

Technical Note

Project:	Hertfordshire County Council Transport Planning Contract	Job No:	60271338
Subject:	FINAL - Stevenage Borough Council Preferred Option Housing Assessment - Transport Modelling Report 2014		
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1.0 Introduction

In November 2014 AECOM was asked by Stevenage Borough Council to look at future transport issues in the district, in response to the latest housing development forecasts proposed as part of the preparations for a new local plan for Stevenage Borough that will set a vision for the town to 2031. Specifically, the aim of this assessment is to identify the potential transport related issues that may arise as a result of the housing development proposals and provide sufficient mitigation proposals.

The assessment has been carried out in conjunction with North Hertfordshire District Council (NHDC) so that the assessment includes explicit consideration of impacts of the latest NHDC development assumptions as well as Stevenage Borough's. It should however be noted that the NHDC housing allocations for Royston, have been included but an assessment of the impact on the road network in that area is not possible due to the extent of the SHUM modelled highway network.

The combined set of housing development proposals has been modelled as a Preferred Option demand scenario making use of the latest Stevenage & Hitchin Urban Model (SHUM) which was updated in January 2014, and approved by the Highways Agency (HA) in March 2014.

The Preferred Option development proposal identified a net total of 25,874 dwellings and 352,500 sqm of additional employment space across North Hertfordshire and Stevenage.

This technical note serves three key purposes:

- Firstly, to explain the stages undertaken during the forecasting of the highway model assignment including the development of the future year highway network and traffic demand, including the housing developments (**Section 2 to 4**).
- Secondly, to present details of potential transport issues on the highway network with the Preferred Option housing development scenario (**Section 5**).
- Thirdly, to discuss mitigation proposals, in response to the transport issues of the Preferred Option housing development scenario (**Section 6**).

This assessment focuses primarily on the local road network in the SHUM model area shown in **Figure 3.1** below. The impact of the housing allocations on the A1(M) is observed but no mitigation has been proposed as the A1(M) road improvements are the subject of other more focused studies.

2.0 Background

A Stevenage and Hitchin Urban Transport Model (SHUM), covering Stevenage and some of the North Hertfordshire area (primarily Hitchin, with elements of Letchworth included) was developed by AECOM in 2009 and subsequently updated in October 2011 following a review and advice from the Highways Agency (HA). SHUM was developed to assist the preparation of the Hitchin and Stevenage Urban Transport Plans (UTP) and is validated to a 2008 base against observed traffic count data and journey times. The HA signed off the 2008 base year model (October 2011 version) on 8th December 2011.

Using SHUM in forecasting mode seeks to determine the impact on the future transport network as a consequence of shifting patterns of demand over time, and forms the basis of the forecasting and analysis of the housing development proposals.

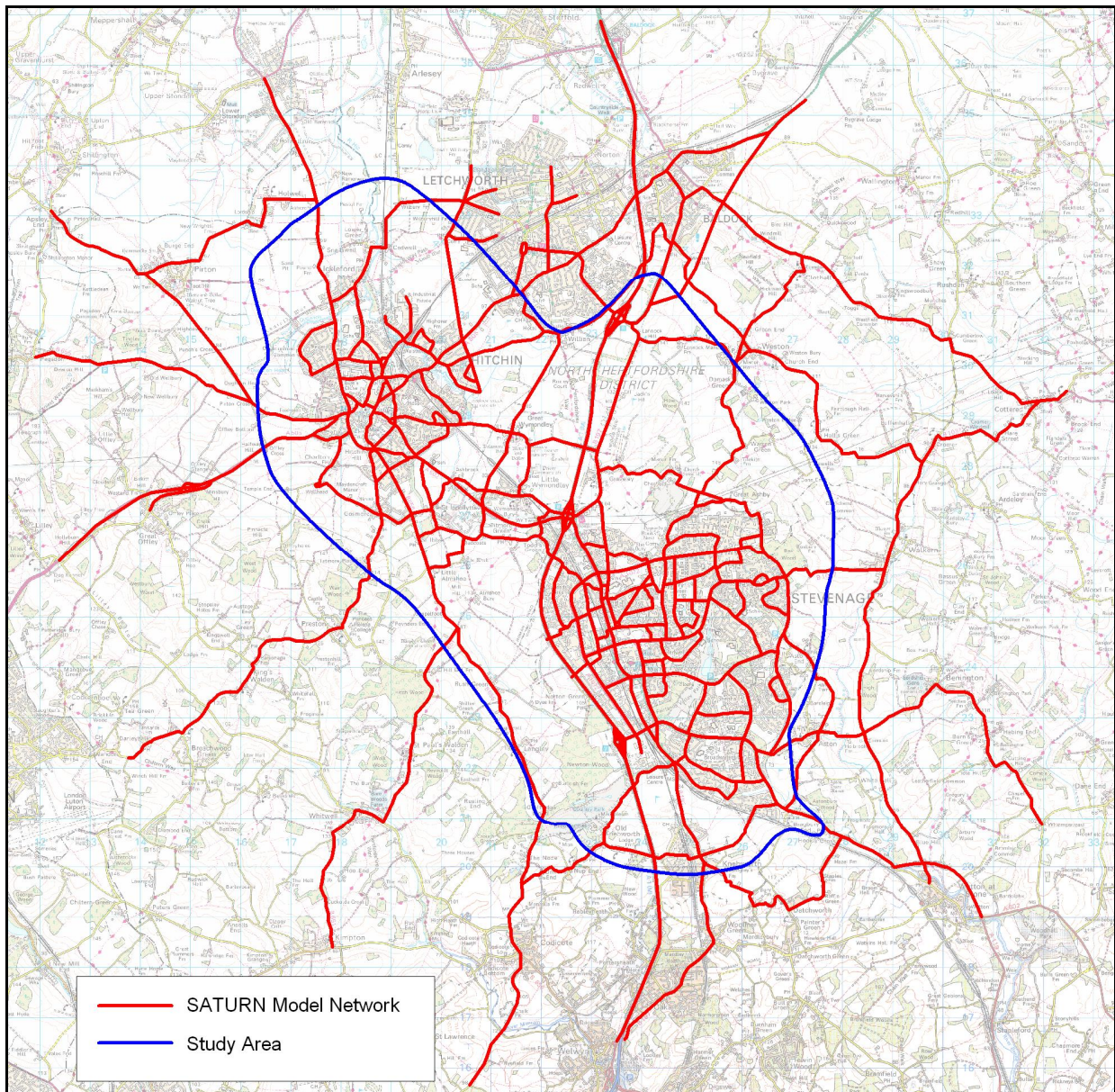
The forecasting methodology for SHUM has been reviewed on two occasions by the HA, who have provided advice on the approach and use of SHUM as a tool for forecasting. Where appropriate, this advice has been incorporated into an update to the SHUM forecasting model; the most recent update was in January 2014 and later signed off by the HA in March 2014. Details on the HA’s reviews and subsequent forecasting model updates, can be found in SHUM Forecasting Model Update Report, issued January 2014.

3.0 Network Development

This section discusses the extent of the future year highway network, including constructed and committed infrastructure.

As discussed, the basis for the model forecasting was SHUM, which covers Hitchin and Stevenage, and the A1(M) motorway including junctions 7,8, and 9. The North Hertfordshire towns of Letchworth and Baldock are on the periphery of the model area but the model does not extend as far as the town of Royston. The extent of the highway network is shown in **Figure 3.1**.

Figure 3.1 SHUM Highway Network



3.1 Future Year Do Minimum Highway Network

SHUM was validated to reflect the transport network operation in 2008. To provide a representative transport network for 2031, the highway network was updated in 2012 to include the constructed and committed transport improvements in the study area. This resulted in the development of the Do Minimum network for 2031 which included the following identified improvements:

- Hitchin Payne's Park gyratory pedestrian crossing;
- Glaxo Smith Kline junction improvements; and
- A1(M) Junction 7 signalised junctions.

It was anticipated that these improvements would be constructed and operational by 2021, therefore the 2031 highway network contains all the improvements.

3.2 Future Year Scenarios Highway Network

No information on anticipated network infrastructure specific to the identified housing developments was provided to AECOM for this assessment; therefore the SHUM Do Minimum network formed the highway network to which the Preferred (development) Option demand was assigned.

4.0 Demand Development

An important part of forecasting the likely traffic conditions on the highway network includes understanding changes to travel demand. Demand changes are a reflection of changes in income, transport prices, demographics and land use changes. The methodology employed for developing the Preferred Option demand matrices for the 2031 future year can be broken down into four stages, discussed below:

- **Stage 1** – Development of background growth factors for internal to internal (within the modelled area) and internal to external trips. Background growth effectively represents growth brought about by general changes in economic conditions resulting in increases in wages, changes in fuel prices etc., essentially all those elements not related to development. These factors were derived using the National Trip End Model (NTEM) forecasts and TEMPRO. The latest version of the dataset, NTEM 6.2 was used in conjunction with the current version of TEMPRO 6.2. This ensured the forecasts benefit from nationally and locally derived growth projections in accordance with government guidance.

For external to external movements, the East of England Regional Model (EERM v3.1) forecasts were used to provide growth factors. The growth factors were applied to the 2008 calibrated SHUM base year demand through a Furness process.
- **Stage 2** – Collection and assessment of development information in the area is undertaken to calculate the number of trips that specific developments can be expected to generate. These trips are then phased and allocated over the development scenarios and trip demand purposes.
- **Stage 3** – The distribution of development trips in zones with no observed base year trip distribution, or similar existing land use, is determined using a gravity model. Where an observed base year trip distribution existed for zones with similar development trips, it was maintained.
- **Stage 4** – The future background growth (Stage 1) and proposed development trips (Stage 2 and 3) are added to the base year demand to produce final future year trip demand matrices.

Stage 1 – Background Growth

No changes have been required to the background growth assumptions for this assessment as the current SHUM forecasting is based on the latest available data. This initial stage of demand development therefore remains unchanged from the reforecasting of the SHUM model in January 2014.

Appendix D summarises the sources of the planning data assumptions for the East of England region that EERM v3.1 contains.

Stage 2 – Development Assumptions

The Preferred Option development proposal received from Stevenage Borough Council in November 2014 identified a net total of 8,494¹ dwellings and 32,500 sqm of employment space. The housing and employment forecasts were broken into three sets of data based on the current status of each development, and assuming all developments will be complete by the assessment year 2031. **Table 4.1** provides a breakdown of the development assumptions used.

Table 4.1 Stevenage Borough Council Preferred Option Housing Demand Forecasts 2031

	Developments	Total Dwellings	Total Employment (sqm.)
Completions & Permissions 2009-2014	33	1,919	-
Planning area sites	35	6,575	-
Non Residential Development	-	-	32,500
Totals:	68	8,494	32,500

The new Stevenage Borough housing assumptions replace the existing Stevenage Borough housing assumptions that are contained within the Do Minimum matrices, the demand base for the Preferred Option. The 32,500 sqm of non-residential development is added in addition to the existing Stevenage Borough assumptions of 93,390 sqm.

Small Site Allocations

A small site allocation of 687 houses was included within the Preferred Option developments which have no specific location so cannot be attributed to a particular zone. The trip volumes calculated for these houses were added into the final demand matrices using a global uplift factor in a relative proportion to the existing land-use.

Appendix A contains the full list of developments included within the Preferred Option modelling.

Trip Rates

Trip rates were used to calculate the number of trips each development proposal would generate and attract. There were no agreed trip rates for the study area used by SBC, NHDC or Herts. Highways, nor did the Highways Agency have an agreed set. Therefore trip rates were derived using TRICS 6.2 (an industry standard database for development trip generation and analysis), the same rates as were used in the previous housing assessment in 2012. TRICS produces average trip rates from available data, the more detailed the input survey information, the more specific the trip rate.

The majority of developments had a development type description allowing the relevant private or non-private trip rates to be applied. If no description was given the mixed Private/Non Private trip rates were applied. There were also some development locations where the specific employment use was not stated, nor available. In this instance, the floor space was split between office (B1), industrial (B2) and warehouse (B8).

The trip rates adopted are given in **Table 4.2**.

¹ The 8,494 total consists of completed dwellings from the 2008 base date plus approximately 7,600 new homes over the period 2011-2031.

Table 4.2 Generic Trip Rates (TRICS 6.2) 2009

Development Type	TRICS Use	AM Peak		PM Peak	
		Arr.	Dep.	Arr.	Dep.
Housing (per dwelling)	Private	0.106	0.366	0.293	0.153
	Non Private	0.058	0.223	0.290	0.168
	Private/Non Private	0.088	0.307	0.289	0.126
Employment (per 100 sq. m)	B1 – Office	1.211	0.132	0.104	1.052
	B1 – Business Park	1.356	0.314	0.199	1.103
	B2 – Industrial Unit	0.322	0.083	0.035	0.287
	B8 - Warehouse	0.098	0.051	0.036	0.092

NHDC Housing Allocation

North Hertfordshire District's housing allocation has been incorporated into the housing assessment. The latest development assumptions for the district were provided by NHDC Council in August 2014 as a net total of 17,380 dwellings and 32 hectares of employment space.

The housing demand forecasts were broken into two sets of data based on the current status of each development, and assuming all developments will be complete by the assessment year 2031. **Table 4.3** provides a breakdown of the development assumptions received.

Table 4.3 NHDC Preferred Option Housing Demand Forecasts 2031

	Developments	Total Dwellings	Total Employment (Hectares)
Emerging Sites ^a	72	15,290	32
Permissions (under construction & outstanding)	256	586	-
Completed (2011-2014)	228	934	-
Small Site Allocations	-	570	
Totals:	556	17,380	32

^a Emerging sites included the Stevenage West development, specified as 3,100 dwellings.

DM Development Duplications

The methods for incorporating the new developments into the model remain the same as the Borough's developments described above, but with an additional adjustment to the NHDC development numbers to take into account duplications with the existing forecast demand in the Do Minimum model.

A comparison was undertaken between the development assumptions provided and those already contained in the SHUM Do Minimum model for 2031 (which represents schemes that are committed or most likely to happen). There were a large number of developments which appeared in both lists, a total of 163 entries. The decision was taken to integrate these duplicate development sites into the Preferred Option matrices by keeping the quantities as they are in the existing 2031 matrices and add the remaining dwellings in to create the Preferred Option matrices.

The net total number of dwellings already accounted for in 2031 Do Minimum SHUM matrices is 1,838. This left 15,542 Preferred Option dwellings to add.

Luton Developments & External Zones

The Preferred Option developments have differing spatial allocations. The majority of these are spread across North Herefordshire however there were two developments, both notable in size within the Luton and Central Bedfordshire area which falls outside the SHUM model area.

Emerging Sites	EL1&EL2	East of Luton	1400 dwellings
Emerging Sites	EL3	Land north east of Luton	700 dwellings

To incorporate these developments within the assessment NHDC were keen to utilise the Central Bedfordshire and Luton Transport Model (CBLTM) in order to understand the volume of trips the Luton developments would generate which would route through the SHUM model area and impact on the performance of the highway network within Hitchin and Stevenage.

To do this a select zone analysis was carried out in the CBLTM 2013 model which showed the routing and volume of trips from the two developments, for this the proportion of trips travelling along the roads entering the SHUM model were then calculated and applied to the housing forecast supplied by NHDC.

This was one of a number of methods explored with NHDC and deemed to be the most appropriate despite notable differences in the development forecasts, with CBLTM based on 5,100 dwellings and NHDC forecasts of 2,100. The developments also cover a wider area than those shown in the maps received from NHDC and some infrastructure changes have been included. These shortcomings of the CBLTM model impact on the route choice demonstrated within the model and consequently what is shown to route into the SHUM model area. This should be borne in mind when considering the resultant level of trip generation applied to the Preferred Option matrices for these sites.

Table 4.4 CBLTM Routing – Total Trips expected to enter/exit the SHUM model area

Road	SHUM Zone Allocation	Total Trips (Additions)			
		AM		PM	
		Dest.	Origin	Dest.	Origin
East of Luton	4305 (A505), & 4309 (Back Lane)	0.00	29.75	12.79	20.12
Percentage based on total trips for the full development quantum:		0%	7%	3%	11%
Land north east of Luton	4305 (A505), & 4309 (Back Lane)	0.00	7.01	5.57	2.26
Percentage based on total trips for the full development quantum:		0%	3%	3%	3%

With the exception of the two Luton developments, any housing development located outside the model area (allocated to an external SHUM zone) has been halved to account for only 50% of the trip demand generated by the development entering the modelled study area. Although a relatively coarse assumption, this retains the same assumption applied in the previous housing assessment in 2012.

Stage 3 – Distribution of Development Trips

The development trips had to be attributed to the five different car demand matrices used in SHUM, for example home based work, home based education etc. No development trips were generated for LGV or HGV as these were accommodated within the NTM assumptions for background growth.

The method employed in splitting out the development trips into demand segments was the same as applied to Do Minimum model update. In brief, five ‘typical’ zones for each of the main development uses; residential and business were selected. ‘Typical’ zones are considered as those where the predominant land use is one of the three types. Five zones were chosen for Stevenage and five for Hitchin.

The demand segment proportions were calculated from the base year trip matrices. Different segments were used for the different development land uses:

- Residential – all five car demand segments

- Business – two car demand segments (Home Based Work and Employers Business).

The matrices were added together and the origin and destination trip end totals used for proportioning the zones’ trips. From these zone proportions, an average proportion across the five zones was then taken forward to split the development trips.

The development trips at this stage of the process are zone trip ends, having an origin or destination at the development site location but the other end of each trip is still to be defined. Where development trips are identified in zones which contain an existing observed base year trip distribution, the zone trip end is distributed based on the observed distribution. However, in locations where no observed trip distribution exists, the matrix trip cells, and therefore distribution of the development trips, are filled by means of a journey purpose specific gravity model.

A gravity model distributes trip ends across the entire network according to weightings based upon the ‘population’ of different zones and relative attractiveness between each zone pair. In this instance, the attractiveness is based on trip volume and the time between each zone pair. Separate gravity models have been developed for each car journey purpose which allows different average trip lengths for each purpose to be represented within the model. Journey purpose specific zone to zone travel times were obtained from skimming the base year highway network in the transport model, whilst the populations at both zones were defined using the existing trip demand.

Stage 4 – Final Demand Matrices

The last stage of the matrix demand process adds the net background growth and development trips to the base year demand.

For the purposes of the housing assessment the final future year demand has not been constrained to overall TEMPRO growth, as it is considered that the development assumptions provided for the Preferred Option are a more accurate representation of localised future levels of growth.

The final gross matrix totals are given in **Table 4.5**. The unconstrained Do Minimum forecasting demand totals have been included for comparison purposes.

Table 4.5 Summary of growth in demand

Peak	BY 2008 AM	DM 2031 AM	DS 2031 AM	BY-DS Percentage Difference (%)	DM-DS Percentage Difference (%)
Home Based Work	23,192	30,773	36,567	58%	19%
Home Based Education	1,996	2,611	3,265	64%	25%
Home Based Other	6,081	8,413	9,789	61%	16%
Non Home Based Other	2,157	3,086	3,439	59%	11%
Employers Business	1,692	2,045	2,291	35%	12%

Peak	BY 2008 PM	DM 2031 PM	DS 2031 PM	BY-DS Percentage Difference (%)	DM-DS Percentage Difference (%)
Home Based Work	15,815	21,494	26,007	64%	21%
Home Based Education	1,106	1,392	1,673	51%	20%
Home Based Other	11,558	15,684	18,202	57%	16%
Non Home Based Other	4,853	6,400	7,247	49%	13%
Employers Business	1,346	1,676	1,873	39%	12%

The final matrices were run through the modelled highway network in December 2014 and stress plots were produced, as shown in **Appendix B**. These plots show the links where there are capacity constraints – those highlighted in red are links where the volume over capacity is over 100% indicating that the design capacity of the highway network configuration cannot cope with the levels of demand.

5.0 Scenario Testing

This section discusses the transport impact of the Preferred Option housing development proposal. The Preferred Option scenario has been analysed to understand the development impact on the highway network. The cost associated with delivering the transport infrastructure required to facilitate the Preferred Option demand is presented in **Section 6**.

In this assessment we have developed a comparative Do Minimum scenario to provide a useful proxy for what mitigation might be required regardless of the full Preferred Option demand being delivered. This scenario is made up of forecast Do Minimum demand (background growth plus developments that are committed or very likely to be committed, in the future year) and a Reference Case highway network containing a number of mitigation proposals for pinch points that were observed in the existing 2031 highway network. Fourteen network pinch points were identified in total.

Figure 5.1 identifies where the modelling of Preferred Option demand has indicated that in 2031 there is a problem with network operation in addition to the pinch points addressed in the Do Minimum scenario. This has been identified through modelling indicators which show there are still more than 100 vehicles queuing at a junction at the end of the AM or PM peak hour. There are a whole range of indicators that could be used, but queuing traffic at particular locations at the end of the modelled peak hour enables us to focus on the worst performing pinch points on the network and identify in more detail what the issues are.

This information is also shown in tabular form in **Table 5.1**. The table, for each of the identified problem locations, provides information on when the problem occurs (i.e. morning peak, evening peak or both) and cross-references against the Do Minimum scenario. The table indicates in both scenarios there are operational issues at the same locations across the network.

Table 5.1 Identified Problem Locations in 2031

Ref.	Problem Location	Development Scenario	
		Do Minimum	Preferred Option
HM2	A505 / B655 Pirton Road	✓	✓
HM3	Payne's Park	✓	✓
HM4	A602 / B656 London Road (Hitchin Hill)	✓	✓
HM5.1	Hitchin Industrial Area / Cadwell Lane	✓	✓
HM5.2	A505 Cambridge Road / Woolgrove Road / Willian Road	✓	✓
HM7	Fishers Green Road	✓	✓
HM9.1	A1(M) Junction 7 Northbound Onslip	✓	✓
HM9.2	A1(M) Junction 7 Roundabout (southbound offslip)	✓	✓
HM9.3	A1(M) Junction 7 Northbound mainline (from Junction 6)	✓	✓
HM9.4	A1(M) Junction 7 Southbound Onslip	✓	✓
HM10	A602 Hitchin Road / A1072 Gunnels Wood Road Roundabout (westbound approach)	✓	✓
HM11	A115 Fairlands Way / Grace Way	✓	✓
HM12	Six Hills Way / Homestead Moat	x	✓
HM13	A602 / Monkswood Way	✓	✓

Ref.	Problem Location	Development Scenario	
		Do Minimum	Preferred Option
HM14	B197 London Road / Monkswood Way	✓	✓
HM15	A602 / Stevenage Road	×	✓
HM16	A1(M) Junction 9 Northbound Mainline (from Junction 8)	×	✓
HM17	A1(M) Junction 8 Northbound Onslip	×	✓
HM18	Six Hills Way/ Valley Way roundabout	×	✓
HM19	A602/Valley Way/ Broadwater Crescent Roundabout	×	✓
HM20	London Road/Toby Carvery Junction	×	✓
HM21.1	Rectory Lane/Weston Road	×	✓
HM21.2	B197 North Road/A602 Lytton Way	×	✓
HM22	Arch Road/Hitchin Road	×	✓
HM23	A1072 Gunnels Wood Road/Clovelly Way	×	✓
✓	<i>Problem location in the morning peak only</i>		
✓	<i>Problem location in the evening peak only</i>		
✓	<i>Problem location in both morning and evening peak</i>		

In total, twenty five pinch points have been identified across the two scenarios. Seven of these pinch points were first identified in the Stevenage Local Plan Testing Report, produced by AECOM in 2013, and found to still be an issue within the Do Minimum scenario. For comparison purposes the reference numbers for these pinch points have been retained. These are pinch points HM5.1, HM5.2, HM7, MH9.1 – 9.3, and HM10.

