set out within the DMRB.

6.2.2   The GEH statistic has been derived to test the "goodness of fit" of the model flow to the observed flow. This statistic is calculated as:

$$GEH = \sqrt{\frac{O\ rs\ rv\ d - Mod\ ll\ d)^2}{(0.5 \times O\ rs\ rv\ d + Mod\ ll\ d))}}$$

6.2.3   It is considered that GEH values of 5 or less would indicate an ideal acceptable fit for a link, whilst links with a GEH value greater than 10 would need further investigation, but may not necessarily be unacceptable.

6.2.4   The aim of the model is not necessarily to achieve a match that would be required for detailed scheme appraisal, but to adjust the DCLTAM provided by HE to a point where it can be considered suitable for strategic Local Plan option testing.

6.3   Comparison of model and observed data

6.3.1   The GEH statistic, a variation of the Chi-Statistic, was used as the measure of comparison. A GEH of 5 or less was seen as a good match, and a GEH between 5 and 10 as a reasonable match.

6.3.2   The count database collated for the purpose of this model comprises link flows in number of vehicles and this has been compared against the modelled flows in vehicles. The number of counts included for this stage is 336 directional link counts.

6.3.3   This reflects a good coverage of the area, both the local road network and the Strategic Road Network.

6.3.4   The GEH statistics derived from the model are summarised in the table below and included in detail at Appendix C.

	AM post ME (pre-ME in brackets)	PM post ME (pre-ME in brackets)
GEH<5	233 links = 69.6% (94 links = 28.1%)	255 links = 75.9% (151 links = 44.9%)
GEH<10	316 links = 94.3% (207 links = 62.0%)	314 links = 93.5% (239 links = 71.0%)
GEH>10	20 links = 6.0% (131 links = 39.1%)	22 links = 6.5% (97 links = 28.9%)

GEH results Post Matrix Estimation (with Pre-ME shown)

6.3.5   It is evident from the table above that 94.3% and 93.5% of the links show a GEH value of 10 or below during the morning and evening peak hours respectively. This is considered a reasonable representation despite there being some links in the network that would be expected to show a poor match due to the zoning system e.g. Heath Lane.

6.3.6   The figures below provide a visual representation of the links where count data has been checked for goodness of fit against modelled data. A comparison of the pre and post Matrix Estimation models is also shown.

6.3.7   A green colour link denotes GEH < 5, amber denotes a GEH between 5 and 10 whilst a red colour denotes a GEH value greater than 10. The blue links are the links in the network that have not been included in the GEH checking. The geographical coverage of the GEH checking is noted as comprehensive.
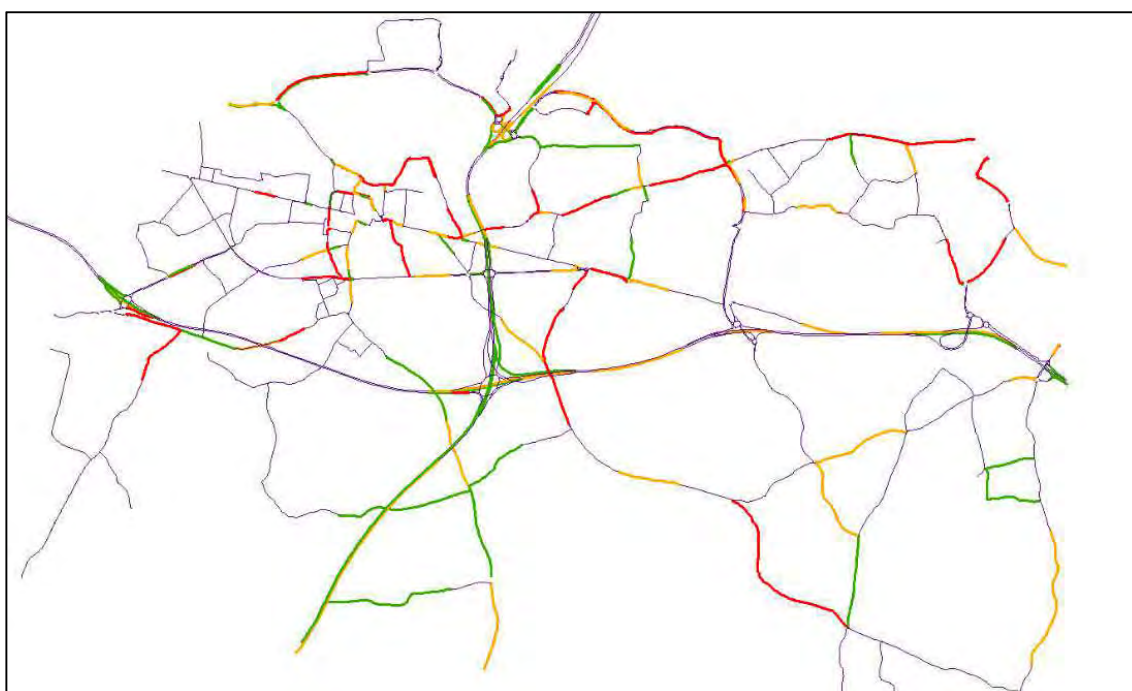
2019 AM pre Matrix Estimation GEH statistics – area wide

2019 AM post Matrix Estimation GEH statistics – area wide
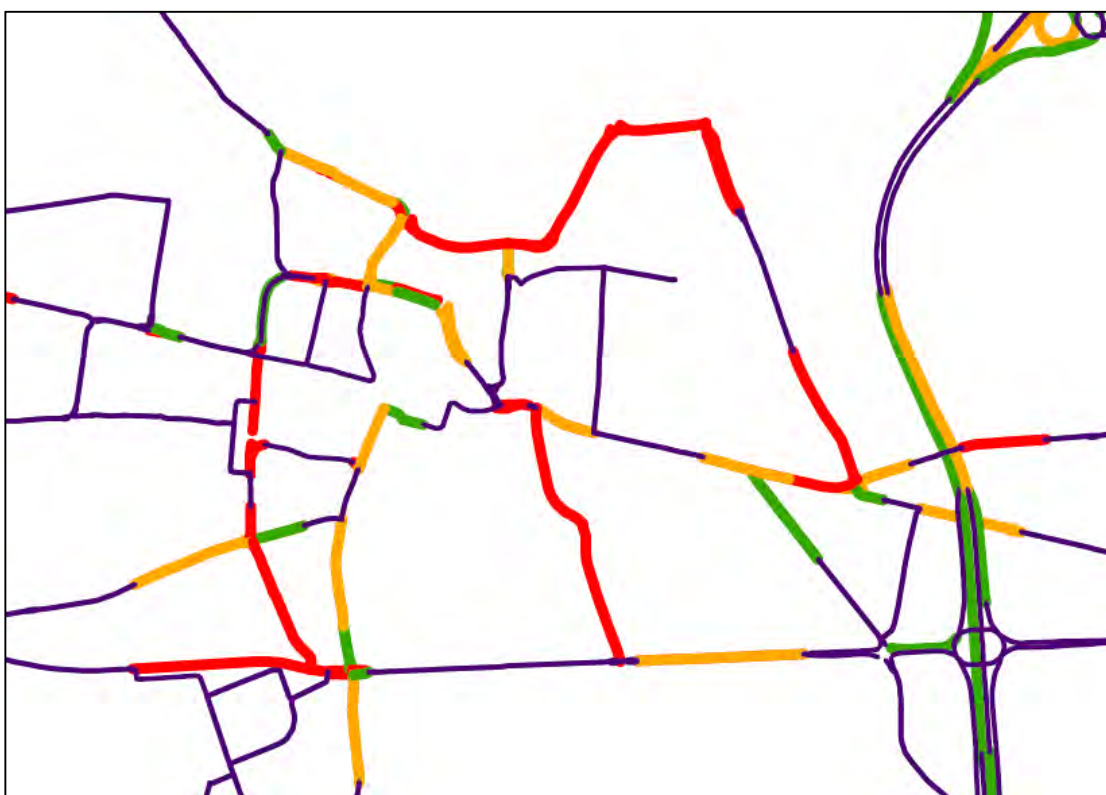
2019 AM pre Matrix Estimation GEH statistics – town centre
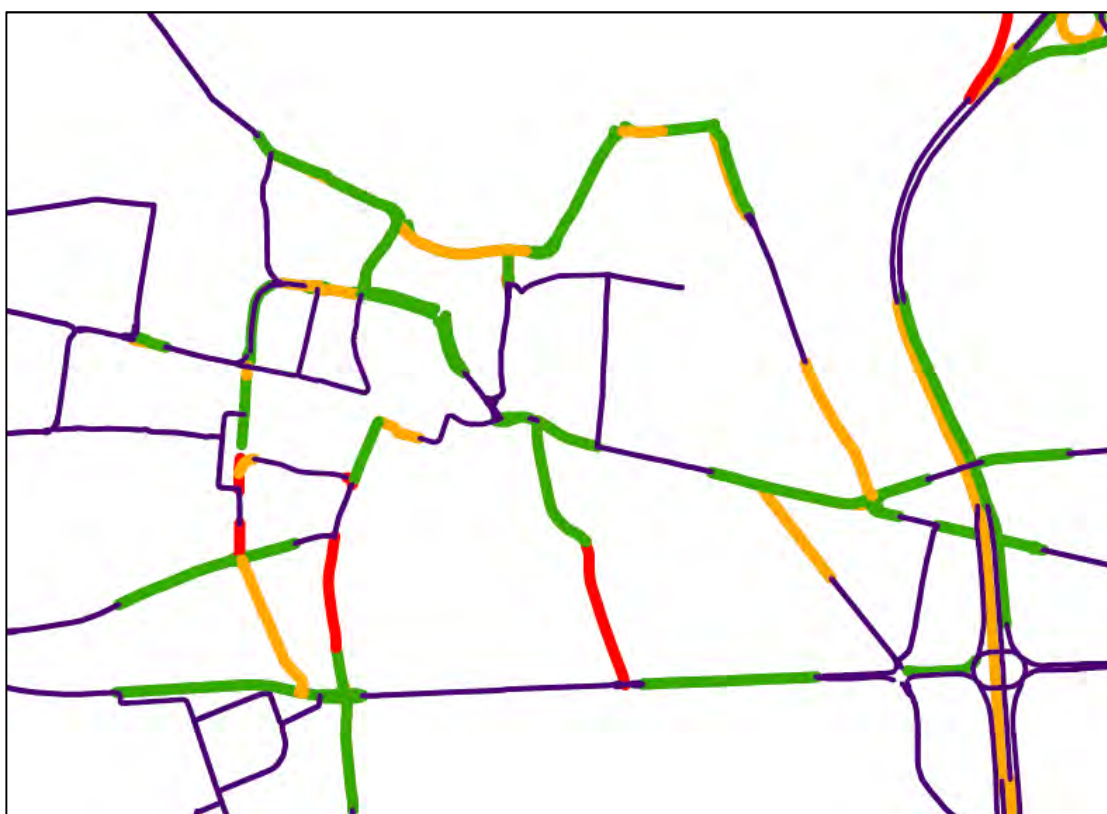
2019 AM post Matrix Estimation GEH statistics – town centre

2019 PM pre Matrix Estimation GEH statistics – area wide

2019 PM post Matrix Estimation GEH statistics – area wide

2019 PM pre Matrix Estimation GEH statistics – town centre

2019 PM post Matrix Estimation GEH statistics – town centre

6.3.8 Based upon the evidence summarised within this section, and for the purpose of using the DCLTAM as a Local Plan option testing comparison tool, the 2019 base year model developed is considered an appropriate assessment tool.

6.4 Use of base year model in forecast year assessments

6.4.1 It is worth noting that the forecast model outputs will not be used as absolute numbers, but will instead be compared to the base year model and be used as a basis for uplifting observed traffic flows where this is available.

7 Findings

7.1.1 It is reaffirmed that the model is to be used for relative scenario testing, rather than for scheme appraisal.

7.1.2 The base year model will be used in conjunction with the forecast models to provide an uplift of traffic flows to add to observed data on links and at junctions where this is available.

7.1.3 This method will allow an understanding of the impacts on the highway network, of both the current local plan and the Local Plan scenarios to be tested.

7.1.4 On the basis of the evidence included within this report, Stantec are content that the 2019 base year model reported is appropriate for inclusion to the evidence base for assessment of Local Plan development options.

Appendix A

Analysis of zones

AM zone analysis

■ rips leaving zone   ■ rips arriving in zone

PM zone analysis
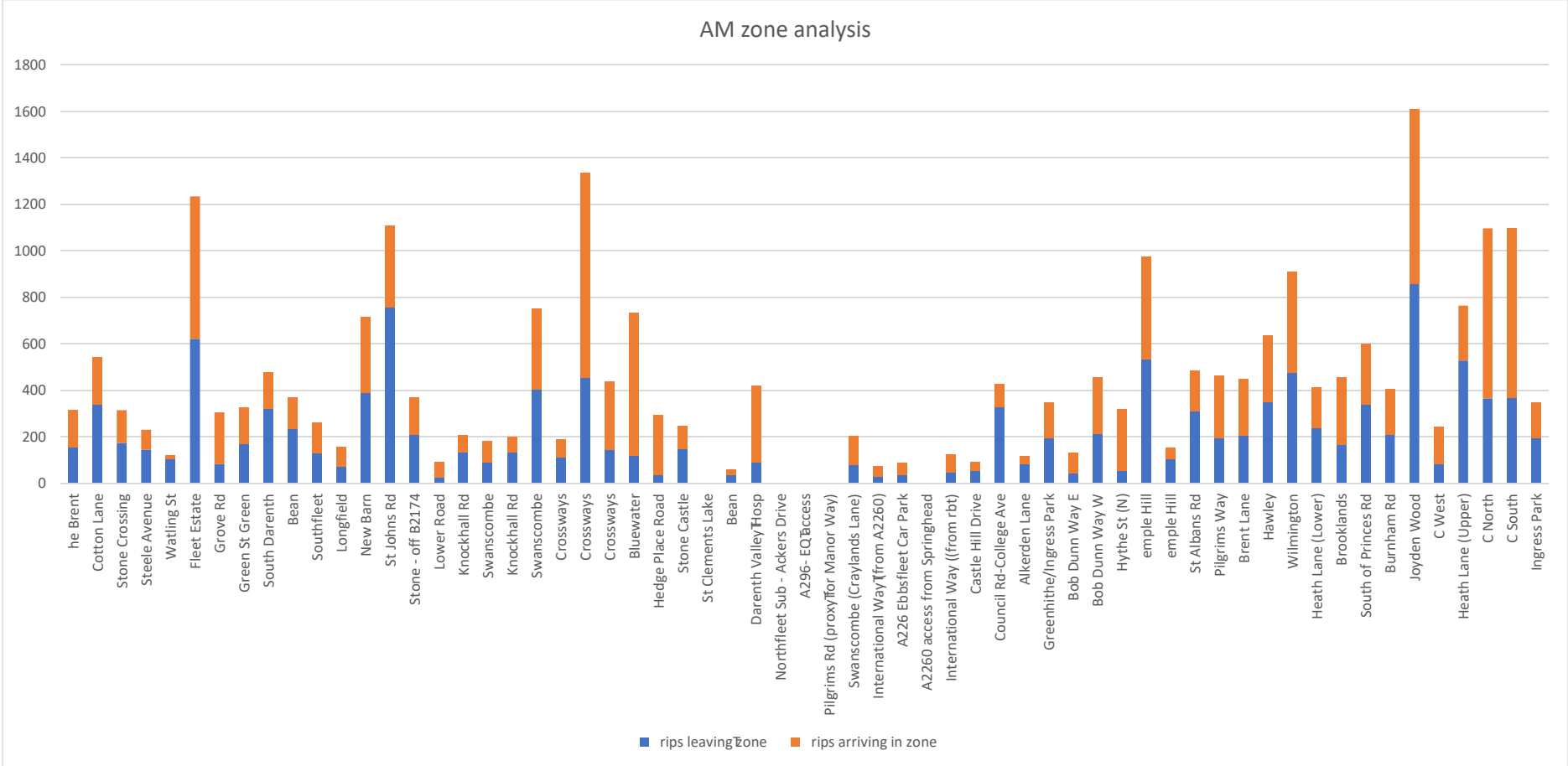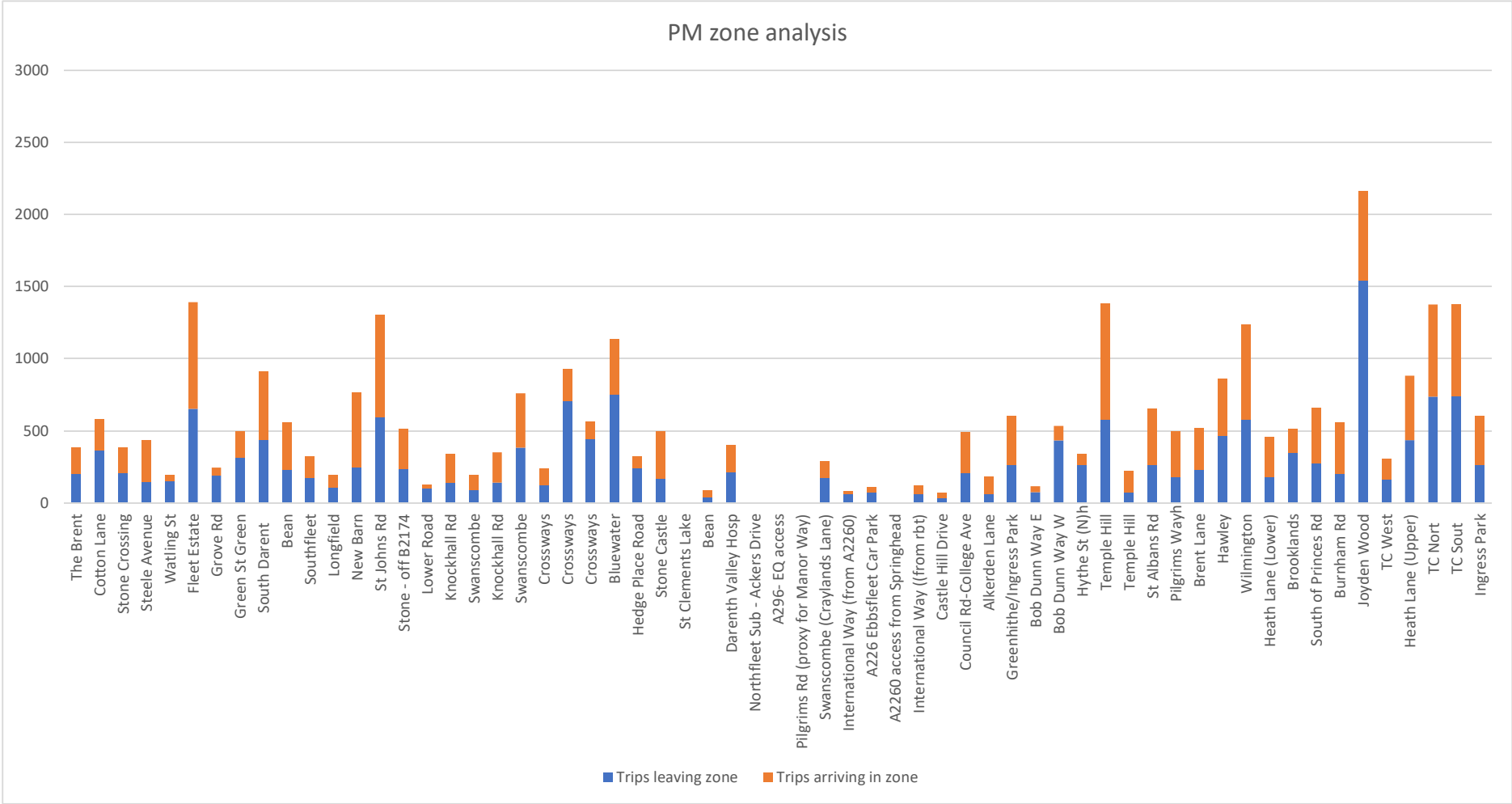
Appendix B

