

Uttlesford Transport Study

784-B029347

SAFFRON WALDEN MODEL OUTPUTS



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1 | BACKGROUND

1.0 BACKGROUND

1.1 OVERVIEW

- 1.1.1 This technical note details the impacts on the transport network of the sites to be taken forward through the Uttlesford Local Plan, together with the sustainable transport interventions and highway capacity improvements to mitigate the increase in demand to travel across the district.
- 1.1.2 It focuses on how the Local Plan site allocations in Saffron Walden will impact upon the performance of the highway network. It details the mitigation required to address the increase in demand to travel and the interventions through which to maximise the proportion of trips which are undertaken by sustainable modes.

1.2 DEVELOPMENT SITES MODELLED & PROPOSALS IN THE LOCAL PLAN

- 1.2.1 The following sites and quantum of housing were modelled and assessed in Saffron Walden:
- 001 RES – Land east of Shire Hill Farm and south of Radwinter Road.
 - 003 RES – Land south of Radwinter Road, (East of Griffin Place).
 - 008 RES – Land north-east of Thaxted Road, Saffron Walden.
 - 037 RES – Land to the south of Debden Road.
- 1.2.2 Together the sites can accommodate some 1,000 dwellings.
- 1.2.3 Following the conclusion of the assessment, Uttlesford District Council reconsidered the quantum of development to come forward within the town, and a revised figure of 1,280 homes was subsequently included in the Regulation 18 Local Plan within the town.

1.3 SCENARIOS & FOCUS OF ASSESSMENT

- 1.3.1 The assessment of the impacts of the sites was undertaken using the Saffron Walden VISUM Model. Technical details of the model and the methodology applied in the assessment of the network are detailed in separate technical notes.
- 1.3.2 Five scenarios have been assessed within the town focusing upon:
- The performance of the network in the 2021 (Base Year) and 2040 (Reference Case).
 - The comparative performance of the network with Local Plan sites in place (in 2040).
 - Interventions to encourage sustainable travel and the impacts on network performance.
 - Highway capacity improvements and the impacts on network performance.
- 1.3.3 The assessment of the performance of the network was based upon the following metrics:
- The volume of traffic on the network in both the AM and PM peak periods.
 - Journey times on the network in both the AM and PM peak periods, and the associated speed of traffic.
 - Junction delays in both the AM and PM peak periods.

1.4 FURTHER READING

1.4.1 This technical note focuses on the performance of the network in Stansted Mountfitchet and at M11 Junction 8. It should be read in conjunction with more detailed analysis of the impacts of Local Plan allocations in the following technical notes:

- TN110 | Uttlesford Transport Study Baseline Report
- TN401 | Strategic Impacts Technical Note
- TN403 | Great Dunmow Model Outputs Technical Note.
- TN404 | Takeley Model Outputs Technical Note.
- TN405 | Stansted Mountfitchet Model Outputs Technical Note.
- TN406 | Great Chesterford, Thaxted & Newport Model Outputs Technical Note.
- TN407 | A120 Corridor Model Outputs Technical Note.

1.5 MORE INFORMATION

1.5.1 For more information on the content of this technical note please contact:

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2 | PERFORMANCE IN THE BASE YEAR (2021)

2.0 PERFORMANCE IN THE BASE YEAR (2021)

2.1 VOLUME OF TRAFFIC

2.1.1 The volume of traffic in the both the AM peak and the PM peak periods in the 2021 Base Year Model is shown in **Figure 2-1**. It highlights that:

- The High Street (B184) is the busiest road in both the AM and PM peak periods with over 700 vehicles travelling northbound.
- Newport Road and Thaxted Road also form busy north-south connections in both peak periods, whilst the main east-west movement of traffic is accommodated on the George Street-Hill Street-East Street-Radwinter Road corridor.
- Ashdon Road, and Mount Pleasant Road-Peaslands Road are also important east-west routes through the town.
- There is some evidence of a tidality to the flow of traffic, with higher levels of traffic travelling north in the AM peak towards Cambridge and the M11, with the level of demand reversed in the PM peak.

2.2 JOURNEY TIMES

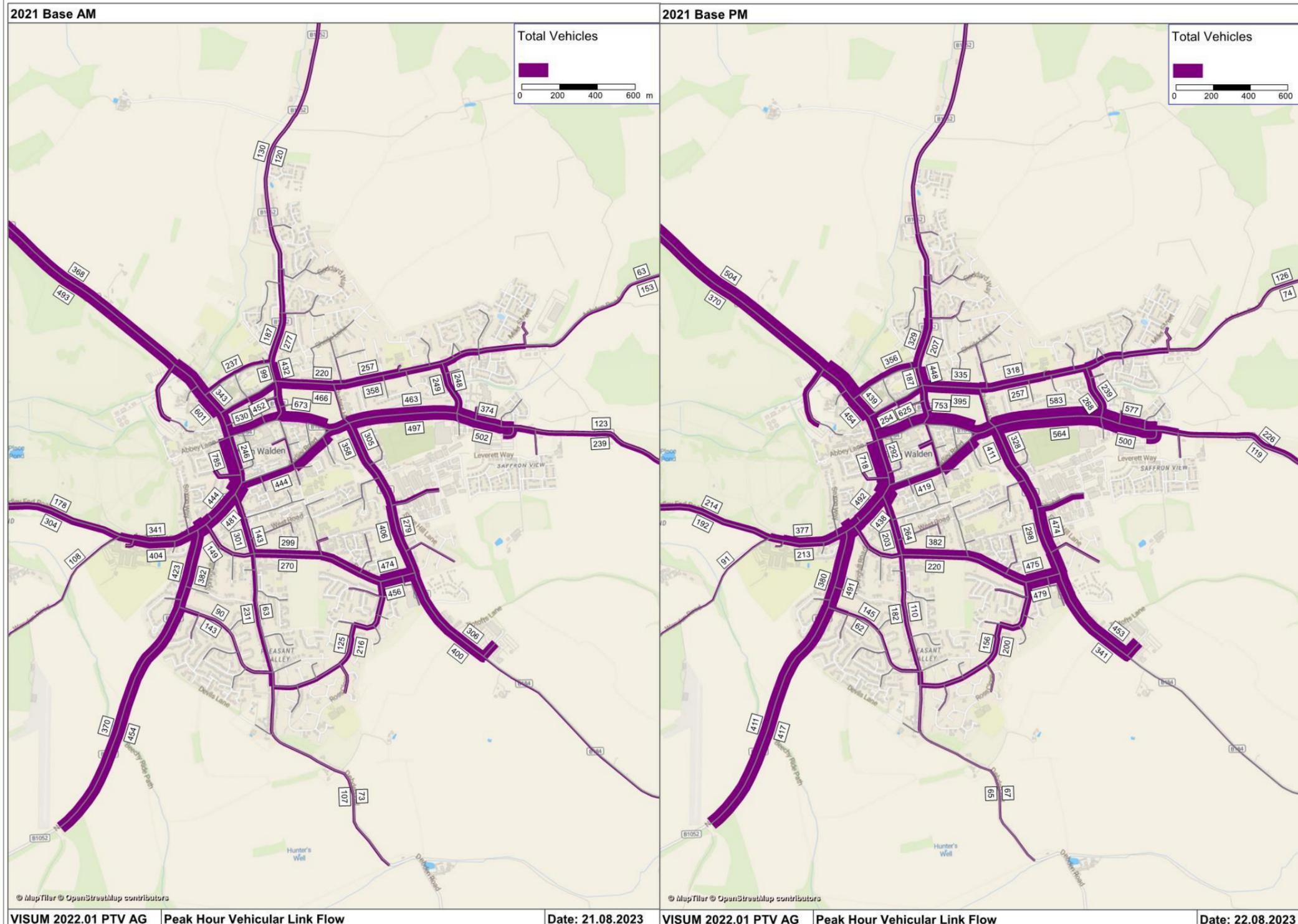
2.2.1 Selected journey times in the AM peak in the 2021 Base Year Model are shown in **Table 2-1**, alongside the comparative journey times for the PM peak period. The average speed of traffic on each route is shown in **Table 2-2**.

2.2.2 A map showing the location of the routes is shown in **Figure 2-2****Error! Reference source not found..** In each instance, the journey times are averaged over the peak hour and so it is acknowledged that traffic may be faster or slower at times within that period. Delays can be identified when comparing the journey times and average speeds between the direction of flow and the time of day. Traffic was not surveyed outside of the main peak periods.

Table 2-1: Journey Time in the AM & PM Peak Periods

Route	Distance (miles)	Direction	Journey Time (seconds)	
			2021 (AM Peak)	2021 (PM Peak)
1 B814 High Street and B1052 Newport Road	1.74	Northbound	341	322
		Southbound	314	376
2 Town Centre via Church Street / Common Hill	1.24	Northbound	363	352
		Southbound	455	441
3 B184 Thaxted Road	1.93	Northbound	362	322
		Southbound	236	248
4 B184 Audley Road / Hill Street	0.87	Westbound	289	245
		Eastbound	267	262
5 B1052 Little Walden Road	0.99	Northbound	153	160
		Southbound	179	175
6 Peaslands Road	0.56	Westbound	129	114
		Eastbound	107	113

Figure 2-1: Volume of Traffic in the 2021 Base Year



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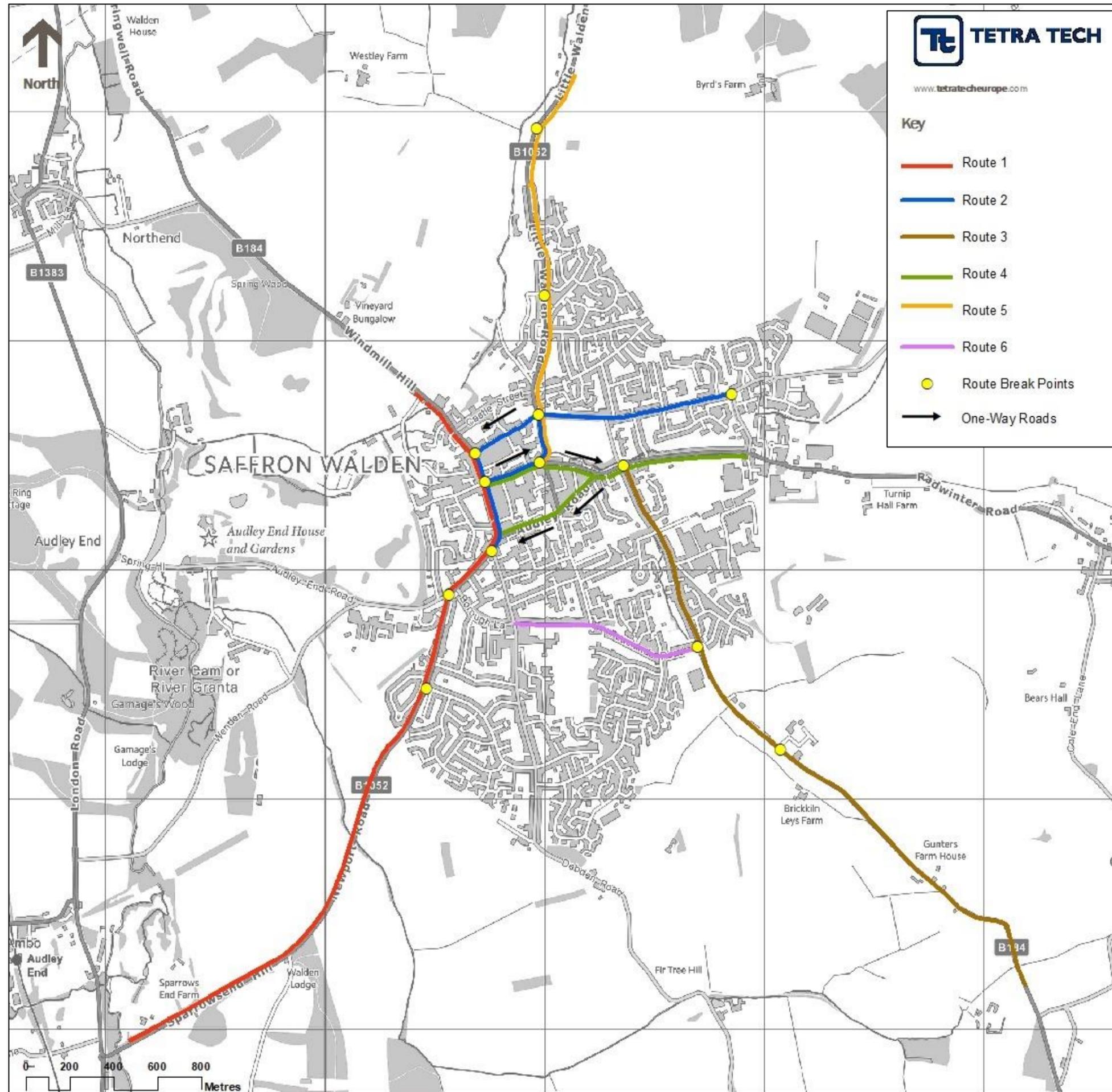
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Figure 2-2: Journey Time Routes



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Table 2-2: Average Vehicle Speeds in the AM & PM Peak Periods

Route	Distance (miles)	Direction	Average Speed in MPH	
			2021 (AM Peak)	2021 (PM Peak)
1 B814 High Street and B1052 Newport Road	1.74	Northbound	18.4	19.5
		Southbound	19.9	16.7
2 Town Centre via Church Street / Common Hill	1.24	Northbound	12.3	12.7
		Southbound	9.8	10.1
3 B184 Thaxted Road	1.93	Northbound	19.2	21.5
		Southbound	29.4	28.0
4 B184 Audley Road / Hill Street	0.87	Westbound	10.8	12.8
		Eastbound	11.7	12.0
5 B1052 Little Walden Road	0.99	Northbound	23.4	22.4
		Southbound	20.0	20.5
6 Peaslands Road	0.56	Westbound	15.6	17.7
		Eastbound	18.8	17.8

2.2.9 The main findings of the journey time analysis are that:

- Traffic travels a lot slower on the network than the permitted speed limits.
- The slowest traffic is that travelling through the town centre via High Street-Church Road-Ashdon Road and via George Stret-Hill Street-Common Hill.
- The fastest traffic is on the relatively lightly trafficked Little Warden Road to the north of the town.
- The largest variations in journey time are on Thaxted Road where northbound traffic travels significantly slower than southbound traffic in both peak periods.

2.2.10 To provide some context for the average speed of traffic in the town, data available from the Department for Transport (DfT) highlights that:

- The average speed on Local 'A' roads in England during the weekday morning peak (assumed by the DfT to be 7am to 10am – this study focuses on the 8am to 9am peak) was 23.4 mph in 2021.
- For the weekday evening peak (4pm to 7pm), the average speed in 2021 was 22.4 mph. The average speed in 2021 for weekday inter peak (10am to 4pm) was 23.2mph.
- The weekday off peak (7pm to 7am) average speed was 28.0 mph¹.

2.2.11 Whilst this could appear to show that traffic in Saffron Walden is currently slower than that across the rest of the country in peak periods, it may be that the differences are in part attributable to the differences in the time periods assessed. As such the focus of the analysis herein, is therefore not how speeds compare to the national picture, but between growth scenarios within the town itself.

2.3 JUNCTION DELAYS

2.3.1 In seeking to understand the differences in journey times, an analysis of the performance of the junctions on the network was undertaken. **Figure 2-3** illustrates the level of delay associated with the worse performing arm/approach to each junction in the AM and PM peak periods.

¹ [Travel time measures for local 'A' roads: January to December 2021 report - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/90114/Travel_time_measures_for_local_A_roads_January_to_December_2021_report.pdf)

2.3.2 The key findings are that:

- The Radwinter Road – Thaxted Road junction experiences the highest delays in the AM peak, with delays on the worst performing approach (traffic travelling north from Thaxted Road) equating to almost two minutes. Delays persist in the PM peak with delays of over 80 seconds.
- Further east along Radwinter Road, the junction with Elizabeth Way also experiences sizeable delays in both peak periods, particularly the PM peak.
- The High Street (at its junction with Church Street in the AM peak and George Street in the PM peak) is also an area subject to noticeable delays on the network.

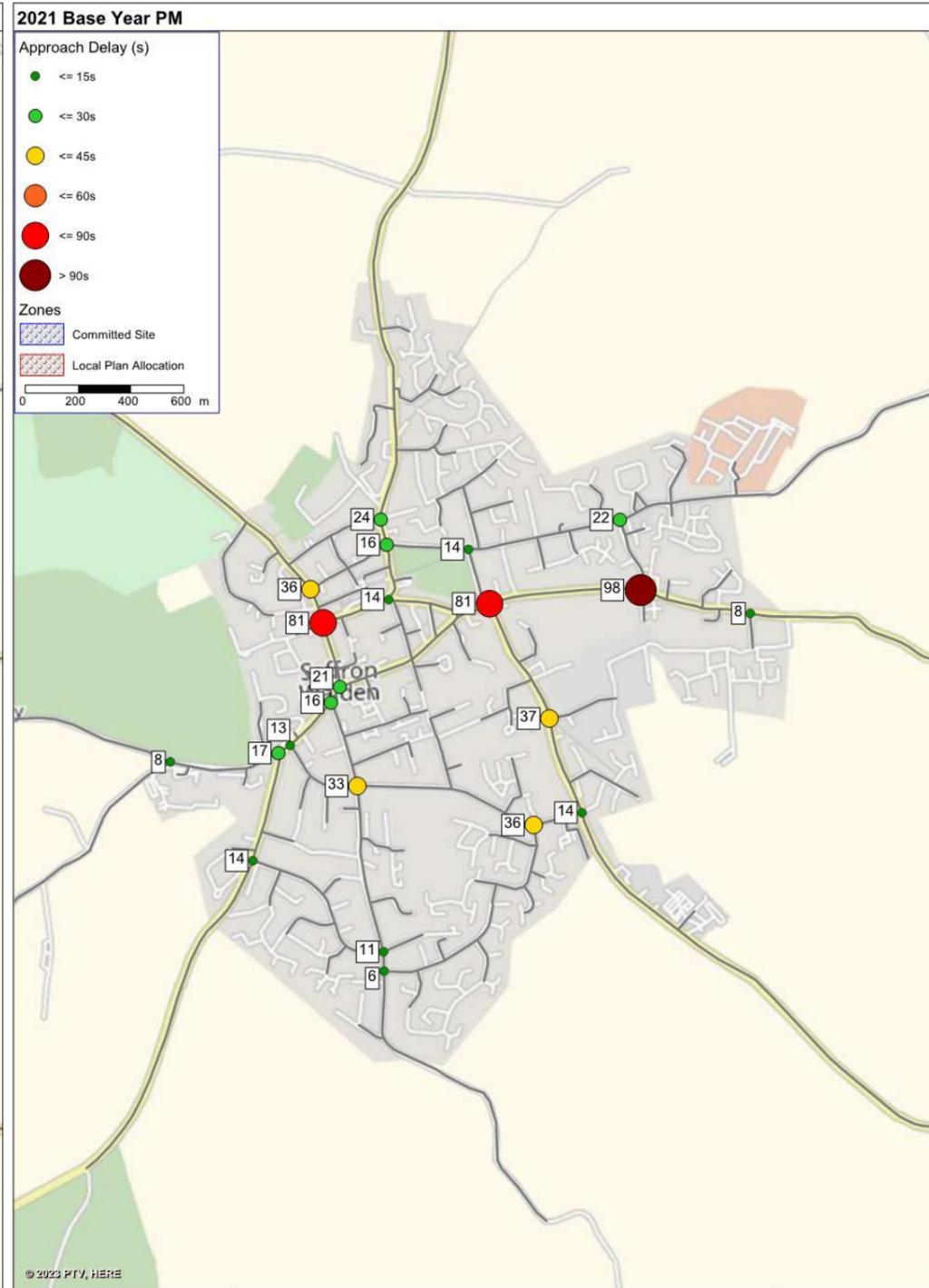
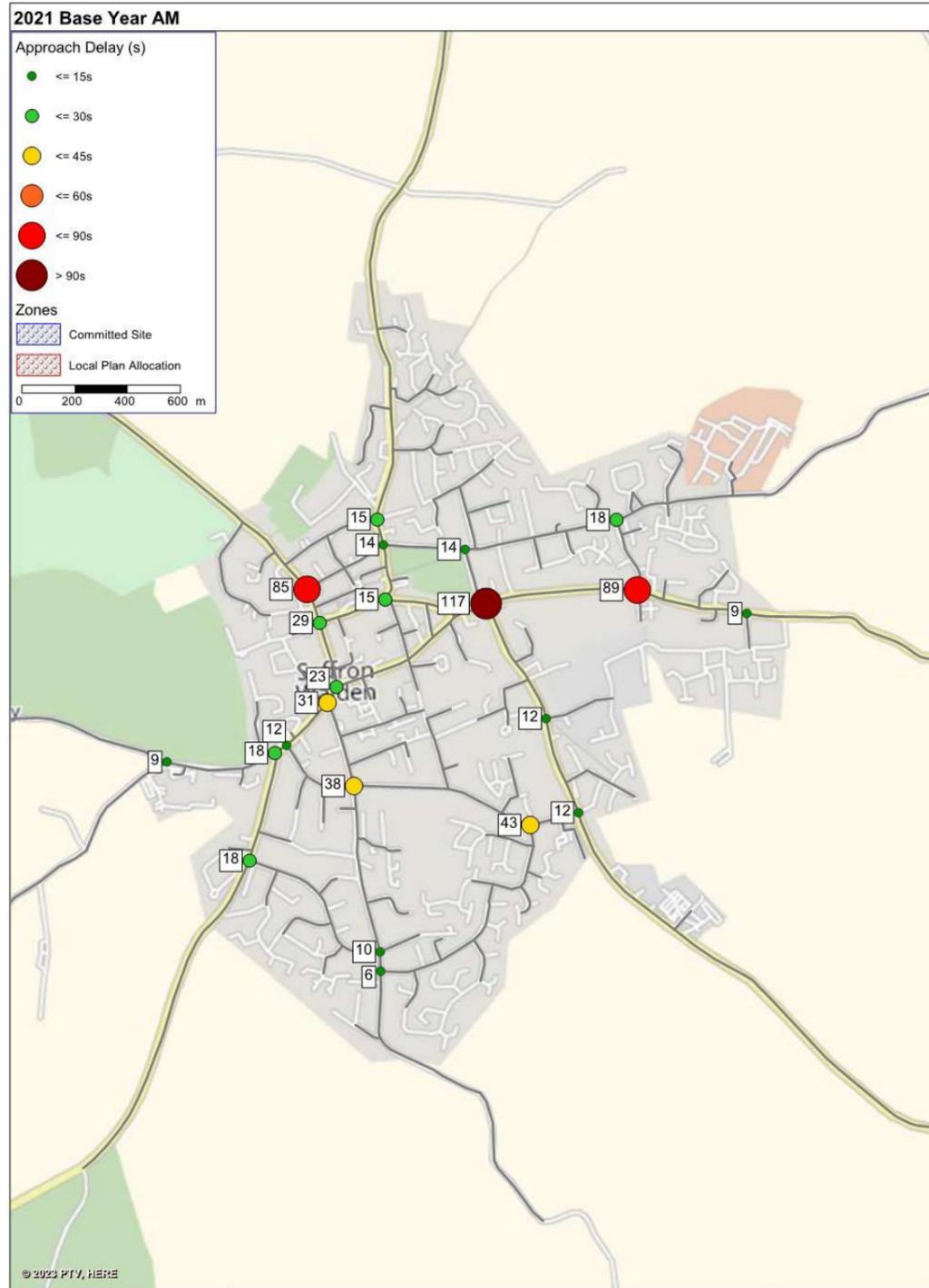
2.4 SUMMARY

