# Sevenoaks Local Plan

## Local Plan Tests Report

October 2025

**Sevenoaks District Council**

SDC



**Document history and status**

| Revision | Date | Description | Author | Checked | Reviewed | Approved |
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| 1.0 | September 2025 | Local Plan Tests Report | FB/PB | PB | MT | MT |
| 2.0 | October 2025 | Updated Draft Local Plan Tests Report | FB/PB | PB | MT | MT |
| | | | | | | |

**Distribution of copies**

| Revision | Issue approved | Date issued | Issued to | Comments |
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| 2.0 | 2.0 | October 2025 | | Incorporated KCC and SDC's comments |

# Sevenoaks Local Plan

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## Contents

# Limitation Statement

The sole purpose of this report is to describe the processes by which 2042 Sevenoaks Local Plan Tests have been carried out using the Sevenoaks Local Transport Model. It should be noted that this report has been prepared for use of Sevenoaks District Council (SDC) as an interim version and will be updated once further preferred options have been confirmed and analysed. This report should be read in full with no excerpts out of context deemed to be representative of the report and its findings as a whole. This report has been prepared exclusively for Jacobs and Jacobs' end client (SDC) and no liability is accepted for any use or reliance on the report by third parties.

Several of the figures within this report have been generated in the PTV VISUM software using OpenStreetMap® open source data, licensed under the Open Data Commons Open Database License (ODbL) by the OpenStreetMap Foundation (OSMF). The data is available under the ODbL. For more information see:

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# 1. Introduction

## 1.1 Background

Sevenoaks District Council (SDC) is undertaking a Local Plan Review (LPR) for the district to address the latest Government standard methodology for calculating authorities' future housing numbers and extend the Plan period to at least 2042.

The current Sevenoaks District Core Strategy was adopted in 2011 and provides for the housing, employment and retail development needed for 2011-2026. The annual housing requirement will increase from the current Local Plan figure to up to approximately 1,145 homes/year from 2027 to 2042.

SDC needs to consider, and consult on, reasonable, alternative options for meeting housing and other development needs. As part of this process, SDC commissioned Jacobs to undertake transport modelling to gather evidence on the transport implications of the emerging draft LPR options.

The overall project objectives are to:

1. Assess the quality and capacity of transport infrastructure across the district and its ability to meet forecast demands – this can be developed through the traffic modelling proposed here.
2. Assess the cumulative impacts of the LP development options on the district's transport network – this can be developed through the traffic modelling proposed here.
3. Identify proposals and potential measures to mitigate the impacts of development to inform the infrastructure requirements associated with the LP. This should include, but is not limited to:
    a. Identification of potential measures to enable and achieve higher levels of sustainable transport mode share across the district.
    b. Identification of the potential barriers to the utilisation of sustainable transport modes across the district.
    c. Identification of potential intervention measures on the transport network

The Sevenoaks Local Transport Model has been checked and enhanced using available data to prepare it for developing forecast scenarios and undertaking spatial assessments. More information can be found in the local base model report[1].

## 1.2 Purpose of this Document

This Report outlines the assumptions, approach, and results of developing the Local Plan Tests. This aims to understand the likely impacts of the local plan development's traffic on the network.

Flow difference plots, junction level of service, link volume / capacity ratio and journey time comparison were extracted from the transport models to identify key junctions and links issues.

It should be noted that this report has been submitted as a draft and is subject to review by National Highways. Revisions may be expected in the final version, depending on feedback received from National Highways.

[1] Stage 2 Tonbridge and Malling and Sevenoaks - Local Model Validation Report v2.docx

## 1.3 Document Structure

Following this introduction, the structure of this report is as follows:

- **Chapter 2** – provides an overview of the methodology and assumptions;
- **Chapter 3** – provides an overview of the Local Plan Options;
- **Chapter 4** – presents the forecast results and analysis;
- **Chapter 5** – provides a summary and recommendations.

# 2. General Methodology and Assumptions

The overall methodology and assumptions used to develop the Local Plan tests follow the one for the Forecast Baseline and are summarised below. More details can be found in the *Sevenoaks 2042 Forecast Baseline Report*.

- Uncertainty Log and Background Growth - Table 1 below presents the assumptions used in developing the future demand for the Local Plan options. These were consistent with the Forecast Baseline, and the only difference is the addition of the demand from Local Plan developments.

Table 1 Sevenoaks – 2042 Local Plan Uncertainty Log and Background Growth Assumptions

| Area | Assumptions |
|---|---|
| Sevenoaks | Forecast Baseline + Local Plan Scenario<br>- **Local Plan – Scenario 1** - includes developments categorised as "initial sites".<br>- **Local Plan – Scenario 2** - includes developments categorised as "initial sites" and the Pedham Place Development |
| Neighbouring Authorities (Tonbridge and Malling, Tunbridge Wells, Gravesham, Dartford, East Sussex, Surrey and Southeast London) | As the growth assumptions used in the Forecast Baseline.<br><br>TEMPro (with adjustment of the default Housing and Job assumptions to match updated housing need/LP targets where known). Committed development (and potentially larger LP sites close to District boundary) agreed on a case-by-case basis (and subtracted from TEMPro v8 to avoid double-counting). |
| Other Areas | As the growth assumptions used in the Forecast Baseline.<br><br>TEMPro v8 growth was applied. |

- Goods Vehicle Growth – As the Forecast Baseline. DfT's Road Traffic Forecast 2022 (RTF22) Scenario 1 for Southeast of England LGV and HGV was used. RTF22 scenario 1 is the reference case based on central projections for GDP (OBR), for fuel prices and for population (ONS).

- Trip Generation – The trip rates extracted from TRICs for the Forecast Baseline were used to calculate the vehicular trips of the local plan developments for the AM and PM peaks. For the proposed Pedham Place development, the developer's consultant provided the trip rates. More details are discussed in Section 3 of this report.

- Trip Distribution - Base donor zone with similar land use in the vicinity of the new development was used to get a similar origin and destination information for each development to distribute vehicle trips around the network. For the proposed Pedham Place development, the developer's consultant provided the trip distribution. More details are discussed in Section 3 of this report.

- Forecast Network Development – The 2042 Forecast Baseline network was used as starting point. More details are presented in the Section 3 for the network changes applied in Scenario 2.

# 3. Local Plan Options

## 3.1 Local Plan Scenario 1 – Initial Sites

The 2042 Sevenoaks Forecast Baseline was used as a starting point to develop the 2042 LP Scenario 1. This includes developments categorised as "initial" from the list provided by SDC. The locations of these developments are presented in Figure 1. Some developments for mixed-used sites lack specific floorspace information. Therefore, an estimation was used based on information available in the area and previous works from neighbouring authorities. This has been reviewed and agreed upon with SDC. The developments in Scenario 1 are modelled in addition to the committed developments included in the Forecast Baseline.

The origin and destination (departures and arrivals) trips for each development for the AM and PM peak were calculated using the trip rates extracted from TRICs for the 2042 Sevenoaks Forecast Baseline.

Base donor zone in the location of the new development has been used to get a similar origin and destination trip distribution pattern. This process has been done for each development to distribute vehicle trips around the network.

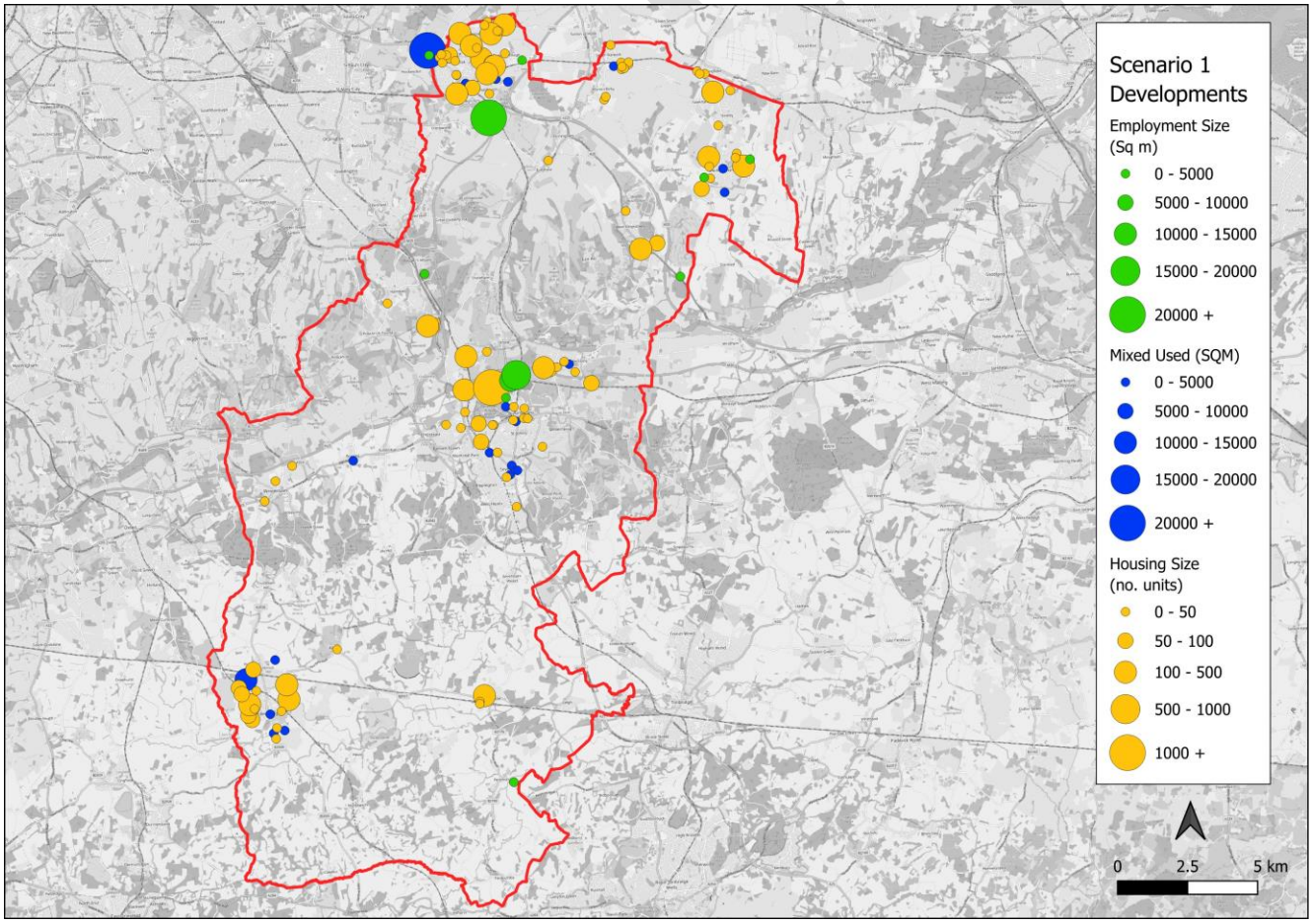


Figure 1 Location of Developments – Scenario 1

## 3.2 Local Plan Scenario 2 – Suitable Sites including Pedham Place Development

The Local Plan Scenario 2 is based on Scenario 1, with the addition of Pedham Place Development site. Figure 2 shows the Scenario 2 developments.