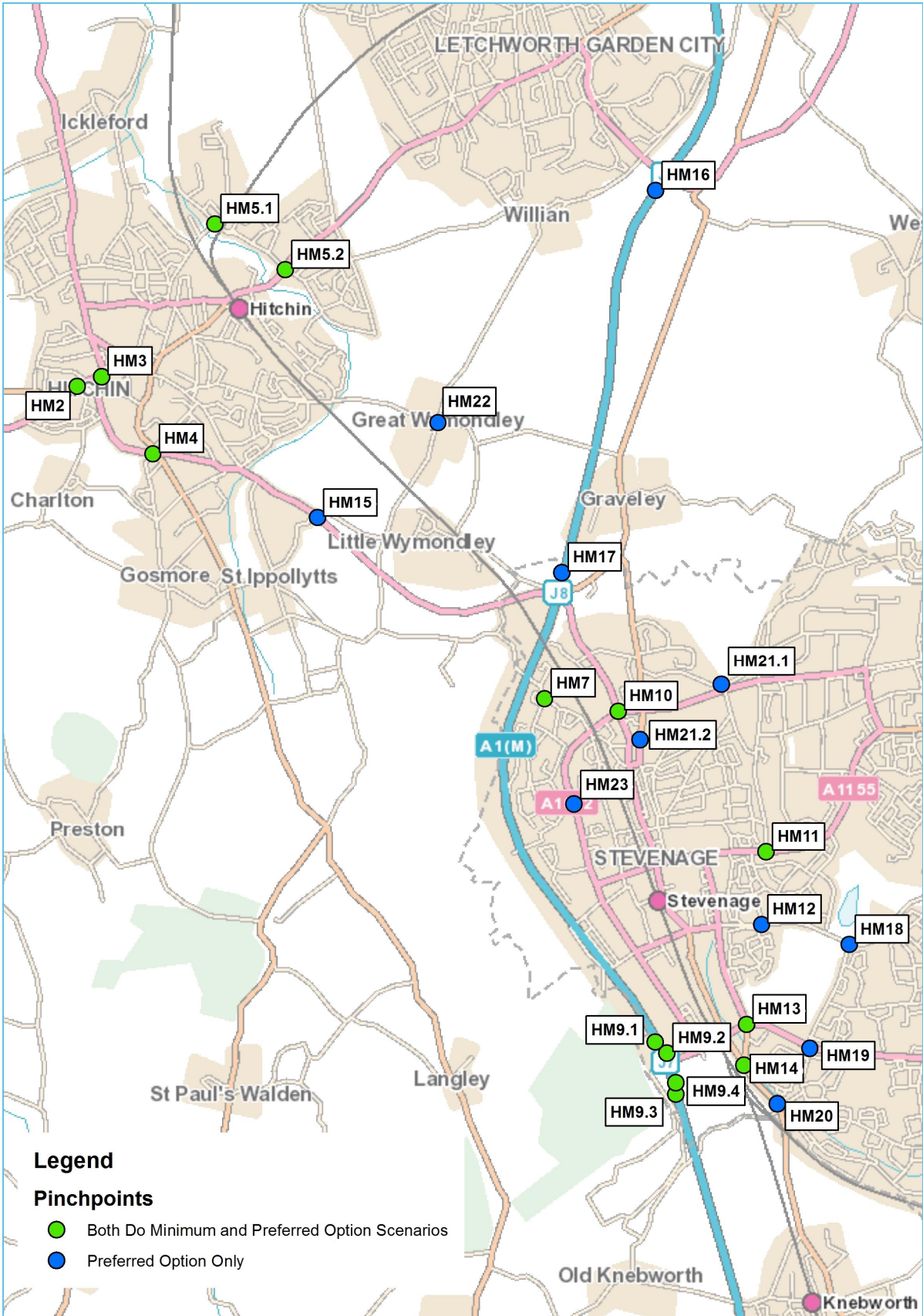
Eleven pinch point junctions occur as a result of the full housing demand contained within the Preferred Option scenario. Notably the majority of these occur in or around the Stevenage area or the A1(M) which is reflective of the fact that the most sizable developments are located within Stevenage or outside the model area so route along the A1(M), as shown in **Table 5.2**.

Table 5.2 Largest Preferred Option Developments

Ref.	
BA1	Land north of Baldock
LG1	North of Letchworth
GA2	Land off Mendip Way
NS1	North of Stevenage
WS1	West of Stevenage
SB	Stevenage Town Centre – residential development

Table 5.1 also indicates that the AM peak is the most congested time period with twelve of the junctions only occurring in the AM peak, and five occurring in both peak periods.

Figure 5.1 Problem locations in 2031 in the Do Minimum and Preferred Option Scenarios



6.0 Mitigation Testing

With the problem locations identified in 2031 for the agreed housing development scenario, it is necessary to establish some mitigation proposals to address the problems and enable the growth to come forward. For each of the identified locations a mitigation proposal has been identified and tested within the model to establish whether it addresses the issues and does not create a problem elsewhere. For each mitigation proposal, a scheme pro-forma has been developed to explain the issues that have been identified as a result of the growth and outline the mitigation proposals to address the problem.

The set of mitigation proposals put forward in the previous Stevenage Local Plan Testing Report were re-tested in this assessment and found to still be valid for those pinch points.

Scheme pro-formas have not been developed for the A1(M) pinch points due to more focused studies taking place on the A1(M) junctions by the A1(M) consortium led by HCC which is focussing primarily on the localised access arrangements to the A1(M) and the Highways Agency (HA) which has commissioned work to assess options for the A1(M) mainline. At this time no specific schemes for junctions 7 to 9 have been confirmed. Any mitigation designs or scheme costing based on this assessment would therefore be of limited value at this stage.

Current proposals for the A1(M) mainline carriageway between Junction 5 and Junction 9 are discussed in the HA documents entitled "Route strategies: Option Assessment Report" and "Route strategies: Strategic Outline Business Case". The localised options are currently in development.

The scheme pro-formas are all presented in **Appendix C**, but in summary they include the following proposals outlined in **Table 6.1**.

Table 6.1 Summary of Mitigation Proposals

Ref.	Problem Location	Improvement
HM2	A505 / B655 Pirton Road	Change to a signal controlled junction
HM3	Payne's Park	Change to a signal controlled junction
HM4	A602 / B656 London Road (Hitchin Hill)	Widen approach arms and signalise the St John's Road approach
HM5.1	Hitchin Industrial Area / Cadwell Lane	Connect Wilbury Way and Cadwell Lane to the north of the industrial area; Redesign Cadwell Lane junction movements
HM5.2	A505 Cambridge Road / Woolgrove Road / Willian Road	Implement a MOVA signal controlled system at the junction, enabling the signals to respond and adjust according to traffic levels.
HM7	Fishers Green Road	Add an additional southbound lane on the northern approach
HM10	A602 Hitchin Road / A1072 Gunnels Wood Road (westbound approach)	Implement a MOVA signal control system; <i>Widen the westbound approach to 3 lanes at the junction stop line (if possible within the existing highway boundary)</i>
HM11	A115 Fairlands Way / Grace Way	Introduce a segregated straight on lane (westbound) at the roundabout, with a merge provided on exit
HM12	Six Hills Way / Homestead Moat	Signalised T-junctions at staggered junctions, with the introduction of MOVA operated signals
HM13	A602 / Monkswood Way	Implement a MOVA signal controlled system at the roundabout
HM14	B197 London Road / Monkswood Way	Extend flared length on southern approach
HM15	A602 / Stevenage Road	Ban the left turn movement from the A602 eastern approach arm to rural Ashbrook Road
HM18	Six Hills Way/ Valley Way roundabout	Change to a signal controlled T-Junction, with a 2 car right turn flare on the western approach

Ref.	Problem Location	Improvement
		and a 2 car left turn flare on the southern approach
HM19	A602/Valley Way/ Broadwater Crescent Roundabout	Implement a MOVA signal controlled system at the roundabout
HM20	London Road/Toby Carvery Junction	Change to a signal controlled junction
HM 21.1 & HM21.2	Rectory Lane/Weston Road & B197 North Road/A602 Lytton Way	Implement a 3 car flare to enable 2 lanes of traffic onto the circulatory from the B197 North Road approach
HM22	Arch Road/Hitchin Road	Change the priority of the junction to make Arch Road southern approach and Hitchin Road the major arms and Arch Road north approach the minor arm.
HM23	A1072 Gunnels Wood Road/Clovelly Way	Introduce a segregated left turn lane from Gunnels Wood Road to Clovelly Way.

6.1 Mitigation Scheme Cost Estimates

A costing exercise has been undertaken for the mitigation proposals, but these can only be considered as preliminary designs and estimates at this stage, suitable to inform the development of the Local Plan and the associated Infrastructure Delivery Plan. We have included a caveat in association with these cost estimates which should be considered when interpreting the estimates, which can be found in **Appendix E**.

The costs associated with the mitigation proposals that have been identified are summarised in **Table 6.2**.

Table 6.2 Scheme Costing

Ref.	Mitigation Scheme Location	Cost (£)
HM2	A505 / B655 Pirton Road	842,000
HM3	Payne's Park	1,485,000
HM4	A602 / B656 London Road (Hitchin Hill)	1,221,000
HM5.1	Hitchin Industrial Area / Cadwell Lane	5,838,000
HM5.2	A505 Cambridge Road / Woolgrove Road / Willian Road	323,000
HM7	Fishers Green Road	61,500
HM9.1	A1(M) Junction 7 Northbound Onslip	-
HM9.2	A1(M) Junction 7 Roundabout (southbound offslip)	-
HM9.3	A1(M) Junction 7 Northbound mainline (from Junction 6)	-
HM9.4	A1(M) Junction 7 Southbound Onslip	-
HM10	A602 Hitchin Road / A1072 Gunnels Wood Road (westbound approach)	479,000
HM11	A115 Fairlands Way / Grace Way	191,800
HM12	Six Hills Way / Homestead Moat	852,500
HM13	A602 / Monkswood Way	666,000
HM14	B197 London Road / Monkswood Way	4,000
HM15	A602 / Stevenage Road	17,350
HM16	A1(M) Junction 9 Northbound Mainline (from Junction 8)	-

Ref.	Mitigation Scheme Location	Cost (£)
HM17	A1(M) Junction 8 Northbound Onslip	-
HM18	Six Hills Way/ Valley Way roundabout	785,750
HM19	A602/Valley Way/ Broadwater Crescent Roundabout	600,000
HM20	London Road/Toby Carvery Junction	905,000
HM21.1 & HM21.2	B197 North Road/A602 Lytton Way	134,000
HM22	Arch Road/Hitchin Road	18,800
HM23	A1072 Gunnels Wood Road/Clovelly Way	1,346,200

From the information we have provided in **Table 5.1**, we have identified the costs associated with the Preferred Option housing development scenario in **Table 6.3**. We have also included the cost associated with delivering the schemes that we had identified in the Do Minimum scenario. This only provides a means of comparison and gives an indication of the level of mitigation that might be required even if the full forecast of development does not go ahead. Mitigation schemes HM15 to 23 and HM12 are not required in the Do Minimum scenario, meaning that (excluding the A1(M) pinch point schemes) only an additional £4.660m would need to be spent for the mitigation scenarios associated with the Preferred Option scenario. It should again be highlighted that this does not include the costs associated with the A1(M) schemes which are likely to be significant. It is also not clear at this stage who is likely to bear these costs. It should however be stated that by providing the schemes as part of the Do Minimum means that additional capacity is available in the network which can be used by trips associated with the Preferred Option development – but the Preferred Option developments themselves very much contribute to the need for the schemes.

Table 6.3 Summary of Cost per Land Use Scenario

Land Use Scenario	Total Cost (£)*
Do Minimum scenario - indicative	11,111,300
Preferred Option scenario	15,770,900

* not including A1(M) Junction 7-9 scheme costs.

7.0 Summary

The assessment of the Preferred Option housing development scenario in 2031, highlights that there will be highway impacts across the network when the developments are in place. However, this assessment does not specifically identify the highways impacts that occur as a direct result of a particular development, or the dependency of a development on the provision of a transport intervention. This assessment provides a broad overview of potential problem locations identified in the future year of 2031, when a specific housing development scenario is in place.

Analysis of an indicative Do Minimum scenario indicates that many of the schemes required for the Preferred Option scenario are also needed in the Do Minimum situation. Although this would imply that many of the schemes would be required regardless of the development, each of the developments does have a significant impact at the locations and would use up the spare capacity available at these junctions so would need to contribute to their delivery.

Appendix A – List of developments included within the Preferred Option modelling

Ref Id.	Site Location/Name	Dwellings	Use	Floorspace	
E&R30	A1		A1	114	3120
E&R31	B1		B1	46679	3117
E&R32	B1		B1	10059	3113
E&R33	A1		A1	4928	3133
E&R34	B1		B1	1586	3116
E&R35	A1		A1	3289	3133
E&R36	B8		B8	2083	3114
E&R37	A1		A1	3659	3125
E&R38	A1		A1	697	3124
E&R39	B2		B2	854	3114
E&R39	B8		B8	855	3114
E&R1	B1		B1	700	1301
E&R2	B2		B2	2219	4315
E&R3	B1		B1	-1249	2307
E&R3	B2		B2	-624	2307
E&R3	A1		A1	4659	2307
E&R4	A1		A1	2201	2307
E&R5	B1		B1	109	4304
E&R6	B1		B1	2180	2307
E&R7	B1		B1	88	4315
E&R8	B1		B1	55	4306
E&R9	A4		A4	33	4310
E&R10	A3		A3	120	2307
E&R11	A1		A1	441	4315
E&R12	B8		B8	42	4315
E&R13	B1		B1	95	4315
E&R14	B1		B1	106	4315
E&R14	B2		B2	106	4315
E&R14	B8		B8	106	4315
E&R15	B2		B2	983	2313
E&R16	B2		B2	99	4315
E&R17	B2		B2	431	4315
E&R18	B2		B2	200	3219
E&R19	B1		B1	862	4315
E&R20	A4		A4	217	3314
E&R21	B1		B1	691	3217
E&R22	B1		B1	170	3305
E&R23	B1		B1	475	3218
E&R23	B2		B2	475	3218
E&R23	B8		B8	475	3218
E&R24	B8		B8	751	2310
E&R25	B8		B8	119	2310
E&R26	B2		B2	572	2313
E&R26	B8		B8	500	2313
E&R27	B1		B1	100	2206
E&R28	A4		A4	47	4315
E&R29	B1		B1	34	4315
Stevenage Borough Preferred Option Additional Employment					
SBC future sites	Non-residential development	-	B1a	10000	3112
SBC future sites	Non-residential development	-	B1	7500	5108
SBC future sites	Non-residential development	-	B2	7500	5108
SBC future sites	Non-residential development	-	B8	7500	5108
Stevenage Borough Preferred Option Housing					
Stevenage BC - Completions / Permissions	Buildbase, Woolners Way	133			3118
Stevenage BC - Completions / Permissions	Gates Garage	45			3122
Stevenage BC - Completions / Permissions	Stoneyhall Estate	38			3106
Stevenage BC - Completions / Permissions	B & Q Site, 144-146 High Street	20			3120
Stevenage BC - Completions / Permissions	Former Van Hage Garden Centre, Bragbury Lane	16			2101
Stevenage BC - Completions / Permissions	Other sites	116			-
Stevenage BC - Completions / Permissions	B & Q Site, 144-146 High Street	70			3120
Stevenage BC - Completions / Permissions	Buildbase, Woolners Way	39			3118
Stevenage BC - Completions / Permissions	Former Wayside Garages, Lytton Way	14			3118
Stevenage BC - Completions / Permissions	Former Van Hage Garden Centre, Bragbury Lane	22			2101
Stevenage BC - Completions / Permissions	Former Mastercare Service & Distribution	48			3101
Stevenage BC - Completions / Permissions	Other sites	40			-

Ref Id.	Site Location/Name	Dwellings	Use	Floorspace (Sq.ms)	SHUM Zone
Stevenage BC - Completions / Permissions	Former Mastercare Service & Distribution	125			3101
Stevenage BC - Completions / Permissions	B & Q Site, 144-146 High Street	65			3120
Stevenage BC - Completions / Permissions	Former Van Hage Garden Centre, Bragbury Lane	26			2101
Stevenage BC - Completions / Permissions	Stoneyhall Estate	22			3106
Stevenage BC - Completions / Permissions	Other sites	62			-
Stevenage BC - Completions / Permissions	Stoneyhall Estate/Merchants Quarter	22			3106
Stevenage BC - Completions / Permissions	Former Wayside Garages	52			3118
Stevenage BC - Completions / Permissions	Former Mastercare Service & Distribution	29			3101
Stevenage BC - Completions / Permissions	Other sites	87			-
Stevenage BC - Completions / Permissions	Former Mastercare Service & Distribution	48			3101
Stevenage BC - Completions / Permissions	Herford Road	18			2105
Stevenage BC - Completions / Permissions	Other sites	19			-
Stevenage BC - Completions / Permissions	Former Mastercare Service & Distribution	55			3101
Stevenage BC - Completions / Permissions	Hertford Road	82			2105
Stevenage BC - Completions / Permissions	Edmonds Drive	17			3143
Stevenage BC - Completions / Permissions	Other sites	18			-
Stevenage BC - Completions / Permissions	Former Mastercare Service & Distribution	136			3101
Stevenage BC - Completions / Permissions	Land off Edmonds Drive/Aston Vale	71			3143
Stevenage BC - Completions / Permissions	Lonsdale School	67			3130
Stevenage BC - Completions / Permissions	Brickdale House	152			3122
Stevenage BC - Completions / Permissions	Small sites	145			-
002	Vincent Court	41.0			2128
003	Ferrier Road	34.0			2112
005	Snooker Club	38.0			3121
107	Ken Brown Car showroom	16.0			2110
150	Twin Foxes pub	14.0			2126
201	Shephall Centre and adjacent amenity land	34.0			3145
209	Ex-Play Centre	15.0			2130
212	Scout Hut	18.0			3135
213	Land at Eliot Road	11.0			2113
214	Day Nursery	6.0			3140
217	Longfield Fire and Rescue Centre	95.0			3160
-	2,700 Residential development in the town centre	1500.0			Zone 3112
-	2,700 Residential development in the town centre	100.0			Zone 3120
-	2,700 Residential development in the town centre	100.0			Zone 3104
-	2,700 Residential development in the town centre	1000.0			Zone 3122
411	Bank House	26.0			3120
511	Dunn Close Garage Court	5.0			2126
528	Southern Car Park	127.0			3120
604	Land south of A602	400.0			2101
609	Bragbury End Sports Ground	150.0			2101
610	Land North of Stevenage	800.0			5107
611	Land West of North Road (Rugby Club)	149.0			5108
612	Land West of Stevenage	1350.0			5126
613	Land at Norton Green	5.0			5110
701	Kenilworth Close NC	50.0			2102
704	The Oval NC	100.0			2117
707	Burwell Road NC	25.0			3141
708	Roebuck NC	25.0			2106
710	Marymead NC	50.0			3151
714	Archer Road NC	24.0			3131
819	Land at Malvern Close	8.0			2102
820	Land West of Bragbury Lane	5.0			2101
840	Former Pin Green School playing field	42.0			3131
841	Land at Shephalbury Park	12.0			3150
-	Windfalls	200.0			-
-	All Windfalls, Other Sites & Small Sites in Stevenage Borough	687.0			-
NHDC Housing (DM)					
141	Meeting House, Meeting House Lane	3.5			4315
142	31a Hitchin Street, and the Maltings, Park Lane	7			4315
B/e03	Land at, Icknield Way	15			4315
B/e03a	78-80 Icknield Way	7.5			4315