- 2.4.1 The Base Year Model simulates the performance of the highway network in Saffron Walden in typical present day (2021) conditions, across the morning and evening peak hours. Anecdotal evidence suggests that the peak periods in the town are significantly shorter than an hour and this should be taken into account when interpreting the results.
- 2.4.2 The analysis of the volume of traffic, the journey times and average speed of vehicles, together with the efficiency of operation of several junctions within the town points towards a network subject to reasonably significant levels of demand.
- 2.4.3 The network seems to generally cope with the demand with a few exceptions, most notably on Radwinter Road and High Street where several junctions experience queuing on at least one approach in both peaks. These findings reflect observations on the ground.

Figure 2-3: Junction Delays (Worst Approach) in the 2021 Base Year

Notes:

- Delays are in seconds per vehicle.
- Represents average queue time in the respective peak period.
- Delays on the worst approach shown in main figure.
- Delays on all approaches are shown for selected junctions in the inserts.



VISUM 2022.01 PTV AG Average Delay By Worst Approach (s) Date: 01.09.2023

VISUM 2022.01 PTV AG Average Delay By Worst Approach (s) Date: 01.09.2023

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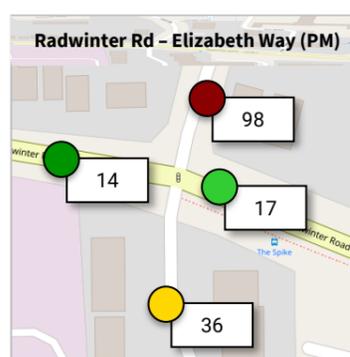
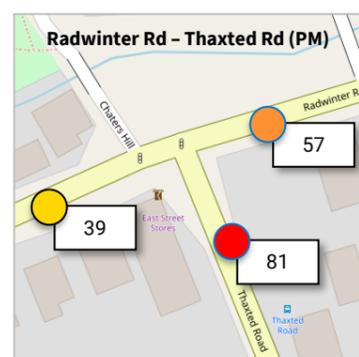
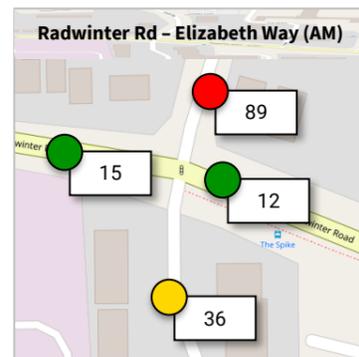
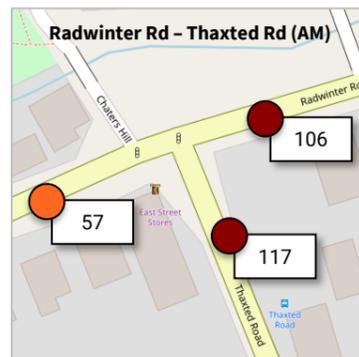
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3 | PERFORMANCE IN THE REFERENCE CASE (2040)

3.0 PERFORMANCE IN THE REFERENCE CASE (2040)

3.1 VOLUME OF TRAFFIC

- 3.1.1 The Reference Case highlights how the road network will perform in a future year (2040) with all committed planning and transport schemes taken into account. It does not include the Local Plan site allocations.
- 3.1.2 The changes in the volume of traffic between the Base Year (2021) and Reference Case (2040) are shown in **Figure 3-1** for both the AM peak and the PM peak periods.
- 3.1.3 It highlights that:
- There will be an increase in the amount of traffic throughout the town in both peak periods. The exceptions to this are the Thaxted Road, Radwinter Road (eastbound) and Ashdon Road links which will see a reduction in traffic.
 - It can be inferred from the model outputs that this is because of a new link road to be provided between Thaxted Road and Radwinter Road as part of the committed housing developments in the south-east of the town.
 - Where increases in traffic are experienced, the level of growth will be significant in places. For example, westbound traffic in the AM peak period on Audley Road will increase by almost 200 vehicles in the hour, from a base year flow of around 450 vehicles.
 - High Street, Radwinter Road (westbound), Newport Road and George Street are amongst the other links to experience increases in demand in both peak periods by 2040.

3.2 JOURNEY TIMES

- 3.2.1 The comparative journey times and average vehicle speed in the 2040 Reference Case are shown alongside those in the 2021 Base Year in **Table 3-1** and **Table 3-2** respectively.

Table 3-1: Changes in Journey Times between Base Year (2021) and Reference Case (2040)

Route	Direction	Average Speed (in seconds)					
		AM Peak			PM Peak		
		2021	2040	Change	2021	2040	Change
1 B814 High Street and B1052 Newport Road	Northbound	341	373	+32	322	364	+22
	Southbound	314	362	+38	376	402	+26
2 Town Centre via Church Street / Common Hill	Northbound	363	401	+38	352	396	+44
	Southbound	455	479	+24	441	474	+33
3 B184 Thaxted Road	Northbound	362	385	+17	322	352	+30
	Southbound	236	330	+94	248	380	+132
4 B184 Audley Road / Hill Street	Westbound	289	265	-24	245	256	+11
	Eastbound	267	247	-20	262	272	+10
5 B1052 Little Walden Road	Northbound	153	159	+6	160	170	+10
	Southbound	179	192	+13	175	186	+11
6 Peaslands Road	Westbound	129	140	+11	114	126	+12
	Eastbound	107	153	+46	113	192	+79

Differences between 2021 Base Year & 2040 Reference Case (AM)

Differences between 2021 Base Year & 2040 Reference Case (PM)

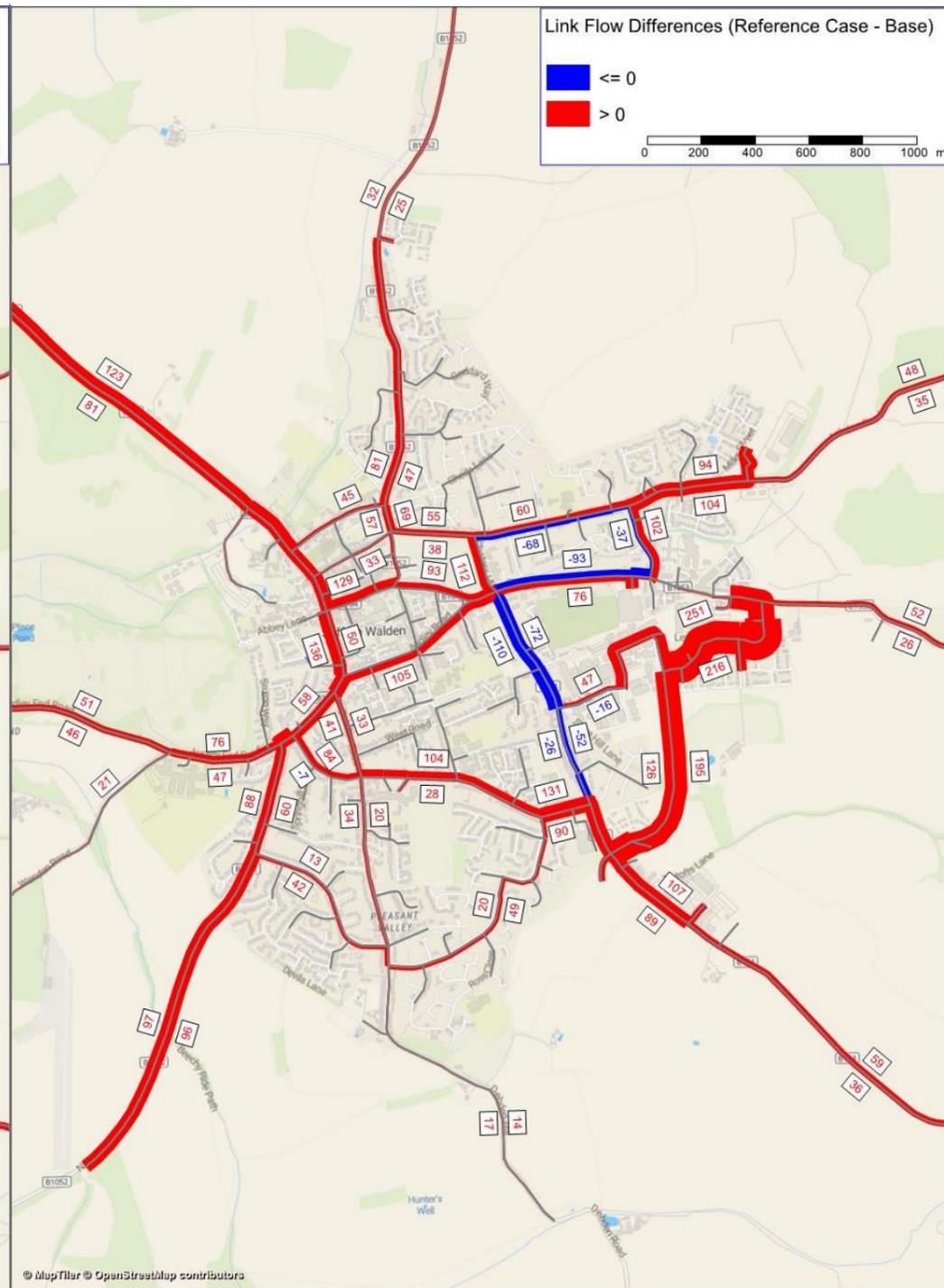
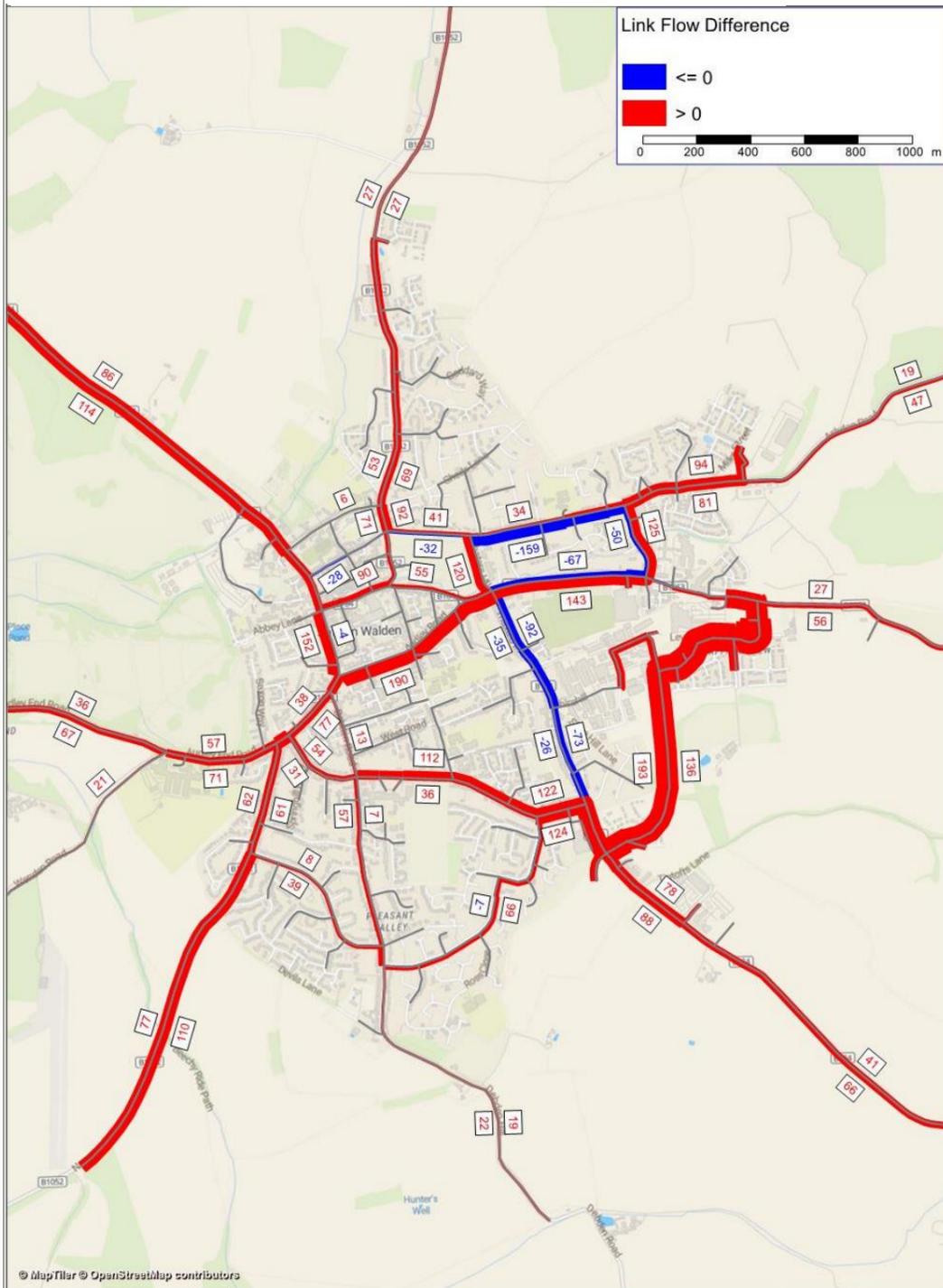


Figure 3-1: Change in Volume of Traffic between Base Year (2021) and Reference Case (2040)

Notes:

- Volume of traffic is presented in vehicles per hour.
- Weight of bar reflects size of flow.
- Red lines represent an increase in flow.
- Blue lines represent a decrease in flow.

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Table 3-2: Changes in Average Speeds between Base Year (2021) and Reference Case (2040)

Route	Direction	Average Speed (in MPH)					
		AM Peak			PM Peak		
		2021	2040	Change	2021	2040	Change
1 B814 High Street and B1052 Newport Road	Northbound	18.4	16.8	-1.6	19.5	17.2	-2.3
	Southbound	19.9	17.3	-2.6	16.7	15.6	-1.1
2 Town Centre via Church Street / Common Hill	Northbound	12.3	11.2	-1.1	12.7	11.3	-1.4
	Southbound	9.8	9.3	-0.5	10.1	9.4	-0.7
3 B184 Thaxted Road	Northbound	19.2	18.0	-1.2	21.5	19.7	-1.8
	Southbound	29.4	21.0	-8.4	28.0	18.2	-9.8
4 B184 Audley Road / Hill Street	Westbound	10.8	11.8	+1.0	12.8	12.2	-0.6
	Eastbound	11.7	12.7	+1.0	12.0	11.5	-0.5
5 B1052 Little Walden Road	Northbound	23.4	22.5	-0.9	22.4	21.1	-1.3
	Southbound	20.0	18.6	-1.4	20.5	19.2	-1.3
6 Peaslands Road	Westbound	15.6	14.4	-1.2	17.7	16.0	-1.7
	Eastbound	18.8	13.2	-5.6	17.8	10.5	-7.3

3.2.6 The tables highlight that:

- Journey times will increase on almost all routes in both peak periods between 2021 and 2040. The exception to this is traffic in the AM peak period for travelling both eastbound and westbound on the Audley Road – Hill Street – Radwinter Road corridor, where journey times will improve by around 20 seconds.
- Increases in journey times will be most stark on Thaxted Road, particularly for southbound traffic in both peak periods. Delays will be over two minutes in the PM peak period and over one and a half minutes in the AM peak period. Northbound traffic will also be slower but to a lesser extent.
- Another notable increase is in relation to eastbound traffic on Peaslands Road, where the delay will see the average speed of traffic reduce by over 5mph in the AM peak period and over 7mph in the PM peak period.

3.3 JUNCTION DELAYS

3.3.1 In seeking to understand the changes in journey times, an analysis of the performance of the junctions on the network was undertaken.

3.3.2 **Figure 3-2** illustrates the level of delay associated with the worse performing arm/approach to each junction in the AM peak period in the 2040 Reference Case, alongside the changes in delay when compared to the 2021 Base Year. The comparative illustrations for the PM peak period are provided in **Figure 3-3**.

3.3.3 The key findings are that:

- In the AM peak period, delays of over a minute will be experienced at the junction of High Street – Church Street. This is as a consequence of traffic queuing to turn onto the High Street from Church Street via the priority give way junction.

- Delays of over a minute will persist on Radwinter Road at its junction with both Thaxted Road and Elizabeth Way. However, the performance of the junctions will be a marked improvement on the delays experienced in the base year as a result of demand reducing as a consequence of the new link to be provided between Radwinter Road – Thaxted Road within the committed development to the south-east of the town.
- Access from this development onto Thaxted Road will see delays at the new junction approaching two minutes.
- In the PM peak period, delays of over one minute will be experienced on the High Street at both the junction with Church Street and the junction with George Street. These are associated with traffic turning onto High Street (from Church Street) and off High Street (onto George Street) as illustrated in the detailed junction arrangements in **Figure 3-2**. However, these junctions are only marginally impacted by growth in the Reference Case scenario.
- Whilst the remainder of the junctions in the town will operate reasonably, some delays will be experienced on Thaxted Road, at its junction with Peasland Road and the next junction providing access to the development to the east. These issues are both directly as a result of committed growth.

