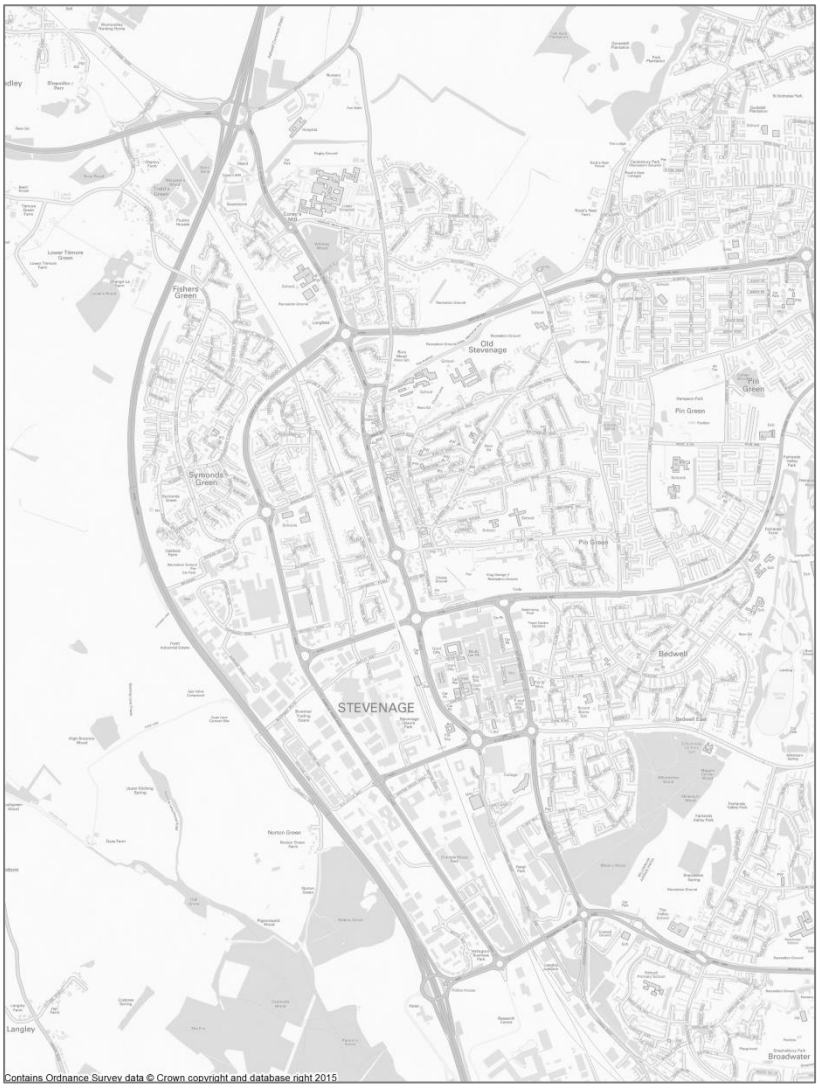
Stevenage Town Centre Model

S-Paramics Model Forecasting Report



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Stevenage Town Centre Model

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Capabilities on project:
Transportation

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1 Executive Summary

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1.1 Executive Summary

1.1.1 AECOM was commissioned by Hertfordshire County Council (HCC) to undertake the development of a S-Paramics model to evaluate different Local Plan options in Stevenage. This project was originated after an initial test trying to evaluate alternative layouts for Lytton Way using an existing model.

1.1.2 The spatial coverage of the existing model was focused only on the town centre, and could not provide an analysis of the impact of the Lytton Way scheme on the wider Stevenage network. It is important to consider the traffic pattern for the wider network of Stevenage as some of the key land use attractors and future developments, such as employment, are not located within the town centre.

1.1.3 It was therefore decided to extend the spatial coverage of the model to include the main highway network in the Stevenage town centre as well as the main corridors and junctions that provide access to Stevenage.

1.1.4 It is also believed that Stevenage Borough Council (SBC) has aspirations to redevelop Stevenage town centre and the town-wide model of Stevenage would provide a suitable platform to understand the traffic implications and impacts of the different options.

1.1.5 Two **future years** have been considered for this study in accordance with the Urban Transport Plan: **2021** and **2031**. The peak time periods considered in the Base Year model were morning and evening peak for a weekday, and Saturday interpeak, based on the evaluation of traffic counts undertaken.

1.1.6 For each forecast year, Do Minimum and Do Something scenarios were created and different **infrastructure assumptions** were included for the 2021 and 2031 Do Minimum and Do Something scenarios.

1.1.7 For the 2021 and 2031 Do Minimum scenarios, two major committed schemes are considered: the Smart motorway on the A1(M) between Junction 6 and 8, considering the ‘all lane running’, and the update hamburger scheme located at Gunnels Wood Road – A602 Broadhall Way junction which also provides access to the GlaxoSmithKline (GSK) site.

1.1.8 For the Do Something scenarios, several proposed schemes are also included in addition to the committed schemes included for the Do Minimum scenarios. For 2021, the relocation of the bus station from its current location to Southgate and Danestrete is considered. For 2031, two further proposed schemes are included, namely the car park consolidation (which includes the multi storey car park to the north of train station) and the bus relocation to Lytton Way (which includes designating the middle section of Lytton Way to ‘bus only’).

1.1.9 As the Urban Transport Plan for Stevenage developed by AECOM in 2009 already acknowledged, it is planned the conversion of the Station Car Park (north) in to a 770 space **multi-storey car park**. This, together with the consolidation car park which involves the substitution of surface car park by new developments, will modify the flow distribution and might have impacts at some junctions.

1.1.10 The **planning data** used to calculate the future demand for the Stevenage model was based on several sources of data: the county wide model of Hertfordshire, COMET, that AECOM has developed for HCC, the Welwyn Hatfield and Stevenage Hitchin (WHaSH) scenario C, SBC planning data and additional areas on East and North Stevenage and Welwyn Hatfield data form COMET. The distribution of this planning data, population and employment, on the future years was agreed with HCC and SBC.

1.1.11 An initial analysis of planning data size and location provides, in advance, initial concerns about the impacts on the network. The dwellings and jobs increase in the town centre will boost the pressure on the network in the town centre. In parallel, the significant increment of dwelling in the northern area will have impacts on the network, considering that there is only one main access (Hitchin road) and a secondary access (North road).

1.1.12 The employment increase considered, around 200,000 square meters by 2031, will attract a significant level of traffic from Stevenage but also from surroundings areas. GSK and Gunnels Wood Road concentrates the highest level of employment, which might create issues at the junctions on Gunnels Wood Road.

1.1.13 Complementary to the planning data, there are two main **land uses changes** that have an impact on the demand: the conversion of John Lewis distribution centre to Costco, and the already commented car park consolidation in the town centre. The changes related to Costco reduce the demand in the morning, and increases the demand in the evening and significantly on Saturdays. The distribution of the trips was provided and it was included in all the scenarios, Do Minimum and Do Something for both years.

1.1.14 As commented before, the implementation of the multi storey car park and the new developments planned in the town centre will produce a car park consolidation. This scenario has been considered only for 2031 Do Something, based on the new developments on the Local Plan. It was assumed that the demand from the surface car parks removed should be moved mainly to the multi storey car park, but also to the surface car parks that remain.

1.1.15 All the previous information was processed to create the **demand matrices** for the future years in both scenarios, Do Minimum and Do Something. WHaSH model was used to calculate the demand growth based on the trip rates extracted from TRICS, as in previous uses of the model. This assumes no changes in travel behaviour, and could be assumed as the worst case scenario as all the planning data for Stevenage, North and East Stevenage, Welwyn Hatfield was considered. The worst case scenario is defined based on the consideration of all growth associated with the Local Plan as committed, considering relatively high development trip rates, but also because no mode choice modifications were considered when improving the Public Transport, and no reduction in car park spaces was considered, which means that the car park consolidation allocates all the demand coming from / going to the removed surface parking into the multi storey car park.

1.1.16 WHaSH calculates the demand growth which should be applied to the morning and evening peak matrices in the Paramics model. Estimation was made to create the growth for Saturday as WHaSH does not include interpeak period, and the evening growth was applied to the base year matrix for Saturdays.

1.1.17 The demand growth in the strategic model zone system (48 WHaSH zones) was applied to the operational model zone system (97 Paramics zones). However, in order to represent the increase of the demand on the proper Paramics zones, the global growth on the WHaSH zone was distributed based on the planning data when there were more than one Paramic zones related to the WHaSH zone. The planning data was located to the closest Paramics zone based on the coordinates provided by HCC, and it was considered that, for each WHaSH zone, the demand in the morning peak in origin may be distributed based on the number of dwellings, and the destination trips based on the number of employment. The evening peak distribution considers the same approach, but considering dwellings as destination and employment as origin. As commented before, Saturday follows the same approach than the evening, as the traffic patterns on Saturday should be more similar to the evening patterns.

1.1.18 Some mitigation measures were identified in order to improve the network performance during the preliminary assignments of the forecast demand. Some signal data needed to be adjusted to the forecast demand, but some additional issues were identified. Mitigation measures were applied to release the highest possible demand, and then to evaluate the worst case scenario. This mitigation measures were based mainly on traffic signal adjustments or implementation of new signalised junctions. No layout modification was considered at this stage in Stevenage.

1.1.19 The **assignments for 2021 and 2031 model scenarios** show a significant level of congestion and network stress. The implementation of the A1(M) 'all lane running' scheme and the GSK updated hamburger scheme improve the traffic conditions at some locations but the Stevenage highway network as a whole experience significant level of congestion.

1.1.20 The A1(M) 'all lane running' scheme improves the current congestion on the A1(M) main carriageway, particularly for southbound in the morning peak. However the improved capacity for the A1(M), together with the forecast year developments, increases the demand and level of congestion for the A1(M) Junction 8 roundabout.

1.1.21 The GSK updated hamburger scheme operates reasonably well for the morning peak with only temporary queues on the Gunnels Wood Road southbound approach arm. However, the level of demand egressing the GSK site in the evening peak is significant that the modelling shows that the current proposed layout cannot accommodate with the egressing demand and there is a high level of unreleased demand within the GSK site.

1.1.22 For the northern area of Stevenage, there is high level of congestion on North Road and the Lister Hospital area, particularly in the morning peak. The mini roundabouts on North Road – Coreys Mill Lane are also a key network constraint, which causes significant congestion and unreleased demand from High Street for the 2031 model scenarios.

1.1.23 Hitchin Road is currently operating under stress as it is the mainly access for the trips to/from the northern area of Stevenage. The demand growth for the forecast year is predicted to exacerbate the situation and causes further congestion and queuing which the modelling shows will eventually block back to upstream junction and other parts of the network.

1.1.24 The level of demand within the town centre increases significantly due to the new developments and also to the new multi storey car park planned for 2031. The demand increase, together with the consolidation of the car par proposed at this stage, intensifies the congestion issues for key junctions within the town centre, particularly the Lytton Way – Fairlands Way junction which provides access to the multi storey car park. The modelling shows that this roundabout experiences long queues which eventually block back to the other parts of the network.

1.1.25 To summarise, the 2021 model scenarios generally operate reasonably well for the morning peak. However, for the evening peak, significant congestion issues are modelled at A1(M) Junction 8, Hitchin road, and in the town centre. There is also unreleased demand for the GSK sites and the industrial areas on Gunnels Wood Road. For the Saturday peak, the town centre is significantly congested but the other parts of the Stevenage highway network operates reasonably well.

1.1.26 For 2031 model scenarios, the modelling shows that the assumed network cannot accommodate the 2031 predicted demand and significant congested and queuing which eventually lead to gridlock situation was simulated.

2 Introduction

2 Introduction

2.1 Background

2.1.1 Hertfordshire County Council (HCC) and Stevenage Borough Council (SBC) seek to understand the implications of the proposed public realm improvement in the area of Stevenage Railway Station and how it could affect the connectivity to the town centre. SBC has aspirations to redevelop Stevenage town centre, especially in the area of Lytton Way, and together with HCC, would like to understand the traffic implications and impacts of the different town centre options included in the Stevenage Local Plan.

2.1.2 Additionally, Highways England (HE) also seeks to understand the possible effects that the proposed actions in Stevenage town centre may have on the A1(M), specifically between Junction 7 and 8.

2.1.3 In order to evaluate the impacts of the proposals in Stevenage, AECOM has developed a S-Paramics microsimulation traffic model for Stevenage, which coupled with a strategic model, will be a useful tool to evaluate the impacts of the different proposals included in the Local Plan.

2.1.4 The Local Model Validation Report (LMVR)[1] details the development of the Stevenage S-Paramics base year model (referred to as the Stevenage model hereafter). This is the Forecasting Report which documents forecasting process and presents the initial results of the evaluation of different Local Plan options.

2.2 Purpose and scope of the forecast scenarios

2.2.1 This Forecasting Report describes the approach followed for the evaluation of Local Plan options, considering not only the new developments, but also the expected infrastructure or land use changes that may affect the network performance within Stevenage.

2.2.2 Two future years have been considered for this study: **2021** and **2031**.

2.2.3 The first one considers the opening year for one committed scheme that will have significant impact on the network conditions around Stevenage: the Smart motorway – All lane running between junction 6 and 8 on the A1(M). Although the model does not cover junction 6, this scheme will improve notably the A1(M) conditions between junction 7 and 8, mainly during the morning peak. The second modelled year, 2031considers SBC expectations about new developments in the town included on the Local Plan, together with the additional developments planned in the surrounding areas.

2.2.4 An analysis of the future demand and the planned infrastructure may provide information on the possible future traffic issues, network constraints and bottlenecks, excessive concentration of demand and / or the suitability of urban transport options. This technical note provides the initial modelling results and discusses the potential future issues, based on the new developments in Stevenage.

2.3 Structure of the report

2.3.1 Following this introductory chapter, the remainder of the Forecasting Report is structured as follows:

3)Infrastructure assumptions;

4)Planning Data assumptions;

5)Land use changes assumptions;

6)Matrix development process;

7)2031 Forecast Scenarios – Key Findings;

8)2021 Forecast Scenarios – Key Findings;

9)Journey time analysis for the town centre ; and

10)Summary and Conclusions.

[1] *Stevenage Town Centre Model - S-Paramics Model - Local Model Validation Report*, issued in May 2015

3 Infrastructure assumptions

3 Infrastructure assumptions

3.1 Scenario definition

3.1.1 It was agreed with HCC[2] to identify different network scenarios depending on the inclusion of different schemes on the network. These schemes are expected to have different opening years and serve different purposes.

3.1.2 Reference case scenarios were defined, which consider committed schemes that are expected to be in place by 2021 and 2031. The reference case scenario will be referred to as Do Minimum scenario henceforth. Schemes that are currently considered as proposals (i.e. not committed) have not been included in the Do Minimum scenario, but to evaluate these schemes, Do Something scenarios have been created which include the committed as well as the proposed schemes.

3.1.3 This section specifies the schemes that have been included in the different forecast year model scenarios. Further detail of the schemes is provided in this section.

3.1.4 As agreed with HCC, the schemes considered for this study include:
- Gunnels Wood Road – A602 Broadhall Way junction, named as GSK updated hamburger scheme
- A1(M) 'all lane running' scheme between Junction 6 and 8, named as A1(M) Smart motorway
- Stevenage town centre bus station relocation;
- Lytton Way Road closure; and
- Car park consolidation.

3.1.5 The forecast year model scenarios and the details for each scheme were discussed and agreed with HCC. **Table 3.1** provides a list of the schemes for each forecast year model scenarios. It is acknowledged that some of the assumptions made for the schemes have changed during the development of this study, and the definition of the schemes was provisional.

Table 3.1: Scenario definition

	Scenario			
Scheme	**2021 Do Minimum**	**2021 Do Something**	**2031 Do Minimum**	**2031 Do Something**
GSK updated hamburger scheme	✓	✓	✓	✓
A1(M) Smart motorway	✓	✓	✓	✓
Lytton Way Closure	No changes. Current layout.	No changes. Current layout.	No changes. Current layout.	✓
Bus stop relocation	No changes. Current location.	Bus stops moved to Southgate and Danestrete (Option 7)	No changes. Current layout.	Bus stops moved to Lytton Way
Multi storey car park	No changes. Current car park configuration.	No changes. Current car park configuration.	No changes. Current car park configuration.	Car park consolidation

[2] As per reference log *Stevenage_Ref_Cases_Log HCC comments v2 27 April 2016*

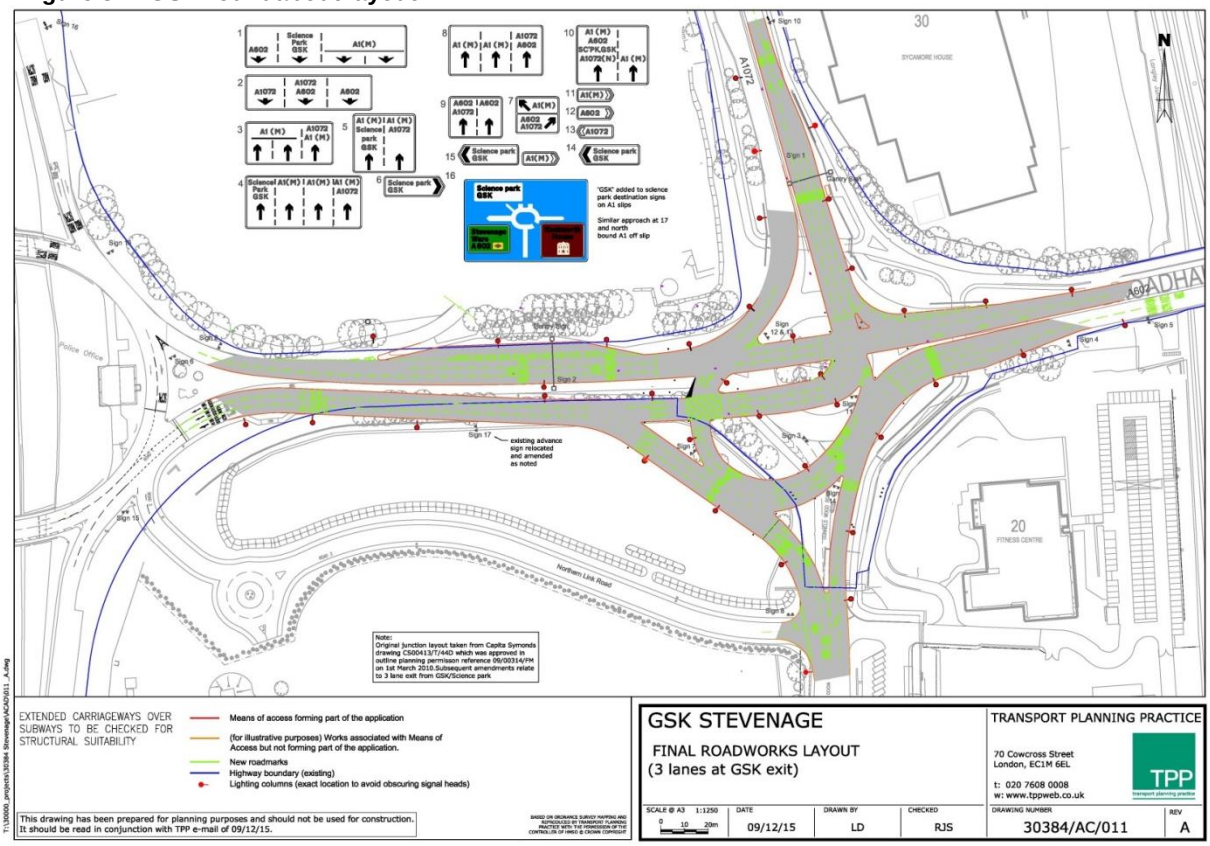
3.2 Do Minimum schemes

3.2.1 The Do Minimum schemes are considered as committed schemes and have been included for the Do Minimum and Do Something scenarios.

Gunnels Wood Road – A602 Broadhall Way roundabout (GSK updated hamburger scheme)

3.2.2 AECOM undertook a specific analysis of the Gunnels Wood Road – A602 Broadhall Way junction using the A1(M) Junction 7 S-Paramics model prior to the development of the Stevenage model. The A1(M) Junction 7 S-Paramics model was used to test several design options for the Gunnels Wood Road – A602 Broadhall Way junction and the updated hamburger scheme is considered to be the preferred option at the time of this study. **Figure 3.1** shows the layout used for the Stevenage model, which includes six traffic lights and three lanes for the exit from GSK, and the signal timing settings were taken from A1(M) Junction 7 S-Paramics model.

Figure 3.1: GSK roundabout layout



A1(M) Smart motorway - 'all lane running' scheme

3.2.3 Based on the latest information from Highways England, the A1(M) 'all lane running' scheme between Junction 6 and 8 is considered to be a committed scheme and is expected to be in place by 2021. For the Stevenage model, it was assumed the implementation of 'all lane running' applies to the A1(M) main carriageway between the junctions as well as through the A1(M) junctions. This scheme will widen the current two-lane main carriageway to three-lane by allowing hard shoulder running, including through Junction 7 and 8 assuming shorter slips. This scheme increases the capacity on the A1(M) significantly and is expected to improve the current congestion issues, particularly during the morning peak. **Figure 3.2** shows the current layout of the A1(M) between Junction 7 an 8 northbound, and it is expected that the hard shoulder lane will be converted into an additional traffic lane for the A1(M).

Figure 3.2: Hard shoulder running on the A1(M) between Junction 7 and 8 (source: googlemaps)

3.3 Do Something schemes

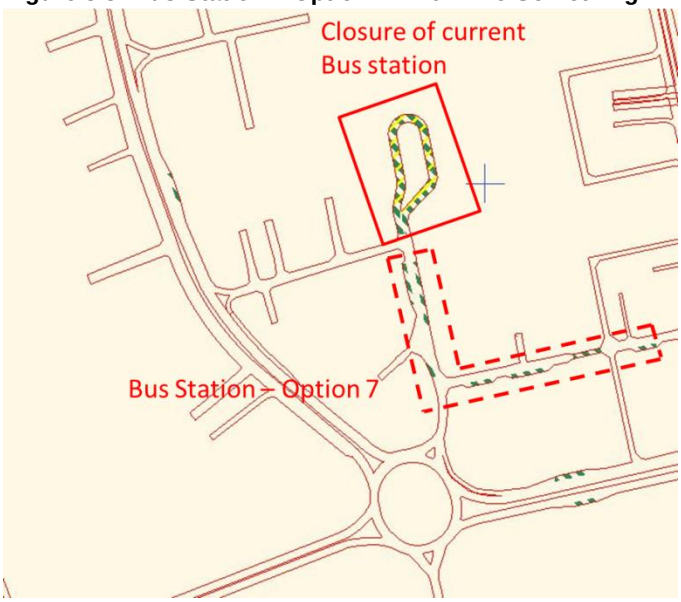
2021 Do Something - Bus station relocation

3.3.1 It is proposed that the current Stevenage town centre bus station to be relocated and the current bus station site to be released for regeneration and redevelopment. The new location and option for the bus station is currently under discussion, and two different options were considered for the 2021 and 2031 Do Something scenarios.

3.3.2 As indicated in **Table 3.1**, the 2021 Do Something scenario considers the relocation of the bus stops from their current location to Southgate and Danestrete. The final layout is currently under discussion, but it was agreed with HCC that for the Stevenage model, Option 7 should be adopted as the most likely option.

3.3.3 For **Figure 3.3**, the green hatchings show the location of the bus stops assumed for the 2021 Do Something scenario. As the bus station relocation is an ongoing project, detailed information on bus routes and stops following the relocation is not available at the time of this study and assumptions were made to re-route the existing bus routes to the new stops for the Stevenage model.

Figure 3.3: Bus Station – Option 7 – 2021 Do Something

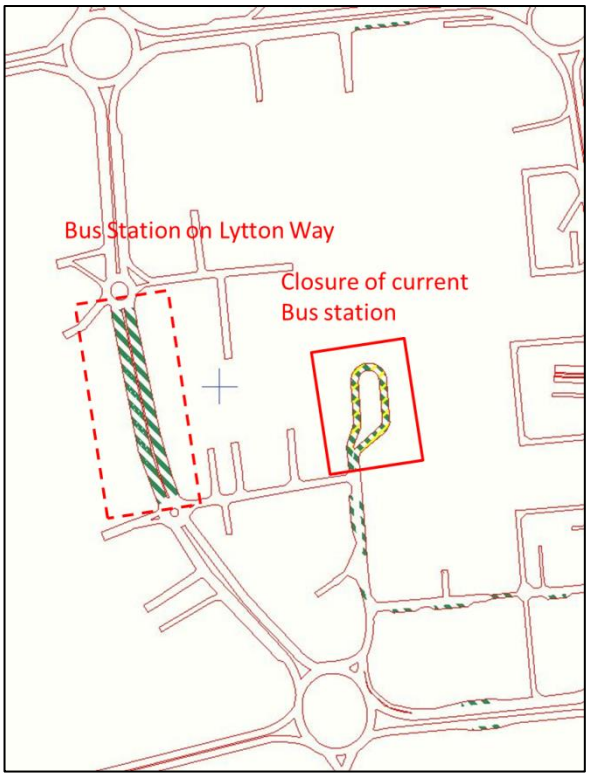


2031 Do Something - Lytton Way closure and bus station relocation

3.3.4 This scheme proposes designating the middle section of Lytton Way as 'bus only' and relocating the current bus station to this section of Lytton Way. The northern and southern section of Lytton Way is kept opened for private vehicles in order to provide access to the car parks and shopping areas. Two roundabouts are proposed at the edges of the 'bus only' section of Lytton Way to maintain full accessibility to the car parks.