Ref Id.	Site Location/Name	Dwellings	Use	Floorspace (Sq.ms)	SHUM Zone
133	Orchard and Anvil, Nightingale Road	6			3213
135	Former Petrol Station, Wratten Road West	2			3204
136	Former Lisles, Old Park Road	20			3202
138	Data Centre, Cooks Way	35			3234
139	Lyon Court, Walsworth Road	35			3212
140	Nat West, Hermitage Road	14			3208
H/m02	Land at and around, Churchgate	61			3207
H/m03	Post Office, Hermitage Road	12			3208
H/r07	22, Bridge Street	12			3204
H/r22	Land off, Hine Way	5			3201
H/r49	Former bus depot, Fishponds Road	29			3214
H/r50	Neighbourhood centre and adjoining properties, John Barker Place	20			3201
H/r52	Industrial area, Cooks Way	29			3234
144	Probyn House, Lloyd Way	5.5			4304
L/m1	Library and museum site, Gernon Road	12			2307
L/m2	The Wynd	70			2307
L/o3	Westbury School, West View	19			4303
L/r02	opp 382-392, Icknield Way	25			4310
L/r08	St Michael's House, 105, Norton Way South	14			2307
L/r11	Ivel Court, Radburn Way	59			2308
L/r16	Land at, Birds Hill	50			2310
L/r26	Garage, Station Road	10			2307
L/s02	Arena Parade, Arena Parade	15			2307
137	Heath House, Princes Mews	7			4315
143	Land Adj 51 Melbourn Road	2			4315
R/e2	Land at, Lumen Road	37.5			4315
R/r06	Agricultural supplier, Garden Walk	28			4315
R/r12	The Warren Car Park, London Road	17.5			4315
R/r13	Industrial estate, Lower Gower Road	12.5			4315
R/r16	former Priory Cinema, Newmarket Road	7			4315
2	r/o 67 Station Road, Ashwell Street	1.5			4315
5	Land adj. 7, Green Lane	2			4315
7	61, Station Road	10			4315
16	Land off, Yeomanry Drive	7.5			4315
B/r03	East of, Clothall Common	20			4315
B/r04	Land off, Clothall Road, Baldock (Clothall parish)	130			4315
B/r11a	Land north of Bygrave Road (Bygrave parish)	70			4315
B/r12	South of, Clothall Common, Baldock (Clothall parish)	137.5			4315
B/r14	r/o, Clare Crescent	10.5			4315
B/r1a	Land at Bygrave Road	30			4315
B/r23	Land at, North Road, Baldock (Bygrave parish)	52.5			4315
B/r2a	Land south of, Bygrave Road (Bygrave parish)	94			4306
BK/r02	Land off, Windmill Close	5.5			4315
BK/r03	Land North of, Windmill Close	6			4315
BK/r04	Land off, Cambridge Road	6.5			4315
25	Millers Close, Picknag Road	1.5			4315
32	Land NE of, The Close	48			1301
036a	Playing Field, Benslow Lane (upper)	42			3230
H/r06	r/o Fieldfares, Benslow Lane	8			3230
H/r24	Land at, Lucas Lane	26			5204
H/r43	r/o The Aspens, 46, Wymondley Road	10			2205
H/r45b	Top Field, Fishponds Road (east)	26			3215
41	Land off, Duncots Close	9			3314
42	Land at, Hall Lane	18			4304
44	Land west of, Hall Lane	8.5			4304
K/r01	Land north of, High Street	6.5			4304
K/r02	Land off, Lloyd Way	15			4304
L/r15	Land west of Western Way	28			2311
L/r18	Land north of former Norton School, Norton Road	56			2311
L/r24	Land off Radburn Way	37			2308
L/r27	Land west of Western Way	106			2311
O/r01	r/o 14-30, High Street	14			2302
O/r02	Allotment Gardens, Luton Road	48			2302
73	Farmyard, Brickyard Lane	10			4315
RD/r01	Land at, Blacksmiths Lane	10.5			4315
84	Ivy Farm, Baldock Road	20.5			4315
R/r03	Land north of, Betjeman Road	50			4315
R/r04	Land north of, Coombelands Road	28			4315
R/r07	Royston FC, Garden Walk	22			4315
R/r11	Land north of, Lindsay Close	50			4315
R/r19	Land east of, Thackeray Close	11.5			4315
99	Land north of The Crescent, London Road	10			3305
H/r47	Land off Sycamore Close	19			2206
WH/r1	Land south of, High Street, Whitwell	44			2304

Ref Id.	Site Location/Name	Dwellings	Use	Floorspace (Sq.ms)	SHUM Zone
07/01522/1	6 Claybush Road, Ashwell, SG7 5RA	0.5			4315
08/02108/1	15 High Street, Ashwell, Baldock, SG7 5NL	0.5			4315
10/02608/1	Land at 22 Lucas Lane, Ashwell, Baldock, SG7 5LN	0.5			4315
04/00773/1	Land rear of 45 and 47, Chiltern Road, Baldock, SG7	2			4315
08/00949/1	Tranters Yard, Whitehorse Street, Baldock, SG7 6QF	1			4315
08/01050/1	Garages At Womback Yard Rear Of 25 And 23, Whitehorse Street, Baldock, SG7	1.5			4315
08/01087/1	Beech Ridge Lodge, Woodland Way, Baldock, SG7 6LF	6			4315
08/02903/1	Baldock Railway Station, Station Road, Baldock, SG7 5BU	5.5			4315
09/00144/1	36 Salisbury Road, Baldock, SG7 5BZ	2			4315
09/01869/1	72 & 74 South Road, Baldock, SG7 6BZ	5			4315
10/00761/1	Land At The Rear Of, California, Baldock, SG7 6NU	5			4315
10/01294/1	Land Between, 10 and 19, Roman Lane, Baldock, SG7	1			4315
10/00621/1	Barn r/o Elms Farm, 57 High Street, Barkway, Royston, SG8 8EB	0.5			4315
10/02669/1	Land At Wheatsheaf Meadow, Barkway	5			4315
10/02658/1	Land at September Cottage, High Street, Barley, Royston, SG8 8JA	2			4315
08/01256/1	76 Ashwell Road, Bygrave, SG7 5EA	0			4306
09/00290/1	Codicote Innovation Centre, St Albans Road, Codicote, SG4 8WH	1			1301
09/00487/1	10 Oakhill Drive, Welwyn, AL6 9NW	0			1301
09/00808/1	Amberwell, Pottersheath Road, Codicote, AL6 9SY	1			1301
09/01336/1	Old Orchard, Danesbury Park Road, Pottersheath, Welwyn, AL6 9SH	1			1301
10/01359/1	Danesbury Hill House, Codicote Road, Welwyn, AL6 9NF	0			4303
10/02792/1	Fairfield, Kimpton Road, Oakhills, Welwyn, AL6 9NN	1			1301
08/01239/1	18 High Street, Graveley, SG4 7LB	4			3306
09/02197/1	Manor Farm, Riding School, Church Lane, Graveley, Hitchin	2			3202
08/02989/1	Arbtree Farm, Ashwell Road, Hinxworth, SG7 5HT	0.5			4306
05/00421/1	R/O Arcade Walk, Paynes Park, Hitchin	3			3205
05/01137/1	North Herts College, Willian Road, Hitchin, SG4 0UJ	71			3225
06/02007/1	Brookers Yard And Suzuki And Peter Fish Premises Off, Paynes Park, Hitchin, SG5	33			3206
06/02187/1	63 Walsworth Road, Hitchin, SG4 9SX	12			3213
07/00347/1	Land To The Rear Of And Including 134 To 150 Evens, Grove Road, Hitchin, SG4	3			3218
08/00505/1	Land At, 50-58 Strathmore Avenue, Hitchin, SG5 1ST	9			2201
08/00872/1	Land adjacent to 11 Lindsay Avenue, Hitchin, SG4 9JA	1			2205
08/01003/1	Land rear of 26 & 28 Wymondley Road and adjacent to, 24 The Chilterns, Hitchin, SG4	2			2205
08/02046/1	Swiss RE office car park, Old Charlton Road, Hitchin, SG5	6			3203
08/02096/1	5 Wymondley Close, Hitchin, SG4 9PW	0			3212
08/02116/1	14a, 15 and 16 Bancroft, Hitchin, SG5	4			3208
08/02132/1	43 Byron Close, Hitchin, SG4 0QS	1			3227
08/02210/1	Rear Of, 93 Bancroft, Hitchin	3			3209
09/01158/1	Land to r/o 22 Bancroft, Hitchin, SG5 1JW	3			3214
09/01422/1	13 Hermitage Road, Hitchin, SG5 1BT	2			3209
09/01434/1	Land Adjacent To The Larches, Standhill Road, Hitchin	2			2207
09/01689/1	Land East of Cooks Way, Hitchin	4			3234
09/01690/1	34a Woolgrove Road, Hitchin, SG4 0AT	2			3224
09/01831/1	204 Westmill Road, Hitchin, SG5 2SQ	3			3201
09/01917/1	10 Newlands Lane, Hitchin, SG4 9AY	0			2206
09/01949/1	Land adjacent to 8 and 9 Times Close, Hitchin, SG5 2UT	2			3201
09/02126/1	105 Bancroft, Hitchin, SG5 1NB	1			3209
09/02165/1	30 & 31 Tristram Road and Land to r/o 25-31 Tristram Road, Hitchin	15			3223
09/02171/1	34-36 Walsworth Road, Hitchin, SG4	2			3213
09/02366/1	Data Centre, Units 6 And 7, Sharps Way, Hitchin, SG4 0JA	32			3234
09/02367/1	Land To The Rear Of 54, Wymondley Road, Hitchin	4			2205
10/00342/1	Former Grove Road Nurseries, 20-34 Grove Road, Hitchin, SG5 1SE	23			3213
10/00344/1	Land rear of 83-84, Tilehouse Street, Hitchin, SG5	3			3206
10/00370/1	6 Willian Road, Hitchin, SG4 0LW	1			3225
10/00475/1	66b Dacre Road, Hitchin, SG5 1QL	1			3213
10/00666/1	39 Grays Lane, Hitchin, SG5 2HH	1			3202
10/00759/1	Manley Bungalow, Pirton Road, Hitchin, SG5 2ES	0			5204
10/01131/1	2 and 3-4 High Street, Hitchin, SG5 1BH	6			3206
10/01158/1	Land adjacent to 27 Oakfield Avenue, Hitchin, SG4 9JD	1			2205
10/01219/1	Former Chapel, Caldicott Centre, Highbury Road, Hitchin	1			3211
10/01249/1	The Wishing Well, 181 Stevenage Road, Hitchin, SG4 9EA	2			2205
10/01299/1	19 Latchmore Close, Hitchin, SG4 9DE	2			2207
10/01404/1	42 Walsworth Road, Hitchin, SG4 9SU	4			3213
10/01431/1	22 Bancroft, Hitchin, SG5 1JW	1			3214
10/01611/1	6 Grove Road, Hitchin, SG5 1SE	2			3213
10/01630/1	4 Water Lane, Hitchin, SG5 1TX	2			3221
10/02286/1	Jubilee House, 13 Fishponds Road, Hitchin SG5 1NR,	8			3221
10/02468/1	239 Cambridge Road, Hitchin, SG4 0JS	1			3223
10/02542/1	Highover Cottages, Highover Way, Hitchin, SG4 0RQ	1			3223
10/02618/1	101A Bancroft, Hitchin	0			3209
10/02639/1	9-10 Bearton Road, Hitchin, SG5 1UB	4			3221
10/02970/1	84a Tilehouse Street, Hitchin, SG5 2DY	1			3206

Ref Id.	Site Location/Name	Dwellings	Use	Floorspace (Sq.ms)	SHUM Zone
10/03004/1	Land adjacent to 181 Stevenage Road, Hitchin, SG4 9EA	1			2205
10/03032/1	271 Bedford Road, Hitchin, SG5 2UQ	7			3201
10/03063/1	Flat 1, 30 Sun Street, Hitchin, SG5 1AH	1			3206
11/00146/1	40 Queen Street, Hitchin, SG4 9TS	1			2207
10/01543/1	Land Adjacent Orchard Cottage, Pirton Road, Holwell	3			3313
10/02116/1	1-2 Rands Close, Holwell Road, Holwell, Hitchin, SG5 3SZ	0			3313
10/02881/1	Colindale, Pirton Road, Holwell, Hitchin, SG5 3SS	0			3313
10/03023/1	Land To Rear Of 2 4 6 8 10, Holwell Road, Holwell	1			3313
10/02864/1	New Ramerwick Farm, Bedford Road, Ickleford, Hitchin, SG5 3RU	0			3313
10/01539/1	Lower Heath Farm, Therfield Road, Odsey, Baldock, SG7 6SE	0.5			4315
08/00729/1	123 High Street, Kimpton, SG4 8QN	0.5			4304
09/00229/1	72a High Street, Kimpton, SG4 8QW	0.5			4304
09/01748/1	Ramridge Farm, Luton Road, Kimpton, SG4 8HB	1			4304
09/01983/1	64 Kimpton Road, Blackmore End, Herts, AL4 8LH	0.5			4304
10/01401/1	5 Blackmore Way, Blackmore End, St Albans, AL4 8LJ	0.5			4304
10/02109/1	Kimpton Methodist Church, The Green, Kimpton, Hitchin, SG4 8RZ	0.5			4304
10/02590/1	Rudwick Hall, Barley Beans Road, Peters Green, Luton, LU2	1			4304
10/02601/1	45 High Street, Kimpton, Hitchin, SG4 8RA	0			4304
10/03113/1	16 Kimpton Road, Kimpton, St Albans, AL4 8LD	0			4304
08/01838/1	Heath Farm, The Heath, Breachwood Green, SG4 8PJ	1.5			4310
10/00773/1	Bury Cottage, Church Road, King's Walden, Hitchin, SG4 8JU	1			2303
07/02616/1	9 Watton Road, Knebworth, SG3 6AH	1			1303
08/00646/1	15 Gun Lane, Knebworth, SG3 6BH	1			1303
08/02829/1	146 Park Lane, Old Knebworth, SG3 6PP	1			1302
09/00752/1	Park Lodge Cottage, Park Lane, Old Knebworth, SG3 6PP	0			1302
10/02192/1	Minsden Farm, Hitchwood Lane, Preston, Hitchin, SG4 7RY	1			2303
07/02994/1	Former Skill Centre (Also Known As Land At), Pixmore Avenue, Letchworth Garden City	103			2310
08/01289/1	Land at Former Skill Centre, Pixmore Avenue, Letchworth Garden City	15			2310
08/02229/1	Land off Cade Close, Letchworth Garden City, SG6	60			2313
09/00114/1	Former Neosid Site, Icknield Way, Letchworth Garden City, SG6 4AS	65			2310
09/00186/1	61-63, Leys Avenue, Letchworth Garden City, SG6	1			2307
09/00625/1	Land Adjoining, 21 Leys Avenue, Letchworth Garden City, SG6	8			2307
09/00643/1	Land at 39 Kimberley, Letchworth Garden City, SG6 4RB	2			2311
09/01106/1	16b Leys Avenue, Letchworth Garden City, SG6 3EU	1			2307
09/01338/1	Land at The Old Grammar School, Broadway, Letchworth Garden City, SG6 3PS	8			2307
09/01546/1	121-123 Norton Way South, Letchworth Garden City, SG6 1NZ	4			2307
09/02167/1	Natwest, Station Place, Letchworth Garden City, SG6 3AQ	3			2307
09/02218/1	1 Northfields, Letchworth Garden City, SG6 4RJ	1			2311
10/00278/1	Land At Broadwater Dale Garages, Broadwater Dale, Letchworth Garden City	10			2307
10/00799/1	Sollershott Hall, Sollershott East, Letchworth Garden City, SG6 3PL	3			2307
10/01087/1	50c Station Road, Letchworth Garden City, SG6 3BE	2			2307
10/01095/1	Former Neosid Site, Icknield Way, Letchworth Garden City, SG6 4AS	1			2310
10/02700/1	Arunbank, Alington Lane, Letchworth Garden City, SG6 3NE	1			2305
07/02961/1	25-59 Odd and 28-38 evens Elmtree Avenue and land South West of Elmtree Avenue, Cockernhoe, LU2	1			4310
09/00607/1	The Lawns, High Street, Offley, SG5 3AN	4			2302
08/02206/1	The Piggeries, Radwell Lane, Radwell, SG7	0.5			4306
09/00047/1	Radwell Grange Farm Barns, Great North Road 2, Radwell, Baldock	2			4306
09/01990/1	Land adjacent to Village Hall, Radwell Lane, Radwell	2			4306
05/00476/1	Dental surgery, 29-31 High Street, Royston	0.5			4315
06/00380/1	Ling Dynamic Systems Ltd, Baldock Road, Royston, SG8 5BQ	30.5			4315
06/00896/1	Land Rear of, White Bear PH, 53 Kneesworth Street, Royston, SG8	0.5			4315
07/02783/1	Land Adjacent To, 26 Morton Street, Royston, SG8	0.5			4315
07/03029/1	Land to the Rear of 4 Kneesworth Street, Royston, SG8 5AA	2.5			4315
08/00177/1	12 Stamford Avenue, Royston, SG8 7DD	0.5			4315
08/00689/1	39-41 Upper King Street, Royston, SG8 9AZ	1			4315
08/00956/1	5 Church Lane, Royston, SG8 9LG	1			4315
08/01223/1	65 Garden Walk, Royston, SG8 7JE	1			4315
08/01343/1	71 Melbourn Road, Royston, SG8 7DG	0.5			4315
08/01592/1	39 Old North Road, Royston, SG8 5EJ	0.5			4315
08/01858/1	Carrington House, 37 Upper King Street, Royston, SG8 9AZ	0.5			4315
08/02788/1	Heath Works, Baldock Road, Royston, SG8 5BQ	26			4315
09/00776/1	25 High Street, Royston, SG8 9AA	0.5			4315
09/01788/1	The Old Bakehouse, Upper King Street, Royston	0.5			4315
09/01928/1	8 Lower Gower Road, Royston, SG8 5EA	0.5			4315
09/02199/1	7 Melbourn Road, Royston, SG8 7DB	0.5			4315
10/00447/1	2 Angel Pavement, Royston, SG8 9AS	1			4315
10/00601/1	Land at 62 Green Drift, Royston, SG8 5BX	0.5			4315
10/01015/1	Rear of, 31 Priory Close, Royston, SG8 7DU	0.5			4315
10/01452/1	70 Heathfield Road, Royston	0.5			4315
10/01552/1	27 Heathfield, Royston, SG8 5BN	1			4315
10/02203/1	Land Between And In The Gardens Of 31 And 33, Mill Road, Royston, SG8 7AQ	0.5			4315
10/02517/1	Ivy Farm, Baldock Road, Royston, SG8 9NU	40.5			4315

Ref Id.	Site Location/Name	Dwellings	Use	Floorspace (Sq.ms)	SHUM Zone
08/01097/1	Land corner of Dark Lane and Payne End (adjacent to 27 Dark Lane), Sandon, SG9	3			4315
10/00104/1	Land At Partridge Hall Farm, Church End Green, Sandon	0.5			4306
10/02860/1	Land adjacent to The Forge, Rushden Road, Sandon, Buntingford, SG9 0QS	0.5			4315
05/00851/1	Tollington, Preston Road, Gosmore, SG4 7QP	1			3305
08/02772/1HH	Pound Farm, London Road, St Ippolyts, Hitchin, SG4 7NE	1			2206
09/00865/1	Land adjacent to Little Court and Oakdene, London Road, St Ippolyts, Hitchin, SG4 7NE	1			2206
05/01661/1	Plots 1, 2, 3 & 8 Cressmans Corner, Lilley Bottom Road, Whitwell, SG4	3			2304
08/00666/1	Land and Outbuildings at, Stagenhoe Farm, Stagenhoe Park, St Paul's Walden, SG4	0			2304
09/01563/1	Hoo End, Whitwell, Hitchin, SG4 8HJ	1			2304
09/01566/1	Hoo End Farm, The Holt, Kimpton, Hitchin, SG4 8HG	1			2304
10/02502/1	28 High Street, Whitwell, Hitchin, SG4 8AG	1			2304
07/00839/1	Land Adjacent Oakwood House, Pedlars Lane, Therfield, Royston	0.5			4315
08/01548/1	Five House Cottages, Sandon Road, Therfield, SG8 9RE	0			4315
08/01757/1	Heatherset, Police Row, Therfield, SG8 9QE	1			4315
03/00381/1	Land at Manor Farm, Damask Green Road, Weston, Hitchin, SG4	1			1306
07/02998/1	Garthlands, Maiden Street, Weston, SG4 7AA	0			1306
08/01996/1	Garthlands, Maiden Street, Weston, Hitchin, SG4 7AA	1			1306
10/02290/1	Land Adjacent Keepers Cottage, Warrens Green Lane, Weston	0			1306
10/00065/1	Land Adjacent, The Green Man, Hitchin Road, Wymondley, Hitchin	6			3301
-	Small site allowances - Hitchin	10.7			3202
-	Small site allowances - Hitchin	10.7			3201
-	Small site allowances - Hitchin	10.7			3218
-	Small site allowances - Hitchin	10.7			3203
-	Small site allowances - Hitchin	10.7			2201
-	Small site allowances - Hitchin	10.7			3221
-	Small site allowances - Hitchin	10.7			3213
-	Small site allowances - Hitchin	10.7			3205
-	Small site allowances - Hitchin	10.7			2207
-	Small site allowances - Hitchin	10.7			2206
-	Small site allowances - Hitchin	10.7			2205
-	Small site allowances - Hitchin	10.7			3230
-	Small site allowances - Hitchin	10.7			3225
-	Small site allowances - Hitchin	10.7			3227
-	Small site allowances - Hitchin	10.7			3224
-	Small site allowances - Hitchin	10.7			3215
-	Small site allowances - Hitchin	10.7			3211
-	Small site allowances - Hitchin	10.7			3212
-	Small site allowances - Hitchin	10.7			3223
-	Small site allowances - Hitchin	10.7			3214
-	Small site allowances - Hitchin	10.7			3208
-	Small site allowances - Hitchin	10.7			3207
-	Small site allowances - Hitchin	10.7			3206
-	Small site allowances - Hitchin	10.7			3204
-	Small site allowances - Hitchin	10.7			3209
-	Small site allowances - Hitchin	10.7			5204
-	Small site allowances - Hitchin	10.7			3202
-	Small site allowances - Hitchin	10.7			3234
-	Small site allowances - Letchworth	12.5			2305
-	Small site allowances - Letchworth	12.5			2307
-	Small site allowances - Letchworth	12.5			2308
-	Small site allowances - Letchworth	12.5			2309
-	Small site allowances - Letchworth	12.5			2310
-	Small site allowances - Letchworth	12.5			2311
-	Small site allowances - Letchworth	12.5			2312
-	Small site allowances - Letchworth	12.5			2313
-	Small site allowances - Baldock	50			4315
-	Small site allowances - Royston	50			4315
NHDC Preferred Option Housing (with Stevenage West)					
12/00724/1	1 Newnham Way, Ashwell, Baldock, SG7 5PN	0.5			4315
12/00724/1	1 Newnham Way, Ashwell, Baldock, SG7 5PN	-0.5			4315
12/00812/1	35 High Street And Whitby Farm, Silver Street, Ashwell, SG7 5NP	1			4315
12/00812/1	35 High Street And Whitby Farm, Silver Street, Ashwell, SG7 5NP	1.5			4315
12/01356/1	Land Rear of, 48 Ashwell Street, Ashwell	1			4315
12/01650/1	Hillrise, 4 Claybush Road, Ashwell, Baldock, SG7 5RA	0.5			4315
12/01650/1	Hillrise, 4 Claybush Road, Ashwell, Baldock, SG7 5RA	0			4315
12/01650/1	Hillrise, 4 Claybush Road	-0.5			4315
12/02079/1	61 Station Road, Ashwell, Baldock, SG7 5LR	-5.5			4315
12/02079/1	61 Station Road, Ashwell, Baldock, SG7 5LR	1.5			4315
12/02079/1	61 Station Road, Ashwell, Baldock, SG7 5LR	2			4315
12/02079/1	61 Station Road, Ashwell, Baldock, SG7 5LR	6			4315
12/02079/1	61 Station Road, Ashwell, Baldock, SG7 5LR	0.5			4315
12/02767/1	Land Adjacent To 92, Ashwell Street, Ashwell, SG7 5QU	0.5			4315
13/00571/1	30 West End, Ashwell, Baldock, SG7 5PJ	-0.5			4315