3.4 SUMMARY

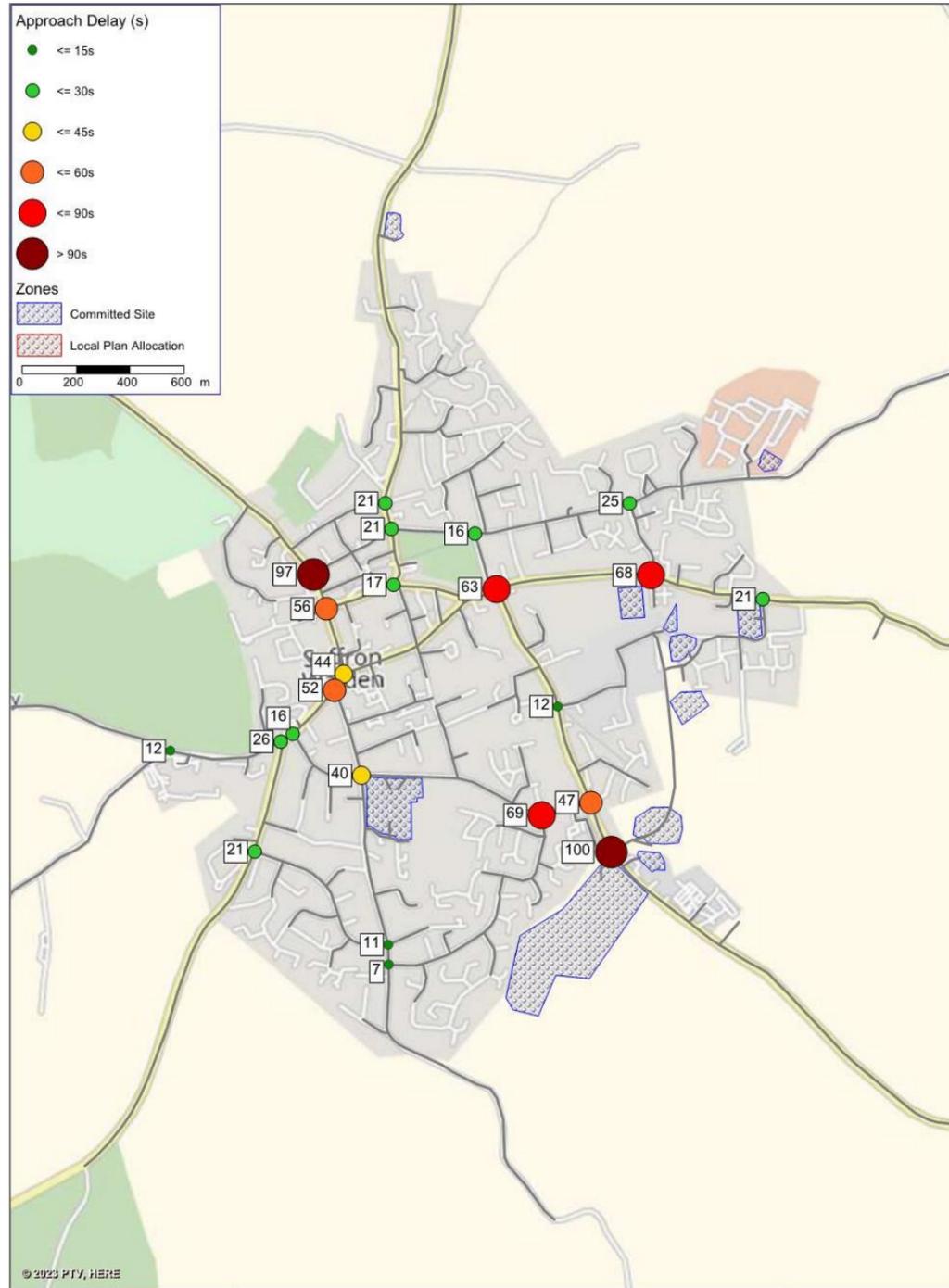
- 3.4.1 The Reference Case identifies how the highway network in Saffron Walden will perform in 2040 before Local Plan related growth is taken into account. It demonstrates that there will be more traffic on the network, longer delays at junctions and that journey times will increase as a result.
- 3.4.2 Committed schemes set to come forward in the intervening period will not stem the increase in travel demand throughout the town, although the new link between Radwinter Road and Thaxted Road being provided as part of the committed developments will see traffic reassign to the extent that the level of queuing and delay at the Radwinter Road – Thaxted Road junction will reduce.

Figure 3-2: AM Peak Junction Delays in the Reference Case (2040)

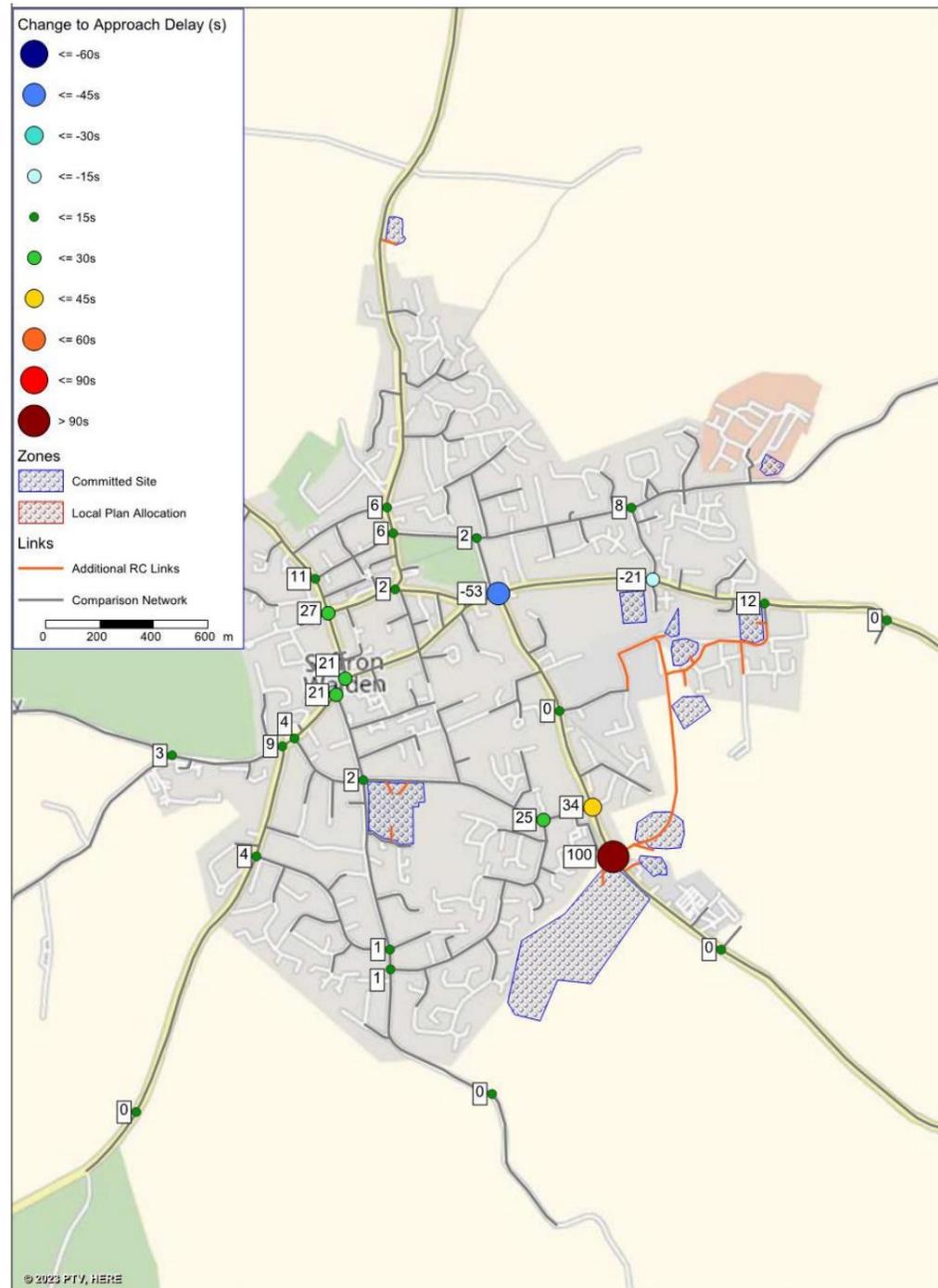
Notes:

- Delays are in seconds per vehicle.
- Represents average queue time in the respective peak period.
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2040 Reference Case (AM)



Differences between 2040 Reference Case & 2021 Base Year (AM)



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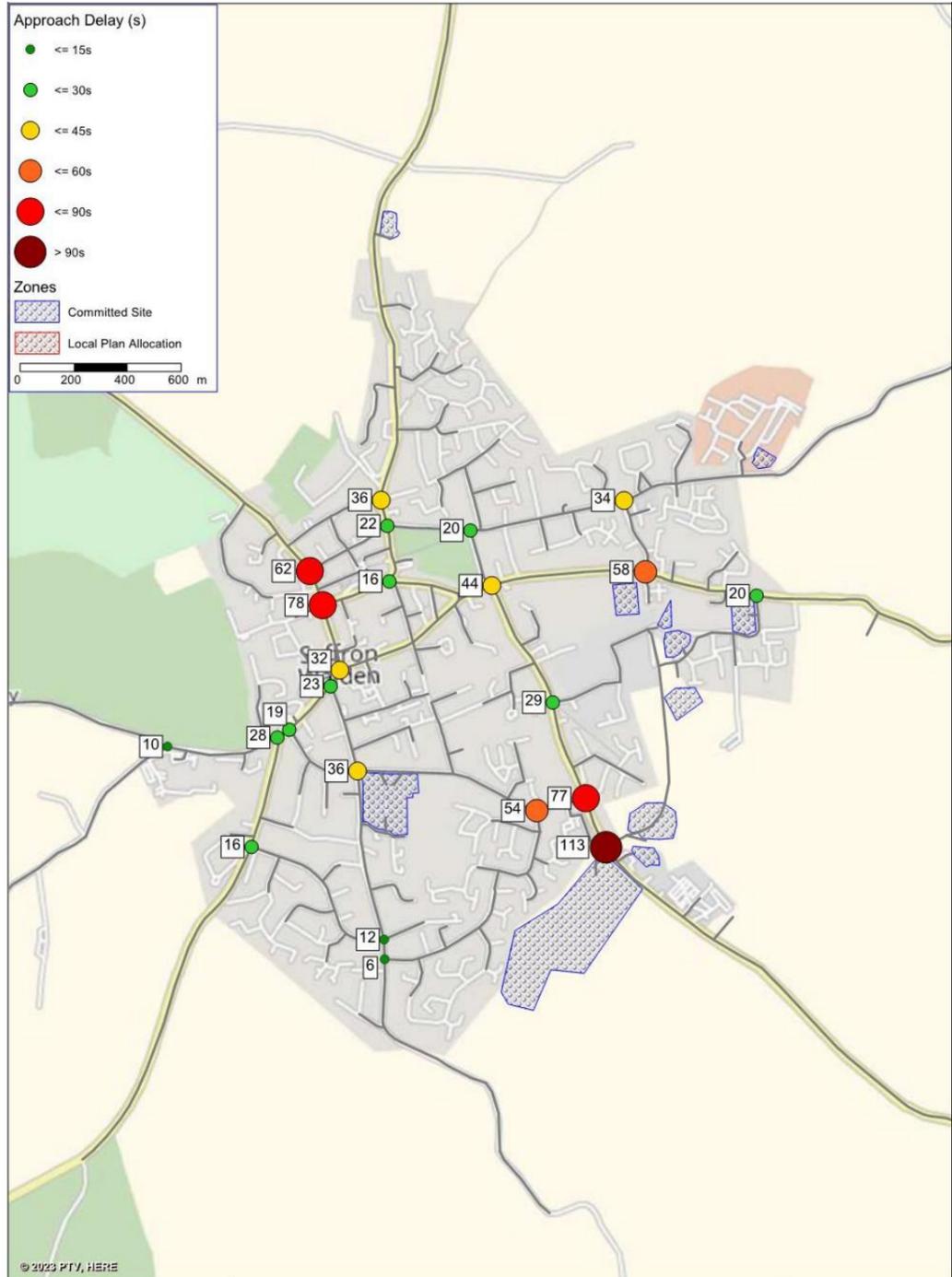
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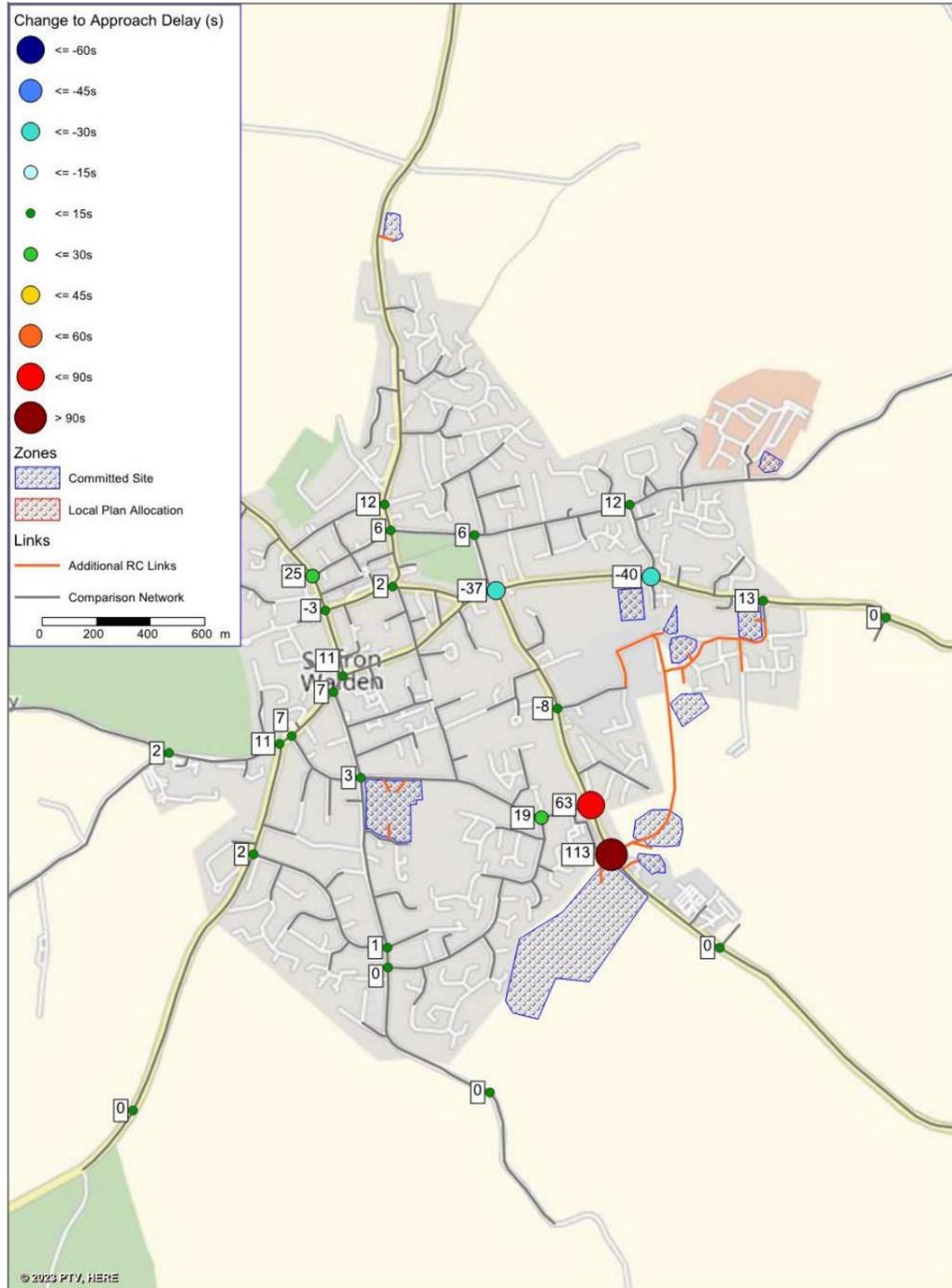
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2040 Reference Case (PM)



VISUM 2022.01 PTV AG Average Delay By Worst Approach (s) Date: 01.09.2023

Differences between 2040 Reference Case & 2021 Base Year (PM)



VISUM 2022.01 PTV AG Difference in Average Delay By Worst Approach (s) Date: 01.09.2023

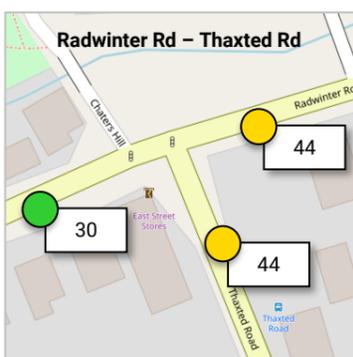
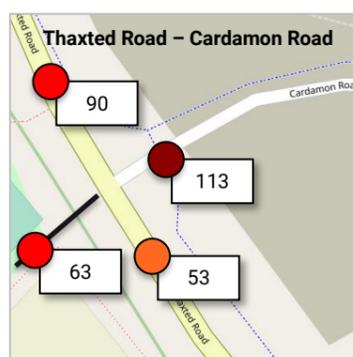


Figure 3-3: PM Peak Junction Delays in the Reference Case (2040)

Notes:

- Delays are in seconds per vehicle.
- Represents average queue time in the respective peak period.
- Delays on the worst approach shown in main figure.
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4 | PERFORMANCE IN THE LOCAL PLAN GROWTH SCENARIO (2040)

4.0 PERFORMANCE IN THE LOCAL PLAN GROWTH SCENARIO (2040)

4.1 VOLUME OF TRAFFIC

4.1.1 The Local Plan Growth Scenario highlights how the road network will perform in 2040 with all site allocations, equating to 1,000 dwellings, in place (see **Figure 4-1**). To understand the impacts of the sites, comparisons are drawn with the performance of the network in the Reference Case.

4.1.2 The differences in the volume of traffic between the Reference Case and Local Plan Growth Scenario are shown in **Figure 4-2** for both the AM peak and the PM peak periods. **Figure 4-3** illustrates where traffic from the site allocations will disperse across the network. They highlight that:

- In the AM peak period, there is an increase in demand in traffic wishing to travel through the town centre via Radwinter Road, Audley Road and High Street, and onwards to the north-west in the direction of the M11 and Cambridge. There is also an increase in demand to travel to the south-west of the town in the direction of Audley End Station, via Peaslands Road.
- In the PM peak period, the demand switches to reflect commuting traffic returning to the south-east of the town, which notable increases on the George Street – Hill Street corridor in particular.
- The most prominent change in demand on the network as a result of Local Plan growth however is the provision of a new distributor road between the sites, and which would also provide a link between Radwinter Road and Thaxted Road. This would reduce flow on the equivalent route to be provided as part of the committed development in the south-east of the town, as referred to in the Reference Case.
- In terms of the distribution of trips from the site allocations in the AM peak period, there is a clear pattern which sees traffic assign to either Radwinter Road or Thaxted Road, with around a quarter of the traffic on the former travelling through the town centre and north towards Cambridge and the M11, and around a third of traffic on the latter travelling south-west and out of the town along Newport Road.
- The vast majority of the remaining trips have a destination within Saffron Walden itself, suggesting that there are a high proportion of local movements which could be accommodated more sustainably.

4.1.3 It should be noted that, in practice, the Local Plan sites will come forward alongside those in the Reference Case. However, the data is presented in this way to identify the additional impacts of the Local Plan.