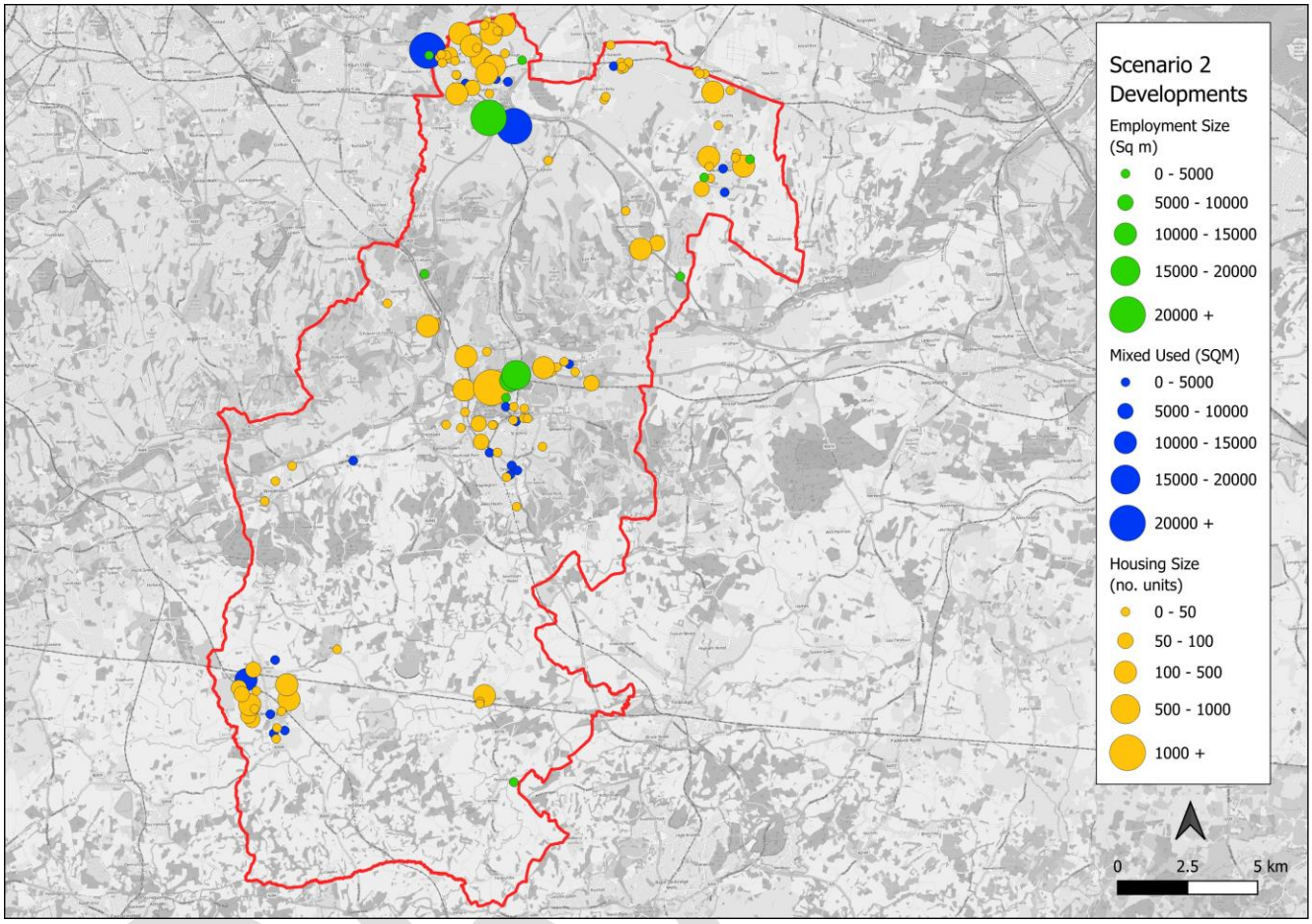


Figure 2 Location of Developments – Scenario 2

Due to the size of the development, two model zones were incorporated into the model to represent residential and employment trips. Two development accesses shown in Figure 3 were incorporated into the model. The access highlighted in blue is accessible for residential trips and the one highlighted in red is accessible to both residential and employment trips.

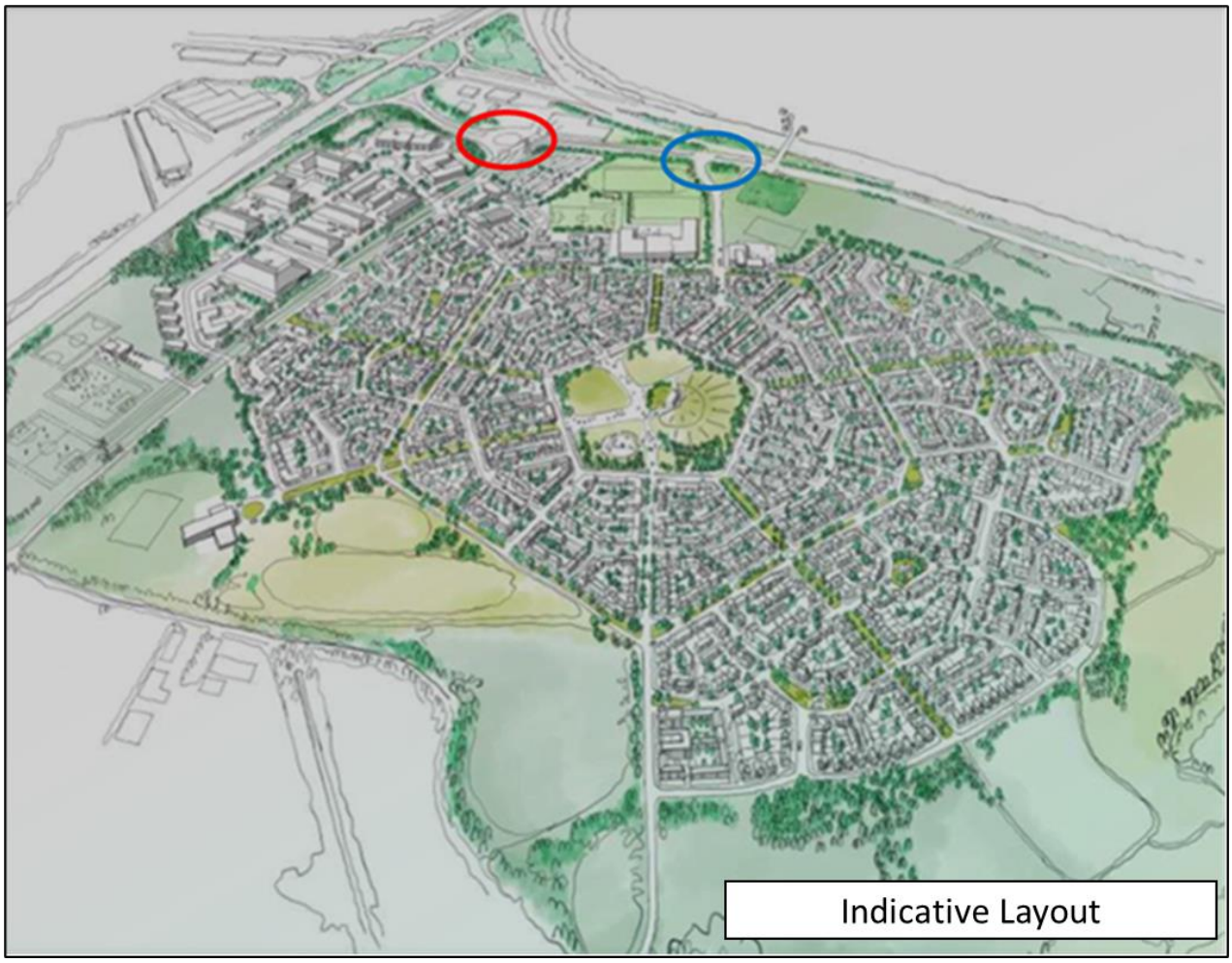


Figure 3 Pedham Place Access Points

The development led improvement scheme at M25 J3 was also incorporated in Local Plan Scenario 2. Figure 4 and Figure 5 show the network changes provided by the developer's consultant. The improvements include widening the roundabout and approaches to increase capacity. It should be noted that this is not a National Highways proposal. It was included in the transport modelling as part of the local plan scheme.

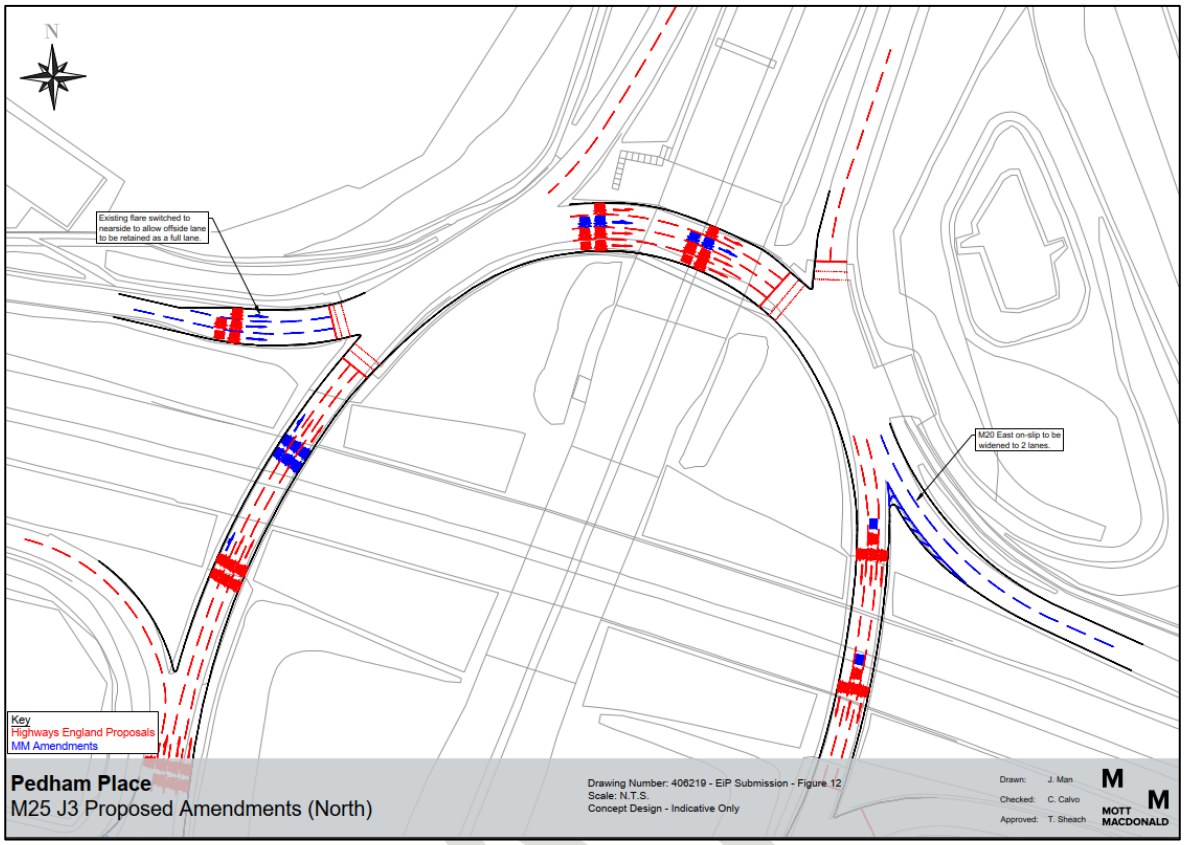


Figure 4 Local Plan Scheme at M25 J3 (North)

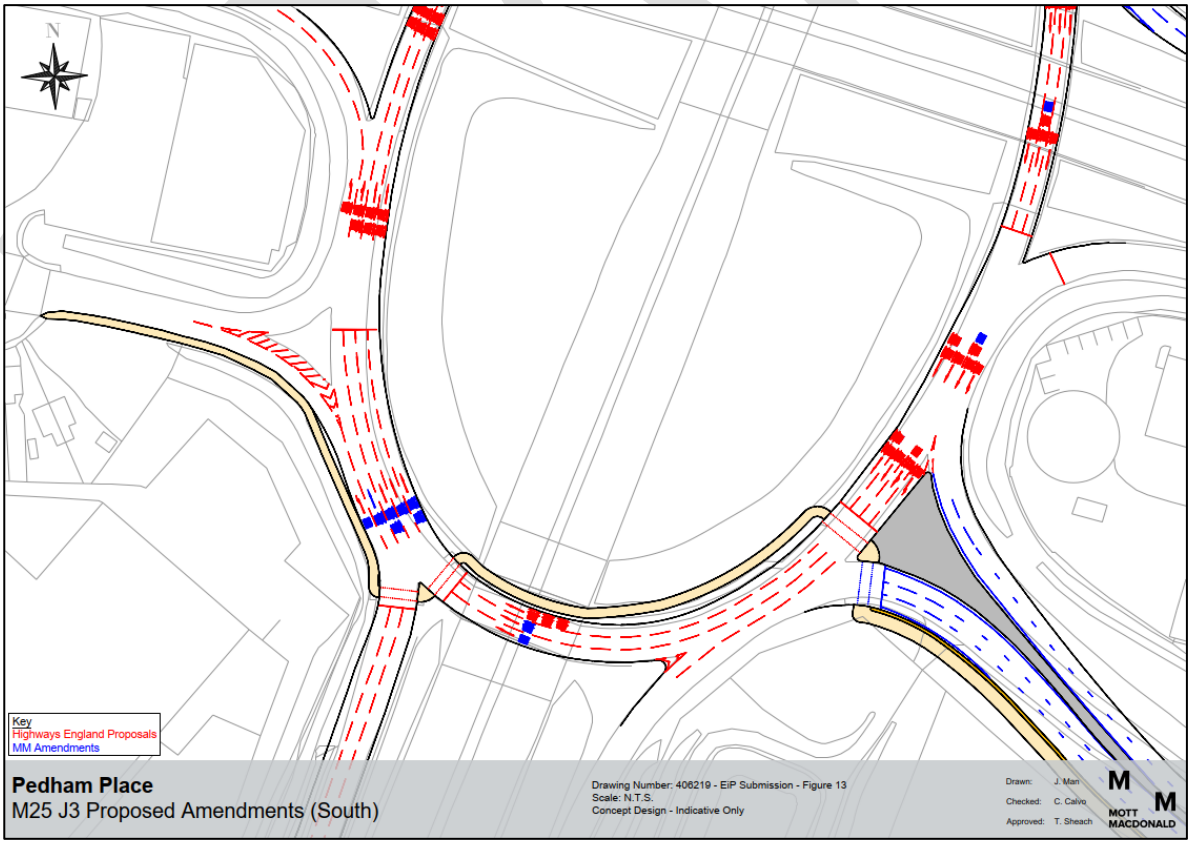


Figure 5 Local Plan Scheme at M25 J3 (South)

## 3.3 Summary of Dwelling Units

Table 2 below presents the estimated dwelling units considered for each scenario.