Ref Id.	Site Location/Name	Dwellings	Use	Floorspace (Sq.ms)	SHUM Zone
13/00571/1	30 West End, Ashwell, Baldock, SG7 5PJ	0.5			4315
07/01522/1	6 Claybush Road	0.25			4315
08/02108/1	15 High Street	0.25			4315
11/01082/1	12 Kingsland Way	0.5			4315
10/02608/1	Land at 22 Lucas Lane	0.25			4315
12/02221/1	6 Kingsland Way	0.5			4315
12/01617/1	40 Kingsland Way	1.5			4315
13/01696/1EUD	Ashwell End Farm Loves Lane	0.5			4315
AS1	Land west of, Claybush Road	16.5			4315
04/00773/1	Land rear of 45 and 47, Chiltern Road, Baldock, SG7	1			4315
11/01101/1	The Old Meeting House, Meeting House Lane, Baldock, SG7 5BP	0.75			4315
11/01101/1	The Old Meeting House, Meeting House Lane, Baldock, SG7 5BP	1			4315
11/01148/1	Land at 7 California, Baldock, SG7 6NU	0.5			4315
11/02227/1	Garages At Womback Yard Rear Of 25 And 23, Whitehorse Street, Baldock	0.75			4315
11/02869/1	31 Whitehorse Street, Baldock, SG7 6QF	1.5			4315
12/00544/1	80 Icknield Way, Baldock	2.25			4315
12/00851/1	Land between 10 & 19 Roman Lane Baldock	0.5			4315
13/00275/1	54 High Street, Baldock, SG7 6BL	0.5			4315
13/00275/1	54 High Street, Baldock, SG7 6BL	2			4315
13/00275/1	54 High Street, Baldock, SG7 6BL	1.5			4315
13/00427/1	10 Royston Road, Baldock, SG7 6NT	0.5			4315
13/01292/1	Quenbys Yard, Pond Lane, Baldock	2			4315
13/01359/1	44 Whitehorse Street, Baldock, SG7 6QQ	2			4315
08/00949/1	Tranters Yard Whitehorse Street	0.5			4315
09/01869/1	72 & 74 South Road	2.5			4315
08/01087/1	Beech Ridge Lodge Woodland Way	3			4315
11/01390/1	13 Whitehorse Street	0.5			4315
10/00761/1	Land at the rear of, California,	2.5			4315
11/02103/1	Former Gospel Hall Orchard Road	0.5			4315
09/00144/1	36 Salisbury Road	2			4315
11/02156/1	7-8 Meeting House Lane	0.5			4315
11/02346/1	19 Whitehorse Street	0.5			4315
11/01789/1	9 and 11 Whitehorse Street	2			4315
10/02640/1	31a Hitchin Street and park Street	3			4315
12/01751/1	1 High Street	0.5			4315
12/02241/1PUD	4 Church Street	0.5			4315
13/00830/1	14a High Street	0.5			4315
13/00916/1	52B Church Street	0.5			4315
02/01061/1	The Warehouse Park Street	1			4315
10/01456/1	Baldock Railway Station Station Road	2.75			4315
BA1	Land north of Baldock	1414			4315
BA2	Land off, Clothall Road, Baldock (Clothall parish)	65			4315
BA3	South of, Clothall Common, Baldock (Clothall parish)	38.25			4315
BA4	East of, Clothall Common	32.5			4315
BA5	Land off, Yeomanry Drive	3.75			4315
BA6	Land at, Icknield Way	-0.5			4315
BA7	r/o, Clare Crescent	-0.75			4315
BA8	Royston Road		B1	33100	4315
-			B2	33100	4315
-			B8	33100	4315
11/02497/1	Garage House, Cambridge Road, Barkway, Royston, SG8 8BS	1			4315
11/02497/1	Garage House, Cambridge Road, Barkway, Royston, SG8 8BS	0.5			4315
11/00307/1	Garage House Cambridge Road	0.5			4315
12/00470/1	140 High Street, Barkway, Royston, SG8 8EG	1			4315
12/00417/1	The Bungalow, Lane Farm Gas Lane	-0.5			4315
12/00417/1	The Bungalow, Lane Farm Gas Lane	0.5			4315
10/02669/1	Land at 22 Wheatsheaf Meadows	2.5			4315
10/00621/1	barn r/o elms Farm, 57 High Street	0.25			4315
11/01969/1	Highfield Farm Burrs Lane	0.5			4315
11/01435/1	Greenways Buckland Road	0			4315
BK1	Land east of, Cambridge Road	14.5			4315
BK2	Land North of, Windmill Close	6			4315
BK3	Land off, Cambridge Road	3.25			4315
BL1	New Hill, Picknage Road	15			4315
BL2	Land at Pudding Lane	11			4315
12/02513/1	Mary Penny Close, Shaftenhoe End Road, Barley, Royston, SG8 8LE	0.5			4315
12/02513/1	Mary Penny Close, Shaftenhoe End Road, Barley, Royston, SG8 8LE	-0.5			4315
13/01699/1	Land adjacent to the Fox And Hounds, High Street, Barley, Royston, SG8 8HU	1			4315
13/02372/1	Chequers Inn, London Road, Barley, Royston, SG8 8JQ	0.5			4315
11/01171/1	76 Ashwell Road, Bygrave, Baldock, SG7 5EA	-0.5			4315
11/01171/1	76 Ashwell Road, Bygrave, Baldock, SG7 5EA	0.5			4315
EL1&EL2	East of Luton	1400			4305
					4309

Ref Id.	Site Location/Name	Dwellings	Use	Floorspace (Sq.ms)	SHUM Zone
EL3	Land north east of Luton	700			4305
					4309
11/02127/1	The Old Water Tower, Danesbury Park Road, Welwyn, AL6	0.5			4302
12/00392/1	Holly Lodge, Danesbury Park Road, Welwyn, AL6 9SH	0.5			4302
12/00392/1	Holly Lodge, Danesbury Park Road, Welwyn, AL6 9SH	0			4302
13/00358/1	65 and land at 67 Codicote Road, Welwyn, AL6 9TY	3			4302
13/00358/1	65 and land at 67 Codicote Road, Welwyn, AL6 9TY	3			4302
13/00399/1	Node Cottage, Hitchin Road, Codicote, Hitchin, SG4 8TL	1			1301
13/01502/1	56 St Albans Road and side garden of 52 St Albans Road, Codicote, Hitchin, SG4 8UT	0			1301
13/01502/1	56 St Albans Road and side garden of 52 St Albans Road, Codicote, Hitchin, SG4 8UT	5			1301
13/02751/1	Scaleber, Fulling Mill Lane, Codicote, Welwyn, AL6 9NP	0.5			4302
13/02751/1	Scaleber, Fulling Mill Lane, Codicote, Welwyn, AL6 9NP	-0.5			4302
13/02885/1	38 Tower Road, Codicote, Hitchin, SG4 8XH	1			1301
13/02892/1	37 Tower Road, Codicote, Hitchin, SG4 8XH	1			1301
13/02981/1	Land rear of The Cottages, Nup End Green, Park Lane, Old Knebworth	1			1302
14/00004/1	Grey Shingles, Pottersheath Road, Codicote, Welwyn, AL6 9ST	-0.5			4302
14/00004/1	Grey Shingles, Pottersheath Road, Codicote, Welwyn, AL6 9ST	0.5			4302
09/00808/1	Amberwell Pottersheath Road	0			1301
10/03091/1	Amberwell Pottersheath Road	1			1301
10/03091/1	Amberwell Pottersheath Road	-1			1301
09/01336/1	Old Orchard Danesbury Park Road	0			1301
12/00392/1	Holly Lodge Danesbury Park Road	-1			1301
11/00751/1	Fairfield Kimpton Road	0			1301
09/00487/1	10 Oaskhill Drive	0			1301
13/01502/1	56 St Albans Road	-1			1301
CD1	Land south of, Cowards Lane	73			1301
CD2	Codicote Garden Centre	58			1301
CD3	Land NE of, The Close	0			1301
12/01060/1	10 Oak Lane, Graveley, Hitchin, SG4 7LN	-1			3306
12/01060/1	10 Oak Lane, Graveley, Hitchin, SG4 7LN	2			3306
11/01241/1	18 High Street, Graveley	-1			3306
11/01241/1	18 High Street, Graveley	1			3306
09/02197/1	Manor Farm, Riding School Church Lane	0			3102
GR1	Land at Milksey Lane	8			3306
GA1	Roundwood, North East Stevenage	357			5105
GA2	Land off Mendip Way	500			5102
12/00366/1	Red Lion Barn Barton Road	0.5			4305
08/02989/1	Arbtree Farm Ashwell Road	0.25			4307
11/03097/1EUD	Hamstewarde, High Street	0.5			4307
09/01422/1	13 Hermitage Road, Hitchin, SG5 1BT	0			3209
10/02796/1	85 Tilehouse Street, Hitchin, SG5 2DY	1			3206
10/02796/1	85 Tilehouse Street, Hitchin, SG5 2DY	0			3206
10/02796/1	85 Tilehouse Street, Hitchin, SG5 2DY	0			3206
12/02021/1	85 Tilehouse Street, Hitchin, SG5 2DY	2			3206
10/02796/1	85 Tilehouse Street	2			3206
10/02811/1	Former Bus Depot, Fishponds Road, Hitchin, SG5 1NP	-27			3221
10/02811/1	Former Bus Depot, Fishponds Road, Hitchin, SG5 1NP	2			3221
10/02811/1	Former Bus Depot, Fishponds Road, Hitchin, SG5 1NP	6			3221
10/02811/1	Former Bus Depot, Fishponds Road, Hitchin, SG5 1NP	12			3221
10/02811/1	Former Bus Depot Fishponds Road	7			3221
10/02970/1	84a Tilehouse Street, Hitchin, SG5 2DY	0			3206
11/00265/1	6 Station Terrace, Hitchin, SG4 9UN	2			3220
12/01418/1	The Anchor, 84 Cambridge Road, Hitchin	1			3226
12/01418/1	The Anchor, 84 Cambridge Road, Hitchin	2			3226
11/01165/1	99-100 Ickleford Road, Hitchin, SG5 1TL	1			3221
11/01661/1	36 Brampton Park Road, Hitchin, SG5 1XF	1			3215
11/01793/1	Land rear of 26 & 28 Wymondley Road and, adjacent to, 24 The Chilterns, Hitchin	0			2204
11/02889/1	5 Wymondley Close, Hitchin, SG4 9PW	-1			3230
11/02889/1	5 Wymondley Close, Hitchin, SG4 9PW	1			3230
11/02970/1	84 Tilehouse Street, Hitchin, SG5 2DY	1			3206
12/00082/1	80-81 Walsworth Road, Hitchin, SG4 9SX	2			3220
12/00893/1	Land to r/o 22 Bancroft, Hitchin, SG5 1JW	0			3214
11/02331/1	22 Bancroft, Hitchin	1			3214
12/01077/1	22 Bridge Street, Hitchin, SG5 2DF	-9			3204
12/01077/1	22 Bridge Street, Hitchin, SG5 2DF	1			3204
12/01122/1	34a Woolgrove Road, Hitchin, SG4 0AT	-1			3224
12/01271/1	St Andrews House, St Andrews Place, Hitchin, SG4 9BU	-30			2207
12/01271/1	St Andrews House, St Andrews Place, Hitchin, SG4 9BU	7			2207
12/01271/1	St Andrews House, St Andrews Place, Hitchin, SG4 9BU	6			2207
12/01435/1	10-11 Sun Street, Hitchin, SG5 1AQ	1			2207
12/01988/1	43-44 Bancroft, Hitchin, SG5 1LA	4			3214
12/02088/1	Land rear of 36, Fishponds Road, Hitchin, SG5 1NR	1			3221
12/02211/1	57 Nightingale Road, Hitchin, SG5 1RQ	9			3232

Ref Id.	Site Location/Name	Dwellings	Use	Floorspace (Sq.ms)	SHUM Zone
12/02225/1	Hitchin Rugby Football Club, King George V Playing Field, Old Hale Way, Hitchin, SG5 1XL	1			3216
12/02225/1	Hitchin Rugby Football Club, King George V Playing Field, Old Hale Way, Hitchin, SG5 1XL	-1			3216
12/02469/1	4 Tilehouse Street, Hitchin, SG5 2DW	1			3206
12/02530/1	Land at Windmill Hill House, Windmill Hill, Highbury Road, Hitchin, SG4 9RT	1			3211
13/00173/1	24 Bucklersbury, Hitchin, SG5 1BG	1			3206
13/00270/1	113 Cambridge Road, Hitchin, SG4 0JH	1			3224
13/00284/1	Former Petrol Station, Wratten Road West, Hitchin, SG5 2EF	2			3202
13/00386/1	Manley Bungalow, Pirton Road, Hitchin, SG5 2ES	1			3202
10/00759/1	Manley Bungalow Pirton Road	-1			3202
13/00398/1	Land adjacent to 25 St Michaels Mount, Hitchin, SG4 0DH	1			3228
13/00662/1	Queen Street Garage, Queen Street, Hitchin, SG4 9TS	3			3207
13/00821/1	93a Bancroft, Hitchin, SG5 1NQ	2			3214
12/00536/1	91-93A Bancroft, Hitchin	5			3214
13/00945/1	10 Newlands Lane, Hitchin, SG4 9AY	1			2206
13/00945/1	10 Newlands Lane, Hitchin, SG4 9AY	-1			2206
13/01255/1	Land at 201 Whitehill Road, Hitchin, SG4 9HY	1			2205
13/01645/1	10 Bucklersbury, Hitchin, SG5 1BB	2			3206
13/01756/1PN	Townsend House, 91-96 Hermitage Road, Hitchin, SG5 1DG	24			3208
13/01964/1	61 Radcliffe Road, Hitchin, SG5 1QG	1			3213
13/01964/1	61 Radcliffe Road, Hitchin, SG5 1QG	2			3213
13/01998/1	79 Benslow Lane, Hitchin, SG4 9RA	2			3230
13/01998/1	79 Benslow Lane, Hitchin, SG4 9RA	0			3230
13/01998/1	79 Benslow Lane	-1			3230
13/02078/1	95 Tilehouse Street, Hitchin, SG5 2DW	0			3206
13/02078/1	95 Tilehouse Street, Hitchin, SG5 2DW	1			3206
13/02078/1	95 Tilehouse Street	-1			3206
13/02151/1	Hitchin Delivery Office, 90 Hermitage Road, Hitchin	12			3208
13/02206/1	John Burgess And Co Ltd, Wratten Road East, Hitchin, SG5 2AP	4			3206
13/02353/1	3 Lancaster Avenue and 25 Bearton Avenue, Lancaster Avenue, Hitchin	1			3215
13/02353/1	3 Lancaster Avenue and 25 Bearton Avenue, Lancaster Avenue, Hitchin	0			3215
13/02362/1	73 Benslow Lane, Hitchin, SG4 9QZ	1			3230
13/02362/1	73 Benslow Lane, Hitchin, SG4 9QZ	0			3230
13/02362/1	73 Benslow Lane	-1			3230
13/02396/1	11 Lindsay Avenue, Hitchin, SG4 9JA	0			2205
13/02454/1	3-5 Bancroft, Hitchin, SG5 1JQ	3			3214
13/02978/1	Block A, Latchmore Court, Brand Street, Hitchin, SG5 1HX	19			3206
13/03003/1	101 Bancroft, Hitchin, SG5 1NB	1			3214
13/03106/1	13 Bedford Road, Hitchin, SG5 2TP	2			3202
14/00026/1	3 Tilehouse Street, Hitchin, SG5 2DW	1			3206
14/00068/1	37a Hermitage Road, Hitchin, SG5 1BY	2			3208
06/02187/1	63 Walsworth Road	0			3213
07/00347/1	Land to the rear of and including 134-15- evens Grove Road	0			3232
08/02132/1	43 Byron Close	1			3227
09/01949/1	Land adjacent to 8 to 9 Times Close	0			3201
09/02126/1	105 Bancroft	0			3209
09/02165/1	30 and 31 Tristram Road	-17			3223
09/02165/1	30 and 31 Tristram Road	17			3223
10/00666/1	39 Grays Lane	0			3202
10/01131/1	2 and 3-4 High Street	0			3206
10/01219/1	Former Chapel Caldicott Centre, Highbury Road	0			3211
10/01249/1	The wishing Well, 181 Stevenage Road	0			2207
10/03004/1	Land adjacent to 181 Stevenage Road	0			2207
10/01299/1	19 Latchmore Close	-3			2207
10/01299/1	19 Latchmore Close	3			2207
10/01611/1	6 Grove Road	0			3221
10/01630/1	4 Water Lane	-4			3221
10/01630/1	4 Water Lane	4			3221
10/02468/1	239 Cambridge Road	0			3233
10/02542/1	Highover Cottages Highover Way	0			3223
11/00146/1	40 Queens Street	1			2207
06/02007/1	Brookers Yard Paynes Park	0			3205
10/00342/1	Former Grove Road Nurseries, 20-34 Grove Road	0			3221
10/01404/1	42 Walsworth Road	0			3213
10/02286/1	Jubilee House, 13 Fishponds Road	0			3221
12/02594/1EUD	38 Walsworth Road	-1			3213
09/01434/1	Land adjacent to the Larches Standhill Road	-1			2207
09/01434/1	Land adjacent to The Larches Standhill Road	1			2207
11/01825/1	23 Bedford Road	1			3202
11/01679/1	100-102 Ninesprings Way	1			2204
12/00399/1	Land at 50-58 Strathmore Avenue	-14			2201
12/00399/1	Land at 50-58 Strathmore Avenue	5			2201
12/01531/1	Land rear of 50-58 Strathmore Avenue	4			2201
11/03012/1	18 Thatchers End	1			2202

Ref Id.	Site Location/Name	Dwellings	Use	Floorspace (Sq.ms)	SHUM Zone
10/00344/1	Land rear of 83-84 Tilehouse Street	0			3206
10/00370/1	6 Willian Road	0			3228
10/03032/1	271 Bedford Road	-8			3201
10/03032/1	271 Bedford Road	8			3201
09/02171/1	34-36 Walsworth Road	0			3213
10/02618/1	101A Bancroft	0			3209
10/00475/1	66b Dacre Road	0			3213
13/02353/1	3 Landcaster Avenue and 25 Bearton	-1			3215
10/03063/1	Flat 1, 30 Sun Street	0			3207
11/00295/1	Church Yard 7b Market Place	1			3207
11/00322/1	Priory Lodge Tilehouse Street	1			3206
11/00694/1	Lyon Court Walsworth Road	0			3213
11/01965/1	Wellington House, 2 park Street	1			3204
12/00519/1	Mount Zion Station Road	1			2207
12/00605/1	26 Bunyan Road	2			3221
13/02637/1	10 Bridge Street	1			3204
13/03087/1	Mill Cottage Purwell Lane	1			2202
11/00923/1	The Studio 29F Nightingale Road	1			3232
09/01689/1	Land East of Cooks Way	0			3234
HT8	Cooks Way	0			3234
09/02366/1	Data Centre, Unit 6&& Sharps Way	0			3234
09/02367/1	Land to the rear of 54 Wymondley Road	0			3230
10/01158/1	Land adjacent to 27 Oakfield Avenue	0			2205
11/00382/1	104 Bedford Road	2			3201
12/02584/1	The Orchard and Anvil, 148 Nightingale Road	-2			3232
HT1	Higover Farm, Stotfold Road	484			5203
HT2	Land north of Pound Farm, London Road (St Ippolyts parish)	67			2206
HT3	Land south of, Oughtonhead Lane	37			5204
HT4	Land at, Lucas Lane	0			5204
HT5	Land at junction of Grays Lane &, Lucas Lane	12			5204
HT6	Land at junction of Grays Lane and, Crow Furlong	41			5204
HT7	Neighbourhood centre and adjoining properties, John Barker Place	13			3201
10/02116/1	1-2 Rands Close, Holwell Road, Holwell, Hitchin, SG5 3SZ	2			3313
10/02116/1	1-2 Rands Close, Holwell Road	-2			3313
12/00404/1	Land To Rear Of 2 4 6 8 10, Holwell Road, Holwell	0			3313
13/01301/1	Ramerick Nursery, Bedford Road, Holwell, Hitchin, SG5 3RX	1			3313
13/02845/1	Land Adjacent Orchard Cottage, Pirton Road, Holwell	0			3313
10/02881/1	Colindale Pirton Road	-1			3313
10/02881/1	Colindale Pirton Road	1			3313
12/01292/1	Land at, New Ramerick Farm, Bedford Road, Holwell	2			3313
12/01825/1	Land adjacent 149, Arlesey Road, Ickleford, SG5 3TL	1			3314
13/00439/1	New Ramerick Farm, Bedford Road, Ickleford, Hitchin, SG5 3RU	0.5			4308
13/00439/1	New Ramerick Farm, Bedford Road, Ickleford, Hitchin, SG5 3RU	-0.5			4308
IC1	Land off, Duncots Close	0			3314
13/00452/1	Land at Bewlay, Slip End, Baldock, SG7 6SF	0.5			4315
10/01539/1	Lower Heath Farm Therfield Road	0.25			4315
12/00410/1	Greenveldt Kennels, Luton Road, Kimpton, Hitchin, SG4 8HB	-0.5			4304
12/00410/1	Greenveldt Kennels, Luton Road, Kimpton, Hitchin, SG4 8HB	0.5			4304
12/01226/1	27 Blackmore Way, Blackmore End, St Albans, AL4 8LJ	-0.5			4304
12/01226/1	27 Blackmore Way, Blackmore End, St Albans, AL4 8LJ	0.5			4304
12/02325/1	Ramridge Farm, Luton Road, Kimpton, Hitchin, SG4 8HB	0.5			4304
11/01769/1	Ramridge Farm Cottages Luton Road	-1			4304
11/01769/1	Ramridge Farm Cottages Luton Road	0.5			4304
13/00175/1	Ayot Chase, Bibbs Hall Lane, Ayot St Lawrence, Welwyn, AL6 9BY	-0.5			4304
13/00175/1	Ayot Chase, Bibbs Hall Lane, Ayot St Lawrence, Welwyn, AL6 9BY	0.5			4304
13/00282/1	72a High Street, Kimpton, Hitchin, SG4 8QW	-0.5			4304
13/00282/1	72a High Street, Kimpton, Hitchin, SG4 8QW	0.5			4304
13/00959/1	Probyn House, Lloyd Way, Kimpton, SG4 8QS	-13.25			4304
13/00959/1	Probyn House, Lloyd Way, Kimpton, SG4 8QS	0.5			4304
13/00959/1	Probyn House, Lloyd Way, Kimpton, SG4 8QS	2			4304
13/00959/1	Probyn House, Lloyd Way, Kimpton, SG4 8QS	1			4304
13/00959/1	Probyn House, Lloyd Way, Kimpton, SG4 8QS	1			4304
13/00959/1	Probyn House, Lloyd Way, Kimpton, SG4 8QS	0.5			4304
KM4	Probyn House, Lloyd Way	2.75			4304
13/01055/1	Kimridge, Kimpton Bottom, Kimpton, Hitchin, SG4 8EU	0.5			4304
13/01055/1	Kimridge, Kimpton Bottom, Kimpton, Hitchin, SG4 8EU	-0.5			4304
13/01815/1	Water Tower, Priors Wood, Bibbs Hall Lane, Ayot St Lawrence	0.5			4304
08/00729/1	123 High Street	0.25			4304
09/01566/1	Hoo End Farm The Holt	0			4304
09/01983/1	64 Kimpton Road, Blackmore End	0.25			4304
10/01401/1	5 Blackmore Way	0.25			4304
10/02601/1	45 High Street	0			4304
10/03113/1	16 Kimpton Road	-0.5			4304
10/03113/1	16 Kimpton Road	0.5			4304
11/00871/1	Little Plummers Plummers Lane	-0.5			4304