4.2 JOURNEY TIMES

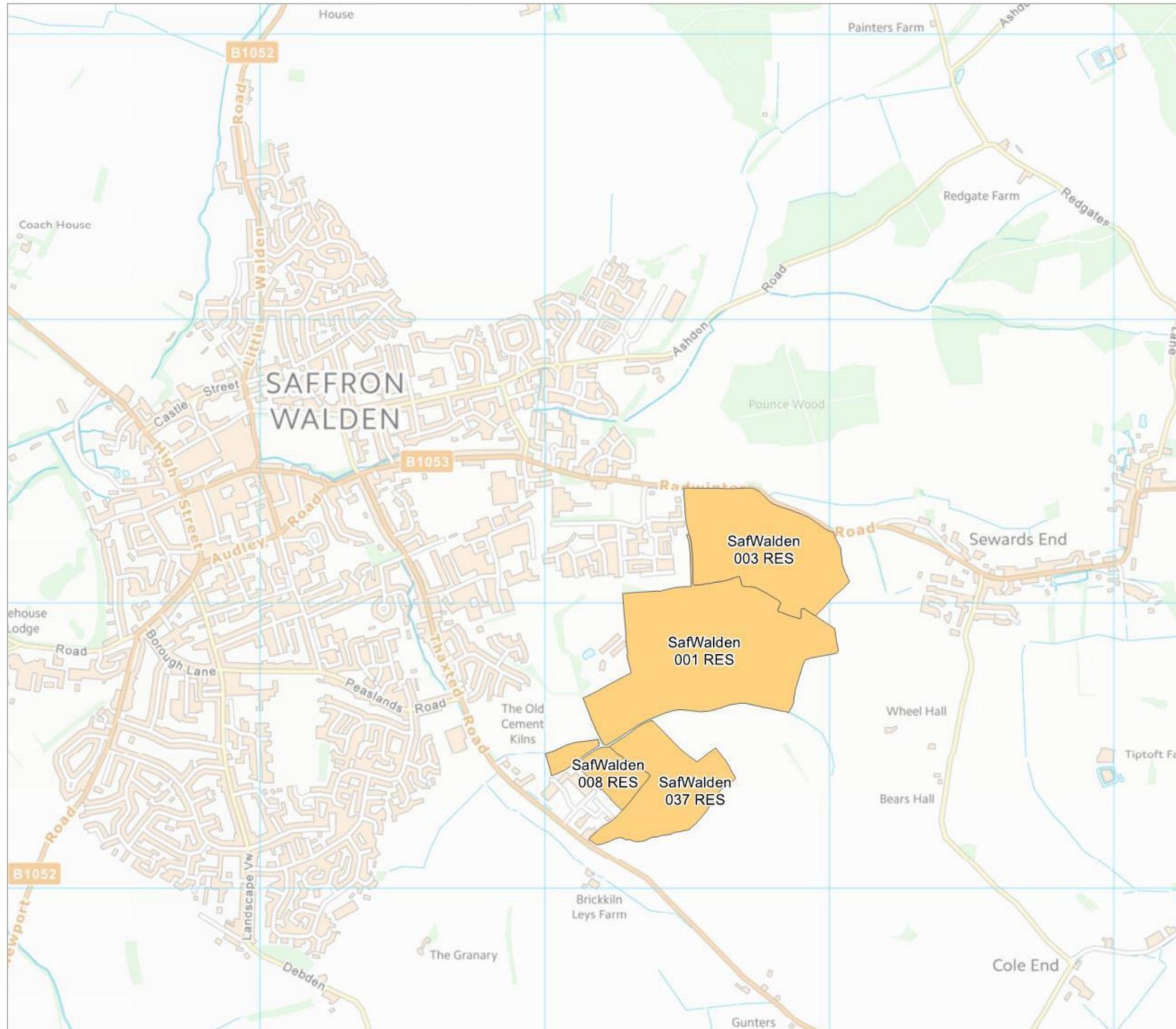
4.2.1 The comparative journey times and average speed of traffic in the 2040 Local Plan Growth Scenario are shown alongside those in the Reference Case in **Table 4-1** and **Table 4-2** respectively.

Table 4-1: Changes in Journey Times between the Reference Case and Local Plan Growth Scenario

Route	Direction	Average Speed (in seconds)					
		AM Peak			PM Peak		
		Ref. Case	Local Plan	Change	Ref. Case	Local Plan	Change
1 B814 High Street and B1052 Newport Road	Northbound	373	387	+14	364	379	+15
	Southbound	362	368	+6	402	449	+47
2 Town Centre via Church Street / Common Hill	Northbound	401	417	+16	396	417	+21
	Southbound	479	532	+53	474	500	+26
3 B184 Thaxted Road	Northbound	385	411	+26	352	355	+3

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 SAFFRON WALDEN MODEL OUTPUTS

Route	Direction	Average Speed (in seconds)					
		AM Peak			PM Peak		
		Ref. Case	Local Plan	Change	Ref. Case	Local Plan	Change
	Southbound	330	345	+15	380	396	+16
4 B184 Audley Road / Hill Street	Westbound	265	304	+39	256	259	+3
	Eastbound	247	254	+7	272	311	+39
5 B1052 Little Walden Road	Northbound	159	162	+3	170	169	-1 sec
	Southbound	192	194	+2	186	201	+15
6 Peaslands Road	Westbound	140	156	+16	126	132	+6
	Eastbound	153	163	+10	192	226	+34

Figure 4-1: Saffron Walden Local Plan Site Allocations


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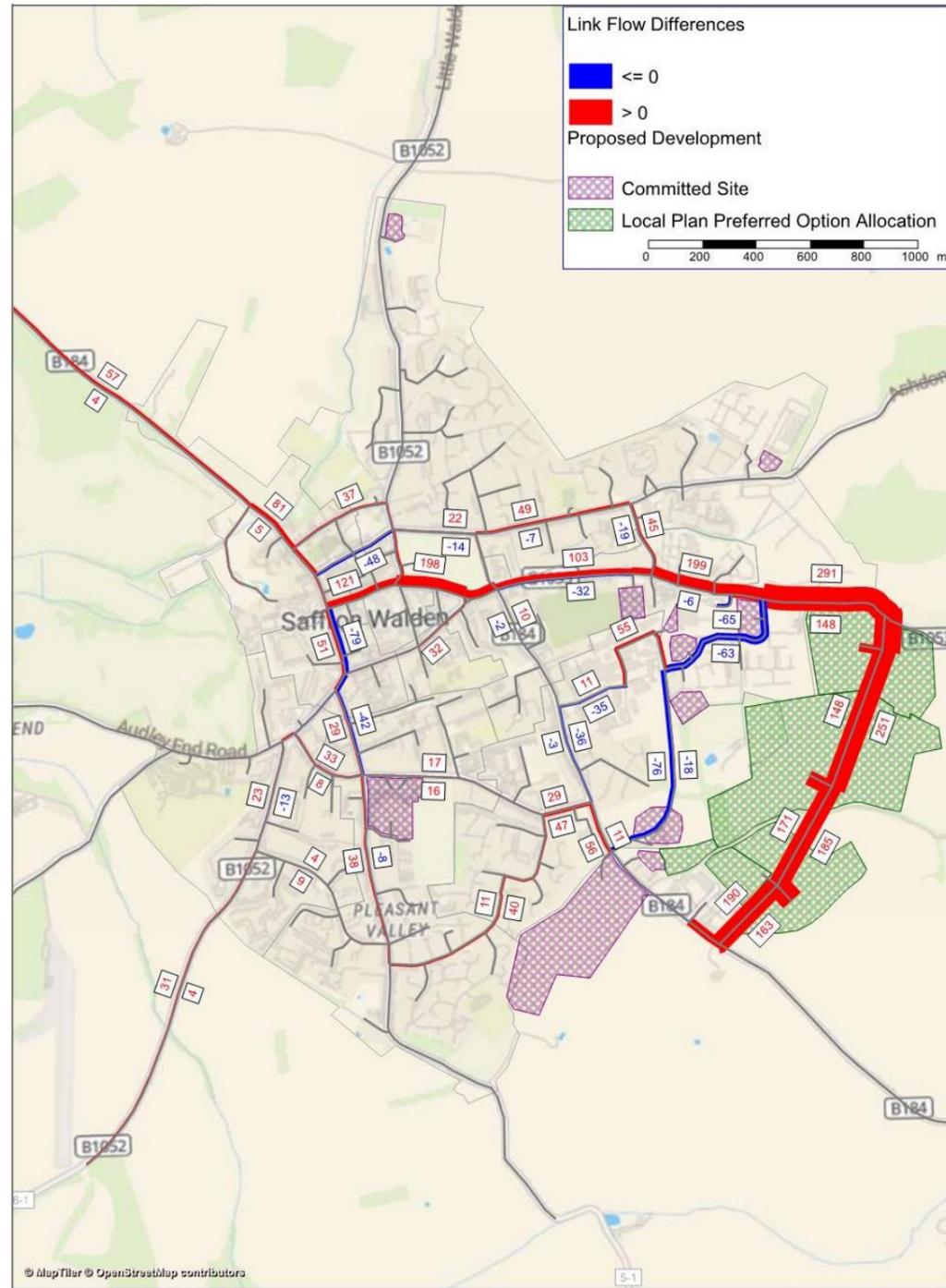
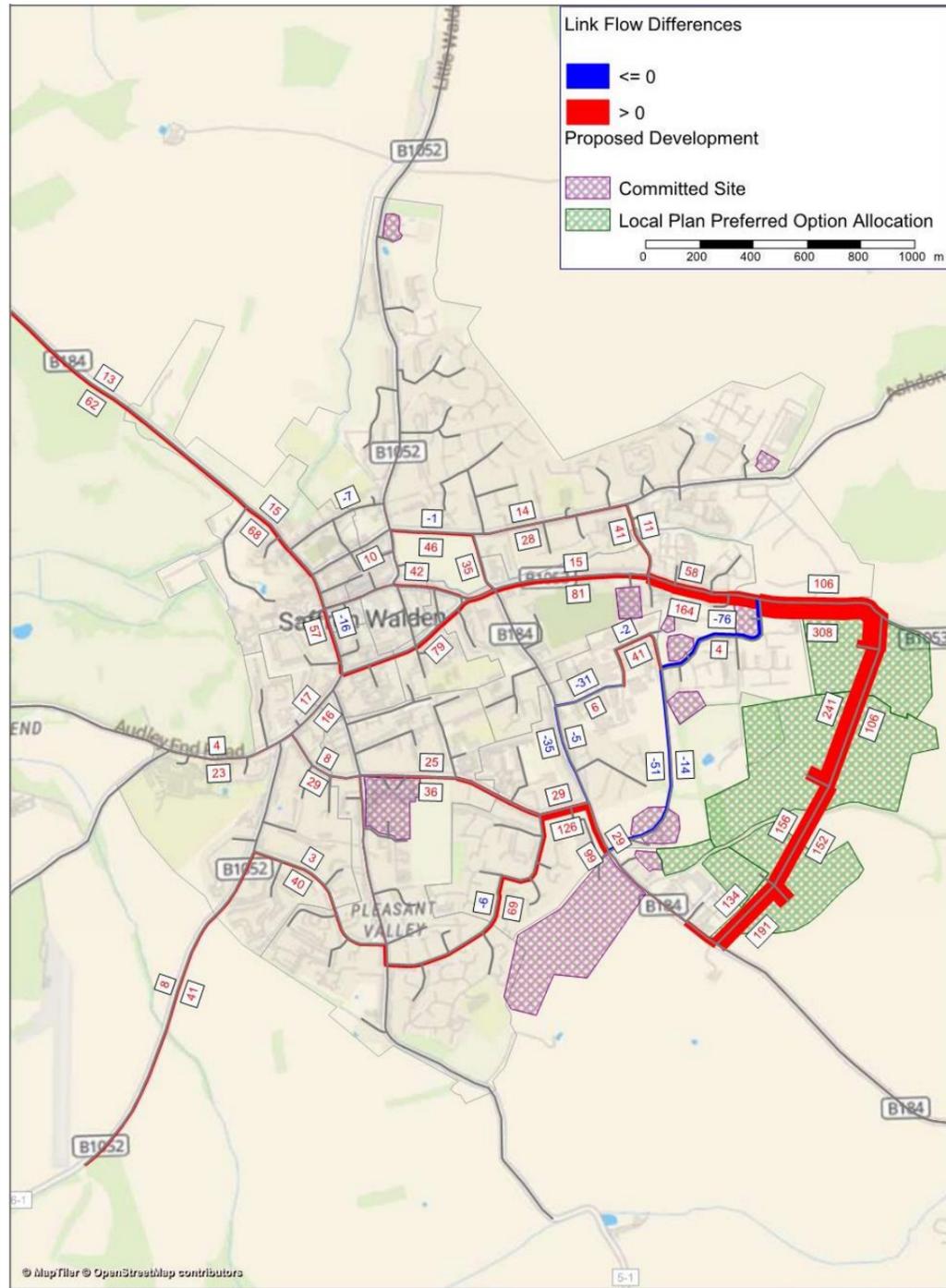
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North

Differences between 2040 Local Plan & 2040 Reference Case (AM)

Differences between 2040 Local Plan & 2040 Reference Case (PM)



VISUM 2022.01 PTV AG | Difference in Total Peak Hour Vehicular Flow | Date: 31.08.2023

VISUM 2022.01 PTV AG | Difference in Total Peak Hour Vehicular Flow | Date: 31.08.2023

Figure 4-2: Change in Volume of Traffic between the Reference Case and Local Plan Growth Scenario

Notes:

- Volume of traffic is presented in vehicles per hour.
- Weight of bar reflects size of flow.
- Red lines represent an increase in flow.
- Blue lines represent a decrease in flow.
- Green hatching represents Local Plan site allocations.

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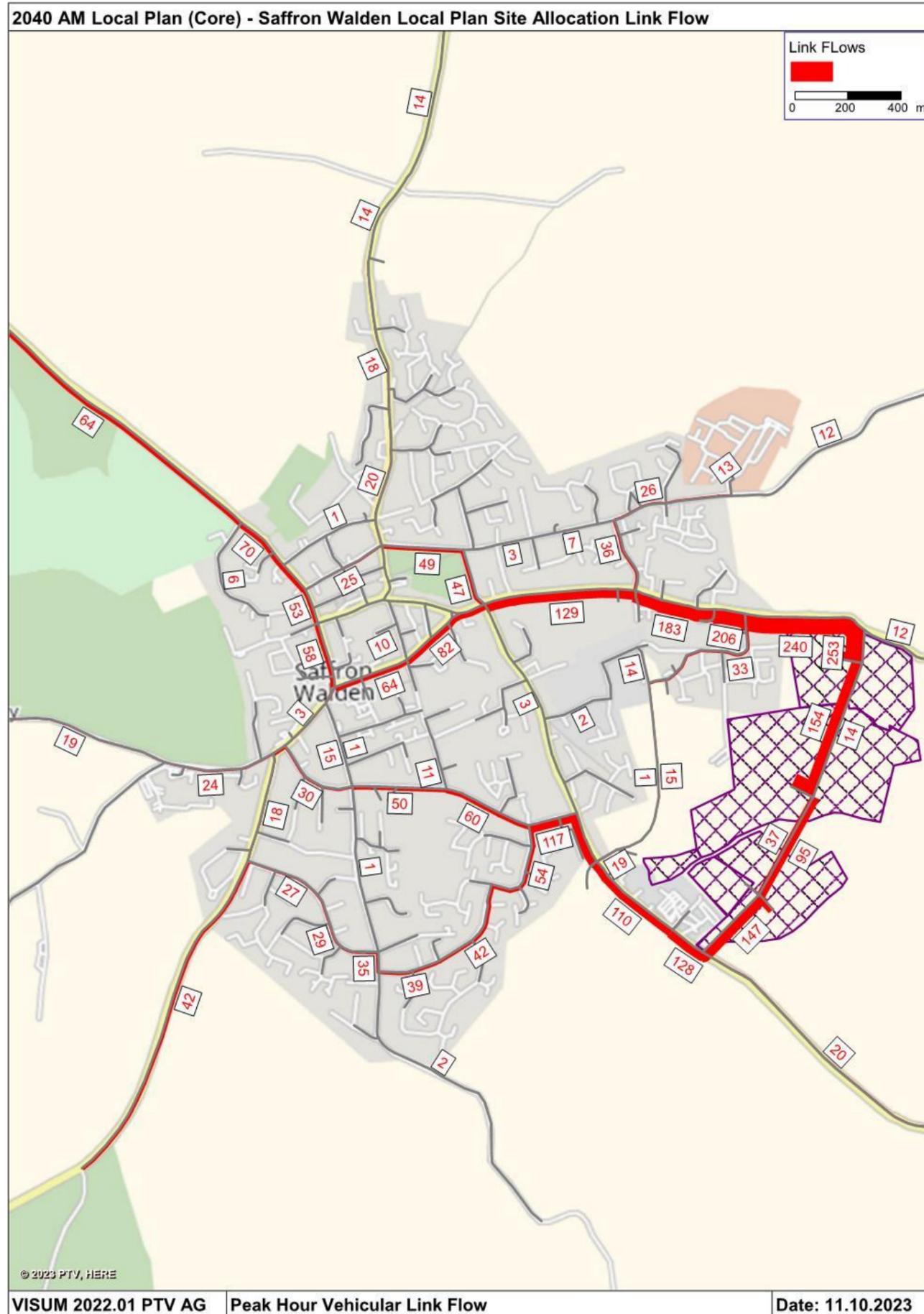
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Figure 4-3: Distribution of Demand from Site Allocations in Saffron Walden (AM Peak)



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Table 4-2: Changes in Average Speeds between the Reference Case and Local Plan Growth Scenario

Route	Direction	Average Speed (in MPH)					
		AM Peak			PM Peak		
		Ref. Case	Local Plan	Change	Ref. Case	Local Plan	Change
1 B814 High Street and B1052 Newport Road	Northbound	16.8	16.2	-0.6	17.2	16.5	-0.7
	Southbound	17.3	17.0	-0.3	15.6	13.9	-1.7
2 Town Centre via Church Street / Common Hill	Northbound	11.2	10.7	-0.5	11.3	10.7	-0.6
	Southbound	9.3	8.4	-0.9	9.4	8.9	-0.5
3 B184 Thaxted Road	Northbound	18.0	16.9	-1.1	19.7	19.5	-0.2
	Southbound	21.0	20.1	-0.9	18.2	17.5	-0.7
4 B184 Audley Road / Hill Street	Westbound	11.8	10.3	-1.5	12.2	12.1	-0.1
	Eastbound	12.7	12.3	-0.4	11.5	10.1	-1.4
5 B1052 Little Walden Road	Northbound	22.5	22.1	-0.4	21.1	21.2	+0.1
	Southbound	18.6	18.4	-0.2	19.2	17.8	-1.4
6 Peaslands Road	Westbound	14.4	12.9	-1.5	16.0	15.3	-0.7
	Eastbound	13.2	12.4	-0.8	10.5	8.9	-1.6

4.2.6 The tables highlight that:

- The impact of Local Plan related growth across the network is relatively modest with no significant changes in journey times or the average speed of traffic.
- The slowest traffic on the network will be the southbound traffic on the Common Hill – Church Street link (Route 2) and along Peaslands Road (Route 6), where vehicles will struggle to reach 9mph on average. This is predominantly due to delays experienced at certain junctions on the network as detailed within Section 4.3.

4.3 JUNCTION DELAYS

4.3.1 In seeking to understand the changes in journey times, an analysis of the performance of the junctions on the network was undertaken. **Figure 4-4** illustrates the level of delay associated with the worse performing arm/approach to each junction in the AM peak period in the Local Plan Growth Scenario, alongside the changes in delay when compared to the 2040 Reference Case. The comparative illustrations for the PM peak period are provided in **Figure 4-5**.