Table 2 Summary of Dwelling Units

| | Scenario 1 | Scenario 2 |
|---|---|---|
| *Completed Developments (from2019)* | *2,509* | *2,509* |
| Extant Permissions | 3,978 | 3,978 |
| Windfall Sites | 900 | 900 |
| Proposed Site Allocation | 11,443 | 14,022 (includes Pedham Place) |
| **Total (excluding completed developments)** | **16,321** | **18,900** |

# 4. Results and Analysis

## 4.1 Model Outputs Criteria

Junction Level of Service (LOS) and link Volume / Capacity (VOC) ratio indicators were used as criteria to identify the link and junction "hot spots" in the study area.

Level of service plots provide a qualitative measure of how good the present traffic situation is on a given junction. As actual flow will vary for different days and different times in a day, LOS relates the traffic service quality to a given flow rate of traffic. VISUM defines the LOS based on the mean delay experienced by each vehicle. Table 4-1 defines the LOS by six levels ranging from level A to level F.

| | |
|---|---|
| A | Level A represents the best quality of traffic where the driver has the freedom to drive with free flow speed. |
| B | Level B represents good traffic quality where driver can reasonably maintain free flow speed and maneuverability within the traffic stream is slightly restricted. |
| C | Level C represents stable traffic flows, at or near free flow. Ability to manoeuvre through lanes is noticeably restricted and requires awareness. |
| D | Level D represents almost unstable traffic flows. Speeds slightly decrease as traffic volume slightly increase. On this level driver comfort decreases. |
| E | Level E represents unstable traffic flows, operating at capacity. Driver's level of comfort becomes poor. |
| F | Level F represents the worst traffic quality with forced or breakdown traffic flows. Travel time cannot be predicted, with generally more demand than capacity. |

Table 4-1: Level of Service Description

On the other hand, volume / capacity is the ratio of assigned traffic volume to the modelled link capacity and the ranges used are set out below.

| V/C Ratio | Description |
|---|---|
| <= 75% | Stable flow with acceptable delay |
| <= 85% | Approaching unstable flow but with tolerable delay |
| <= 100% | Unstable flow |
| > 100% | Over-capacity |

Table 4-2: Level of Service Description

## 4.2 2042 Scenario 1 – Suitable Sites

### 4.2.1 Flow Difference Plots

Figure 6 and Figure 7 show the flow difference plots (presented in total actual vehicles and considering blocking back and queue effect) for each peak period comparing the 2042 LP Scenario 1 and 2042 Forecast Baseline.

In the AM, significant traffic increases (greater than 100 vehicles per direction) are predicted on the following corridors.

Sevenoaks Town

- A224 London Road
- A224 Morants Ct Road

Edenbridge Town

- Crouch House Road
- Hilders Lane
- Swan Lane
- B2027 Four Elms Road

Some traffic increases (less than 100 vehicles per direction) are also predicted on the following corridors.

Swanley Town

- B2173
- B258 Swanley Lane
- Highlands Hill
- Swanley Village Road
- Russet Way

Longfield and New Ash Green

- Ash Road
- B255 Whitehill Road
- B262 Station Road
- B262 Sandbanks Hill
- A225 Main Road

Sevenoaks Town

- A25 Seal Road
- A25 Bradbourne Vale Road
- A25 Westerham Road
- A225 High Street
- Oak Lane
- A225 Otford Road
- A225 High Street
- A225 Shoreham Road (towards Eynsford)
- B2042 Back Lane
- A25 Main Road
- M25
- A21 (near Chevening Cross)
- Starhill Road (towards Knockholt)

Edenbridge Town

- B2026 Station Road
- B2026 Main Road
- B2026 Hosey Common Road
- B2027 Clinton Lane
- B2027 Penshurst Road (towards Leigh)
- Ensfield Road
- Little Browns Lane
- Hevers Lane
- B2026 Mill Hill

- B2028 Town Hill
- B269 Kent Hatch Road
- Broadham Green Road (towards Oxted)

Similar trip patterns can be seen in the PM peak, with more traffic across all roads compared to the AM peak, especially around Edenbridge along B2027 Four Elms Road, Little Browns Lane and Hilders Lane.

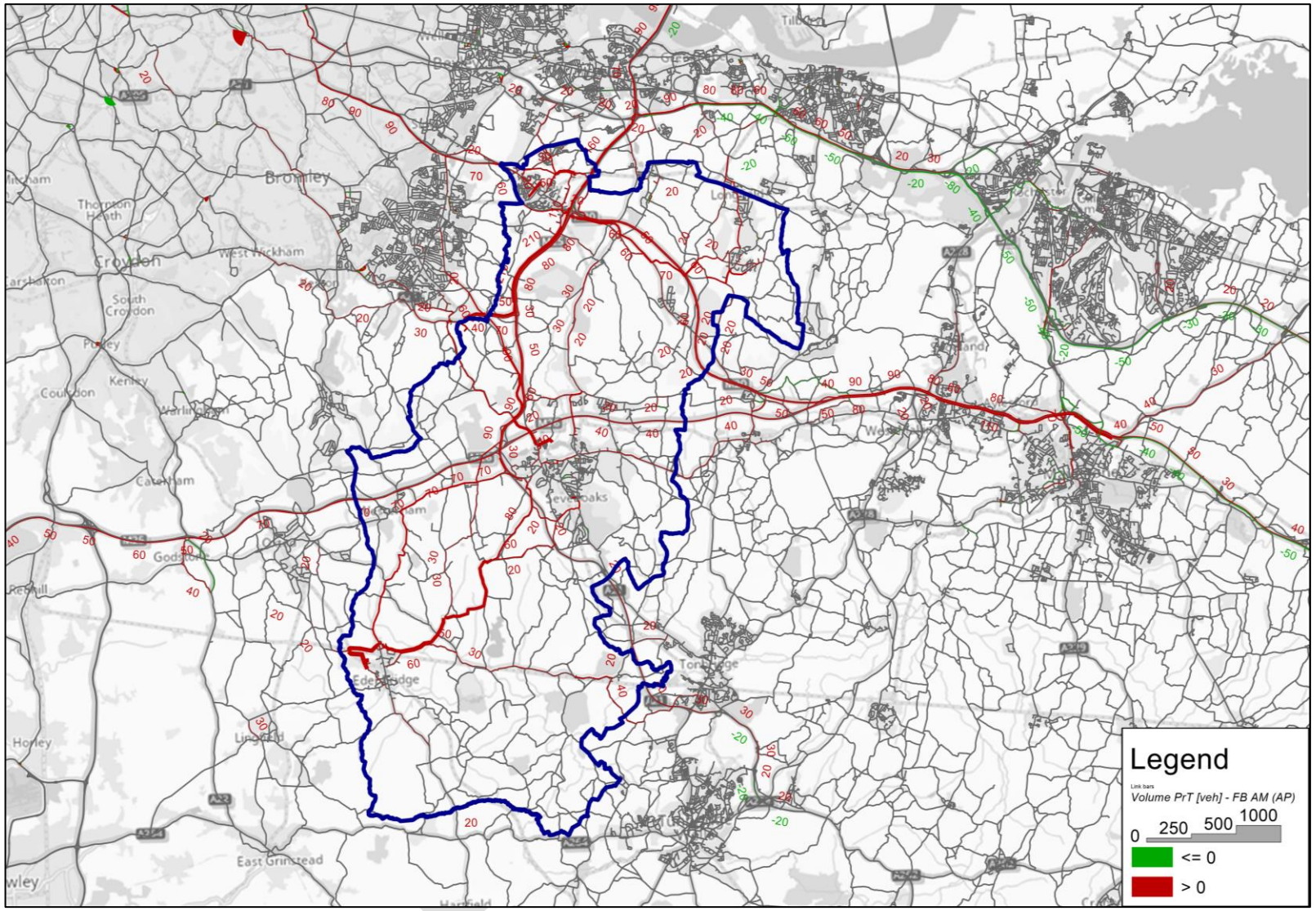


Figure 6 2042 Sevenoaks Forecast Baseline vs Local Plan Scenario 1 - AM Peak Period

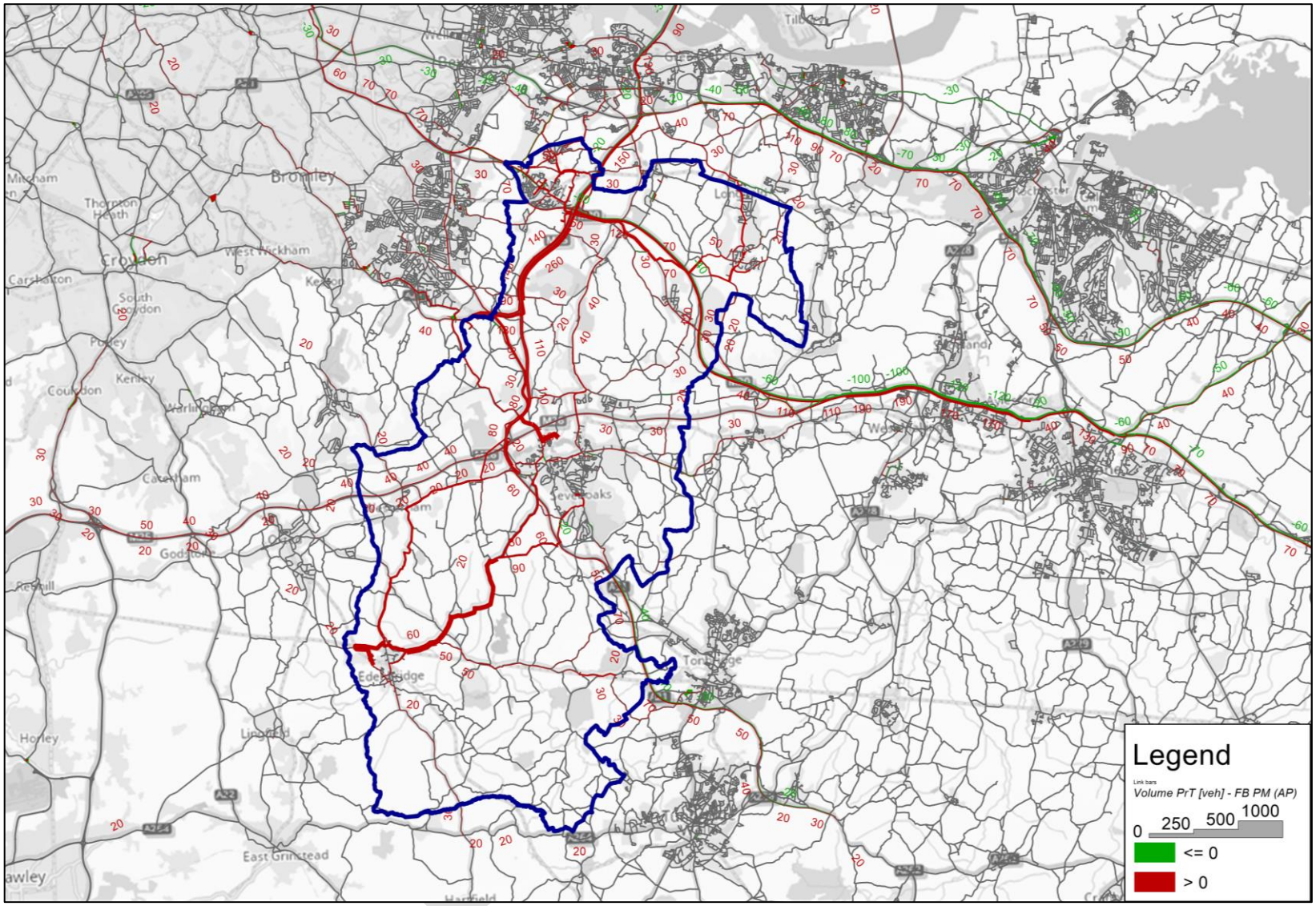


Figure 7 2042 Sevenoaks Forecast Baseline vs Local Plan Scenario 1 - PM Peak Period

#### 4.2.2 Junction and Link "Hot-Spots"

Figure 8 and Figure 10 show the junction level of service and link volume capacity ratios for 2042 LP Scenario 1 in the AM and PM peak periods. Appendix A also shows the detailed V/C and maximum LOS by key area in Sevenoaks District.