SATURN output
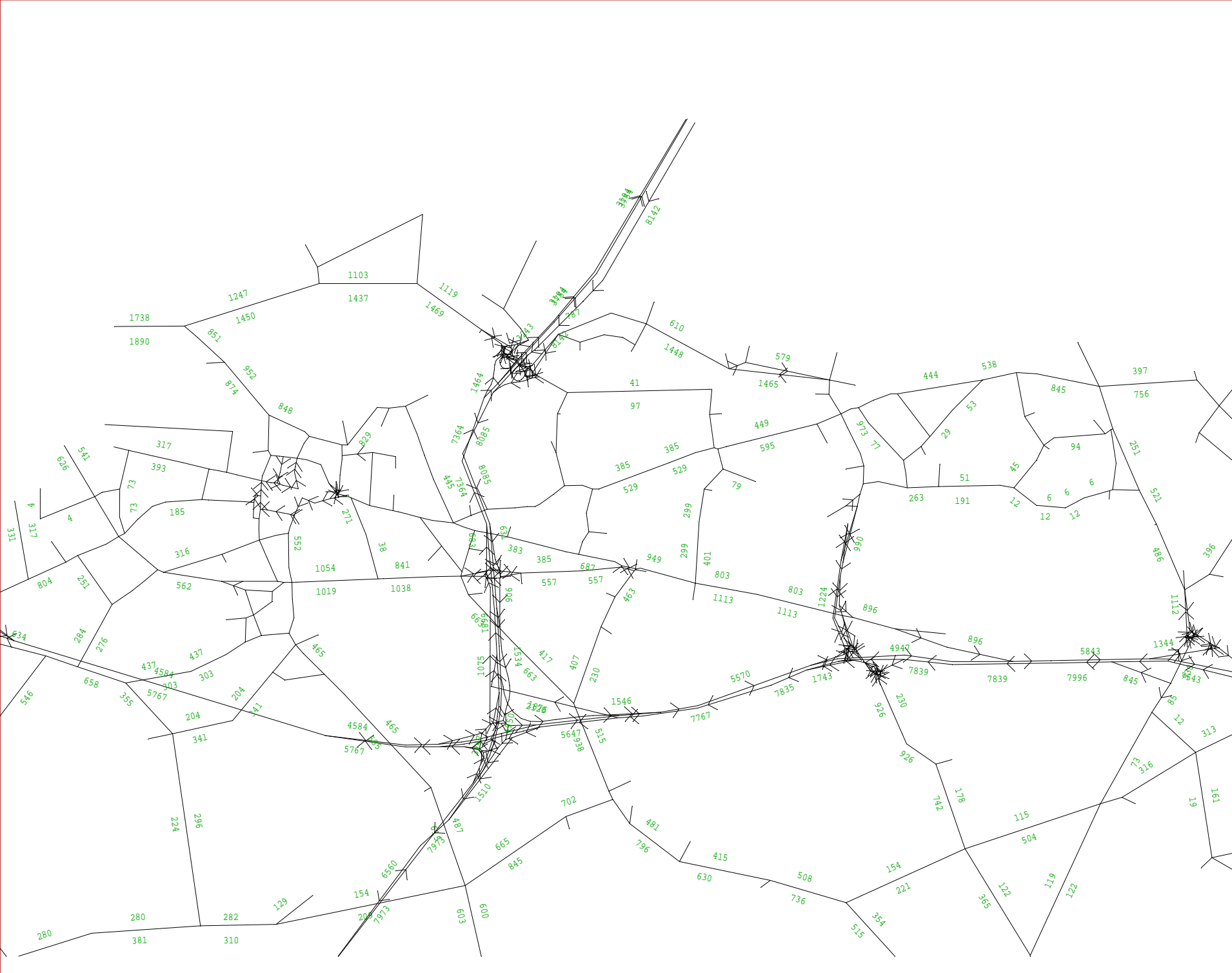
Atkins Ltd /
DVV / ITS

cordonBaseAM
.UFS

Scale 38891

Link Annot:

Actual flow

24- 9-20
PETER BRETT

AM 2019

SATURN

Atkins Ltd /
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cordonBaseAM
.UFS

Scale 10264

Link Annot:

Actual flow

AM 2019

SATURN

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 DVV / ITS

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.UFS

Scale 38891

Link Annot:

Actual flow

Appendix C

Post Matrix Estimation Results

2019 AM - observed vs modelled checks - POST MATRIX ESTIMATION

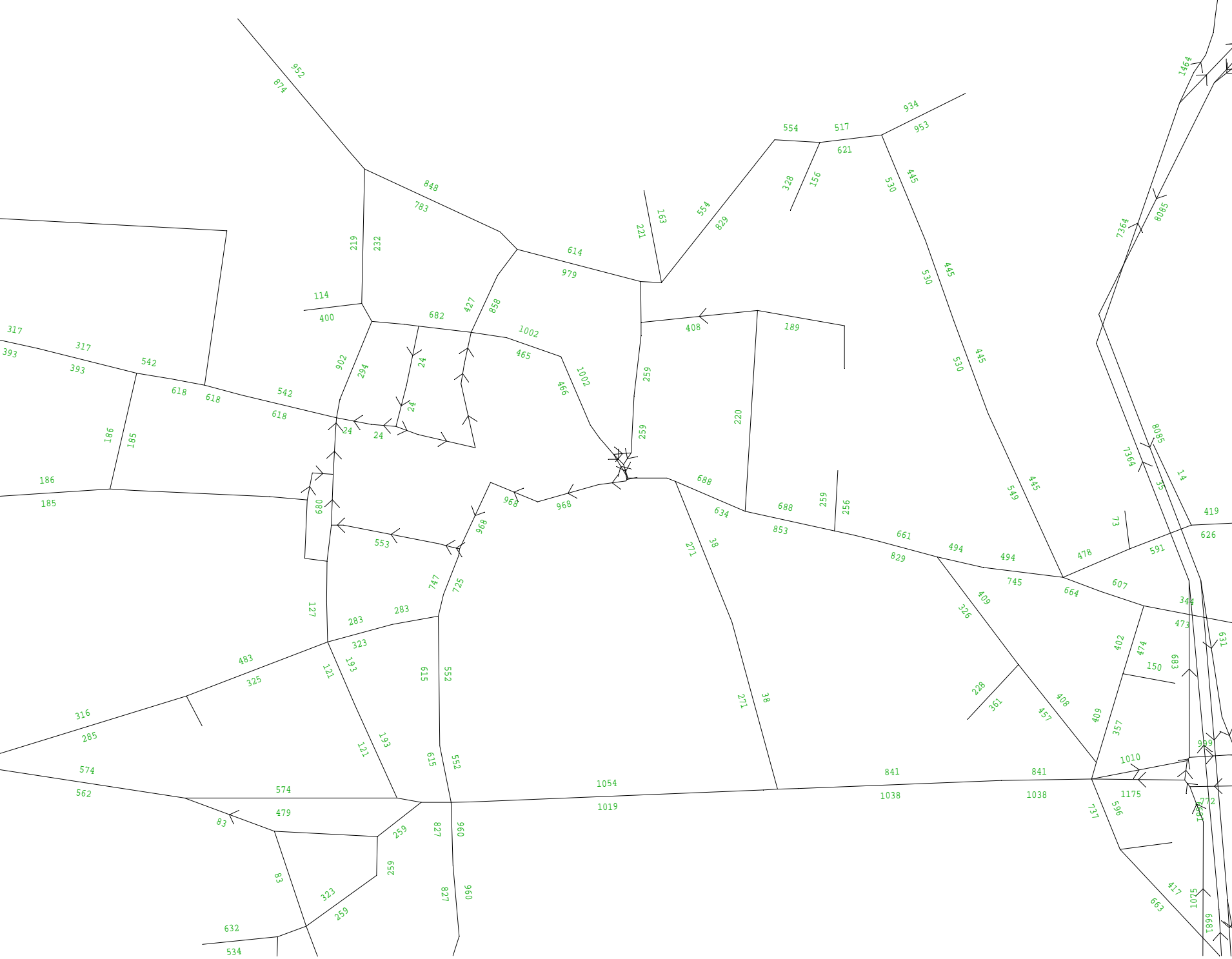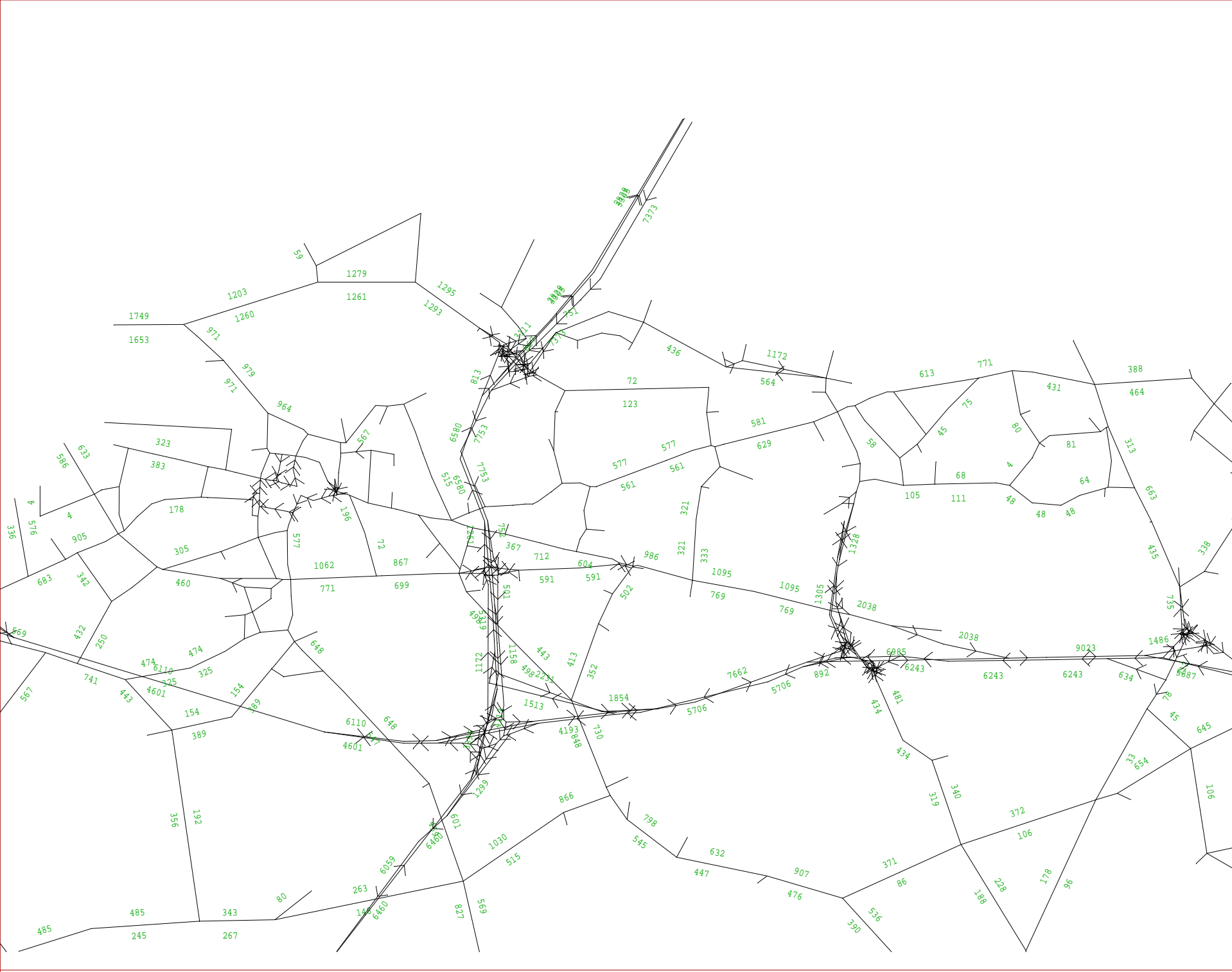| Ref	Link	From	To	A node	B node	AB pair	2019 observed VEHICLES			2019 modelled VEHICLES			Absolute check			GEH check		PASS or < 10
							Car/LGV	HGV	Total	Car/LGV	HGV	Total	Diffs	Tolerance	Pass / Fail	GEH	Banding	
1	Oakfield Lane	Heath Lane	Leyton Cross Rd Rbt	86707	86201	8670786201	701	29	730	795	6	801	71	110	PASS	2.6	< 5	YES
2	Oakfield Lane	Leyton Cross Rd Rbt	Heath Lane	86201	86707	8620186707	975	22	997	832	14	845	152	150	FAIL	5.0	< 10	YES
3	Leyton Cross Road	Bracton Ln Rbt	Leyton Cross Rd Rbt	86711	86201	8671186201	667	23	690	721	3	724	34	100	PASS	1.3	< 5	YES
4	Leyton Cross Road	Leyton Cross Rd Rbt	Bracton Ln Rbt	86201	86711	8620186711	525	26	551	530	4	535	16	100	PASS	0.7	< 5	YES
5	Oakfield Lane	Pinewood Pl Rbt	Leyton Cross Rd Rbt	86710	86201	8671086201	859	31	890	588	14	602	288	134	FAIL	10.5	> 10	NO
6	Oakfield Lane	Leyton Cross Rd Rbt	Pinewood Pl Rbt	86201	86710	8620186710	727	35	762	727	5	732	30	114	PASS	1.1	< 5	YES
7	Oakfield Lane	Heath Lane	Parsons Lane	86707	86664	8670786664	461	2	463	670	12	682	219	100	FAIL	9.2	< 10	YES
8	Oakfield Lane	Parsons Lane	Heath Lane	86664	86707	8666486707	410	22	432	640	5	645	213	100	FAIL	9.2	< 10	YES
9	Oakfield Lane	Elm Road	Parsons Lane	86654	86655	8665486655	310	6	316	300	1	301	15	100	PASS	0.9	< 5	YES
10	Oakfield Lane	Parsons Lane	Elm Road	86655	86654	8665586654	536	9	545	419	5	424	121	100	FAIL	5.5	< 10	YES
11	Oakfield Lane	Elm Road	Parsons Lane	86655	86664	8665586664	310	6	316	300	1	301	15	100	PASS	0.9	< 5	YES
12	Darenth Rd nb	Princes Road	East Hill	86270	86638	8627086638	303	1	305	283	1	284	21	100	PASS	1.2	< 5	YES
13	Darenth Rd sb	East Hill	Princes Road	86638	86270	8663886270	195	1	196	38	0	38	158	100	FAIL	14.6	> 10	NO
14	o A206W eb	Crayford Way	Thames Rd EB	90157	86673	9015786673	-	-	1432	1407	107	1514	82	215	PASS	2.1	< 5	YES
15	o A206W wb	Thames Rd WB	Crayford Way	86673	90157	8667390157	-	-	1588	1577	99	1676	88	238	PASS	2.1	< 5	YES
16	o A206E wb	Joyce Green Ln	A206 WB	86672	86673	8667286673	-	-	953	1123	95	1218	265	143	FAIL	8.0	< 10	YES
17	o A206E eb	A206	Joyce Green Ln	86673	86672	8667386672	-	-	1031	952	95	1047	16	155	PASS	0.5	< 5	YES
18	o A2026 Burnham Road Nb	Burnham Cres	Burnham Rd NB	86218	86673	8621886673	-	-	743	765	11	776	33	111	PASS	1.2	< 5	YES
19	o A2026 Burnham Sb	Burnham Rd NB	Burnham Cres	86673	86218	8667386218	-	-	631	765	19	785	154	100	FAIL	5.8	< 10	YES
20	A206 Bob Dunn Way eb (to L'bk int)	A206 (W)	Littlebrook Interchange (W)	29802	83365	2980283365	690	162	852	793	100	893	41	128	PASS	1.4	< 5	YES
21	A206 Bob Dunn Way wb (from L'bk int)	Littlebrook Interchange (W)	A206 (W)	81915	29802	8191529802	817	133	950	1096	104	1200	250	143	FAIL	7.6	< 10	YES
22	Rennie Out (L'bk)	Rennie Drive	Littlebrook Interchange (W)	27264	81994	2726481994	187	70	257	186	18	204	53	100	PASS	3.5	< 5	YES
23	Rennie In (L'bk)	Littlebrook Interchange (W)	Rennie Drive	83365	27264	8336527264	168	87	255	170	1	171	84	100	PASS	5.8	< 10	YES
24	L'bk Overbridge eb	Littlebrook Interchange (W)	A206 (E)	81994	81912	8199481912	994	138	1132	1187	60	1247	115	170	PASS	3.3	< 5	YES
25	Northbound off-slip at 1a	A282 Slip Road	Littlebrook Interchange (W)	81906	81910	8190681910	807	142	949	1220	66	1287	338	142	FAIL	10.1	> 10	NO
26	Northbound on-slip at 1a	Littlebrook Interchange (W)	A282 Slip Road	81909	81914	8190981914	413	155	568	425	220	645	77	100	PASS	3.1	< 5	YES
27	L'bk Overbridge wb	Littlebrook Interchange (E)	A206 (W)	81992	81911	8199281911	615	150	765	674	202	876	111	115	PASS	3.9	< 5	YES
28	Crossways (to L'bk)	A206 (N)	Littlebrook Interchange (E)	27013	81993	2701381993	536	88	624	418	225	643	19	100	PASS	0.7	< 5	YES
29	Crossways (from L'bk)	Littlebrook Interchange (E)	A206 (N)	81908	27013	8190827013	975	57	1032	1142	91	1233	201	155	FAIL	6.0	< 10	YES
30	B2228 Cotton wb (to L'bk int)	Cotton Lane	Littlebrook Interchange (E)	27411	82006	2741182006	349	6	355	309	40	349	6	100	PASS	0.3	< 5	YES
31	B2228 Cotton eb (from L'bk int)	Littlebrook Interchange (E)	Cotton Lane	82006	27411	8200627411	160	16	176	194	17	211	35	100	PASS	2.5	< 5	YES
32	Southbound off-slip at 1a	A282 Slip Road	Littlebrook Interchange (E)	81913	81992	8191381992	526	129	655	677	144	821	166	100	FAIL	6.1	< 10	YES
33	Southbound-slip on at 1a	Littlebrook Interchange (E)	A282 Slip Road	81991	81907	8199181907	653	137	790	581	159	739	51	119	PASS	1.8	< 5	YES
34	A226 London Rd Eb	A226 (W)	Cotton Lane	27435	27070	2743527070	-	-	548	354	10	363	185	100	FAIL	8.7	< 10	YES
35	A226 London Rd Wb	Cotton Lane	A226 (W)	27070	27435	2707027435	-	-	621	554	13	567	54	100	PASS	2.2	< 5	YES
36	B2228 sb	Cotton Lane	A226	22318	27070	2231827070	-	-	263	249	19	268	5	100	PASS	0.3	< 5	YES
37	B2228 nb	A226	Cotton Lane	27070	22318	2707022318	-	-	413	270	16	285	128	100	FAIL	6.8	< 10	YES
38	A226 London Rd Wb	A226 (E)	Cotton Lane	22320	27070	2232027070	-	-	571	515	16	531	40	100	PASS	1.7	< 5	YES
39	A226 London Rd Eb	Cotton Lane	A226 (E)	27070	22320	2707022320	-	-	348	295	15	310	38	100	PASS	2.1	< 5	YES
40	A226 Eb (west of Stone Park Rd)	A226 (W)	Stone Place Road Xroad	22307	22305	2230722305	-	-	341	321	12	333	8	100	PASS	0.5	< 5	YES
41	A226 Wb sb (west of Stone Park Rd)	Stone Place Road	A226 (W)	22305	22307	2230522307	-	-	571	483	6	488	83	100	PASS	3.6	< 5	YES
42	Stone Place Rd sb (B2228 alternative)	Stone Place Road	Stone Place Road Xroad	89595	22305	8959522305	-	-	80	91	10	101	21	100	PASS	2.2	< 5	YES
43	Stone Place Rd nb (B2228 alternative)	Stone Place Road Xroad	Stone Place Road	22305	89595	2230589595	-	-	69	99	8	107	38	100	PASS	4.0	< 5	YES
44	A226 wb (east of Hedge) S2	A226 (E)	Stone Place Road Xroad	20132	22306	2013222306	-	-	673	542	7	549	124	100	FAIL	5.0	< 10	YES
45	A226 eb (east of Hedge) S2	Stone Place Road Xroad	A226 (E)	22306	20132	2230620132	-	-	455	408	4	412	43	100	PASS	2.1	< 5	YES
46	Hedge Place Rd Nb	Hedge Place Road	Stone Place Road Xroad	22303	22341	2230322341	-	-	220	188	4	192	28	100	PASS	1.9	< 5	YES
47	Hedge Place Rd Sb	Stone Place Road Xroad	Hedge Place Road	22341	22303	2234122303	-	-	220	153	16	168	52	100	PASS	3.7	< 5	YES
48	B255 south of A226 nb	St Clements Way	St Clements Roundabout	27029	27028	2702927028	-	-	1326	1079	19	1097	229	199	FAIL	6.6	< 10	YES
49	B255 south of A226 sb	St Clements Roundabout	St Clements Way	27028	27029	2702827029	-	-	867	867	24	890	23	130	PASS	0.8	< 5	YES
50	Crossing Sb	Long :0.247715	Lat :51.45587	75440	24103	7544024103	4266	1143	5409	4263	1240	5503	94	400	PASS	1.3	< 5	YES
51	Crossing Nb	Long :0.247094	Lat :51.45613	75109	75425	7510975425	2153	564	2717	2552	379	2931	214	400	PASS	4.0	< 5	YES
52	Crossing Nb	Long :0.246884	Lat :51.45625	75107	75424	7510775424	1468	554	2022	1615	509	2124	102	303	PASS	2.2	< 5	YES
53	Southbound within 1a	Long :0.240067	Lat :51.45138	81913	81907	8191381907	3498	990	4488	3586	1096	4682	194	400	PASS	2.9	< 5	YES
54	Northbound within 1a	Long :0.241240	Lat :51.45240	81906	75108	8190675108	3280	793	4073	3753	675	4428	355	400	PASS	5.4	< 10	YES
55	1a1b Sb	Long :0.237572	Lat :51.44332	82506	81905	8250681905	4078	1189	5267	4167	1255	5421	154	400	PASS	2.1	< 5	YES
56	1b1a Nb	Long :0.236893	Lat :51.44387	81904	82490	8190482490	4428	704	5133	4974	741	5715	582	400	FAIL	7.9	< 10	YES
57	PRI - sb off-slip	Long :0.239042	Lat :51.44042	81905	88691	8190588691	448	68	516	523	34	557	41	100	PASS	1.8	< 5	YES
58	PRI - nb on-slip	Long :0.238378	Lat :51.43951	71447	81904	7144781904	509	45	554	603	17	620	66	100	PASS	2.7	< 5	YES
59	M25 nb within 1b	Long :0.238530	Lat :51.44055	82482	81904	8248281904	3808	701	4509	4372	724	5096	587	400	FAIL	8.5	< 10	YES
60	M25 sb within 1b	Long :0.239092	Lat :51.43987	81899	82391	8189982391	3071	906	3977	3184	1167	4351	374	400	PASS	5.8	< 10	YES
61	J2 M25Sb within	Long :0.238701	Lat :51.42668	82209	81885	8220981885	2294	768	3063	2332	838	3170	107	400	PASS	1.9	< 5	YES
62	J2 M25Nb within	Long :0.238597	Lat :51.42691	81886	82206	8188682206	2119	499	2617	2658	388	3046	429	393	FAIL	8.1	< 10	YES
63	PRI - DI Southern (Sb on-slip)	Long :0.239970	Lat :51.43116	81898	88690	8189888690	974	160	1134	985	178	1163	29	170	PASS	0.8	< 5	YES
64	J2 M25N to A2 Coast	Long :0.239698	Lat :51.42942	82209	81689	8220981689	950	234	1185	852	329	1181	4	178	PASS	0.1	< 5	YES
65	J2 A2 Coast to M25N	Long :0.245697	Lat :51.42678	81649	73648	8164973648	1253	264	1517	1250	278	1528	11	228	PASS	0.3	< 5	YES
66	J2 to M25 nb	Long :0.238725	Lat :51.42805	71319	82206	7131982206	436	52	489	471	56	526	38	100	PASS	1.7	< 5	YES