Ref Id.	Site Location/Name	Dwellings	Use	Floorspace (Sq.ms)	SHUM Zone
11/00871/1	Little Plummers Plummers Lane, Peters Green	0.5			4304
11/02543/1	High Oaks Kimpton Bottom	0			4304
11/02948/1	49 High Street	0.5			4304
10/02109/1	Kimpton Methodist Church The Green	0.25			4304
11/00749/1	Old Lion Brewery, 46B High Street	0.5			4304
12/02814/1	20 Blackmore End	0			4304
KM1	Land at, Hall Lane	17.5			4304
KM2	Land off Lloyd Way	7.5			4304
KM3	Land north of, High Street	3.25			4304
11/00031/1	Baileys Close Farm, Pasture Lane, Breachwood Green	0			4310
11/00031/1	Baileys Close Farm, Pasture Lane, Breachwood Green	-0.5			4310
10/00773/1	Bury Cottage Church Road	0			2303
11/00031/1	Baileys Close Farm Pasture Lane, Breachwood Green	1			2303
KW1	Allotments west of The Heath, Breachwood Green	8			4309
11/00277/1	9 Watton Road, Knebworth, SG3 6AH	0			1303
12/01688/1	Unit 1, 121 London Road, Knebworth, SG3 6EX	2			1303
12/02794/1	115 and 117 London Road, Knebworth, SG3 6EX	1			1303
12/02851/1	Trees, Deards End Lane, Knebworth, SG3 6NL	1			1303
12/02858/1	Bulwer Lytton House, Lytton Fields, Knebworth, SG3 6DW	5			1303
12/02858/1	Bulwer Lytton House, Lytton Fields, Knebworth, SG3 6DW	6			1303
12/02858/1	Bulwer Lytton House, Lytton Fields, Knebworth, SG3 6DW	2			1303
13/00050/1	164 Old Park Lane, Old Knebworth, Knebworth, SG3 6PR	-1			1302
13/00050/1	164 Old Park Lane, Old Knebworth, Knebworth, SG3 6PR	1			1302
14/00010/1	Site of former 146, Park Lane, Old Knebworth, SG3 6PP	0			1301
13/01992/1	The Node Conference And Training Centre, Hitchin Road, Codicote, Hitchin, SG4 8TL	3			1302
13/01992/1	The Node Conference And Training Centre, Hitchin Road, Codicote, Hitchin, SG4 8TL	10			1302
13/01992/1	The Node Conference And Training Centre, Hitchin Road, Codicote, Hitchin, SG4 8TL	3			1302
13/02021/1	The Node Conference And Training Centre, Hitchin Road, Codicote, Hitchin, SG4 8TL	1			1302
13/00325/1	39 Pondcroft Road, Knebworth	0			1303
13/00325/1	39 Pondcroft Road, Knebworth	2			1303
13/00325/1	39 Pondcroft Road	-1			1303
13/00735/1	8 Park Lane, Knebworth	1			1303
09/00752/1	Park Lodge Cottage Park Lane	-1			1302
12/02736/1	Park Lodge Cottage Park Lane	1			1302
10/02847/1	Jacob Farm Nup End	1			1302
KB2	Land at, Gypsy Lane	184			1303
KB1	Land at, Deards End	227			1303
10/00715/1	121-123 Norton Way South, Letchworth Garden City, SG6 1NZ	-2			2312
11/02111/1	71 Station Road, Letchworth Garden City, SG6 3BJ	-1			2312
12/00686/1	The Old Grammar School, Broadway, Letchworth Garden City, SG6 3PS	-7			2307
12/00686/1	The Old Grammar School, Broadway, Letchworth Garden City, SG6 3PS	7			2307
12/00708/1	St John Ambulance Brigade HQ, Birds Hill, Letchworth Garden City	1			2310
12/01584/1	Land at 39 Kimberley, Letchworth Garden City, SG6 4RB	0			2311
12/02492/1	31 Gaunts Way, Letchworth Garden City, SG6 4PJ	1			2311
13/00869/1	11 Arena Parade and 29 Eastcheap, Letchworth Garden City, SG6 3BY	5			2312
13/01087/1	Land at Rosehill Hospital, Hitchin Road, Letchworth Garden City, SG6 3NA	1			2305
09/00625/1	Land adj 21 Leys Avenue, Letchworth Garden City	0			2312
07/02994/1	Former Skills Centre Pixmore Avenue	-77			2310
07/02994/1	Former Skills Centre Pixmore Avenue	16			2310
07/02994/1	Former Skills Centre Pixmore Avenue	2			2310
08/01289/1	Former Skills Centre Pixmore Avenue	4			2310
07/02994/1 and 08/01289/1	Skills Centre Pixmore Avenue	66			2310
07/02994/1 and 08/01289/1	Former Skills Centre Pixmore Avenue	4			2310
09/00114/1	Former Neosid site Icknield Way	-51			2312
09/00114/1	Former Neosid Site Icknield Way	2			2312
09/00114/1	Former Neosid Site Icknield Way	15			2312
09/00114/1	Former Neosid site Icknield Way	17			2312
09/00114/1	Former Neosid Site Icknield Way	16			2312
10/01095/1	Former Neosid Site Icknield Way	1			2312
09/02167/1	Natwest Station Place	0			2307
09/02218/1	1 Northfields	0			2311
10/02700/1	Arunbank Alington Lane	0			2305
08/02229/1	Land off Cade Close	0			2313
10/00278/1	Land at Broadwater Dale Garages Broadwater Dale	0			2307
10/00799/1	Sollershott Hall Sollershott East	0			2307
10/00472/1	Former Westbury Primary School West View	7			2307
10/00472/1	Former Westbury Primary School West View	12			2307
11/00110/1	Land at 99 Northfields	1			2311
LG1	North of Letchworth	1000			2311
LG10	Former Power Station		B1	5090	2310

Ref Id.	Site Location/Name	Dwellings	Use	Floorspace (Sq.ms)	SHUM Zone
-			B2	5090	2310
-			B8	5090	2310
LG2	George W King Site, Blackhorse Road	146			2310
LG3	Land east of Talbot Way	112			2310
LG4	Land north of former Norton School, Norton Road	0			2311
LG5	Land at Birds Hill	0			2310
LG6	Land off Radburn Way	-10			2308
LG7	Garage, Station Road	14			2307
LG8	Pixmore Industrial estate	16			2310
LG9	Former Lannock School	11			2308
10/01087/1	50c Station Road	0			2307
13/00379/1	Land Adjacent, 1A Manor Cottages, Hexton Road, Lilley	0.5			4310
11/00979/1	Calders Cottage, Putteridge Park, Luton, LU2 8LB	0			4310
11/00979/1	Calders Cottage, Putteridge Park, Luton, LU2 8LB	0.5			4310
13/02038/1	Mill Farm, Luton Road, Offley, Hitchin, SG5 3DR	1			4310
11/02241/1	Meadow Croft Mangrove Road	0.5			4310
07/02961/1	25-29 and 28-38 evens Elmtree Avenue, Cockernhoe	0.5			4310
11/00979/1	Calders Cottage Putteridge Park	-0.5			4310
10/02420/1	Land adjacent to Jessamine Cottage Luton Road	1			2302
11/00155/1	The Lawns High Street	0			2302
12/00256/1	Land adj to Claypit Cottage Luton Road	3			2302
OF1	Allotment Gardens, Luton Road	14			2302
11/01504/1	Land adjacent to 6 Priors Hill	1			2301
11/01997/1	Former Craft Workshop, rear of village Hall High Street	1			2301
12/01898/1	PirtonHall Shillington Road	1			2301
13/00279/1	Former Telephone Exchange Crab Tree Lane	1			2301
PT1	Land east of, Priors Hill	88			2301
13/01553/1	Land off Templars Lane, Preston	6			2304
11/02263/1	Ladygrove Court Hitchwood Lane	10			2304
PR1	Land east of Buthchers Lane	23			2303
11/00689/1	Land Rear Of 18 And 20, Royal Oak Lane, Pirton	1			2501
12/00785/1	Tithe Barn, Rectory Manor, Shillington Road, Pirton, Hitchin, SG5 3DH	1			2501
12/01859/1	The Dial, West Lane, Pirton, Hitchin, SG5 3QP	1			2501
12/02337/1	2 West Lane, Pirton, Hitchin, SG5 3RA	-1			2501
12/02337/1	2 West Lane, Pirton, Hitchin, SG5 3RA	1			2501
12/01511/1	Radwell Grange Farm Barns, Great North Road, Radwell, Baldock	1			4315
09/01990/1	Land Adj Village Hall Radwell Lane	1			4307
RD1	Land at, Blacksmiths Lane	5.25			4315
RD2	Farmyard, Brickyard Lane	0			4315
06/00380/1	Ling Dynamic Systems Ltd, Baldock Road, Royston, SG8 5BQ	5.75			4315
06/00380/1	Ling Dynamic Systems Ltd, Baldock Road, Royston, SG8 5BQ	1			4315
06/00380/1	Ling Dynamic Systems Ltd, Baldock Road, Royston, SG8 5BQ	5.5			4315
06/00380/1	Ling Dynamic Systems Ltd Baldock Road	1			4315
10/01065/1	Site B, Land off Thackeray Close, Royston	1			4315
10/01065/1	Site B, Land off Thackeray Close, Royston	10			4315
10/01449/1	34 Victoria Crescent, Royston, SG8 7AX	1			4315
10/01449/1	34 Victoria Crescent, Royston, SG8 7AX	-0.5			4315
10/02517/1	Ivy Farm, Baldock Road, Royston, SG8 9NU	-17.75			4315
13/00700/1	Ivy Farm, Baldock Road, Royston, SG8 9NU	-13.25			4315
13/00700/1	Ivy Farm, Baldock Road, Royston, SG8 9NU	15			4315
13/00700/1	Ivy Farm, Baldock Road, Royston, SG8 9NU	10			4315
10/02517/1	Ivy Farm Baldock Road	1.5			4315
12/00590/1	Ivy Farm Baldock Road	-0.5			4315
10/02517/1	Ivy Farm Baldock Road	12			4315
10/02517/1	Ivy Farm Baldock Road	1			4315
10/02517/1	Ivy Farm Baldock Road	1.5			4315
10/02517/1	Ivy Farm Baldock Road	1.5			4315
10/02517/1	Ivy Farm Baldock Road	5			4315
10/02517/1	Ivy Farm Baldock Road	8			4315
10/02517/1	Ivy Farm Baldock Road	7.5			4315
12/00590/1	Ivy Farm Baldock Road	0.5			4315
11/01126/1	Land to the Rear of, 4 Kneesworth Street, Royston, SG8 5AA	-0.75			4315
11/01126/1	Land to the Rear of, 4 Kneesworth Street, Royston, SG8 5AA	2			4315
11/01290/1	The Jockey, 31 Baldock Street, Royston, SG8 5BD	0.5			4315
12/00651/1	Former Priory Cinema and swimming pool, Newmarket Road, Royston, SG8 7DX	-2.5			4315
12/00651/1	Former Priory Cinema and swimming pool, Newmarket Road, Royston, SG8 7DX	4.5			4315
12/00651/1	Former Priory Cinema and swimming pool, Newmarket Road, Royston, SG8 7DX	1			4315
12/00651/1	Former Priory Cinema and swimming pool, Newmarket Road, Royston, SG8 7DX	0.5			4315
12/00651/1	Former Priory Cinema and swimming pool, Newmarket Road, Royston, SG8 7DX	1			4315
12/00651/1	Former Priory Cinema and swimming pool, Newmarket Road, Royston, SG8 7DX	4			4315

Ref Id.	Site Location/Name	Dwellings	Use	Floorspace (Sq.ms)	SHUM Zone
12/00914/1	24 Kneesworth Street, Royston, SG8 5AA	1.5			4315
12/01116/1	Car park on the corner of Market Hill and Fish Hill, Royston	2			4315
12/01559/1	Land between 12 and 14, The Close, Royston	0.5			4315
13/00025/1	50-52 High Street, Royston, SG8 9AW	5.5			4315
13/00183/1	14 & 18-20 High Street, Royston, SG8 9AG	1			4315
13/00260/1	7 Melbourn Road, Royston, SG8 7DB	-0.75			4315
13/00260/1	7 Melbourn Road, Royston, SG8 7DB	1			4315
13/01022/1	28 High Street, Royston, SG8 9AG	1			4315
13/02331/1	8 High Street, Royston, SG8 9AG	1			4315
13/02631/1	17a Mill Road Royston, SG8 7AE	1			4315
13/02631/1	17a Mill Road Royston, SG8 7AE	1			4315
12/01665/1	The Old Bakehouse, Upper King Street, Royston	0.25			4315
13/01608/1	Land adj 47 Baldock Road, Royston	0.5			4315
13/02653/1	59 High Street, Royston	0.5			4315
14/00326/1	56 Melbourn Road, Royston, SG8 7DF	-0.5			4315
14/00326/1	56 Melbourn Road, Royston, SG8 7DF	1			4315
08/01223/1	65 Garden Walk	0.5			4315
08/01592/1	39 Old North Road	0.25			4315
08/02788/1	Heath Works Baldock Road	13			4315
09/00776/1	25 High Street	0.25			4315
10/00447/1	2 Angel Pavement	0.5			4315
10/01066/1	Site C, Land off Coombelands Road	-15.5			4315
10/01066/1	Site C, Land off Coombelands Road	15.5			4315
10/01066/1	Site C, Land off Coombelands Road	12			4315
10/01066/1	site C, land off Coombelands Road	2			4315
10/01452/1	70 Heathfield	0.25			4315
11/02148/1	70 Heathfield	-0.5			4315
11/02148/1	70 Heathfield	0.5			4315
10/01552/1	27 Heathfield	0.5			4315
10/02203/1	Land between and in the garden of 31 and 33 Mill Road	0.25			4315
11/01726/1	5 Church Lane	-1			4315
11/01726/1	5 Church Lane	1			4315
11/02025/1	41 & 43 Gower Road	0.5			4315
11/00569/1	Land Adjacent 51 Melbourn Road	1			4315
09/01928/1	8 Lower Gower Road	0.25			4315
10/01015/1	Rear of, 31 Priory Close	0.25			4315
10/02416/1	Heath House Princes Mews	3.5			4315
11/00040/1	The Old Police Station Priory Lane	2			4315
06/00380/1	Ling Dynamics Systems Ltd Baldock Road	2			4315
11/02008/1	14 Angel Pavement	1			4315
11/02093/1	13 Angel Pavement	1			4315
08/00689/1	39-41 Upper King Street	0.5			4315
11/01475/1	19 Cornation Avenue	1.5			4315
13/00257/1	69 Kneesworth Street	0.5			4315
13/00746/1	40A Kneesworth Street	0.5			4315
RY1	land west of Ivy Farm, Baldock Road	155.5			4315
RY2	Land north of, Newmarket Road (north)	150			4315
RY3	Land north of, Betjeman Road	37			4315
RY4	Land north of, Lindsay Close	25			4315
RY5	Agricultural supplier, Garden Walk	14			4315
RY6	Royston FC, Garden Walk	11			4315
RY7	Anglian Business Park	21			4315
RY8	Land at, Lumen Road	-11.25			4315
RY9	York Way		B1	18233	4315
-	-		B2	18233	4315
-	-		B8	18233	4315
09/01849/1	Land at Baldock Radio Station, Royston Road, Wallington	0.5			4315
09/01849/1	Land at Baldock Radio Station, Royston Road, Wallington	-1			4315
09/01849/1	Land at Baldock Radio Station, Royston Road, Wallington	1			4315
10/00104/1	Land At Partridge Hall Farm, Church End Green, Sandon	0.25			4315
12/00085/1	Land corner of Dark Lane and Payne End (adjacent to 27 Dark Lane), Sandon, SG9	1.5			4315
13/03093/1	Southfield Cottages, Broadfield, Buntingford, SG9 9RD	1			4311
13/03093/1	Southfield Cottages, Broadfield, Buntingford, SG9 9RD	-1			4311
11/01293/1	Land adj to the Forge Rushden Road	0.25			4315
05/00851/1	Tollington Preston Road	0			3305
09/00865/1	Land Adjacent to Little Court and Oakdene London Road	0			3304
12/00360/1	Springwood Preston Road	-1			3305
12/002595/1	Gosmore End Cottage, Hitchin Road, Gosmore	1			3305
SI1	Land south of Waterdell Lane	72			3305
SI2	Land south of, Stevenage Road	24			3304
09/01563/1	Hoo End Hoo End, Whitwell	0			2304
11/00369/1	28 High Street, Whitwell	-2			2304
11/00369/1	28 High Street, Whitwell	2			2304
13/00474/1	Little East Hall Farm	1			2304

Ref Id.	Site Location/Name	Dwellings	Use	Floorspace (Sq.ms)	SHUM Zone
13/01002/1	Bendish House Hollybush Lane, Bendish	1			2304
SP1	Land south of, High Street, Whitwell	0			2304
NS1	North of Stevenage	1000			5113
WS1	West of Stevenage	3100			5126
11/02546/1	Land at Turfmead, Blackhorse Lane, Hitchin, SG4 9EG	-1			2206
11/02546/1	Land at Turfmead, Blackhorse Lane, Hitchin, SG4 9EG	8			2206
11/02546/1	Land at Turfmead, Blackhorse Lane, Hitchin, SG4 9EG	6			2206
11/02866/1	Vine Cottage, Maydencroft Lane, Gosmore, Hitchin, SG4 7QB	-1			3305
11/02866/1	Vine Cottage, Maydencroft Lane, Gosmore, Hitchin, SG4 7QB	1			3305
14/00263/1	3 Blackhorse Lane, Hitchin, SG4 9EE	3			2206
13/02798/1	Land at The Old Bell House, 61 London Road, St Ippolyts	1			3304
11/01972/1	Plots 1, 2, 3 & 8, Cressmans Corner, Lilley Bottom Road, Whitwell, Hitchin, SG4 8JP	-1			2304
13/00004/1	54 Horn Hill, Whitwell	0			2304
13/00004/1	54 Horn Hill, Whitwell	1			2304
07/00839/1	Land adj Oakwood House Pedlars Lane	0.25			4315
08/01757/1	Heatherset Police Row	0.5			4315
TH1	Land west of Police Row	13			4315
TH2	Land south of, Kelshall Road	6			4315
13/01005/1	Bygrave Lodge Farm, Wallington, Baldock, SG7 6QX	0.5			4315
03/00381/1	Land at Manor Farm, Damask Green Road, Weston, Hitchin, SG4	0			1306
12/01547/1	Weston Park, Damask Green Road, Weston	1			1306
13/00763/1	Squash court building, Weston Park, Damask Green Road, Weston	1			1306
13/00239/1	Friends Green Farm, Friends Green, Weston, Hitchin, SG4 7BU	1			5103
13/00883/1	Lannock Manor, Hitchin Road, Weston, Hitchin, SG4 7EE	-1			1306
08/01996/1	Garthlands Maiden Street	0			1306
12/00162/1	37 Halls Green	-2			1306
12/00162/1	37 Halls Green	1			1306
10/02290/1	Land adjacent Keepers Cottage Warrens Green lane	0			1306
12/000486/1	Hicks Grove House Halls Green	0			1306
WE1	Land off Hitchin Road	25			1306
13/00004/1	54 Horn Hill	-1			2304
12/00341/1	Redcoats Farm Barns, Redcoats Green, Little Wymondley	2			3303
12/01745/1	Land Rear of, Alswick, Church Path, Little Wymondley	1			3302
13/01929/1	Boleyn Cottage and Seymour Cottages, Hornbeam Court, Arch Road, Wymondley, Hitchin, SG4 7ER	-1			3302
13/01929/1	Boleyn Cottage and Seymour Cottages, Hornbeam Court, Arch Road, Wymondley, Hitchin, SG4 7ER	2			3302
12/02830/1	Long Close, Willian Road, Wymondley	1			3301
10/00065/1	Land adjacent The Green Man Hitchin Road	0			3301
11/01933/1	St Marys Cottage St Marys Church Road	1			3301
13/01190/1	Fern Cottage Stevenage Road	1			3301
WY1	Land south of Little Wymondley	300			3302
WY2	Land north of, Stevenage Road, Little Wymondley	63			3302
-	Small Site Allocations	570			-