In both time periods, the link and junction performance is generally similar to the Forecast Baseline with the addition of the following. The location of the junctions and links where the LOS and V/C rating changed in the LP Scenario 1 is presented separately in Figure 9 and Figure 11.

Swanley

- B2173 London Road / Kingswood Avenue junction changing from E to F
- M25 J3 roundabout changing from C to E
- London Road / Button Street junction changing from C to D

Sevenoaks Town

- Shoreham Road / Pilgrims Way East / Station Road junction changing from LOS E to F
- Station Road / Sevenoaks Road / High Street roundabout changing from LOS C to D
- Westerham Road / Worships Hill / Cold Arbor Road junction changing from LOS D to E
- Westerham Road / Witches Lane changing from D to E
- Tonbridge Road / St Julian Road junction changing from E to F
- Polhill / Pilgrims Way junction near M25 changing from C to D
- Maidstone Road / Saxbys Road junction changing from C to D

Edenbridge

- B2026 Main Road / Hilder's Lane changing from maximum LOS C to F.

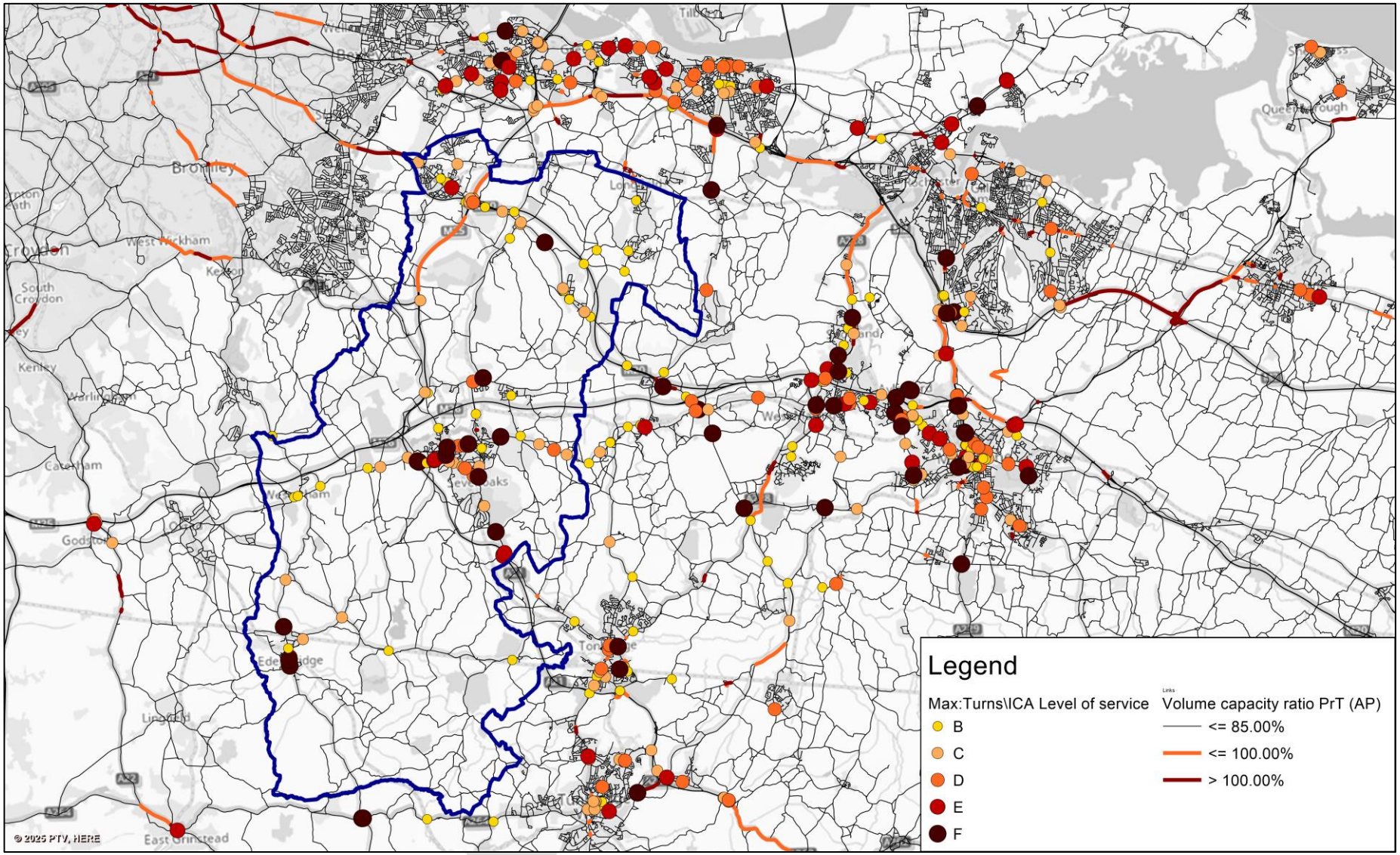


Figure 8 2042 LP Scenario 1 – Junction Max LOS and Link Volume Capacity Ratio - AM Peak

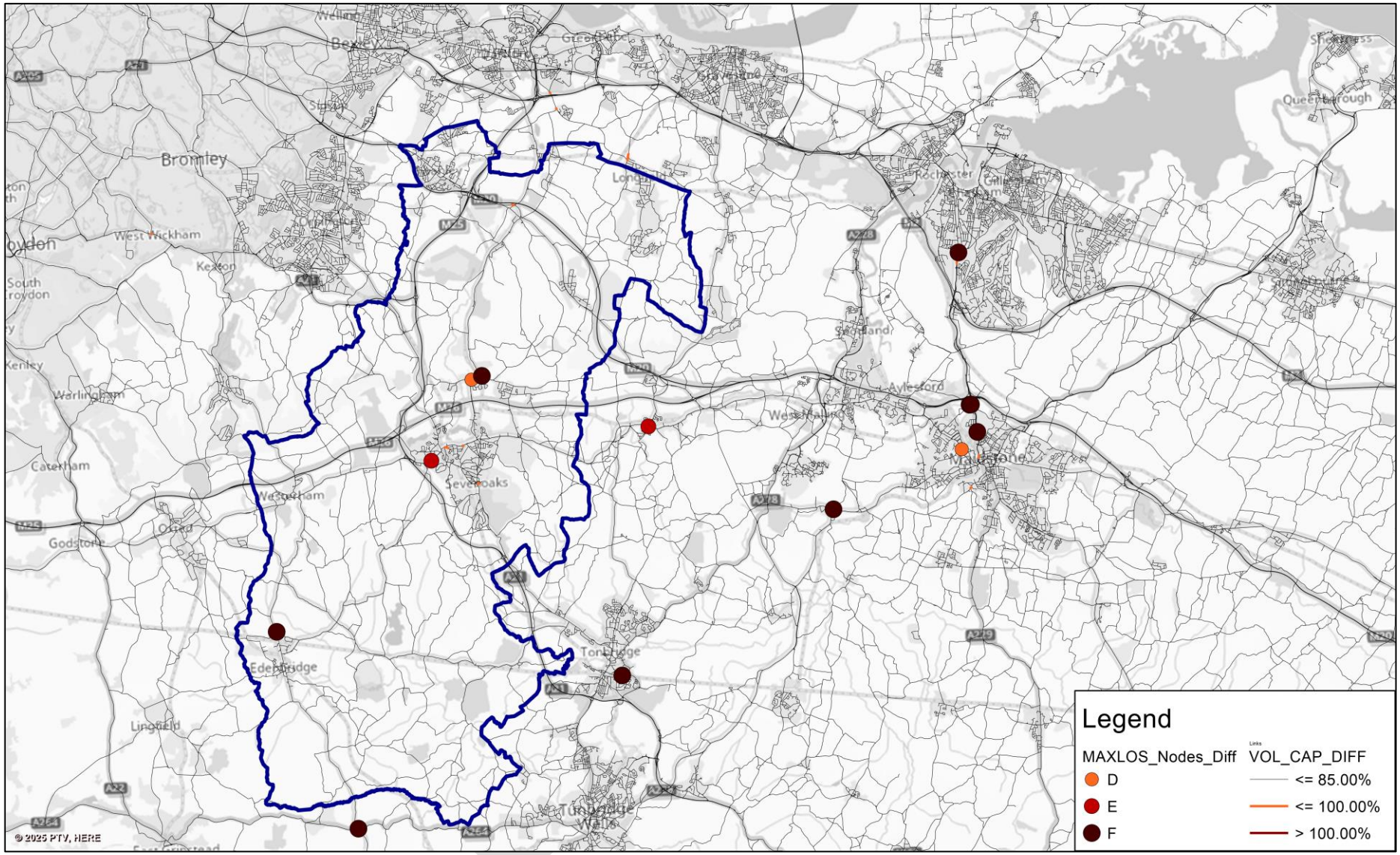


Figure 9: Location of Junctions and Links where the LOS and V/C Ratio Changed - 2042 LP Scenario 1 vs 2042 Forecast Baseline – AM Peak

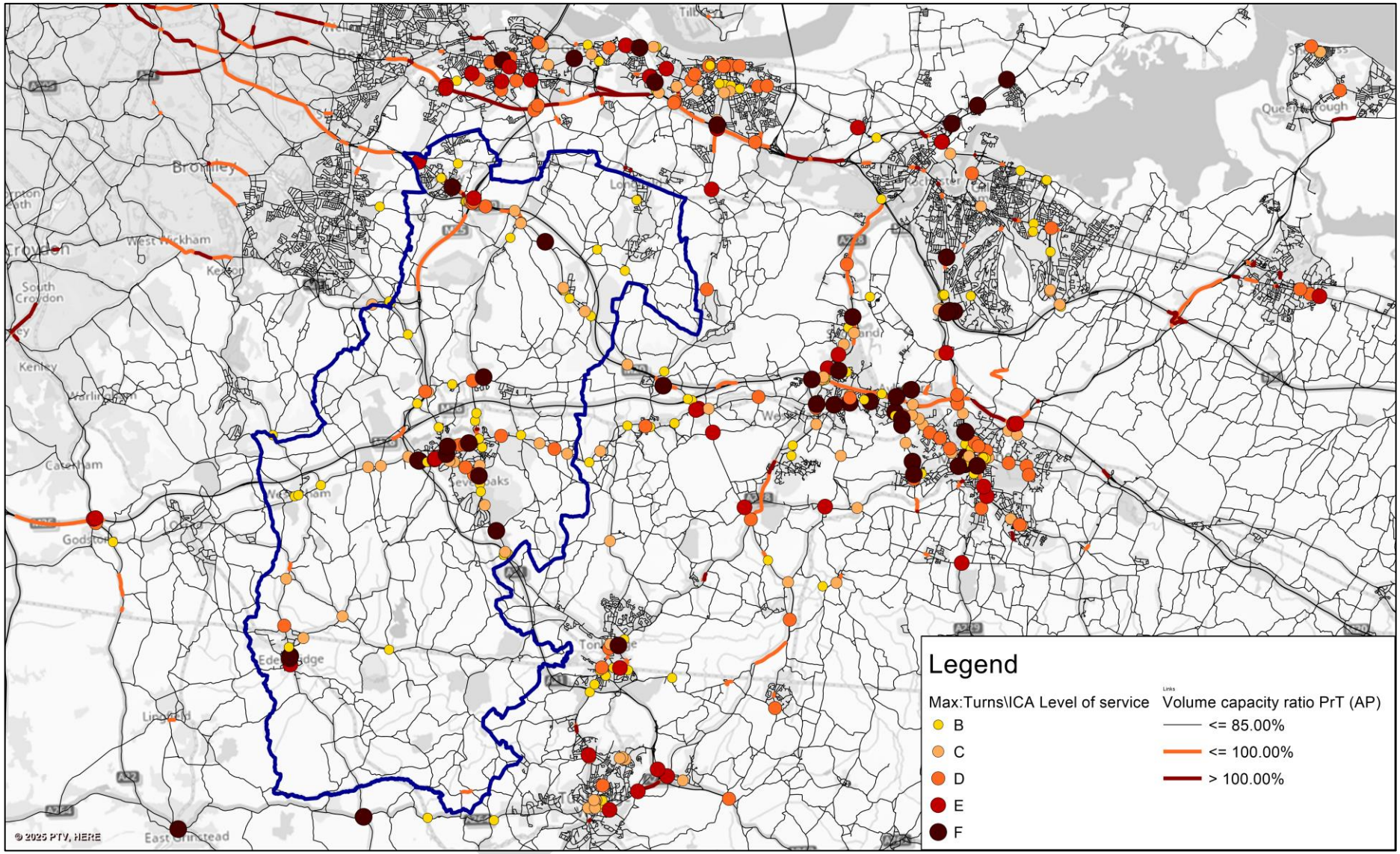


Figure 10: 2042 LP Scenario 1 – Junction Max LOS and Link Volume Capacity Ratio - PM Peak