67	M25S sb	Long :0.226463	Lat :51.41701	82483	81879	8248381879	4520	904	5423	4612	1074	5686	262	400	PASS	3.5	< 5	YES
68	M25S nb	Long :0.226444	Lat :51.41721	82485	81886	8248581886	4197	583	4780	4629	590	5219	439	400	FAIL	6.2	< 10	YES
69	A2 eb (W of J2)	Long :0.225549	Lat :51.42603	86162	81881	8616281881	3665	240	3905	3873	237	4101	196	400	PASS	3.1	< 5	YES
70	A2 wb (W of J2)	Long :0.225943	Lat :51.42584	81880	24026	8188024026	4559	312	4872	4777	304	5081	210	400	PASS	3.0	< 5	YES
71	A2/A2018 junction within wb	Long :0.180552	Lat :51.43512	86156	86177	8615686177	2923	299	3222	3871	237	4108	887	400	FAIL	14.6	> 10	NO
72	A2/A2018 junction within eb	Long :0.175526	Lat :51.43775	86177	86156	8617786156	2519	249	2768	2926	194	3120	352	400	PASS	6.5	< 10	YES
73	A2 /A2018 junction slip	Long :0.180443	Lat :51.43495	86156	86701	8615686701	465	74	538	905	68	973	435	100	FAIL	15.8	> 10	NO
74	A2 /A2018 junction slip	Long :0.175734	Lat :51.43689	86177	86699	8617786699	835	39	874	851	33	884	11	131	PASS	0.4	< 5	YES
75	A2 /A2018 junction slip	Long :0.176289	Lat :51.43685	86698	86177	8669886177	744	40	784	807	40	847	63	118	PASS	2.2	< 5	YES
76	A2 Eb (E of J2)	Long :0.263754	Lat :51.42828	82526	81890	8252681890	3777	683	4461	3723	593	4316	145	400	PASS	2.2	< 5	YES
77	A2 Wb (E of J2)	Long :0.265195	Lat :51.42834	82921	82524	8292182524	5776	513	6289	5882	591	6473	185	400	PASS	2.3	< 5	YES
78	Coastbound off at Bean	Long :0.272699	Lat :51.43092	81890	82960	8189082960	465	221	686	516	34	551	135	100	FAIL	5.4	< 10	YES
79	A2 Westbound exit for Bean Jnct	Long :0.284442	Lat :51.43090	81917	73617	8191773617	1506	27	1533	1726	16	1742	209	230	PASS	5.2	< 10	YES
80	A2 eb within Bean	Long :0.284715	Lat :51.43119	81890	81918	8189081918	2829	503	3332	3207	559	3765	433	400	FAIL	7.3	< 10	YES
81	A2 @ Bean Junction Westbound	Long :0.284463	Lat :51.43104	81917	81889	8191781889	4739	524	5263	4318	556	4873	389	400	PASS	5.5	< 10	YES
82	Coastbound on-slip at Bean	Long :0.297190	Lat :51.43063	82964	81918	8296481918	760	71	831	756	44	800	31	125	PASS	1.1	< 5	YES
83	A2 eb (Bean to Ebb)	Long :0.303067	Lat :51.43049	82922	81984	8292281984	3778	660	4438	3963	603	4566	128	400	PASS	1.9	< 5	YES
84	A2 wb duplicate	Long :0.302857	Lat :51.43031	82919	82929	8291982929	5684	863	6547	6043	572	6615	68	400	PASS	0.8	< 5	YES
85	A2 eb (within Ebb)	Long :0.322875	Lat :51.42986	81984	81980	8198481980	3026	467	3493	2917	508	3425	69	400	PASS	1.2	< 5	YES
86	A2 wb (within Ebb)	Long :0.309976	Lat :51.43026	81983	81982	8198381982	4970	546	5516	5523	516	6039	153	400	PASS	2.0	< 5	YES
87	Coastbound off-slip at Ebb	Long :0.314310	Lat :51.43061	81984	73633	8198473633	990	122	1112	1047	95	1142	30	167	PASS	0.9	< 5	YES
88	London off-slip (at Ebb)	Long :0.315867	Lat :51.43011	81983	73628	8198373628	359	45	404	400	4	404	0	100	PASS	0.0	< 5	YES
89	Coastbound on at Ebb	Long :0.324360	Lat :51.42964	81981	81980	8198181980	224	51	274	240	3	242	32	100	PASS	2.0	< 5	YES
90	Westbound access to A2 from Ebbs Valley	Long :0.310142	Lat :51.43014	82375	81892	8237581892	461	88	549	447	62	508	41	100	PASS	1.8	< 5	YES
91	A2026 Burnham Rd eb C1inb	Burnham Road	Priory Road	86211	86290	8621186290	758	25	783	868	19	886	103	117	PASS	3.6	< 5	YES
92	A2026 Burnham Rd C1outb	Priory Road	Burnham Road	86290	86211	8629086211	760	17	777	843	9	853	76	117	PASS	2.7	< 5	YES
93	NG - Victoria Rd wb	Victoria Road	Priory Road	86208	86290	8620886290	597	19	616	785	6	791	175	100	FAIL	6.6	< 10	YES
94	NG - Victoria Rd eb	Priory Road	Victoria Road	86290	86208	8629086208	720	25	745	766	18	784	39	112	PASS	1.4	< 5	YES
95	NG - Victoria Rd eb	Victoria Road	Mill Pond Rd Rbt	86208	86210	8620886210	644	28	672	766	18	784	112	100	FAIL	4.2	< 5	YES
96	NG - Victoria Rd wb	Mill Pond Rd Rbt	Victoria Road	86210	86208	8621086208	667	18	685	785	6	791	106	100	FAIL	3.9	< 5	YES
97	TCR_Hythe St (S1) nb	Hythe Street	Mill Pond Rd Rbt	86280	86210	8628086210	420	8	428	408	6	414	14	100	PASS	0.7	< 5	YES
98	TCR_Hythe St (s1) sb	Mill Pond Rd Rbt	Hythe Street	86210	86280	8621086280	628	25	653	775	18	793	140	100	FAIL	5.2	< 10	YES
99	NG - Mill Pond East Wb	Temple Hill	Overy St	86206	86220	8620686220	837	26	863	951	11	962	99	129	PASS	3.3	< 5	YES
100	NG - Mill Pond West Eb	Overy St	Temple Hill	86220	86206	8622086206	559	11	570	735	11	746	176	100	FAIL	6.9	< 10	YES
101	TCR-OveryNb	Overy St	Mill Pond Road	86191	86220	8619186220	210	1	211	417	3	421	210	100	FAIL	11.8	> 10	NO
102	TCR-Overy Sb	Mill Pond Road	Overy St	86220	86191	8622086191	240	10	250	248	4	252	2	100	PASS	0.1	< 5	YES
103	NG - Mill Pond West eb	Mill Pond Road	Temple Hill	86210	86220	8621086220	544	12	556	588	8	596	40	100	PASS	1.7	< 5	YES
104	NG - Mill Pond East wb	Temple Hill	Mill Pond Road	86220	86210	8622086210	800	17	817	974	8	982	165	123	FAIL	5.5	< 10	YES
105	Temple Hill (into TH -)	Temple Hill	Temple Hill Rbt	86206	86203	8620686203	491	9	499	533	7	540	41	100	PASS	1.8	< 5	YES
106	Temple Hill (out of TH -)	Temple Hill Rbt	Temple Hill	86203	86206	8620386206	830	6	836	807	7	814	22	125	PASS	0.8	< 5	YES
107	Temple Hill (out of TH -)	Temple Hill Sq	Temple Hill Rbt	86627	86203	8662786203	612	5	617	807	7	814	197	100	FAIL	7.4	< 10	YES
108	Temple Hill (into TH -)	Temple Hill Rbt	Temple Hill Sq	86203	86627	8620386627	492	7	499	533	7	540	41	100	PASS	1.8	< 5	YES
109	St Vincents Nb	Attlee Dr	St Vincent's Ave	86197	86198	8619786198	624	9	632	499	10	509	123	100	FAIL	5.2	< 10	YES
110	St Vincents Sb	St Vincent's Ave	Attlee Dr	86198	86197	8619886197	478	13	491	408	12	420	71	100	PASS	3.3	< 5	YES
111	Temple Hill Square Eb	Temple Hill Sq	St Vincent's Ave	86627	86198	8662786198	470	13	483	497	7	504	21	100	PASS	0.9	< 5	YES
112	Temple Hill Square Wb	St Vincent's Ave	Temple Hill Sq	86198	86627	8619886627	605	5	610	600	7	607	3	100	PASS	0.1	< 5	YES
113	Westgate/HighfieldN	Priory Road	Westgate Rd	86240	86277	8624086277	900	14	914	644	12	656	258	137	FAIL	9.2	< 10	YES
114	Westgate/HighfieldN	Highfield Road N	Priory Road	86239	86240	8623986240	937	13	950	832	14	846	104	143	PASS	3.5	< 5	YES
115	Westgate/HighfieldN	Westgate Rd (WNW)	Kent Road	86277	86245	8627786245	898	14	912	644	12	656	256	137	FAIL	9.2	< 10	YES
116	Westgate/HighfieldN	Kent Road	Westgate Rd (WNW)	86245	86277	8624586277	277	6	283	329	7	336	53	100	PASS	3.0	< 5	YES
117	TCR_Hythe St (S1) sb	Hythe Street N	Hythe Street	86280	86257	8628086257	645	26	671	775	18	793	122	100	FAIL	4.5	< 5	YES
118	TCR_Hythe St (s1) nb	Hythe Street	Hythe Street N	86257	86280	8625786280	432	10	442	408	6	414	28	100	PASS	1.4	< 5	YES
119	TC_Home Gardens 1 wb	Home Gardens	Westgate Rd	86258	86257	8625886257	402	5	407	333	5	338	69	100	PASS	3.6	< 5	YES
120	TC_Home Gardens 1 eb	Westgate Rd	Home Gardens	86257	86258	8625786258	944	29	973	993	21	1014	41	146	PASS	1.3	< 5	YES
121	TC_Westgate wb	Westgate Rd	Home Gardens	86245	86257	8624586257	700	13	713	622	11	633	80	107	PASS	3.1	< 5	YES
122	TC_Westgate eb	Home Gardens	Westgate Rd	86257	86245	8625786245	462	7	469	329	7	336	133	100	FAIL	6.6	< 10	YES
123	TC_Home Gardens 3 eb	Home Gardens E	Home Gardens WB	86262	86260	8626286260	518	6	524	446	4	450	74	100	PASS	3.4	< 5	YES
124	TC_Home Gardens 3 wb	Home Gardens EB	Home Gardens E	86260	86262	8626086262	838	30	868	900	20	920	52	130	PASS	1.8	< 5	YES
125	TC_Home Gardens 2 wb	Home Gardens W	Home Gardens EB	86258	86260	8625886260	935	29	964	900	20	920	44	145	PASS	1.4	< 5	YES
126	TC_Home Gardens 2 eb	Home Gardens WB	Home Gardens W	86260	86258	8626086258	444	5	449	446	4	450	1	100	PASS	0.0	< 5	YES
127	East Hill Eb	East Hill	Mount Pleasant Rd	86190	86636	8619086636	826	8	834	563	5	568	266	125	FAIL	10.0	> 10	NO
128	East Hill Wb	Mount Pleasant Rd	East Hill	86636	86190	8663686190	479	26	505	597	17	614	109	100	FAIL	4.6	< 5	YES
129	Darenth Rd sb	Darenth Road	Mount Pleasant Rd	86638	86636	8663886636	216	1	217	283	1	284	67	100	PASS	4.3	< 5	YES
130	Darenth Rd nb	Mount Pleasant Rd	Darenth Road	86636	86638	8663686638	115	0	115	38	0	38	77	100	PASS	8.9	< 10	YES
131	East Hill	Overy Liberty	Mount Pleasant Rd	86187	86637	8618786637	592	26	618	597	17	614	4	100	PASS	0.2	< 5	YES
132	East Hill	Mount Pleasant Rd	Overy Liberty	86637	86187	8663786187	936	8	944	809	6	815	129	142	PASS	4.4	< 5	YES
133	A226 The Brent (W) - wb	The Brent	Park Road Rbt	86315	86313	8631586313	578	5	583	701	4	706	123	100	FAIL	4.8	< 5	YES
134	A226 The Brent (W) - eb	Park Road Rbt	The Brent	86313	86315	8631386315	452	10	462	431	8	439	23	100	PASS	1.1	< 5	YES
135	Park Road nwb	Park Road	Park Road Rbt	79536	86313	7953686313	419	10	429	316	5	321	108	100	FAIL	5.6	< 10	YES
136	Park Road seb	Park Road Rbt	Park Road	86313	79536	8631379536	279	24	303	388	10	398	95	100	PASS	5.1	< 10	YES
137	A226 East Hill (E) - eb	East Hill	Park Road Rbt	86307	86313	8630786313	556	28	584	570	17	587	3	125	PASS	0.1	< 5	YES
138	A226 East Hill (E) - wb	Park Road Rbt	East Hill	86313	86307	8631386307	822	9	831	768	9	777	54	125	PASS	1.9	< 5	YES
139	TH - St Vin Sb	St Vincent's Rd	Watling Street Rbt	86329	27080	8632927080	596	13	609	408	12	420	189	100	FAIL	8.3	< 10	YES
140	TH - St Vin Nb	Watling Street Rbt	St Vincent's Rd	27080	86329	2708086329	664	10	674	516	10	526	148	100	FAIL	6.0	< 10	YES