3.3.5 The design of the roundabouts that give access to the 'bus only' section of Lytton Way is shown in **Figure 3.4**. It is important to highlight that the design adopted for the Stevenage model is provisional and this is an initial evaluation only.

Figure 3.4: Lytton Way Closure and bus stops relocation – 2031 Do Something



2031- Do Something – Car park consolidation

3.3.6 SBC planned to include a multi storey car park on Lytton Way on the Station Car Park (north). This proposed car park will replace the surface car park that currently exists on the western side of Lytton Way between the railway station and Lytton Way – Fairlands Way roundabout. The main access for the proposed multi storey car park was assumed (for the purposes of modelling) to be located on Lytton Way, opposite Swingate, as showed in **Figure 3.4**.

3.3.7 The proposed multi storey car park is intended to replace a number of surface car parks in the town centre which could be released for redevelopment. The car parking demand within the town centre is expected to be relocated to the multi storey car park. The approach followed to relocate this demand is further discussed in **Section 5.3 Car Park Consolidation.**

3.3.8 This scheme is included alongside the Lytton Way Closure, as such the access to the proposed multi storey car park will be determined by the definitive layout of Lytton Way. As an initial test, the access to the multi storey car park is provided by the proposed roundabout to the north of 'bus only' section of Lytton Way.

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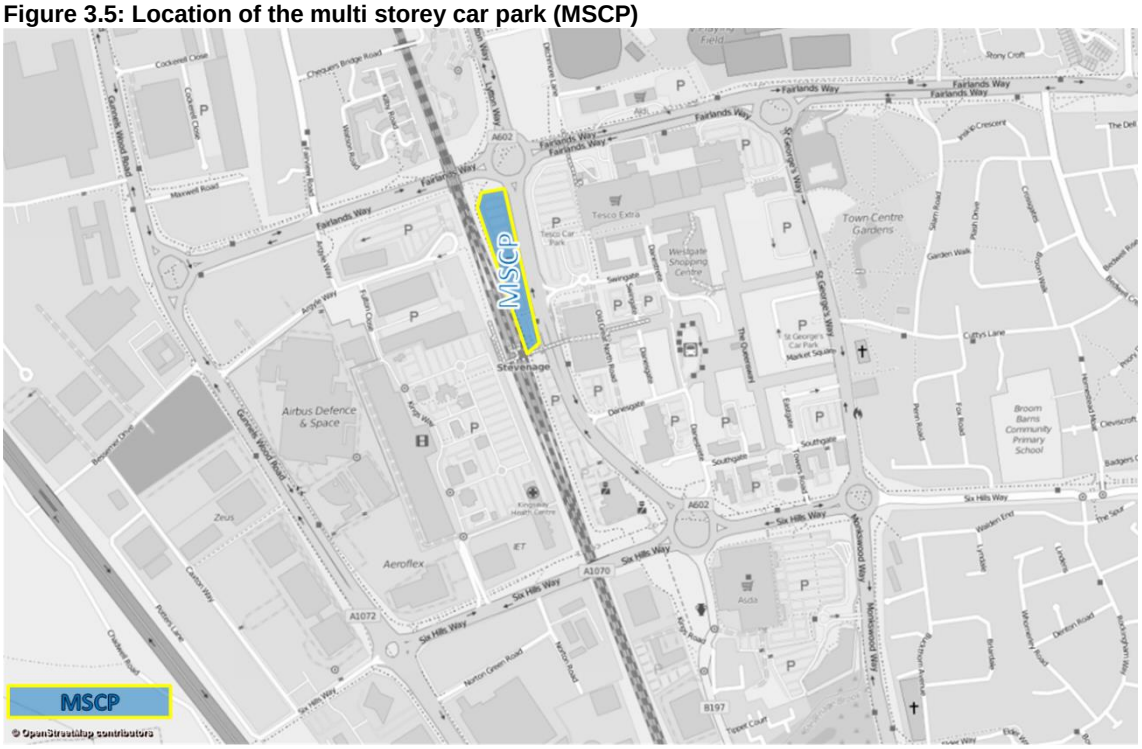
Figure 3.5: Location of the multi storey car park (MSCP)



4 Planning Data assumptions

4 Planning Data assumptions

4.1 Introduction

4.1.1 This section contains the relevant information about the planning data and how it has been considered for the different model scenarios. The planning data was agreed with HCC and SBC on the 27th of April 2016 and considers several sources:

- WHaSH Scenario C data: committed developments already included in WHaSH Scenario C model.
- COMET data: reviewed and accepted by HCC, and classified as SMART data, representing sites with planning permission.
- SBC planning data (Local Plan): housing and employment confirmed as per e-mail received on the 28th of April 2016.
- East Stevenage and North Stevenage sites (EHDC and NHDC) confirmed as per e-mail received on the 28th of April 2016.
- Welwyn Hatfield planning data: prepared for COMET including SMART data and Local Plan data.

4.2 Planning data

4.2.1 The following bullet points set out the distribution of planning data for 2021 and 2031 as agreed with HCC:

- 2021:
    - Housing: SMART planning data (committed developments as agreed in January 2016)
      2021 Local Plan planning data (as confirmed by SBC in April 2016)
    - Jobs: SMART planning data (committed developments as agreed in January 2016)
      Additional job data in GSK (50,000 sqm), Stevenage central (5,000 sqm) and Land west of Junction 8 (12,500 sqm), as confirmed by SBC in April 2016)
- 2031: 2021 developments and:
    - Housing: Stevenage Local Plan planning data (as agreed in April 2016)
      North of Stevenage + Roundwood + Mendip Way and East Stevenage (as agreed in April 2016)
    - Jobs: Stevenage Local Plan planning data (as agreed in April 2016)
- Committed developments for Welwyn Hatfield in both 2021 and 2031 as applied in WHaSH Scenario C, and Local Plan planning data as considered in the latest information at that time. Welwyn Hatfield numbers considered for the Local Plan are not the latest ones as the local plan process is still evolving. Local plan numbers differ from the WHaSH tests done for Welwyn Htfield in 2016 (high OAN, scenario 1 & 2). Welwyn Hatfield SMART and Local plan data for 2021 and 2031 come from the data provided for COMET (Dwellings from *121015 Log - WEL HAT COMET_Housing_Short GB 15JAN16 v6.xlsx* and Employment from *WelHat_COMET_EMPLOYMENT_01April2015 v2.xlsx*).
- North Herts planning data considered in WHaSH Scenario C was included for 2021 and 2031, and increased in 2031 with the new development.

Table 4.1 and

4.2.2 **Table 4.2** detail the planning data considered for each forecast year and location, in number of dwellings and in number of square meters (sqm) of employment. **Appendix A: Planning data by site** provides further breakdown of the planning data by each forecast year and development site.

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Table 4.1: Planning data - Dwellings

Area	Development Type	Planning data	Location	Dwellings by 2021	Dwellings by 2031
Stevenage	Dwellings	SMART	Town Centre	139	139
			High Street	71	71
			Hitchin Road	95	95
			North Road	1	1
			Other	1,484	1,484
			SMART Total	**1,790**	**1,790**
		Committed	Town Centre	508	508
			Committed Total	**508**	**508**
		Local Plan	Town Centre	0	1,699
			Other	3,138	3,604
			Local Plan Total	**0**	**5,303**
	Dwellings in Stevenage			**5,436**	**7,601**
EHDC	Dwellings		EHDC	0	600
NHDC	Dwellings		NHDC	0	1,857
	Dwellings in EHDC and NHDC			**0**	**2,457**
Welwyn Hatfield	Dwellings	SMART		1,231	1,231
		Local Plan		2,849	11,358
	Dwellings in Welwyn Hatfield			**4,080**	**12,589**

Table 4.2: Planning data - Employment

Area	Development Type	Planning data	Description	Employment by 2021 sqm	Employment by 2031 sqm
Stevenage	Employment	SMART	GSK	53,235	53,235
			Town Centre	514	514
			High Street	225	225
			Hitchin Road	4,928	4,928
			North Road	1,709	1,709
			Other	32,959	32,959
		SMART Total		**93,570**	**93,570**
		Local Plan	GSK	50,000	50,000
			Town Centre	5,000	35,000
			North Road	0	20,000
			Other	12,500	38,500
		Local Plan Total		**67,500**	**143,500**
		Losses	Town Centre	0	-1,209
			High Street	0	-205
			Other	0	-39,116
		Losses Total		**0**	**-40,530**
	Employment in Stevenage			**161,070**	**196,540**
Welwyn Hatfield	Employment	SMART		32,497	32,497
		Local Plan		0	0[3]
		Losses		0	-53,817
	Employment in Welwyn Hatfield			**32,497**	**-21,320**

[3] *Latest information for Welwyn Hatfield Local Plan considers 12,000 new jobs by 2031 which equates to a floor area of 187,598 sqm for B classes plus additional retail, which were not considered in this exercise.*

4.2.3 For Stevenage town centre, the Local Plan considers an increase of 1,699 dwellings by 2031. This figure was provided as an aggregated figure without specific development location information. During the forecasting process for the Stevenage model, AECOM was informed by SBC/HCC that this figure has been updated, and the latest information splits the residential growth into several areas of the town centre. The latest figures released by SBC/HCC in June 2016 are summarised below:

- consider 2,000 dwellings in the town centre instead of 1,699.
- include a new application, Icon House, that was not originally considered.
- update the committed dwellings in comparison with what was originally in WHaSH Scenario C. From 508 to 950 dwellings.

4.2.4 As the updated residential growth figure was made available to AECOM after the WHaSH model runs have been undertaken, it was agreed with HCC that the planning data would not be updated for this study, but it might be adjusted in future applications.

4.2.5 However, in order to get a more accurate representation of the distribution of residential growth across the town centre, the latest distribution of dwellings, as released in June 2016, was considered. This process is detailed in **Section 6** of this report, and **Figure 4.1** and **Table 4.3** summarise the distribution of committed and Local Plan growth across the town centre development sites.

Figure 4.1: Planning data – Town centre dwellings locations

Table 4.3: Town centre dwellings - Distribution

Site Id	Site Name	Residential units (rounded)	Proportions
A	The Icon Building	450	-
B	Brickdale House parts I and II	200	21%
C	Park Place and Marshgate	100	5%
D	Southgate House	80	8%
E	Southgate [HCC, SBC and NHS land]	200	10%
F	Six Hills House	140	15%
G	Matalan	530	56%
H	Central Core	200	10%
I	Centre West [aka Leisure Park]	1500	75%
MSCP	Lytton Way, Station North	Multi-storey car park	
S	Southgate	Primary school	
	Total	**3400**	
	Committed (B+D+F+G)	950	**100%**
	New developments (C+E+H+I)	2000	**100%**
	Not considered	450	

4.2.6 Following the receipt of the planning data, a preliminary analysis of the 2031 data was undertaken and the following bullet points summarise the predicted impacts of the growth on the mobility patterns in and around Stevenage:

Dwellings

- There is a significant increment of dwellings in the town centre, being higher than 2,200 dwellings when the committed developments are included. This will increase the pressure on the highway network in and around the town centre.
- There is a significant amount of new dwellings planned in the East and North of Stevenage, almost 2,500 dwellings, which will increase the pressure on the northern and eastern access to Stevenage.
- The Local Plan in Welwyn Hatfield considers a significant increase of dwellings, but this growth is not expected to have a significant impact on the highway network of Stevenage, except for the A1(M) and main accesses to areas with high level of new employment within Stevenage.

Employment

- There is already a significant committed employment growth considered for the GSK site, but the Local Plan is doubling this to more than 160,000 sqm by 2021 and almost 200,000 sqm by 2031. This is going to have a significant impact on the highway network, particularly towards the GSK site in the morning peak, and from GSK site in the evening peak.
- There is also a significant increase of employment in the town centre, which will increase the pressure on the highway network in and around the town centre.
- There are some losses, about 40,000 sqm of employment reduction in Stevenage. However the net employment growth for Stevenage is still significant.

4.2.7 The location of the employment developments will have an important effect on the network performance, as it will concentrate traffic accessing these locations in the morning peak and egressing in the evening peak.

4.3 Location of developments

4.3.1 The planning data provided by HCC also shows location of the developments which have been plotted based on the Easting and Northing coordinates provided.

4.3.2 **Figure 4.2** to **Figure 4.5** represent the location and size of the developments for each forecast year. These figures clearly show the concentration of new dwellings in the town centre, and the concentration of new employment in the south and east of Stevenage for 2021 and 2031.

Capabilities on project:
Transportation

Figure 4.2: Planning data – Employment developments (2021)

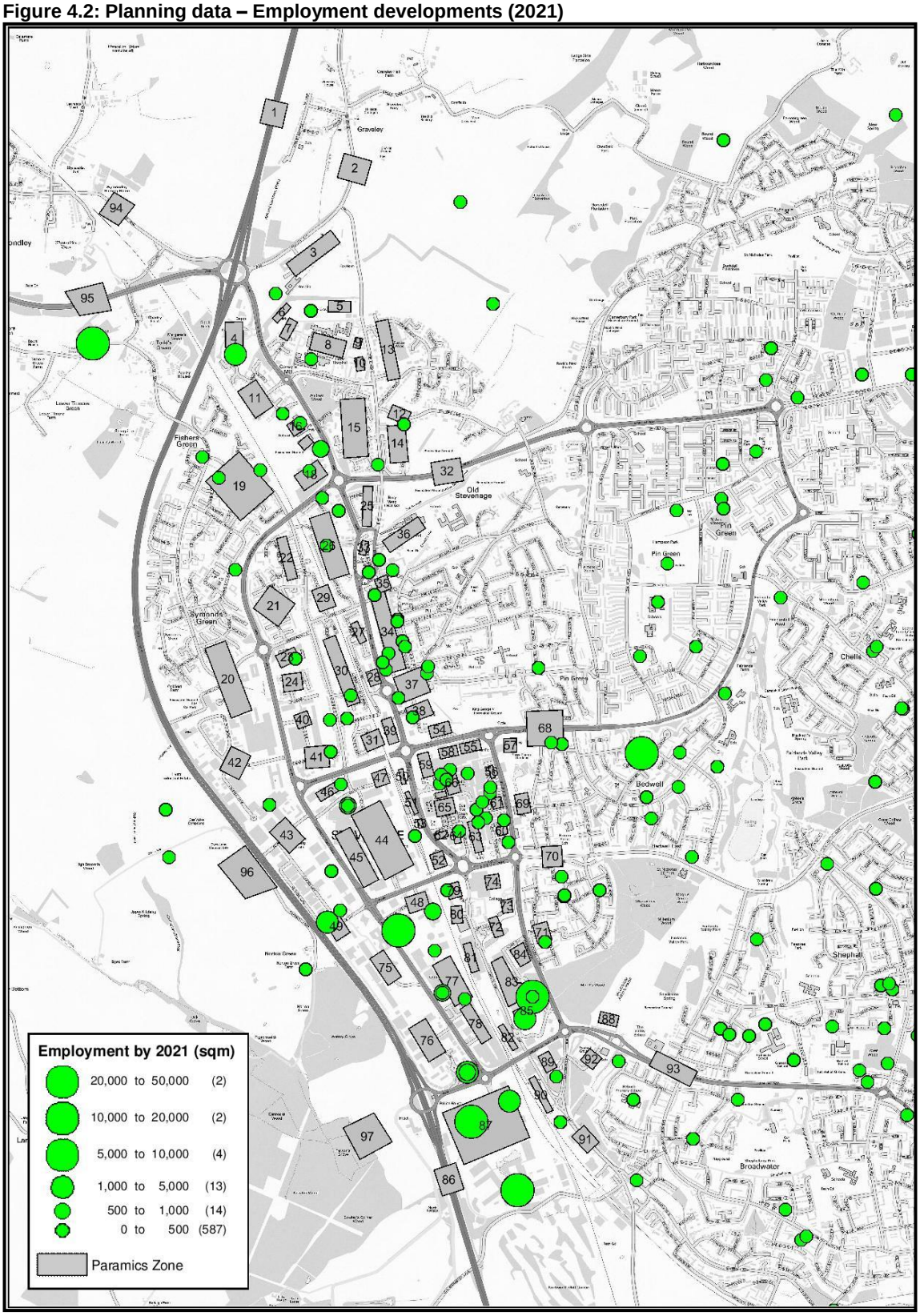
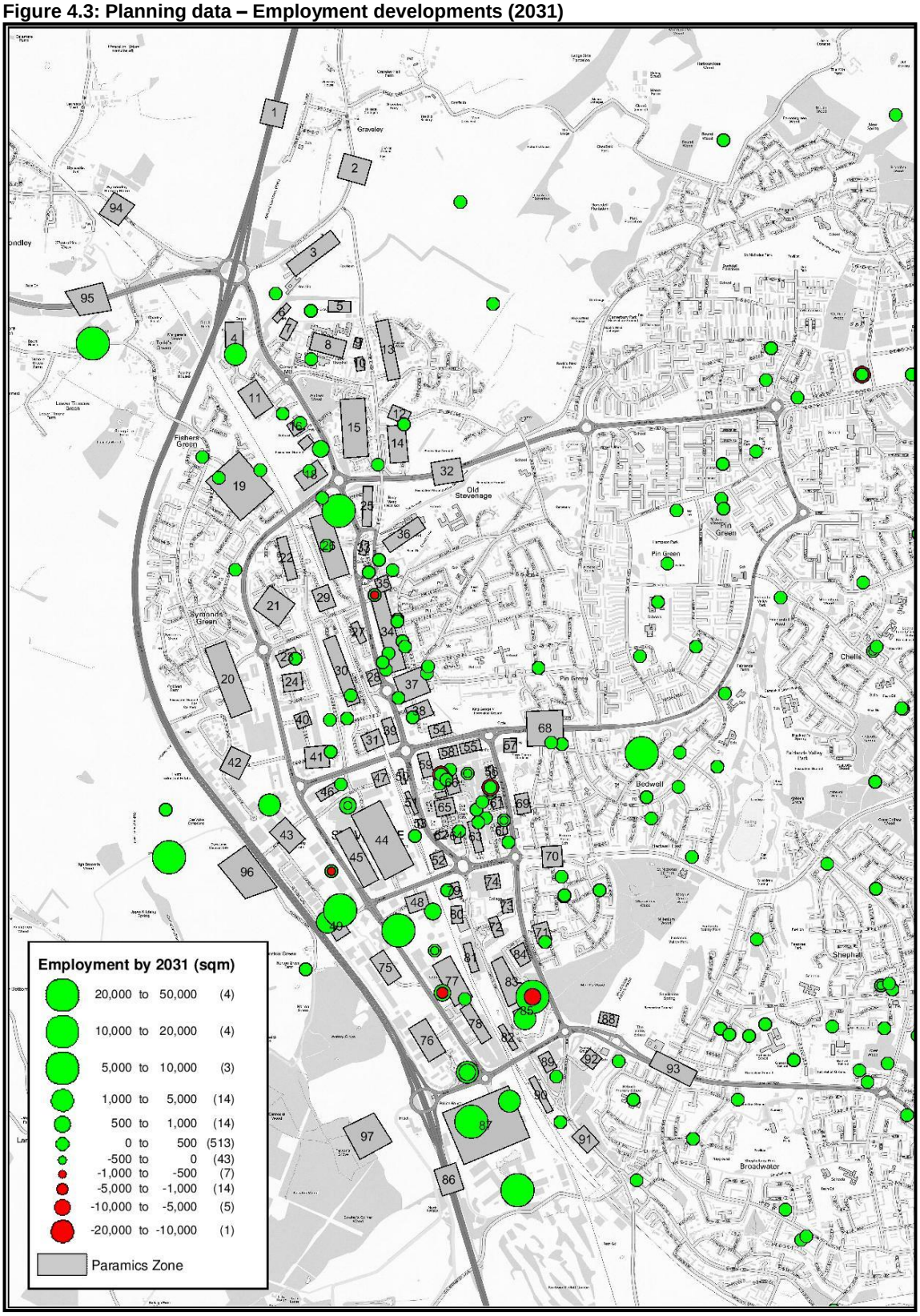
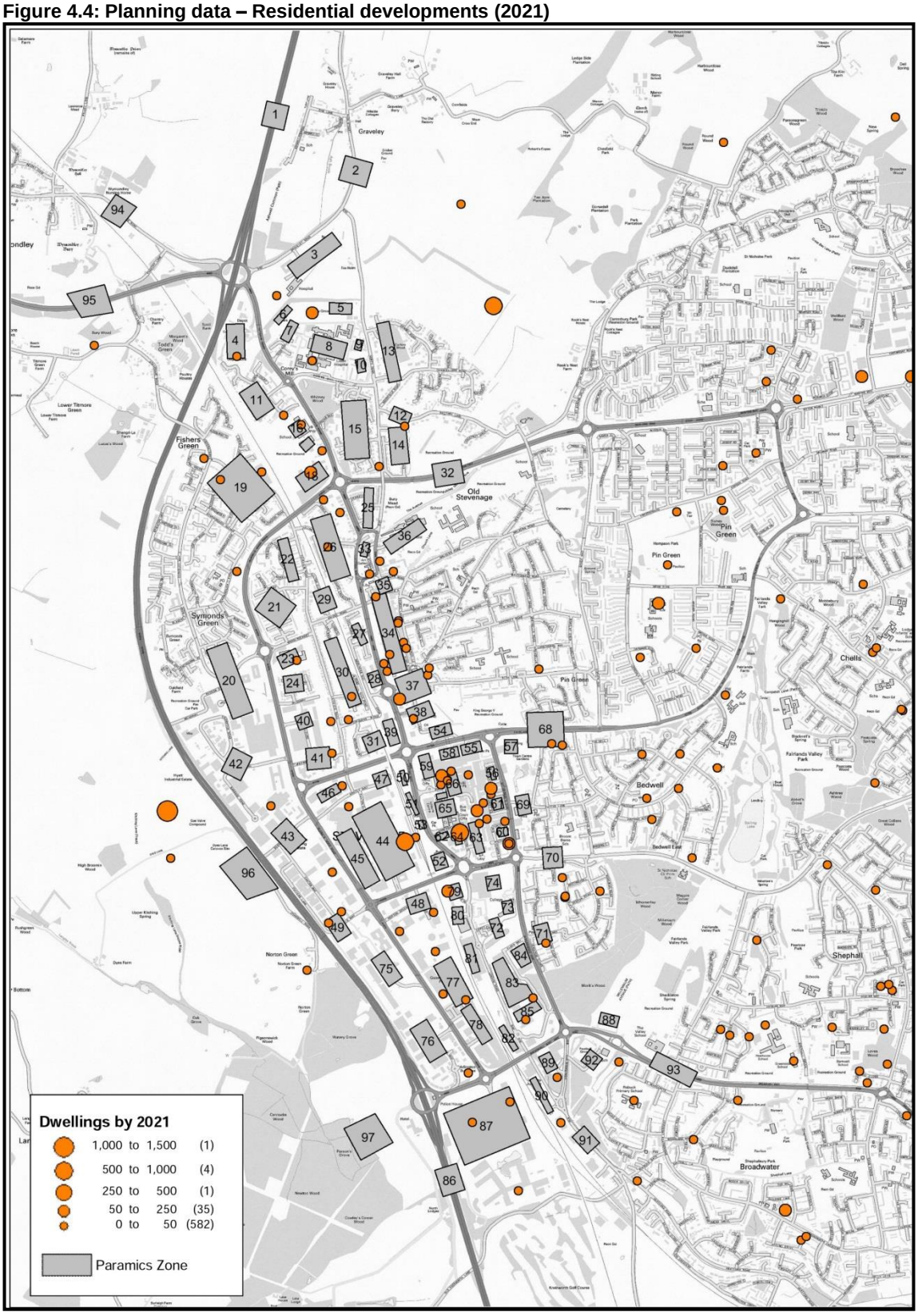


Figure 4.3: Planning data – Employment developments (2031)