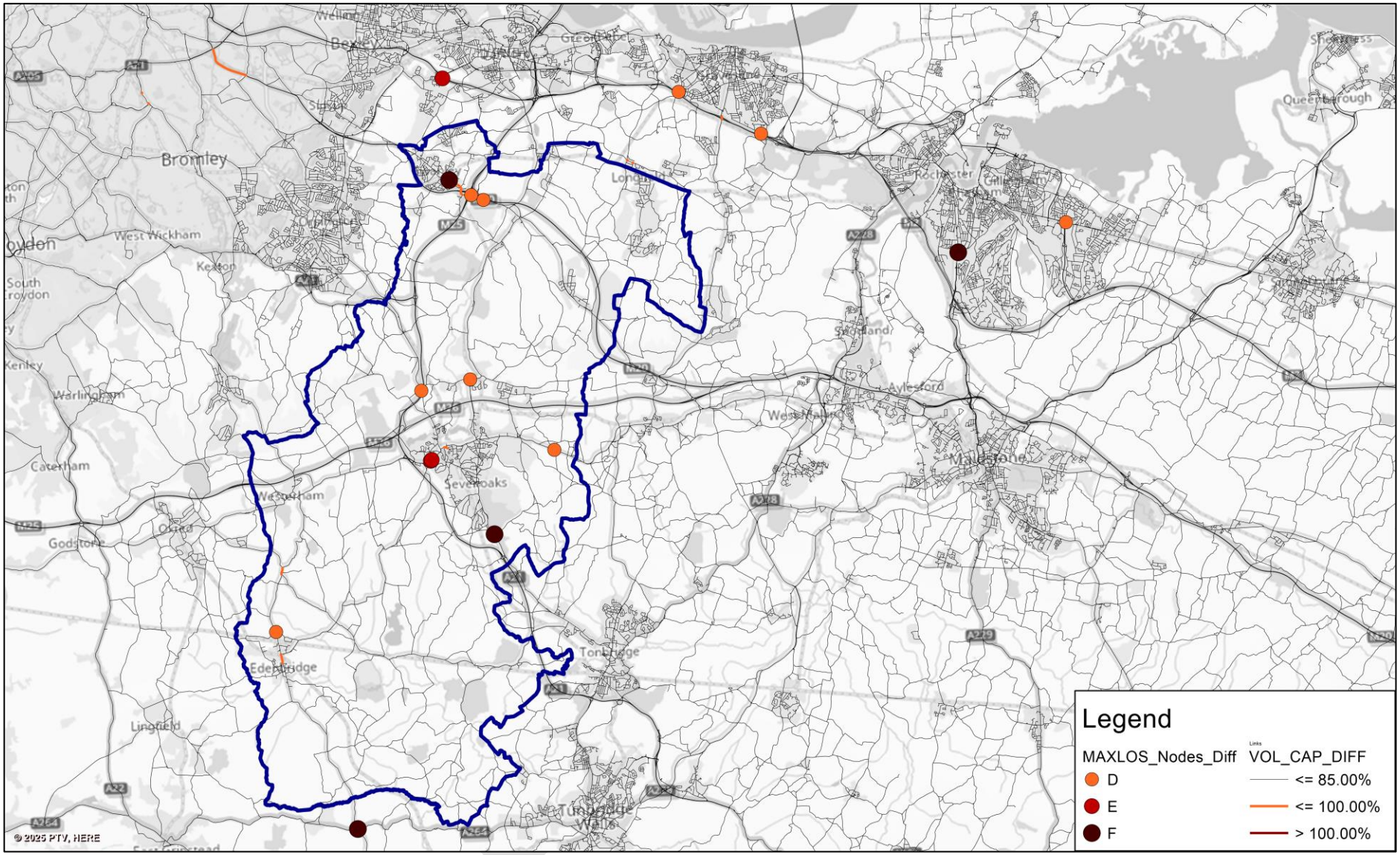


Figure 11: Location of Junctions and Links where the LOS and V/C Ratio Changed - 2042 LP Scenario 1 vs 2042 Forecast Baseline – PM Peak

#### 4.2.3 Journey Time Comparison

Figure 12 presents the routes considered for the journey time comparison. Detailed journey time comparison between the 2042 Local Plan Scenario 1 and 2042 Forecast Baseline is shown in Table 3.

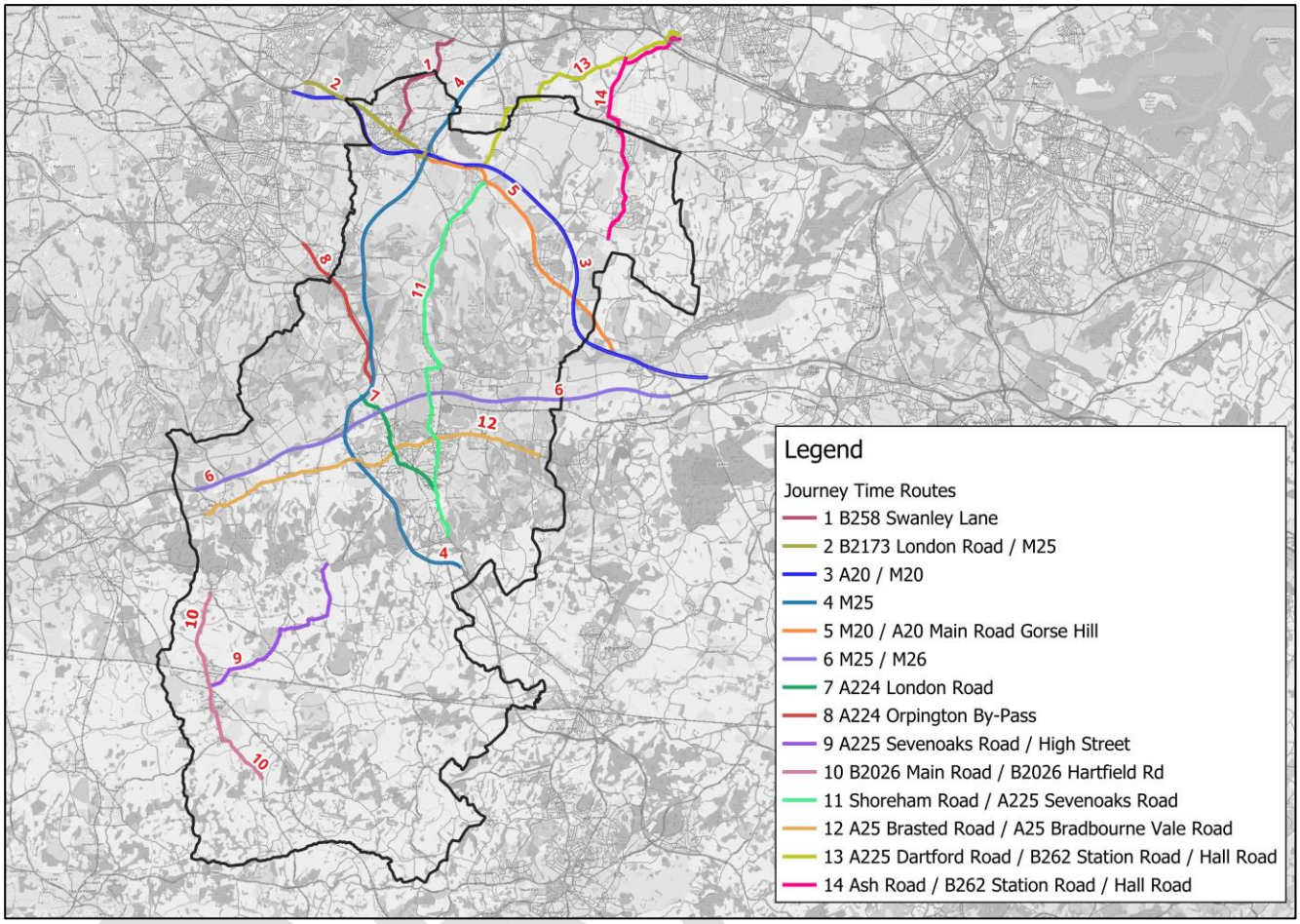


Figure 12 Journey Times Routes in Sevenoaks

The comparison of travel times between the 2042 Local Plan Scenario 1 and the Forecast Baseline shows only marginal differences (less than 10%). However, this may be due to the network already being congested in the Forecast Baseline. Therefore, consideration should still be given to the following routes where increases in travel time have been predicted.

- Route 2 - B2173 London Road / M25 eastbound increasing by 6 % or 52 seconds in the PM peak
- Route 9 – A225 Sevenoaks Road / High Street increasing by 8 % or 41 seconds in the southbound direction in the PM peak
- Route 13 – A225 Dartford Road / Hall Road increasing by 7% or 1 minute in the northbound direction in the AM peak
- Route 14 – Ash Road / Hall Road increasing by 8 % or 1 minute 27 seconds in the northbound direction in the AM Peak

Table 3: 2042 Forecast Baseline vs Local Plan Scenario 1 Journey Time Comparison

| Route | Description | Direction | 2042 Baseline Model [min:sec] | | 2042 LP Test Sc 1 [min:sec] | | Actual Difference [min:sec] | | % Difference | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | AM | PM | AM | PM | AM | PM | AM | PM |
| 1 | B258 Swanley Lane | 13_SB | 07:07 | 07:09 | 07:10 | 07:22 | 00:03 | 00:13 | 1% | 3% |
| | B258 Swanley Lane | 13_NB | 07:10 | 07:06 | 07:16 | 07:09 | 00:06 | 00:03 | 1% | 1% |
| 2 | B2173 London Road / M25 | 14_EB | 12:51 | 13:48 | 13:08 | 14:40 | 00:17 | 00:52 | 2% | 6% |
| | B2173 London Road / M25 | 14_WB | 17:12 | 15:53 | 17:51 | 16:33 | 00:39 | 00:40 | 4% | 4% |
| 3 | A20-M20 | 15_EB | 12:18 | 13:36 | 12:19 | 13:34 | 00:01 | 00:02 | 0% | 0% |
| | A20-M20 | 15_WB | 13:13 | 11:19 | 13:31 | 11:22 | 00:18 | 00:03 | 2% | 0% |
| 4 | M25 | 16_SB | 16:34 | 15:04 | 16:37 | 15:13 | 00:03 | 00:09 | 0% | 1% |
| | M25 | 16_NB | 14:24 | 15:23 | 14:29 | 15:31 | 00:05 | 00:08 | 1% | 1% |
| 5 | M20 / A20 Main Road Gorse Hill | 17_SB | 16:47 | 16:24 | 17:16 | 16:56 | 00:29 | 00:32 | 3% | 3% |
| | M20 / A20 Main Road Gorse Hill | 17_NB | 17:33 | 16:05 | 18:06 | 16:30 | 00:33 | 00:25 | 3% | 3% |
| 6 | M25-M26 | 19_EB | 10:52 | 11:58 | 10:53 | 11:58 | 00:01 | 00:00 | 0% | 0% |
| | M25-M26 | 19_WB | 11:54 | 11:15 | 11:58 | 11:16 | 00:04 | 00:01 | 1% | 0% |
| 7 | A224 London Road | 22_SB | 08:38 | 08:24 | 08:42 | 08:38 | 00:04 | 00:14 | 1% | 3% |
| | A224 London Road | 22_NB | 08:43 | 09:29 | 08:51 | 09:34 | 00:08 | 00:05 | 2% | 1% |
| 8 | A224 Orpington By-Pass | 24_NB | 06:45 | 06:41 | 07:11 | 06:51 | 00:26 | 00:10 | 6% | 2% |
| | A224 Orpington By-Pass | 24_SB | 06:36 | 06:43 | 06:43 | 07:06 | 00:07 | 00:23 | 2% | 6% |
| 9 | A225 Sevenoaks Road / High Street | 25_SB | 08:52 | 08:47 | 08:58 | 09:28 | 00:06 | 00:41 | 1% | 8% |
| | A225 Sevenoaks Road / High Street | 25_NB | 08:55 | 08:51 | 09:19 | 08:56 | 00:24 | 00:05 | 4% | 1% |
| 10 | A224 Orpington By-Pass | 26_NB | 10:16 | 09:55 | 10:23 | 10:05 | 00:07 | 00:10 | 1% | 2% |
| | A224 Orpington By-Pass | 26_SB | 10:01 | 10:28 | 10:06 | 10:48 | 00:05 | 00:20 | 1% | 3% |
| 11 | Shoreham Road / A225 Sevenoaks Road | 31_SB | 22:30 | 21:42 | 22:44 | 22:01 | 00:14 | 00:19 | 1% | 1% |
| | Shoreham Road / A225 Sevenoaks Road | 31_NB | 20:55 | 22:14 | 21:05 | 22:32 | 00:10 | 00:18 | 1% | 1% |
| 12 | A25 Brasted Road / A25 Bradbourne Vale Road | 32_EB | 23:29 | 25:19 | 23:58 | 25:47 | 00:29 | 00:28 | 2% | 2% |
| | A25 Brasted Road / A25 Bradbourne Vale Road | 32_WB | 26:36 | 24:00 | 26:59 | 24:49 | 00:23 | 00:49 | 1% | 3% |