2019 AM - observed vs modelled checks - POST MATRIX ESTIMATION

Ref	Link	From	To	A node	B node	AB pair	2019 observed VEHICLES			2019 modelled VEHICLES			Absolute check			GEH check		PASS or < 10
							Car/LGV	HGV	Total	Car/LGV	HGV	Total	Diffs	Tolerance	Pass / Fail	GEH	Banding	
141	A226 The Brent (E) - eb	The Brent E	Watling Street Rbt	27430	27080	2743027080	660	11	671	702	14	715	44	100	PASS	1.7	< 5	YES
142	A226 The Brent (E) - wb	Watling Street Rbt	The Brent E	27080	27430	2708027430	476	8	484	412	10	422	62	100	PASS	2.9	< 5	YES
143	B500 Watling St (W) -wb	Watling Street	Watling Street Rbt	29820	27080	2982027080	560	5	565	599	13	613	48	100	PASS	2.0	< 5	YES
144	B2500 Watling St (W) - eb	Watling Street Rbt	Watling Street	27080	29820	2708029820	572	15	587	511	22	533	54	100	PASS	2.3	< 5	YES
145	A226 The Brent (W) - eb - duplicate	The Brent W	Watling Street Rbt	86315	27080	8631527080	462	10	472	431	8	439	33	100	PASS	1.5	< 5	YES
146	A226 The Brent (W) - eb - duplicate	Watling Street Rbt	The Brent W	27080	86315	2708086315	566	6	572	701	4	706	134	100	FAIL	5.3	< 10	YES
147	TC - Instone	Lowfield St N	Instone Rd Jnct	86690	86685	8669086685	821	13	834	908	9	917	83	125	PASS	2.8	< 5	YES
148	TC - Instone	Lowfield St S	Instone Rd Jnct	86661	86685	8666186685	550	3	553	384	5	389	164	100	FAIL	7.6	< 10	YES
149	TC - Instone	Instone Rd Jnct	Lowfield St S	86685	86661	8668586661	421	10	431	781	9	790	359	100	FAIL	14.5	> 10	NO
150	TC - Instone	Instone Rd Jnct	Instone Rd	86685	86225	8668586225	950	6	956	510	5	515	441	143	FAIL	16.3	> 10	NO
151	Highfield Rd Nb (one-way)	Instone Rd	Highfield Road N	86229	86231	8622986231	747	6	753	636	6	642	111	113	PASS	4.2	< 5	YES
152	TC - Instone	Instone Rd	Highfield Road N	86695	86229	8669586229	721	5	726	510	5	515	211	109	FAIL	8.5	< 10	YES
153	Highfield Rd - South of Instone nb	Highfield Road S	Highfield Road N	86228	86229	8622886229	291	2	293	127	1	127	166	100	FAIL	11.4	> 10	NO
154	Highfield Rd - South of Instone sb	Highfield Road N	Highfield Road S	86229	86228	8622986228	265	1	266	1	0	1	265	100	FAIL	23.0	> 10	NO
155	Westgate/HighfieldN	Highfield Road N	West Hill Junction	86239	86233	8623986233	287	7	294	274	7	280	14	100	PASS	0.8	< 5	YES
156	Westgate/HighfieldN	West Hill Junction	Highfield Road N	86233	86239	8623386239	949	12	961	832	14	846	115	144	PASS	3.8	< 5	YES
157	TC	Highfield Rd	West Hill Junction	86632	86233	8663286233	813	6	819	636	6	642	177	123	FAIL	6.6	< 10	YES
158	Highfield Rd - North of Heath sb	Highfield Road	Heath Lane Rbt	86226	86659	8622686659	403	1	404	1	0	1	403	100	FAIL	28.4	> 10	NO
159	Highfield Rd - North of Heath nb	Heath Lane Rbt	Highfield Road	86659	86226	8665986226	460	2	462	127	1	127	335	100	FAIL	19.5	> 10	NO
160	Heath St wb	Heath Street	Heath Lane Rbt	86221	86659	8622186659	287	4	291	301	6	307	16	100	PASS	0.9	< 5	YES
161	Heath St eb	Heath Lane Rbt	Heath Street	86659	86221	8665986221	200	1	201	275	2	277	76	100	PASS	4.9	< 5	YES
162	Highfield Road S nb	Highfield Road S	Heath Lane Rbt	86658	86659	8665886659	241	3	244	121	0	121	123	100	FAIL	9.1	< 10	YES
163	Highfield Road S sb	Heath Lane Rbt	Highfield Road S	86659	86658	8665986658	316	0	316	187	2	189	127	100	FAIL	8.0	< 10	YES
164	Heath Lane (lower) - eb	Heath Lane	Heath Lane Rbt	86657	86659	8665786659	406	0	406	468	5	473	67	100	PASS	3.2	< 5	YES
165	Heath Lane (lower) - wb	Heath Lane Rbt	Heath Lane	86659	86657	8665986657	361	5	366	302	6	308	58	100	PASS	3.2	< 5	YES
166	Lowfield St (north of B2174) sb	Lowfield Street N	B2174/A255 Junction	86222	86641	8622286641	336	8	344	518	11	529	185	100	FAIL	8.9	< 10	YES
167	Lowfield St (north of B2174) nb	B2174/A255 Junction	Lowfield Street N	86641	86222	8664186222	621	2	623	581	11	592	31	100	PASS	1.3	< 5	YES
168	A225 Wb	Princes Road E	B2174/A255 Junction	86704	86641	8670486641	781	21	802	918	32	950	148	120	FAIL	5.0	< 10	YES
169	A225 Eb	B2174/A255 Junction	Princes Road E	86641	86704	8664186704	913	19	932	1013	13	1026	94	140	PASS	3.0	< 5	YES
170	A225 Nb	Lowfield Street S	B2174/A255 Junction	86648	86641	8664886641	860	22	882	779	14	793	89	132	PASS	3.1	< 5	YES
171	A225 Sb	B2174/A255 Junction	Lowfield Street S	86641	86648	8664186648	684	18	702	911	16	927	225	105	FAIL	7.9	< 10	YES
172	B2174 eb	Princes Road W	B2174/A255 Junction	86003	86641	8600386641	836	13	849	853	9	862	13	127	PASS	0.4	< 5	YES
173	B2174 wb	B2174/A255 Junction	Princes Road W	86641	86003	8664186003	595	25	620	563	27	590	30	100	PASS	1.2	< 5	YES
174	Highfield Road S sb	Highfield Rd S	B2174 Junction	86658	86642	8665886642	351	0	351	187	2	189	162	100	FAIL	9.9	< 10	YES
175	Highfield Road S nb	B2174 Junction	Highfield Rd S	86642	86658	8664286658	232	3	235	121	0	121	114	100	FAIL	8.5	< 10	YES
176	B2174 Wb	Princes Road E	B2174 Junction	86003	86642	8600386642	646	24	670	522	25	547	123	100	FAIL	5.0	< 10	YES
177	B2174 Eb	B2174 Junction	Princes Road E	86642	86003	8664286003	851	16	867	744	9	752	115	130	PASS	4.0	< 5	YES
178	B2174 Eb	Princes Road W	B2174 Junction	86004	86642	8600486642	517	16	533	557	6	563	30	100	PASS	1.3	< 5	YES
179	B2174 Wb	B2174 Junction	Princes Road W	86642	86004	8664286004	431	21	452	401	25	426	26	100	PASS	1.3	< 5	YES
180	Lowfield St (south of Heath) nb	B2174	A226	86222	86660	8622286660	400	11	411	581	11	592	181	100	FAIL	8.1	< 10	YES
181	Lowfield St (south of Heath) sb	B2174	A226	86660	86222	8666086222	258	16	274	518	11	529	255	100	FAIL	12.7	> 10	NO
182	A225 Nb	B258	B2174	86647	86648	8664786648	455	15	470	779	14	793	323	100	FAIL	12.9	> 10	NO
183	A225 Sb	B258	B2174	86648	86647	8664886647	818	20	838	911	16	927	89	126	PASS	3.0	< 5	YES
184	A2018 eb	A2(T)	A226	86684	86683	8668486683	626	31	657	692	21	713	56	100	PASS	2.2	< 5	YES
185	A2018 wb	A2(T)	A226	86683	86684	8668386684	488	19	507	634	53	687	180	100	FAIL	7.4	< 10	YES
186	A226 eb	LA Boundary	A2018	86339	86282	8633986282	363	8	371	283	3	287	84	100	PASS	4.7	< 5	YES
187	A226 Wb	LA Boundary	A2018	86282	86339	8628286339	399	7	406	361	3	363	43	100	PASS	2.2	< 5	YES
188	Highfield Rd Nb (one-way)	A225	A226 West Hill	86231	86632	8623186632	670	18	688	636	6	642	46	100	PASS	1.8	< 5	YES
189	PRI - A225Wb	A296	A282(T)	81900	81902	8190081902	948	95	1043	909	35	945	98	156	PASS	3.1	< 5	YES
190	PRI - A225Eb	A296	A282(T)	71446	81900	7144681900	980	72	1052	1061	42	1104	52	158	PASS	1.6	< 5	YES
191	A225 Princes eb	A225 Lowfield St	A296	86292	86295	8629286295	845	94	939	801	13	814	125	141	PASS	4.2	< 5	YES
192	A225 Princes wb	A296	A225 Lowfield St	86295	86292	8629586292	832	39	871	953	32	985	114	131	PASS	3.7	< 5	YES
193	West Hill (west of Priory H) eb	A2018	A226 Highfield Road North	86265	86670	8626586670	444	7	451	566	8	574	123	100	FAIL	5.4	< 10	YES
194	West Hill (west of Priory H) wb	A2018	A226 Highfield Road North	86670	86265	8667086265	430	5	435	486	10	496	61	100	PASS	2.8	< 5	YES
195	A225 Nb	A20	B258	90050	44053	9005044053	507	11	518	545	12	557	39	100	PASS	1.7	< 5	YES
196	A225 Sb	A20	B258	44053	90050	4405390050	384	15	399	537	20	557	158	100	FAIL	7.2	< 10	YES
197	Overy Liberty/Market St	A225	A226 Home Gardens	86689	86690	8668986690	690	30	720	908	9	917	197	108	FAIL	6.9	< 10	YES
198	A226 Stone Eb	A296	A206	22322	27505	2232227505	412	12	424	321	12	333	91	100	PASS	4.7	< 5	YES
199	A226 Stone Wb	A296	A206	27505	22322	2750522322	516	22	538	483	6	488	50	100	PASS	2.2	< 5	YES
200	Crossways	A206 Galleon Blvd	A206 Crossway Blvd	22250	27014	2225027014	671	49	720	611	51	662	58	108	PASS	2.2	< 5	YES
201	Crossways	A206 Crossway Blvd	A206 Galleon Blvd	27014	22250	2701422250	622	64	686	484	73	558	128	100	FAIL	5.1	< 10	YES
202	A206 Crossways	A206 Galleon Blvd	Claire Causeway	27014	27007	2701427007	417	40	457	431	52	483	26	100	PASS	1.2	< 5	YES
203	A206 Crossways	Claire Causeway	A206 Galleon Blvd	27007	27014	2700727014	1206	42	1248	1199	69	1268	20	187	PASS	0.6	< 5	YES
204	A206 Crossways E eb S2	Claire Causeway	Station Road	27007	71708	2700771708	465	40	505	493	53	545	40	100	PASS	1.8	< 5	YES
205	A206 Crossways wb E S2	Station Road	Claire Causeway	27009	27007	2700927007	1365	41	1406	1229	65	1294	112	211	PASS	3.1	< 5	YES
206	A206 (north of Steele) nb	Steele Ave	A206	27010	27009	2701027009	1476	46	1522	1459	66	1525	3	228	PASS	0.1	< 5	YES
207	A206 (north of Steele) sb	A206	Steele Ave	27009	27010	2700927010	676	44	720	694	51	745	25	108	PASS	0.9	< 5	YES
208	A206 (north of A226) nb	St Clements Rbt	Steele Ave	27028	27010	2702827010	1361	40	1401	1326	66	1392	9	210	PASS	0.2	< 5	YES
209	A206 (north of A226) sb	Steele Ave	St Clements Rbt	27010	27028	2701027028	676	42	718	694	51	745	27	108	PASS	1.0	< 5	YES
210	Crossways zone loader (arr)	Galleon Blvd N	Crossways	27014	27017	2701427017	331	23	354	344	6	350	4	100	PASS	0.2	< 5	YES
211	Crossways zone loader (dep)	Crossways	Galleon Blvd N	27017	27014	2701727014	101	35	136	114	10	125	11	100	PASS	1.0	< 5	YES
212	Crossways	Galleon Blvd S	Crossways	22235	27014	2223527014	107	8	115	32	5	37	78	100	PASS	9.0	< 10	YES
213	Crossways	Crossways	Galleon Blvd S	27014	22235	2701422235	715	8	723	697	4	701	22	108	PASS	0.8	< 5	YES
214	Crossways zone loader (arr)	Claire Causeway	Crossways	27007	89422	2700789422	44	6	50	0	0	0	50	100	PASS	10.0	< 10	YES
215	Crossways zone loader (dep)	Crossways	Claire Causeway	89422	27007	8942227007	21	8	29	32	5	37	8	100	PASS	1.4	< 5	YES
216	A226 eb (east of B255)	Mounts Road	Rbt	27028	28053	2702828053	469	28	497	426	39	464	33	100	PASS	1.5	< 5	YES
217	A226 wb (east of B255)	Rbt	Mounts Road	28053	27028	2805327028	865	47	912	967	62	1029	117	137	PASS	3.8	< 5	YES
218	A226 eb (west of B255)	Sanderling Way	Rbt	20132	27028	2013227028	543	5	548	551	5	557	9	100	PASS	0.4	< 5	YES
219	A226 wb (west of B255)	Rbt	Sanderling Way	27028	20132	2702820132	727	18	745	673	9	682	63	112	PASS	2.3	< 5	YES
220	B255 south of A226 nb	B225	Rbt	27027	27029	2702727029	1221	30	1251	1079	19	1097	154	188	PASS	4.5	< 5	YES
221	B225 south of A226 sb	Rbt	B225	27029	27027	2702927027	731	31	762	867	24	890	128	114	FAIL	4.5	< 5	YES
222	B225 north of Mounts nb	Mounts Road	Castleridge Drive	27026	89424	2702689424	1185	29	1214	1027	19	1046	168	182	PASS	4.5	< 5	YES
223	B225 north of Mounts sb	Castleridge Drive	Mounts Road	89424	27026	8942427026	754	28	782	889	24	913	131	117	FAIL	4.5	< 5	YES
224	CG - A296W Eb	A296 Princes Road	Clarendon Gardens Rbt	81997	22340	8199722340	521	19	540	348	13	360	180	100	FAIL	8.5	< 10	YES
225	CG - A296W Wb	Clarendon Gardens Rbt	A296 Princes Road	22340	81997	2234081997	360	10	370	330	72	402	32	100	PASS	1.6	< 5	YES
226	CG - B2500 Eb	Watling Street	Clarendon Gardens Rbt	22343	29914	2234329914	633	30	663	533	72	605	58	100	PASS	2.3	< 5	YES
227	CG - B2500 Wb	Clarendon Gardens Rbt	Watling Street	29914	22343	2991422343	630	8	638	629	10	639	1	100	PASS	0.1	< 5	YES
228	CG - A296E Eb	Clarendon Gardens Rbt	A296 Watling Street	27506	22338	2750622338	878	43	921	941	17	958	37	138	PASS	1.2	< 5	YES
229	CG - A296W Eb	A296 Watling Street	Clarendon Gardens Rbt	22338	27506	2233827506	1134	9	1143	848	24	871	272	171	FAIL	8.6	< 10	YES
230	CG - Gore Road nb	Gore Road	Clarendon Gardens Rbt	22332	22339	2233222339	532	10	542	446	4	450	92	100	PASS	4.1	< 5	YES
231	CG - Gore Road sb	Clarendon Gardens Rbt	Gore Road	22339	22332	2233922332	453	7	460	456	1	457	3	100	PASS	0.1	< 5	YES
232	A296 (E of DV) Eb S2	A296	Bean Junction	27506	22243	2750622243	750	30	780	668	35	702	78	117	PASS	2.9	< 5	YES
233	A296 (E of DV) Wb S2	Bean Junction	A296	22243	27506	2224327506	942	11	953	1078	3	1081	128	143	PASS	4.0	< 5	YES
234	Former B2174 Nb (from DV)	St James Lane	Rbt	27506	22301	2750622301	287	10	297	288	4	292	5	100	PASS	0.3	< 5	YES
235	Former B2174 Sb (to DV)	Rbt	St James Lane	22301	27506	2230127506	388	2	390	318	27	345	45	100	PASS	2.4	< 5	YES
236	Darenth Valley out			98615	27506	9861527506	258	1	259	258	3	261	2	100	PASS	0.1	< 5	YES
237	Darenth Valley in			27506	98615	2750698615	768	5	773	605	1	606	167	116	FAIL	6.4	< 10	YES
238	A226 Swanscombe Eb	Manor Way Staggered Jnct	A226 London Road E	20119	27500	2011927500	474	24	498	364	31	395	103	100	FAIL	4.9	< 5	YES
239	A226 east of K'hall eb	A226 London Road W	Manor Way Staggered Jnct	20126	20119	2012620119	494	25	519	409	34	444	75	100	PASS	3.4	< 5	YES
240	A226 west of K'hall eb	Manor Way Staggered Jnct	A226 London Road W	20119	20126	2011920126	651	44	695	717	60	777	82	100	PASS	3.0	< 5	YES
241	Craylands Lane Nb	Craylands Lane	Manor Way Staggered Jnct	89428	20119	8942820119	180	4	184	169	2	171	13	100	PASS	1.0	< 5	YES
242	Craylands Lane Sb	Manor Way Staggered Jnct	Craylands Lane	20119	89428	2011989428	158	1	159	153	3	156	3	100	PASS	0.2	< 5	YES
243	A226 Swanscombe Eb	A226 London Road	High Street	27500	20118	2750020118	475	26	501	364	31	395	106	100	FAIL	5.0	< 10	YES
244	A226 Swanscombe Wb	High Street	A226 London Road	20118	27500	2011827500	605	34	639	656	58	714	75	100	PASS	2.9	< 5	YES
245	A226 Swanscombe Wb	A226 Galley Hill Road	High Street	23178	20118	2317820118	553	31	584	582	53	635	51	100	PASS	2.1	< 5	YES
246	A226 Swanscombe Eb	High Street	A226 Galley Hill Road	20118	23178	2011823178	470	23	493	292	27	319	174	100	FAIL	8.6	< 10	YES
247	Swanscombe High St Nb	High Street	A226	20226	20118	2022620118	260	4	264	233	4	238	26	100	PASS	1.7	< 5	YES
248	Swanscombe High St Sb	A226	High Street	20118	20226	2011820226	213	4	217	231	4	235	18	100	PASS	1.2	< 5	YES
249	Lower Rd (nb -arr)			23178	68667	2317868667	230	35	265	222	1	222	43	100	PASS	2.7	< 5	YES
250	Lower Rd (sb - dep)			68667	23178	6866723178	108	27	135	96	1	97	38	100	PASS	3.5	< 5	YES
251	A226 Northfleet Eb	A226	B2175 Stonebridge Road	23178	23177	2317823177	521	63	584	334	26	360	224	100	FAIL	10.3	> 10	NO
252	A226 Northfleet Wb	B2175 Stonebridge Road	A226	23177	23178	2317723178	806	73	879	759	53	812	67	132	PASS	2.3	< 5	YES
253	Thames Way under HS (neb)	Thames Way	Ebbs Car Park	23177	98581	2317798581	414	58	472	332	45	376	96	100	PASS	4.6	< 5	YES
254	Thames Way under HS (swb)	Ebbs Car Park	Thames Way	98581	23177	9858123177	295	57	352	217	39	256	96	100	PASS	5.5	< 10	YES
255	Thames Way (nwb)	Thames Way	Ebbs Car Park	81202	98581	8120298581	473	60	533	389	45	434	99	100	PASS	4.5	< 5	YES
256	Thames Way (seb)	Ebbs Car Park	Thames Way	98581	81202	9858181202	253	55	308	200	39	239	69	100	PASS	4.2	< 5	YES
257	oo Ebbsfleet Gateway eb			23185	89364	2318589364	474	95	569	256	44	301	268	100	FAIL	12.9	> 10	NO
258	oo Ebbsfleet Gateway wb			89364	23185	8936423185	709	110	819	823	56	880	61	123	PASS	2.1	< 5	YES
259	oo International Way nb			23185	89646	2318589646	343	1	344	336	1	338	6	100	PASS	0.3	< 5	YES
260	oo International Way sb			89646	23185	8964623185	2	1	3	13	0	13	10	100	PASS	3.5	< 5	YES
261	oo B259 sb			89430	23185	8943023185	561	7	568	532	7	539	29	100	PASS	1.2	< 5	YES
262	oo B259 nb			23185	89430	2318589430	553	9	562	466	7	472	90	100	PASS	3.9	< 5	YES
263	oo A2260 south of B259 nb			73622	23185	7362223185	1103	102	1205	936	52	988	217	181	FAIL	6.5	< 10	YES
264	oo A2260 south of B259 sb			23185	73623	2318573623	1005	115	1120	1245	63	1309	189	168	FAIL	5.4	< 10	YES
265	A225 Hawley Road Northbound			26013	86727	2601386727	645	14	659	658	7	665	5	100	PASS	0.2	< 5	YES
266	A225 Hawley Road Southbound			86727	26013	8672726013	376	8	384	437	10	447	63	100	PASS	3.1	< 5	YES
267	B260 Green Street Green Road Eastbound			89426	22334	8942622334	998	31	1029	906	9	915	114	154	PASS	3.7	< 5	YES
268	B260 Green Street Green Road Westbound			22334	89426	2233489426	505	16	521	496	5	501	20	100	PASS	0.9	< 5	YES
269	B255 Bean Lane (north of A2 North Roundabout) Northbound			83356	83359	8335683359	933	30	963	1086	39	1124	162	144	FAIL	5.0	< 10	YES
270	B255 Bean Lane (north of A2 North Roundabout) Southbound			83358	89865	8335889865	132	4	136	356	21	377	241	100	FAIL	15.1	> 10	NO
271	A296 Roman Road Northbound			27033	27035	2703327035	652	37	689	756	44	800	112	100	FAIL	4.1	< 5	YES
272	B262 Hall Road Southbound			83355	28510	8335528510	1151	37	1187	1434	48	1482	295	178	FAIL	8.1	< 10	YES
273	B262 Hall Road Eastbound			28510	83355	2851083355	1627	52	1679	1392	54	1447	232	252	PASS	5.9	< 10	YES
274	Parsonage Lane Northbound			44053	29908	4405329908	505	12	516	626	9	635	119	100	FAIL	4.9	< 5	YES
275	Parsonage Lane Southbound			29908	44053	2990844053	711	17	728	800	13	813	85	109	PASS	3.1	< 5	YES
276	A225 Main Road Northbound			90062	90050	9006290050	500	17	517	470	8	479	38	100	PASS	1.7	< 5	YES
277	A225 Main Road Southbound			90050	90062	9005090062	583	39	622	618	23	641	19	100	PASS	0.8	< 5	YES
278	B260 Main Road Southbound			26637	90788	2663790788	315	27	342	328	7	335	7	100	PASS	0.4	< 5	YES
279	B260 Main Road Southbound			90788	26637	9078826637	603	61	665	490	7	497	168	100	FAIL	7.0	< 10	YES
280	B255 Whitehill Road Northbound			90788	26554	9078826554	306	9	315	467	6	473	158	100	FAIL	8.0	< 10	YES