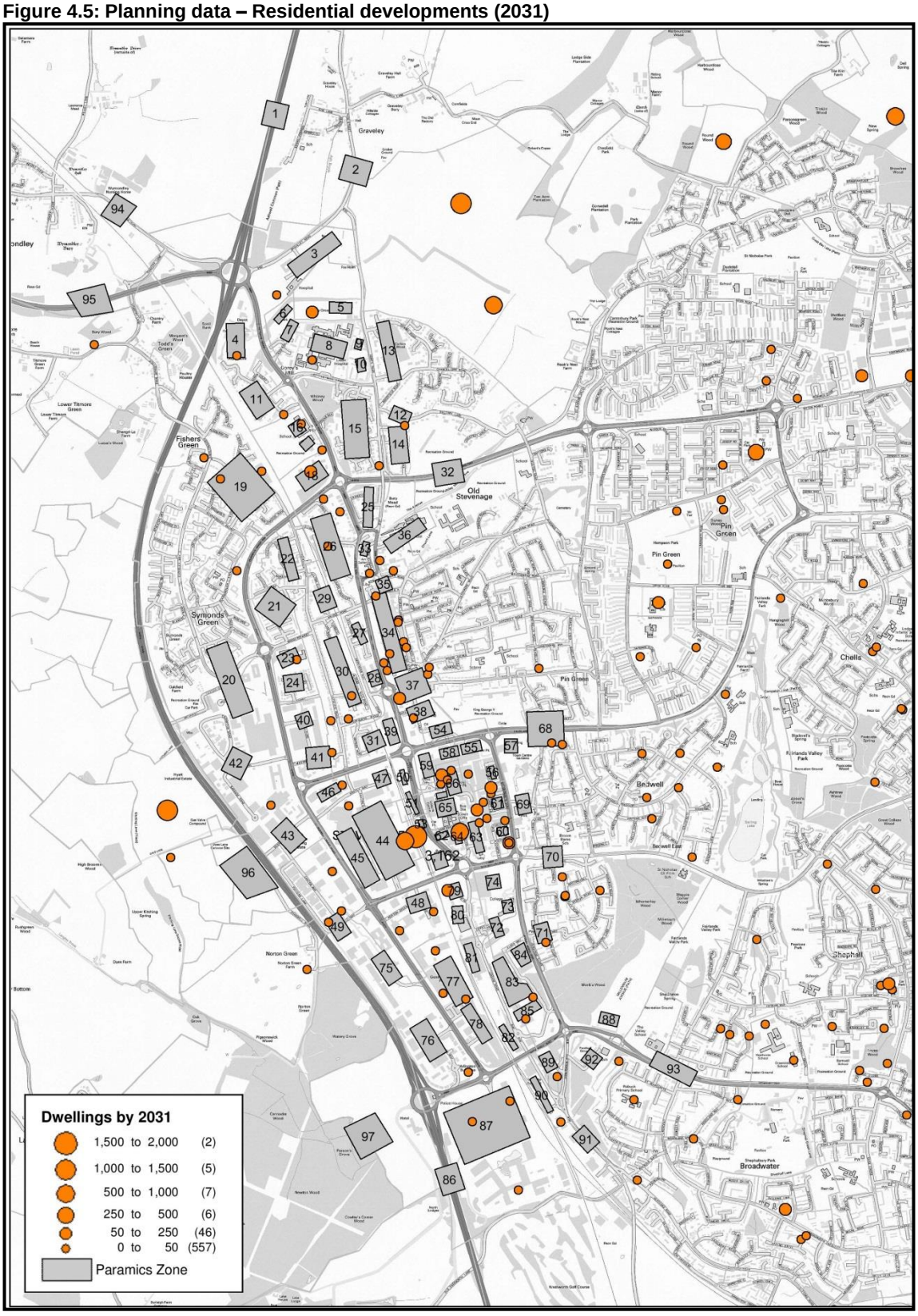
Capabilities on project:
Transportation

Figure 4.4: Planning data – Residential developments (2021)



Capabilities on project:
Transportation

Figure 4.5: Planning data – Residential developments (2031)



5 Land use changes assumptions

5 Land use changes assumptions

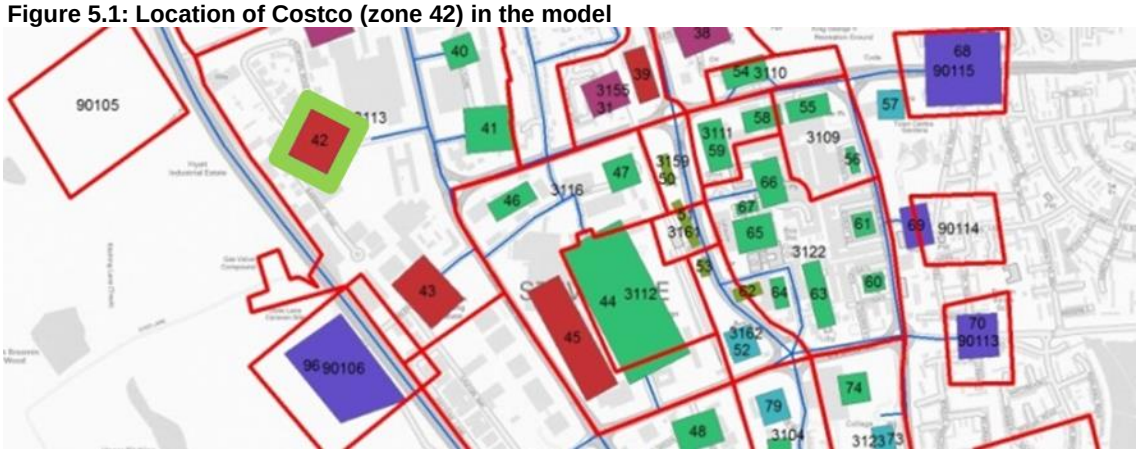
5.1 Introduction

5.1.1 There are two main land use changes within Stevenage town centre that may have significant impact on the network performance in the forecast year model scenarios:
- Conversion of John Lewis distribution centre to Costco; and
- Car park consolidation in the town centre.

5.2 Conversion of John Lewis distribution centre to Costco

5.2.1 A new Costco wholesale store is planned to be built where there is currently a John Lewis Warehouse. It is believed that the access for the store will be via Cavendish road, therefore the demand have been assigned to zone 42 in the model. **Figure 5.1** shows the location of zone 42 (west of Stevenage). The new demand associated to this business has been included for all the scenarios following discussions with HCC.

Figure 5.1: Location of Costco (zone 42) in the model



5.2.2 The suggested impacted of the conversion of John Lewis distribution centre to Costco was provided by HCC, and set as follows:
- Net reduction in the morning peak hour: 119 less arrivals and 45 less departures.
- Net increase in the evening peak hour: 106 more arrivals and 177 less departures.
- Net increase in the Saturday peak hour: 391 more arrivals and 401 less departures.

5.2.3 The distribution of trips associated with the Costco store was also provided, and was included in the model. **Appendix B: Costco demand distribution** shows the trip distribution.

5.3 Car Park Consolidation

5.3.1 SBC's Local Plan encourages the redesign of the town centre by closing a number of the surface car parks and building a new multi storey car park adjacent to the railway station as well as new developments within the town centre area. The new developments, a primary school, offices and residential units, are planned to be built in the locations of the current surface car parks.

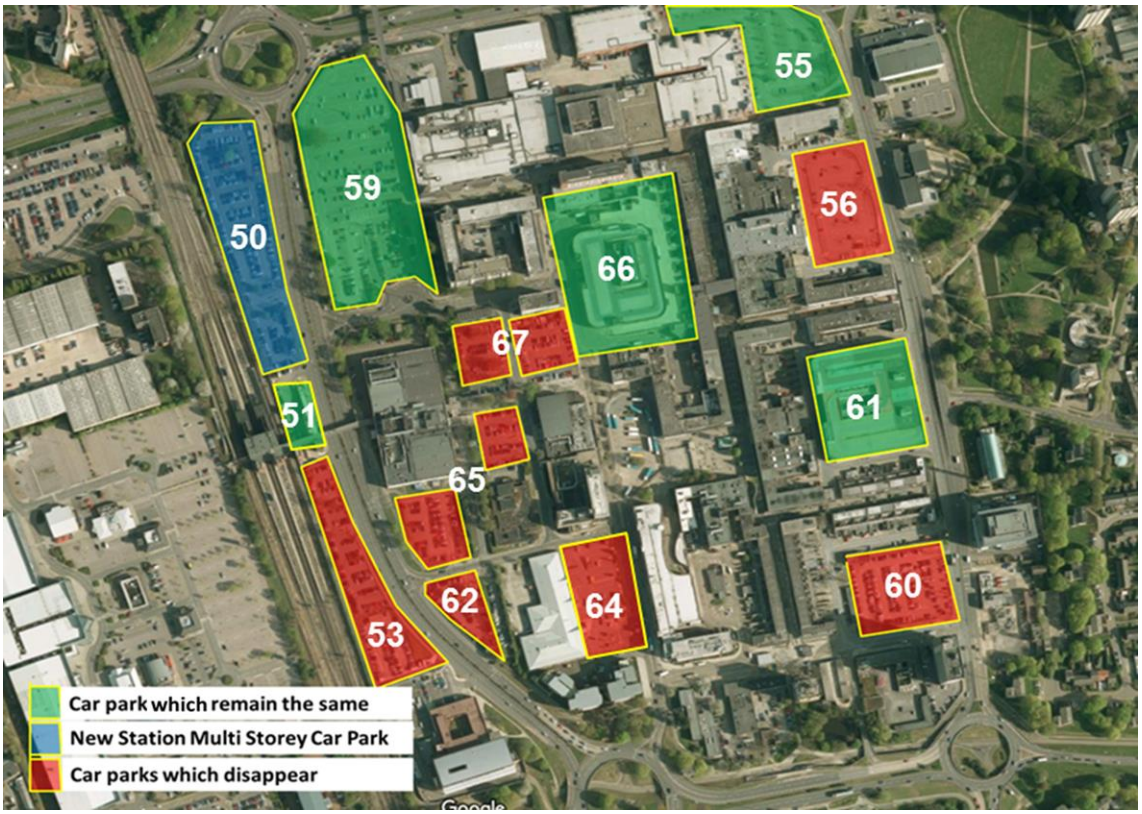
5.3.2 The Urban Transport Plan for Stevenage developed by AECOM in 2009 already considered the conversion of the Station Car Park (north) in to a 770 space multi storey car park.

5.3.3 The car park consolidation in the Stevenage town centre involves relocation of demand from the surface car parks to the multi storey car park and, to a lesser extent, to other existing car parks. It was agreed with HCC that the demand located on the zones that are converted into new developments needs to be redistributed to other car parks within the area, with the multi storey car park being the main receptor of this demand.

5.3.4 The multi storey car park is expected to serve the commuter trips to the railway station as well as the trips for the residential areas within the town centre which may stay overnight. Based on the information from SBC, **Figure 5.2**

shows the car parks in zones 55, 59, 61 and 66 which will remain the same; and car parks in zones 53, 56, 60, 62, 63, 64, 65 and 67 will be converted into new developments. Zone 60 and 56 will keep some car parking spaces for the residents of Southgate House but majority of the existing car park demand to these zones will need to be relocated. Zone 51 is kept as an access to the train station with a very low number of parking spaces.

Figure 5.2: Consolidation car park assumptions



5.3.5 **Table 5.1** shows the redistribution assumption for each car park that will be converted to developments. A brief description of the planned development is also included for reference.

Table 5.1: Demand distribution – Car park consolidation

Zone name and number	Distribution	
Southgate -Primary school Zone 60	Zone 60	10%
	MSCP - Zone 50	65%
	Zone 61	25%
Park Place and Marshgate – Zone 56	Zone 56	15%
	MSCP - Zone 50	70%
	Zone 61	15%
Central Core - Zone 67	MSCP - Zone 50	60%
	Zone 66	40%
Central Core - Zone 65	MSCP - Zone 50	80%
	Zone 66	20%
Matalan - Zone 62	MSCP - Zone 50	100%
Matalan - Zone 64	MSCP - Zone 50	100%
Train station - Zone 51	MSCP - Zone 50	80%
	Zone 51	20%
Potential office development - Zone 53	MSCP - Zone 50	100%

5.3.6 It was agreed with HCC to include the car park consolidation in 2031 Do Something scenario only. **Table 5.2** shows the predicted demand for the multi storey car park.

5.3.7 The predicted demand level for the multi storey car park generally aligns with the number of parking spaces considered in the Urban Transport Plan for Stevenage (770 spaces). For weekdays, the predicted demand is in the region of the capacity of the car park; however, for Saturdays, the turnover of the car parking spaces might be higher (i.e. less commuting trips and more retail related trips) which could allow higher demand to the car park. The initial evaluation of the car park consolidation indicates that the multi storey car park capacity might be achieved by 2031 with the current assumptions.

Table 5.2: Demand distribution – Car park consolidation

BASE YEAR – Demand for the peak hour							
From	**Morning peak**	**Evening peak**	**Saturday**	**To**	**Morning peak**	**Evening peak**	**Saturday**
Multi-storey car park	136	300	207	**Multi-storey car park**	209	347	130
2031 – Do Something – Demand for the peak hour							
From	**Morning peak**	**Evening peak**	**Saturday**	**To**	**Morning peak**	**Evening peak**	**Saturday**
Multi-storey car park	700	787	705	**Multi-storey car park**	424	628	1038

6 Matrix development process

6 Matrix development process

6.1 Overview

6.1.1 This section explains how the demand matrices for the forecast year model scenarios were developed. The process of building the matrices is based on several data sources:
- Planning data and trips rates;
- WHaSH model; and
- Transformation process from strategic model (i.e. WHaSH) to operational model (i.e. Stevenage model).

6.1.2 The planning data, as agreed with HCC and SBC, was processed and included in the WHaSH model. It was agreed with HCC to use the WHaSH model as a source of forecast demand to underpin the forecast year Stevenage model for 2021 and 2031. The WHaSH model was cordoned to enable the demand growth to 2021 / 2031 for Stevenage to be calculated which was then applied to the demand of the base year Stevenage model.

6.1.3 As Saturday peak is not included for the WHaSH model, it was proposed to make the assumption that the WHaSH demand for the evening peak can be used as a proxy for Saturday demand growth over time and applied to the Saturday peak Stevenage model.

6.2 Trip rates

6.2.1 The WHaSH model was updated using the planning data for 2021 and 2031 as presented in **Section 4**. **Table 6.1** shows the WHaSH trips rates used to calculate the additional demand, which, as presented on previous WHaSH applications, are based on TRICS.

Table 6.1: Trip rates – TRICS assumptions included in WHaSH model

Sites to Assess	AM		PM		
Households	**Origin**	**Destination**	**Origin**	**Destination**	**Unit**
Residential	0.420	0.163	0.221	0.399	per dwelling
Student Halls	0.005	0.007	0.013	0.002	per dwelling
Employment					
Retail - A1					
Town Centre					
Town Centre Retail – Floor space	0.702	1.969	0.972	0.295	per 100sq metres
Town Centre Retail - Jobs	0.005	0.096	0.209	0.029	per job
Edge of Town					
Edge of Town Retail – Floor space	0.049	0.162	0.330	0.303	per 100sq metres
Edge of Town Retail - Jobs	0.026	0.086	0.174	0.160	per job
A3/4					
A Class – Floor space	0.000	0.000	1.388	2.065	per 100sq metres
A Class - Jobs	0.000	0.000	0.372	0.554	per job
B Class					
B1 Jobs	0.015	0.203	0.176	0.011	per job
B1 Floor space	0.086	1.153	0.994	0.060	per 100sq metres
B2 Jobs	0.04	0.49	0.402	0.025	per job
B2 Floor space	0.082	1.011	0.829	0.723	per 100sq metres
B8 Jobs	0.044	0.085	0.078	0.029	per job
B8 Floor space	0.051	0.099	0.091	0.033	per 100sq metres
Retirement					
Care homes - bedrooms	0.073	0.146	0.073	0.049	per bedrooms
Education					
D1 Primary Schools - pupils	0.142	0.213	0.042	0.029	Per pupils
D1 Secondary Schools - pupils	0.094	0.151	0.026	0.016	Per pupils

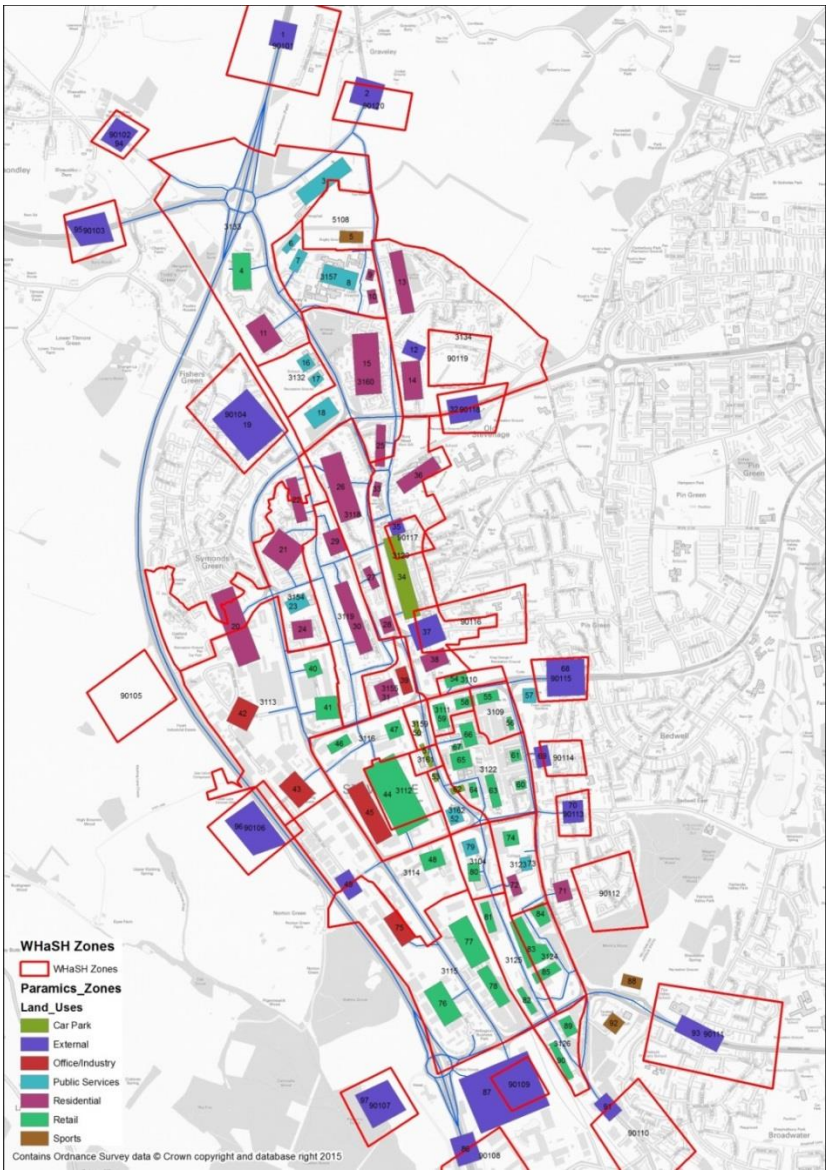
6.3 Strategic model matrices (WHaSH model)

6.3.1 Each development was assigned to a WHaSH model zone based on the coordinates provided by HCC. **Appendix A: Planning data by site** includes the WHaSH zone associated to each development. The planning data was aggregated by zone and the forecast year model demand matrices for the morning and evening peak for 2031 and 2021 were calculated based on the trips rates as shown in **Table 6.1**.

6.3.2 The WHaSH model network was updated based on the infrastructure assumptions presented in **Section 3**. The forecast year demand matrices were assigned for each time period, forecast year and network scenario, assuming no changes in travel behaviour.

6.3.3 A cordon model was then extracted from the WHaSH model and correspondence between the zones of the cordon model and the Stevenage model was set up, following the approach used for the Base Year. **Figure 6.1** shows the correspondence between the WHaSH cordon model zones and the Stevenage model zones.

Figure 6.1: WHaSH cordon model and Stevenage model zones



6.3.4 The cordon matrices were analysed and evaluated to extract the growth for each WHaSH zone. A comparison between the WHaSH base year and forecast year matrices was undertaken for each time period to obtain the demand growth base on the WHaSH zones. This was then applied and distributed onto model zones for the Stevenage model based on the zone correspondence.

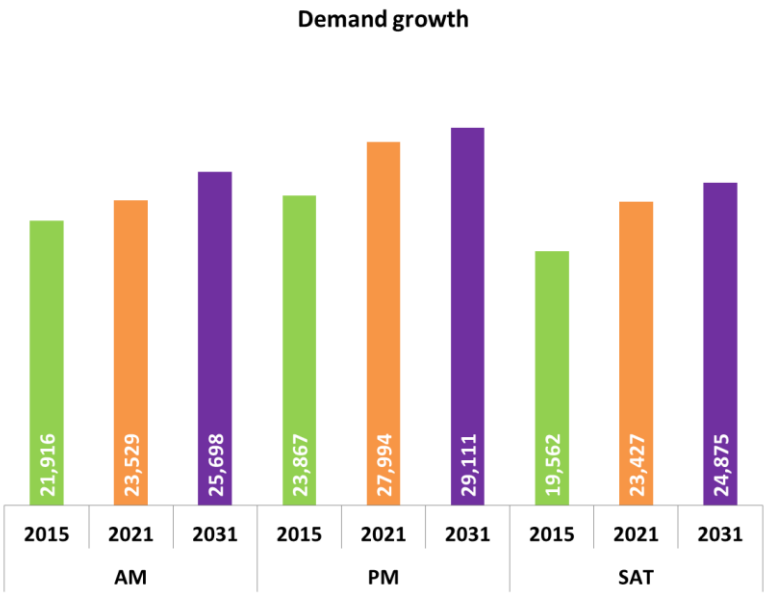
6.4 Operational model matrices (Stevenage model)

6.4.1 The first step when creating the model matrices for the forecast year Stevenage models was to assign the new developments within Stevenage to a zone. This was based on the coordinates provided for each development and the likely access to them. **Appendix A: Planning data by site** includes the S-Paramics zone associated to each development in Stevenage. The demand of the developments outside of the coverage of the Stevenage model is included in the external zones, which have been aligned with the external zones of the WHaSH cordon model.

6.4.2 The demand increases obtained from the WHaSH model were distributed into the appropriate S-Paramics zones. The planning data was used to disseminate the future demand in the different Paramics zones when a WHaSH zone considered more than one S-Paramics zones. It was considered that the number of dwellings can be used to distribute the demand in origin and the employment for destination in the morning peak, and the opposite for the evening peak. As commented before, the evening peak adjustment was considered for Saturdays. This process produced Paramics future matrices for 2021 and 2031 and all the time periods, considering the 97 zones included on the Paramics model.

6.4.3 **Figure 6.2** shows the matrix totals for car for 2015, 2021 and 2031 Stevenage models. As the demand for the Do Something and Do Minimum scenarios are quite similar, **Figure 6.2** only includes the Do Minimum demand. The matrix totals show the weekday evening and Saturday peaks generally have higher level of demand growth. It is important to highlight here that the projection of the demand for Saturdays is based on the demand growth of the evening peak from the WHaSH cordon model as Saturday peak is not modelled for the WHaSH model.

Figure 6.2: Demand growth for cars between the Paramics base year matrix and the future scenarios



6.5 Matrix enhancement

6.5.1 As detailed in **Section 5**, there are two land use changes that require further matrix manipulations:

- The car park consolidation which was applied for 2031 Do Something scenario; and
- The conversion of John Lewis distribution centre to Costco which modified the demand from / to Cavendish Rd (zone 42) for all forecast year model scenarios.

6.5.2 The **car matrices** were therefore enhanced based on the changes related to the carpark consolidation and Costco demand and distribution adjustments as discussed in **Section 5.**

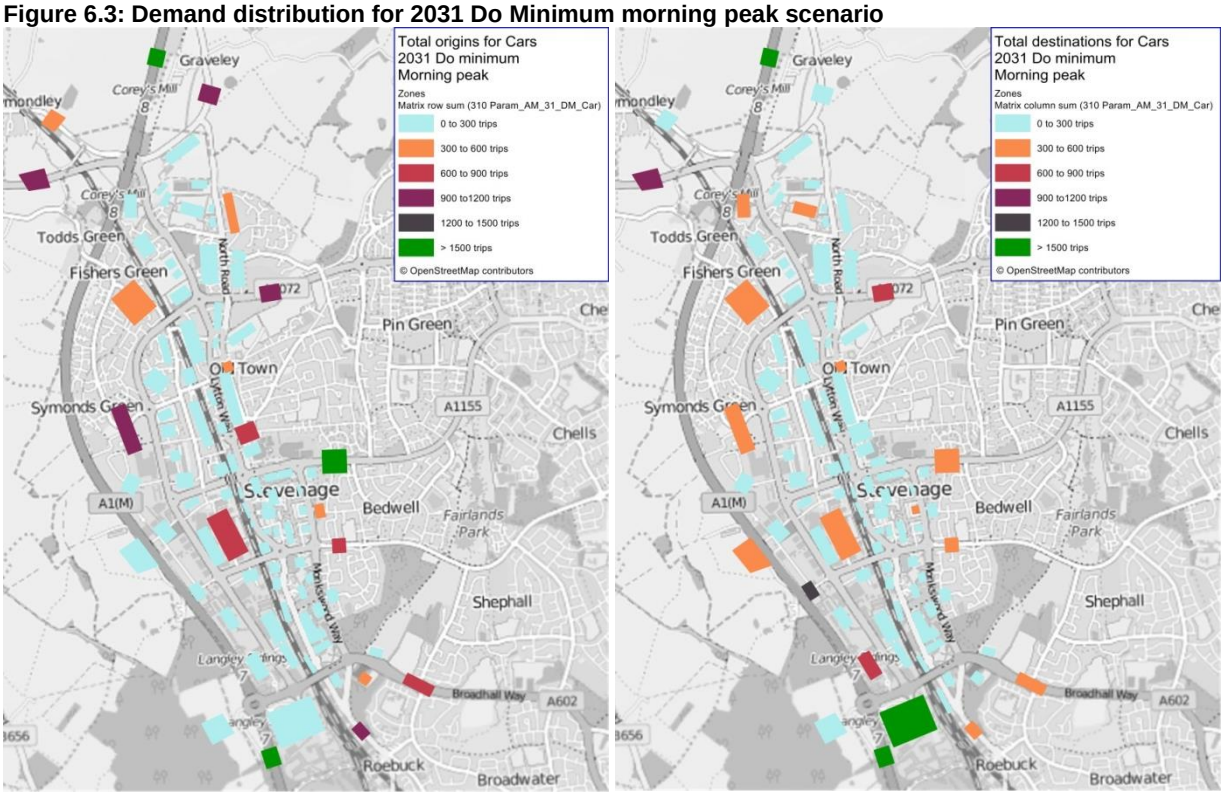
6.6 Analysis of the origin and destination trip ends for 2031 Do Minimum scenario

6.6.1 **Figure 6.3** and **Figure 6.4** show the trip end distribution obtained for the demand in the morning and evening peak respectively.