4.3.2 The key findings are that:

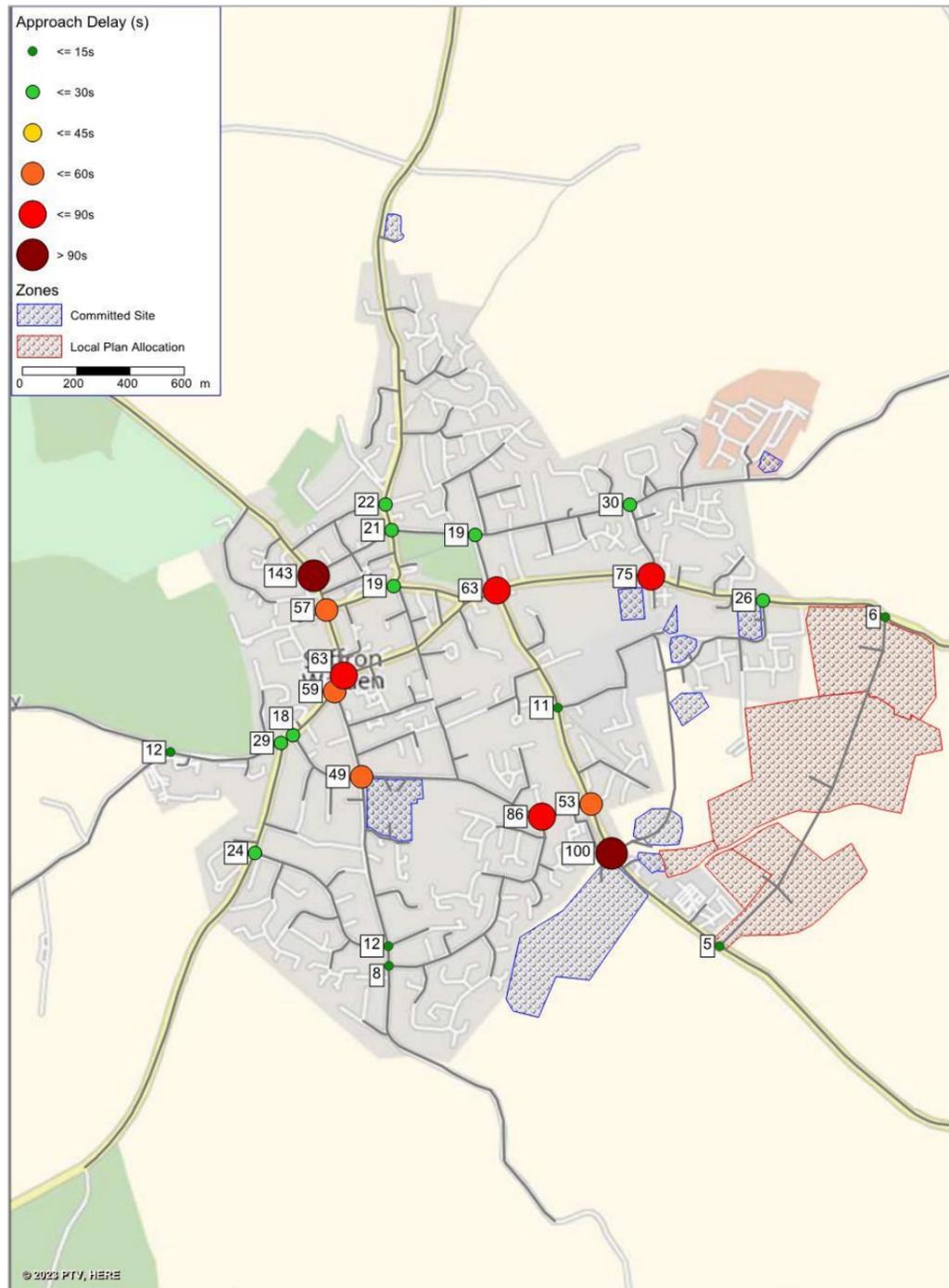
- The junction of High Street and Church Street will be subject to the longest delays in the AM peak period, equating to around two and a half minutes. It is the only junction on the network where there is a tangible change in the level of delay when compared to those within the Reference Case.
- The junctions on the High Street, with George Street and Audley Road, together with Debden Road will all see delays of around one minute, but none perform significantly different to the Reference Case.
- On the wider network, Radwinter Road will continue to experience delays with Thaxted Road and Elizabeth Way reflecting performance concerns in the Reference Case. Likewise, there will be queuing at junctions on both Peaslands Road and Thaxted Road.
- In the PM peak period, the picture is broadly similar although the only notable increases in delay on High Street will be at its junction with George Street. The junction of Thaxted Road and Peaslands Road is the only other location with an increase in delay of over 30 seconds.

Figure 4-4: AM Peak Junction Delays in the Local Plan Growth Scenario

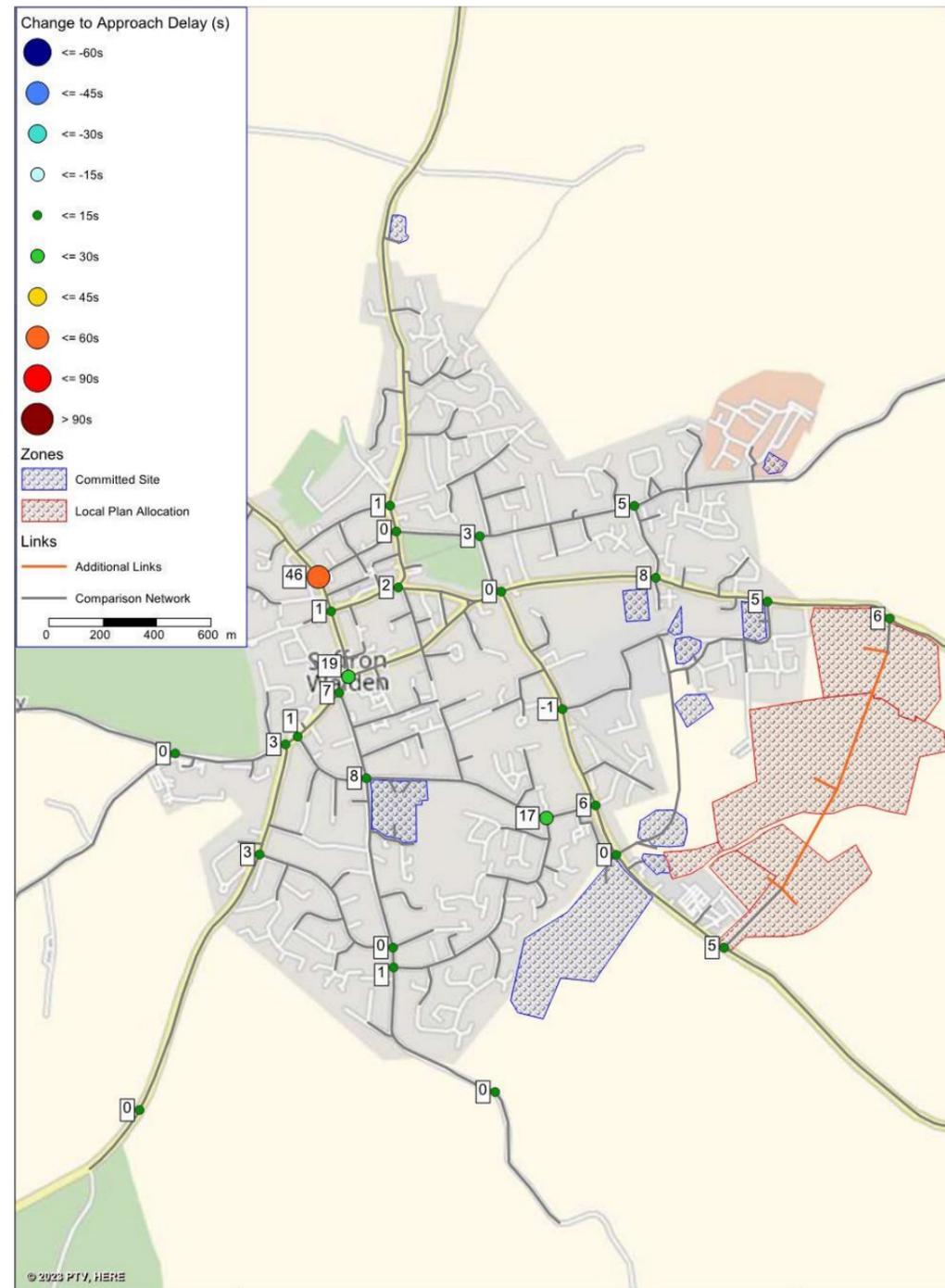
Notes:

- Delays are in seconds per vehicle.
- Represents average queue time in the respective peak period.
- Delays on the worst approach shown in main figure.
- Delays on all approaches are shown for selected junctions in the inserts.

2040 Local Plan (AM)



Differences between 2040 Local Plan & 2040 Reference Case (AM)



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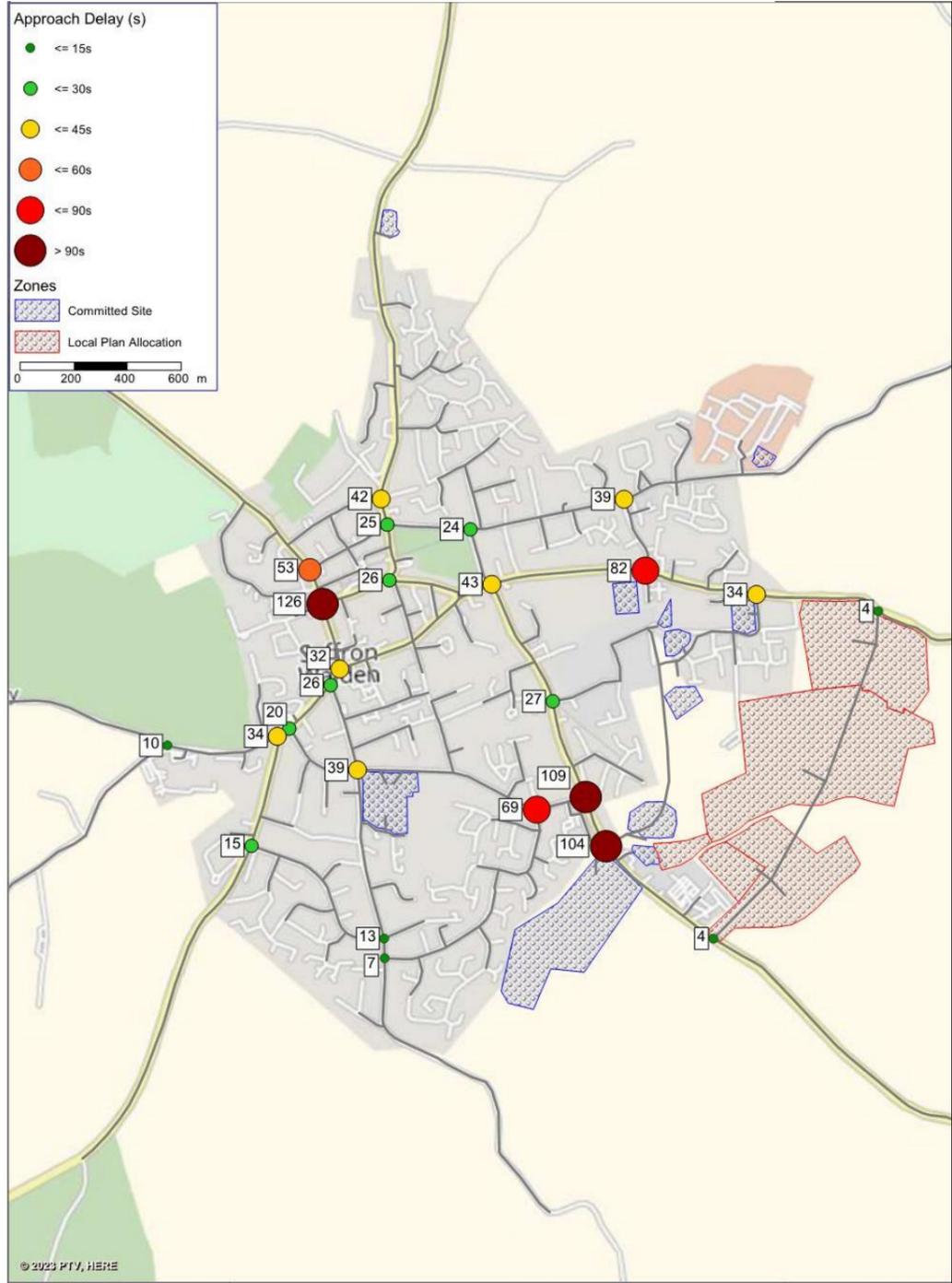
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2040 Local Plan (PM)



Differences between 2040 Local Plan & 2040 Reference Case (PM)

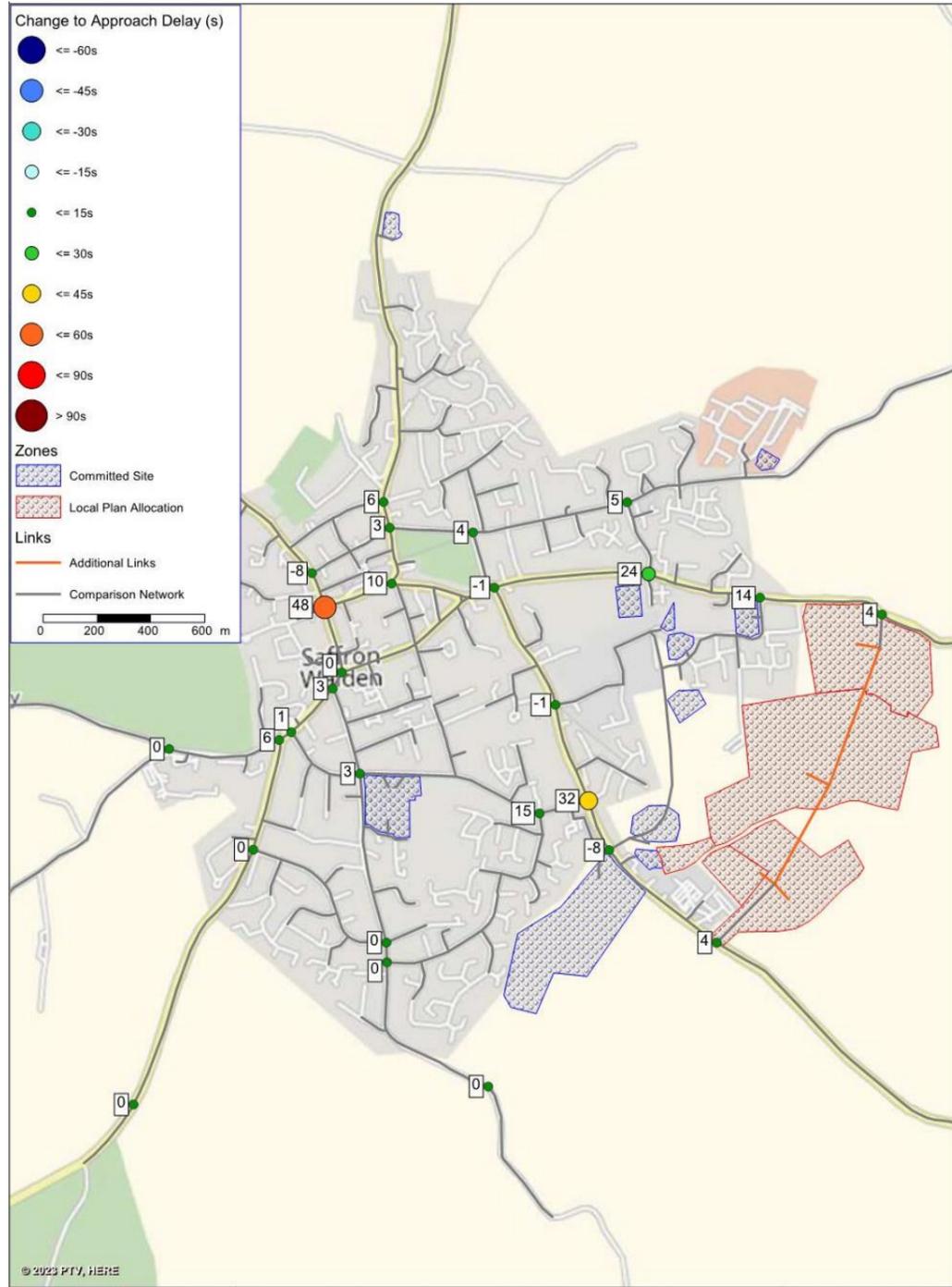


Figure 4-5: PM Peak Junction Delays in the Local Plan Growth Scenario

Notes:

- Delays are in seconds per vehicle.
- Represents average queue time in the respective peak period.
- Delays on the worst approach shown in main figure.
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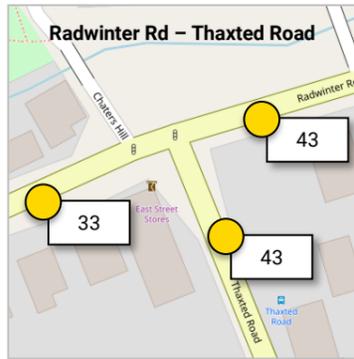
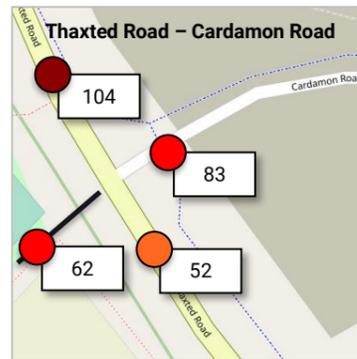
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4.4 SUMMARY

- 4.4.1 The Local Plan Growth Scenario will result in more traffic on the network, as is to be expected with the delivery of around 1,000 new dwellings within the town.
- 4.4.2 The scale and severity of the impacts associated with this increase in demand to travel differs across the network. However, it is considered that it generally performs well, and broadly similar to the Reference Case.
- 4.4.3 The instances where impacts are most noticeable are along High Street, at various junctions, and along Peaslands Road. This isn't a surprise, given the levels of commuting associated with Audley End Station to the south-west and Cambridge to the north. The job opportunities in Cambridgeshire to the north and lack of alternative routes from Saffron Walden inevitably increase the volume of traffic on High Street, and traffic will be delayed at several junctions.
- 4.4.4 With limited scope to increase the capacity of the highway network at these points, mitigation needs to focus on reducing demand through the provision of realistic and attractive alternatives to the car.



TETRA TECH

5 | MITIGATION PACKAGE 1 – SUSTAINABLE TRANSPORT

5.0 MITIGATION: PACKAGE 1 – SUSTAINABLE TRANSPORT

5.1 INTERVENTIONS

- 5.1.1 Following the identification of the impacts of the Local Plan Growth Scenario on the highway network, a package of interventions to accommodate the increased travel demand within the town was identified focused on the delivery of sustainable travel improvements.
- 5.1.2 The adverse effects of an increase in traffic associated with new development aren't limited to additional queuing and journey times for vehicles but extend to:
- Undermining the availability of more sustainable travel choices.
 - Emissions and air quality, particularly in residential areas.
 - Severance and the dominance of traffic on the public realm.
 - Healthy lifestyles and the quality of life for residents.
- 5.1.3 In this context, merely focusing on the provision of additional highway capacity would fail to address many of the wider implications of increases in travel demand in the town. Subsequently, and in line with the overarching vision for the future of transport detailed within the Local Plan, a package of multi-modal sustainable transport interventions was identified. A summary of the individual measures and the rationale for their implementation are highlighted in **Table 5-1**.

Table 5-1: Sustainable Transport Interventions in Saffron Walden

Ref	Scheme
Public Transport	
PT.01	Provide a new bus top on Radwinter Road close to the entrance to Site 003 RES, together with Real Time Information at all bus stops in proximity to the site allocations.
PT.02	Increase the frequency of services between Radwinter Road and Audley End Station to at least one bus per hour, preferably two buses per hour.
PT.03	Explore scope to re-route some services through the development sites as part of the introduction of a possible town-loop service and/or increased frequencies of services to Cambridge.
PT.04	Offer discounted (or free) bus travel to all new residents for 12 months.
Walking & Cycling	
WC.01	Provide a fully segregated and continuous cycle link between the sites and the station.
WC.02	Provision of a new e-bike for every new household.
WC.03	Provide a continuous segregated route between Thaxted Road and Radwinter Road for cyclists and pedestrians.

- 5.1.4 Based upon the above schemes coming forward, assumptions were made relating to the extent to which modal shift could be achieved both from within the site allocations themselves and elsewhere within the town, as a result of indirect benefits beyond the sites themselves (such as through the provision of a more frequent bus service for example).

- 5.1.5 A high level of modal shift was applied to reflect the nature and scale of investment that would be provided. Given the bespoke package of interventions and the specific locations in question, it is difficult to find directly comparable case studies upon which to base any mode shift assumptions.
- 5.1.6 However, following a literature review of the available evidence, the reductions applied to the number of trips undertaken by vehicles within Great Dunmow are set out in **Table 5-2**.

Table 5-2: Mode Shift Assumptions

Origin & Destination Pairs	Vehicle Trip Reduction Applied
Local Plan Allocations to Saffron Walden Town Centre	25% Reduction
Between Local Plan Allocations within Saffron Walden	80% Reduction
Local Plan Allocations to other parts of Saffron Walden	25% to 50% reduction
Knight Park-Bound Trips from elsewhere in Saffron Walden	25% to 50% reduction
Southwest Saffron Walden-Bound Trips from elsewhere in Saffron Walden	25% to 50% reduction
External-Bound Trips from Saffron Walden to the North (via the B184 Windmill Hill)	25% to 50% reduction

- 5.1.7 The impacts on the performance of these measures on the highway network are presented herein.