2019 AM - observed vs modelled checks - POST MATRIX ESTIMATION

Ref	Link	From	To	A node	B node	AB pair	2019 observed VEHICLES Car/LGV	HGV	Total	2019 modelled VEHICLES Car/LGV	HGV	Total	Absolute check Diffs	Tolerance	Pass / Fail	GEH check GEH	Banding	PASS or < 10
281	B255 Whitehill Road Eastbound			26554	90788	2655490788	214	7	221	232	4	236	16	100	PASS	1.0	< 5	YES
282	New Barn Road Westbound			47136	26899	4713626899	512	12	524	482	2	484	40	100	PASS	1.8	< 5	YES
283	New Barn Road Eastbound			26899	47136	2689947136	373	9	382	371	1	373	9	100	PASS	0.5	< 5	YES
284	A226 The Brent Southbound			27431	27432	2743127432	431	24	454	354	10	363	91	100	PASS	4.5	< 5	YES
285	A226 The Brent Northbound			27432	27431	2743227431	593	33	625	554	13	567	59	100	PASS	2.4	< 5	YES
286	B2500 Watling Street Southbound			22346	22347	2234622347	301	7	308	269	17	286	22	100	PASS	1.3	< 5	YES
287	B2500 Watling Street Eastbound			22347	22346	2234722346	503	8	511	447	3	451	61	100	PASS	2.8	< 5	YES
288	B260 Trolling Down Hill Westbound			22334	86297	2233486297	669	21	690	636	7	644	46	100	PASS	1.8	< 5	YES
289	B260 Trolling Down Hill Westbound			86297	22334	8629722334	337	10	347	403	4	407	60	100	PASS	3.1	< 5	YES
290	A225 Hawley Road Eastbound			44053	26013	4405326013	631	20	650	580	7	588	63	100	PASS	2.5	< 5	YES
291	A225 Hawley Road Westbound			26013	44053	2601344053	419	22	441	454	11	465	23	100	PASS	1.1	< 5	YES
292	Clement Street Westbound			44077	44053	4407744053	72	1	73	144	4	147	74	100	PASS	7.1	< 10	YES
293	Clement Street Southbound			44053	44077	4405344077	89	3	91	200	3	202	111	100	FAIL	9.1	< 10	YES
294	A282 southbound exit for A2 Eastbound			81899	81898	8189981898	416	89	505	460	54	514	9	100	PASS	0.4	< 5	YES
295	A282 northbound distributor between A2 and A296xA225 Southbound			71318	88688	7131888688	885	38	922	946	38	984	61	138	PASS	2.0	< 5	YES
296	A2 westbound within the M25xA282 junction Northbound			81625	81880	8162581880	3120	177	3297	3401	225	3626	329	400	PASS	5.6	< 10	YES
297	A2 eastbound within the M25xA282 junction Westbound			81881	81623	8188181623	1895	81	1977	2024	110	2135	158	296	PASS	3.5	< 5	YES
298	M25 J2 anti-clockwise exit Northbound			81886	81883	8188681883	1862	193	2055	1898	194	2092	37	308	PASS	0.8	< 5	YES
299	A2 westbound access from M25xA282 Southbound			81882	81880	8188281880	1469	153	1623	1376	79	1455	167	243	PASS	4.3	< 5	YES
300	A2 eastbound access from M25xA282 Northbound			71320	81623	7132081623	946	95	1041	845	154	1000	41	156	PASS	1.3	< 5	YES
301	A2 eastbound after M25 J2 roundabout access Westbound			81881	81623	8188181623	1895	81	1977	2024	110	2135	158	296	PASS	3.5	< 5	YES
302	A2 westbound before M25 J2 roundabout exit Eastbound			81649	81625	8164981625	4572	257	4829	4633	313	4946	117	400	PASS	1.7	< 5	YES
303	B255 Bean Lane (south of A2 South Roundabout) Westbound			73621	26016	7362126016	193	7	200	219	4	223	23	100	PASS	1.6	< 5	YES
304	B255 Bean Lane (south of A2 South Roundabout) Westbound			26016	73621	2601673621	502	16	518	879	13	892	374	100	FAIL	14.1	> 10	NO
305	A2 westbound between A2260 and B259 Eastbound			82915	81983	8291581983	6119	563	6682	5915	527	6443	239	400	PASS	3.0	< 5	YES
306	A2 westbound exit for A2260 Northbound			81894	81893	8189481893	492	46	538	593	8	601	63	100	PASS	2.6	< 5	YES
307	A2 westbound within the A2260 junction Eastbound			81894	81895	8189481895	4988	554	5543	5112	525	5638	95	400	PASS	1.3	< 5	YES
308	B260 Green St Green Rd (East of Ladywood Rd) Eastbound			47126	89412	4712689412	342	10	353	393	7	400	47	100	PASS	2.4	< 5	YES
309	B260 Green St Green Rd (East of Ladywood Rd) Northbound			89412	47126	8941247126	668	21	689	604	8	612	77	100	PASS	3.0	< 5	YES
310	Elizabeth Street Southbound			22308	27411	2230827411	63	1	64	79	6	85	21	100	PASS	2.4	< 5	YES
311	Elizabeth Street Westbound			27411	22308	2741122308	18	0	18	34	2	36	18	100	PASS	3.4	< 5	YES
312	A226 London Road (West of Oak Road) Eastbound			22307	27505	2230727505	582	33	614	483	6	488	126	100	FAIL	5.4	< 10	YES
313	A226 London Road (West of Oak Road) Westbound			27505	22307	2750522307	284	16	300	321	12	333	33	100	PASS	1.8	< 5	YES
314	Southfleet Road (North of the roundabout) Eastbound			23185	89430	2318589430	356	8	364	466	7	472	108	100	FAIL	5.3	< 10	YES
315	Southfleet Road (North of the roundabout) Westbound			89430	23185	8943023185	390	9	399	532	7	539	140	100	FAIL	6.5	< 10	YES
316	Alkerden Lane (west of Gilbert Close) Eastbound			20231	89440	2023189440	189	3	192	188	1	188	3	100	PASS	0.2	< 5	YES
317	Alkerden Lane (west of Gilbert Close) Westbound			89440	20231	8944020231	81	5	86	52	0	52	34	100	PASS	4.1	< 5	YES
318	A226 Thames Way Eastbound			28512	98579	2851298579	599	20	618	756	22	778	160	100	FAIL	6.1	< 10	YES
319	A226 Thames Way Southbound			98579	28512	9857928512	206	7	213	89	7	96	117	100	FAIL	9.4	< 10	YES
320	B262 Station Road Northbound			76743	26019	7674326019	388	13	401	591	7	599	197	100	FAIL	8.8	< 10	YES
321	B262 Station Road Westbound			26019	76743	2601976743	247	8	255	288	8	296	41	100	PASS	2.5	< 5	YES
322	B262 Betsham Road Eastbound			47128	26632	4712826632	248	8	256	479	5	483	227	100	FAIL	11.8	> 10	NO
323	B262 Betsham Road Eastbound			26632	47128	2663247128	75	3	77	111	2	113	36	100	PASS	3.7	< 5	YES
324	Warren Road Northbound			26901	26898	2690126898	8	0	8	0	0	0	8	100	PASS	3.9	< 5	YES
325	Warren Road Southbound			26898	26901	2689826901	10	0	10	0	0	0	10	100	PASS	4.6	< 5	YES
326	B255 Highcross Road Southbound			26632	26554	2663226554	108	4	112	115	3	117	5	100	PASS	0.5	< 5	YES
327	B255 Highcross Road Northbound			26554	26632	2655426632	197	7	204	355	4	359	155	100	FAIL	9.3	< 10	YES
328	Red Street Southbound			26020	26898	2602026898	22	0	22	25	1	26	4	100	PASS	0.8	< 5	YES
329	Red Street Northbound			26898	26020	2689826020	21	0	21	19	1	20	1	100	PASS	0.2	< 5	YES
330	Park Corner Road Eastbound			76747	26897	7674726897	52	4	56	86	1	87	31	100	PASS	3.6	< 5	YES
331	Gore Road Westbound			22334	22333	2233422333	333	5	338	400	1	401	63	100	PASS	3.3	< 5	YES
332	Gore Road Eastbound			22333	22334	2233322334	262	1	263	223	1	224	39	100	PASS	2.5	< 5	YES
333	Ship Lane Westbound			44005	44059	4400544059	27	1	29	48	1	49	20	100	PASS	3.2	< 5	YES
334	Ship Lane Northbound			44059	44005	4405944005	48	0	48	36	1	37	11	100	PASS	1.7	< 5	YES
335	A2260, 385m south of International Way.			89364	98580	8936498580	455	43	498	256	44	301	198	100	FAIL	9.9	< 10	YES
336	A2260, 385m south of International Way.			98580	89364	9858089364	741	94	835	823	56	880	45	125	PASS	1.5	< 5	YES

o A206/A2026 rbt
oo Ebbsfleet Gateway Rbt A2260/B259
TH - Temple Hill
CG - Clarendon Gardens Gyratory
PRI - Princes Road Interchange
DI - Darenth Interchange

237	PASS	233	< 5
99	FAIL	315	< 10
		20	> 10
70.5%	PASS		
29.5%	FAIL	233	< 5
		82	5 > < 10
		20	> 10

69.6%	< 5
24.5%	5 > < 10
6.0%	> 10

| Either PASS or <10 | 316 | 94.33% |

2019 PM - observed vs modelled checks - POST MATRIX ESTIMATION

Ref	Link	From	To	A node	B node	AB pair	2019 observed VEHICLES			2019 modelled VEHICLES			Absolute check			GEH check		PASS or < 10
							Car/LGV	HGV	Total	Car/LGV	HGV	Total	Diffs	Tolerance	Pass / Fail	GEH	Banding	
1	Oakfield Lane	Heath Lane	Leyton Cross Rd Rbt	86707	86201	8670786201	720	4	724	781	7	787	63	109	PASS	2.3	< 5	YES
2	Oakfield Lane	Leyton Cross Rd Rbt	Heath Lane	86201	86707	8620186707	788	7	795	801	8	809	14	119	PASS	0.5	< 5	YES
3	Leyton Cross Road	Bracton Ln Rbt	Leyton Cross Rd Rbt	86711	86201	8671186201	585	6	591	688	3	691	100	100	FAIL	4.0	< 5	YES
4	Leyton Cross Road	Leyton Cross Rd Rbt	Bracton Ln Rbt	86201	86711	8620186711	579	4	583	547	6	554	29	100	PASS	1.2	< 5	YES
5	Oakfield Lane	Pinewood Pl Rbt	Leyton Cross Rd Rbt	86710	86201	8671086201	770	10	780	542	9	551	229	117	FAIL	8.9	< 10	YES
6	Oakfield Lane	Leyton Cross Rd Rbt	Pinewood Pl Rbt	86201	86710	8620186710	708	9	717	635	4	639	78	108	PASS	3.0	< 5	YES
7	Oakfield Lane	Heath Lane	Parsons Lane	86707	86664	8670786664	367	3	370	559	8	567	197	100	FAIL	9.1	< 10	YES
8	Oakfield Lane	Parsons Lane	Heath Lane	86664	86707	8666486707	395	2	397	728	4	733	336	100	FAIL	14.1	> 10	NO
9	Oakfield Lane	Elm Road	Parsons Lane	86654	86655	8665486655	379	2	381	323	1	324	57	100	PASS	3.0	< 5	YES
10	Oakfield Lane	Parsons Lane	Elm Road	86655	86654	8665586654	380	3	383	454	5	459	76	100	PASS	3.7	< 5	YES
11	Oakfield Lane	Elm Road	Parsons Lane	86655	86664	8665586664	379	2	381	323	1	324	57	100	PASS	3.0	< 5	YES
12	Darenth Rd nb	Princes Road	East Hill	86270	86638	8627086638	373	2	375	198	1	199	176	100	FAIL	10.4	> 10	NO
13	Darenth Rd sb	East Hill	Princes Road	86638	86270	8663886270	240	1	241	72	0	72	169	100	FAIL	13.5	> 10	NO
14	o A206W eb	Crayford Way	Thames Rd EB	90157	86673	9015786673	-	-	1588	1508	78	1586	2	238	PASS	0.1	< 5	YES
15	o A206W wb	Thames Rd WB	Crayford Way	86673	90157	8667390157	-	-	1472	1433	70	1504	32	221	PASS	0.8	< 5	YES
16	o A206E wb	Joyce Green Ln	A206 WB	86673	86673	8667386673	-	-	1010	1060	64	1123	113	152	PASS	3.5	< 5	YES
17	o A206E eb	A206 EB	Joyce Green Ln	86673	86672	8667386672	-	-	1041	1006	63	1068	27	156	PASS	0.8	< 5	YES
18	o A2026 Burnham Road Nb	Burnham Cres	Burnham Rd NB	86218	86673	8621886673	-	-	716	790	9	799	83	107	PASS	3.0	< 5	YES
19	o A2026 Burnham Sb	Burnham Rd NB	Burnham Cres	86673	86218	8667386218	-	-	829	919	17	936	107	124	PASS	3.6	< 5	YES
20	A206 Bob Dunn Way eb (to L'bk int)	A206 (W)	Littlebrook Interchange (W)	29802	83365	2980283365	1062	63	1125	1080	63	1144	19	169	PASS	0.6	< 5	YES
21	A206 Bob Dunn Way wb (from L'bk int)	Littlebrook Interchange (W)	A206 (W)	81915	29802	8191529802	1006	95	1101	1112	67	1189	88	165	PASS	2.6	< 5	YES
22	Rennie Out (L'bk)	Rennie Drive	Littlebrook Interchange (W)	27264	81994	2726481994	203	27	230	199	37	236	6	100	PASS	0.4	< 5	YES
23	Rennie In (L'bk)	Littlebrook Interchange (W)	Rennie Drive	83365	27264	8336527264	108	51	159	106	1	107	52	100	PASS	4.5	< 5	YES
24	L'bk Overbridge eb	Littlebrook Interchange (W)	A206 (E)	81994	81912	8199481912	1092	91	1183	1194	47	1240	57	177	PASS	1.7	< 5	YES
25	Northbound off-slip at 1a	Littlebrook Interchange (W)	A282 Slip Road	81906	81910	8190681910	478	89	567	674	44	718	151	100	FAIL	6.0	< 10	YES
26	Northbound on-slip at 1a	Littlebrook Interchange (W)	A282 Slip Road	81909	81914	8190981914	616	57	673	658	94	753	80	100	PASS	3.0	< 5	YES
27	L'bk Overbridge wb	Littlebrook Interchange (E)	A206 (W)	81992	81911	8199281911	1104	69	1173	1127	64	1191	18	176	PASS	0.5	< 5	YES
28	Crossways (to L'bk)	A206 (N)	Littlebrook Interchange (E)	27013	81993	2701381993	1279	27	1306	1127	33	1159	147	196	PASS	4.2	< 5	YES
29	Crossways (from L'bk)	Littlebrook Interchange (E)	A206 (N)	81908	27013	8190827013	576	42	618	638	67	705	87	100	PASS	3.4	< 5	YES
30	B2228 Cotton Wb (to L'bk int)	Cotton Lane	Littlebrook Interchange (E)	27411	82006	2741182006	225	2	227	229	21	250	23	100	PASS	1.5	< 5	YES
31	B2228 Cotton eb (from L'bk int)	Littlebrook Interchange (E)	Cotton Lane	82006	27411	8200627411	267	1	268	239	20	259	9	100	PASS	0.6	< 5	YES
32	Southbound off-slip at 1a	A282 Slip Road	Littlebrook Interchange (E)	81913	81992	8191381992	673	90	763	648	106	753	10	114	PASS	0.3	< 5	YES
33	Southbound-slip on at 1a	Littlebrook Interchange (E)	A282 Slip Road	81991	81907	8199181907	1350	54	1404	1191	55	1246	158	211	PASS	4.3	< 5	YES
34	A226 London Rd Eb	A226 (W)	Cotton Lane	27435	27070	2743527070	-	-	634	480	10	490	144	100	FAIL	6.1	< 10	YES
35	A226 London Rd Wb	Cotton Lane	A226 (W)	27070	27435	2707027435	-	-	404	317	18	335	69	100	PASS	3.6	< 5	YES
36	B2228 sb	Cotton Lane	A226	22318	27070	2231827070	-	-	404	317	18	335	69	100	PASS	3.6	< 5	YES
37	B2228 nb	A226	Cotton Lane	27070	22318	2707022318	-	-	417	322	6	328	89	100	PASS	4.6	< 5	YES
38	A226 London Rd Wb	A226 (E)	Cotton Lane	22320	27070	2232027070	-	-	461	362	7	369	92	100	PASS	4.5	< 5	YES
39	A226 London Rd Eb	Cotton Lane	A226 (E)	27070	22320	2707022320	-	-	555	437	15	452	103	100	FAIL	4.6	< 5	YES
40	A2 Eb (west of Stone Park Rd)	A226 (W)	Stone Place Road Xroad	22307	22305	2230722305	-	-	553	515	10	525	28	100	PASS	1.2	< 5	YES
41	A226 Wb (west of Stone Park Rd)	Stone Place Road Xroad	A226 (W)	22305	22307	2230522307	-	-	446	518	4	522	76	100	PASS	3.5	< 5	YES
42	Stone Place Rd sb (B2228 alternative)	Stone Place Road	Stone Place Road Xroad	89595	22305	8959522305	-	-	63	137	8	145	82	100	PASS	8.0	< 10	YES
43	Stone Place Rd nb (B2228 alternative)	Stone Place Road Xroad	Stone Place Road	22305	89595	2230589595	-	-	91	145	15	161	70	100	PASS	6.2	< 10	YES
44	A226 wb (east of Hedge) S2	A226 (E)	Stone Place Road Xroad	20132	22306	2013222306	-	-	554	554	15	569	3	100	PASS	0.1	< 5	YES
45	A226 eb (east of Hedge) S2	Stone Place Road Xroad	A226 (E)	22306	20132	2230620132	-	-	767	538	4	542	225	115	FAIL	8.8	< 10	YES
46	Hedge Place Rd Nb	Hedge Place Road	Stone Place Road Xroad	22303	22341	2230322341	-	-	319	222	4	226	93	100	PASS	5.6	< 10	YES
47	Hedge Place Rd Sb	Stone Place Road Xroad	Hedge Place Road	22341	22303	2234122303	-	-	203	228	13	241	38	100	PASS	2.5	< 5	YES
48	B255 south of A226 nb	St Clements Way	St Clements Roundabout	27029	27028	2702927028	-	-	1254	943	14	958	296	188	FAIL	8.9	< 10	YES