6.6.2 The trip end distribution analysis is intended to provide an indication on the potential impact of the growth for 2031 Do Minimum scenario. The demand distribution in the morning peak shows that:

- Fairlands Way concentrates the highest demand in origin trip ends in the morning peak within Stevenage.
- The demand coming from Clovelly Way and Fisher´s Green is significant, which might increase pressure on Gunnels Wood Road and Lytton Way North.
- There is significant demand increase from the north, using High street, which might cause congestion issues.
- The demand coming from the A602 Hitchin Road is significant and might affect junction 8.
- The demand on the town centre is quite high, but distributed on several zones for a better representation of the traffic patterns. The leisure park on the centre west concentrates most of the new developments on the town centre, which involves high demand.
- GSK and Gunnels Wood Road attract high demand during the morning peak. Both areas concentrate a significant amount of employment, and this attractiveness might put on the junctions located in the vicinity to them under further stress, for example Gunnels Wood Road – A602 Broadhall Way and Gunnels Wood Road – Six Hills Way.

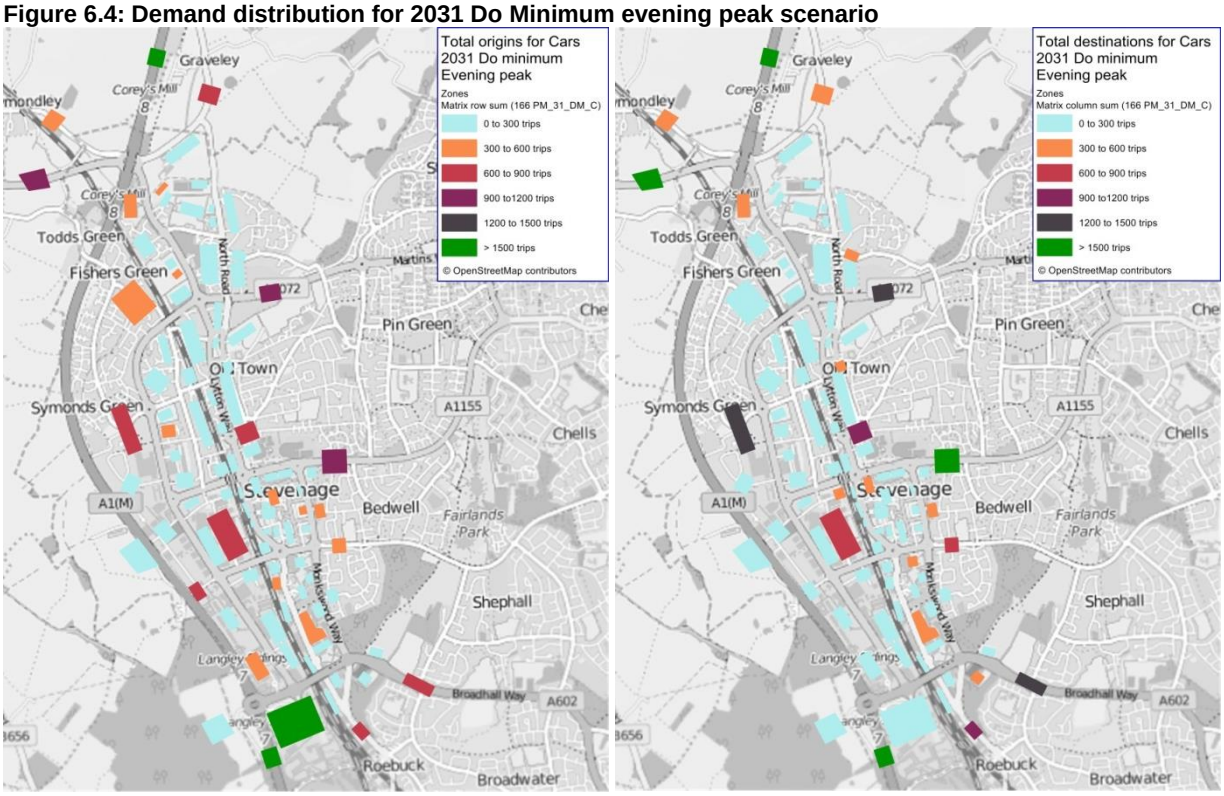
Figure 6.3: Demand distribution for 2031 Do Minimum morning peak scenario



6.6.3 The demand distribution in the evening peak shows that:

- There are some traffic flows that invert the direction respect the morning peak. GSK and zones with high employment on Gunnels Wood Road originates a significant number of trips in the evening peak.
- The town centre demand is higher in origin and destination.
- The demand in the northern area is significant, which might impact on the network.

Figure 6.4: Demand distribution for 2031 Do Minimum evening peak scenario



7 2031 Forecast Scenarios – Key Findings

7 2031 Forecast Scenarios – Key Findings

7.1 Introduction

7.1.1 This section presents the key findings for the 2031 forecast year modelling. It should be noted that for this study, the impact of the relocation of the town centre bus station and Lytton Way Closure on mode shift is not considered. Also some of the schemes that have been included in the modelling are provisional designs, and assumptions were made in relation to the scheme layout, which should be taken into account when considering the modelling results for this study.

7.1.2 During the preliminary assignments of the forecast year model scenarios, it was identified that mitigation measures, such as signal timing adjustments, were required in order to improve the operation and performance of the network. **Section 7.2** discusses the mitigation measures that have been included in the forecast year model scenarios.

7.2 Mitigation Measures

7.2.1 The preliminary assignments of the 2031 forecast year models show that there is a high level of unreleased demand. The mitigation measures, which included the signalisation of three roundabouts within Stevenage and the additional lane on the A1(M) to the north of Junction 8, are aimed to reduce the amount of unreleased vehicles. It should be noted that the signal timings have been adjusted visually only for this study and optimisation, based on junction modelling, could potentially improve the operation of the signalised junctions further.

7.2.2 *Mitigation 1*: As **Figure 7.1** shows, the **A1(M) between Junction 8 and 9** currently consists of three-lane main carriageway and a hard shoulder lane. Initially, the modelling assumed the A1(M) to the north of Junction 8 will remain as existing layout. However, preliminary 2031 assignments show that there is 'weaving issues' for the southbound carriageway which produces high level of unreleased demand from the A1(M) north. The issue is mainly related to the demand growth and the number of vehicles trying to access Stevenage via A1(M) Junction 8.

Figure 7.1: A1(M) southbound section upstream Junction 8 (source: googlemaps)

7.2.3 In order to reduce this issue, an extra lane for the A1(M) in both directions was added between Junctions 8 and 9, considering the hard shoulder as an extra lane, which increases the A1(M) southbound carriageway to four-lane for this section. This mitigation measure reduces the issue relating to the unreleased demand and "weaving", and is aligned with the latest consideration that Highway England[4] has for this section of the A1(M).

7.2.4 *Mitigation 2:* The modelling shows that the 2031 forecast year demand for **Lytton Way Road - Fairlands Way roundabout** is significantly higher than the existing conditions. The preliminary assignments show that there are long queues on the approaches to this roundabout which eventually block the network in the town centre. Before considering a new junction layout that is not within the current scope of this study, signalisation was considered to manage the forecast demands. It should be noted that the traffic signal settings adopted for the forecast year models are provisional and based on the current modelling study only. No engineering safety and feasibility or junction modelling works have been undertaken and further analysis should be undertaken if this mitigation measure is to be taken forward.

7.2.5 For the morning peak, the main conflicts at this roundabout are between Fairlands Way westbound and Lytton Way North southbound, which already present queues in the base year model. For 2031, the modelling shows that the roundabout is not able to accommodate the demands from these approaches and traffic signals were assumed on these approaches, as partial signalization of the roundabout, to avoid significant blocking back of queues to upstream junctions and network. **Figure 7.2** shows the main conflicts at this roundabout for the morning peak.

Figure 7.2: 2031 Lytton Way Road – Fairlands Way roundabout main conflicts (morning peak)

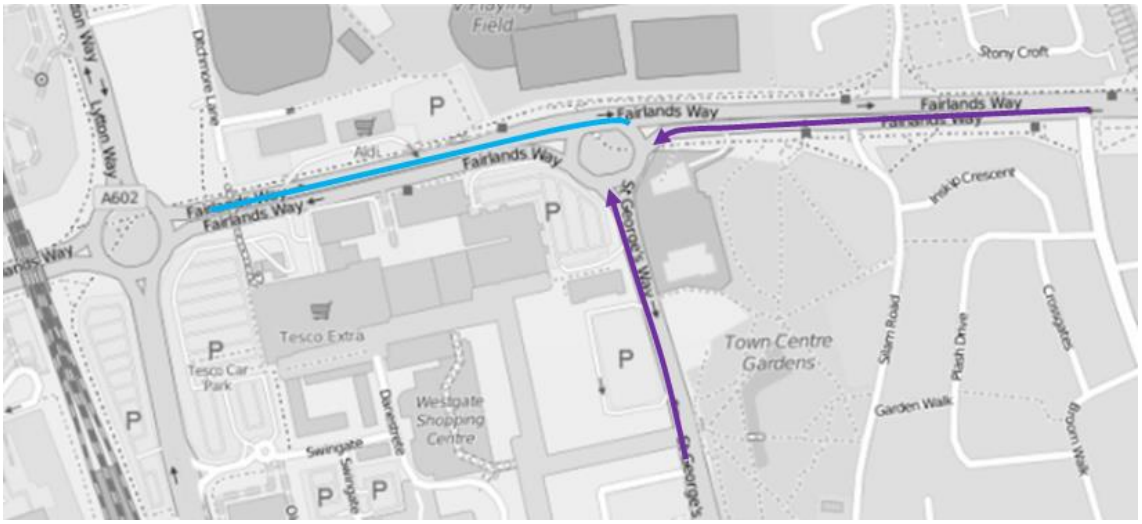
7.2.6 Initial assignments of the Do Minimum evening peak shows that the queues from this roundabout does not cause upstream blocking back, therefore traffic signals were not included for all model scenarios for the evening peak.

7.2.7 For the Saturday peak, initial assignments suggest that the conflicting demands for this roundabout will cause upstream blocking back and signalisation is required. The main conflicts are between the Lytton Way North southbound, Lytton Way northbound and Fairlands Way eastbound approaches. The demand coming from Fairlands Way westbound increases significantly for the forecast year Saturday peak, and it was necessary to include a partial signalization of the roundabout this roundabout on this arms to accommodate for the increase in demand.

7.2.8 *Mitigation 3:* The initial assignments show that there is extensive queueing on the approaches to the **St Georges Way – Fairlands Way roundabout** for the Saturday peak. The modelling suggests that the demand from Fairlands Way eastbound to St George's Way southbound is significant and there are long queues on the St Georges northbound and Fairlands Way eastbound approach. The implementation of a partial signalization of the roundabout including a traffic signal to manage the demand from the Fairlands Way westbound approach and the west-to-south movement reduces the queuing and blocking back for these approaches.

[4] Based on the A1 strategy study that Department for Transport / Highways England are developing.

Figure 7.3: St Georges Way – Fairlands Way roundabout main conflicts (purple) and Fairlands Way queues (blue)



7.2.9 *Mitigation 4:* The part time traffic signals for the **Hitchin Road – Martins Way roundabout** currently operate during the morning peak only. The location of the traffic lights is on Martins Way westbound approach and Hitchin Road southbound approach. The preliminary assignments for 2031 scenarios show that with minimal signal timing changes the morning peak demand can be accommodated. However, for the evening peak, the modelling suggests that there are still significant queuing on the approaches for this roundabout with signalisation.

7.2.10 *Mitigation 5:* As commented above, some traffic signal adjustments were needed to accommodate the forecast demand at some locations. This is the case for the traffic signals at A1(M) Junction 7 and Junction 8 roundabouts. The green times and cycle times were adjusted to improve the operation and performance of the roundabouts for the forecast year model scenarios. The modelling shows that although the A1(M) Junction 7 roundabout generally operates without significant queuing. However, the significant increase of demand from/ to the northern area of Stevenage causes significant congestion at the A1(M) Junction 8. This is discussed in more detail in the following sections.

7.3 Morning Peak – 2031 Scenarios

2031 Do Minimum

Junction 8 – Northern area key findings

7.3.1 For the 2031 Do Minimum scenario, it was assumed that the main carriageway for the A1(M) southbound has four-lane as discussed above. This mitigation measure reduces the "weaving" of the A1(M) southbound traffic and as shown in **Figure 7.4**, there is no notable delays for the A1(M) southbound in the vicinity of Junction 8.

7.3.2 The modelling suggests that the developments planned for 2031 in the northern area of Stevenage will cause significant congestion on North Road and the Lister Hospital area. Hitchin Road shows significant queues in the model, mainly northbound toward A1(M) Junction 8. Hitchin Road – Coreys Mill Lane roundabout is also another network constraint due to the size of the roundabout and the high demand that are predicted to traverse through it.

7.3.3 The modelling also suggests that the two mini-roundabouts at North Road – Coreys Mill Lane will not have sufficient capacity to accommodate the predicted future level of demand and consequently, long queues, represented with dotted yellow lines in **Figure 7.4**, are predicted for North Road.

7.3.4 Signal timing at Gunnels Wood Rd – Hitchin Rd roundabout was updated to release the maximum possible number of vehicles from Martins Way and to reduce queues on Hitchin Road southbound.

Figure 7.4: 2031 Do Minimum – Morning peak - Northern Stevenage

Town centre area key findings

7.3.5 For the 2031 Do Minimum scenario, **Figure 7.5** shows that there is queuing on Lytton Way southbound approach to Lytton Way – Fairlands Way roundabout (with traffic signalisations). Gunnels Wood Road southbound also shows significant queuing as there is high level of forecast demand from the north. For Gunnels Wood Road – Six Hills Way roundabout, there are short queues on some approaches to the roundabout as vehicles trying to access the industrial zone (zone 49).

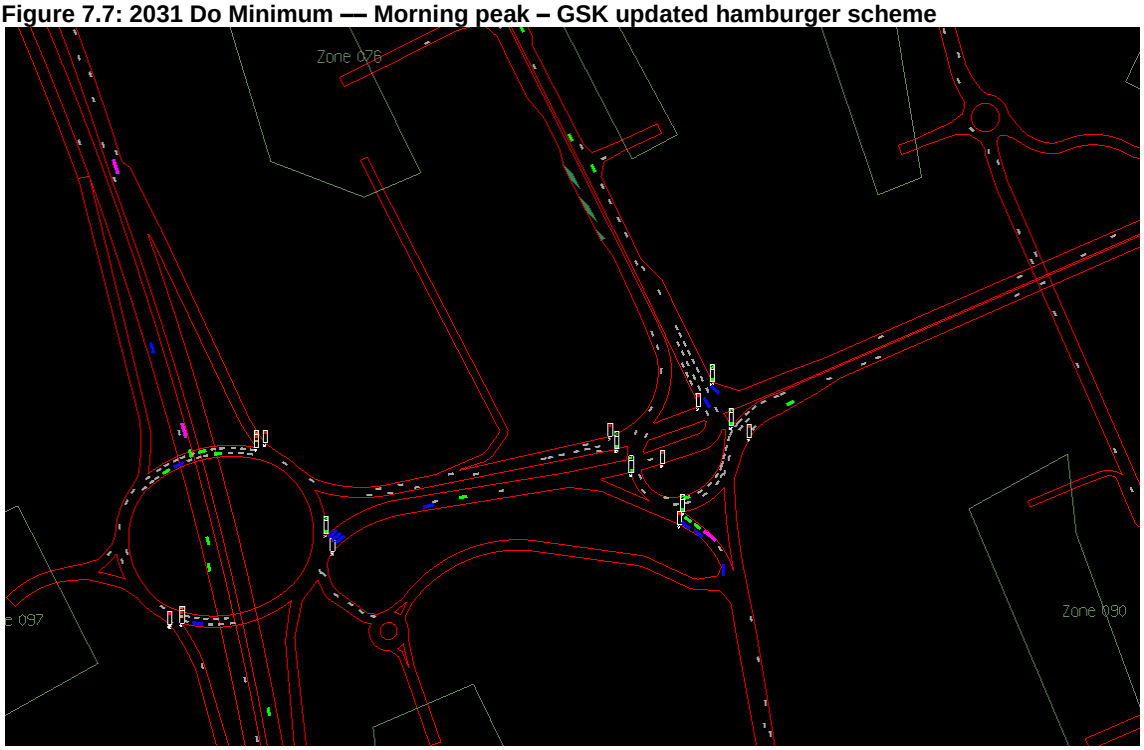
Figure 7.5: 2031 Do Minimum – Morning peak - Town centre

Southern area key findings

7.3.6 2031 Do Minimum includes the new layout for the Gunnels Wood Road – Broadhall Way roundabout, namely the GSK updated hamburger scheme. This scheme provides greater capacity and reduces the queuing for this junction when compared to the base year. However, the modelling suggests that temporary queues could occur on Gunnels Wood Road southbound due to the high demand going to the GSK site during the morning peak and that only one lane is designated as access to the GSK site from this approach. **Figure 7.6** and **Figure 7.7** show the modelled queues on the approaches to this junction.

Figure 7.6: 2031 Do Minimum – Morning peak - Southern Stevenage

Figure 7.7: 2031 Do Minimum –– Morning peak – GSK updated hamburger scheme



2031 Do Something

7.3.7 2031 Do Something scenario includes the Lytton Way closure, the relocation of the bus station and the car park consolidation schemes. This new configuration of the town centre involves significant changes on the demand distribution. The new multi storey car park planned on Lytton Way (zone 50) is a key trip attractor and generator for the town centre and significantly increases the demand for Lytton Way – Fairlands Way roundabout.

Junction 8 – Northern area key findings

7.3.8 The network performance in the northern area for the Do Something scenario has similar issues as the Do Minimum scenario, with long queues on Hitchin Road and North Road.

Town centre area key findings

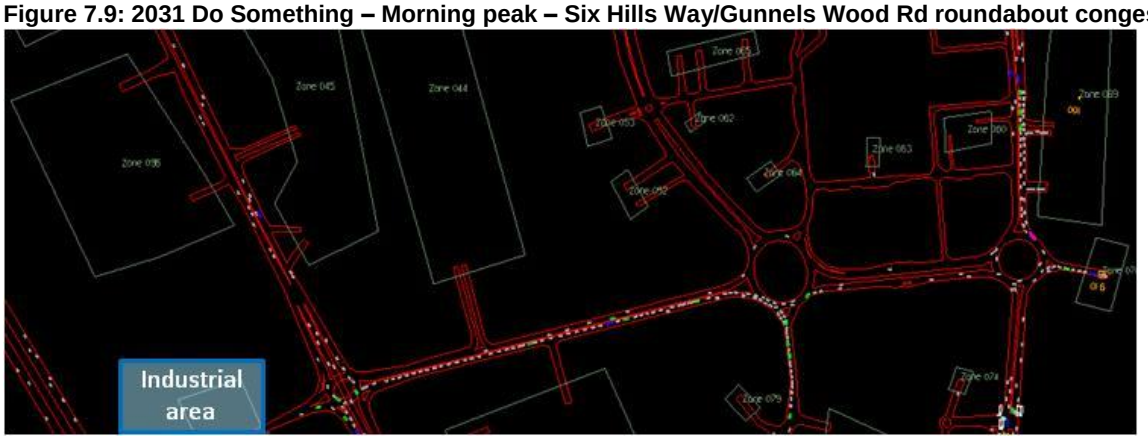
7.3.9 The car park consolidation proposal relocates most of the demand in the town centre to the new multi storey car park and with its only access via the Lytton Way – Fairlands Way roundabout, the modelling shows that significant queuing is predicted on all approaches to the roundabout for the morning peak, as shown in **Figure 7.8**, which will potentially block the network.

Figure 7.8: 2031 Do Something – Morning peak – Town Centre

Southern area key findings

7.3.10 There is a significant demand going to the industrial area on the west of Stevenage on Six Hills Way (Zone 42). This creates modelled queues on Six Hills Way approach to Gunnels Wood Rd - Six Hills Way roundabout as shown in **Figure 7.9**.

Figure 7.9: 2031 Do Something – Morning peak – Six Hills Way/Gunnels Wood Rd roundabout congestion



7.4 Evening Peak – 2031 Scenarios

2031 Do Minimum

A1(M) Junction 8 – Northern area key findings

7.4.1 A1(M) Junction 8 is extremely congested for the 2031 Do Minimum scenario in the evening peak based on the modelling. As it can be seen in **Figure 7.10**, there are modelled queues on the A1(M) off slip, Graveley Road, Hitchin Road and A602. Traffic signals at A1(M) Junction 8 roundabout were adjusted, to minimise blocking back to upstream junctions and A1(M) main carriageway, however, there is still significant queuing on most approaches.

7.4.2 The modelling shows a significant level of demand egressing Stevenage via A1(M) Junction 8, and a significant level of demand accessing Stevenage and Hitchin from the A1(M). This conflicting demand causes significant congestion for Hitchin Road as showed in **Figure 7.10**.

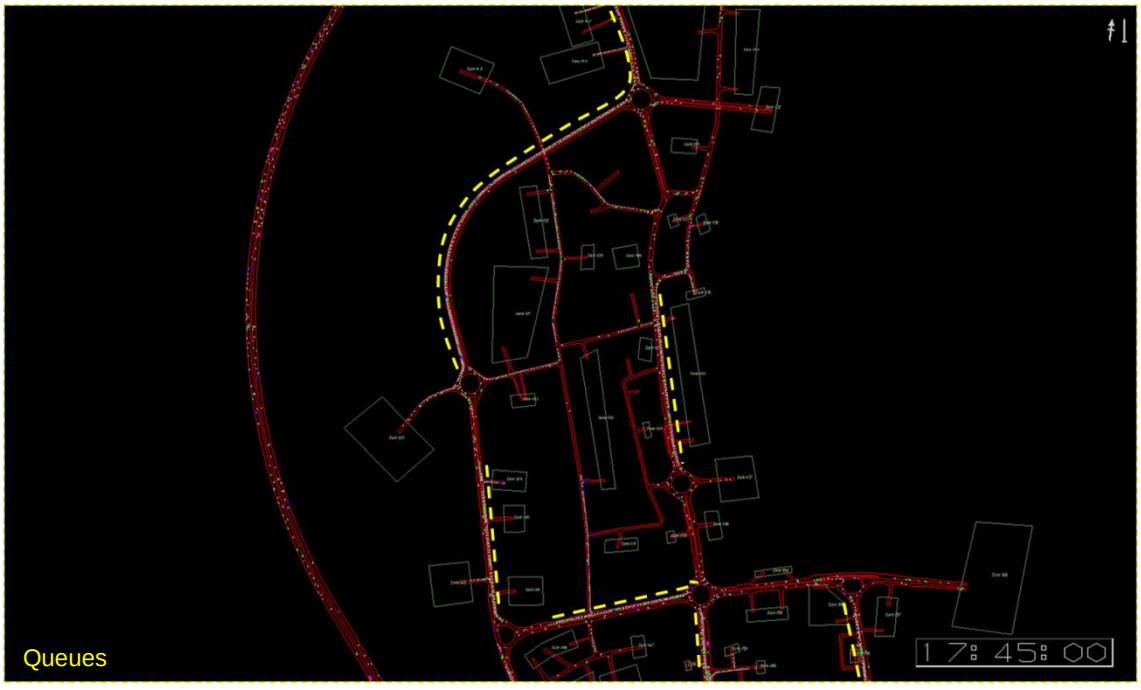
Figure 7.10: 2031 Do Minimum – Evening peak – Junction 8

7.4.3 **Figure 7.11** shows that the northbound queues towards A1(M) Junction 8 continues to extend through the Gunnels Wood Rd – Martins Way roundabout to Gunnels Wood Rd – Clovelly May Road roundabout. The modelling shows that the capacity constraint at A1(M) Junction 8 causes significant level of congestion during the evening peak and as the queue lengths worsen throughout the evening peak, the northern part of the Stevenage network eventually gridlocks causing significant amount of unreleased demand.

Figure 7.11: 2031 Do Minimum – Evening peak – Northern Stevenage

7.4.4 There are significant modelled queues on several road sections between Fairlands Way and Martins Way, including Gunnels Wood Road northbound, Gunnels Wood Road southbound, Fairlands Way eastbound and Lytton Way southbound as shown in **Figure 7.12**.

Figure 7.12: 2031 Do Minimum – Evening peak – Area between Fairlands Way and Martins Way



Town centre area key findings

7.4.5 The model shows the town centre is congested for 2031 Do Minimum scenario in the evening peak. **Figure 7.13** shows Lytton Way is congested in both directions, as well as St Georges Way. Six Hills Way eastbound will also experience significant queuing.