| Route | Description | Direction | 2042 Baseline Model [min:sec] | | 2042 LP Test Sc 1 [min:sec] | | Actual Difference [min:sec] | | % Difference | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | AM | PM | AM | PM | AM | PM | AM | PM |
| 13 | A225 Dartford Road / B262 Station Road / Hall Road | 33_SB | 18:33 | 14:46 | 18:54 | 15:05 | 00:21 | 00:19 | 2% | 2% |
| | A225 Dartford Road / B262 Station Road / Hall Road | 33_NB | 17:44 | 16:27 | 18:59 | 16:22 | 01:15 | 00:05 | 7% | -1% |
| 14 | Ash Road / B262 Station Road / Hall Road | 34_SB | 18:57 | 16:02 | 19:25 | 16:29 | 00:28 | 00:27 | 2% | 3% |
| | Ash Road / B262 Station Road / Hall Road | 34_NB | 19:08 | 16:20 | 20:35 | 16:25 | 01:27 | 00:05 | 8% | 1% |

## 4.3 2042 Local Plan Scenario 2 – with Pedham Place Development

### 4.3.1 Flow Difference Plots

Figure 17 and Figure 14 show the flow difference plots (presented in total actual vehicles and considering blocking back and queue effect) for each peak period comparing the 2042 LP Scenario 1 and 2042 Forecast Baseline.

Overall, the flow changes show similar patterns to Scenario 1 around Sevenoaks and Edenbridge, but with higher volumes on the network surrounding the Pedham Place development. Increases of more than 100 vehicles are observed along the A20 Main Road, the M25, and the M26. Additional traffic is also predicted along Shoreham Road between Otford and Farningham, as well as on the A225 Dartford Road.

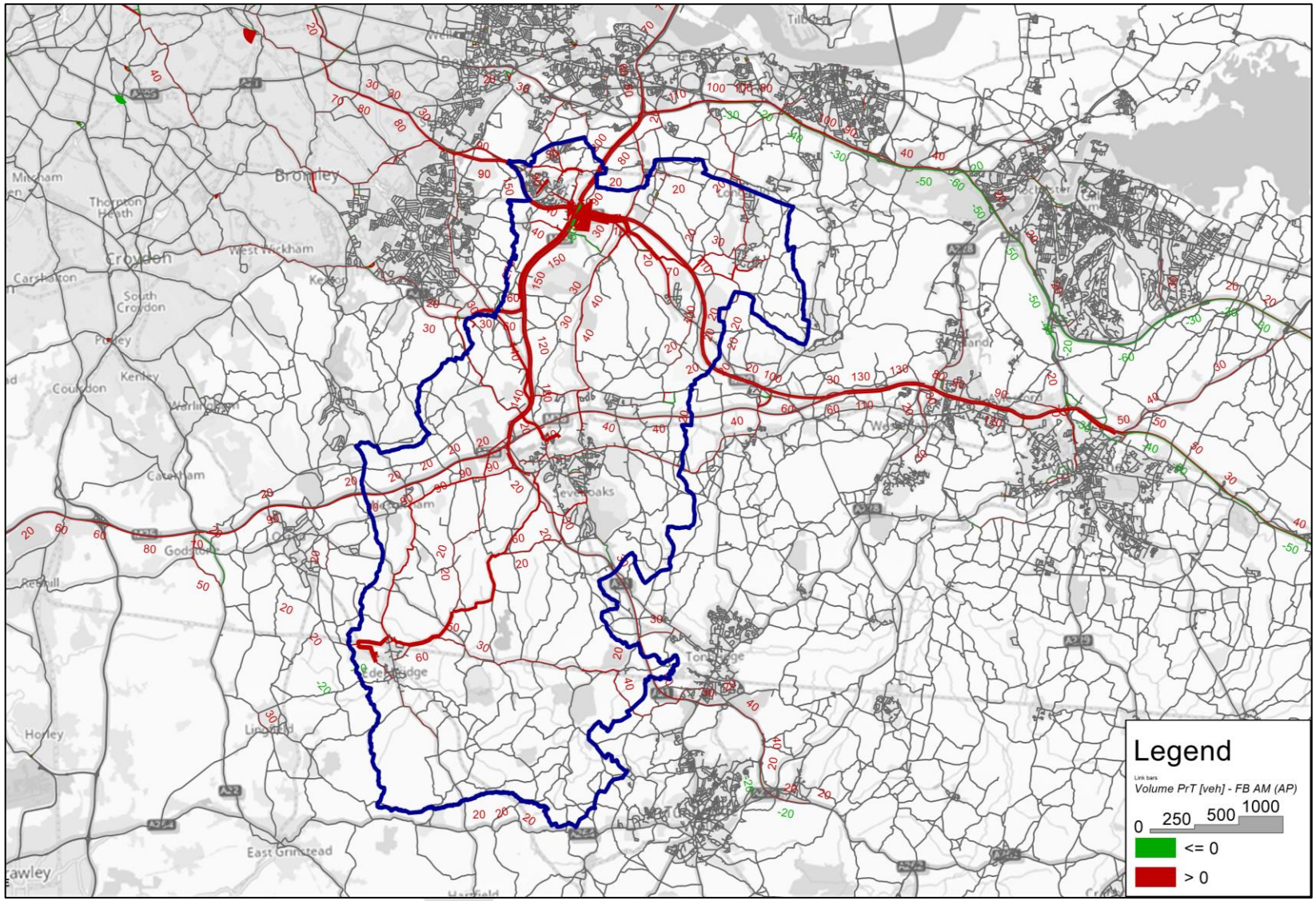


Figure 13 2042 Sevenoaks Forecast Baseline vs 2042 LP Scenario 2 - AM Peak

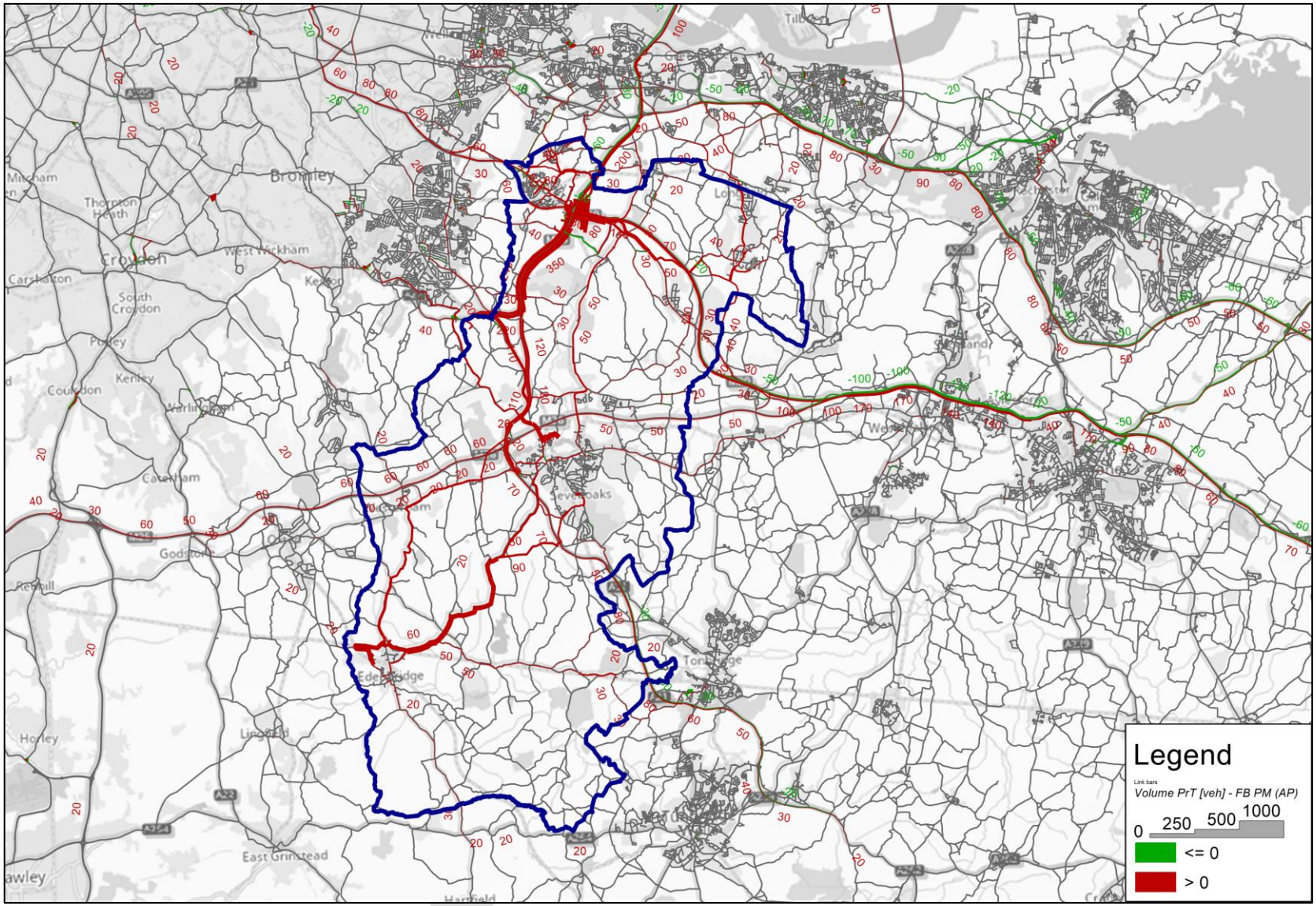


Figure 14 2042 Sevenoaks Forecast Baseline vs 2042 LP Scenario 1 - PM Peak

#### 4.3.2 Junction and Link "Hot-Spots"

Figure 15 and Figure 17 show the junction level of service and link volume capacity ratios for 2042 LP Scenario 2 in the AM and PM peak periods. Appendix B also shows the detailed V/C and maximum LOS by key area in Sevenoaks District.

Similar to Local Plan Scenario 1, the link and junction performance is generally consistent with the Forecast Baseline, with the addition of the following changes. Overall, the main differences in Level of Service (LOS) and Volume-to-Capacity (V/C) ratios in Local Plan Scenario 2 are observed around M25 Junction 3 and the A20, which are directly connected to the Pedham Place development. The locations of the junctions and links where LOS and V/C ratings have changed in Scenario 2 are shown separately in Figure 16 and Figure 18.