49	B255 south of A226 sb	St Clements Roundabout	St Clements Way	27028	27029	2702827029	-	-	1430	1301	17	1318	112	215	PASS	3.0	< 5	YES
50	Crossing Sb	Long :0.247715	Lat :51.45587	75440	24103	7544024103	5966	786	5966	5009	751	5760	206	400	PASS	2.7	< 5	YES
51	Crossing Nb	Long :0.247094	Lat :51.45613	75109	75425	7510975425	2380	404	2784	2249	341	2589	194	400	PASS	3.7	< 5	YES
52	Crossing Nb	Long :0.246884	Lat :51.45625	75107	75424	7510775424	2093	406	2498	1785	337	2122	376	375	FAIL	7.8	< 10	YES
53	Southbound within 1a	Long :0.240067	Lat :51.45138	81913	81907	8191381907	4606	683	5289	4361	645	5007	282	400	PASS	3.9	< 5	YES
54	Northbound within 1a	Long :0.241240	Lat :51.45240	81906	75108	8190675108	3735	616	4351	3750	646	4395	45	400	PASS	0.7	< 5	YES
55	1a1b Sb	Long :0.237572	Lat :51.44332	82506	81905	8250681905	5684	732	6416	5552	700	6252	163	400	PASS	2.1	< 5	YES
56	1b1a Nb	Long :0.236893	Lat :51.44387	81904	82490	8190482490	3917	707	4625	4424	690	5114	489	400	FAIL	7.0	< 10	YES
57	PRI - sb off-slip	Long :0.239042	Lat :51.44042	81905	88691	8190588691	534	36	570	477	86	563	6	100	PASS	0.3	< 5	YES
58	PRI - nb on-slip	Long :0.238378	Lat :51.43951	71447	81904	7144781904	1072	94	1166	1045	71	1116	50	175	PASS	1.5	< 5	YES
59	M25 nb within 1b	Long :0.238530	Lat :51.44055	82482	81904	8248281904	3600	120	3720	3376	620	3996	276	400	PASS	4.4	< 5	YES
60	M25 sb within 1b	Long :0.239092	Lat :51.43646	81899	82391	8189982391	4402	563	4964	4504	588	5092	128	400	PASS	1.8	< 5	YES
61	J2 M25Sb within	Long :0.238701	Lat :51.42668	82209	81885	8220981885	2725	422	3147	2840	405	3245	98	400	PASS	1.7	< 5	YES
62	J2 M25Nb within	Long :0.238597	Lat :51.42691	81888	82206	8188682206	1741	403	2144	2213	378	2591	447	322	FAIL	9.2	< 10	YES
63	PRI - Di Southern (Sb on-slip)	Long :0.239970	Lat :51.43116	81898	88690	8189888690	843	53	896	907	80	987	91	134	PASS	3.0	< 5	YES
64	J2 M25N to A2 Coast	Long :0.239698	Lat :51.42942	82209	81689	8220981689	1848	234	2082	1664	182	1847	236	312	PASS	5.3	< 10	YES
65	J2 A2 Coast to M25N	Long :0.245697	Lat :51.42678	81649	73648	8164973648	800	207	1007	887	200	1086	80	151	PASS	2.5	< 5	YES
66	J2 to M25 nb	Long :0.238725	Lat :51.42805	71319	82206	7131982206	293	43	336	277	43	319	17	100	PASS	0.9	< 5	YES
67	M255 sb	Long :0.226463	Lat :51.41701	82483	81879	8248381879	4692	487	5179	4841	514	5355	176	400	PASS	2.4	< 5	YES
68	M255 nb	Long :0.226444	Lat :51.41886	82485	81886	8248581886	4231	555	4785	4430	521	4951	166	400	PASS	2.4	< 5	YES
69	A2 eb (W of J2)	Long :0.225549	Lat :51.42603	86162	81881	8616281881	5381	208	5543	5504	196	5700	157	400	PASS	2.1	< 5	YES
70	A2 wb (W of J2)	Long :0.225943	Lat :51.42584	81880	24026	8188024026	4139	108	4212	4241	104	4344	133	400	PASS	2.0	< 5	YES
71	A2/A2018 junction within wb	Long :0.180552	Lat :51.43512	86156	86177	8615686177	2903	94	2997	3590	53	3643	646	400	FAIL	11.2	> 10	NO
72	A2/A2018 junction within eb	Long :0.175526	Lat :51.43775	86177	86156	8617786156	3748	174	3921	4052	188	4240	319	400	PASS	5.0	< 10	YES
73	A2 /A2018 junction slip	Long :0.180443	Lat :51.43495	86156	86701	8615686701	670	56	726	651	51	702	24	109	PASS	0.9	< 5	YES
74	A2 /A2018 junction slip	Long :0.175734	Lat :51.43789	86177	86699	8617786699	642	74	716	665	21	686	29	107	PASS	1.1	< 5	YES
75	A2 /A2018 junction slip	Long :0.176289	Lat :51.43685	86698	86177	8669886177	709	9	718	715	16	732	14	108	PASS	0.5	< 5	YES
76	A2 Eb (E of J2)	Long :0.263754	Lat :51.42828	82526	81890	8252681890	6224	509	6733	6481	381	6862	129	400	PASS	1.6	< 5	YES
77	A2 Wb (E of J2)	Long :0.265195	Lat :51.42834	82921	82524	8292182524	4447	310	4790	4726	300	5026	235	400	PASS	3.4	< 5	YES
78	Coastbound off at Bean	Long :0.276099	Lat :51.43092	81890	82960	8189082960	912	23	935	621	18	639	296	140	FAIL	10.5	> 10	NO
79	A2 Westbound exit for Bean Jnct	Long :0.284442	Lat :51.43090	81917	73617	8191773617	1369	24	1393	1359	21	1380	13	209	PASS	0.3	< 5	YES
80	A2 eb within Bean	Long :0.284715	Lat :51.43119	81890	81918	8189081918	5759	383	6142	5861	362	6223	81	400	PASS	1.0	< 5	YES
81	A2 @ Bean Junction Westbound	Long :0.284463	Lat :51.43119	81917	81885	8191781889	3385	319	3673	3866	290	4156	483	400	FAIL	7.7	< 10	YES
82	Coastbound on-slip at Bean	Long :0.287063	Lat :51.43063	82964	81918	8296481918	1449	32	1481	1705	105	1810	329	222	FAIL	8.1	< 10	YES
83	A2 eb (Bean to Ebbf)	Long :0.303067	Lat :51.43049	82922	81984	8292281984	7526	549	8007	7566	467	8033	26	400	PASS	0.3	< 5	YES
84	A2 wb duplicate	Long :0.302857	Lat :51.43031	82919	82929	8291982929	4839	458	5297	5225	311	5536	239	400	PASS	3.3	< 5	YES
85	A2 eb (within Ebbf)	Long :0.322875	Lat :51.42986	81984	81980	8198481980	6296	384	6624	6293	397	6690	66	400	PASS	0.8	< 5	YES
86	A2 wb (within Ebbf)	Long :0.309976	Lat :51.43026	81983	81982	8198381982	4443	330	4754	4655	290	4945	191	400	PASS	2.7	< 5	YES
87	Coastbound off-slip at Ebb	Long :0.314310	Lat :51.43061	81984	73633	8198473633	1216	76	1292	1273	70	1343	51	194	PASS	1.4	< 5	YES
88	London off-slip (at Ebb)	Long :0.315867	Lat :51.43011	81983	73628	8198373628	258	17	275	288	4	292	17	100	PASS	1.0	< 5	YES
89	Coastbound on at Ebb	Long :0.324360	Lat :51.42964	81981	81980	8198181980	566	21	587	579	2	581	6	100	PASS	0.2	< 5	YES
90	Westbound access to A2 from Ebbs Vall	Long :0.310142	Lat :51.43014	82375	81892	8237581892	446	31	477	792	35	827	350	100	FAIL	13.9	> 10	NO
91	A2026 Burnham Rd eb C1inb	Burnham Road	Priory Road	86211	86290	8621186290	740	7	747	930	16	946	199	112	FAIL	6.8	< 10	YES
92	A2026 Burnham Rd wb C1outb	Priory Road	Burnham Road	86290	86211	8629086211	810	7	817	944	8	953	136	123	FAIL	4.6	< 5	YES
93	NG - Victoria Rd wb	Victoria Road	Priory Road	86208	86290	8620886290	661	6	667	670	5	675	8	100	PASS	0.3	< 5	YES
94	NG - Victoria Rd eb	Priory Road	Victoria Road	86290	86208	8629086208	715	7	722	916	16	931	209	108	FAIL	7.3	< 10	YES
95	NG - Victoria Rd eb	Victoria Road	Mill Pond Rd Rbt	86208	86210	8620886210	810	8	818	916	16	931	113	123	PASS	3.8	< 5	YES
96	NG - Victoria Rd wb	Mill Pond Rd Rbt	Victoria Road	86210	86208	8621086208	625	9	634	670	5	675	41	100	PASS	1.6	< 5	YES
97	TCR_Hythe St (S1) nb	Hythe Street	Mill Pond Rd Rbt	86280	86210	8628086210	522	3	525	471	3	474	51	100	PASS	2.3	< 5	YES
98	TCR_Hythe St (s1) sb	Mill Pond Rd Rbt	Hythe Street	86210	86280	8621086280	490	3	493	665	16	681	188	100	FAIL	7.7	< 10	YES
99	NG - Mill Pond East Wb	Temple Hill	Overy St	86206	86220	8620686220	577	5	582	710	12	722	140	118	FAIL	5.5	< 10	YES
100	NG - Mill Pond West Eb	Overy St	Temple Hill	86220	86206	8622086206	777	7	784	820	7	827	43	118	PASS	1.5	< 5	YES
101	TCR-OveryNb	Overy St	Mill Pond Road	86191	86220	8619186220	230	0	230	308	3	311	81	100	PASS	4.9	< 5	YES
102	TCR-Overy Sb	Mill Pond Road	Overy St	86220	86191	8622086191	229	0	229	251	5	256	27	100	PASS	1.7	< 5	YES
103	NG - Mill Pond West eb	Mill Pond Road	Temple Hill	86210	86220	8621086220	777	7	784	763	5	768	16	118	PASS	0.6	< 5	YES
104	NG - Mill Pond East wb	Temple Hill	Mill Pond Road	86220	86210	8622086210	562	5	567	714	7	719	152	100	FAIL	6.0	< 10	YES
105	Temple Hill (into TH -)	Temple Hill	Temple Hill Rbt	86206	86203	8620686203	828	2	830	718	4	722	108	125	PASS	3.9	< 5	YES
106	Temple Hill (out of TH -)	Temple Hill Rbt	Temple Hill	86203	86206	8620386206	472	11	483	548	6	554	71	100	PASS	3.1	< 5	YES
107	Temple Hill (out of TH -)	Temple Hill Sq	Temple Hill Rbt	86627	86203	8662786203	441	11	452	548	6	554	102	100	FAIL	4.6	< 5	YES
108	Temple Hill (into TH -)	Temple Hill Rbt	Temple Hill Sq	86627	86627	8620386627	601	2	603	718	4	722	119	100	FAIL	4.6	< 5	YES
109	St Vincents Nb	Attlee Dr	St Vincent's Ave	86197	86198	8619786198	483	12	495	403	15	418	77	100	PASS	3.6	< 5	YES
110	St Vincents Sb	St Vincent's Ave	Attlee Dr	86198	86197	8619886197	563	2	565	453	20	473	92	100	PASS	4.0	< 5	YES
111	Temple Hill Square Eb	Temple Hill Sq	St Vincent's Ave	86627	86198	8662786198	594	2	596	572	4	576	20	100	PASS	0.8	< 5	YES
112	Temple Hill Square Wb	St Vincent's Ave	Temple Hill Sq	86198	86627	8619886627	450	12	462	485	6	491	29	100	PASS	1.3	< 5	YES
113	Westgate/HighfieldS	Priory Rd	Westgate Rd	86240	86277	8624086277	849	5	854	852	7	859	5	135	PASS	0.2	< 5	YES
114	Westgate/HighfieldN	Highfield Road N	Priory Road	86239	86240	8623986240	894	5	899	893	9	902	3	135	PASS	0.1	< 5	YES
115	Westgate/HighfieldN	Westgate Rd (WNW)	Kent Road	86277	86245	8627786245	853	4	857	852	7	859	2	129	PASS	0.1	< 5	YES
116	Westgate/HighfieldN	Kent Road	Westgate Rd (WNW)	86245	86277	8624586277	282	0	282	340	6	346	64	100	PASS	3.6	< 5	YES
117	TCR_Hythe St (S1) nb	Hythe Street	Hythe Street N	86280	86257	8628086257	511	3	514	565	16	581	167	100	FAIL	6.8	< 10	YES
118	TCR_Hythe St (s1) sb	Hythe Street N	Hythe Street	86257	86280	8625786280	508	6	514	471	3	474	40	100	PASS	1.8	< 5	YES
119	TC_Home Gardens 1 wb	Westgate Rd	Home Gardens	86258	86257	8625886257	421	2	423	441	5	445	22	100	PASS	1.1	< 5	YES
120	TC_Home Gardens 1 eb	Westgate Rd	Home Gardens	86257	86258	8625786258	1024	3	1027	1122	17	1145	118	154	PASS	3.5	< 5	YES
121	TC_Westgate wb	Westgate Rd	Home Gardens E	86245	86257	8624586257	747	4	751	832	7	839	88	113	PASS	3.1	< 5	YES
122	TC_Westgate eb	Home Gardens	Westgate Rd	86257	86245	8625786245	385	1	386	340	6	346	40	100	PASS	2.1	< 5	YES
123	TC_Home Gardens 3 eb	Home Gardens E	Home Gardens WB	86262	86260	8626286260	446	3	449	421	6	427	22	100	PASS	1.1	< 5	YES
124	TC_Home Gardens 3 wb	Home Gardens EB	Home Gardens W	86260	86262	8626086262	1076	3	1079	1035	18	1053	26	153	PASS	0.8	< 5	YES
125	TC_Home Gardens 2 wb	Home Gardens W	Home Gardens EB	86258	86260	8625886260	1024	3	1027	1035	18	1053	26	154	PASS	0.8	< 5	YES
126	TC_Home Gardens 2 eb	Home Gardens WB	Home Gardens W	86260	86258	8626086258	469	3	472	421	6	427	45	100	PASS	2.1	< 5	YES
127	East Hill Eb	East Hill	Mount Pleasant Rd	86190	86636	8619086636	700	5	705	571	7	578	127	100	FAIL	5.0	< 10	YES
128	East Hill Wb	Mount Pleasant Rd	East Hill	86636	86190	8663686190	757	2	759	818	20	838	79	114	PASS	2.8	< 5	YES
129	Darenth Rd sb	Darenth Road	Mount Pleasant Rd	86638	86636	8663886636	187	0	187	198	1	199	12	100	PASS	0.9	< 5	YES
130	Darenth Rd nb	Mount Pleasant Rd	Darenth Road	86636	86638	8663686638	121	0	121	72	0	72	49	100	PASS	5.0	< 10	YES
131	East Hill	Overy Liberty	Mount Pleasant Road	86637	86187	8663786637	881	2	883	818	20	839	44	132	PASS	1.5	< 5	YES
132	East Hill	Mount Pleasant Rd	Overy Liberty	86187	86637	8618786637	751	5	756	698	7	705	51	113	PASS	1.9	< 5	YES
133	A226 The Brent (W) - wb	The Brent	Park Road Rbt	86315	86313	8631586313	563	2	565	529	4	533	32	100	PASS	1.4	< 5	YES
134	A226 The Brent (W) - eb	Park Road Rbt	The Brent	86313	86315	8631386315	654	6	660	723	9	733	73	100	PASS	2.8	< 5	YES
135	Park Road nwb	Park Road	Park Road Rbt	79536	86313	7953686313	478	6	484	573	5	578	95	100	PASS	4.1	< 5	YES
136	Park Road seb	Park Road Rbt	Park Road	86313	79536	8631379536	360	2	362	415	11	426	64	100	PASS	3.2	< 5	YES
137	A226 East Hill (E) - eb	East Hill	Park Road Rbt	86307	86313	8630786313	790	5	795	860	21	881	86	119	PASS	3.0	< 5	YES
138	A226 East Hill (E) - wb	Park Road Rbt	East Hill	86313	86307	8631386307	817	5	822	824	10	834	12	123	PASS	0.4	< 5	YES
139	TH - St Vin Sb	St Vincent's Rd	Watling Street Rbt	86329	27080	8632927080	620	1	621	453	20	473	148	100	FAIL	6.3	< 10	YES
140	TH - St Vin Nb	Watling Street Rbt	St Vincent's Rd	27080	86329	2708086329	657	13	670	512	6	518	147	100	FAIL	5.9	< 10	YES
141	A226 The Brent (E) - eb	The Brent E	Watling Street Rbt	27430	27080	2743027080	617	2	619	539	10	549	70	100	PASS	2.9	< 5	YES
142	A226 The Brent (E) - wb	Watling Street Rbt	The Brent E	27080	27430	2708027430	674	2	676	605	6	611	65	100	PASS	2.6	< 5	YES
143	B2500 Watling St (W) -wb	Watling Street	Watling Street Rbt	29820	27080	2982027080	556	9	565	507	7	514	51	100	PASS	2.2	< 5	YES
144	B2500 Watling St (W) - eb	Watling Street Rbt	Watling Street	27080	29820	2708029820	557	2	559	576	27	603	44	100	PASS	1.8	< 5	YES
145	A226 The Brent (W) - eb - duplicate	The Brent W	Watling Street Rbt	86315	27080	8631527080	671	2	673	723	10	733	60	100	PASS	2.3	< 5	YES
146	A226 The Brent (W) - eb - duplicate	Watling Street Rbt	The Brent W	27080	86315	2708086315	571	2	573	529	4	533	40	100	PASS	1.7	< 5	YES
147	TC - Instone	Instone Rd Jnct	Instone Rd South	86690	86685	8669086685	783	1	784	744	4	748	36	118	PASS	1.3	< 5	YES
148	TC - Instone	Lowfield St S	Instone Rd Jnct	86661	86685	8666186685	477	5	482	468	2	470	12	100	PASS	0.5	< 5	YES
149	TC - Instone	Instone Rd Jnct	Lowfield St S	86685	86661	8668586661	419	5	424	568	4	572	148	100	FAIL	6.6	< 10	YES
150	TC - Instone	Instone Rd Jnct	Instone Rd	86685	86225	8668586225	837	5	842	643	3	646	196	126	FAIL	7.2	< 10	YES
151	Highfield Rd Nb (one-way)	Instone Rd	Highfield Road N	86225	86229	8622586229	767	6	773	672	3	675	98	100	PASS	3.6	< 5	YES
152	TC - Instone	Instone Rd	Highfield Road	86695	86229	8669586229	961	5	966	643	3	646	320	145	FAIL	11.3	> 10	NO
153	Highfield Rd - South of Instone nb	Highfield Road S	Highfield Road N	86228	86229	8622886229	181	3	184	30	0	30	154	100	FAIL	14.0	> 10	NO
154	Highfield Rd - South of Instone sb	Highfield Road N	Highfield Road S	86229	86228	8622986228	377	0	377	1	0	1	376	100	FAIL	27.3	> 10	NO