Figure 7.13: 2031 Do Minimum – Evening peak – Town Centre

Southern area key findings

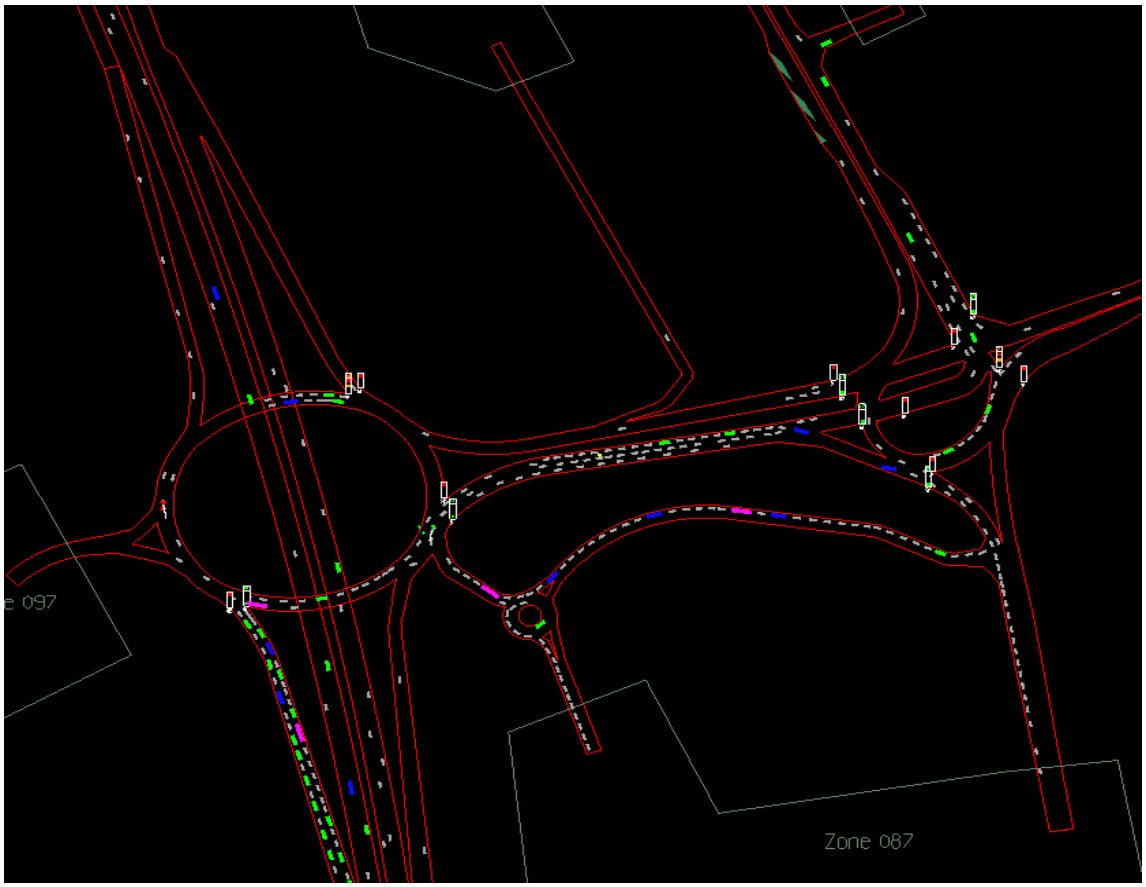
7.4.6 Regarding the southern area of Stevenage, the main problems are concentrated at the egress for the GSK site. The number of vehicles leaving this area is very high and the new layout included for the Gunnels Wood Road – Broadhall Way junction cannot accommodate the significant amount of egressing traffic from the GSK site causing queues and unreleased demand within the GSK site. The performance of the updated hamburger scheme to the Gunnels Wood Rd – Broadhall Way junction is however generally reasonable for the rest of movements. These conflicts can be seen in **Figure 7.14**.

7.4.7 There is also significant demand trying to leave the industrial area in the west of Stevenage on Six Hills Way. The demand that was trying to arrive at the workplaces in the morning, are trying to leave in the evening. The capacity and conflicts flows at Six Hills Way / Gunnel Wood Rd roundabout, together with the high demand, produce unreleased demand.

Capabilities on project:
Transportation

Figure 7.14: 2031 Do Minimum – Evening peak – Southern Stevenage

Figure 7.15: 2031 Do Minimum – Evening peak – GSK updated hamburger scheme

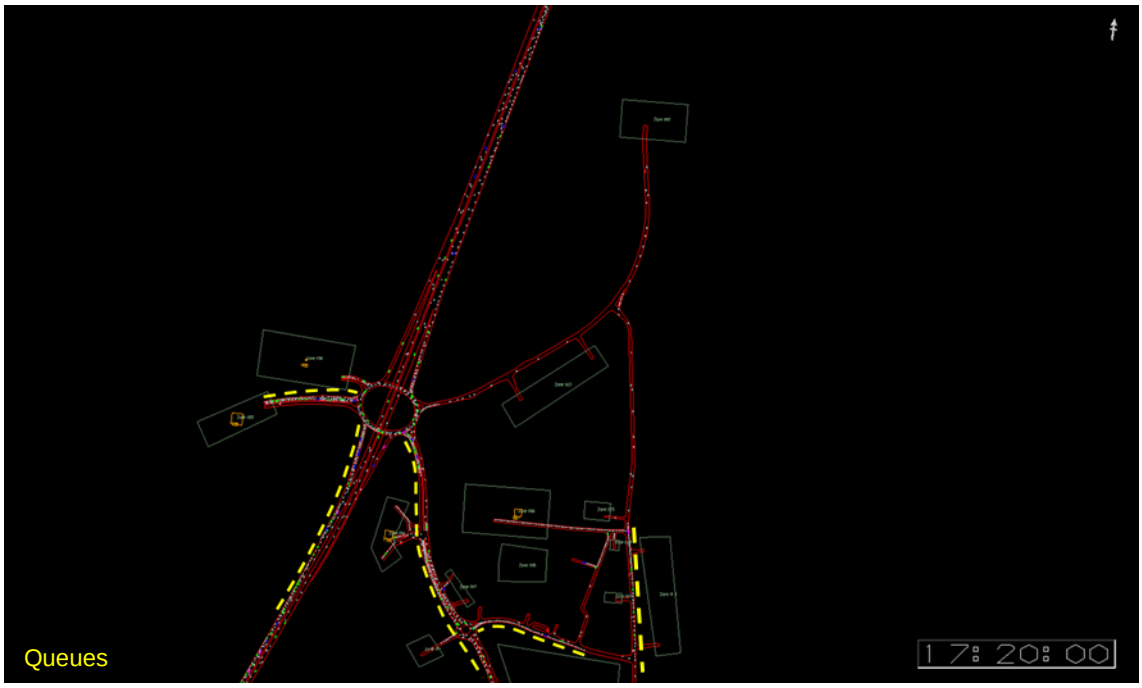


2031 Do Something

Junction 8 – Northern area key findings

7.4.8 2031 Do Something scenario presents similar issues to 2031 Do Minimum scenario in the northern area. The capacity constraint at the A1(M) Junction 8 roundabout causes long modelled queues and congestion on Hitchin Road as shown on **Figure 7.16**.

Figure 7.16: 2031 Do Something – Evening peak – Northern Stevenage



Town centre area key findings

7.4.9 2031 Do Something scenario includes the closure of Lytton Way. As it was discussed previously, the town centre is already very congested for 2031 Do Minimum Scenario, with Lytton Way opened for general traffic. For the Do Something scenario, the general traffic are transferred to the existing parallels routes of St Georges Way and Gunnels Wood Road.

7.4.10 **Figure 7.17** shows how the modelled queues extend to the whole St Georges Way and continue along Six Hills Way. Significant queues can also be observed on Gunnels Wood Road, both southbound and northbound approaches to Gunnels Wood Rd / Fairlands Way roundabout. The car park consolidation also creates a significant unreleased demand from the multi storey car park planned on Lytton Way. The queuing worsens throughout the evening peak, and eventually causes gridlock for this part of the network.

7.4.11 In addition to the queues on Lytton Way northbound, there will be queues on Lytton Way North southbound and Fairlands Way eastbound. The already mentioned congested sections in the town centre, alongside the inability of Lytton Way – Fairlands Way roundabout to cope with the new demand conditions, will conclude with the blocking of the town centre.

7.4.12 The traffic conditions in the town centre are very poor even before the peak hour. However is important for the analysis of the Lytton Way scheme, and the fact that the south section of Lytton Way is almost empty in both time periods, morning and evening peak. This means that the demand is concentrated mainly on the northern section of Lytton Way, and therefore, Lytton Way – Fairlands Way junction will be more stressed than Lytton Way – Six Hills Way junction.

Figure 7.17: 2031 Do Something – Evening peak – Town centre

Southern area key findings

7.4.13 The model shows similar situation between the Do Something and the Do Minimum scenario for the evening peak. The egressing traffic from the GSK site has difficulties joining the wider highway network and there is also significant unreleased demand from the industrial area in the west of Stevenage on Six Hills Way, coming from the industrial area.

7.5 Saturday – 2031 Scenarios

2031 Do Minimum

7.5.1 The modelling shows that the Lytton Way – Fairlands Way roundabout cannot accommodate the demand in the Saturday peak period for the 2031 Do Minimum scenario. **Figure 7.18** shows that there is significant queuing within the town centre during the warm-up period which causes gridlock during the peak hour.

7.5.2 The significant growth that will experience for 2031 cannot be accommodated by the existing highway network. Although signalisation for some junctions were included to mitigate the increase in demand, the modelling suggests that significant interventions will be required to accommodate the modelled growth for Stevenage.

7.5.3 Further analysis on other parts of the network was not undertaken as significant queueing and gridlocks were observed at the early stage of the Saturday peak.

Figure 7.18: 2031 Do Minimum – Saturday – Town centre

2031 Do Something

7.5.4 Similarly to 2031 Do Minimum scenario, Lytton Way – Fairlands Way roundabout blocks despite the mitigation measures included. In this case, the pressure over the roundabout is even higher due to the car park consolidation.

7.5.5 Lytton Way closure increases the demand for St Georges Way and Gunnels Wood Road, which causes queues on many road sections of the town centre. The location of the modelled queues can be seen in **Figure 7.19**.

7.5.6 Similar to the 2031 Do Minimum scenario, the 2031 Do Something scenario experience significant queuing and gridlocks at the early stage of the Saturday peak, and the performance of the network in other areas cannot be assessed.

Figure 7.19: 2031 Do Something – Saturday – Town centre

8 2021 Forecast Scenarios – Key Findings

8 2021 Forecast Scenarios –Key Findings

8.1 Introduction

8.1.1 The only difference between 2021 Do Minimum and 2021 Do Something scenarios is the location of the bus station. For 2021 Do Minimum scenario the bus station remains at its current location, while for 2021 Do Something scenario it is relocated to Danestrete and Southgate as it has been previously discussed in this technical note. From the initial assignment, the relocation of the bus station does not have a significant impact on the assignment outside the town centre, therefore the results for both 2021 Do Minimum and Do Something scenarios are presented together for all time periods below.

8.2 Morning Peak – 2021 Scenarios

Junction 8 – Northern area key findings

8.2.1 2021 Do Minimum and 2021 Do Something scenarios both include the extra lane added on the A1(M) above Junction 8. As it does for 2031 scenarios, the mitigation measures avoid excessive “weaving” for the A1(M). For the approaches to the Junction 8 roundabout, there are queuing on the Hitchin Road approach as shown in **Figure 8.1:** and **Figure 8.2** for the 2021 Do Minimum and 2021 Do Something scenario respectively.

Figure 8.1: 2021 Do Minimum- Morning Peak – Northern area

Figure 8.2: 2021 Do Something – Morning peak – Northern area

8.2.2 Lytton Way – Fairlands Way roundabout has been signalised on Fairlands Way westbound and Lytton Way southbound approaches. This mitigation measure balances the different flows and avoids blocking back and long queues as shown in **Figure 8.3** and **Figure 8.4**. Martins Way´s queues still remain, but they may be reduced with further traffic signalisation at the Gunnels Wood Road – Hitchin Road roundabout.

Figure 8.3: 2021 Do Minimum – Morning peak - Area between Fairlands Way and Martins Way

Figure 8.4: 2021 Do Something – Morning peak - Area between Fairlands Way and Martins Way

Town centre area key findings

8.2.3 The highway network within the town centre generally operates reasonably well for both 2021 Do Minimum and 2021 Do Something scenarios during the morning peak, as it can be seen in **Figure 8.5** and **Figure 8.6**.

8.2.4 The bus relocation does not have a significant impact on the network performance. **Figure 8.5** and **Figure 8.6** show the performance of the network in the town centre and how the traffic conditions are similar with/without the bus station relocation.

Capabilities on project:
Transportation

Figure 8.5: 2021 Do Minimum – Morning peak - Town Centre

Figure 8.6: 2021 Do Something – Morning peak - Town Centre

Southern area key findings

8.2.5 The GSK updated hamburger scheme is included at Gunnels Wood Road – Broadhall Way junction, which significantly reduces the queues on all the arms approaching the junction. The modelling shows that temporary queues can occur on the Gunnels Wood Road southbound approach due to the high level of demand that the GSK site attracts in the morning peak as shown in **Figure 8.7** and **Figure 8.8**. The current layout includes only one lane from Gunnels Wood Road to the GSK site. Extra lanes to access GSK may improve the performance and reduce the queues, but maybe at the detriment of other movements.

Figure 8.7: 2021 Do Minimum – Morning peak – Southern area

Figure 8.8: 2021 Do Something – Morning peak – Southern area

8.3 Evening Peak – 2021 Scenarios

Junction 8 – Northern area key findings

8.3.1 A1(M) Junction 8 presents a significant level of congestion in the evening peak. The modelling suggests that there are long queues on Hitchin Road and Graveley Road, as shown in **Figure 8.9** and **Figure 8.10**.

8.3.2 Hitchin Road northbound is very congested in the evening peak. Hitchin Road – Coreys Mill Lane roundabout is one of the main reasons, together with junction 8, for the queues on Hitchin Road due to its low capacity. Some queues can also be seen on Coreys Mil Lane – North Road due to the existing mini roundabouts.

Figure 8.9: 2021 Do Minimum – Evening peak – Northern area

Figure 8.10: 2021 Do Something – Evening peak – Northern area

8.3.3 An additional traffic signal has been included at Gunnels Wood Road – Hitchin Road roundabout which was intended to provide more capacity for the Gunnels wood Road approach arm. However, as shown in **Figure 8.11** and **Figure 8.12**, the queue lengths on this approach remain significant due to high level of demand.

8.3.4 Hitchin Road northbound approach to Gunnels Wood Rd – Hitchin Rd roundabout experience long queues and congestion. This is related to the demand growth that has been applied to Fisher´s Green (zone 19). The northbound trips from this zone cause queues on Hitchin Road. Gunnels Wood Road, Fairview Road and Julian Road, and also unreleased demand, as shown in **Figure 8.11** and **Figure 8.12**.

Capabilities on project:
Transportation

Figure 8.11: 2021 Do Minimum – Evening peak - Area between Fairlands Way and Martins Way

Figure 8.12: 2021 Do Something – Evening peak - Area between Fairlands Way and Martins Way

Town centre area key findings

8.3.5 The town centre overall is congested with significant queueing. The more congested sections include Lytton Way northbound upstream to Lytton Way – Fairlands Way roundabout and St Georges Way northbound. Six Hills Way eastbound and Fairlands Way eastbound also have queues, as shown in **Figure 8.13** and **Figure 8.14**.

8.3.6 The modelling shows that the bus relocation does not appear to have a significant impact on the network performance.

Figure 8.13: 2021 Do Minimum – Evening peak - Town centre

Figure 8.14: 2021 Do Something – Evening peak - Town centre

Southern area key findings

8.3.7 Demand leaving the GSK site in the evening peak is very high. Similar to 2031, there is unreleased demand from this zone. **Figure 8.15** and **Figure 8.16** show the traffic conditions for southern Stevenage for the 2021 Do Minimum and 2021 Do Something scenario respectively.

Figure 8.15: 2021 Do Minimum – Evening peak – Southern area

Figure 8.16: 2021 Do Something – Evening peak – Southern area

8.4 Saturday – 2021 Scenarios

Junction 8 – Northern area key findings

8.4.1 A1(M) Junction 8 operates at/near capacity in the Saturday peak for 2021 Do Something and 2021 Do Minimum scenarios with queuing on Graveley Road and Hitchin Road as shown in **Figure 8.17** and **Figure 8.18**.

Figure 8.17: 2021 Do Minimum – Saturday peak – Northern area

Figure 8.18: 2021 Do Something – Saturday peak – Northern area

Town centre area key findings

8.4.2 Overall the town centre is very congested. The modelling suggests there are queuing at multiple locations, and some of the most congestion road links are:

- St Georges Way northbound and southbound.
- Six Hills Way Eastbound.

8.4.3 The most congested sections are highlighted on **Figure 8.19** and **Figure 8.20**.

Figure 8.19: 2021 Do Minimum – Saturday peak – Town Centre

Figure 8.20: 2021 Do Something – Saturday peak – Town Centre

8.4.4 Three traffic signals have been included for the evening peak at Lytton Way – Fairlands Way roundabout for the following approach arms:

- Lytton Way southbound
- Lytton Way northbound
- Fairlands Way westbound.

8.4.5 The traffic signals at Fairlands Way – Lytton Way roundabout causes some queuing on Lytton Way northbound and Fairlands Way southbound and westbound, but at the same time reduces blocking back at the roundabout. The demand for this roundabout is very high, and the modelling suggests that signalisation is required to accommodate the demand.

8.4.6 Additionally, a signal has been included at Fairlands Way – St Georges Way, which is intended to control the traffic flows from St.George's and Fairlands Way westbound.

Southern area key findings

8.4.7 The GSK updated hamburger scheme is included at Gunnels Wood Road – Broadhall Way junction. The modelling suggests that there is some unreleased demand from the GSK site, even though other approach arms generally operates well as it can be seen in **Figure 8.21** and **Figure 8.22**.

Figure 8.21: 2021 Do Minimum – Saturday peak – Southern area

Figure 8.22: 2021 Do Something – Saturday peak – Southern area

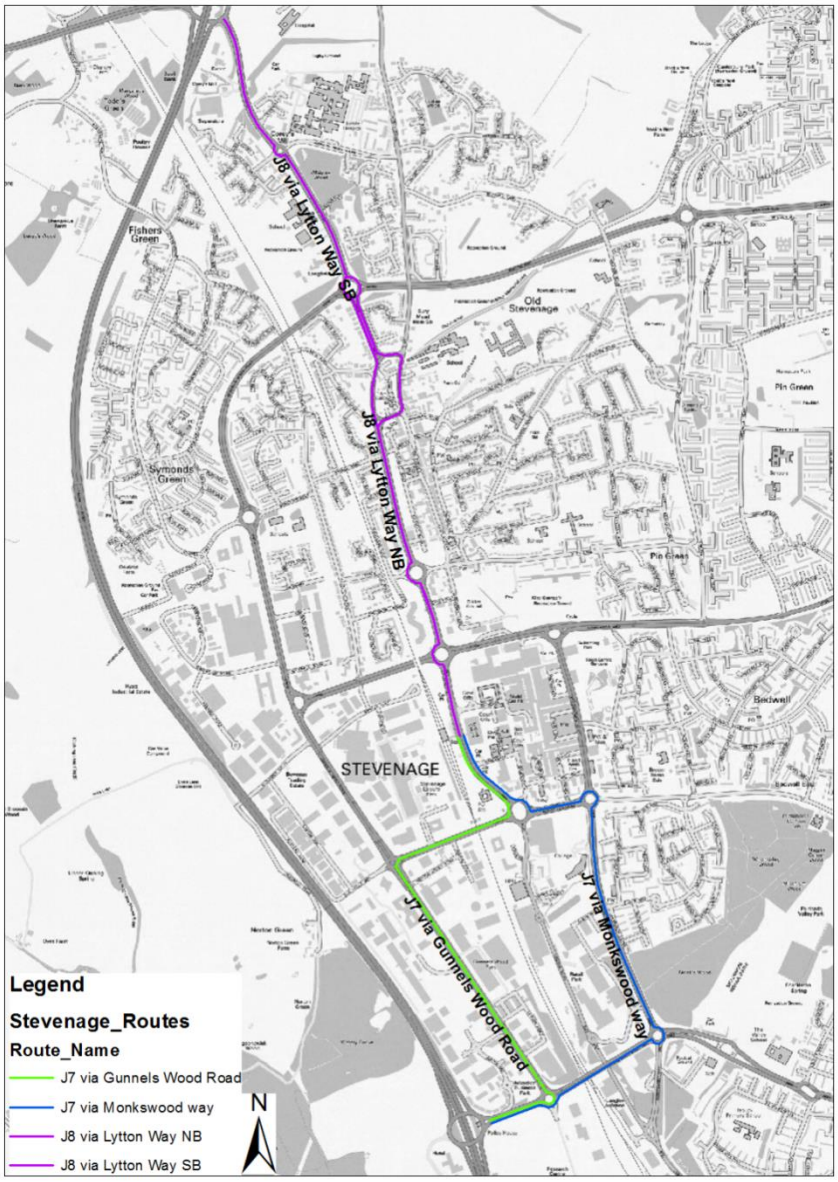
9 Journey time analysis for the town centre

9 Journey time analysis for the town centre

9.1 Introduction

9.1.1 Journey time analysis of three different routes was carried out in order to provide further information on the model performance for the forecast year model scenarios. It was agreed with HCC to extract 3 main journey time routes: one from the town centre to Junction 8 and two routes from the town centre to Junction 7, via Monkswood Way and Gunnels Wood Road. The journey times were measured during the peak hour of each time period when possible. The routes can be seen in **Figure 9.1**.

Figure 9.1: Journey time routes



9.1.2 Modelled journey times were extracted for the base year model, 2021 Do Minimum and 2031 Do Minimum scenarios for comparison.

9.1.3 For 2021, modelled journey times were extracted for the Do Minimum scenario only as the performance of the 2021 Do Minimum and 2021 Do Something scenarios are very similar.

9.1.4 For 2031, the Do Minimum scenario was used to understand the impacts of the new developments on the traffic conditions and journey times. For the morning peak, the modelling shows significant queuing, however the network does not reach gridlock status. For the evening and Saturday peak, the modelling shows that the network gridlocks due to significantly high level of demand. As a consequence, modelled journey times could be extracted for the morning peak hour; and the data extracted for the evening and Saturday peak period are from the first half hour of the period.

Base Year model

9.1.5 The routes defined from the town centre to Junction 7 offer two alternative routes: one via Monkswood Way, and the other via Gunnels Wood Road. **Table 9.1** shows that the route via Monkswood Way is not used in the base year model as it is not perceived to the most efficient route when compared to the alternative route via Gunnels Wood Road. It can be observed on **Table 9.1** that for the morning peak hour, the journey time for route Junction 7 via Gunnels Wood Road southbound is 558 seconds. This value is the results of the long queues existing on Gunnnels Wood Road southbound, which are produced by the vehicles trying to access to Junction 7. It is important to note that Broadhall Way – Gunnels Wood Road roundabout is not upgraded in the base year model. As discussed in the LMVR, some issues were found when validating against observed data in the routes that presented congestion. Despite that, modelled journey times validated in 75% at least in all of the cases against observed data in the Base Year Model.

9.1.6 **Table 9.1** shows how the modelled journey times for Junction 8 route northbound is significantly higher in the evening peak than in the other time periods. Hitchin Road is more congested in the evening peak and the modelling shows that vehicles have the difficulties accessing Junction 8.

Table 9.1: Average Journey time (seconds) for the routes – Base year model

Time period	J7 Via Gunnels SB	J7 Via Gunnels NB	J7 Via Monkswood SB	J7 Via Monkswood NB	J8 Via Lytton Way SB	J8 Via Lytton Way NB
Morning peak hour	558	225	Not used	Not used	300	335
Evening peak hour	265	226	Not used	Not used	302	428
Saturday peak hour	183	201	Not used	Not used	272	341

2021 Do Minimum

9.1.7 The two possible routes to and from Junction 7 showed the route via Gunnels Wood Road was more preferable with motorists when compared to the Monkwoods Way. The southbound route towards Stevenage Town Centre recorded a count of zero at all peak times during the day. This shows the route chosen by trips travelling southbound, is via Gunnels Wood Road. However, when travelling northbound, from Junction 7 towards Stevenage Town Centre, the route via Monkwoods Way recorded trips adopting this route. This behaviour is consistent with the base year model.

9.1.8 When analysing the journey times of the northbound and southbound routes via Gunnels Wood Road it can be seen that in general the northbound journey times are greater than the southbound for all peak periods. This could be a reason why some trips prefer the northbound route via Monkwoods Way in order to avoid delays in their journeys. This can be seen in the journey times which showed reductions of up to approx. 60 seconds by taking the northbound route via Monkwoods Way instead of Gunnels Wood Road.

9.1.9 One of the main findings is that route Junction 7 via Gunnels Wood Rd southbound has a journey time value in the morning peak hour of 249 seconds while in the base year it is 558 seconds. This reduction in journey times is due to the implementation of the updated hamburger scheme, which significantly reduces the southbound queues on Gunnels Wood Road during the morning peak.