5.2 VOLUME OF TRAFFIC

- 5.2.1 Sustainable Transport Mitigation Package 1 highlights how the road network will perform in a future year (2040) with all Local Plan site allocations and sustainable transport mitigation in place. To understand the effectiveness of the interventions to be delivered as part of the package, comparisons are drawn with the performance of the network in the Reference Case.
- 5.2.2 The changes in the volume of traffic between the Reference Case and Mitigation Package 1 are shown in **Figure 5-1** for both the AM peak and the PM peak periods.
- 5.2.3 It highlights that:
- Investment in sustainable transport measures has the potential to negate much of the adverse effects of the increased travel demand associated with the Local Plan site allocations.
 - On several routes, notably High Street – Windmill Hill, and Thaxted Road the package of mitigation will reduce the volume of traffic to levels less than would otherwise be experienced in the Reference Case.
 - Elsewhere increases will be minimal and broadly in line with conditions in the Reference Case.
 - The exception to this is Radwinter Road and the wider east-west corridor through the town through to High Street in the west. This reflects a combination of increasing demand to access the town centre and the re-routing effects of the access road to be provided as a distributor road between the new site allocations.

Differences between 2040 Reference Case & Local Plan Sites + Sustainable Transport Mitigation (AM)

Differences between 2040 Reference Case & Local Plan Sites + Sustainable Transport Mitigation (PM)

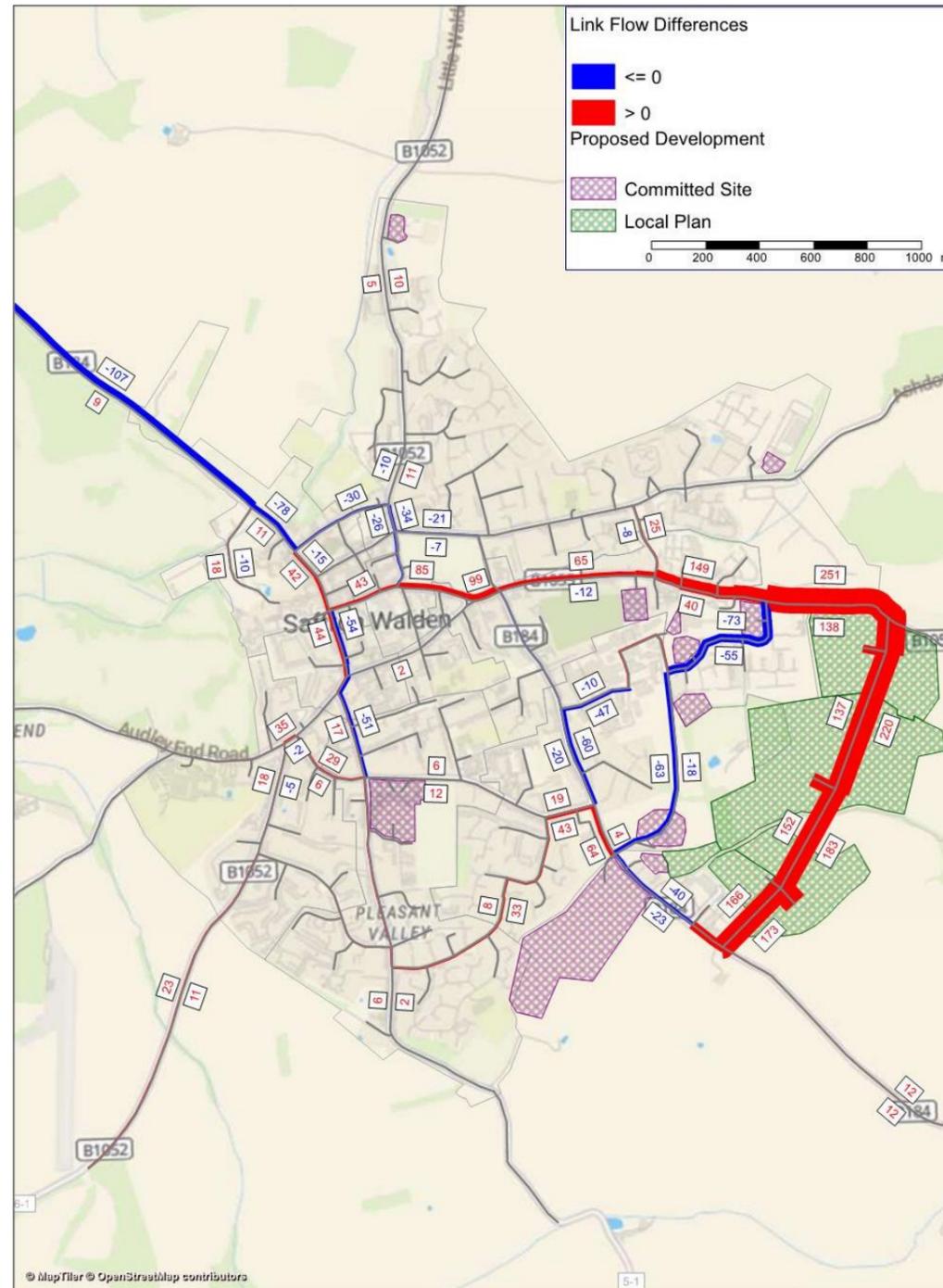
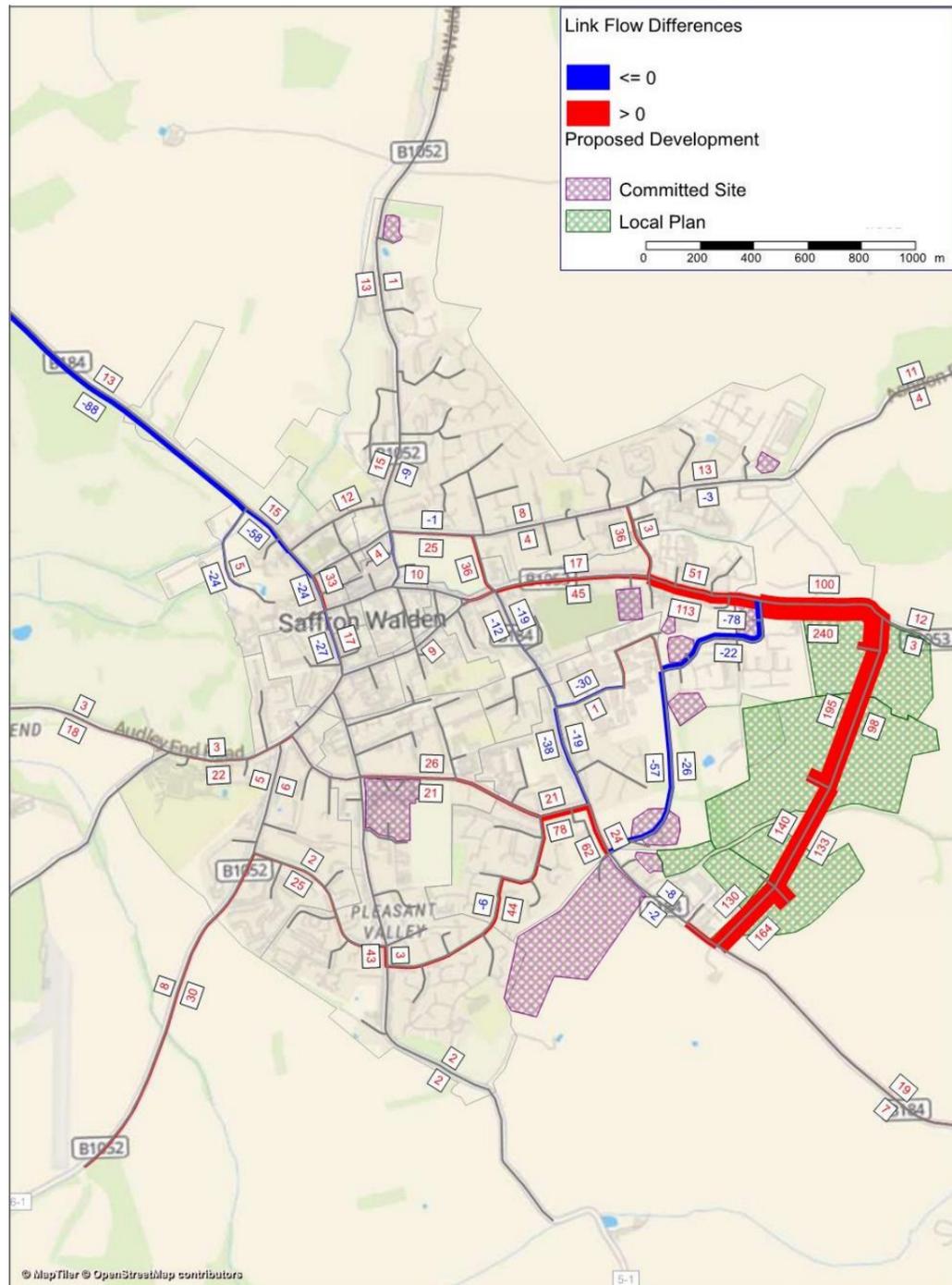


Figure 5-1: Change in Volume of Traffic between the Reference Case and Mitigation Package 1

Notes:

- Volume of traffic is presented in vehicles per hour.
- Weight of bar reflects size of flow.
- Red lines represent an increase in flow.
- Blue lines represent a decrease in flow.
- Green hatching represents Local Plan site allocations.

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5.3 JOURNEY TIMES

5.3.1 The comparative journey times and average speed of traffic in the Mitigation Package 1 scenario and the Reference Case are shown in **Table 5-3** and **Table 5-4** respectively.

Table 5-3: Changes in Journey Times between the Reference Case and Sustainable Transport Mitigation Package 1 (STMP1)

Route	Direction	Average Speed (in seconds)					
		AM Peak			PM Peak		
		Ref. Case	STMP 1	Change	Ref. Case	STMP 1	Change
1 B814 High Street and B1052 Newport Road	Northbound	373	372	-1	364	375	+11
	Southbound	362	381	+19	402	397	-5
2 Town Centre via Church Street / Common Hill	Northbound	401	400	-1	396	402	+6
	Southbound	479	485	+6	474	465	-9
3 B184 Thaxted Road	Northbound	385	395	+10	352	353	+1
	Southbound	330	341	+11	380	392	+12
4 B184 Audley Road / Hill Street	Westbound	265	272	+7	256	258	+2
	Eastbound	247	250	+3	272	292	+20
5 B1052 Little Walden Road	Northbound	159	160	+1	170	168	-2
	Southbound	192	190	-2	186	186	-
6 Peaslands Road	Westbound	140	149	+9	126	131	+5
	Eastbound	153	161	+8	192	208	+16

Table 5-4: Changes in Average Speed between the Reference Case and Sustainable Transport Package Scenario

Route	Direction	Average Speed (in MPH)					
		AM Peak			PM Peak		
		Ref. Case	STMP 1	Change	Ref. Case	STMP 1	Change
1 B814 High Street and B1052 Newport Road	Northbound	16.8	16.8	-	17.2	16.7	-0.5
	Southbound	17.3	16.4	-0.9	15.6	15.8	+0.2
2 Town Centre via Church Street / Common Hill	Northbound	11.2	11.2	-	11.3	11.1	-0.2
	Southbound	9.3	9.2	-0.1	9.4	9.6	+0.2
3 B184 Thaxted Road	Northbound	18.0	17.6	-0.4	19.7	19.6	-0.1
	Southbound	21.0	20.3	-0.7	18.2	17.7	-0.5
4 B184 Audley Road / Hill Street	Westbound	11.8	11.5	-0.3	12.2	12.1	-0.1
	Eastbound	12.7	12.5	-0.2	11.5	10.7	-0.8
5 B1052 Little Walden Road	Northbound	22.5	22.4	-0.1	21.1	21.3	+0.2
	Southbound	18.6	18.8	+0.2	19.2	19.2	-
6 Peaslands Road	Westbound	14.4	13.5	-0.9	16.0	15.4	-0.6
	Eastbound	13.2	12.5	-0.7	10.5	9.7	-0.8

5.3.6 The tables highlight that:

- The introduction of sustainable transport measures helps to increase the speed of general traffic on several routes through the town, albeit only marginally. This suggests that further steps could be taken to re-prioritise junctions for pedestrians and cyclists as opposed to passing on the benefits to general traffic.
- Where there are lower average speeds on the network compared to the Reference Cases, the differences are only marginal and unlikely to be noticed by road users. Even where the largest increase in journey time will be experienced – eastbound traffic on George Street – Hill Street – Audley Road corridor – it will still only amount to a 0.8mph reduction in journey speed.

5.4 JUNCTION DELAYS

5.4.1 In seeking to understand the changes in journey times, an analysis of the performance of the junctions on the network was undertaken. **Figure 5-2** illustrates the level of delay associated with the worse performing arm/approach to each junction in the AM peak period in the Sustainable Transport Mitigation Package, alongside the changes in delay when compared to the 2040 Reference Case. The comparative illustrations for the PM peak period are provided in **Figure 5-3**.

5.4.2 The key findings are that:

- There will be little difference between the length of delays experienced at individual junctions when viewing the Reference Case and the Local Plan sites supported by the proposed package of sustainable transport measures. In this respect the schemes appear to sufficiently mitigate the impact of the Local Plan allocations.
- Whilst delays will remain on the network, they will be shorter than they would otherwise have been if the Local Plan sites and mitigation did not come forward.
- The High Street – Church Street junction will see the greatest average reduction in delay from the Reference Case, although it will remain subject to queuing in both peak periods.

5.5 SUMMARY

5.5.1 Providing a package of intervention to mitigate the impacts of the Local Plan site allocations which focuses on the provision of attractive sustainable travel options which provides realistic alternatives to the car will provide many benefits to the travel offering in the town, beyond the performance of the highway network.

5.5.2 Making walking and cycling safer and more convenient, and public transport more frequent and accessible will support wider ambitions to improve the health and well-being of residents, support moves to address the climate emergency, and cater for all sections of society, particularly those without access to a car.

5.5.3 Notwithstanding the wider benefits of focusing mitigation on sustainable travel, its ability to reduce demand to travel by car will benefit the performance of the highway network itself. If a high degree of modal shift can be achieved, the majority of the network will perform as effectively as within the Reference Case, despite the additional 1,000 dwellings within the urban area.

5.5.4 The reconfiguration of certain junctions to accommodate several of the sustainable transport interventions has not been assessed within the model at this stage of the process, and it is conceivable that it may negate the journey time savings detailed above. Where capacity issues and delays will persist on the network, local junction enhancements schemes are likely to be required to help regulate demand and maximise the efficiency of their operation, and they will be considered in light of this.

Delays in Local Plan Sites + Sustainable Transport Mitigation Scenario (AM)

Differences between 2040 Reference Case & Local Plan Sites + Sustainable Transport Mitigation (AM)

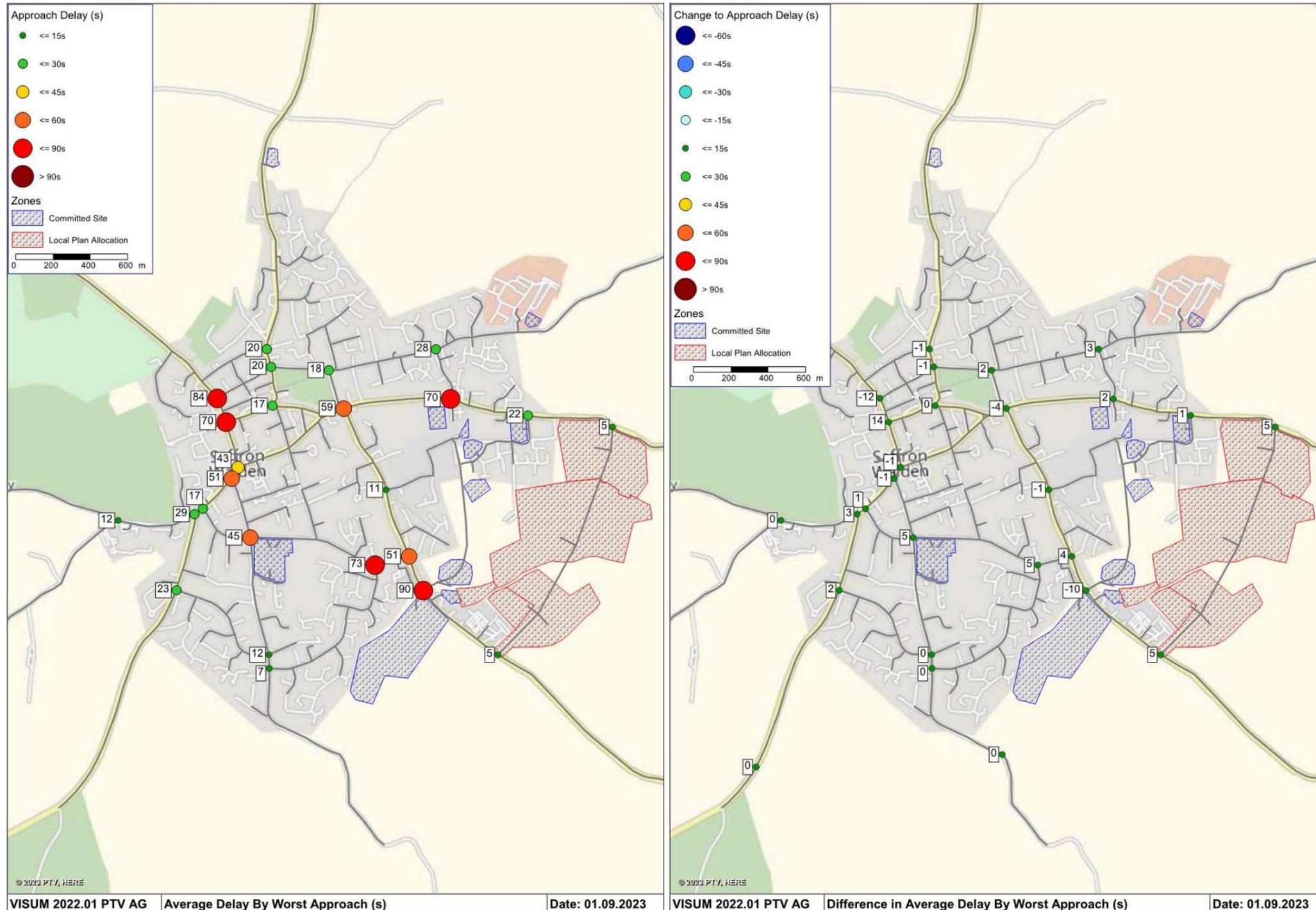


Figure 5-2: AM Peak Junction Delays in the Sustainable Transport Mitigation Scenario

Notes:

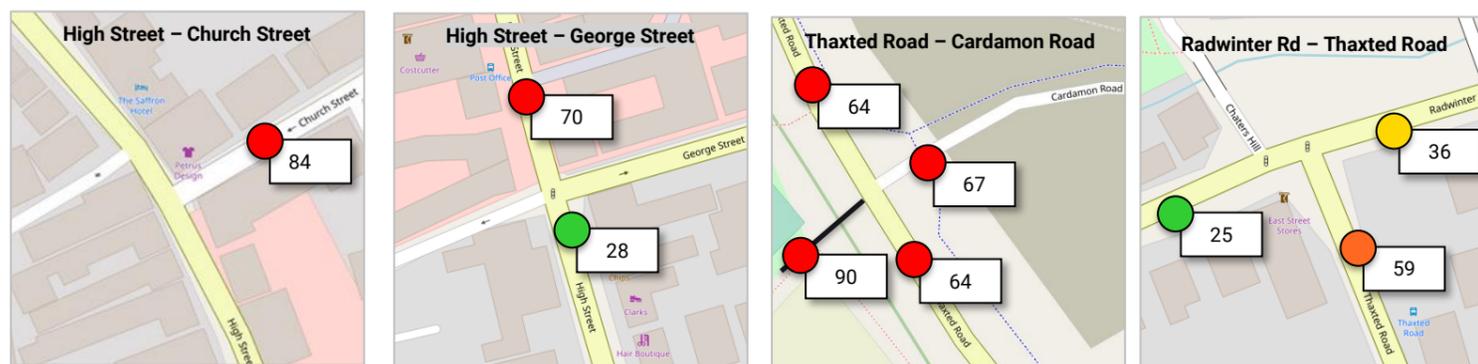
- Delays are in seconds per vehicle.
- Represents average queue time in the respective peak period.
- Delays on the worst approach shown in main figure.
- Delays on all approaches are shown for selected junctions in the inserts.