2019 PM - observed vs modelled checks - POST MATRIX ESTIMATION

Ref	Link	From	To	A node	B node	AB pair	Car/LGV	HGV	Total	Car/LGV	HGV	Total	Diffs	Tolerance	Pass / Fail	GEH	Banding	PASS or < 10	
							observed			modelled			Absolute check			GEH check			
155	Westgate/HighfieldN	Highfield Road N	West Hill Junction	86233	86239	8623986233	284	0	284	231	6	237	47	100	PASS	2.9	< 5	YES	
156	Westgate/HighfieldN	West Hill Junction	Highfield Road N	86233	86239	8623386239	900	7	907	893	9	902	5	136	PASS	0.2	< 5	YES	
157	TC	Highfield Road	West Hill Junction	86632	86232	8663286233	813	6	819	672	3	675	144	123	FAIL	5.3	< 10	YES	
158	Highfield Rd - North of Heath sb	Highfield Road	Heath Lane Rbt	86226	86659	8622686659	539	0	539	1	0	1	538	100	FAIL	32.7	> 10	NO	Due to zoning
159	Highfield Rd - North of Heath nb	Heath Lane Rbt	Highfield Road	86659	86226	8665986226	258	1	259	30	0	30	229	100	FAIL	19.0	> 10	NO	
160	Heath St wb	Heath Street	Heath Lane Rbt	86221	86659	8622186659	191	1	192	279	4	284	92	100	PASS	5.9	< 10	YES	
161	Heath St eb	Heath Lane Rbt	Heath Street	86659	86221	8665986221	220	0	220	134	4	138	82	100	PASS	6.1	< 10	YES	
162	Highfield Road S nb	Highfield Road S	Heath Lane Rbt	86658	86659	8665886659	131	0	131	19	0	19	112	100	FAIL	12.9	> 10	NO	
163	Highfield Road S sb	Heath Lane Rbt	Highfield Road S	86659	86658	8665986658	336	0	336	293	4	297	39	100	PASS	2.2	< 5	YES	
164	Heath Lane (lower) - eb	Heath Lane	Heath Lane Rbt	86657	86659	8665786659	228	1	229	439	8	447	218	100	FAIL	11.9	> 10	NO	
165	Heath Lane (lower) - wb	Heath Lane Rbt	Heath Lane	86659	86657	8665986657	275	1	276	281	4	286	10	100	PASS	0.6	< 5	YES	
166	Lowfield St (north of B2174) sb	B2174/A255 Junction	Lowfield Street N	86222	86641	8622286641	455	1	456	557	6	564	108	100	FAIL	4.8	< 5	YES	
167	Lowfield St (north of B2174) nb	B2174/A255 Junction	Lowfield Street N	86641	86222	8664186222	530	6	536	516	6	522	14	100	PASS	0.6	< 5	YES	
168	A225 Wb	Princes Road E	B2174/A255 Junction	86704	86641	8670486641	714	7	721	727	14	741	20	108	PASS	0.8	< 5	YES	
169	A225 Eb	B2174/A255 Junction	Princes Road E	86641	86704	8664186704	935	10	945	1002	19	1022	77	142	PASS	2.4	< 5	YES	
170	A225 Nb	Lowfield Street S	B2174/A255 Junction	86648	86641	8664886641	706	12	718	793	8	801	83	108	PASS	3.0	< 5	YES	
171	A225 Sb	B2174/A255 Junction	Lowfield Street S	86641	86648	8664186648	628	3	631	816	8	824	193	100	FAIL	7.2	< 10	YES	
172	B2174 eb	Princes Road W	B2174/A255 Junction	86003	86641	8600386641	785	4	789	774	9	783	6	118	PASS	0.2	< 5	YES	
173	B2174 wb	B2174/A255 Junction	Princes Road W	86641	86003	8664186003	567	5	572	516	4	520	52	100	PASS	2.2	< 5	YES	
174	Highfield Road S sb	Highfield Rd S	B2174 Junction	86658	86642	8665886642	339	0	339	293	4	297	42	100	PASS	2.4	< 5	YES	
175	Highfield Road S nb	B2174 Junction	Highfield Rd S	86642	86658	8664286658	122	0	122	19	0	19	103	100	FAIL	12.3	> 10	NO	
176	B2174 Wb	Princes Road E	B2174 Junction	86003	86642	8600386642	550	5	555	414	2	416	139	100	FAIL	6.3	< 10	YES	
177	B2174 Eb	B2174 Junction	Princes Road E	86642	86003	8664286003	840	4	844	786	6	792	52	127	PASS	1.8	< 5	YES	
178	B2174 Eb	Princes Road W	B2174 Junction	86004	86642	8600486642	519	4	523	493	2	495	28	100	PASS	1.2	< 5	YES	
179	B2174 Wb	B2174 Junction	Princes Road W	86642	86004	8664286004	446	5	451	396	2	397	54	100	PASS	2.6	< 5	YES	
180	Lowfield St (south of Heath) nb	B2174	A226	86222	86660	8622286660	310	2	312	516	6	522	210	100	FAIL	10.3	> 10	NO	
181	Lowfield St (south of Heath) sb	B2174	A226	86660	86222	8666086222	472	4	476	557	6	564	88	100	PASS	3.8	< 5	YES	
182	A225 Nb	B258	B2174	86647	86648	8664786648	472	8	480	793	8	801	321	100	FAIL	12.7	> 10	NO	
183	A225 Sb	B2174	B258	86648	86647	8664886647	745	2	747	816	8	824	77	112	PASS	2.8	< 5	YES	
184	A2018 eb	A2(T)	A226	86684	86683	8668486683	641	12	653	674	10	684	31	100	PASS	1.2	< 5	YES	
185	A2018 wb	A2(T)	A226	86683	86684	8668386684	604	25	629	640	13	654	25	100	PASS	1.0	< 5	YES	
186	A226 eb	LA Boundary	A2018	86339	86282	8633986282	351	2	353	297	1	298	55	100	PASS	3.1	< 5	YES	
187	A226 Wb Rd Nb (one-way)	LA Boundary	A2018	86282	86339	8628286339	415	5	420	358	0	358	62	100	PASS	3.1	< 5	YES	
188	Highfield Rd Nb (one-way)	A225	A226 West Hill	86231	86632	8623186632	130	10	549	672	3	675	126	100	FAIL	5.1	< 10	YES	
189	PRI - A225Wb	A296	A282(T)	81900	81902	8190081902	691	18	709	735	54	790	81	106	PASS	2.9	< 5	YES	
190	PRI - A225Eb	A296	A282(T)	71446	81900	7144681900	1033	17	1050	969	25	994	56	158	PASS	1.8	< 5	YES	
191	A225 Princes eb	A225 Lowfield St	A296	86292	86295	8629286295	817	32	849	811	19	829	20	127	PASS	0.7	< 5	YES	
192	A225 Princes wb	A225 Lowfield St	A296	86295	86292	8629586292	798	25	823	661	14	675	148	123	FAIL	5.4	< 10	YES	
193	West Hill (west of Priory H) wb	A2018	A226 Highfield Road North	86265	86670	8626586670	520	9	529	541	7	548	19	100	PASS	0.8	< 5	YES	
194	West Hill (west of Priory H) eb	A2018	A226 Highfield Road North	86670	86265	8667086265	368	7	375	540	7	547	172	100	FAIL	8.0	< 10	YES	
195	A225 Nb	A20	B258	90050	44053	9005044053	506	13	519	781	10	791	272	100	FAIL	10.6	> 10	NO	
196	A225 Sb	A20	B258	44053	90050	4405390050	502	3	505	549	7	555	50	100	PASS	2.2	< 5	YES	
197	Overy Liberty/Market St	A225	A226 Home Gardens	86689	86690	8668986690	747	3	751	744	4	748	3	113	PASS	0.1	< 5	YES	
198	A226 Stone Eb	A296	A206	22322	27505	2232227505	557	6	563	515	10	525	38	100	PASS	1.6	< 5	YES	
199	A226 Stone Wb	A296	A206	27505	22322	2750522322	537	4	541	518	4	522	19	100	PASS	0.8	< 5	YES	
200	Crossways	A206 Galleon Blvd	A206 Crossway Blvd	22250	27014	2225027014	636	49	685	630	32	662	23	100	PASS	0.9	< 5	YES	
201	Crossways	A206 Galleon Blvd	A206 Crossway Blvd	27014	22250	2701422250	670	24	694	547	3	550	144	100	FAIL	5.8	< 10	YES	
202	A206 Crossways	A206 Galleon Blvd	Claire Causeway	27014	27007	2701427007	1042	20	1062	1091	37	1128	66	159	PASS	2.0	< 5	YES	
203	A206 Crossways	Claire Causeway	A206 Galleon Blvd	27007	27014	2700727014	469	16	485	370	11	381	104	100	FAIL	5.0	< 10	YES	
204	A206 Crossways E eb S2	Claire Causeway	Station Road	27007	71708	2700771708	1329	17	1346	1255	38	1294	52	202	PASS	1.4	< 5	YES	
205	A206 Crossways wb E S2	Station Road	Claire Causeway	27009	27007	2700927007	603	21	624	496	11	508	116	100	FAIL	4.9	< 5	YES	
206	A206 (north of Steele) eb	Steele Ave	A206	27010	27009	2701027009	713	19	732	644	13	657	75	110	PASS	2.9	< 5	YES	
207	A206 (north of Steele) sb	A206	Steele Ave	27009	27010	2700927010	1167	15	1182	1249	37	1286	104	177	PASS	3.0	< 5	YES	
208	A206 (north of A226) nb	St Clements Rbt	Steele Ave	27028	27010	2702827010	815	20	835	741	13	755	80	125	PASS	2.9	< 5	YES	
209	A206 (north of A226) sb	Steele Ave	St Clements Rbt	27010	27028	2701027028	1167	16	1183	1249	37	1286	103	177	PASS	2.9	< 5	YES	
210	Crossways zone loader (arr)	Galleon Blvd N	Crossways	27014	27017	2701427017	115	36	151	124	5	129	22	100	PASS	1.9	< 5	YES	
211	Crossways zone loader (dep)	Crossways	Galleon Blvd N	27017	27014	2701727014	263	15	278	338	3	342	64	100	PASS	3.6	< 5	YES	
212	Crossways	Galleon Blvd S	Crossways	22235	27014	2223527014	550	4	554	517	6	523	31	100	PASS	1.3	< 5	YES	
213	Crossways	Crossways	Galleon Blvd S	27014	22235	2701422235	90	4	94	93	8	100	6	100	PASS	0.6	< 5	YES	
214	Crossways zone loader (arr)	Claire Causeway	Crossways	27007	89422	2700789422	6	0	6	0	0	0	6	100	PASS	3.5	< 5	YES	
215	Crossways zone loader (dep)	Crossways	Claire Causeway	89422	27007	8942227007	38	1	39	38	1	38	1	100	PASS	0.1	< 5	YES	
216	A226 eb (east of B255)	Mounts Road	Rbt	27028	28053	2702828053	745	15	760	747	26	773	13	114	PASS	0.5	< 5	YES	
217	A226 wb (east of B255)	Rbt	Mounts Road	28053	27028	2805327028	566	14	580	600	17	616	36	100	PASS	1.5	< 5	YES	
218	A226 eb (west of B255)	Sanderling Way	Rbt	20132	27028	2013227028	766	4	770	652	5	656	114	116	PASS	4.3	< 5	YES	
219	A226 wb (west of B255)	Rbt	Sanderling Way	27028	20132	2702820132	602	8	610	655	16	671	61	100	PASS	2.4	< 5	YES	
220	B255 south of A226 nb	B225	Rbt	27027	27029	2702727029	936	19	955	943	14	957	3	143	PASS	0.1	< 5	YES	
221	B255 south of A226 sb	Rbt	B225	27029	27027	2702927027	1182	12	1194	1301	17	1318	124	179	PASS	3.5	< 5	YES	
222	B225 north of Mounts nb	Mounts Road	Castleridge Drive	27026	89424	2702689424	996	20	1016	1000	14	1015	1	152	PASS	0.0	< 5	YES	
223	B225 north of Mounts sb	Castleridge Drive	Mounts Road	89424	27026	8942427026	1229	12	1241	1297	17	1315	74	186	PASS	2.1	< 5	YES	
224	CG - A296W Eb	A296 Princes Road	Clarendon Gardens Rbt	81997	22340	8199722340	484	5	489	416	94	510	21	100	PASS	0.9	< 5	YES	
225	CG - A296W Wb	Clarendon Gardens Rbt	A296 Princes Road	22340	81997	2234081997	554	17	571	479	36	514	57	100	PASS	2.4	< 5	YES	
226	CG - B2500 Eb	Watling Street	Clarendon Gardens Rbt	22343	29914	2234329914	499	2	501	524	38	561	55	100	PASS	2.6	< 5	YES	
227	CG - B2500 Wb	Clarendon Gardens Rbt	Watling Street	29914	22343	2991422343	508	11	519	469	37	505	14	100	PASS	0.6	< 5	YES	
228	CG - A296E Eb	Clarendon Gardens Rbt	A296 Watling Street	27506	22338	2750622338	1014	4	1018	944	16	960	58	153	PASS	1.8	< 5	YES	
229	CG - A296E Wb	A296 Watling Street	Clarendon Gardens Rbt	22338	27506	2233827506	875	31	906	718	79	796	110	136	PASS	3.8	< 5	YES	
230	CG - Gore Road nb	Gore Road	Clarendon Gardens Rbt	22332	22339	2233222339	374	0	374	274	5	279	95	100	PASS	5.2	< 10	YES	
231	CG - Gore Road sb	Clarendon Gardens Rbt	Gore Road	22339	22332	2233922332	428	6	434	493	2	495	61	100	PASS	2.8	< 5	YES	
232	A296 (E of DV) Eb S2	A296	Bean Junction	27506	22243	2750622243	713	4	717	780	93	872	155	108	FAIL	5.5	< 10	YES	
233	A296 (E of DV) Wb S2	Bean Junction	A296	22243	27506	2224327506	783	30	813	713	9	722	91	122	PASS	3.3	< 5	YES	
234	Former B2174 Nb (from DV)	St James Lane	Rbt	27506	22301	2750622301	384	0	384	300	6	306	78	100	PASS	4.2	< 5	YES	
235	Former B2174 Sb (to DV)	Rbt	St James Lane	22301	27506	2230127506	647	4	171	258	244	4	111	100	FAIL	7.4	< 10	YES	
236	Darenth Valley out	27506	27506	9861527506	562	0	562	492	3	495	67	100	PASS	2.9	< 5	YES					
237	Darenth Valley in			27506	98615	2750698615	264	0	264	156	0	156	108	100	FAIL	7.4	< 10	YES	
238	A226 Swanscombe Eb	Manor Way Staggered Jnct	A226 London Road E	20119	27500	2011927500	741	6	747	528	22	549	198	112	FAIL	7.8	< 10	YES	
239	A226 east of K'hall eb	A226 London Road W	Manor Way Staggered Jnct	20126	20119	2012620119	775	12	787	671	24	695	92	118	PASS	3.4	< 5	YES	
240	A226 west of K'hall eb	Manor Way Staggered Jnct	A226 London Road W	20119	20126	2011920126	498	15	513	427	18	446	67	100	PASS	3.1	< 5	YES	
241	Craylands Lane Nb	Craylands Lane	Manor Way Staggered Jnct	89428	20119	8942820119	126	1	127	131	1	133	6	100	PASS	0.5	< 5	YES	
242	Craylands Lane Sb	Manor Way Staggered Jnct	Craylands Lane	20119	89428	2011989428	180	0	180	213	3	215	35	100	PASS	2.5	< 5	YES	
243	A226 Swanscombe Eb	A226 London Road	High Street	27500	20118	2750020118	735	9	744	528	22	549	195	112	FAIL	7.7	< 10	YES	
244	A226 Swanscombe Wb	High Street	A226 London Road	20118	27500	2011827500	437	8	445	366	17	383	62	100	PASS	3.1	< 5	YES	
245	A226 Swanscombe Wb	High Street	A226 Galley Hill Road	23178	20118	2317820118	443	8	451	410	13	423	28	100	PASS	1.3	< 5	YES	
246	A226 Swanscombe Eb	High Street	A226 Galley Hill Road	20118	23178	2011823178	606	7	613	307	18	326	287	100	FAIL	13.3	> 10	NO	
247	Swanscombe High St Nb	High Street	A226	20226	20118	2022620118	141	2	143	45	4	49	94	100	FAIL	9.6	< 10	YES	
248	Swanscombe High St Sb	A226	High Street	20118	20226	2011820226	277	4	281	310	3	313	32	100	PASS	1.8	< 5	YES	
249	Lower Rd (nb -arr)			23178	68667	2317868667	42	9	51	46	0	46	5	100	PASS	0.7	< 5	YES	
250	Lower Rd (sb - dep)			68667	23178	6866723178	188	9	197	187	0	187	10	100	PASS	0.7	< 5	YES	
251	A226 Northfleet Eb			23178	23177	2317823177	871	31	902	468	17	486	416	135	FAIL	15.8	> 10	NO	
252	A226 Northfleet Wb	B2175 Stonebridge Road	A226	23177	23178	2317723178	547	32	579	451	13	465	114	100	FAIL	5.0	< 10	YES	
253	Thames Way under HS (enb)	Thames Way	Ebbs Car Park	98581	23177	9858123177	243	26	269	134	12	144	117	100	FAIL	7.2	< 10	YES	
254	Thames Way under HS (swb)	Ebbs Car Park	Thames Way	23177	98581	2317798581	485	21	506	484	11	494	12	100	PASS	0.5	< 5	YES	
255	Thames Way (nwb)	Thames Way	Ebbs Car Park	81202	98581	8120298581	236	26	262	135	23	157	105	100	FAIL	7.2	< 10	YES	
256	Thames Way (seb)	Ebbs Car Park	Thames Way	98581	81202	9858181202	533	21	554	539	11	550	4	100	PASS	0.2	< 5	YES	
257	oo Ebbsfleet Gateway eb	23185	89364	2318589364	303	45	348	267	22	289	59	100	PASS	3.3	< 5	YES					
258	oo Ebbsfleet Gateway wb	89364	23185	8936423185	937	31	968	888	18	906	62	145	PASS	2.0	< 5	YES					
259	oo International Way nb	23185	89646	2318589646	226	1	227	221	0	222	5	100	PASS	0.3	< 5	YES					
260	oo International Way sb	89646	23185	8964623185	66	0	66	61	0	61	5	100	PASS	0.7	< 5	YES					
261	oo B259 sb	89430	23185	8943023185	501	4	505	658	5	663	158	100	FAIL	6.5	< 10	YES					
262	oo B259 nb	23185	89430	2318589430	466	4	470	421	5	426	44	100	PASS	2.1	< 5	YES					
263	oo A2260 south of B259 nb	73622	23185	7362223185	814	48	862	649	28	677	185	129	FAIL	6.7	< 10	YES					
264	oo A2260 south of B259 sb	23185	73623	2318573623	1323	33	1356	1346	23	1369	13	203	PASS	0.4	< 5	YES					
265	A225 Hawley Road Northbound	26013	86727	2601386727	546	4	551	539	1	540	11	100	PASS	0.5	< 5	YES					
266	A225 Hawley Road Southbound	86727	26013	8672726013	592	4	596	643	2	645	49	100	PASS	2.0	< 5	YES					
267	B260 Green Street Green Road Northbound	89426	22334	8942622334	913	17	929	820	9	829	100	139	PASS	3.4	< 5	YES					
268	B260 Green Street Green Road Westbound	22334	89426	2233489426	801	15	815	713	5	718	97	122	PASS	3.5	< 5	YES					
269	B255 Bean Lane (north of A2 North Roundabout) Northbound	83356	83358	8335683359	506	9	516	1178	33	1211	696	100	FAIL	23.7	> 10	NO	Check count
270	B255 Bean Lane (north of A2 North Roundabout) Southbound	83358	89865	8335889865	367	6	373	578	6	584	211	100	FAIL	9.7	< 10	YES	
271	A296 Roman Road Northbound	27033	27035	2703327035	1560	46	1606	1705	105	1810	204	241	PASS	4.9	< 5	YES					
272	B262 Hall Road Southbound	83355	28510	8335528510	1485	27	1512	1735	53	1788	276	227	FAIL	6.8	< 10	YES					
273	B262 Hall Road Eastbound	28510	83355	2851083355	1503	27	1530	1485	27	1512	18	229	PASS	0.5	< 5	YES					
274	Parsonage Lane Southbound	44053	29908	4405329908	897	12	908	989	11	1000	92	136	PASS	3.0	< 5	YES					
275	Parsonage Lane Northbound	29908	44053	2990844053	443	6	449	496	6	502	53	100	PASS	2.4	< 5	YES					
276	A225 Main Road Southbound	90062	90050	9006290050	848	41	889	827	8	835	54	133	PASS	1.8	< 5	YES					
277	A225 Main Road Northbound	90050	90062	9005090062	467	10	478	480	7	487	10	100	PASS	0.4	< 5	YES					
278	B260 Main Road Southbound	26637	90788	2663790788	544	15	559	520	5	525	34	100	PASS	1.5	< 5	YES					
279	B260 Main Road Northbound	90788	26637	9078826637	367	10	378	370	7	376	1	100	PASS	0.0	< 5	YES					
280	B255 Whitehill Road Northbound	90788	26554	9078826554	295	5	300	350	4	354	54	100	PASS	3.0	< 5	YES					
281	B255 Whitehill Road Eastbound	26554	90788	2655490788	300	5	305	310	4	314	9	100	PASS	0.5	< 5	YES					
282	New Barn Road Westbound	47136	26899	4713626899	418	5	423	374	3	376	47	100	PASS	2.3	< 5	YES					
283	New Barn Road Eastbound	26899	47136	2689947136	496	6	502	510	1	510	9	100	PASS	0.4	< 5	YES					
284	A226 The Brent Southbound	27431	27432	2743127432	752	22	774	560	4	566	208	116	FAIL	8.0	< 10	YES					
285	A226 The Brent Northbound	27432	27431	2743227431	598	18	616	480	10	490	126	100	FAIL	5.4	< 10	YES					
286	B500 Watling Street Southbound	22346	22347	2234622347	607	9	616	604	9	613	3	100	PASS	0.1	< 5	YES					
287	B2500 Watling Street Eastbound	22347	22346	2234722346	458	12	469	489	4	493	24	100	PASS	1.1	< 5	YES					
288	B260 Trolling Down Hill Westbound	22334	86297	2233486297	496	9	505	476	7	483	22	100	PASS	1.0	< 5	YES					
289	B260 Trolling Down Hill Westbound	86297	22334	8629722334	492	8	501	431	3	434	67	100	PASS	3.1	< 5	YES					
290	A225 Hawley Road Eastbound	44053	26013	4405326013	473	12	485	448	1	449	35	100	PASS	1.6	< 5	YES					
291	A225 Hawley Road Westbound	26013	44053	2601344053	577	10	587	595	3	597	10	100	PASS	0.4	< 5	YES					
292	Clement Street Westbound	44077	44053	4407744053	152	2	154	258	2	260	105	100	FAIL	7.3	< 10	YES					
293	Clement Street Southbound	44053	44077	4405344077	88	1	89	144	1	145	56	100	FAIL	5.2	< 10	YES					
294	A282 southbound exit for A2 Eastbound	81899	81898	8189981898	529	28	558	571	27	598	40	100	PASS	1.7	< 5	YES					
295	A282 northbound distributor between A2 and A296xA225 Southbound	71318	88688	7131888688	1102	59	1161	997	57	1055	106	174	PASS	3.2	< 5	YES					
296	A2 westbound within the M25xA282 junction Northbound	81625	81880	8162581880	2503	54	2557	2686	55	2741	184	384	PASS	3.6	< 5	YES					
297	A2 eastbound within the M25xA282 junction Westbound	81881	81623	8188181623	3882	125	4008	3918	110	4028	20	400	PASS	0.3	< 5	YES					
298	M25 J2 anti-clockwise exit Northbound	81886	81883	8188681883	2221	178	2399	2004	134	2218	181	360	PASS	3.9	< 5	YES					
299	A2 westbound access from M25xA282 Northbound	81882	81880	8188281880	1580	36	1616	1556	48	1604	12	242	PASS	0.3	< 5	YES					
300	A2 eastbound access from M25xA282 Northbound	71320	81623	7132081623	1166	64	1230	897	89	986	244	185	FAIL	7.3	< 10	YES					
301	A2 eastbound after M25 J2 roundabout access Westbound	81881	81623	8188181623	3882	125	4008	3919	110	4028	20	400	PASS	0.3	< 5	YES					
302	A2 westbound before M25 J2 roundabout exit Eastbound	81649	81625	8164981625	3703	106	3809	3839	100	3939	130	400	PASS	2.1	< 5	YES					
303	B255 Bean Lane (south of A2 South Roundabout) Westbound	73621	26016	7362126016	468	8	475	457	7	464	11	100	PASS	0.5	< 5	YES					
304	B255 Bean Lane (south of A2 South Roundabout) Westbound	26016	73621	2601673621	360	6	367	412	6	418	52	100	PASS	2.6	< 5	YES					
305	A2 westbound between A2260 and B259 Eastbound	81983	81625	8198381625	4716	388	5104	4943	294	5237	133	400	PASS	1.9	< 5	YES					
306	A2 westbound exit for A2260 Northbound	81894	81893	8189481893	622	24	646	612	9	620	26	100	PASS	1.0	< 5	YES					
307	A2 westbound within the A2260 junction Eastbound	81894	81895	8189481895	4095	386	4481	4202	293	4495	14	400	PASS	0.2	< 5	YES					
308	B260 Green St Green Rd (East of Ladywood Rd) Eastbound	47126	89412	4712689412	614	12	626	611	7	617	8	100	PASS	0.3	< 5	YES					

2019 PM - observed vs modelled checks - POST MATRIX ESTIMATION

Ref	Link	From	To	A node	B node	AB pair	2019 observed VEHICLES			2019 modelled VEHICLES			Absolute check			GEH check		PASS or < 10
							Car/LGV	HGV	Total	Car/LGV	HGV	Total	Diffs	Tolerance	Pass / Fail	GEH	Banding	
309	B260 Green St Green Rd (East of Ladywood Rd) Northbound			89412	47126	8941247126	469	8	478	428	6	435	43	100	PASS	2.0	< 5	YES
310	Elizabeth Street Southbound			22308	27411	2230827411	27	0	27	83	13	96	69	100	PASS	8.7	< 10	YES
311	Elizabeth Street Westbound			27411	22308	2741122308	28	0	28	63	2	66	38	100	PASS	5.5	< 10	YES
312	A226 London Road (West of Oak Road) Eastbound			22307	27505	2230727505	540	16	555	518	4	522	33	100	PASS	1.4	< 5	YES
313	A226 London Road (West of Oak Road) Westbound			27505	22307	2750522307	614	18	632	515	10	525	107	100	FAIL	4.4	< 5	YES
314	Southfleet Road (North of the roundabout) Eastbound			23185	89430	2318589430	350	4	354	421	5	426	71	100	PASS	3.6	< 5	YES
315	Southfleet Road (North of the roundabout) Westbound			89430	23185	8943023185	418	5	423	658	5	663	239	100	FAIL	10.3	> 10	NO
316	Alkerden Lane (west of Gilbert Close) Eastbound			20231	89440	2023189440	109	3	112	110	0	110	2	100	PASS	0.2	< 5	YES
317	Alkerden Lane (west of Gilbert Close) Westbound			89440	20231	8944020231	197	5	202	68	0	68	134	100	FAIL	11.5	> 10	NO
318	A226 Thames Way Eastbound			28512	98579	2851298579	409	7	416	383	9	392	25	100	PASS	1.2	< 5	YES
319	A226 Thames Way Southbound			98579	28512	9857928512	277	5	282	301	1	302	20	100	PASS	1.2	< 5	YES
320	B262 Station Road Northbound			76743	26019	7674326019	212	4	216	221	3	224	7	100	PASS	0.5	< 5	YES
321	B262 Station Road Westbound			26019	76743	2601976743	609	10	619	619	9	628	8	100	PASS	0.3	< 5	YES
322	B262 Betsham Road Eastbound			47128	26632	4712826632	93	2	96	100	2	102	7	100	PASS	0.7	< 5	YES
323	B262 Betsham Road Eastbound			26632	47128	2663247128	346	6	353	359	5	363	11	100	PASS	0.6	< 5	YES
324	Warren Road Southbound			26901	26898	2690126898	8	0	8	0	0	0	8	100	PASS	4.1	< 5	YES
325	Warren Road Southbound			26898	26901	2689826901	9	0	9	0	0	0	9	100	PASS	4.3	< 5	YES
326	B255 Highcross Road Southbound			26632	26554	2663226554	211	4	215	216	4	219	4	100	PASS	0.3	< 5	YES
327	B255 Highcross Road Northbound			26554	26632	2655426632	147	3	150	179	2	181	31	100	PASS	2.4	< 5	YES
328	Red Street Southbound			26020	26898	2602026898	17	0	17	15	2	17	0	100	PASS	0.0	< 5	YES
329	Red Street Northbound			26898	26020	2689826020	41	1	42	40	1	40	2	100	PASS	0.2	< 5	YES
330	Park Corner Road Eastbound			76747	26897	7674726897	90	0	90	77	0	77	13	100	PASS	1.4	< 5	YES
331	Gore Road Westbound			22334	22333	2233422333	490	7	498	407	2	410	88	100	PASS	4.1	< 5	YES
332	Gore Road Eastbound			22333	22334	2233322334	408	0	408	346	2	348	60	100	PASS	3.1	< 5	YES
333	Ship Lane Westbound			44005	44059	4400544059	121	2	123	126	1	127	5	100	PASS	0.4	< 5	YES
334	Ship Lane Northbound			44059	44005	4405944005	47	0	47	43	0	44	4	100	PASS	0.6	< 5	YES
335	A2260, 385m south of International Way.			89364	98580	8936498580	264	17	281	267	22	289	8	100	PASS	0.5	< 5	YES
336	A2260, 385m south of International Way.			98580	89364	9858089364	893	21	914	888	18	906	8	137	PASS	0.3	< 5	YES

o A206/A2026 rbt
oo Ebbsfleet Gateway Rbt A2260/B259
TH - Temple Hill
CG - Clarendon Gardens Gyratory
PRI - Princes Road Interchange
DI - Darenth Interchange