9.1.10 For route Junction 7 via Gunnels Wood Road northbound, it can be seen that the modelled journey times for the evening peak in the base year model is 226 seconds whilst in 2021 Do Minimum scenario, it is 597 seconds. Despite the improvements at Gunnels Wood Road – Broadhall Way roundabout, there is significant congestion at the Gunnels Wood Road – Six Hills Way roundabout, which is mainly caused by the high level of demand leaving the industrial area. Additionally, there are queues on Six Hills Ways eastbound and very congested traffic on Lytton Way.

9.1.11 The route to and from Junction 8 showed similar journey times for morning peak and Saturday peak whereas evening peak showed that the northbound journey time towards Junction 8 is up to 180 seconds longer when compared to the morning peak hour and Saturday peak hour journey times. Generally, for all routes, the evening peak journey times are significantly greater than the morning peak and Saturday peak. **Table 9.2** shows the average modelled journey times for 2021 Do Minimum scenario.

9.1.12 For the routes to/from Junction 8, comparison between the modelled journey times for 2021 Do Minimum and the base year model show that the increase in journey time for 2021 is approximately 100 seconds for all peaks hours. This is due to the increase in demand from the external zones and also the new developments planned for 2021 in the northern area of Stevenage which increase the demand for Hitchin Road.

Table 9.2: Average Journey time (seconds) for the routes – 2021 Do Minimum

Time period	J7 Via Gunnels SB	J7 Via Gunnels NB	J7 Via Monkswood SB	J7 Via Monkswood NB	J8 Via Lytton Way SB	J8 Via Lytton Way NB
Morning peak hour	249	269	Not used	293	471	449
Evening peak hour	280	597	Not used	538	667	506
Saturday peak hour	214	285	Not used	352	432	480

9.1.13 As a reference, **Table 9.3** shows all the journey time measurements taken in five minutes slots.

Table 9.3: Journey time (seconds) for the routes – 2021 Do Minimum

Time Period	Hour	J7 Via Gunnels SB	J7 Via Gunnels NB	J7 Via Monkswood SB	J7 Via Monkswood NB	J8 Via Lytton Way NB	J8 Via Lytton Way SB
Morning Peak Period	08:00:00	266	0	0	0	465	463
	08:05:00	265	247	0	0	479	457
	08:10:00	218	298	0	303	498	481
	08:15:00	221	0	0	305	551	466
	08:20:00	252	257	0	306	572	524
	08:25:00	264	284	0	0	558	425
	08:30:00	222	256	0	259	547	585.6
	08:35:00	223	246	0	0	427	545
	08:40:00	247	306	0	0	474	439
	08:45:00	307	283	0	0	401	328
	08:50:00	263	246	0	0	326	331
Saturday Peak Period	11:00:00	201	215	0	0	314.	324
	11:05:00	200	0	0	0	336	494.
	11:10:00	215	242	0	0	386.	468
	11:15:00	0	0	0	0	416	557
	11:20:00	221	268	0	0	435	589
	11:25:00	206	281	0	0	427	403
	11:30:00	216	400	0	404	453	420
	11:35:00	0	236	0	0	493	514
	11:40:00	225	268	0	0	460.	486
	11:45:00	218	290	0	0	469	507
	11:50:00	239	367	0	300	472	500
	11:55:00	199	0	0	0	523	500
Evening Peak Period	17:00:00	280	466	0	333	680	404
	17:05:00	252	503	0	490	676	419
	17:10:00	225	0	0	0	795	440
	17:15:00	295	0	0	0	726	459
	17:20:00	287	304	0	535	643	459
	17:25:00	0	434	0	704	626	488
	17:30:00	242	805	0	441	729	661
	17:35:00	232	774	0	443	579	624
	17:40:00	273	0	0	753	569	544
	17:45:00	350	0	0	580	528	543
	17:50:00	331	999	0	567	684	546
	17:55:00	315	495	0	0	767	490

2031 Do Minimum

9.1.14 The modelling shows that the 2031 Do Minimum scenario gridlocks for the evening peak and Saturday peak period. As a consequence, it was only possible to get journey time data for the morning peak hour. For the evening and Saturday peak period, the results could only be extracted from the first half an hour of the period. The average modelled journey times for the morning peak hour can be seen in **Table 9.4** and the journey times for every five minutes are presented in **Table 9.5**. For the evening and Saturday peak period, the journey times of the first half hour of the peak period are shown in **Table 9.6**.

9.1.15 For the morning peak hour, route via Gunnels Wood Road from the town centre to Junction 7 was more preferable than route via Monkswood Way and no southbound trips were recorded to travel to Junction 7 via Monkswood Way. This is consistent with the results for the base year and the 2021 Do Minimum model scenario. The modelled journey time for this route is also similar to the results extracted for 2021 Do Minimum scenario.

9.1.16 For the routes going from Junction 7 to the town centre, route via Monkswood is faster than the route via Gunnels Wood Road. The difference between routes in the morning peak hour is approximately 75 seconds. Junction 7 route via Gunnels Wood Road northbound has an average journey times of 259 seconds in 2021 Do Minimum scenario whilst in 2031 Do Minimum scenario this increases to 333 seconds. This increase in journey time is due to the higher demand in 2031.

9.1.17 For the morning peak, the modelled journey times for the Junction 8 route are approximately 670 seconds, for both southbound and northbound directions. This is a significant increase, of approximately 210 seconds, in journey times when compared to 2021 Do Minimum scenario which is due to increase in developments and demands for Stevenage.

Table 9.4: Average Journey time (seconds) for the routes – 2031 Do Minimum – Morning peak hour

Journey time (peak hour)	J7 Via Gunnels SB	J7 Via Gunnels NB	J7 Via Monkswood SB	J7 Via Monkswood NB	J8 Via Lytton Way NB	J8 Via Lytton Way SB
Morning peak hour	239	333	Not used	259	674	662

Table 9.5: Journey time (seconds) for the routes – 2031 Do Minimum – Morning peak hour

Time Period	Hour	J7 Via Gunnels SB	J7 Via Gunnels NB	J7 Via Monkswood SB	J7 Via Monkswood NB	J8 Via Lytton Way NB	J8 Via Lytton Way SB
Morning Peak Period	08:00:00	215	338	0	256	725	620
	08:05:00	256.	278	0	237	661	630
	08:10:00	216	0	0	305	612	628
	08:15:00	204	332	0	0	610	665
	08:20:00	240	0	0	274	644	753
	08:25:00	228	339	0	260	729	680
	08:30:00	231	312	0	221	785	640
	08:35:00	199	425	0	0	682	670
	08:40:00	253	273	0	278	615	695
	08:45:00	254	0	0	243	646	606
	08:50:00	332	0	0	0	706	694

9.1.18 As it has already been mentioned, 2031 Do Minimum scenario gridlocks for the evening and Saturday peak period. The level of congestion is significant and modelled journey times could only be extracted for the first half hour of each period.

9.1.19 The values obtained for the first half hour of the evening peak period and Saturday peak periods are presented in **Table 9.6**. For the evening peak period, the journey times for Junction 8 via Lytton northbound is already very high - 332 seconds greater than the journey times for the base year model in the peak hour, which reflects the level of congestion that will occur very early on the network as a consequence of the new developments in the northern area of Stevenage.

9.1.20 Similarly for the evening peak period, the Saturday peak period also presents significantly long journey times early in the time period. In the first half hour the journey time values for the routes from / to Junction 8 are approximately 330 seconds greater than in the base year.

Table 9.6: Journey time (seconds) for the routes – 2031 Do Minimum – Evening and Saturday peak period

Time Period	Hour	J7 Via Gunnels SB	J7 Via Gunnels NB	J7 Via Monkswood SB	J7 Via Monkswood NB	J8 Via Lytton Way NB	J8 Via Lytton Way SB
Evening Peak Period	from 16:00:00 to 16:30:00	247	263	Not used	278	634	398
Saturday Peak Period	from 11:00:00 to 11:30:00	211	296	Not used	306	513	501

10 Summary and Conclusions

10 Summary and Conclusions

10.1 Introduction

10.1.1 This section summarises the key findings from the analysis of the model outputs for the different model scenarios. As agreed with HCC, we have undertaken qualitative analysis of the different scenarios based on observed queues and unreleased demand from the key model zones.

10.2 2031 Do Minimum

Demand

10.2.1 The northern area of Stevenage experiences a significant increase in demand as a result of the new developments in this area. These new developments increase the traffic demand on North Road and the Lister Hospital area. The congestion issues are particularly acute in the morning peak; as a consequence, there is a significant number of unreleased vehicles from High Street (zone 2).

10.2.2 The industrial area in the west of Stevenage (zone 49) concentrates a high level of employment, and is a key trip attractor in the morning peak, and key trip generator in the evening peak. The low capacity of the roundabout that provides access to this area causes queueing on Six Hills Way eastbound in the morning peak and unreleased demand in the evening peak.

10.2.3 The GSK site is a major trip attractor in Stevenage. The demand pattern and behaviour of this zone is very similar to the industrial zone previously mentioned. Significant level of demand access the zone in the morning peak, whilst in the evening, significant level of demand egress the zone.

Network performance

10.2.4 The performance of the A1(M) section encompasses by the Stevenage model improves with the A1(M) 'all lane running' scheme. The additional main carriageway lane increases capacity and reduces congestion on the A1(M).

10.2.5 The performance of the A1(M) Junction 8 roundabout is dependent to the layout of the A1(M) upstream of Junction 8. If only three-lane are considered on this section of the A1(M), there will be capacity issues on the A1(M) southbound off-slip at Junction 8 as well as "weaving" issues. This issue can be reduced by considering four-lane for the A1(M) upstream of Junction 8.

10.2.6 Hitchin Road presents very congested conditions for all the time periods in 2031 Do Minimum scenario. A number of reasons can explain this situation:

- Significant demand increase in the northern area of Stevenage as a result of new developments.
- Lack of capacity at A1(M) Junction 8, which does not allow releasing enough vehicles coming from Hitchin Road.
- Hitchin Road – Coreys Mill Lane roundabout reduces the capacity of Hitchin Road.

10.2.7 The congested conditions on Hitchin road are particularly severe in the evening peak. Queues extend from Junction 8 to Gunnels Wood Road – Clovelly Way roundabout and eventually block the network.

10.2.8 The two consecutive mini roundabouts on North Road cause queuing along this road. The modelling shows that the mini roundabouts are not able to accommodate with the demand increase coming from North Hertfordshire. These issues are mainly due to development within North Herts which is adjacent to the Stevenage urban area.

10.2.9 Lytton Way – Fairlands Way roundabout is one of the most critical junctions in Stevenage. The roundabout has been signalised, which has improved the performance in the morning peak. However, this mitigation measure is not sufficient for the evening and Saturday peak period. It should be noted that this provisional mitigation measure should be analysed further to confirm engineering and safety feasibility.

10.2.10 2031 Do Minimum scenario includes the updated hamburger scheme for the Gunnels Wood Road – Broadhall Way roundabout. This scheme significantly improves the performance of the junction. However, temporary queues were modelled in the morning peak on Gunnels Wood Road southbound, as only one lane provides access to GSK offices. In

the evening peak there is be unreleased demand from the GSK site due to the high level of demand egressing from this zone.

10.3 2031 Do Something

Demand

10.3.1 The car park consolidation proposal concentrates a significant level of demand in the multi storey car park.

10.3.2 The closure of a number of car parks in the town centre produces a significant reduction of the demand on the southern section of Lytton Way and consequently an increase of the demand on the northern section.

10.3.3 The northern area of Stevenage experiences a considerable growth due to the new developments, as it does for 2031 Do Minimum scenario. The demand in this zone generates congestion on North Road and the Lister Hospital area.

10.3.4 The performance of the GSK is similar to 2031 Do Minimum scenario. In the morning significant level of demand access the zone whilst in the evening, significant level of demand egress.

Network performance

10.3.5 2031 Do Something scenario presents similar issues in the north area of Stevenage compared to the 2031 Do Minimum scenario. Congestion levels on Hitchin Road are very high because of the lack of capacity at Junction 8. North Road will also be extremely congested as a consequence of the new demand generated by the new developments and the capacity constraint of the mini roundabouts on North Road.

10.3.6 Congestion levels on Hitchin Road are also high. Queues extend to Gunnels Wood Road – Clovelly Way roundabout and eventually block the network.

10.3.7 Lytton Way – Fairlands Way roundabout experience significant stress following the closure of Lytton Way and the car park consolidation and will not be able to accommodate with the demand for all modelled time periods. Traffic signals have been included at the roundabout, but they are not able to provide notable improvement to the operation of the roundabout. Further analysis of the roundabout will be required, as well as the exit and entrance to the car park.

10.3.8 Another effect of Lytton Way closure is the additional demand placed on St Georges Way and Gunnels Wood Road. There will be queues on many sections of the town centre, which will be more significant in the evening and Saturday peak periods.

10.3.9 The congested conditions in the town centre alongside the capacity constraints at Lytton Way – Fairlands Way roundabout will eventually cause gridlock for the highway network for all time periods.

10.3.10 The industrial area in the west of Stevenage (zone 49) attracts a significant number of trips in the morning peak, and generates a significant number of trips in the evening peak. The low capacity of the roundabout that provides access to this area cause temporary queues on Six Hills Way eastbound in the morning peak and unreleased demand in the evening peak.

10.4 2021 Do Minimum and 2021 Do Something

Demand

10.4.1 2021 Do Minimum and 2021 Do Something scenarios are identical except for the location of the bus station. The bus station remains at its current location for the 2021 Do Minimum scenario whilst for 2021 Do Something scenario the bus station is relocated to Danestrete and Southgate. However, the modelling shows that the bus relocation appears not to have a significant impact on the assignment and the outcomes of the 2021 Do Minimum and Do Something assignments are similar.

10.4.2 2021 scenarios do not include the new developments that are included in 2031 in the north area of Stevenage. The absence of these developments reduces the traffic issues in this area when compared to 2031 scenarios.

10.4.3 The demand from Fisher's Green Road (zone 19) experiences significant growth. The northbound trips from this zone increase the congestion on the northbound approach at Gunnels Wood Road – Martins Way roundabout, and the modelling shows that the queues can extend to Fisher´s Green road.

10.4.4 The industrial zone in west Stevenage (zone 49) is a destination and origin for a significant number of trips in the morning and evening peak period respectively. There is some unreleased demand in the evening peak from this zone the roundabout that provide access to it cannot accommodate the egressing employment traffic.

10.4.5 The GSK site attracts a significant level of demand in the morning peak period. Conversely, this zone is the origin of a significant level of trips in the evening peak period. The modelling shows that the egressing demand considered cannot be fully released based on the updated hamburger layout for the Gunnels Wood Road – Broadhall Way roundabout and there is a significant unreleased demand for the GSK site in the evening peak.

Network performance

10.4.6 A1(M) Junction 8 is congested, especially in the evening peak period. The lack of capacity at Junction 8 for the increase in demand causes queueing on Hitchin Road, Graveley Road, A1(M) northbound off-slip and the A602 from Hitchin.

10.4.7 Hitchin Road is congested for all modelled time periods. The worst conditions on Hitchin road arise during the evening peak period, where queues can extend to Gunnels Wood Road – Clovelly Way roundabout.

10.4.8 In the morning peak there are queues on Gunnels Wood Road southbound. These queues are caused by the vehicles trying to access the GSK site. The new layout for Gunnels Wood Road – Broadhall Way roundabout provides only one lane for access to the GSK site, which can cause temporary queues on the Gunnels Wood Road southbound.

10.4.9 Overall the network performance is worse in the evening peak period when compared to the other modelled time periods, which can be explained by the higher level of demand compared to the morning peak period.

10.5 Summary

10.5.1 As a summary, **Table 10.1** presents the performance for each scenario:

Table 10.1: Network performance for each scenario

Scenario	Morning peak	Evening peak	Saturday Inter peak
2031 Do Minimum	**North -** Extremely congested. **Centre -** Congested but working. **South -** Industrial area congested.	**North -** Blocked. **Centre -** Very congested. **South -** Industrial area and GSK unreleased demand.	**Centre -** Blocked.
2031 Do Something	**North -** Very congested. **Centre -** Blocked. **South -** Industrial area congested.	**North -** Blocked. **Centre -** Blocked. **South –** Industrial area and GSK unreleased demand.	**Centre -** Blocked.
2021 Do Minimum Do Something	**North -** Acceptable performance. **Centre -** Acceptable performance. **South -** Acceptable performance.	**North –** Very congested. **Centre -** Congested **South –** Industrial area and GSK unreleased demand.	**North -** Acceptable performance. **Centre -** Congested

10.6 Next steps

10.6.1 Based on the analysis and the conclusions performed on this initial test of the impacts, several next steps might be proposed for a further evaluation of the Local Plan and the network performance under future demand.

- Short term applications:

  1) Base year run including Lytton Way closure and car park consolidation.

  2) 2021 Do Something including Lytton Way closure and car park consolidation.

  3) 2021 Lytton Way closure test with SG1 development (without Smart motorway).

  4) 2031 test with vehicle demand reduction.

  5) Alternative planning scenarios: Considering only 2031 new developments in the town centre and car park consolidation.

  6) Gunnels Wood Rd / Broadhall Way roundabout design improvement.

  7) Standalone test of town centre development.

- Medium term applications:

  8) Test impact of further mitigation at Fairlands Way and Gunnels Wood Road junctions.

  9) Lytton Way scheme definition: design definition based on the key findings.

  10) Junction 8 improvements: Further analysis to improve the performance of the junction.

11 Appendix A: Planning data by site

11 Appendix A: Planning data by site

Table 11.1: Dwellings - Stevenage 2021

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zone	WHaSH Cordon	Paramics Zone	Dwellings by 2021
08/00467/FP	Stevenage	SMART	172 & R/O 170 Fairview Road, Stevenage	Dwellings	STARTED	3119	3119	30	11
10/00470/FPM	Stevenage	SMART	Land Off Edmonds Drive, Stevenage, SG2 9TJ	Dwellings	STARTED	3143	0	0	2
11/00714/FP	Stevenage	SMART	Adj, 55 Spring Drive, Stevenage, SG2 8BD	Dwellings	STARTED	2105	0	0	1
12/00251/FP	Stevenage	SMART	Land adj, 73 Whomerley Road, Stevenage, SG1 1SS	Dwellings	GRANTED	2126	90113	70	1
12/00231/FP	Stevenage	SMART	Jade Palace, 23-25 Middle Row, Stevenage, SG1 3AW	Dwellings	GRANTED	3120	3120	34	2
12/00480/EOT	Stevenage	SMART	Land To Rear Of, 4 Fishers Green, Stevenage, SG1 2JA	Dwellings	GRANTED	2128	90104	19	1
12/00435/FP	Stevenage	SMART	R/O 1 Chequers Bridge Road, Stevenage, SG1 2LY	Dwellings	GRANTED	3119	3119	30	1
12/00496/OPM	Stevenage	SMART	Lonsdale School, Webb Rise, Stevenage, SG1 5QU	Dwellings	GRANTED	3130	0	0	67
13/00125/FP	Stevenage	SMART	30 High Street, Stevenage, SG1 3AU	Dwellings	GRANTED	3120	3120	33	1
06/00301/FP	Stevenage	SMART	11 Walkern Road (Pond Close), Stevenage	Dwellings	GRANTED	3120	90117	35	12
12/00577/FPM	Stevenage	SMART	3, 4, 5 And 6 Ditchmore Lane, Stevenage, SG1 3LJ	Dwellings	0	3120	3120	38	6
13/00216/FP	Stevenage	SMART	R/O, 210 Fairview Road, Stevenage, SG1 2NA	Dwellings	GRANTED	3119	3113	41	1
13/00194/FP	Stevenage	SMART	Tarrant Court, Ingleside Drive, Stevenage, SG1 4RG	Dwellings	GRANTED	3133	3133	11	4
13/00137/FP	Stevenage	SMART	33 Queensway, Town Centre, Stevenage, SG1 1DN	Dwellings	STARTED	3122	3122	61	7
13/00443/CPA	Stevenage	SMART	Brickdale House, Swingate, Stevenage, SG1 1XG	Dwellings	SUPERSEDED	3122	3122	66	36
13/00342/FP	Stevenage	SMART	Adj, 9 Taywood Close, Stevenage, SG2 9QP	Dwellings	STARTED	3146	0	0	1
13/00422/FP	Stevenage	SMART	53 Coventry Close, Stevenage, SG1 4PD	Dwellings	GRANTED	3163	0	0	1
13/00527/FP	Stevenage	SMART	Land adj Cherrydown, Twinwoods, Stevenage, SG1 1RJ	Dwellings	STARTED	2125	0	0	1
13/00599/FP	Stevenage	SMART	Land Between, 7A And 11 North Road, Stevenage, SG1 4BD	Dwellings	GRANTED	3160	3160	15	1
13/00598/REG3	Stevenage	SMART	Land Adjacent To, 88 Marlborough Road, Stevenage, SG2 9HL	Dwellings	SUPERSEDED	2111	0	0	2
08/00485/RM	Stevenage	SMART	Former Mastercare Service & Distribution, Wedgwood Way, Stevenage	Dwellings	STARTED	3101	0	0	106
14/00002/REG3	Stevenage	SMART	Land Adjacent, 2 Peartree Way, Stevenage, SG2 9DZ	Dwellings	GRANTED	3147	0	0	1
14/00043/FP	Stevenage	SMART	Brickdale House, Swingate, Stevenage, SG1 1XG	Dwellings	GRANTED	3122	3122	66	4
13/00476/FP	Stevenage	SMART	Land adj, 15 Warwick Road, Stevenage, SG2 0QT	Dwellings	SUPERSEDED	2113	0	0	1
13/00541/FP	Stevenage	SMART	62 Barnwell, Stevenage, SG2 9SN	Dwellings	GRANTED	3145	0	0	1

Capabilities on project:
Transportation

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zone	WHaSH Cordon	Paramics Zone	Dwellings by 2021
13/00542/FPM	Stevenage	SMART	BP Petrol Filling Station, Primett Road, Stevenage, SG1 3EE	Dwellings	0	3120	3120	34	43
14/00095/FP	Stevenage	SMART	11, High Street, Stevenage, SG1 3BG	Dwellings	0	3120	3120	36	1
13/00595/REG3	Stevenage	SMART	Land Bounded By Bragbury Lane, Pembridge Gardens And Blenheim Way, Stevenage	Dwellings	GRANTED	2101	0	0	5
13/00585/RM	Stevenage	SMART	32, Essex Road, Stevenage, SG1 3EX	Dwellings	STARTED	3118	3118	26	5
14/00303/FP	Stevenage	SMART	320, Broadwater Crescent, Stevenage, SG2 8EX	Dwellings	GRANTED	2105	0	0	1
14/00004/REG3	Stevenage	SMART	Land Adjacent 8 Magellan Close, Stevenage, SG2 0NF	Dwellings	GRANTED	2111	0	0	1
10/00321/EOT	Stevenage	SMART	40 Fishers Green Stevenage Herts SG1 2JA	Dwellings	STARTED	2128	90104	19	2
13/00589/FP	Stevenage	SMART	37 Gonville Crescent, Stevenage, SG2 9LX	Dwellings	GRANTED	2108	0	0	2
14/00087/RMM	Stevenage	SMART	The Water Tower, Meredith Road, Stevenage	Dwellings	STARTED	3131	0	0	34
13/00516/FP	Stevenage	SMART	Tudor House Court, 2A Letchmore Road, Stevenage, SG1 3HU	Dwellings	GRANTED	3120	90116	37	5
14/00498/FP	Stevenage	SMART	Land adj, 54 Dryden Crescent, Stevenage, SG2 0JG	Dwellings	GRANTED	3136	0	0	1
14/00271/FP	Stevenage	SMART	29, Longfields, Stevenage, SG2 8QD	Dwellings	GRANTED	2104	0	0	1
14/00284/FP	Stevenage	SMART	10, Market Square, Stevenage, SG1 1EP	Dwellings	GRANTED	3122	3122	61	2
14/00329/FPM	Stevenage	SMART	Archer Road Neighbourhood Centre, Stevenage, SG1 5HF	Dwellings	0	3131	0	0	24
14/00446/FP	Stevenage	SMART	64 Angle Ways, Stevenage, SG2 9AR	Dwellings	GRANTED	3149	0	0	1
09/00449	Stevenage	SMART	Muslim Community Centre, Vardon Road, Stevenage, SG1 5JE	Dwellings	0	3131	0	0	1
14/00553/CPA	Stevenage	SMART	DuPont (UK) Ltd, Wedgwood Way, Stevenage, SG1 4QN	Dwellings	GRANTED	3163	0	0	73
13/00488/FP	Stevenage	SMART	107, 107A, 109 And 109A High Street, Stevenage, SG1 3HS	Dwellings	GRANTED	3120	3120	34	2
14/00220/CPA	Stevenage	SMART	Southgate House, Southgate, Stevenage, SG1 1HG	Dwellings	GRANTED	3122	3122	60	65
14/00208/OP	Stevenage	SMART	Shephall Way Surgery, 29 Shephall Way, Stevenage, SG2 9QN	Dwellings	GRANTED	3146	0	0	3
14/00078/FPM	Stevenage	SMART	Brickdale House, Swingate, Stevenage, SG1 1XG	Dwellings	STARTED	3122	3122	66	17
14/00064/FPM	Stevenage	SMART	Rileys, 2 Letchmore Road, Stevenage, SG1 3HU	Dwellings	STARTED	3121	90116	37	38
14/00194/FP	Stevenage	SMART	Adj, 29 Long Leaves, Stevenage, SG2 9AX	Dwellings	GRANTED	3149	0	0	1
14/00424/FP	Stevenage	SMART	Bandley House, Bandley Rise, Stevenage, SG2 9NR	Dwellings	STARTED	2108	0	0	1
14/00181/FP	Stevenage	SMART	35 Bandley Rise, Stevenage, SG2 9LS	Dwellings	STARTED	2108	0	0	1
14/00450/FP	Stevenage	SMART	18 Meadow Way, Stevenage, SG1 1QB	Dwellings	GRANTED	2125	0	0	1
10/00488/FP	Stevenage	SMART	67 High Street, Stevenage, SG1 3AG	Dwellings	STARTED	3120	3120	34	2
13/00241/FPM	Stevenage	SMART	Twin Foxes, 54 Rockingham Way, Stevenage, SG1 1SJ	Dwellings	GRANTED	2126	90113	70	13
14/00579/FP	Stevenage	SMART	Land R/O, 1 Fir Close, Stevenage, SG2 8DA	Dwellings	GRANTED	3152	0	0	1
14/00038/REG3M	Stevenage	SMART	Land Rear Of, Ferrier Road And Magellan Close, Stevenage	Dwellings	GRANTED	2112	0	0	34
14/00494/FP	Stevenage	SMART	Adj, 32 Taywood Close, Stevenage, SG2 9QP	Dwellings	STARTED	3146	0	0	1