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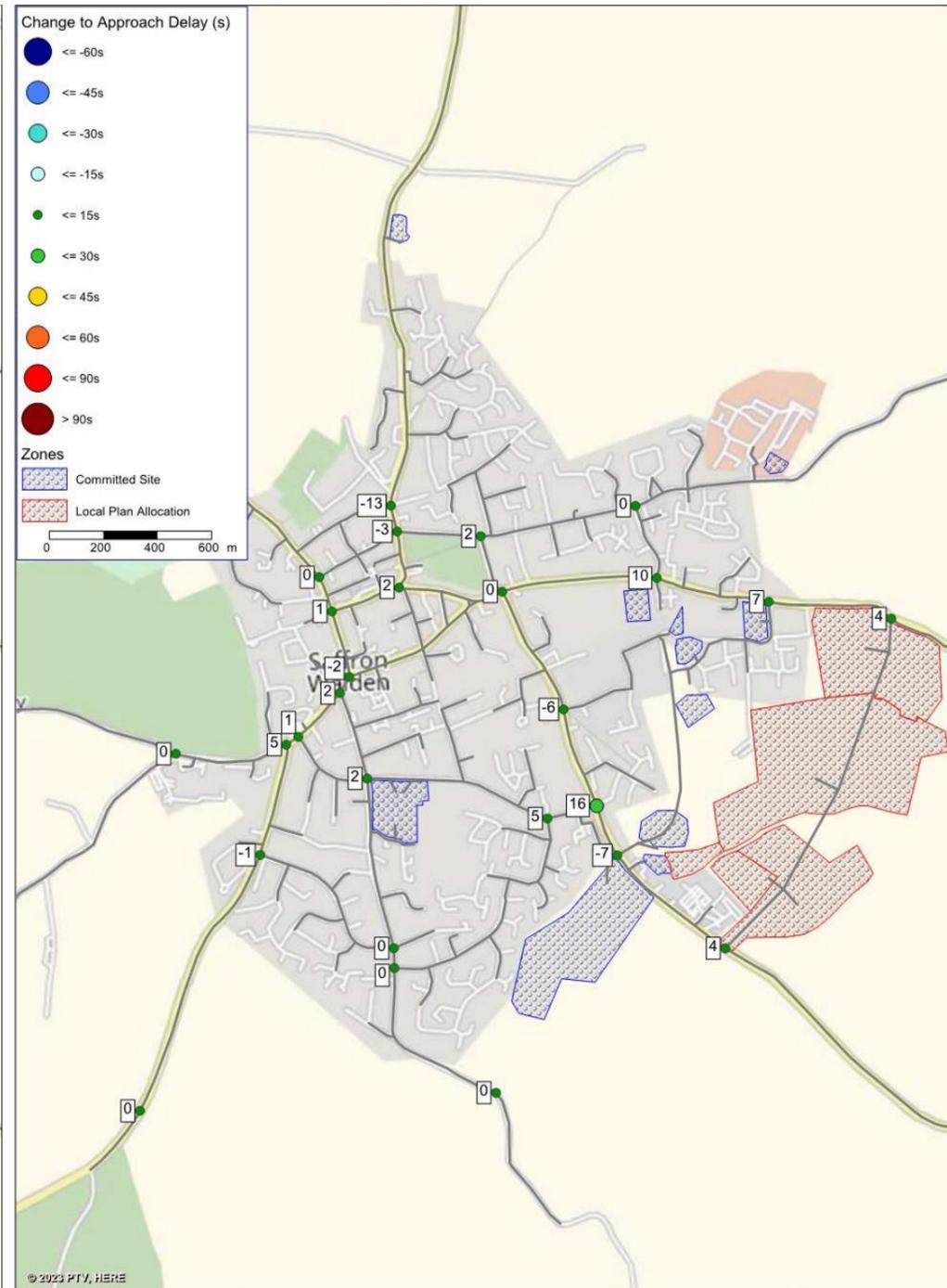
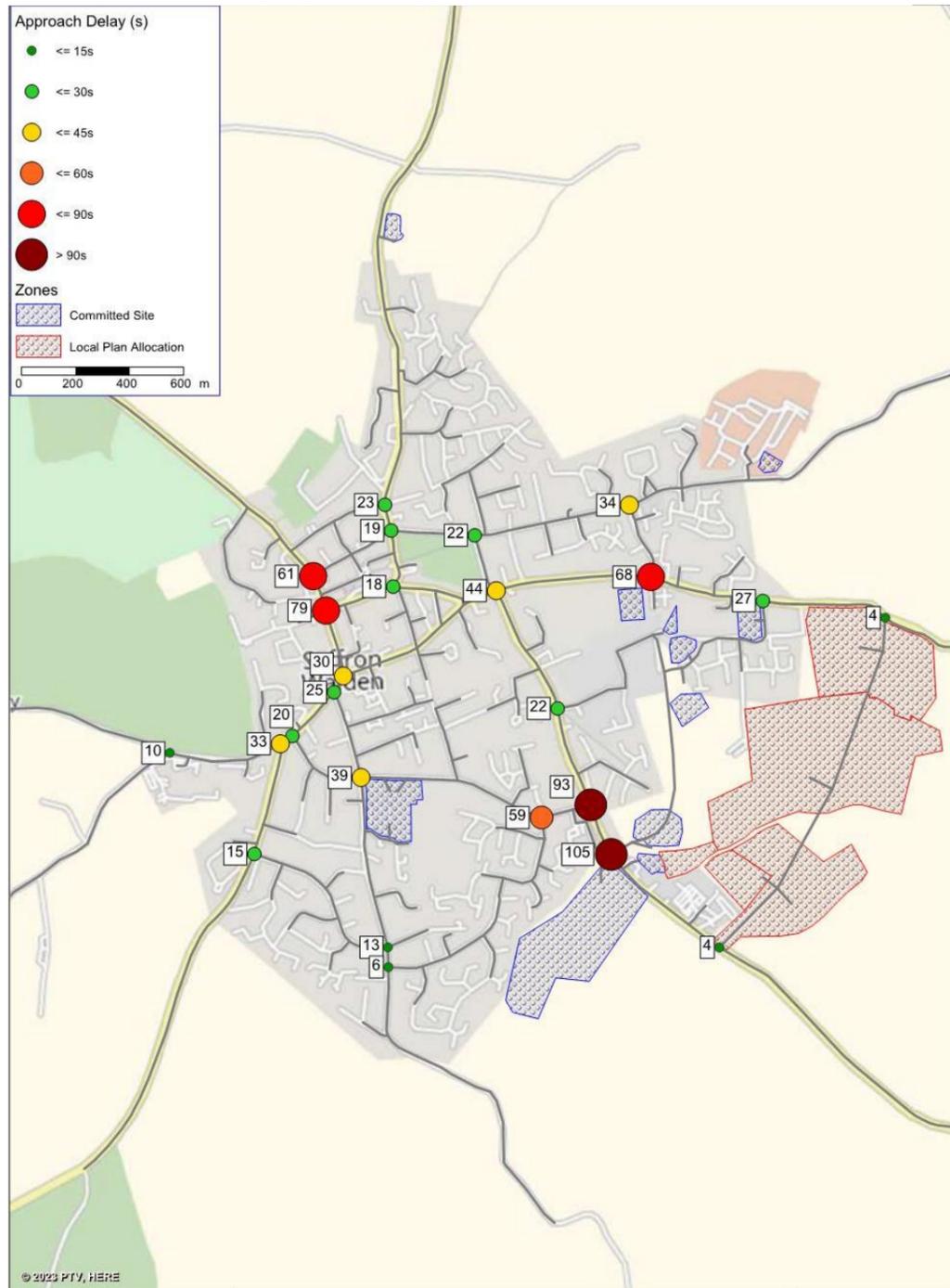


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Delays in Local Plan Sites + Sustainable Transport Mitigation Scenario (PM)

Differences between 2040 Reference Case & Local Plan Sites + Sustainable Transport Mitigation (PM)



VISUM 2022.01 PTV AG Average Delay By Worst Approach (s) Date: 01.09.2023

VISUM 2022.01 PTV AG Difference in Average Delay By Worst Approach (s) Date: 01.09.2023

Figure 5-3: PM Peak Junction Delays in the Sustainable Transport Mitigation Scenario

Notes:

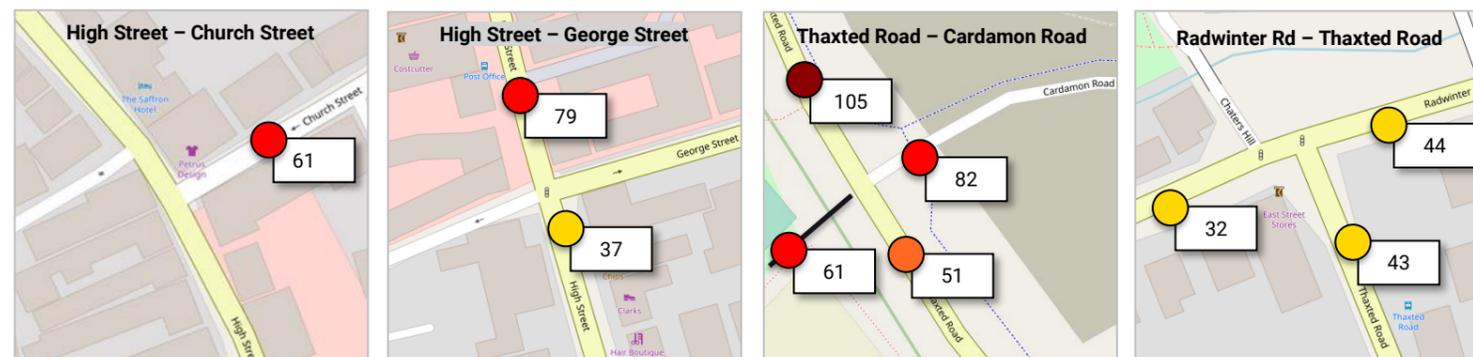
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6 | MITIGATION PACKAGE 2 – HIGHWAY CAPACITY

6.0 MITIGATION: PACKAGE 2 – HIGHWAY CAPACITY

6.1 INTERVENTIONS

- 6.1.1 It is envisaged that a combination of sustainable transport interventions and local junction modifications could provide sufficient mitigation to address the impacts of the Local Plan allocations in Saffron Walden.
- 6.1.2 However, in seeking to provide a greater understanding of more strategic options available to the town, a second scenario was assessed which focused on a combination of both the sustainable transport interventions and a new link road to the south of the town between Thaxted Road and Newport Road.
- 6.1.3 For the purposes of this assessment, the road has been assumed to be a 40mph single carriageway that would operate as a local distributor road. Such a route has been widely discussed within the town for several years and this scenario depicts its potential impact on the performance of the wider network.

6.2 VOLUME OF TRAFFIC

- 6.2.1 Mitigation Package 2 highlights how the road network will perform in a future year (2040) with all Local Plan site allocations, sustainable transport mitigation in place and a new link road to the south of the town. To understand the effectiveness of the interventions to be delivered as part of the package, comparisons are drawn with the performance of the network in the Reference Case.
- 6.2.2 The changes in the volume of traffic between the Reference Case and Mitigation Package 2 are shown in **Figure 6-1** and **Figure 4-2** for both the AM peak and the PM peak periods.
- 6.2.3 It highlights that:
- The link road will result in significant levels of traffic reassigning onto the new corridor in both peak periods.
 - Hourly flows will amount to almost 400 vehicles in the AM peak period (westbound traffic between Debden Road and Thaxted Road) and almost 500 vehicles in the PM peak period (eastbound traffic on the same stretch of carriageway).
 - This will benefit many existing routes within the town that would see a sizeable reduction in the volume of traffic they accommodate in the peaks. Both Newport Road and Thaxted Road will see a reduction in both north and south bound trips in both period periods, whilst east-west movements would be reduced on both Peaslands Road – Mount Pleasant Road and Winstanley Road – Cromwell Road.
 - However, there will be little benefit to High Street given the lack of alternative, direct routes north from the south of the town.

6.3 JOURNEY TIMES

6.3.1 The comparative journey times and average speed of traffic in the Mitigation Package 1 scenario and the Reference Case are shown in **Table 6-1** and **Table 6-2** respectively.

Table 6-1: Changes in Journey Times between the Reference Case and Highway Capacity Mitigation Package 2 (MP2)

Route	Direction	Average Speed (in seconds)					
		AM Pea			PM Peak		
		Ref. Case	MP 2	Change	Ref. Case	MP 2	Change
1 B814 High Street and B1052 Newport Road	Northbound	373	365	-8	364	329	-35
	Southbound	362	351	-9	402	421	+19
2 Town Centre via Church Street / Common Hill	Northbound	401	402	+1	396	376	-20
	Southbound	479	481	+2	474	474	-
3 B184 Thaxted Road	Northbound	385	388	+3	352	350	-2
	Southbound	330	313	-17	380	328	-52
4 B184 Audley Road / Hill Street	Westbound	265	258	-7	256	232	-24
	Eastbound	247	242	-5	272	272	-
5 B1052 Little Walden Road	Northbound	159	162	+3	170	171	+1
	Southbound	192	192	-	186	192	+6
6 Peaslands Road	Westbound	140	126	-14	126	114	-8
	Eastbound	153	121	-32	192	128	-64

Table 6-2: Changes in Average Speeds between the Reference Case and Highway Capacity Mitigation Package 2 (MP 2)

Route	Direction	Average Speed (in MPH)					
		AM Peak			PM Peak		
		Ref. Case	MP 2	Change	Ref. Case	MP 2	Change
1 B814 High Street and B1052 Newport Road	Northbound	16.8	17.2	+0.4	17.2	19.0	+1.8
	Southbound	17.3	17.8	+0.5	15.6	14.9	-0.7
2 Town Centre via Church Street / Common Hill	Northbound	11.2	11.1	-0.1	11.3	11.9	+0.6
	Southbound	9.3	9.3	-	9.4	9.4	-
3 B184 Thaxted Road	Northbound	18.0	17.9	-0.1	19.7	19.8	+0.1
	Southbound	21.0	22.2	+1.2	18.2	21.1	+2.9
4 B184 Audley Road / Hill Street	Westbound	11.8	12.1	+0.3	12.2	13.5	+1.3
	Eastbound	12.7	12.9	+0.2	11.5	11.5	-
5 B1052 Little Walden Road	Northbound	22.5	22.1	-0.4	21.1	20.9	-0.2
	Southbound	18.6	18.6	-	19.2	18.6	-0.6
6 Peaslands Road	Westbound	14.4	16.0	+1.6	16.0	17.7	+1.7
	Eastbound	13.2	16.6	+3.4	10.5	15.7	+5.2

6.3.6 The tables highlight that:

- Journeys times will reduce (and average vehicles speeds will increase) on several routes in both peak periods as a result of the delivery of the link road. The largest time savings will be on Thaxted Road and Peaslands Road, reflecting the alternative route for east-west traffic the new link provides.
- This suggests that further measures could be taken to lock in benefits for sustainable transport users on the network – i.e. as opposed to general traffic benefiting from quicker journeys, more priority could be given for pedestrians and cyclists at key junctions, thereby maintain vehicles speeds at previous levels.
- Elsewhere journey times will be reduced to similar levels to the Reference Case. This implies that traffic will continue to be subject to delays on High Street associated with certain turning movements. This is a consequence of north and southbound traffic still being relying on the High Street-Windmill Lane corridor.

6.4 JUNCTION DELAYS

6.4.1 In seeking to understand the changes in journey times, an analysis of the performance of the junctions on the network was undertaken. **Figure 6-2** illustrates the level of delay associated with the worse performing arm/approach to each junction in the AM peak period in the Highway Capacity Mitigation Package, alongside the changes in delay when compared to the 2040 Reference Case. The comparative illustrations for the PM peak period are provided in **Figure 6-3**. The key findings are that:

- Notwithstanding the volume of traffic which will reassign from the road network within the town, several junctions will continue to experience queuing and delays in both peak periods including those on High Street, Radwinter Road and Thaxted Road which have been highlighted as having issues in previous scenarios.
- The most pronounced delays will remain at the junction of High Street and Church Street with traffic from Church Street struggling to join the flow of traffic on the main carriageway due to the volume of vehicles.
- The lack of alleviation to these junctions, points to the fact that there remains no realistic alternative north-south routes between the town and Cambridge and the M11 to the north.

6.5 SUMMARY

6.5.1 The provision of a new link road to the south of the town is a scheme which should only be considered in the period beyond the current Local Plan. It is not deemed necessary or appropriate to mitigate the impact of the Local Plan site allocations.

6.5.2 The scheme itself could have many benefits in terms of the removal of traffic from many existing routes in the south of the town. However, given the lack of wider route choice, many vehicles will still be required to travel through the town centre via High Street. In particular, if they are travelling north towards the M11 and Cambridge. In this respect, the link road would fall short in addressing all of the town's highway capacity issues – delays will remain on key corridors through Saffron Walden although journey times and the average speed of traffic will improve on many routes.

6.5.3 The link road could unlock wider benefits in terms of the reallocation of road space to more sustainable forms of travel within the town, and subsequent improvements to air quality and emission levels. A more detailed analysis of the benefits of the scheme could be explored through the development of a transport business case but the outcome of that process should not have any implications for the delivery of the Local Plan sites.