Swanley

- B2173 London Road / Kingswood Avenue junction changing from **E** to **F**
- Main Road / London Road junction changing from **B** to **D**
- M25 J3 changing from LOS **D** to **F**

Sevenoaks

- Shoreham Road / Pilgrims Way East / Station Road junction changing from LOS **E** to **F**
- Station Road / Sevenoaks Road / High Street rounabout changing from LOS **C** to **D**
- Westerham Road / Worships Hill / Cold Arbor Road junction changing from LOS **D** to **E**
- A25 Main Road / Church Road junction changing from **C** to **D**
- Westerham Road / Witches Lane changing from **D** to **E**
- Tonbridge Road / St Julian Road junction changing from **E** to **F**
- Polhill / Pilgrims Way junction near M25 changing from **C** to **D**
- Maidstone Road / Saxbys Road junction changing from **C** to **D**

Edenbridge

- B2026 Main Road / Hilder's Lane changing from maximum LOS **C** to **F**

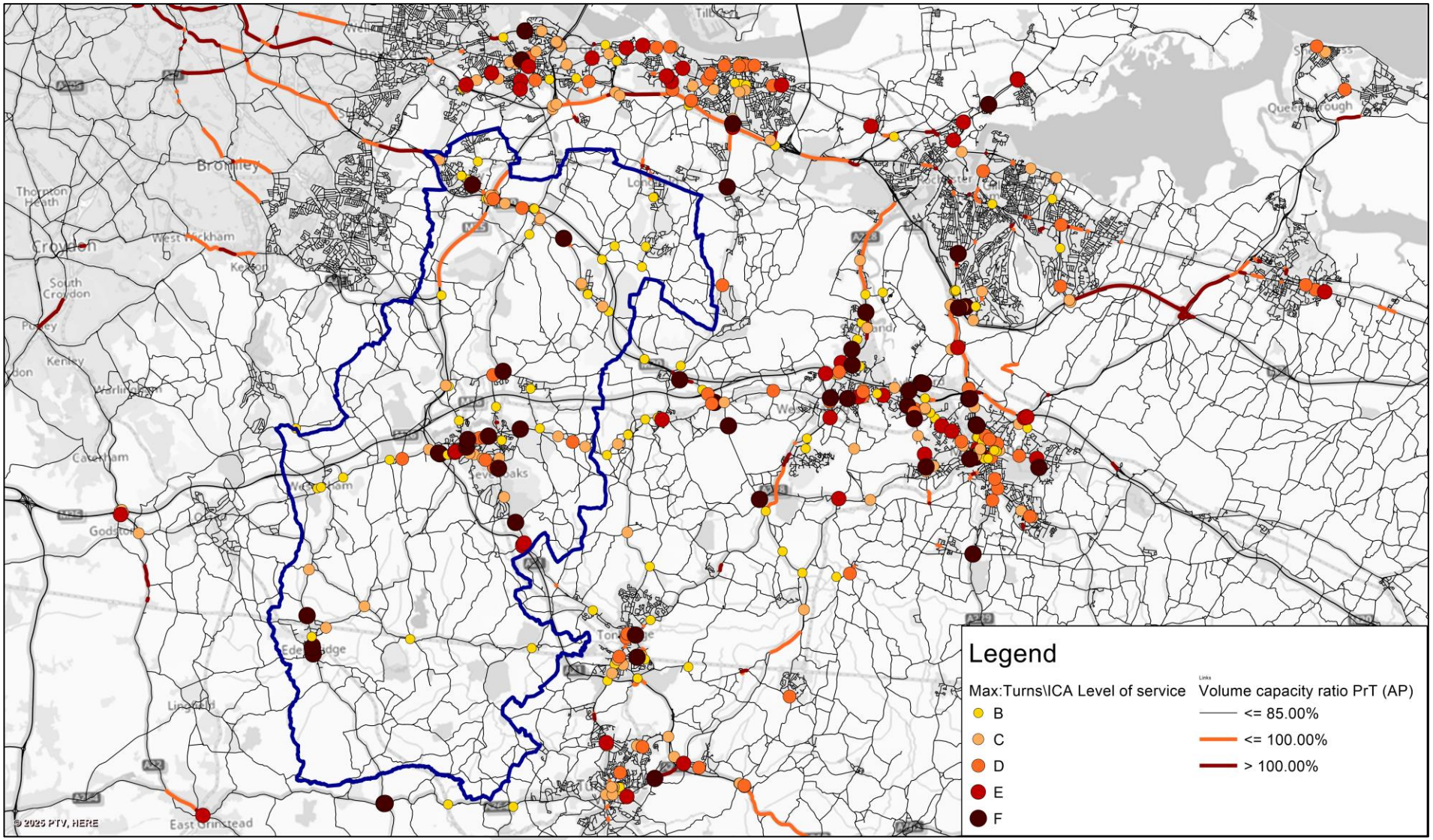


Figure 15 LP Scenario 2 - Junction LOS and Link Volume Capacity Ratio - AM Peak Period

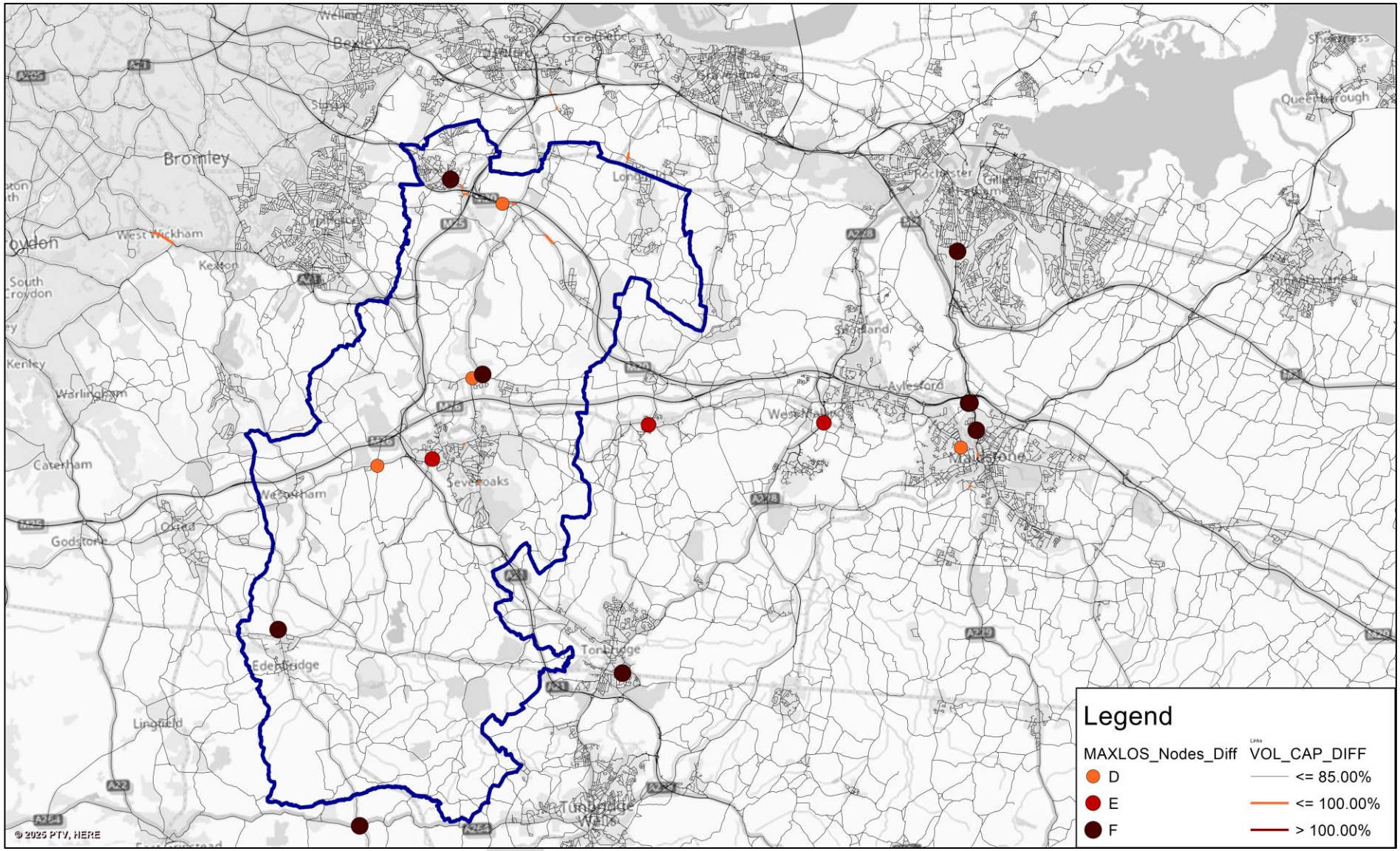


Figure 16: Location of Junctions and Links where the LOS and V/C Ratio Changed - 2042 LP Scenario 2 vs 2042 Forecast Baseline – AM Peak

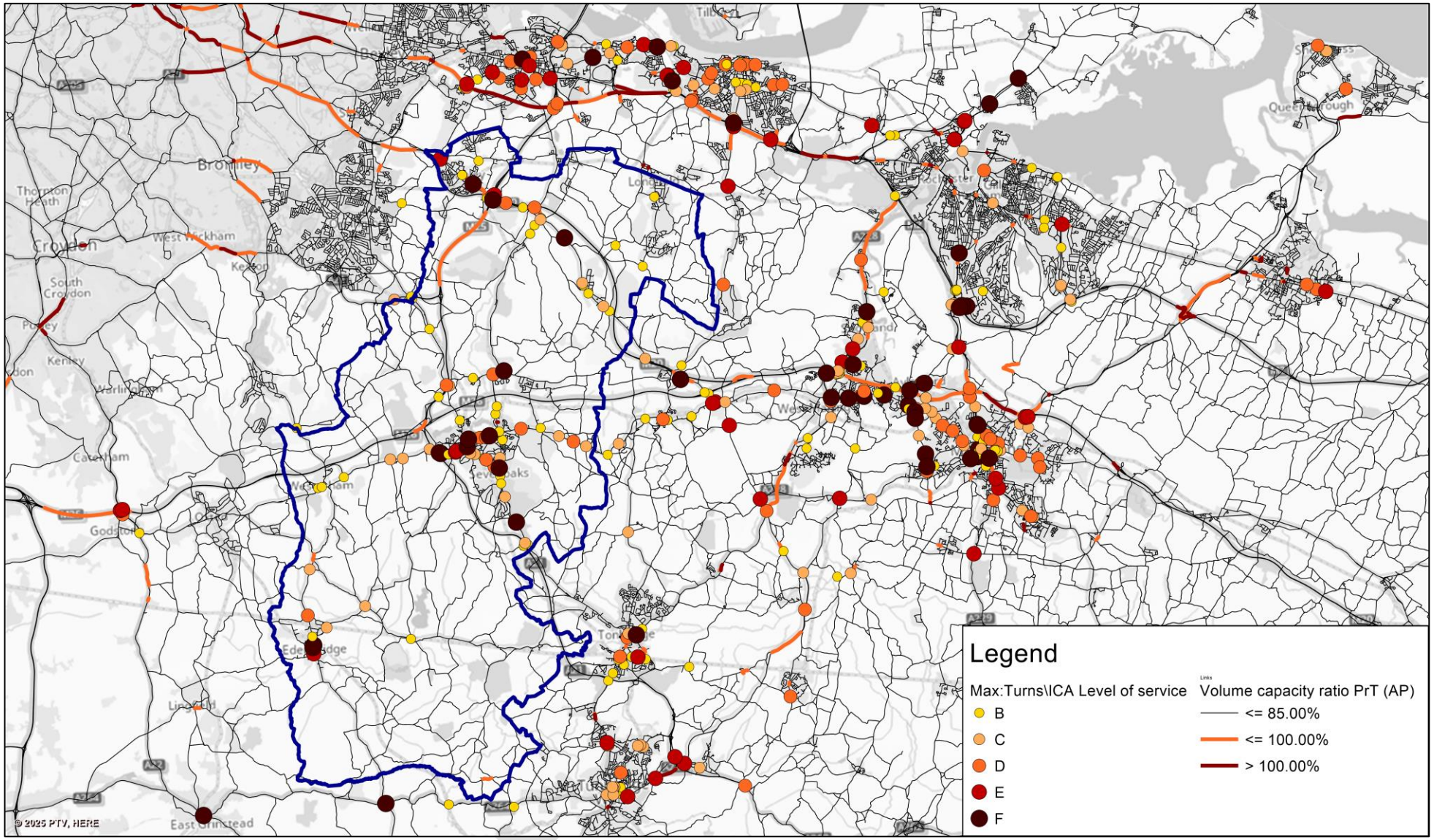


Figure 17 LP Scenario 2 - Junction LOS and Link Volume Capacity Ratio - PM Peak Period