Capabilities on project:
Transportation

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zone	WHaSH Cordon	Paramics Zone	Dwellings by 2021
14/00702/CPA	Stevenage	SMART	Bank House, Primett Road, Stevenage	Dwellings	STARTED	3120	3120	34	44
14/00581/REG3	Stevenage	SMART	Land Rear Of 129 To 145, Broad Oak Way, Stevenage, SG2 8RB	Dwellings	GRANTED	3152	90111	92	4
14/00627/FP	Stevenage	SMART	7, Inskip Crescent, Stevenage, SG1 1JX	Dwellings	STARTED	3153	90115	68	2
14/00705/CPA	Stevenage	SMART	Brickdale House, Swingate, Stevenage, SG1 1XG	Dwellings	GRANTED	3122	3122	66	146
10/00570/FP	Stevenage	SMART	Land Adjacent To Old Smithy 1 Hertford Road Stevenage Herts SG2 8DR	Dwellings	STARTED	2106	90110	91	1
14/00698/FP	Stevenage	SMART	47, Whomerley Road, Stevenage, SG1 1SR	Dwellings	SUPERSEDED	2126	0	0	1
14/00715/CPA	Stevenage	SMART	Antelope House, Ardent House, Atlantic House & Sheffield Hou, Gates Way, Stevenage, SG1 3NS	Dwellings	GRANTED	3120	90116	37	91
15/00032/CPA	Stevenage	SMART	Londis 32 - 34 Queensway Town Centre Stevenage Herts SG1 1BS	Dwellings	GRANTED	3122	3122	63	3
15/00025/FP	Stevenage	SMART	Wayside, Rectory Lane, Stevenage, SG1 4BX	Dwellings	GRANTED	3134	90119	12	2
11/00250/FP	Stevenage	SMART	Norton Green Farm Barn, Chadwell Road, Norton Green, Stevenage, SG1 2DS	Dwellings	STARTED	5112	0	0	1
11/00345/EOT	Stevenage	SMART	Land Adjacent, 47 Whomerley Road, Stevenage, SG1 1SR	Dwellings	STARTED	2126	0	0	1
12/00547/OPM	Stevenage	SMART	Longfield Fire & Rescue site Hitchin Road Stevenage SG1 4AE	Dwellings		3160	3160	18	95
15/00348/FP	Stevenage	SMART	1 Colestrete, Stevenage, SG1 1RB	Dwellings	GRANTED	2125	0	0	1
15/00115/FP	Stevenage	SMART	Voyage Care, 49 Fellowes Way, Stevenage, SG2 8BS	Dwellings	GRANTED	3152	90111	93	1
15/00118/FP	Stevenage	SMART	Land adj, 142 Leaves Spring, Stevenage, SG2 9BG	Dwellings	GRANTED	3147	0	0	1
15/00273/CPA	Stevenage	SMART	Brickdale House, Danestrete, Stevenage, SG1 1XQ	Dwellings	STARTED	3122	3122	66	1
15/00326/FP	Stevenage	SMART	Southgate House, Southgate, Stevenage, SG1 1HG	Dwellings	GRANTED	3122	3122	60	4
15/00532/RM	Stevenage	SMART	Land Adj To, 47 Breakspear, Stevenage, SG2 9SQ	Dwellings	GRANTED	3144	0	0	4
15/00406/FP	Stevenage	SMART	504 Canterbury Way, Stevenage, SG1 4ED	Dwellings	GRANTED	3163	0	0	1
15/00225/CPA	Stevenage	SMART	Six Hills House, London Road, Stevenage, SG1 1YB	Dwellings	GRANTED	3104	3104	79	15
15/00244/FP	Stevenage	SMART	Land adj, 15 Warwick Road, Stevenage, SG2 0QT	Dwellings	GRANTED	2113	0	0	1
15/00399/CPA	Stevenage	SMART	Crompton Joinery, 25 Boulton Road, Stevenage, SG1 4QX	Dwellings	GRANTED	3101	0	0	4
15/00269/FP	Stevenage	SMART	The Mallard, 37 Julians Road, Stevenage, SG1 3ES	Dwellings	GRANTED	3118	3118	26	4
15/00395/RMM	Stevenage	SMART	Vincent Court, Fishers Green Road, Stevenage	Dwellings	GRANTED	2128	90104	19	37
15/00483/CPA	Stevenage	SMART	Six Hills House, London Road, Stevenage, SG1 1YB	Dwellings	STARTED	3104	3104	79	128
15/00099/FP	Stevenage	SMART	135 Sish Lane, Stevenage, SG1 3LP	Dwellings	GRANTED	3127	0	0	1
14/00425/FP	Stevenage	SMART	Land accessed from Malvern Close, R/O 1 Aspen Close, Stevenage, SG2 8SJ	Dwellings	GRANTED	2102	0	0	1
15/00120/FP	Stevenage	SMART	7th Floor, Southgate House, Southgate, Stevenage, SG1 1HG	Dwellings	GRANTED	3122	3122	60	5
15/00080/FP	Stevenage	SMART	3 And 4 Ditchmore Lane, Stevenage, SG1 3LJ	Dwellings	GRANTED	3120	3120	38	6
15/00125/FP	Stevenage	SMART	40 Vinters Avenue, Stevenage, SG1 1QU	Dwellings	GRANTED	2127	0	0	1
15/00128/FP	Stevenage	SMART	Adj, 14 Plash Drive, Stevenage, SG1 1LW	Dwellings	GRANTED	3153	90115	68	1

Capabilities on project:
Transportation

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zone	WHaSH Cordon	Paramics Zone	Dwellings by 2021
15/00145/FP	Stevenage	SMART	28 Chester Road, Stevenage, SG1 4LD	Dwellings	GRANTED	3163	0	0	1
15/00176/FP	Stevenage	SMART	32 Jessop Road Stevenage SG1 5NG	Dwellings		2117	0	0	1
14/00559/OPM	Stevenage	SMART	Matalan, Stevenage	Dwellings		3122	3122	64	526
HO3	Stevenage	Local Plan for 2021	0	Dwellings	0	5107	0	0	800
HO1/11	Stevenage	Local Plan for 2021	gb 15/12/15 Local Plan Consult 06 Jan 16 - Land West of North Road (rugby Club)	Dwellings	0	5108	5108	5	149
HO1/13	Stevenage	Local Plan for 2021	gb 15/12/15 Local Plan Consult 06 Jan 16 - Scout Hut Drakes Drive	Dwellings	0	3135	0	0	18
HO1/10	Stevenage	Local Plan for 2021	gb 15/12/15 Local Plan Consult 06 Jan 16 - Possibly Land at Eliot Road (16 dwell)	Dwellings	0	2113	0	0	16
NH1/22	Stevenage	Local Plan for 2021	gb 15/12/15 Local Plan Consult 06 Jan 16 - Former pin green playing field	Dwellings	0	3131	0	0	42
HO1/5	Stevenage	Local Plan for 2021	gb 15/12/15 Local Plan Consult 06 Jan 16 - Ex play centre, scarborough ave	Dwellings	0	2130	0	0	15
HO1/4	Stevenage	Local Plan for 2021	gb 15/12/15 Local Plan Consult 06 Jan 16 - Dunn Close garage court	Dwellings	0	2126	90112	71	5
HO2	Stevenage	Local Plan for 2021	0	Dwellings	0	5124	0	0	1350
HO1/7	Stevenage	Local Plan for 2021	gb 15/12/15 Local Plan Consult 06 Jan 16 - Fry Road day nursery	Dwellings	0	3140	0	0	6
HO1/3	Stevenage	Local Plan for 2021	gb 15/12/15 Local Plan Consult 06 Jan 16 - Burwell Road neighbourhood centre	Dwellings	0	3141	0	0	20
HO1/14	Stevenage	Local Plan for 2021	gb 15/12/15 Local Plan Consult 06 Jan 16 - Shephall Centre and adj amenity land	Dwellings	0	3145	0	0	34
HO1/12	Stevenage	Local Plan for 2021	gb 15/12/15 Local Plan Consult 06 Jan 16 - Marymead neighbourhood centre	Dwellings	0	3151	0	0	60
NH2/29	Stevenage	Local Plan for 2021	0	Dwellings	0	2102	0	0	8
HO1/9	Stevenage	Local Plan for 2021	gb 15/12/15 Local Plan Consult 06 Jan 16 - Kenilworth neighbourhood centre	Dwellings	0	2102	0	0	65
HO/4	Stevenage	Local Plan for 2021	0	Dwellings	0	2101	0	0	400
HO/4	Stevenage	Local Plan for 2021	0	Dwellings	0	2101	0	0	150
HC1/2 & HO1/1	Stevenage	Local Plan for 2021	gb 15/12/15 Local Plan Consult 06 Jan 16 - Bedwell Crescent neighbourhood centre	Dwellings	0	2125	0	0	45
HO1/15	Stevenage	Local Plan for 2021	gb 15/12/15 Local Plan Consult 06 Jan 16 - Shephall View Policy H3	Dwellings	0	2125	0	0	25
Town Centre	Stevenage	Local Plan for 2021	gb 15/12/15 Local Plan Consult 06 Jan 16 - Combined Town Centre Sites	Dwellings	Committed	3112	3112	44	**Distributed**
Town Centre1	Stevenage	Local Plan for 2021	Combined Town Centre location redistributed	Dwellings	75%	3112	3112	44	-
Town Centre2	Stevenage	Local Plan for 2021	Combined Town Centre location redistributed	Dwellings		3104	3104	79	-
Town Centre3	Stevenage	Local Plan for 2021	Combined Town Centre location redistributed	Dwellings	5%	3109	3109	56	-
Town Centre4	Stevenage	Local Plan for 2021	Combined Town Centre location redistributed	Dwellings		3120	3120	38	-
Town Centre5	Stevenage	Local Plan for 2021	Combined Town Centre location redistributed	Dwellings	10%	3122	3122	63	-
Town Centre6	Stevenage	Local Plan for 2021	Combined Town Centre location redistributed	Dwellings	10%	3122	3122	66	-
Town Centre7	Stevenage	Local Plan for 2021	Combined Town Centre location redistributed	Dwellings		3122	3122	60	-

Capabilities on project:
Transportation

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zone	WHaSH Cordon	Paramics Zone	Dwellings by 2021
Scenario C	Stevenage	Committed	2,700 Residential development in the town centre	Dwellings	Committed	3112	3112	44	**Distributed**
ScenarioC1	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings		3112	3112	44	-
ScenarioC2	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings	33%	3104	3104	79	167.64
ScenarioC3	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings		3109	3109	56	-
ScenarioC4	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings		3120	3120	38	-
ScenarioC5	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings		3122	3122	63	-
ScenarioC6	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings	48%	3122	3122	66	243.84
ScenarioC7	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings	19%	3122	3122	60	96.52

Table 11.2: Dwellings - Stevenage 2031

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zone	WHaSH Cordon	Paramics Zone	Dwellings by 2031
08/00467/FP	Stevenage	SMART	172 & R/O 170 Fairview Road, Stevenage	Dwellings	STARTED	3119	3119	30	11
10/00470/FPM	Stevenage	SMART	Land Off Edmonds Drive, Stevenage, SG2 9TJ	Dwellings	STARTED	3143	0	0	2
11/00714/FP	Stevenage	SMART	Adj, 55 Spring Drive, Stevenage, SG2 8BD	Dwellings	STARTED	2105	0	0	1
12/00251/FP	Stevenage	SMART	Land adj, 73 Whomerley Road, Stevenage, SG1 1SS	Dwellings	GRANTED	2126	90113	70	1
12/00231/FP	Stevenage	SMART	Jade Palace, 23-25 Middle Row, Stevenage, SG1 3AW	Dwellings	GRANTED	3120	3120	34	2
12/00480/EOT	Stevenage	SMART	Land To Rear Of, 4 Fishers Green, Stevenage, SG1 2JA	Dwellings	GRANTED	2128	90104	19	1
12/00435/FP	Stevenage	SMART	R/O 1 Chequers Bridge Road, Stevenage, SG1 2LY	Dwellings	GRANTED	3119	3119	30	1
12/00496/OPM	Stevenage	SMART	Lonsdale School, Webb Rise, Stevenage, SG1 5QU	Dwellings	GRANTED	3130	0	0	67
13/00125/FP	Stevenage	SMART	30 High Street, Stevenage, SG1 3AU	Dwellings	GRANTED	3120	3120	33	1
06/00301/FP	Stevenage	SMART	11 Walkern Road (Pond Close), Stevenage	Dwellings	GRANTED	3120	90117	35	12
12/00577/FPM	Stevenage	SMART	3, 4, 5 And 6 Ditchmore Lane, Stevenage, SG1 3LJ	Dwellings	0	3120	3120	38	6
13/00216/FP	Stevenage	SMART	R/O, 210 Fairview Road, Stevenage, SG1 2NA	Dwellings	GRANTED	3119	3113	41	1
13/00194/FP	Stevenage	SMART	Tarrant Court, Ingleside Drive, Stevenage, SG1 4RG	Dwellings	GRANTED	3133	3133	11	4
13/00137/FP	Stevenage	SMART	33 Queensway, Town Centre, Stevenage, SG1 1DN	Dwellings	STARTED	3122	3122	61	7
13/00443/CPA	Stevenage	SMART	Brickdale House, Swingate, Stevenage, SG1 1XG	Dwellings	SUPERSEDED	3122	3122	66	36
13/00342/FP	Stevenage	SMART	Adj, 9 Taywood Close, Stevenage, SG2 9QP	Dwellings	STARTED	3146	0	0	1
13/00422/FP	Stevenage	SMART	53 Coventry Close, Stevenage, SG1 4PD	Dwellings	GRANTED	3163	0	0	1
13/00527/FP	Stevenage	SMART	Land adj Cherrydown, Twinwoods, Stevenage, SG1 1RJ	Dwellings	STARTED	2125	0	0	1
13/00599/FP	Stevenage	SMART	Land Between, 7A And 11 North Road, Stevenage, SG1 4BD	Dwellings	GRANTED	3160	3160	15	1
13/00598/REG3	Stevenage	SMART	Land Adjacent To, 88 Marlborough Road, Stevenage, SG2 9HL	Dwellings	SUPERSEDED	2111	0	0	2
08/00485/RM	Stevenage	SMART	Former Mastercare Service & Distribution, Wedgwood Way, Stevenage	Dwellings	STARTED	3101	0	0	106
14/00002/REG3	Stevenage	SMART	Land Adjacent, 2 Peartree Way, Stevenage, SG2 9DZ	Dwellings	GRANTED	3147	0	0	1
14/00043/FP	Stevenage	SMART	Brickdale House, Swingate, Stevenage, SG1 1XG	Dwellings	GRANTED	3122	3122	66	4
13/00476/FP	Stevenage	SMART	Land adj, 15 Warwick Road, Stevenage, SG2 0QT	Dwellings	SUPERSEDED	2113	0	0	1
13/00541/FP	Stevenage	SMART	62 Barnwell, Stevenage, SG2 9SN	Dwellings	GRANTED	3145	0	0	1
13/00542/FPM	Stevenage	SMART	BP Petrol Filling Station, Primett Road, Stevenage, SG1 3EE	Dwellings	0	3120	3120	34	43
14/00095/FP	Stevenage	SMART	11, High Street, Stevenage, SG1 3BG	Dwellings	0	3120	3120	36	1
13/00595/REG3	Stevenage	SMART	Land Bounded By Bragbury Lane, Pembridge Gardens And Blenheim Way, Stevenage	Dwellings	GRANTED	2101	0	0	5
13/00585/RM	Stevenage	SMART	32, Essex Road, Stevenage, SG1 3EX	Dwellings	STARTED	3118	3118	26	5
14/00303/FP	Stevenage	SMART	320, Broadwater Crescent, Stevenage, SG2 8EX	Dwellings	GRANTED	2105	0	0	1
14/00004/REG3	Stevenage	SMART	Land Adjacent 8 Magellan Close, Stevenage, SG2 0NF	Dwellings	GRANTED	2111	0	0	1

Capabilities on project:
Transportation

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zone	WHaSH Cordon	Paramics Zone	Dwellings by 2031
10/00321/EOT	Stevenage	SMART	40 Fishers Green Stevenage Herts SG1 2JA	Dwellings	STARTED	2128	90104	19	2
13/00589/FP	Stevenage	SMART	37 Gonville Crescent, Stevenage, SG2 9LX	Dwellings	GRANTED	2108	0	0	2
14/00087/RMM	Stevenage	SMART	The Water Tower, Meredith Road, Stevenage	Dwellings	STARTED	3131	0	0	34
13/00516/FP	Stevenage	SMART	Tudor House Court, 2A Letchmore Road, Stevenage, SG1 3HU	Dwellings	GRANTED	3120	90116	37	5
14/00498/FP	Stevenage	SMART	Land adj, 54 Dryden Crescent, Stevenage, SG2 0JG	Dwellings	GRANTED	3136	0	0	1
14/00271/FP	Stevenage	SMART	29, Longfields, Stevenage, SG2 8QD	Dwellings	GRANTED	2104	0	0	1
14/00284/FP	Stevenage	SMART	10, Market Square, Stevenage, SG1 1EP	Dwellings	GRANTED	3122	3122	61	2
14/00329/FPM	Stevenage	SMART	Archer Road Neighbourhood Centre, Stevenage, SG1 5HF	Dwellings	0	3131	0	0	24
14/00446/FP	Stevenage	SMART	64 Angle Ways, Stevenage, SG2 9AR	Dwellings	GRANTED	3149	0	0	1
09/00449	Stevenage	SMART	Muslim Community Centre, Vardon Road, Stevenage, SG1 5JE	Dwellings	0	3131	0	0	1
14/00553/CPA	Stevenage	SMART	DuPont (UK) Ltd, Wedgwood Way, Stevenage, SG1 4QN	Dwellings	GRANTED	3163	0	0	73
13/00488/FP	Stevenage	SMART	107, 107A, 109 And 109A High Street, Stevenage, SG1 3HS	Dwellings	GRANTED	3120	3120	34	2
14/00220/CPA	Stevenage	SMART	Southgate House, Southgate, Stevenage, SG1 1HG	Dwellings	GRANTED	3122	3122	60	65
14/00208/OP	Stevenage	SMART	Shephall Way Surgery, 29 Shephall Way, Stevenage, SG2 9QN	Dwellings	GRANTED	3146	0	0	3
14/00078/FPM	Stevenage	SMART	Brickdale House, Swingate, Stevenage, SG1 1XG	Dwellings	STARTED	3122	3122	66	17
14/00064/FPM	Stevenage	SMART	Rileys, 2 Letchmore Road, Stevenage, SG1 3HU	Dwellings	STARTED	3121	90116	37	38
14/00194/FP	Stevenage	SMART	Adj, 29 Long Leaves, Stevenage, SG2 9AX	Dwellings	GRANTED	3149	0	0	1
14/00424/FP	Stevenage	SMART	Bandley House, Bandley Rise, Stevenage, SG2 9NR	Dwellings	STARTED	2108	0	0	1
14/00181/FP	Stevenage	SMART	35 Bandley Rise, Stevenage, SG2 9LS	Dwellings	STARTED	2108	0	0	1
14/00450/FP	Stevenage	SMART	18 Meadow Way, Stevenage, SG1 1QB	Dwellings	GRANTED	2125	0	0	1
10/00488/FP	Stevenage	SMART	67 High Street, Stevenage, SG1 3AG	Dwellings	STARTED	3120	3120	34	2
13/00241/FPM	Stevenage	SMART	Twin Foxes, 54 Rockingham Way, Stevenage, SG1 1SJ	Dwellings	GRANTED	2126	90113	70	13
14/00579/FP	Stevenage	SMART	Land R/O, 1 Fir Close, Stevenage, SG2 8DA	Dwellings	GRANTED	3152	0	0	1
14/00038/REG3M	Stevenage	SMART	Land Rear Of, Ferrier Road And Magellan Close, Stevenage	Dwellings	GRANTED	2112	0	0	34
14/00494/FP	Stevenage	SMART	Adj, 32 Taywood Close, Stevenage, SG2 9QP	Dwellings	STARTED	3146	0	0	1
14/00702/CPA	Stevenage	SMART	Bank House, Primett Road, Stevenage	Dwellings	STARTED	3120	3120	34	44
14/00581/REG3	Stevenage	SMART	Land Rear Of 129 To 145, Broad Oak Way, Stevenage, SG2 8RB	Dwellings	GRANTED	3152	90111	92	4
14/00627/FP	Stevenage	SMART	7, Inskip Crescent, Stevenage, SG1 1JX	Dwellings	STARTED	3153	90115	68	2
14/00705/CPA	Stevenage	SMART	Brickdale House, Swingate, Stevenage, SG1 1XG	Dwellings	GRANTED	3122	3122	66	146
10/00570/FP	Stevenage	SMART	Land Adjacent To Old Smithy 1 Hertford Road Stevenage Herts SG2 8DR	Dwellings	STARTED	2106	90110	91	1
14/00698/FP	Stevenage	SMART	47, Whomerley Road, Stevenage, SG1 1SR	Dwellings	SUPERSEDED	2126	0	0	1

Capabilities on project:
Transportation

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zone	WHaSH Cordon	Paramics Zone	Dwellings by 2031
14/00715/CPA	Stevenage	SMART	Antelope House, Ardent House, Atlantic House & Sheffield Hou, Gates Way, Stevenage, SG1 3NS	Dwellings	GRANTED	3120	90116	37	91
15/00032/CPA	Stevenage	SMART	Londis 32 - 34 Queensway Town Centre Stevenage Herts SG1 1BS	Dwellings	GRANTED	3122	3122	63	3
15/00025/FP	Stevenage	SMART	Wayside, Rectory Lane, Stevenage, SG1 4BX	Dwellings	GRANTED	3134	90119	12	2
11/00250/FP	Stevenage	SMART	Norton Green Farm Barn, Chadwell Road, Norton Green, Stevenage, SG1 2DS	Dwellings	STARTED	5112	0	0	1
11/00345/EOT	Stevenage	SMART	Land Adjacent, 47 Whomerley Road, Stevenage, SG1 1SR	Dwellings	STARTED	2126	0	0	1
12/00547/OPM	Stevenage	SMART	Longfield Fire & Rescue site Hitchin Road Stevenage SG1 4AE	Dwellings		3160	3160	18	95
15/00348/FP	Stevenage	SMART	1 Colestrete, Stevenage, SG1 1RB	Dwellings	GRANTED	2125	0	0	1
15/00115/FP	Stevenage	SMART	Voyage Care, 49 Fellowes Way, Stevenage, SG2 8BS	Dwellings	GRANTED	3152	90111	93	1
15/00118/FP	Stevenage	SMART	Land adj, 142 Leaves Spring, Stevenage, SG2 9BG	Dwellings	GRANTED	3147	0	0	1
15/00273/CPA	Stevenage	SMART	Brickdale House, Danestrete, Stevenage, SG1 1XQ	Dwellings	STARTED	3122	3122	66	1
15/00326/FP	Stevenage	SMART	Southgate House, Southgate, Stevenage, SG1 1HG	Dwellings	GRANTED	3122	3122	60	4
15/00532/RM	Stevenage	SMART	Land Adj To, 47 Breakspear, Stevenage, SG2 9SQ	Dwellings	GRANTED	3144	0	0	4
15/00406/FP	Stevenage	SMART	504 Canterbury Way, Stevenage, SG1 4ED	Dwellings	GRANTED	3163	0	0	1
15/00225/CPA	Stevenage	SMART	Six Hills House, London Road, Stevenage, SG1 1YB	Dwellings	GRANTED	3104	3104	79	15
15/00244/FP	Stevenage	SMART	Land adj, 15 Warwick Road, Stevenage, SG2 0QT	Dwellings	GRANTED	2113	0	0	1
15/00399/CPA	Stevenage	SMART	Crompton Joinery, 25 Boulton Road, Stevenage, SG1 4QX	Dwellings	GRANTED	3101	0	0	4
15/00269/FP	Stevenage	SMART	The Mallard, 37 Julians Road, Stevenage, SG1 3ES	Dwellings	GRANTED	3118	3118	26	4
15/00395/RMM	Stevenage	SMART	Vincent Court, Fishers Green Road, Stevenage	Dwellings	GRANTED	2128	90104	19	37
15/00483/CPA	Stevenage	SMART	Six Hills House, London Road, Stevenage, SG1 1YB	Dwellings	STARTED	3104	3104	79	128
15/00099/FP	Stevenage	SMART	135 Sish Lane, Stevenage, SG1 3LP	Dwellings	GRANTED	3127	0	0	1
14/00425/FP	Stevenage	SMART	Land accessed from Malvern Close, R/O 1 Aspen Close, Stevenage, SG2 8SJ	Dwellings	GRANTED	2102	0	0	1
15/00120/FP	Stevenage	SMART	7th Floor, Southgate House, Southgate, Stevenage, SG1 1HG	Dwellings	GRANTED	3122	3122	60	5
15/00080/FP	Stevenage	SMART	3 And 4 Ditchmore Lane, Stevenage, SG1 3LJ	Dwellings	GRANTED	3120	3120	38	6
15/00125/FP	Stevenage	SMART	40 Vinters Avenue, Stevenage, SG1 1QU	Dwellings	GRANTED	2127	0	0	1
15/00128/FP	Stevenage	SMART	Adj, 14 Plash Drive, Stevenage, SG1 1LW	Dwellings	GRANTED	3153	90115	68	1
15/00145/FP	Stevenage	SMART	28 Chester Road, Stevenage, SG1 4LD	Dwellings	GRANTED	3163	0	0	1
15/00176/FP	Stevenage	SMART	32 Jessop Road Stevenage SG1 5NG	Dwellings		2117	0	0	1
14/00559/OPM	Stevenage	SMART	Matalan, Stevenage	Dwellings		3122	3122	64	526
HO3	Stevenage	Local Plan (Stev)	0	Dwellings	0	5107	0	0	800
HO1/11	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Land West of North Road (rugby Club)	Dwellings	0	5108	5108	5	149
HC1/7 & HO1/18	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - The Oval neighbourhood centre	Dwellings	0	2117	0	0	275