Delays in Local Plan Sites + Highway Capacity Mitigation Scenario (AM)

Differences between 2040 Reference Case & Local Plan Sites + Highway Capacity Mitigation (AM)

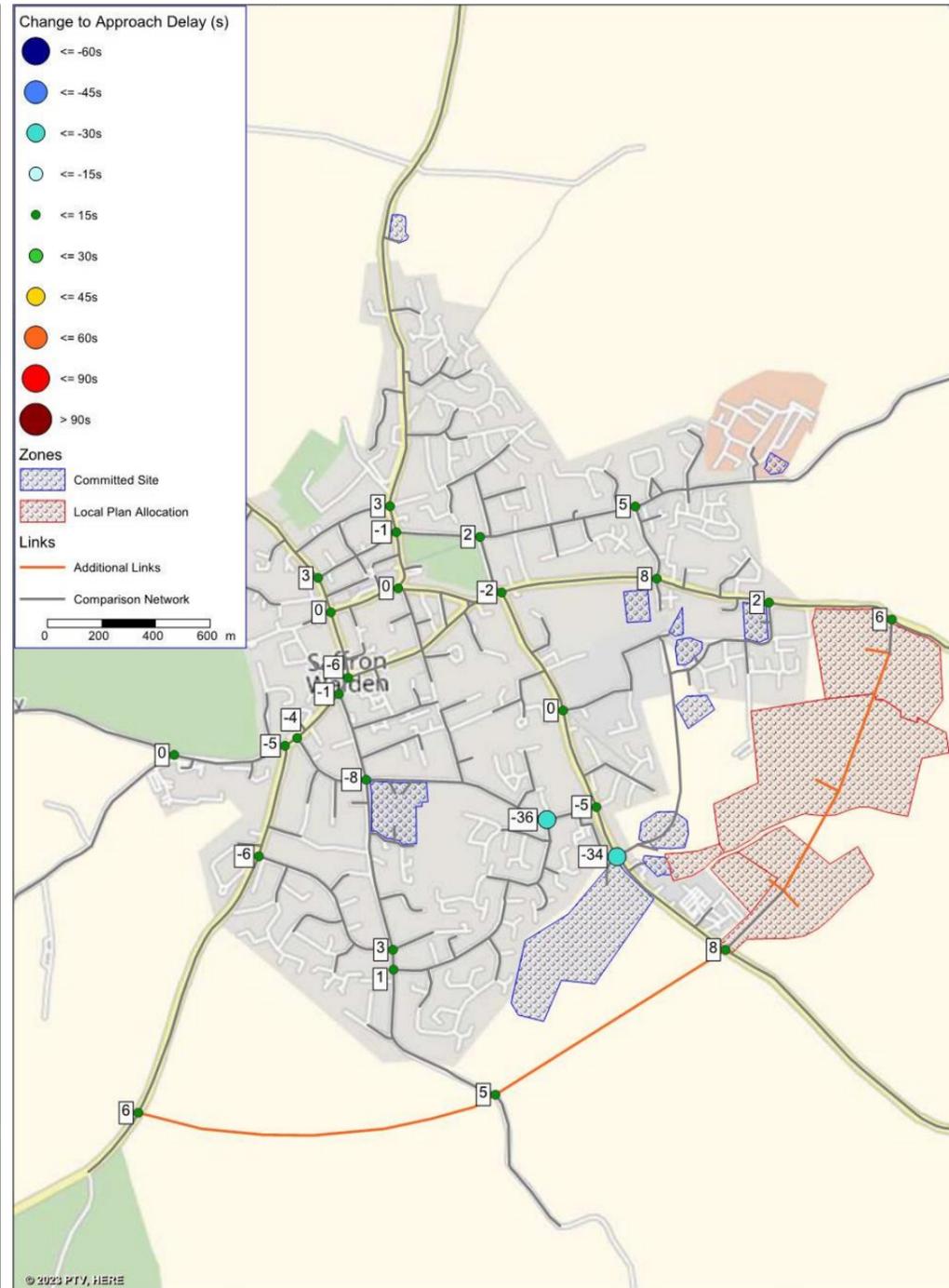
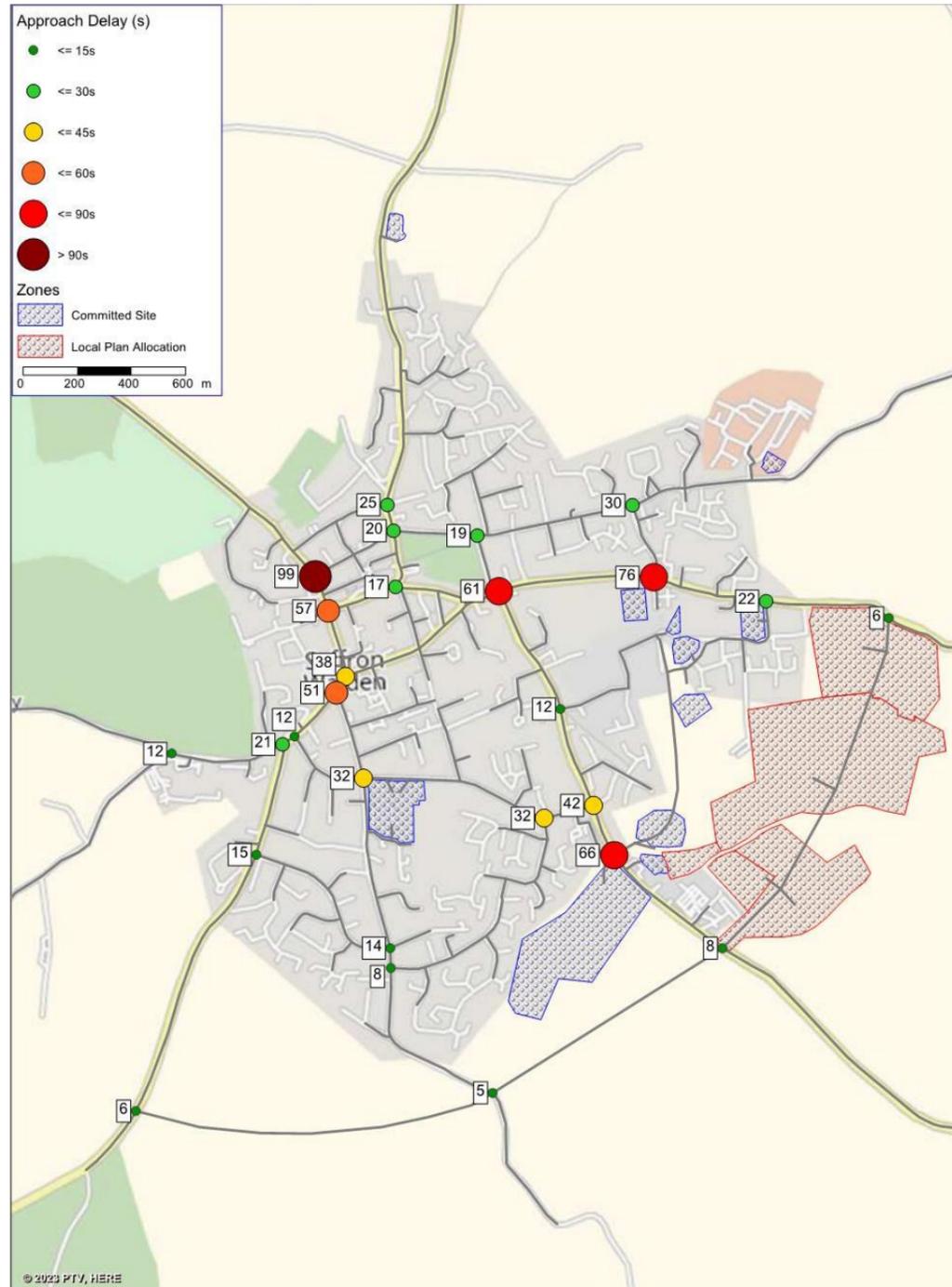


Figure 6-2: AM Peak Junction Delays in the Highway Capacity Mitigation Scenario

Notes:

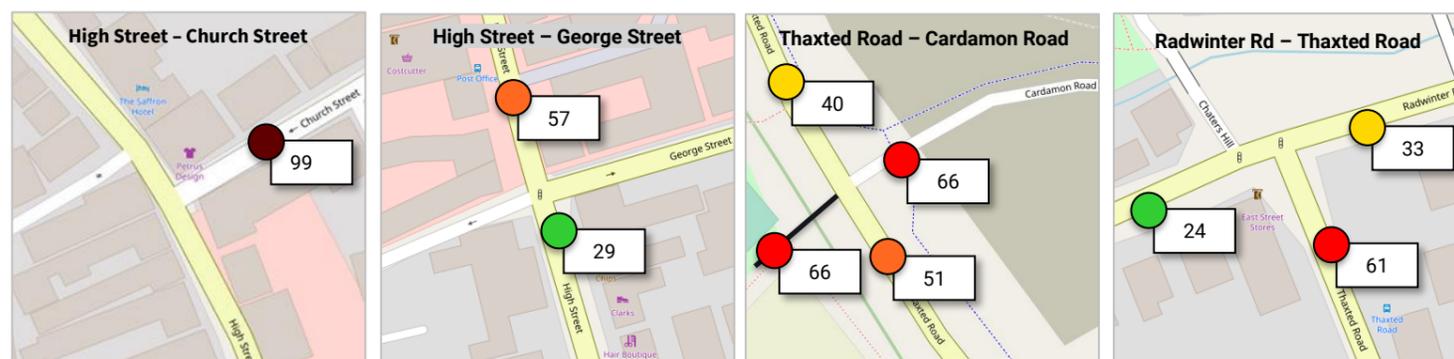
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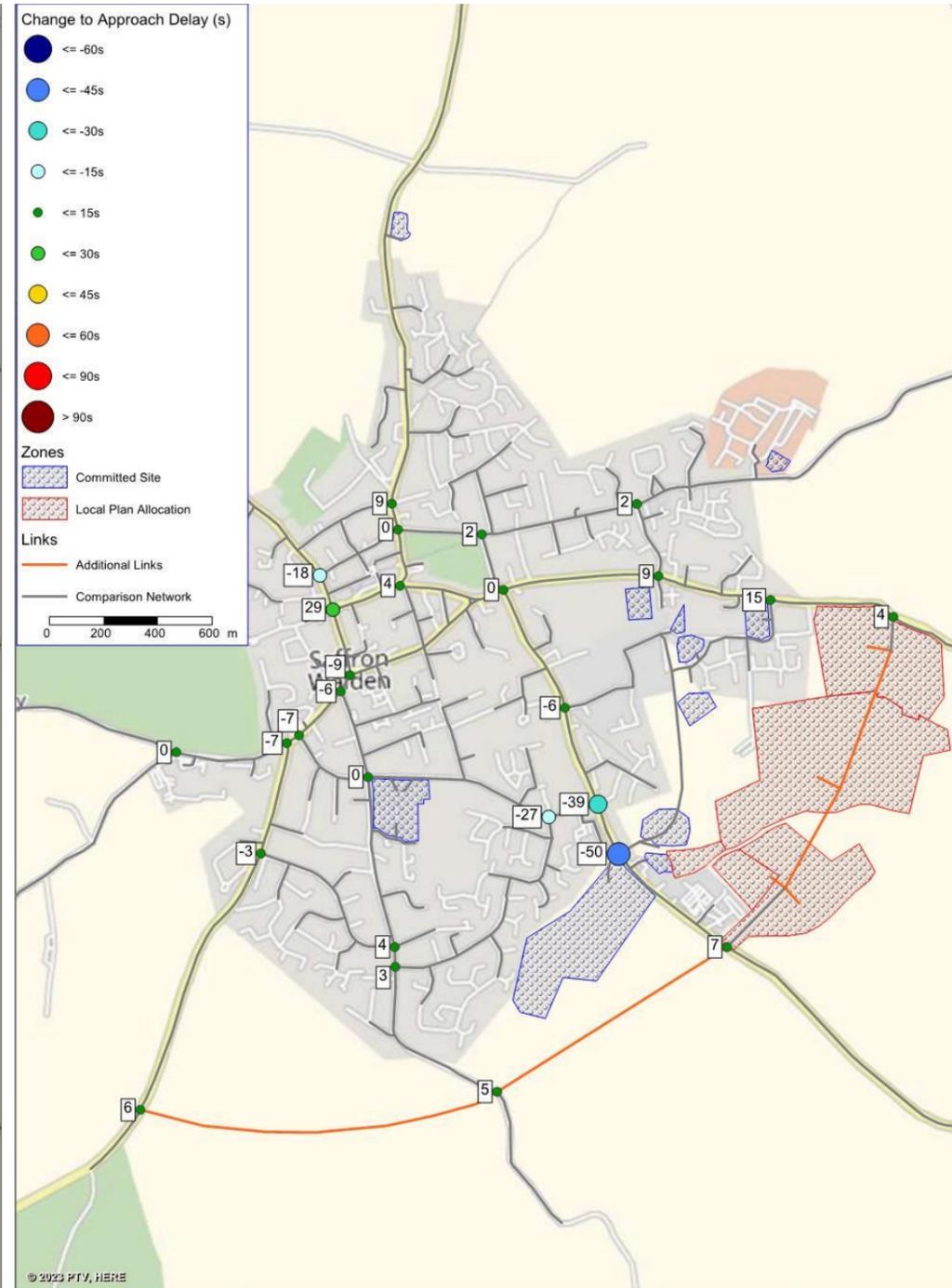
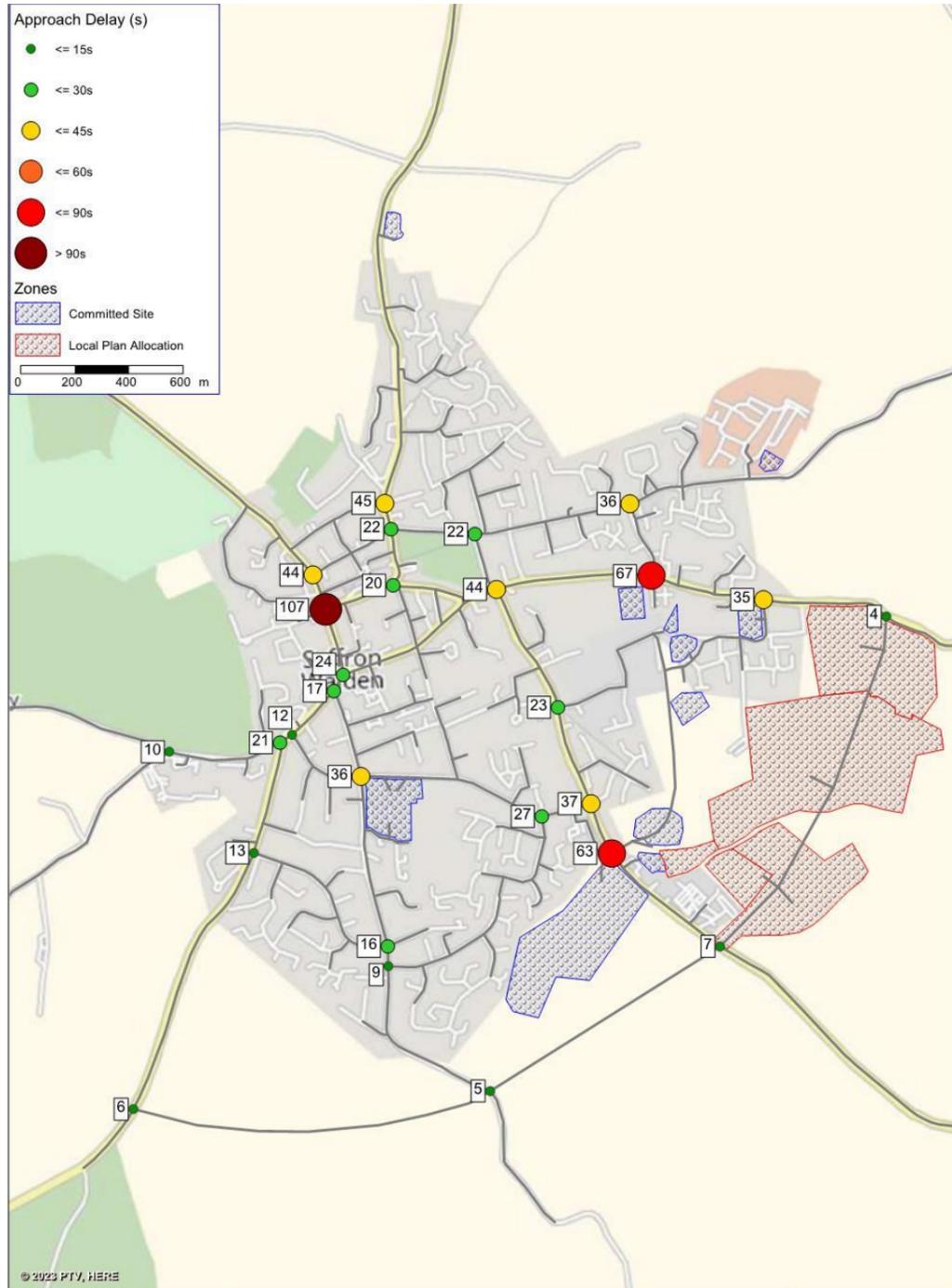


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Delays in Local Plan Sites + Highway Capacity Mitigation Scenario (PM)

Differences between 2040 Reference Case & Local Plan Sites + Highway Capacity Mitigation (PM)



VISUM 2022.01 PTV AG Average Delay By Worst Approach (s) Date: 01.09.2023

VISUM 2022.01 PTV AG Difference in Average Delay By Worst Approach (s) Date: 01.09.2023

Figure 6-3: PM Peak Junction Delays in the Highway Capacity Mitigation Scenario

Notes:

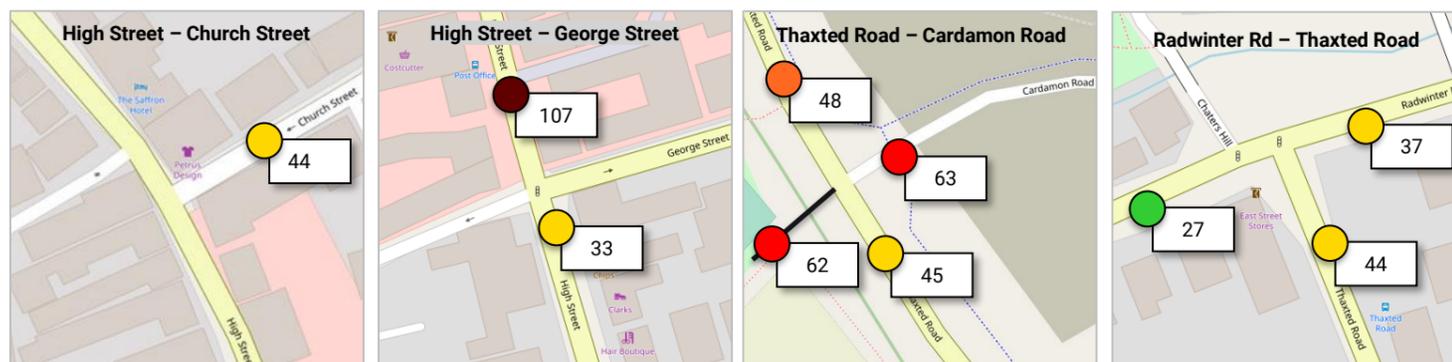
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7 | SUMMARY

7.0 SUMMARY

7.1 OVERVIEW

- 7.1.1 This technical note has detailed the performance of the highway network in Saffron Walden and drawn comparisons in its operation with and without Local Plan site allocations coming forward, and the relative effectiveness of alternative packages of mitigation.
- 7.1.2 It is clear from the analysis that the road network will be significantly busier in 2040 than is it today, even before Local Plan related growth is considered. This is due to the impact of committed development sites coming forward in the town and surrounding area, together with background growth in traffic.
- 7.1.3 The impact of the Local Plan sites themselves will be marginal in comparison.
- 7.1.4 The delivery of a package of sustainable transport related interventions will broadly mitigate the impacts of the allocations. Improving the efficiency of operation of several junctions is also likely to be required to supplement the sustainable travel focus.
- 7.1.5 The success of such an approach assumes that a high degree of modal shift is achieved, both within the development sites themselves and elsewhere in the town (particularly on bus corridors set to benefit from enhanced service frequencies). However, if achieved, the benefits of public transport, walking and cycling improvements stretch far beyond the operation of the highway network itself and will help contribute towards wider carbon, environment, health and well-being priorities.
- 7.1.6 It has long been thought that a link road around the town is required to alleviate the pressures it faces from large volumes of traffic throughout the day and the creation of the Saffron Walden VISUM Model now provides a tool through which impacts on the routing of traffic can be identified.
- 7.1.7 Whilst such a scheme is not deemed integral to mitigating the impacts of the Local Plan, if such a link were to come forward in the longer term, journey time benefits will be provided on a number of routes through the town. Further investigation is required to determine if these benefits will provide value for money and it is recommended that the authority consider the production of a Transport Business Case to determine its long term viability.

7.2 RECOMMENDED INTERVENTIONS

- 7.2.1 Following the assessment of the Local Plan sites and the conclusions drawn within this technical note, the schemes recommended to be taken forward through the Local Plan are set out in **Table 7-1** below, together with a high level estimate as to their associated costs.

Table 7-1: List of Recommended Interventions & Indicative Costs

Ref.	Scheme	Cost	Notes
Public Transport			
PT.01	New bus stops on Radwinter Road close to entrance to Site 003 RE3.	£30,000	Based upon two new bus shelters to serve services travelling in both directions.
PT.02	Real Time Information (RTI) at bus stops close to the site	£150,000	Based upon provision of thirty RTI displays.

Ref.	Scheme	Cost	Notes
	allocations, in the town centre and along the wider corridors.		
PT.03	Increase the frequency of services between Radwinter Road and Audley End Station to two buses per hour.	£300,000 to £400,000	Suggested annual capital funding contribution towards subsidy of increased service provision. Potential for uplifting existing 301 or 319/320 or a Saffron Walden station shuttle. Cost does not take into account revenue generated.
PT.04	Stagecoach Citi 7 'Express' Service variation offering a faster direct limited stop service to Cambridge.	£2,000,000	Support for a service over a five year period based upon a cost of £400,000 per year for an hourly service. Cost does not take into account revenue generated.
PT.05	Free bus travel for 12 months.	£2,000,000	Based upon one Stagecoach daily travel pass per new household at £8 per/day for working days only.
Walking & Cycling			
WC.01	Provision of a new e-bike for every new household.	£1,000,000	Based upon one bike per household at a cost of £1,000 per bike.
WC.02	Provide a fully segregated and continuous cycle link between the sites and the station.	£3,000,000	Assumed to be 3km in length at a cost of £1,000,000 per km.
WC.03	Provide a continuous segregated route between Thaxted Road and Radwinter Road for cyclists and pedestrians.	£0	To be provided within the development site as part of the site masterplan.

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