Stevenage Borough Preferred Option Housing Allocations

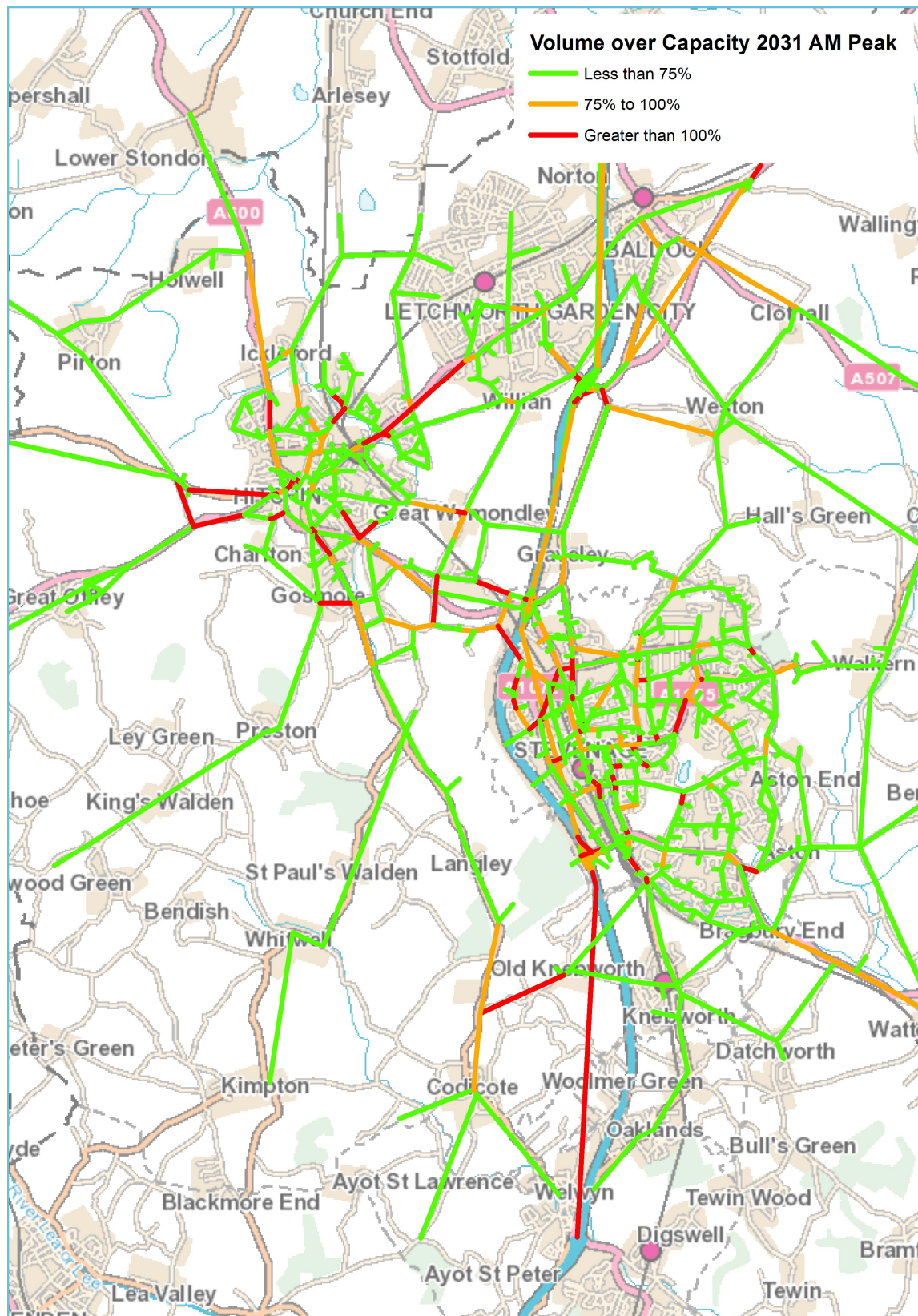
Key: Housing Allocation Status	
Permissions	
Completed	
Planning Area Sites	

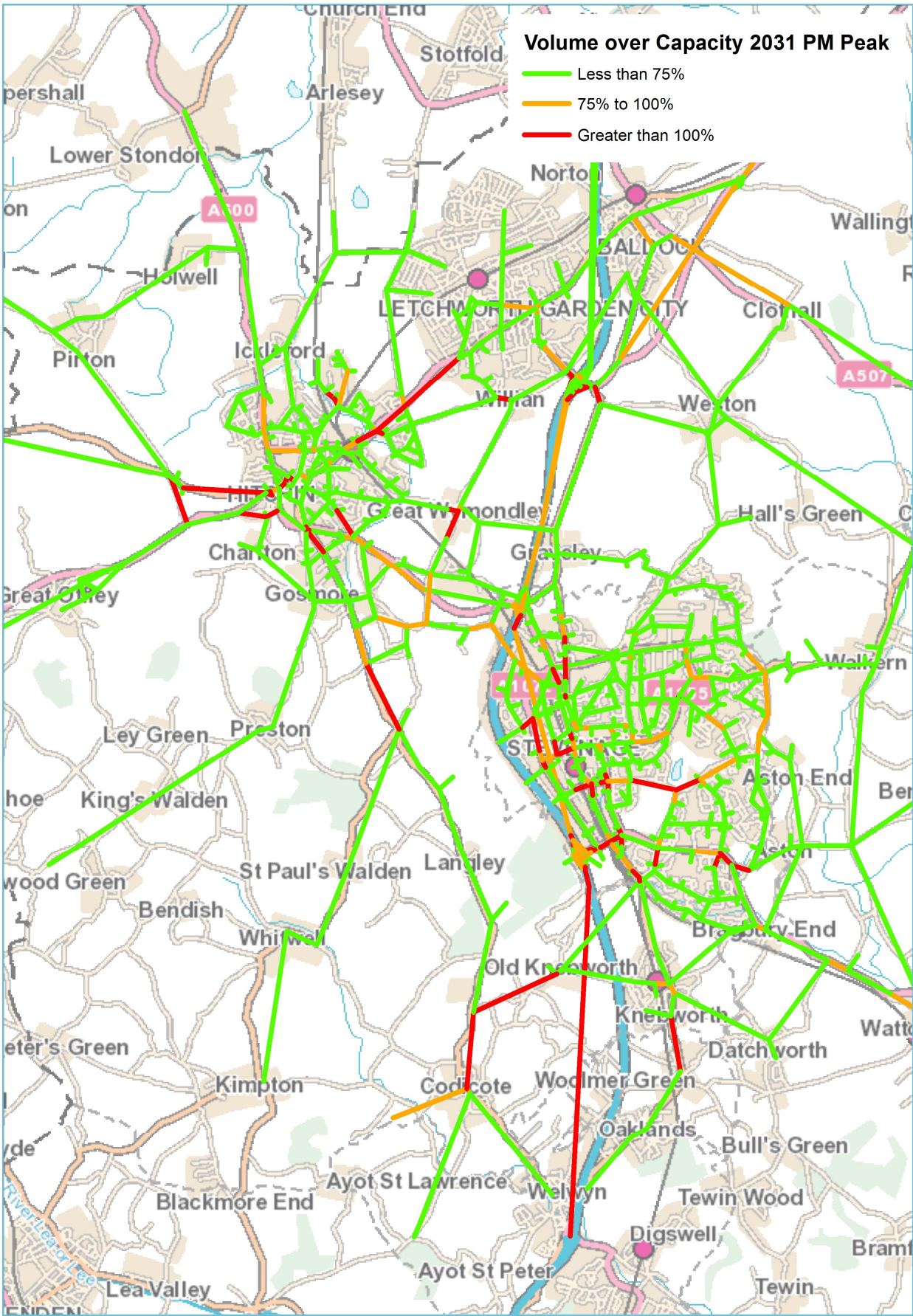
Ref Id.	Site Location/Name	Parish	Dwellings	SHUM Zone	
-	Former Mastercare Service & Distribution	-	136	3101	
-	Land off Edmonds Drive/Aston Vale	-	71	3143	
-	Lonsdale School	-	67	3130	
-	Brickdale House	-	152	3122	
-	Small sites	-	145	-	
-	Former Mastercare Service & Distribution	-	136	3101	
Total Permissions:			571		
2009	Buildbase, Woolners Way		133	3118	
2009	Gates Garage		45	3122	
2009	Stoneyhall Estate		38	3106	
2009	B & Q Site, 144-146 High Street		20	3120	
2009	Former Van Hage Garden Centre, Bragbury Lane		16	2101	
2009	Other sites		116	-	
2010	B & Q Site, 144-146 High Street		70	3120	
2010	Buildbase, Woolners Way		39	3118	
2010	Former Wayside Garages, Lytton Way		14	3118	
2010	Former Van Hage Garden Centre, Bragbury Lane		22	2101	
2010	Former Mastercare Service & Distribution		48	3101	
2010	Other sites		40	-	
2011	Former Mastercare Service & Distribution		125	3101	
2011	B & Q Site, 144-146 High Street		65	3120	
2011	Former Van Hage Garden Centre, Bragbury Lane		26	2101	
2011	Stoneyhall Estate		22	3106	
2011	Other sites		62	-	
2012	Stoneyhall Estate/Merchants Quarter		22	3106	
2012	Former Wayside Garages		52	3118	
2012	Former Mastercare Service & Distribution		29	3101	
2012	Other sites		87	-	
2013	Former Mastercare Service & Distribution		48	3101	
2013	Herford Road		18	2105	
2013	Other sites		19	-	
2014	Former Mastercare Service & Distribution		55	3101	
2014	Hertford Road		82	2105	
2014	Edmonds Drive		17	3143	
2014	Other sites		18	-	
Total Completed (2009-2014):			1348		
002	Vincent Court	Symonds Green	41		
003	Ferrier Road	Manor	34		
005	Snooker Club	Old Town	38		
107	Ken Brown Car showroom	Shephall	16		
150	Twin Foxes pub	Bedwell	14		
201	Shephall Centre and adjacent amenity land	Shephall	34		
209	Ex-Play Centre	Symonds Green	15		
212	Scout Hut	Manor	18		
213	Land at Eliot Road	Chells	11		
214	Day Nursery	Chells	6		
217	Longfield Fire and Rescue Centre	Woodfield	95		
125	Stevenage Leisure Park	Bedwell	2,700		
126	Park Place	Bedwell			
141	Matalan	Bedwell			
218	Social Services building	Bedwell			
219a	Town centre library	Bedwell			
225	The Plaza	Bedwell			
403	Six Hills House	Roebuck			
408	Saffron Ground	Old Town			
413	Southgate House	Bedwell			
411	Bank House	Old Town		26	

511	Dunn Close Garage Court	Bedwell	5	
528	Southern Car Park	Old Town	127	
604	Land south of A602	Longmeadow	400	
609	Bragbury End Sports Ground	Longmeadow	150	
610	Land North of Stevenage	Woodfield	800	
611	Land West of North Road (Rugby Club)	Woodfield	149	
612	Land West of Stevenage	Symonds Green	1,350	
613	Land at Norton Green	Symonds Green	5	
701	Kenilworth Close NC	Longmeadow	50	
704	The Oval NC	Martins Wood	100	
707	Burwell Road NC	Bandley Hill	25	
708	Roebuck NC	Roebuck	25	
710	Marymead NC	Roebuck	50	
714	Archer Road NC	Pin Green	24	
819	Land at Malvern Close	Longmeadow	8	
820	Land West of Bragbury Lane	Longmeadow	5	
840	Former Pin Green School playing field	Pin Green	42	
841	Land at Shephalbury Park	Roebuck	12	
-	Windfalls	-	200	
Total Planning Area Sites:			6,575	

Technical Note

Appendix B – Preferred Option Demand Link Capacity Stress Plots (Pre mitigation)





Appendix C – Scheme Proforma’s

Location	A505 / B655 Pirton Road roundabout
Reference	HM2

Description of Problem

As a result of the increase in traffic growth on the A505 / A602 corridor through Hitchin, the A505 / B655 Pirton Road roundabout will be under pressure and operating at or close to the design capacity.

Mitigation Proposal Details

The improvement to the A505 / B655 junction is to change the roundabout to a signal controlled junction. The signal timings have been optimised with junction improvement based on fixed timings however there may be additional scope to implement demand responsive signals to respond to changes in demand during busy periods. This cannot be modelled because of software limitations but it would be expected to further enhance the operation and capacity of the junction.

A505 / B655 Pirton Road Roundabout Improvement



Outline Cost Analysis

The cost estimate for delivery excludes the following:

- Legal Costs
- Landscaping Design
- Statutory Undertakers design fee.
- Statutory Undertakers diversion and or protection costs.
- Third Party Ground Investigation costs. Trial Pits and Geotechnical surveying will be supplied by third parties.
- Traffic Regulation Orders & any associated consultation (TRO's).
- 3rd Party Land acquisition costs and accommodation works costs.
- Dedication of Land, Land to be passed over to the council as highway.
- Contract documentation for appointment of the preferred contractor, as this is being progressed by others.
- Tendering of the works

- Site support fees during the construction period, this will be included within a later fee proposal, if required.

Initial costs for implementing this junction have been estimated at £850,000. These costs were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

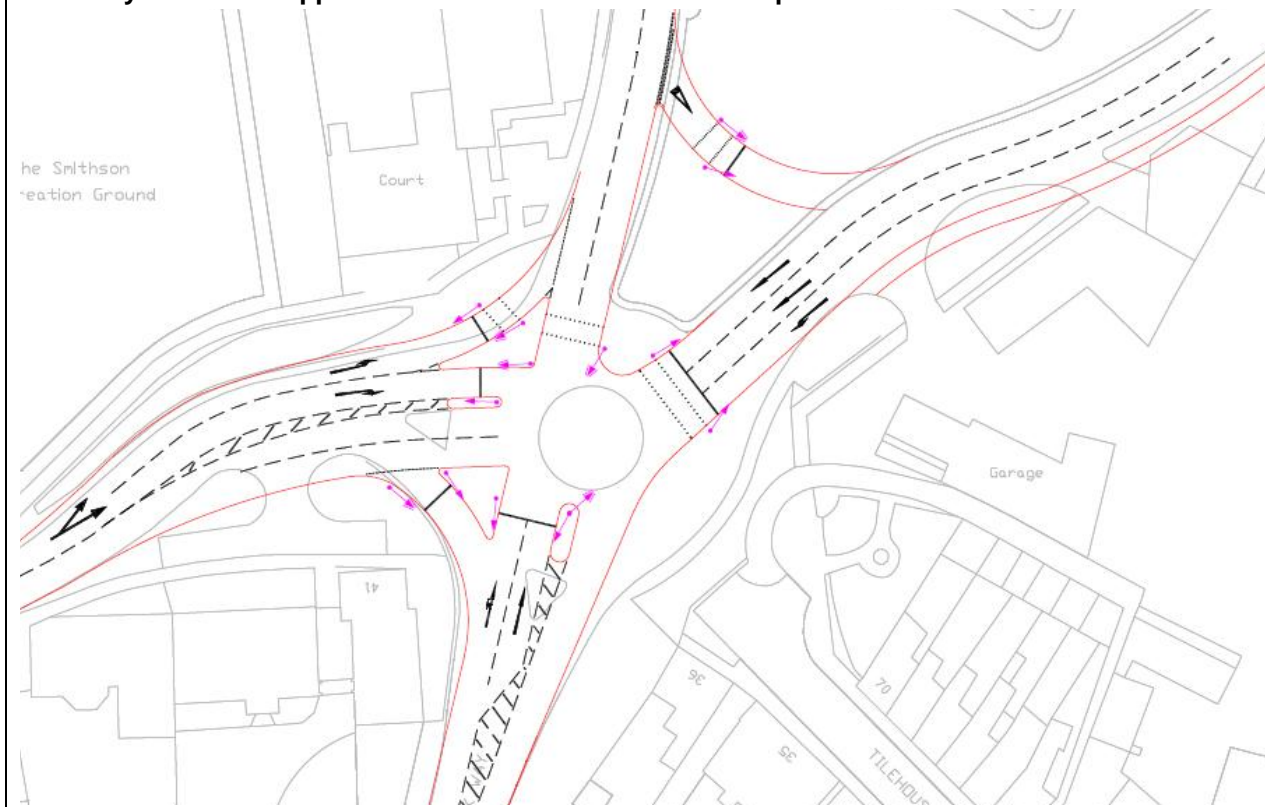
Works Element	Estimated Cost	Notes
Construction Items	£232,000	
Allowances for Design Fees	£47,000	20% of the construction items
Allowances for Preliminaries	£232,000	100% of the construction
Allowances for Supervision	£70,000	30% of the construction items
<i>Sub-Total for construction items and allowances</i>	<i>£581,000</i>	
Optimism Bias	£261,000	45% of sub-total
Cost for Delivery	£842,000	2021 Construction Year

Location	A505 Payne's Park / Upper Tilehouse Street Roundabout
Reference	HM3

Description of Problem
 The A505 / A602 through Hitchin, which provides a link between Luton and Stevenage / A1(M), has been identified as a key route which is susceptible to a lack of capacity. There is insufficient capacity at the A505 Payne's Park roundabout, which causes congestion on this main corridor during the busy PM peak periods, with queuing on Payne's Park and Upper Tilehouse Street.

- Mitigation Proposal Details**
 Convert the existing roundabout into a signalised junction with localised widening by:
- Using land in front of the library and museum for right turn movements from Payne's Park to Old Park Road.
 - Take land from the court building to install a signalised dedicated left turn from Upper Tilehouse Street to Old Park Road.

A505 Payne's Park / Upper Tilehouse Street Roundabout Improvement



- Outline Cost Analysis**
 The cost estimate for delivery excludes the following:
- Legal Costs
 - Landscaping Design
 - Statutory Undertakers design fee.
 - Statutory Undertakers diversion and or protection costs.
 - Third Party Ground Investigation costs. Trial Pits and Geotechnical surveying will be supplied by

- third parties.
- Traffic Regulation Orders & any associated consultation (TRO's).
 - 3rd Party Land acquisition costs and accommodation works costs.
 - Dedication of Land, Land to be passed over to the council as highway.
 - Contract documentation for appointment of the preferred contractor, as this is being progressed by others.
 - Tendering of the works
 - Site support fees during the construction period, this will be included within a later fee proposal, if required.

Initial costs for implementing this junction have been estimated at £1.5 million. These costs were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£330,000	
Allowances for Design Fees	£66,000	20% of the construction items
Allowances for Preliminaries	£330,000	100% of the construction items
Allowances for Supervision	£33,000	10% of the construction items
Allowances for Utilities / Electricals	£66,000	20% of the construction items
<i>Sub-Total for allowances and construction items</i>	<i>£825,000</i>	
Optimism Bias	£660,000	80% of sub-total
Cost for Delivery	£1,485,000	2021 Construction Year

Location	A602 / B656 Hitchin Hill Roundabout
Reference	HM4

Description of Problem

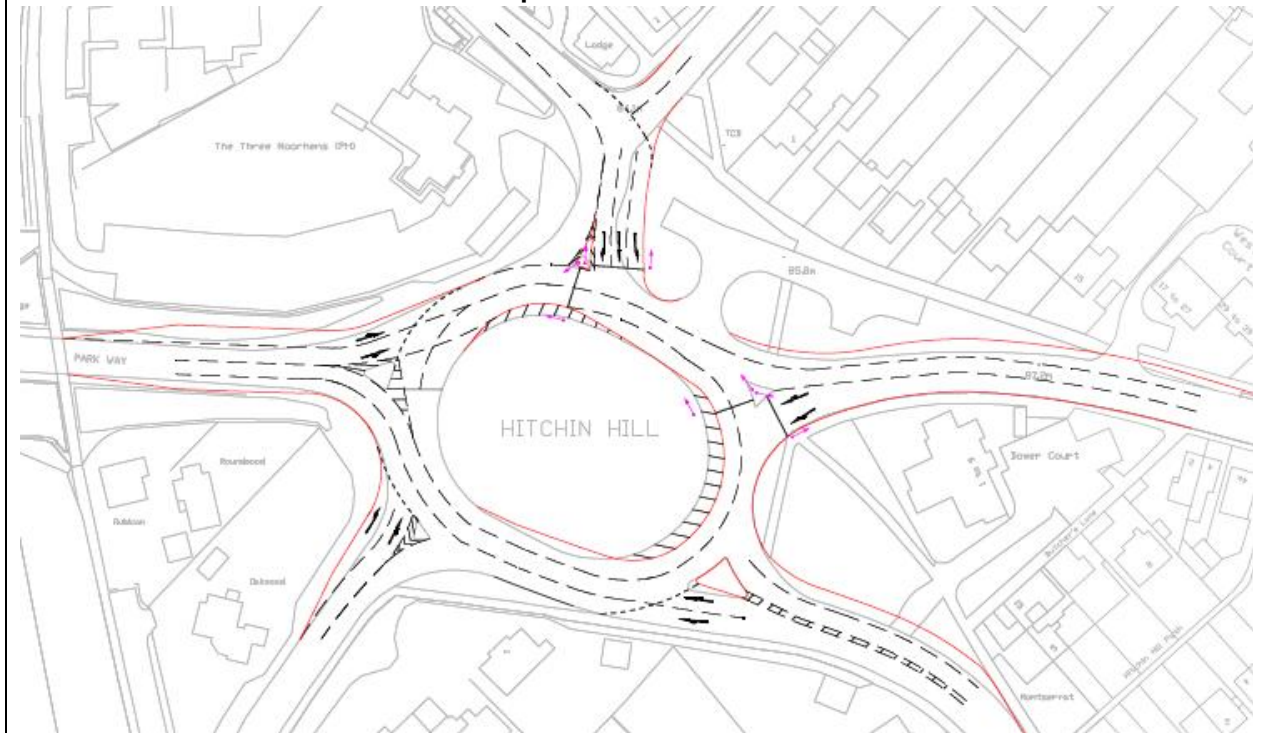
The A505 / A602 through Hitchin, which provides a link between Luton and Stevenage/ A1(M) has been identified as a key route which is susceptible to a lack of capacity. There is insufficient capacity at the A602 / B656 Hitchin Hill roundabout, which causes congestion on this main corridor during the busy AM and PM peak periods, with queuing on the A602 and St John’s Road from the B656 Hitchin Hill approach despite a ‘keep clear’ sign in place.

Mitigation Proposal Details

Increase the roundabout capacity and improve the movement of traffic by widening some approaches and partially signalise the A602 / B656 arm of the existing roundabout.

- Widen St John’s to a three lane entry.
- Widen Stevenage Road, London Road, Gosmore Road and Park Way to extend the existing two lane approaches.
- Provide two lane exits on St John’s, Stevenage Road, London Road and Park Way with a single exit on to Gosmore Road.
- Install signals on St John’s Road approach.

A505 / B656 Hitchin Hill Roundabout Improvement



Outline Cost Analysis

The cost estimate for delivery excludes the following:

- Legal Costs
- Landscaping Design
- Statutory Undertakers design fee.
- Statutory Undertakers diversion and or protection costs.

- Third Party Ground Investigation costs. Trial Pits and Geotechnical surveying will be supplied by third parties.
- Traffic Regulation Orders & any associated consultation (TRO's).
- 3rd Party Land acquisition costs and accommodation works costs.
- Dedication of Land, Land to be passed over to the council as highway.
- Contract documentation for appointment of the preferred contractor, as this is being progressed by others.
- Tendering of the works
- Site support fees during the construction period, this will be included within a later fee proposal, if required.