Capabilities on project:
Transportation

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zone	WHaSH Cordon	Paramics Zone	Dwellings by 2031
HO1/13	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Scout Hut Drakes Drive	Dwellings	0	3135	0	0	18
HO1/10	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Possibly Land at Eliot Road (16 dwell)	Dwellings	0	2113	0	0	16
NH1/22	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Former pin green playing field	Dwellings	0	3131	0	0	42
HO1/5	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Ex play centre, scarborough ave	Dwellings	0	2130	0	0	15
HO1/4	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Dunn Close garage court	Dwellings	0	2126	90112	71	5
HO2	Stevenage	Local Plan (Stev)	0	Dwellings	0	5124	0	0	1350
HO1/8	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Ken Brown car showroom	Dwellings	0	2110	0	0	36
HO1/7	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Fry Road day nursery	Dwellings	0	3140	0	0	6
HO1/3	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Burwell Road neighbourhood centre	Dwellings	0	3141	0	0	20
HO1/14	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Shephall Centre and adj amenity land	Dwellings	0	3145	0	0	34
HO1/12	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Marymead neighbourhood centre	Dwellings	0	3151	0	0	60
NH2/29	Stevenage	Local Plan (Stev)	0	Dwellings	0	2102	0	0	8
HO1/9	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Kenilworth neighbourhood centre	Dwellings	0	2102	0	0	65
HO/4	Stevenage	Local Plan (Stev)	0	Dwellings	0	2101	0	0	400
HO/4	Stevenage	Local Plan (Stev)	0	Dwellings	0	2101	0	0	150
HC1/2 & HO1/1	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Bedwell Crescent neighbourhood centre	Dwellings	0	2125	0	0	45
HO1/15	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Shephall View Policy H3	Dwellings	0	2125	0	0	25
HC1/3 & HC1/16	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Glebe neighbourhood centre	Dwellings	0	2113	0	0	35
HO1/17 & HC1/4	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - The Hyde neighbourhood centre	Dwellings	0	3144	0	0	50
Town Centre	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Combined Town Centre Sites	Dwellings	Committed	3112	3112	44	**Distributed**
Town Centre1	Stevenage	Local Plan (Stev)	Combined Town Centre location redistributed	Dwellings	75%	3112	3112	44	1274.25
Town Centre2	Stevenage	Local Plan (Stev)	Combined Town Centre location redistributed	Dwellings		3104	3104	79	-
Town Centre3	Stevenage	Local Plan (Stev)	Combined Town Centre location redistributed	Dwellings	5%	3109	3109	56	84.95
Town Centre4	Stevenage	Local Plan (Stev)	Combined Town Centre location redistributed	Dwellings		3120	3120	38	-
Town Centre5	Stevenage	Local Plan (Stev)	Combined Town Centre location redistributed	Dwellings	10%	3122	3122	63	169.9
Town Centre6	Stevenage	Local Plan (Stev)	Combined Town Centre location redistributed	Dwellings	10%	3122	3122	66	169.9
Town Centre7	Stevenage	Local Plan (Stev)	Combined Town Centre location redistributed	Dwellings		3122	3122	60	-
Scenario C	Stevenage	Committed	2,700 Residential development in the town centre	Dwellings	Committed	3112	3112	44	Distributed

Capabilities on project:
Transportation

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zone	WHaSH Cordon	Paramics Zone	Dwellings by 2031
ScenarioC1	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings		3112	3112	44	-
ScenarioC2	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings	33%	3104	3104	79	167.64
ScenarioC3	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings		3109	3109	56	-
ScenarioC4	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings		3120	3120	38	-
ScenarioC5	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings		3122	3122	63	-
ScenarioC6	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings	48%	3122	3122	66	243.84
ScenarioC7	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings	19%	3122	3122	60	96.52

Table 11.3: Employment - Stevenage 2021

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zones	WHaSH Cordon	Paramics Zones	Employment by 2021 sqm
05/00621/OP	Stevenage	SMART	Gsk South Of Broadhall Way, Gunnels Wood Road, Stevenage	Employment	GRANTED	3117	90109	87	39392
05/00621/OP	Stevenage	SMART	Gsk South Of Broadhall Way, Gunnels Wood Road, Stevenage	Employment	GRANTED	3117	90109	87	3000
05/00621/OP	Stevenage	SMART	Gsk South Of Broadhall Way, Gunnels Wood Road, Stevenage	Employment	GRANTED	3117	90109	87	7287
11/00337/OPM	Stevenage	SMART	Glaxo SmithKline Research And Development Ltd, Gunnels Wood Road, Stevenage, SG1 2NY	Employment	GRANTED	3117	90109	87	3556
11/00530/EOT	Stevenage	SMART	Land At Norton Road, Stevenage	Employment	STARTED	3114	3114	48	854
11/00530/EOT	Stevenage	SMART	Land At Norton Road, Stevenage	Employment	STARTED	3114	3114	48	855
08/00429/FP	Stevenage	SMART	J Sainsbury Plc, Hitchin Road, Stevenage, SG1 4AE	Employment	STARTED	3133	3133	4	4928
12/00172/FP	Stevenage	SMART	Spice Rouge, 99 High Street, Stevenage, SG1 3HR	Employment	GRANTED	3120	3120	34	15
12/00257/FP	Stevenage	SMART	Unit A, Dunelm Mill, Roebuck Retail Park, London Road , Stevenage	Employment	STARTED	3126	3126	90	281
10/00118/FP	Stevenage	SMART	Pyramid House, Oxleys Road, Stevenage	Employment	GRANTED	3144	0	0	223
11/00701/FPM	Stevenage	SMART	Plot 2000 Arlington Business Park, Gunnels Wood Road, Stevenage	Employment	GRANTED	3115	3115	76	3770
11/00701/FPM	Stevenage	SMART	Plot 2000 Arlington Business Park, Gunnels Wood Road, Stevenage	Employment	GRANTED	3115	3115	76	511
12/00473/FP	Stevenage	SMART	86 Queensway, Town Centre, Stevenage, SG1 1EG	Employment	GRANTED	3109	3122	66	284
12/00463/FP	Stevenage	SMART	Cromer House Caxton Way Stevenage Herts SG1 2DF	Employment	SUPERSEDED	3114	3114	49	255
12/00463/FP	Stevenage	SMART	Cromer House Caxton Way Stevenage Herts SG1 2DF	Employment	SUPERSEDED	3114	3114	49	2553
12/00507/FP	Stevenage	SMART	Land At Leyden Road, Stevenage	Employment	GRANTED	3115	3115	77	364
12/00507/FP	Stevenage	SMART	Land At Leyden Road, Stevenage	Employment	GRANTED	3115	3115	77	44
12/00507/FP	Stevenage	SMART	Land At Leyden Road, Stevenage	Employment	GRANTED	3115	3115	77	30
12/00566/FP	Stevenage	SMART	Stamford House, Primett Road, Stevenage, SG1 3EE	Employment	GRANTED	3120	3120	34	20
13/00020/FP	Stevenage	SMART	Astrium, Gunnels Wood Road, Stevenage, SG1 2DB	Employment	GRANTED	3116	3116	45	712
13/00072/FPM	Stevenage	SMART	Units 6 & 7 Gunnels Wood Park, Gunnels Wood Road, Stevenage, SG1 2BH	Employment	GRANTED	3115	3115	77	900
13/00072/FPM	Stevenage	SMART	Units 6 & 7 Gunnels Wood Park, Gunnels Wood Road, Stevenage, SG1 2BH	Employment	GRANTED	3115	3115	77	901
13/00072/FPM	Stevenage	SMART	Units 6 & 7 Gunnels Wood Park, Gunnels Wood Road, Stevenage, SG1 2BH	Employment	GRANTED	3115	3115	77	901
13/00489/FP	Stevenage	SMART	Stevenage Credit Union, 11 The Hyde, Stevenage, SG2 9SD	Employment	GRANTED	3144	0	0	22
13/00456/FP	Stevenage	SMART	Astrium, Gunnels Wood Road, Stevenage, SG1 2DB	Employment	STARTED	3132	3132	17	712
14/00329/FPM	Stevenage	SMART	Archer Road Neighbourhood Centre, Stevenage, SG1 5HF	Employment	GRANTED	3131	0	0	222
14/00571/FP	Stevenage	SMART	14 -16 Park Place, Town Centre, Stevenage, SG1 1DP	Employment	GRANTED	3122	3122	61	230
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	206
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	207

Capabilities on project:
Transportation

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zones	WHaSH Cordon	Paramics Zones	Employment by 2021 sqm
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	207
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	149
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	149
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	150
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	193
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	193
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	193
14/00095/FP	Stevenage	SMART	11, High Street, Stevenage, SG1 3BG	Employment	COMPLETED	3120	3120	36	210
14/00111/FPM	Stevenage	SMART	Unit 5, Roaring Meg Retail Park, London Road, Stevenage, SG1 1XJ	Employment	GRANTED	3124	3124	85	4253
14/00675/FP	Stevenage	SMART	Land Adj To Roaring Meg Retail Park South, Monkswood Way, Stevenage	Employment	GRANTED	3126	3126	89	123
14/00675/FP	Stevenage	SMART	Land Adj To Roaring Meg Retail Park South, Monkswood Way, Stevenage	Employment	GRANTED	3126	3126	89	123
14/00680/FPM	Stevenage	SMART	Homebase Ltd, Roaring Meg Retail Park, London Road, Stevenage, SG1 1XJ	Employment	STARTED	3124	3124	83	5688
14/00053/FPM	Stevenage	SMART	The Wine Society, Gunnels Wood Road, Stevenage, SG1 2BG	Employment	GRANTED	3114	0	0	1680
14/00053/FPM	Stevenage	SMART	The Wine Society, Gunnels Wood Road, Stevenage, SG1 2BG	Employment	GRANTED	3114	0	0	7024
EC1/1	Stevenage	Local Plan	GSK/Stevenage Bioscience Catalyst	Employment		3117	90109	87	50000
EC1/5	Stevenage	Local Plan	Stevenage central	Employment		2127	0	0	5000
EC1/7	Stevenage	Local Plan	Land west of Jucntion 8	Employment		5130	0	0	12500

Table 11.4: Employment - Stevenage 2031

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zone	WHaSH Cordon	Paramics Zone	Employment by 2031 sqm
05/00621/OP	Stevenage	SMART	Gsk South Of Broadhall Way, Gunnels Wood Road, Stevenage	Employment	GRANTED	3117	90109	87	39392
05/00621/OP	Stevenage	SMART	Gsk South Of Broadhall Way, Gunnels Wood Road, Stevenage	Employment	GRANTED	3117	90109	87	3000
05/00621/OP	Stevenage	SMART	Gsk South Of Broadhall Way, Gunnels Wood Road, Stevenage	Employment	GRANTED	3117	90109	87	7287
11/00337/OPM	Stevenage	SMART	Glaxo SmithKline Research And Development Ltd, Gunnels Wood Road, Stevenage, SG1 2NY	Employment	GRANTED	3117	90109	87	3556
11/00530/EOT	Stevenage	SMART	Land At Norton Road, Stevenage	Employment	STARTED	3114	3114	48	854
11/00530/EOT	Stevenage	SMART	Land At Norton Road, Stevenage	Employment	STARTED	3114	3114	48	855
08/00429/FP	Stevenage	SMART	J Sainsbury Plc, Hitchin Road, Stevenage, SG1 4AE	Employment	STARTED	3133	3133	4	4928
12/00172/FP	Stevenage	SMART	Spice Rouge, 99 High Street, Stevenage, SG1 3HR	Employment	GRANTED	3120	3120	34	15
12/00257/FP	Stevenage	SMART	Unit A, Dunelm Mill, Roebuck Retail Park, London Road , Stevenage	Employment	STARTED	3126	3126	90	281
10/00118/FP	Stevenage	SMART	Pyramid House, Oxleys Road, Stevenage	Employment	GRANTED	3144	0	0	223
11/00701/FPM	Stevenage	SMART	Plot 2000 Arlington Business Park, Gunnels Wood Road, Stevenage	Employment	GRANTED	3115	3115	76	3770
11/00701/FPM	Stevenage	SMART	Plot 2000 Arlington Business Park, Gunnels Wood Road, Stevenage	Employment	GRANTED	3115	3115	76	511
12/00473/FP	Stevenage	SMART	86 Queensway, Town Centre, Stevenage, SG1 1EG	Employment	GRANTED	3109	3122	66	284
12/00463/FP	Stevenage	SMART	Cromer House Caxton Way Stevenage Herts SG1 2DF	Employment	SUPERSEDED	3114	3114	49	255
12/00463/FP	Stevenage	SMART	Cromer House Caxton Way Stevenage Herts SG1 2DF	Employment	SUPERSEDED	3114	3114	49	2553
12/00507/FP	Stevenage	SMART	Land At Leyden Road, Stevenage	Employment	GRANTED	3115	3115	77	364
12/00507/FP	Stevenage	SMART	Land At Leyden Road, Stevenage	Employment	GRANTED	3115	3115	77	44
12/00507/FP	Stevenage	SMART	Land At Leyden Road, Stevenage	Employment	GRANTED	3115	3115	77	30
12/00566/FP	Stevenage	SMART	Stamford House, Primett Road, Stevenage, SG1 3EE	Employment	GRANTED	3120	3120	34	20
13/00020/FP	Stevenage	SMART	Astrium, Gunnels Wood Road, Stevenage, SG1 2DB	Employment	GRANTED	3116	3116	45	712
13/00072/FPM	Stevenage	SMART	Units 6 & 7 Gunnels Wood Park, Gunnels Wood Road, Stevenage, SG1 2BH	Employment	GRANTED	3115	3115	77	900
13/00072/FPM	Stevenage	SMART	Units 6 & 7 Gunnels Wood Park, Gunnels Wood Road, Stevenage, SG1 2BH	Employment	GRANTED	3115	3115	77	901
13/00072/FPM	Stevenage	SMART	Units 6 & 7 Gunnels Wood Park, Gunnels Wood Road, Stevenage, SG1 2BH	Employment	GRANTED	3115	3115	77	901
13/00489/FP	Stevenage	SMART	Stevenage Credit Union, 11 The Hyde, Stevenage, SG2 9SD	Employment	GRANTED	3144	0	0	22
13/00456/FP	Stevenage	SMART	Astrium, Gunnels Wood Road, Stevenage, SG1 2DB	Employment	STARTED	3132	3132	17	712
14/00329/FPM	Stevenage	SMART	Archer Road Neighbourhood Centre, Stevenage, SG1 5HF	Employment	GRANTED	3131	0	0	222
14/00571/FP	Stevenage	SMART	14 -16 Park Place, Town Centre, Stevenage, SG1 1DP	Employment	GRANTED	3122	3122	61	230
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	206
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	207
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	207
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	149

Capabilities on project:
Transportation

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zone	WHaSH Cordon	Paramics Zone	Employment by 2031 sqm
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	149
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	150
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	193
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	193
14/00347/FPM	Stevenage	SMART	3 Argyle Way, Stevenage, SG1 2AD	Employment	GRANTED	3116	3116	46	193
14/00095/FP	Stevenage	SMART	11, High Street, Stevenage, SG1 3BG	Employment	COMPLETED	3120	3120	36	210
14/00111/FPM	Stevenage	SMART	Unit 5, Roaring Meg Retail Park, London Road, Stevenage, SG1 1XJ	Employment	GRANTED	3124	3124	85	4253
14/00675/FP	Stevenage	SMART	Land Adj To Roaring Meg Retail Park South, Monkswood Way, Stevenage	Employment	GRANTED	3126	3126	89	123
14/00675/FP	Stevenage	SMART	Land Adj To Roaring Meg Retail Park South, Monkswood Way, Stevenage	Employment	GRANTED	3126	3126	89	123
14/00680/FPM	Stevenage	SMART	Homebase Ltd, Roaring Meg Retail Park, London Road, Stevenage, SG1 1XJ	Employment	STARTED	3124	3124	83	5688
14/00053/FPM	Stevenage	SMART	The Wine Society, Gunnels Wood Road, Stevenage, SG1 2BG	Employment	GRANTED	3114	0	0	1680
14/00053/FPM	Stevenage	SMART	The Wine Society, Gunnels Wood Road, Stevenage, SG1 2BG	Employment	GRANTED	3114	0	0	7024
EC1/1	Stevenage	Local Plan	GSK/Stevenage Bioscience Catalyst	Employment		3117	90109	87	50000
EC1/2	Stevenage	Local Plan	South of Bessemer Drive, Gunnels Wood	Employment		3114	3114	49	12000
EC1/3	Stevenage	Local Plan	West of Gunnels wood Road	Employment		3113	3113	43	4000
EC1/4	Stevenage	Local Plan	Land west of North Road	Employment		3118	3118	26	20000
EC1/5	Stevenage	Local Plan	Stevenage central	Employment		2127	0	0	35000
EC6	Stevenage	Local Plan	west of Stevenage	Employment		5125	0	0	10000
EC1/7	Stevenage	Local Plan	Land west of Jucntion 8	Employment		5130	0	0	12500
15/00032/CPA	Stevenage	Losses	Londis 32 - 34 Queensway Town Centre Stevenage Herts SG1 1BS	Employment	GRANTED	3122	3122	63	-128
14/00715/CPA	Stevenage	Losses	Antelope House, Ardent House, Atlantic House & Sheffield Hou, Gates Way, Stevenage, SG1 3NS	Employment	GRANTED	3120	90116	37	-4500
14/00705/CPA	Stevenage	Losses	Brickdale House, Swingate, Stevenage, SG1 1XG	Employment	GRANTED	3122	3122	66	-9695
13/00241/FPM	Stevenage	Losses	Twin Foxes, 54 Rockingham Way, Stevenage, SG1 1SJ	Employment	GRANTED	2126	90113	70	-285
14/00257/FP	Stevenage	Losses	Unit K, Gunnels Wood Park, Gunnels Wood Road, Stevenage, SG1 2BH	Employment	GRANTED	3115	3115	77	-210
14/00291/FP	Stevenage	Losses	22 - 24, The Glebe, Chells Way, Stevenage, SG2 0DJ	Employment	GRANTED	2113	0	0	-157
14/00284/FP	Stevenage	Losses	10, Market Square, Stevenage, SG1 1EP	Employment	GRANTED	3122	3122	61	-47
14/00553/CPA	Stevenage	Losses	DuPont (UK) Ltd, Wedgwood Way, Stevenage, SG1 4QN	Employment	GRANTED	3163	0	0	-6650
14/00571/FP	Stevenage	Losses	14 -16 Park Place, Town Centre, Stevenage, SG1 1DP	Employment	GRANTED	3122	3122	61	-230
14/00329/FPM	Stevenage	Losses	Archer Road Neighbourhood Centre, Stevenage, SG1 5HF	Employment	GRANTED	3131	0	0	-222
14/00467/FP	Stevenage	Losses	Belvue House, Bell Lane And Cinnabar Cafe, 56 - 58 High Street, Stevenage, SG1 3EF	Employment	GRANTED	3120	3120	34	-520
14/00220/CPA	Stevenage	Losses	Southgate House, Southgate, Stevenage, SG1 1HG	Employment	GRANTED	3122	3122	60	-4680
13/00516/FP	Stevenage	Losses	Tudor House Court, 2A Letchmore Road, Stevenage, SG1 3HU	Employment	GRANTED	3120	90116	37	-180

Capabilities on project:
Transportation

Site ID	Area	Scheme	Description	Development Type	Status	WHaSH Zone	WHaSH Cordon	Paramics Zone	Employment by 2031 sqm
14/00043/FP	Stevenage	Losses	Brickdale House, Swingate, Stevenage, SG1 1XG	Employment	GRANTED	3122	3122	66	-474
13/00125/FP	Stevenage	Losses	30 High Street, Stevenage, SG1 3AU	Employment	GRANTED	3120	3120	33	-44
13/00072/FPM	Stevenage	Losses	Units 6 & 7 Gunnels Wood Park, Gunnels Wood Road, Stevenage, SG1 2BH	Employment	GRANTED	3115	3115	77	-2702
13/00020/FP	Stevenage	Losses	Astrium, Gunnels Wood Road, Stevenage, SG1 2DB	Employment	GRANTED	3116	3116	45	-475
12/00473/FP	Stevenage	Losses	86 Queensway, Town Centre, Stevenage, SG1 1EG	Employment	GRANTED	3109	3122	66	-284
12/00409/FP	Stevenage	Losses	28 Market Place, Town Centre, Stevenage, SG1 1DB	Employment	GRANTED	3122	3122	60	-93
10/00118/FP	Stevenage	Losses	Pyramid House, Oxleys Road, Stevenage	Employment	GRANTED	3144	0	0	-223
12/00100/FPM	Stevenage	Losses	Abel Smith House, Six Hills Way, Stevenage	Employment	GRANTED	3114	0	0	-813
14/00680/FPM	Stevenage	Losses	Homebase Ltd, Roaring Meg Retail Park, London Road, Stevenage, SG1 1XJ	Employment	STARTED	3124	3124	83	-5683
14/00702/CPA	Stevenage	Losses	Bank House, Primett Road, Stevenage	Employment	STARTED	3120	3120	34	-1792
12/00577/FPM	Stevenage	Losses	3, 4, 5 And 6 Ditchmore Lane, Stevenage, SG1 3LJ	Employment	STARTED	3120	3120	38	-238
10/00488/FP	Stevenage	Losses	67 High Street, Stevenage, SG1 3AG	Employment	STARTED	3120	3120	34	-205
Town Centre	Stevenage	Local Plan (Stev)	gb 15/12/15 Local Plan Consult 06 Jan 16 - Combined Town Centre Sites	Dwellings	Committed	3112	3112	44	**Distributed**
Town Centre1	Stevenage	Local Plan (Stev)	Combined Town Centre location redistributed	Dwellings	75%	3112	3112	44	
Town Centre2	Stevenage	Local Plan (Stev)	Combined Town Centre location redistributed	Dwellings		3104	3104	79	
Town Centre3	Stevenage	Local Plan (Stev)	Combined Town Centre location redistributed	Dwellings	5%	3109	3109	56	
Town Centre4	Stevenage	Local Plan (Stev)	Combined Town Centre location redistributed	Dwellings		3120	3120	38	
Town Centre5	Stevenage	Local Plan (Stev)	Combined Town Centre location redistributed	Dwellings	10%	3122	3122	63	
Town Centre6	Stevenage	Local Plan (Stev)	Combined Town Centre location redistributed	Dwellings	10%	3122	3122	66	
Town Centre7	Stevenage	Local Plan (Stev)	Combined Town Centre location redistributed	Dwellings		3122	3122	60	
Scenario C	Stevenage	Committed	2,700 Residential development in the town centre	Dwellings	Committed	3112	3112	44	**Distributed**
ScenarioC1	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings		3112	3112	44	
ScenarioC2	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings	33%	3104	3104	79	
ScenarioC3	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings		3109	3109	56	
ScenarioC4	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings		3120	3120	38	
ScenarioC5	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings		3122	3122	63	
ScenarioC6	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings	48%	3122	3122	66	
ScenarioC7	Stevenage	Committed	2,700 Residential development in the town centre - redistributed	Dwellings	19%	3122	3122	60	

12 Appendix B: Costco demand distribution

12 Appendix B: Costco demand distribution

Capabilities on project:
Transportation