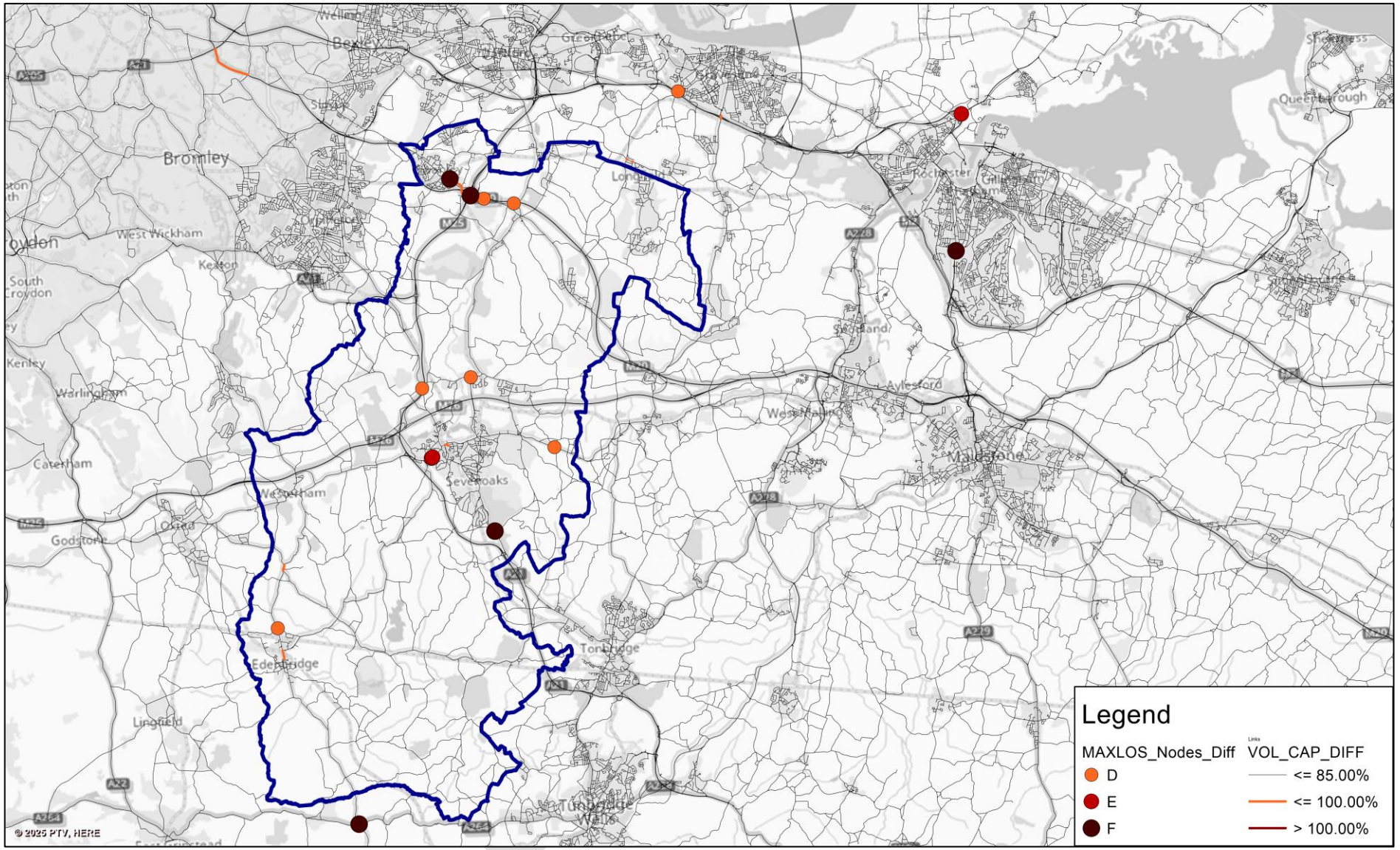


Figure 18: Location of Junctions and Links where the LOS and V/C Ratio Changed - 2042 LP Scenario 2 vs 2042 Forecast Baseline – PM Peak

#### 4.3.3 Journey Time Comparison

Detailed journey time comparisons between the 2042 LP Scenario 2 and 2042 Forecast Baseline are shown in Table 3.

Overall, journey times are similar to Scenario 1 results, except for the routes surrounding the Pedham Place development.

- Route 2 connecting B2173 London Road and M25 shows an increase of 7% and 14% or around 56 seconds to 2 minutes and 18 seconds in the eastbound and westbound directions respectively;
- Route 5 along A20 Main Road Gorse Hill shows an increase of 6% or around 1 minute.

Table 4 2042 Sevenoaks Forecast Baseline A vs 2042 LP Scenario 2 Journey Times Comparison

| Route | Description | Direction | 2042 Forecast Baseline [min:sec] | | 2042 LP Scenario 2 [min:sec] | | Actual Difference [min:sec] | | % Difference | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | AM | PM | AM | PM | AM | PM | AM | PM |
| 1 | B258 Swanley Lane/ Barn End Lane | 13_SB | 07:07 | 07:09 | 07:09 | 07:22 | 00:02 | 00:13 | 0% | 3% |
| | B258 Swanley Lane/ Barn End Lane | 13_NB | 07:10 | 07:06 | 07:14 | 07:09 | 00:04 | 00:03 | 1% | 1% |
| 2 | B2173 London Road | 14_EB | 12:51 | 13:48 | 13:20 | 14:44 | 00:29 | 00:56 | 4% | 7% |
| | B2173 London Road | 14_WB | 17:12 | 15:53 | 16:50 | 18:11 | 00:22 | 02:18 | -2% | 14% |
| 3 | A20-M20 | 15_EB | 12:18 | 13:36 | 12:21 | 13:37 | 00:03 | 00:01 | 0% | 0% |
| | A20-M20 | 15_WB | 13:13 | 11:19 | 13:39 | 11:21 | 00:26 | 00:02 | 3% | 0% |
| 4 | M25 | 16_SB | 16:34 | 15:04 | 16:51 | 15:27 | 00:17 | 00:23 | 2% | 3% |
| | M25 | 16_NB | 14:24 | 15:23 | 14:31 | 15:44 | 00:07 | 00:21 | 1% | 2% |
| 5 | A20 London Road/Main Road Gorse Hill | 17_SB | 16:47 | 16:24 | 15:57 | 17:27 | 00:50 | 01:03 | -5% | 6% |
| | A20 London Road/Main Road Gorse Hill | 17_NB | 17:33 | 16:05 | 18:26 | 17:01 | 00:53 | 00:56 | 5% | 6% |
| 6 | A225 Shoreham Road/Eynsford Road | 18_SB | 10:52 | 11:58 | 10:53 | 11:58 | 00:01 | 00:00 | 0% | 0% |
| | A225 Shoreham Road/Eynsford Road | 18_NB | 11:54 | 11:15 | 11:59 | 11:16 | 00:05 | 00:01 | 1% | 0% |
| 7 | M25-M26 | 19_EB | 08:38 | 08:24 | 08:44 | 08:36 | 00:06 | 00:12 | 1% | 2% |
| | M25-M26 | 19_WB | 08:43 | 09:29 | 08:49 | 09:34 | 00:06 | 00:05 | 1% | 1% |
| 8 | A25 Brasted Road/ Main Road | 20_EB | 06:45 | 06:41 | 07:10 | 06:55 | 00:25 | 00:14 | 6% | 3% |
| | A25 Brasted Road/ Main Road | 20_WB | 06:36 | 06:43 | 06:44 | 07:06 | 00:08 | 00:23 | 2% | 6% |
| 9 | A25 Bradbourne Vale Road / Seal Road | 21_EB | 08:52 | 08:47 | 08:59 | 09:28 | 00:07 | 00:41 | 1% | 8% |
| | A25 Bradbourne Vale Road / Seal Road | 21_WB | 08:55 | 08:51 | 09:18 | 08:57 | 00:23 | 00:06 | 4% | 1% |
| 10 | A224 London Road/Amherst Hill | 22_SB | 10:16 | 09:55 | 10:23 | 10:05 | 00:07 | 00:10 | 1% | 2% |
| | A224 London Road/Amherst Hill | 22_NB | 10:01 | 10:28 | 10:06 | 10:48 | 00:05 | 00:20 | 1% | 3% |
| 11 | A225 Sevenoaks Road / High Street | 23_SB | 22:30 | 21:42 | 22:54 | 22:07 | 00:24 | 00:25 | 2% | 2% |
| | A225 Sevenoaks Road / High Street | 23_NB | 20:55 | 22:14 | 21:07 | 22:37 | 00:12 | 00:23 | 1% | 2% |
| 12 | A224 Orpington By-Pass / Polhill | 24_NB | 23:29 | 25:19 | 24:00 | 25:52 | 00:31 | 00:33 | 2% | 2% |
| | A224 Orpington By-Pass / Polhill | 24_SB | 26:36 | 24:00 | 26:58 | 24:49 | 00:22 | 00:49 | 1% | 3% |

| Route | Description | Direction | 2042 Forecast Baseline [min:sec] | | 2042 LP Scenario 2 [min:sec] | | Actual Difference [min:sec] | | % Difference | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | AM | PM | AM | PM | AM | PM | AM | PM |
| 13 | B2027 Four Elms Road/ B2042 Ide Hill Road | 25_SB | 18:33 | 14:46 | 18:31 | 15:09 | 00:02 | 00:23 | 0% | 3% |
| | B2027 Four Elms Road/ B2042 Ide Hill Road | 25_NB | 17:44 | 16:27 | 17:55 | 16:27 | 00:11 | 00:00 | 1% | 0% |
| 14 | B2026 Hartfield Road/Main Road | 26_NB | 18:57 | 16:02 | 19:02 | 16:30 | 00:05 | 00:28 | 0% | 3% |
| | B2026 Hartfield Road/Main Road | 26_SB | 19:08 | 16:20 | 19:27 | 16:26 | 00:19 | 00:06 | 2% | 1% |

# 5. Summary and Recommendations

This Report provides a summary of the assumptions and methodology used to develop the following Local Plan Scenarios for Sevenoaks District.

- Scenario 1 - includes developments categorised as "initial"
- Scenario 2 - includes developments categorised as "initial" and the Pedham Place development

Local Plan Scenario 1

With the additional demand from developments categorised as "initial," Scenario 1 predicts significant increases in traffic (greater than 100 vehicles per direction) in Sevenoaks and Edenbridge. Marginal increases are also observed around Swanley, Hartley/Longfield, and New Ash Green.

Most of the junction and link "hotspots" identified in the Forecast Baseline remain in Scenario 1. However, the additional growth incorporated into the model worsens the performance of some junctions in Sevenoaks, Edenbridge, and Swanley.

The comparison of travel times between Scenario 1 and the Forecast Baseline shows only marginal differences. This may be due to the network already being congested in the Forecast Baseline.

Local Plan Scenario 2

Scenario 2 shows similar patterns to Scenario 1, with additional traffic increases in the area surrounding the Pedham Place development. Increases of more than 100 vehicles are predicted along the A20 Main Road, the M25, and the M26. Other roads affected by the inclusion of this development include Shoreham Road and the A225 Dartford Road.

Similarly, junction LOS and link V/C ratios show marginal differences between Scenario 2 and the Forecast Baseline, except around M25 Junction 3 and the A20. This indicates that, despite the inclusion of the improvement scheme at M25 Junction 5, issues are still predicted at this junction. Further review of the proposed junction design is therefore required.

In terms of journey times, significant increases are observed only in areas close to the Pedham Place development. These include:

- Route 2 – connecting B2173 London Road and the M25
- Route 5 – along the A20 Main Road

In interpreting the results, it should be noted that in strategic modelling, issues on one junction or link could reflect delays or congestion of the corridor nearby. Furthermore, the outputs from the strategic model provide a high-level indication of where the capacity of the road will likely be an issue.

The local plan tests included in this report will be used by SDC in their spatial assessment. The following additional steps will be undertaken to verify the capacity issues mentioned above.

- Local junction modelling covering the hotspot areas will be undertaken to assess the junction performance in detail.
- Identification of mitigation measures

Considering the above, further scenarios may be required, and additional reports will be provided.

The assumptions guiding this analysis are based on the available information at the time of modelling. Should new or additional information come to light that could significantly affect the results presented in this report, further review should be considered.

Finally, as mentioned in the earlier section, this report has been submitted as a draft and is subject to review by National Highways. Revisions may be expected in the final version, depending on feedback received from National Highways