259	PASS	255	< 5
77	FAIL	314	< 10
		22	> 10

77.1%	PASS	255	< 5
22.9%	FAIL	59	5 > < 10
		22	> 10

75.9%	< 5
17.6%	5 > < 10
6.5%	> 10

Either PASS or <10	314	93.5%

Appendix D

9 sector analysis

Comparison of Sector to Sector movements following matrix estimation

1 AM pre Matrix Estimation - number of sector to sector movements — 2016 (0700-0800)

		North (1)	West (2)	South (3)	East (4)	Dartford (west of M25) (5)	Dartford (east of M25) (6)	Gravesham (7)	Non Gravesham (S) (8)	Non Gravesham (E) (9)	
North	1	12,547	1,197	2,805	1,117	239	740	242	185	1,081	20,155
West	2	901	119	1,796	793	2,325	1,077	445	663	934	9,053
South	3	2,178	1,790	1,848	2,320	453	888	620	1,151	4,513	15,760
East	4	1,168	1,271	2,869	569	52	270	397	63	3,277	9,936
Dartford (west of M25)	5	276	2,510	403	61	1,187	831	113	330	133	5,844
Dartford (east of M25)	6	665	1,267	948	219	1,067	1,334	950	286	346	7,083
Gravesham	7	437	1,313	771	428	235	1,197	4,272	139	1,355	10,148
Non Gravesham (S)	8	147	933	1,332	82	545	293	115	378	216	4,040
Non Gravesham (E)	9	1,108	2,279	6,769	2,787	158	560	1,845	283	9,141	24,929
		19,427	12,679	19,542	8,376	6,261	7,189	8,999	3,478	20,996	106,947

1 PM pre Matrix Estimation - number of sector to sector movements — 2016 (1700-1800)

		North (1)	West (2)	South (3)	East (4)	Dartford (west of M25) (5)	Dartford (east of M25) (6)	Gravesham (7)	Non Gravesham (S) (8)	Non Gravesham (E) (9)	
North	1	15,324	814	2,090	1,269	272	553	468	117	1,216	22,123
West	2	764	111	1,898	1,472	2,519	1,521	898	1,139	1,837	12,159
South	3	1,928	1,582	1,661	3,034	339	740	1,029	1,382	6,167	17,861
East	4	1,114	773	2,034	652	35	212	339	46	2,650	7,855
Dartford (west of M25)	5	432	2,840	293	135	1,640	1,406	278	509	230	7,763
Dartford (east of M25)	6	738	1,569	755	436	1,315	1,500	1,535	324	827	8,999
Gravesham	7	425	766	512	509	135	1,307	4,087	139	1,841	9,722
Non Gravesham (S)	8	117	711	1,255	100	535	373	200	439	282	4,012
Non Gravesham (E)	9	813	1,073	5,059	3,259	94	565	1,526	166	11,192	23,747
		21,655	10,239	15,557	10,866	6,884	8,176	10,361	4,261	26,242	114,241

2 AM pre Matrix Estimation - sector to sector movement proportions — 2016 (0700-0800)

		North (1)	West (2)	South (3)	East (4)	Dartford (west of M25) (5)	Dartford (east of M25) (6)	Gravesham (7)	Non Gravesham (S) (8)	Non Gravesham (E) (9)	
North	1	11.7%	1.1%	2.6%	1.0%	0.2%	0.7%	0.2%	0.2%	1.0%	18.8%
West	2	0.8%	0.1%	1.7%	0.7%	2.2%	1.0%	0.4%	0.6%	0.9%	8.5%
South	3	2.0%	1.7%	1.7%	2.2%	0.4%	0.8%	0.6%	1.1%	4.2%	14.7%
East	4	1.1%	1.2%	2.7%	0.5%	0.0%	0.3%	0.4%	0.1%	3.1%	9.3%
Dartford (west of M25)	5	0.3%	2.3%	0.4%	0.1%	1.1%	0.8%	0.1%	0.3%	0.1%	5.5%
Dartford (east of M25)	6	0.6%	1.2%	0.9%	0.2%	1.0%	1.2%	0.9%	0.3%	0.3%	6.6%
Gravesham	7	0.4%	1.2%	0.7%	0.4%	0.2%	1.1%	4.0%	0.1%	1.3%	9.5%
Non Gravesham (S)	8	0.1%	0.9%	1.2%	0.1%	0.5%	0.3%	0.1%	0.4%	0.2%	3.8%
Non Gravesham (E)	9	1.0%	2.1%	6.3%	2.6%	0.1%	0.5%	1.7%	0.3%	8.5%	23.3%
		18.2%	11.9%	18.3%	7.8%	5.9%	6.7%	8.4%	3.3%	19.6%	100.0%

2 PM pre Matrix Estimation - sector to sector movement proportions — 2016 (1700-1800)

		North (1)	West (2)	South (3)	East (4)	Dartford (west of M25) (5)	Dartford (east of M25) (6)	Gravesham (7)	Non Gravesham (S) (8)	Non Gravesham (E) (9)	
North	1	13.4%	0.7%	1.8%	1.1%	0.2%	0.5%	0.4%	0.1%	1.1%	19.4%
West	2	0.7%	0.1%	1.7%	1.3%	2.2%	1.3%	0.8%	1.0%	1.6%	10.6%
South	3	1.7%	1.4%	1.5%	2.7%	0.3%	0.6%	0.9%	1.2%	5.4%	15.6%
East	4	1.0%	0.7%	1.8%	0.6%	0.0%	0.2%	0.3%	0.0%	2.3%	6.9%
Dartford (west of M25)	5	0.4%	2.5%	0.3%	0.1%	1.4%	1.2%	0.2%	0.4%	0.2%	6.8%
Dartford (east of M25)	6	0.6%	1.4%	0.7%	0.4%	1.2%	1.3%	1.3%	0.3%	0.7%	7.9%
Gravesham	7	0.4%	0.7%	0.4%	0.4%	0.1%	1.1%	3.6%	0.1%	1.6%	8.5%
Non Gravesham (S)	8	0.1%	0.6%	1.1%	0.1%	0.5%	0.3%	0.2%	0.4%	0.2%	3.5%
Non Gravesham (E)	9	0.7%	0.9%	4.4%	2.9%	0.1%	0.5%	1.3%	0.1%	9.8%	20.8%
		19.0%	9.0%	13.6%	9.5%	6.0%	7.2%	9.1%	3.7%	23.0%	100.0%

3 AM post Matrix Estimation - number of sector to sector movements — 2019 (0800-0900)

		North (1)	West (2)	South (3)	East (4)	Dartford (west of M25) (5)	Dartford (east of M25) (6)	Gravesham (7)	Non Gravesham (S) (8)	Non Gravesham (E) (9)	
North	1	12,547	1,226	3,062	1,181	288	836	222	216	1,112	20,689
West	2	984	131	1,798	799	2,899	1,524	412	788	978	10,313
South	3	2,157	1,993	1,848	2,320	441	1,008	648	1,137	4,576	16,129
East	4	1,203	1,340	2,909	569	56	261	396	63	3,277	10,074
Dartford (west of M25)	5	315	3,007	432	85	2,232	1,487	144	440	175	8,317
Dartford (east of M25)	6	712	1,490	1,060	244	1,544	2,334	1,426	306	396	9,514
Gravesham	7	501	1,554	1,067	436	309	1,530	4,321	187	1,377	11,282
Non Gravesham (S)	8	153	1,065	1,374	82	668	411	210	375	288	4,626
Non Gravesham (E)	9	1,137	2,452	6,976	2,787	183	549	1,843	300	9,141	25,368
		19,710	14,257	20,526	8,504	8,621	9,941	9,623	3,811	21,320	116,314

3 PM post Matrix Estimation - number of sector to sector movements — 2019 (1700-1800)

		North (1)	West (2)	South (3)	East (4)	Dartford (west of M25) (5)	Dartford (east of M25) (6)	Gravesham (7)	Non Gravesham (S) (8)	Non Gravesham (E) (9)	
North	1	15,324	1,044	2,348	1,267	373	560	436	136	1,210	22,697
West	2	829	138	1,992	1,585	2,646	1,623	1,019	1,396	2,046	13,274
South	3	1,999	1,813	1,661	3,034	398	815	1,039	1,379	6,172	18,309
East	4	1,027	835	2,054	652	46	267	342	54	2,650	7,925
Dartford (west of M25)	5	578	2,651	297	185	2,289	1,959	373	565	294	9,192
Dartford (east of M25)	6	1,191	1,648	808	477	1,553	1,677	2,063	389	905	10,711
Gravesham	7	311	869	631	490	199	1,704	4,080	160	1,799	10,243
Non Gravesham (S)	8	134	892	1,211	99	601	445	284	449	277	4,392
Non Gravesham (E)	9	685	1,215	5,199	3,259	127	710	1,533	184	11,192	24,103
		22,077	11,103	16,200	11,048	8,232	9,761	11,169	4,711	26,545	120,846

4 AM post Matrix Estimation - sector to sector movement proportions — 2019 (0800-0900)

		North (1)	West (2)	South (3)	East (4)	Dartford (west of M25) (5)	Dartford (east of M25) (6)	Gravesham (7)	Non Gravesham (S) (8)	Non Gravesham (E) (9)	
North	1	10.8%	1.1%	2.6%	1.0%	0.2%	0.7%	0.2%	0.2%	1.0%	17.8%
West	2	0.8%	0.1%	1.5%	0.7%	2.5%	1.3%	0.4%	0.7%	0.8%	8.9%
South	3	1.9%	1.7%	1.6%	2.0%	0.4%	0.9%	0.6%	1.0%	3.9%	13.9%
East	4	1.0%	1.2%	2.5%	0.5%	0.0%	0.2%	0.3%	0.1%	2.8%	8.7%
Dartford (west of M25)	5	0.3%	2.6%	0.4%	0.1%	1.9%	1.3%	0.1%	0.4%	0.2%	7.2%
Dartford (east of M25)	6	0.6%	1.3%	0.9%	0.2%	1.3%	2.0%	1.2%	0.3%	0.3%	8.2%
Gravesham	7	0.4%	1.3%	0.9%	0.4%	0.3%	1.3%	3.7%	0.2%	1.2%	9.7%
Non Gravesham (S)	8	0.1%	0.9%	1.2%	0.1%	0.6%	0.4%	0.2%	0.3%	0.2%	4.0%
Non Gravesham (E)	9	1.0%	2.1%	6.0%	2.4%	0.2%	0.5%	1.6%	0.3%	7.9%	21.8%
		16.9%	12.3%	17.6%	7.3%	7.4%	8.5%	8.3%	3.3%	18.3%	100.0%

4 PM post Matrix Estimation - sector to sector movement proportions — 2019 (1700-1800)

		North (1)	West (2)	South (3)	East (4)	Dartford (west of M25) (5)	Dartford (east of M25) (6)	Gravesham (7)	Non Gravesham (S) (8)	Non Gravesham (E) (9)	
North	1	12.7%	0.9%	1.9%	1.0%	0.3%	0.5%	0.4%	0.1%	1.0%	18.8%
West	2	0.7%	0.1%	1.6%	1.3%	2.2%	1.3%	0.8%	1.2%	1.7%	11.0%
South	3	1.7%	1.5%	1.4%	2.5%	0.3%	0.7%	0.9%	1.1%	5.1%	15.2%
East	4	0.8%	0.7%	1.7%	0.5%	0.0%	0.2%	0.3%	0.0%	2.2%	6.6%
Dartford (west of M25)	5	0.5%	2.2%	0.2%	0.2%	1.9%	1.6%	0.3%	0.5%	0.2%	7.6%
Dartford (east of M25)	6	1.0%	1.4%	0.7%	0.4%	1.3%	1.4%	1.7%	0.3%	0.7%	8.9%
Gravesham	7	0.3%	0.7%	0.5%	0.4%	0.2%	1.4%	3.4%	0.1%	1.5%	8.5%
Non Gravesham (S)	8	0.1%	0.7%	1.0%	0.1%	0.5%	0.4%	0.2%	0.4%	0.2%	3.6%
Non Gravesham (E)	9	0.6%	1.0%	4.3%	2.7%	0.1%	0.6%	1.3%	0.2%	9.3%	19.9%
		18.3%	9.2%	13.4%	9.1%	6.8%	8.1%	9.2%	3.9%	22.0%	100.0%

5 AM pre and post Matrix Estimation - sector to sector movement proportion differences

		North (1)	West (2)	South (3)	East (4)	Dartford (west of M25) (5)	Dartford (east of M25) (6)	Gravesham (7)	Non Gravesham (S) (8)	Non Gravesham (E) (9)	
North	1	-0.9%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.5%
West	2	0.0%	0.0%	-0.1%	-0.1%	0.3%	0.3%	-0.1%	0.1%	0.0%	1.2%
South	3	-0.2%	0.0%	-0.1%	-0.2%	0.0%	0.0%	0.0%	-0.1%	-0.3%	0.3%
East	4	-0.1%	0.0%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.1%
Dartford (west of M25)	5	0.0%	0.2%	0.0%	0.0%	0.8%	0.5%	0.0%	0.1%	0.0%	2.3%
Dartford (east of M25)	6	0.0%	0.1%	0.0%	0.0%	0.3%	0.8%	0.3%	0.0%	0.0%	2.3%
Gravesham	7	0.0%	0.1%	0.2%	0.0%	0.0%	0.2%	-0.3%	0.0%	-0.1%	1.1%
Non Gravesham (S)	8	0.0%	0.0%	-0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.5%
Non Gravesham (E)	9	-0.1%	0.0%	-0.3%	-0.2%	0.0%	-0.1%	-0.1%	0.0%	-0.7%	0.4%
		0.3%	1.5%	0.9%	0.1%	2.2%	2.6%	0.6%	0.3%	0.3%	8.8%

5 PM pre and post Matrix Estimation - sector to sector movement proportion differences

		North (1)	West (2)	South (3)	East (4)	Dartford (west of M25) (5)	Dartford (east of M25) (6)	Gravesham (7)	Non Gravesham (S) (8)	Non Gravesham (E) (9)	
North	1	-0.7%	0.2%	0.1%	-0.1%	0.1%	0.0%	0.0%	0.0%	-0.1%	0.5%
West	2	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.1%	1.0%
South	3	0.0%	0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	-0.1%	-0.3%	0.4%
East	4	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.1%
Dartford (west of M25)	5	0.1%	-0.3%	0.0%	0.0%	0.5%	0.4%	0.1%	0.0%	0.0%	1.3%
Dartford (east of M25)	6	0.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.4%	0.0%	0.0%	1.5%
Gravesham	7	-0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	-0.2%	0.0%	-0.1%	0.5%
Non Gravesham (S)	8	0.0%	0.1%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.3%
Non Gravesham (E)	9	-0.1%	0.1%	-0.1%	-0.2%	0.0%	0.1%	-0.1%	0.0%	-0.5%	0.3%
		0.4%	0.8%	0.6%	0.2%	1.2%	1.4%	0.7%	0.4%	0.3%	5.8%

6 AM pre and post Matrix Estimation - sector to sector movement differences

		North (1)	West (2)	South (3)	East (4)	Dartford (west of M25) (5)	Dartford (east of M25) (6)	Gravesham (7)	Non Gravesham (S) (8)	Non Gravesham (E) (9)	
North	1	-	28	256	63	49	96	20	30	31	534
West	2	83	12	2	6	574	446	33	125	44	1,260
South	3	21	203	0	0	11	121	29	14	64	370
East	4	36	69	40	-	4	9	1	0	-	138
Dartford (west of M25)	5	38	497	29	24	1,046	656	30	110	42	2,474
Dartford (east of M25)	6	47	223	112	26	477	1,000	476	19	50	2,431
Gravesham	7	64	241	296	8	74	334	49	47	22	1,135
Non Gravesham (S)	8	6	132	42	1	122	119	95	2	72	587
Non Gravesham (E)	9	30	173	207	-	25	11	2	17	-	440
		283	1,578	984	128	2,360	2,752	624	334	324	9,367

6 PM pre and post Matrix Estimation - sector to sector movement differences

		North (1)	West (2)	South (3)	East (4)	Dartford (west of M25) (5)	Dartford (east of M25) (6)	Gravesham (7)	Non Gravesham (S) (8)	Non Gravesham (E) (9)	
North	1	-	230	258	2	101	7	33	19	6	574
West	2	65	27	94	113	127	102	121	257	209	1,116
South	3	71	231	-	0	59	75	9	2	5	448
East	4	88	62	20	-	11	55	3	7	-	70
Dartford (west of M25)	5	146	189	4	51	649	553	95	56	64	1,429
Dartford (east of M25)	6	453	79	53	41	238	177	528	65	78	1,712
Gravesham	7	114	102	119	19	64	397	7	21	42	521
Non Gravesham (S)	8	17	181	44	1	66	73	84	10	5	380
Non Gravesham (E)	9	128	142	139	-	33	145	7	18	-	355
		423	864	643	182	1,348	1,584	808	451	303	6,605

7 AM pre and post Matrix Estimation - sector to sector movement percentage differences

		North (1)	West (2)	South (3)	East (4)	Dartford (west of M25) (5)	Dartford (east of M25) (6)	Gravesham (7)	Non Gravesham (S) (8)	Non Gravesham (E) (9)	
North	1	0.0%	2.4%	9.1%	5.7%	20.5%	12.9%	-8.3%	16.4%	2.9%	2.7%
West	2	9.3%	9.8%	0.1%	0.8%	24.7%	41.4%	-7.4%	18.9%	4.7%	13.9%
South	3	-1.0%	11.3%	0.0%	0.0%	-2.5%	13.6%	4.6%	-1.2%	1.4%	2.3%
East	4	3.1%	5.4%	1.4%	0.0%	8.4%	-3.5%	-0.3%	0.1%	0.0%	1.4%
Dartford (west of M25)	5	13.9%	19.8%	7.3%	39.5%	88.2%	79.0%	26.8%	33.3%	31.6%	42.3%
Dartford (east of M25)	6	7.1%	17.6%	11.8%	11.8%	44.7%	75.0%	50.1%	6.8%	14.3%	34.3%
Gravesham	7	14.6%	18.4%	38.4%	1.8%	31.4%	27.9%	1.1%	34.0%	1.6%	11.2%
Non Gravesham (S)	8	4.1%	14.2%	3.2%	0.7%	22.5%	40.6%	82.6%	-0.6%	33.4%	14.5%
Non Gravesham (E)	9	2.7%	7.6%	3.1%	0.0%	15.8%	-1.9%	-0.1%	6.1%	0.0%	1.8%
		1.5%	12.4%	5.0%	1.5%	37.7%	38.3%	6.9%	9.6%	1.5%	8.8%

7 PM pre and post Matrix Estimation - sector to sector movement percentage differences

		North (1)	West (2)	South (3)	East (4)	Dartford (west of M25) (5)	Dartford (east of M25) (6)	Gravesham (7)	Non Gravesham (S) (8)	Non Gravesham (E) (9)	
North	1	0.0%	28.3%	12.3%	-0.2%	37.0%	1.2%	-7.0%	16.3%	-0.5%	2.6%
West	2	8.5%	24.3%	4.9%	7.7%	5.1%	6.7%	13.5%	22.6%	11.4%	9.2%
South	3	3.7%	14.6%	0.0%	0.0%	17.5%	10.2%	0.9%	-0.2%	0.1%	2.5%
East	4	-7.9%	8.0%	1.0%	0.0%	31.2%	26.2%	0.7%	16.2%	0.0%	0.9%
Dartford (west of M25)	5	33.9%	-6.7%	1.5%	37.6%	39.6%	39.3%	34.1%	11.0%	27.9%	18.4%
Dartford (east of M25)	6	61.4%	5.1%	7.0%	9.4%	18.1%	11.8%	34.4%	19.9%	9.4%	19.0%
Gravesham	7	-26.9%	13.4%	23.2%	-3.7%	47.1%	30.4%	-0.2%	14.9%	-2.3%	5.4%
Non Gravesham (S)	8	14.9%	25.4%	-3.5%	-1.4%	12.3%	19.4%	42.1%	2.3%	-1.9%	9.5%
Non Gravesham (E)	9	-15.7%	13.2%	2.8%	0.0%	34.7%	25.7%	0.5%	10.6%	0.0%	1.5%
		2.0%	8.4%	4.1%	1.7%	19.6%	19.4%	7.8%	10.6%	1.2%	5.8%