Initial costs for implementing this junction have been estimated at £1.2 million. These costs were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

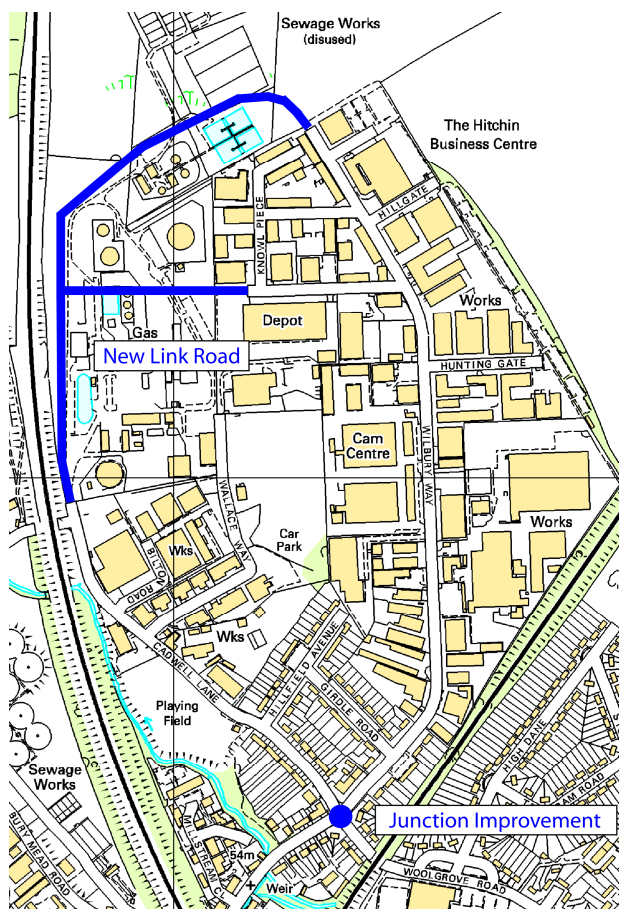
Works Element	Estimated Cost	Notes
Construction Items	£337,000	
Allowances for Design Fees	£67,000	20% of the construction items
Allowances for Preliminaries	£337,000	100% of the construction items
Allowances for Supervision	£34,000	10% of the construction items
Allowances for Utilities / Electricals	£67,000	20% of the construction items
<i>Sub-Total for allowances and construction items</i>	<i>£842,000</i>	
Optimism Bias	£379,000	45% of sub-total
Cost for Delivery	£1,221,000	2021 Construction Year

Location	Hitchin Industrial Area – Cadwell Lane/Grove Road/Wilbury Way/Woolgrove Road Junction
Reference	HM5.1

Description of Problem

The Cadwell Lane signalised junction at the entry to the industrial area is problematic as it does not have sufficient capacity to accommodate the future year level of growth, causing delay and queuing on the approaches to and from the industrial area. This junction currently experiences delay and congestion, under current operating conditions, with the increase in demand in and around the area, exacerbating the issue.

Mitigation Proposal Details



To provide sufficient network capacity to accommodate the future year level of demand, it is proposed that the highway network in the industrial area should be connected at the northern end to provide relief within the industrial area and balance the demand on the approaches to the Cadwell Lane junction. It is proposed that Wilbury Way is connected to Cadwell Lane to the north of the industrial area, along with extending Knowl Piece to provide a road link to Cadwell Lane.

In addition to connecting the industrial area, the junction of Cadwell Lane / Grove Road will be improved. The improvement consists of reallocating lanes to maximise capacity whilst banning right turning movements from Grove Road to Woolgrove Road and also from Wilbury Way to Cadwell Lane where there is no current demand. It has been assumed that no widening is undertaken, however, observations indicate that increasing the radius and widening the turn from Grove Road into Cadwell Lane would enable traffic to travel through the junction at a slightly increased speed and therefore improve the capacity of the junction by increasing the potential throughput of traffic. It is not expected that this would have any detrimental impact on safety at the junction but this will need to be assessed fully during any detailed design phase of scheme development.

Although the junction model does not represent the behaviour, it is also anticipated that improvements would be derived by:

- Introducing demand responsive pedestrian phases.
- Operating the junction under a MOVA signal control system.
- Providing minimal widening to improve the amount of non-blocking right turn storage from Cadwell Lane and to improve the radius for vehicles turning into Cadwell Lane.

Outline Cost Analysis

The cost estimate for delivery excludes the following:

- Legal Costs
- Landscaping Design
- Statutory Undertakers design fee.
- Statutory Undertakers diversion and or protection costs.
- Third Party Ground Investigation costs. Trial Pits and Geotechnical surveying will be supplied by third parties.
- Traffic Regulation Orders & any associated consultation (TRO's).
- 3rd Party Land acquisition costs and accommodation works costs.
- Dedication of Land, Land to be passed over to the council as highway.
- Contract documentation for appointment of the preferred contractor, as this is being progressed by others.
- Tendering of the works
- Site support fees during the construction period, this will be included within a later fee proposal, if required.

Initial costs for implementing this junction have been estimated at £5.8 million. These costs were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£2,440,000	
Allowances for Design Fees	£488,000	20% of the construction items
Allowances for Preliminaries	£366,000	15% of the construction items
Allowances for Supervision	£244,000	10% of the construction items
Allowances for Utilities / Electricals	£488,000	20% of the construction items
<i>Sub-Total for allowances and construction items</i>	<i>£4,026,000</i>	
Optimism Bias	£1,812,000	45% of sub-total
Cost for Delivery	£5,838,000	2021 Construction Year

Location	A505 Cambridge Road / Woolgrove Road / Willian Road
Reference	HM5.2

Description of Problem

This signalised junction is location on the main route between Hitchin and Letchworth, and is a problem junction for traffic travelling west-east. It also provides access to and from the approach for the industrial area, so has conflicting turning movements.

As well as the location of the junction as a gateway to and from Hitchin and the industrial area, the junction is problematic as it does not have sufficient capacity to accommodate the future year level of growth. This causes delay and queuing on the approaches to and from Hitchin town centre and the industrial area. The model forecast that this junction will experience delay and congestion, under future operating conditions, with the increase in demand and pressure in and around the area, exacerbating the issue.

Mitigation Proposal Details

To provide sufficient network capacity to accommodate the future year level of demand, it is proposed that the junction of will be improved by changing the operation of the signal control system. The MOVA (Microprocessor Optimised Vehicle Actuation) signal control system is a more efficient form of control able to deliver substantially reduced delays without the need for regular re-setting of the signal timings.

MOVA is a sophisticated strategy using the computing power of microprocessors to assess the best signal timings, given the physical layout of the junction, the signal stages available and the traffic conditions at the time. The system will generate its own signal timings cycle-by-cycle, varying continuously with traffic conditions, both in the short term (hour to hour, day to day) and in the long term following annual trends and longer term traffic growth.

This junction would be an ideal candidate for MOVA control as it is forecast to be a site that would suffer from prolonged periods of congestion in the future. MOVA performs particularly, and appears to give above average benefits at smaller heavily congested junctions, which this location is. This innovative method of signal control can reduce delays and accident levels. Evidence has shown that MOVA can reduce delays by an average of 13%, compared with conventional signal controls.

MOVA has two operational modes; the first deals with uncongested conditions, the second with situations when the junction becomes overloaded/congested with large queues on one or more approaches. This form of operation would be suited to this junction location, when congestion occurs during the busy peak periods, and the junction is uncongested at other times.

It has been assumed that no widening is undertaken at the junction, as it is understood that there is no room to extend beyond the current highway boundary.

Outline Cost Analysis

The cost estimate for delivery excludes the following:

- Legal Costs
- Landscaping Design
- Statutory Undertakers design fee.
- Statutory Undertakers diversion and or protection costs.
- Third Party Ground Investigation costs. Trial Pits and Geotechnical surveying will be supplied by third parties.

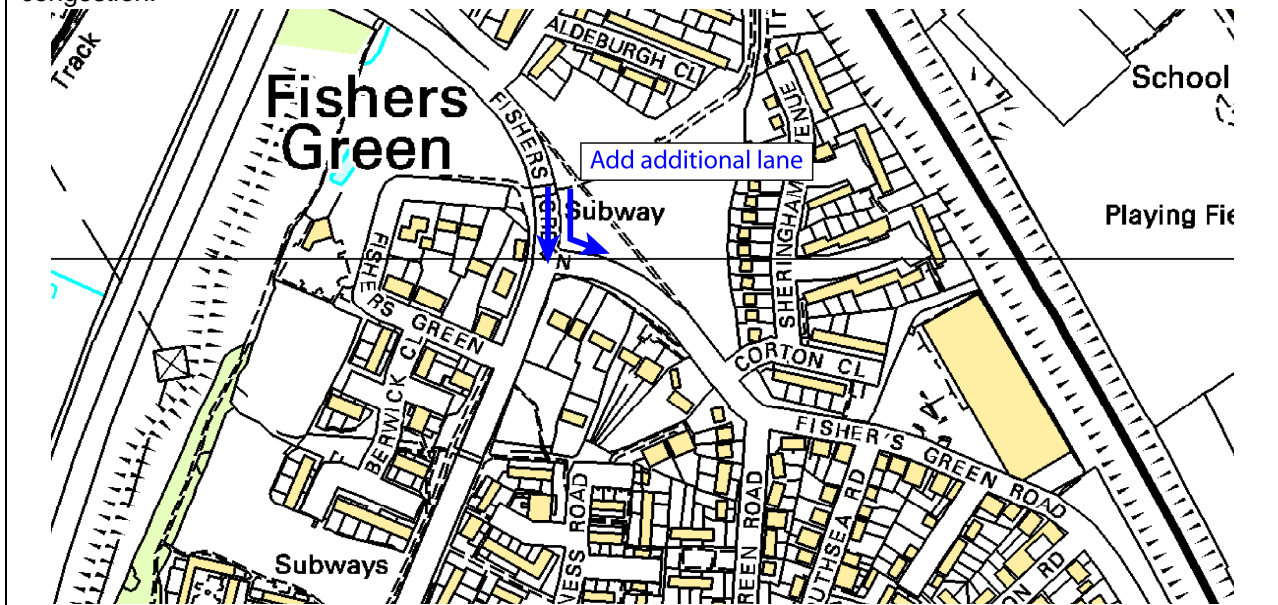
- Traffic Regulation Orders & any associated consultation (TRO's).
 - 3rd Party Land acquisition costs and accommodation works costs.
 - Dedication of Land, Land to be passed over to the council as highway.
 - Contract documentation for appointment of the preferred contractor, as this is being progressed by others.
 - Tendering of the works
 - Site support fees during the construction period, this will be included within a later fee proposal, if required.
- Initial costs for implementing this junction have been estimated at £320,000. These costs were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£135,000	
Allowances for Design Fees	£27,000	20% of the construction items
Allowances for Preliminaries	£20,000	15% of the construction items
Allowances for Supervision	£14,000	10% of the construction items
Allowances for Utilities / Electricals	£27,000	20% of the construction items
<i>Sub-Total for allowances and construction items</i>	<i>£223,000</i>	
Optimism Bias	£100,000	45% of sub-total
Cost for Delivery	£323,000	2021 Construction Year

Location	Fishers Green Road / Clovelly Way
Reference	HM7

Description of Problem
 At the junction of Fishers Green Road and Clovelly Way, the north approach (which carries traffic travelling southbound to enter Stevenage) is operating at the design capacity in the morning peak. This causes a breakdown in traffic flow and delay and congestion along the link on the approach to the junction.

Mitigation Proposal Details
 The proposed improvement is to widen the northern approach to the junction, to allow two lanes for southbound traffic. The bridge across the A1(M) restricts widening the entire section of Fishers Green Road between Chantry Lane and Clovelly Way but widening the approach to provide an additional left lane for left turning traffic, will provide some additional capacity on the approach, helping to relieve congestion.



- Outline Cost Analysis**
 The cost estimate for delivery excludes the following:
- Legal Costs
 - Landscaping Design
 - Statutory Undertakers design fee.
 - Statutory Undertakers diversion and or protection costs.
 - Third Party Ground Investigation costs. Trial Pits and Geotechnical surveying will be supplied by third parties.
 - Traffic Regulation Orders & any associated consultation (TRO's).
 - 3rd Party Land acquisition costs and accommodation works costs.
 - Dedication of Land, Land to be passed over to the council as highway.
 - Contract documentation for appointment of the preferred contractor, as this is being progressed by others.
 - Tendering of the works
 - Site support fees during the construction period, this will be included within a later fee proposal, if

required.
 Initial costs for implementing this junction have been estimated at £62,000. These costs were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£25,500	
Allowances for Supervision	£5,000	20% of the construction items
Allowances for Utilities / Electricals	£4,000	15% of the construction items
<i>Sub-Total for allowances and construction items</i>	£3,000	10% of the construction items
Optimism Bias	£5,000	20% of the construction items
	<i>£42,500</i>	
Cost for Delivery	£19,000	45% of sub-total
	£61,500	2021 Construction Year

Location	A602 Hitchin Road / A1072 Gunnels Wood Road Roundabout
Reference	HM10

Description of Problem

The modelling has highlighted that the A1072 east approach (westbound) / A1072 circulating approach to the roundabout is operating above the design capacity, causing congestion and delay on the approach.

The junction of the A602 / A1072 operates at capacity during the morning and evening peak. The volume of demand from the north travelling into Stevenage has a knock-on impact on the east approach (from the A1072), causing westbound traffic to queue in the morning peak due to inadequate capacity to accommodate both movements at this junction.

The roundabout currently has part time signals in place, which are operational during busy periods, to ensure a balanced movement of flow on all approaches. The location of the junction also poses difficulties for any highway expansion. The existing structure of the roundabout is raised above a shared pedestrian / cycle path, so the highway boundary is constrained and there is not much, if any scope for widening the roundabout without considerable construction.

Mitigation Proposal Details

To address this problem, it would be proposed that a solution should be sought to improve the balance and operation of the signal timings and any minor alignment improvements that could be made within the existing highway boundary. The junctions could be improved by changing the operation of the signal control system. The MOVA (Microprocessor Optimised Vehicle Actuation) signal control system is a more efficient form of control, able to deliver substantially reduced delays without the need for regular re-setting of the signal timings.

This location would be a prime candidate for conversion to MOVA controls, as it is expected to experience high flows, and is a large, complex junction which is expected to suffer from periods of congestion in the future.

As discussed in HM5.2, MOVA is extremely flexible, and the signal timings can vary widely as the traffic conditions change. A MOVA form of signal control can reduce delays and accident levels. Evidence has shown that MOVA can reduce delays by an average of 13% over conventional forms of signal control.

MOVA has two operational modes; the first deals with uncongested conditions, the second with situations when the junction becomes overloaded/congested with large queues on one or more approaches. MOVA determines which mode is appropriate and which approach(es), if any, are overloaded. This type of operation would be ideal at this location, as flows and congestion conditions would vary during the day.

Outline Cost Analysis

The cost estimate for delivery excludes the following:

- Legal Costs
- Landscaping Design
- Statutory Undertakers design fee.
- Statutory Undertakers diversion and or protection costs.
- Third Party Ground Investigation costs. Trial Pits and Geotechnical surveying will be supplied by third parties.

- Traffic Regulation Orders & any associated consultation (TRO's).
 - 3rd Party Land acquisition costs and accommodation works costs.
 - Dedication of Land, Land to be passed over to the council as highway.
 - Contract documentation for appointment of the preferred contractor, as this is being progressed by others.
 - Tendering of the works
 - Site support fees during the construction period, this will be included within a later fee proposal, if required.
- Initial costs for implementing this junction have been estimated at £480,000. These costs were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£200,000	
Allowances for Traffic Management	£40,000	20% of the construction items
Allowances for Preliminaries	£30,000	15% of the construction items
Allowances for Supervision	£20,000	10% of the construction items
Allowances for Utilities / Electricals	£40,000	20% of the construction items
<i>Sub-Total for allowances and construction items</i>	<i>£330,000</i>	
Optimism Bias	£149,000	45% of sub-total
Cost for Delivery	£479,000	2021 Construction Year

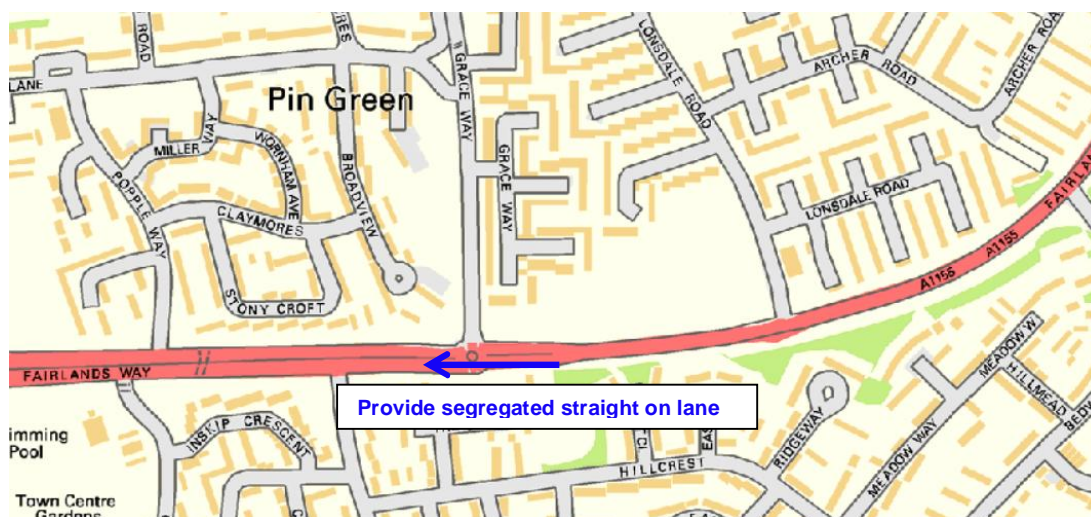
Location	A115 Fairlands Way / Grace Way
Reference	HM11

Description of Problem

The A115 Fairlands Way / Grace Way roundabout is located within central Stevenage and is a problem junction for traffic travelling east-west in the future. The junction is problematic as it does not have sufficient capacity to accommodate the future year level of growth. This causes delay and queuing on the westbound approach to the junction, alongside queuing and delays on the Grace Way approach to the junction. The model forecasts that this junction will experience delay and congestion, under future operating conditions, with the increase in demand and pressure in and around the area exacerbating the issue.

Mitigation Proposal Details

To provide sufficient network capacity to accommodate the future year level of demand, it is proposed that the junction will be improved by introducing a segregated straight on lane westbound at the roundabout and a merge to the west. This would mean that the westbound Fairlands Way approach, which has the predominant demand, would be unopposed, allowing free flowing traffic conditions through the junction.



Outline Cost Analysis

The costs estimates are based on outline design drawings and any quantities shown are indicative only. Further scheme development is required to refine the cost estimate. The cost estimate for delivery excludes the following:

- Third party land acquisition costs and accommodation works costs
- Dedication of Land, Land to be passed over to the council as highway.
- Legal costs
- Landscaping design
- Statutory Undertakers design fees
- Statutory Undertakers diversion and or protection costs
- Ground Investigation cost
- Traffic Regulation Orders & any associated TRO consultation
- Contract documentation for appointment of the preferred contractor
- Tendering of the work

Initial costs for implementing this junction were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£72,000	
Allowances for Design Fees	£14,400	20% of the construction items
Allowances for Preliminaries	£10,800	15% of the construction items
Allowances for Traffic Management	£14,400	20% of the construction items
Allowances for Supervision	£7,200	10% of the construction items
Allowances for Utilities / Electricals	£14,400	20% of the construction items
Sub-Total for allowances and construction items	£133,200	
Optimism Bias	£58,600	44% of sub-total
Cost for Delivery	£191,800	2021 Construction Year

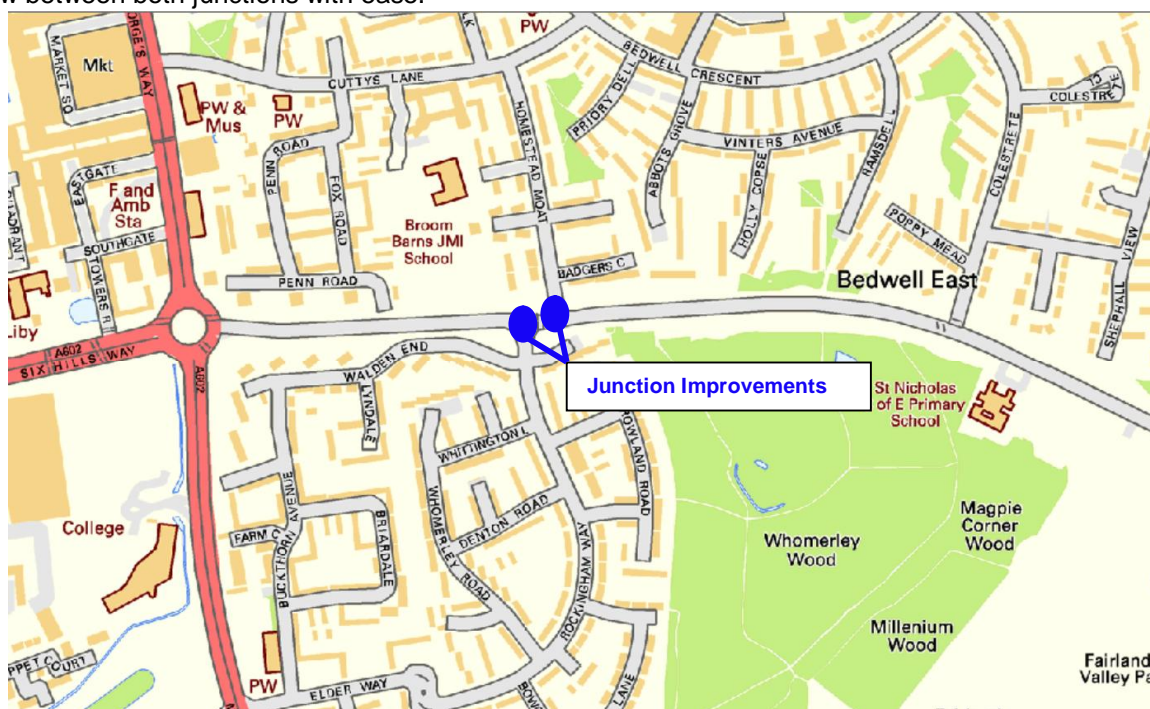
Location	Six Hills Way / Homestead Moat
Reference	HM12

Description of Problem

The Six Hills Way / Homestead Moat roundabout has been identified as a key route which is susceptible to a lack of capacity and is a problem junction for traffic travelling east-west. The junction is problematic as it does not have sufficient capacity to accommodate the future level of growth. This causes delay and queuing on the westbound approach to the junction. The westbound approach from Six Hills Way is also affected by the close proximity of the Six Hills Way/ Rockingham Way roundabout, which is located 15m to the west of the junction.

Mitigation Proposal Details

To provide sufficient network capacity to accommodate the future year level of demand, it is proposed that the Six Hills Way/ Homestead Moat and the Six Hills Way / Rockingham Way roundabouts be converted into two signalised T-junctions, with demand responsive signals. This allows controlled stacking on the approach to the A602 / Monkwood Way junction to the west, and enables the Six Hills Way / Homestead Moat and Six Hills Way / Rockingham Way junctions to operate in sync with one another, ensuring that the westbound Six Hills Way approach, which has the predominant demand, can flow between both junctions with ease.



Outline Cost Analysis

The costs estimates are based on outline design drawings and any quantities shown are indicative only. Further scheme development is required to refine the cost estimate. The cost estimate for delivery excludes the following:

- Third party land acquisition costs and accommodation works costs
- Dedication of Land, Land to be passed over to the council as highway.
- Legal costs
- Landscaping design

- Statutory Undertakers design fees
- Statutory Undertakers diversion and or protection costs
- Ground Investigation cost
- Traffic Regulation Orders & any associated TRO consultation
- Contract documentation for appointment of the preferred contractor
- Tendering of the work

Initial costs for implementing this junction were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£320,000	
Allowances for Design Fees	£64,000	20% of the construction items
Allowances for Preliminaries	£48,000	15% of the construction items
Allowances for Traffic Management	£64,000	20% of the construction items
Allowances for Supervision	£32,000	10% of the construction items
Allowances for Utilities / Electricals	£64,000	20% of the construction items
Sub-Total for allowances and construction items	£592,000	
Optimism Bias	£260,500	44% of sub-total
Cost for Delivery	£852,500	2021 Construction Year

Location	A602 / Monkswood Way
Reference	HM13

Description of Problem

The A602/Monkswood Way roundabout is located to the south of central Stevenage and is a key roundabout linking southeast Stevenage to the A1(M) at junction 7, and is a problem junction for traffic travelling east-west. The junction is problematic as it does not have sufficient capacity to accommodate the future year level of growth. This causes large delays and queues on the westbound approach. The model forecasts that this junction will experience further delay and congestion, under future operating conditions, with the increase in demand exacerbating the issue.

Mitigation Proposal Details

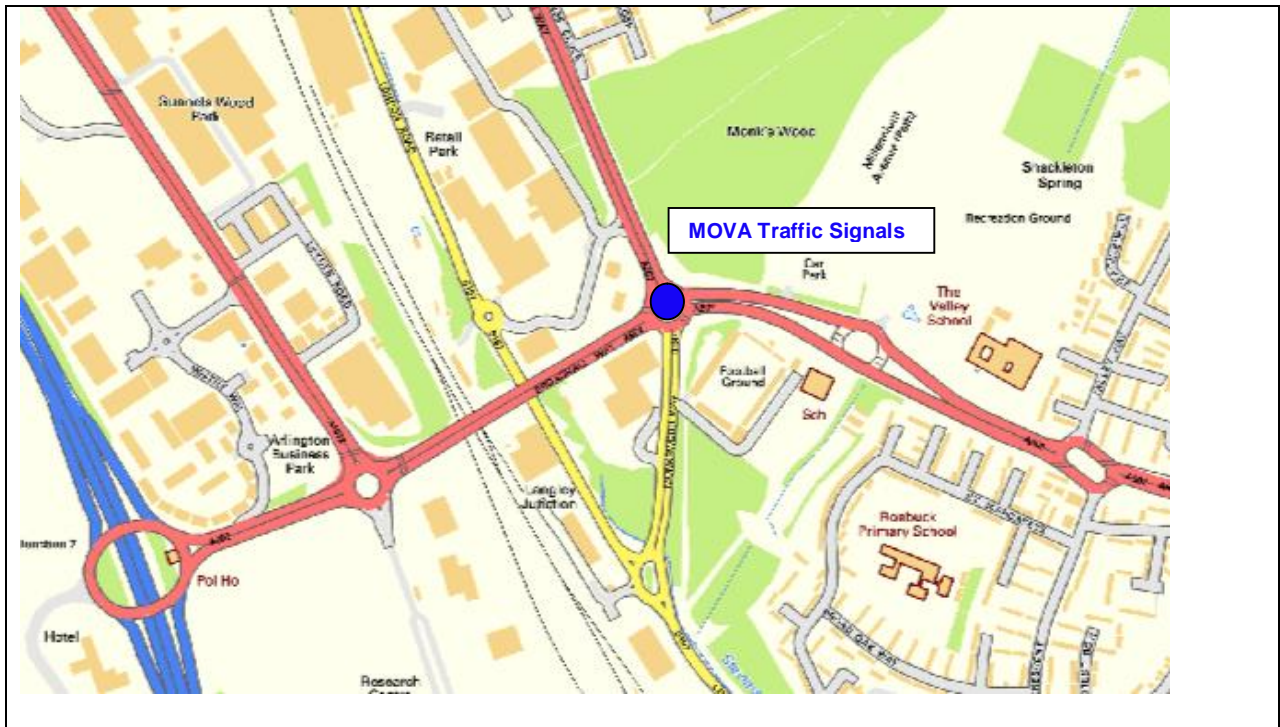
To provide sufficient network capacity to accommodate the future year level of demand, it is proposed that the junction will be improved by implementing MOVA traffic signals. The MOVA (Microprocessor Optimised Vehicle Actuation) signal control system is a more efficient form of control able to deliver substantially reduced delays without the need for regular re-setting of the signal timings.

MOVA is a sophisticated strategy using the computing power of microprocessors to assess the best signal timings, given the physical layout of the junction, the signal stages available and the traffic conditions at the time. The system will generate its own signal timings cycle-by-cycle, varying continuously with traffic conditions, both in the short term (hour to hour, day to day) and in the long term following annual trends and longer term traffic growth.

This junction would be an ideal candidate for MOVA control as it is forecast to be a site that would suffer from prolonged periods of congestion in the future. MOVA performs particularly well, and appears to give above average benefits at smaller heavily congested junctions, which this location is. This innovative method of signal control can reduce delays and accident levels. Evidence has shown that MOVA can reduce delays by an average of 13%, compared with conventional signal controls.

MOVA has two operational modes; the first deals with uncongested conditions, the second with situations when the junction becomes overloaded/congested with large queues on one or more approaches. This form of operation would be suited to this junction location, when congestion occurs during the busy peak periods, and the junction is uncongested at other times.

It has been assumed that no widening is undertaken at the junction, as it is understood that there is no room to extend beyond the current highway boundary.



Outline Cost Analysis

The costs estimates are based on outline design drawings and any quantities shown are indicative only. Further scheme development is required to refine the cost estimate. The cost estimate for delivery excludes the following:

- Third party land acquisition costs and accommodation works costs
- Dedication of Land, Land to be passed over to the council as highway.
- Legal costs
- Landscaping design
- Statutory Undertakers design fees
- Statutory Undertakers diversion and or protection costs
- Ground Investigation cost
- Traffic Regulation Orders & any associated TRO consultation
- Contract documentation for appointment of the preferred contractor
- Tendering of the work

Initial costs for implementing this junction were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£250,000	
Allowances for Design Fees	£50,000	20% of the construction items
Allowances for Preliminaries	£37,500	15% of the construction items
Allowances for Traffic Management	£50,000	20% of the construction items
Allowances for Supervision	£25,000	10% of the construction items
Allowances for Utilities / Electricals	£50,000	20% of the construction items
Sub-Total for allowances and construction items	£462,500	

Optimism Bias	£203,500	44% of sub-total
Cost for Delivery	£666,000	2021 Construction Year

Location	B197 London Road / Monkswood Way
Reference	HM14

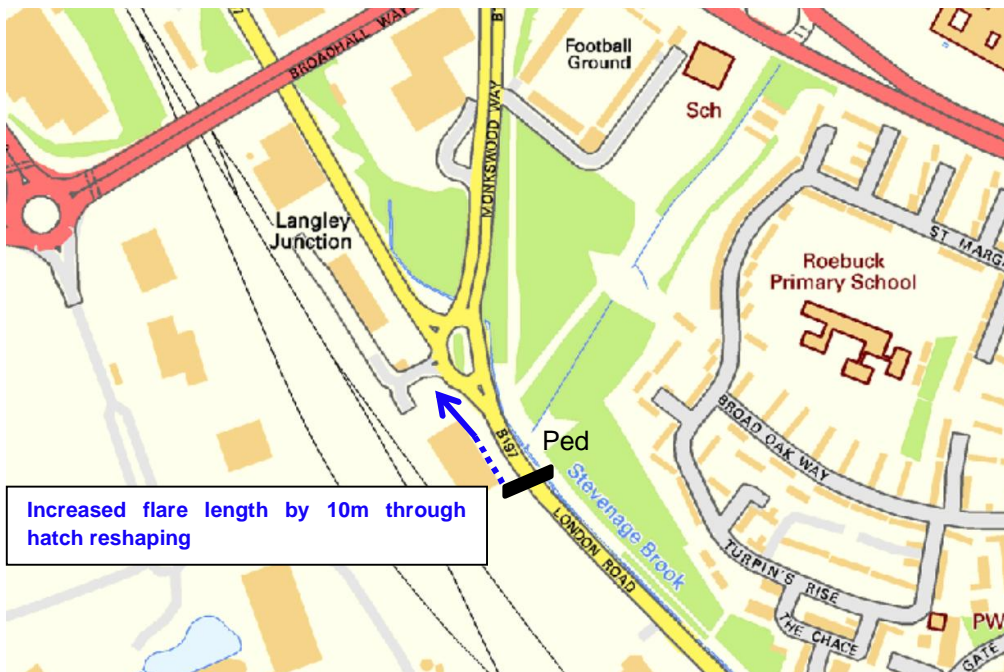
Description of Problem

The B197 London Road/ Monkswood Way junction is located to the South of central Stevenage and is a key junction for traffic from the south entering central Stevenage, and is a problem junction for traffic travelling south-north. The junction is problematic as it does not have sufficient capacity to accommodate the future year level of growth. This causes large delays and queues on the northbound approach. The model forecast that this junction will experience further delay and congestion, under future operating conditions, with the increase in demand exacerbating the issue.

Mitigation Proposal Details

To provide sufficient network capacity to accommodate the future year level of demand, it is proposed that the junction will be improved by extending the flare length on the northbound approach by 10m, allowing vehicles to queue in two lanes on the approach to the junction for a longer distance, thus reducing current capacity constraints.

It is proposed that the flare will be extended through reshaping the current hatching on the approach to the junction, with new hatching alignment from the pedestrian crossing onwards to the junction.



Increased flare length by 10m through hatch reshaping

Outline Cost Analysis

The costs estimates are based on outline design drawings and any quantities shown are indicative only. Further scheme development is required to refine the cost estimate. The cost estimate for delivery excludes the following:

- Third party land acquisition costs and accommodation works costs
- Dedication of Land, Land to be passed over to the council as highway.
- Legal costs
- Landscaping design

- Statutory Undertakers design fees
- Statutory Undertakers diversion and or protection costs
- Ground Investigation cost
- Traffic Regulation Orders & any associated TRO consultation
- Contract documentation for appointment of the preferred contractor
- Tendering of the work

Initial costs for implementing this junction were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£1,500	
Allowances for Design Fees	£300	20% of the construction items
Allowances for Preliminaries	£225	15% of the construction items
Allowances for Traffic Management	£300	20% of the construction items
Allowances for Supervision	£150	10% of the construction items
Allowances for Utilities / Electricals	£300	20% of the construction items
Sub-Total for allowances and construction items	£2,775	
Optimism Bias	£1,225	44% of sub-total
Cost for Delivery	£4,000	2021 Construction Year

Location	A602 / Stevenage Road
Reference	HM15

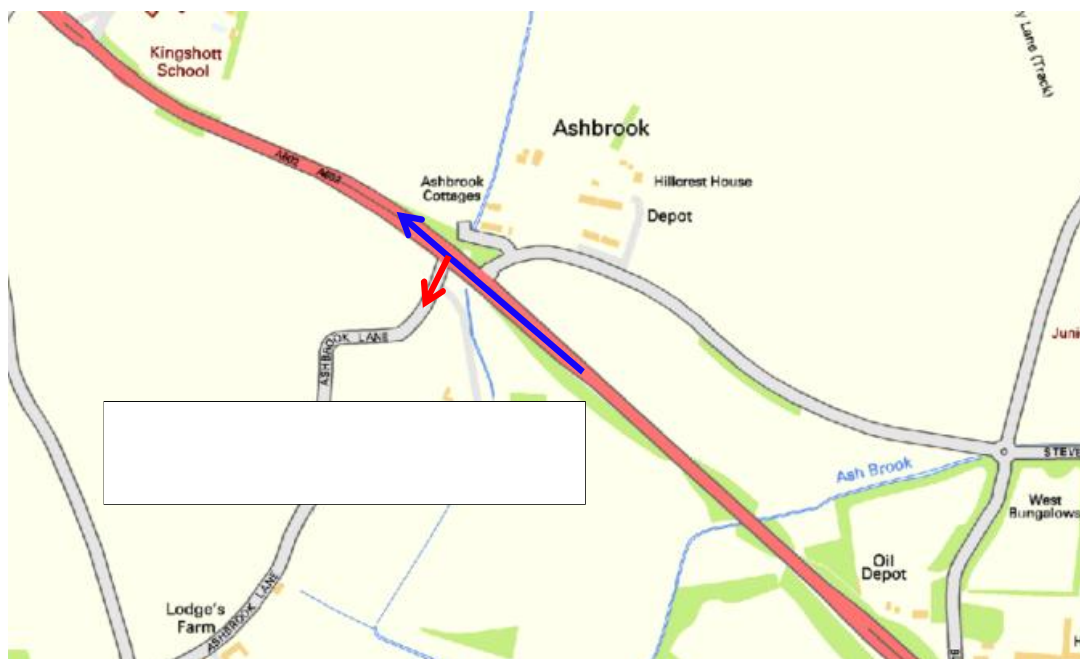
Description of Problem

The A602 / Stevenage Road junction is a priority junction located on the A602 between Hitchin and Stevenage. Modelling suggests that future year demands will result in the junction being over capacity, with large queues and delays occurring at the junction at the A602 Northbound approach. Large queues form at this approach due to being held up by the A602/ Ashbrook Lane junction to the north.

Mitigation Proposal Details

To provide sufficient network capacity to accommodate the future year level of demand, it is proposed that the left turn movement from the A602 northbound to Ashbrook Lane be banned. This will allow traffic travelling northbound on the A602, the predominant movement, to be free flowing and not be held up by left turning vehicles.

However, it is important to note that banning the left turn movement may result in the queueing and delays moving up the road network, however this would need to be tested in more detailed design.



Outline Cost Analysis

The costs estimates are based on outline design drawings and any quantities shown are indicative only. Further scheme development is required to refine the cost estimate. The cost estimate for delivery excludes the following:

- Third party land acquisition costs and accommodation works costs
- Dedication of Land, Land to be passed over to the council as highway.
- Legal costs
- Landscaping design
- Statutory Undertakers design fees
- Statutory Undertakers diversion and or protection costs
- Ground Investigation cost

- Traffic Regulation Orders & any associated TRO consultation
- Contract documentation for appointment of the preferred contractor
- Tendering of the work

Initial costs for implementing this junction were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£6,500	
Allowances for Design Fees	£1,300	20% of the construction items
Allowances for Preliminaries	£1,000	15% of the construction items
Allowances for Traffic Management	£1,300	20% of the construction items
Allowances for Supervision	£650	10% of the construction items
Allowances for Utilities / Electricals	£1,300	20% of the construction items
Sub-Total for allowances and construction items	£12,050	
Optimism Bias	£5,300	44% of sub-total
Cost for Delivery	£17,350	2021 Construction Year

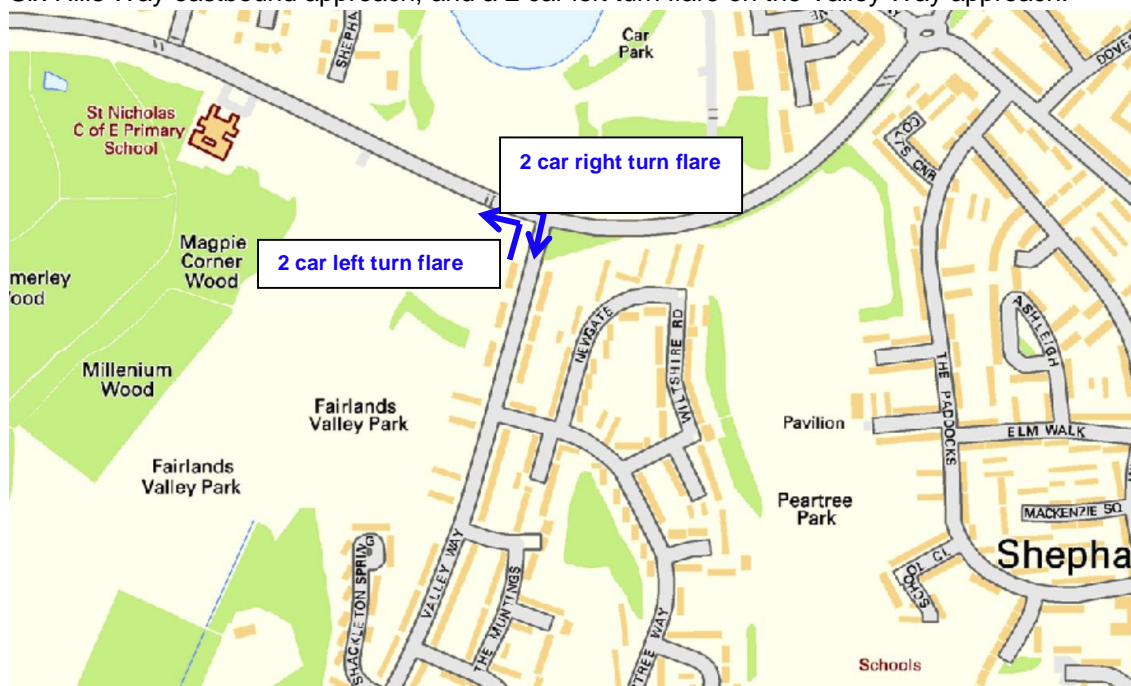
Location	Six Hills Way / Valley Way Roundabout
Reference	HM18

Description of Problem

The Six Hills Way / Valley Way roundabout is problematic as it does not have sufficient capacity to accommodate the future year level of growth, causing delay and queuing on the Six Hills Way eastbound approach.

Mitigation Proposal Details

To provide sufficient network capacity to accommodate the future year level of demand, it is proposed that the existing roundabout is converted into a signalised T-junction, with a 2 car right turn flare on the Six Hills Way eastbound approach, and a 2 car left turn flare on the Valley Way approach.



Outline Cost Analysis

The costs estimates are based on outline design drawings and any quantities shown are indicative only. Further scheme development is required to refine the cost estimate. The cost estimate for delivery excludes the following:

- Third party land acquisition costs and accommodation works costs
- Dedication of Land, Land to be passed over to the council as highway.
- Legal costs
- Landscaping design
- Statutory Undertakers design fees
- Statutory Undertakers diversion and or protection costs
- Ground Investigation cost
- Traffic Regulation Orders & any associated TRO consultation
- Contract documentation for appointment of the preferred contractor
- Tendering of the work

Initial costs for implementing this junction were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£295,000	
Allowances for Design Fees	£59,000	20% of the construction items
Allowances for Preliminaries	£44,250	15% of the construction items
Allowances for Traffic Management	£59,000	20% of the construction items
Allowances for Supervision	£29,500	10% of the construction items
Allowances for Utilities / Electricals	£59,000	20% of the construction items
Sub-Total for allowances and construction items	£545,750	
Optimism Bias	£240,000	44% of sub-total
Cost for Delivery	£785,750	2021 Construction Year

Location	A602 / Valley Way / Broadwater Crescent Roundabout
Reference	HM19

Description of Problem

The A602/Valley Way/Broadwater Crescent roundabout is problematic as it does not have sufficient capacity to accommodate the future year level of growth, and becomes a problem junction for traffic travelling west-east. Due to the capacity constraints, large queues and delays occur on the A602 eastbound approach to the junction in the PM peak.

Mitigation Proposal Details

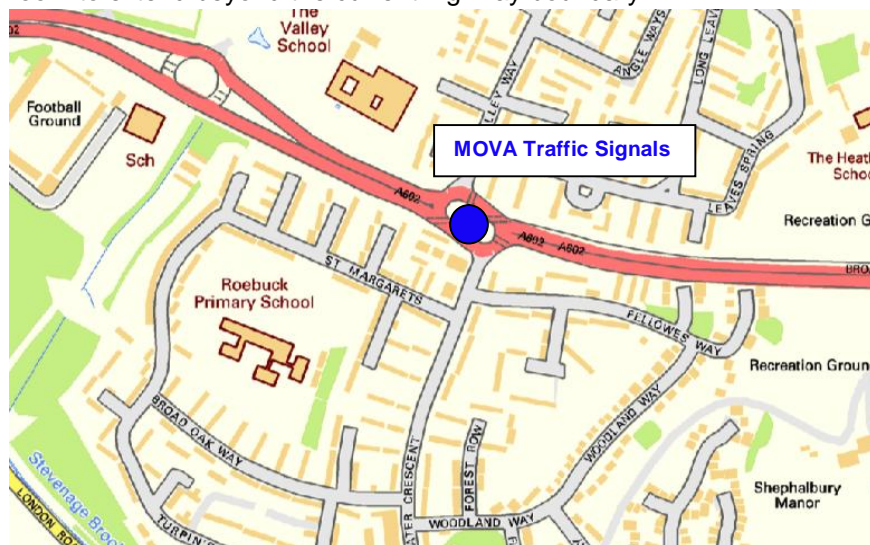
To provide sufficient network capacity to accommodate the future year level of demand, it is proposed that the junction will be improved by implementing MOVA traffic signals. The MOVA (Microprocessor Optimised Vehicle Actuation) signal control system is a more efficient form of control able to deliver substantially reduced delays without the need for regular re-setting of the signal timings.

MOVA is a sophisticated strategy using the computing power of microprocessors to assess the best signal timings, given the physical layout of the junction, the signal stages available and the traffic conditions at the time. The system will generate its own signal timings cycle-by-cycle, varying continuously with traffic conditions, both in the short term (hour to hour, day to day) and in the long term following annual trends and longer term traffic growth.

This junction would be an ideal candidate for MOVA control as it is forecast to be a site that would suffer from prolonged periods of congestion in the future. MOVA performs particularly well, and appears to give above average benefits at smaller heavily congested junctions, which this location is. This innovative method of signal control can reduce delays and accident levels. Evidence has shown that MOVA can reduce delays by an average of 13%, compared with conventional signal controls.

MOVA has two operational modes; the first deals with uncongested conditions, the second with situations when the junction becomes overloaded/congested with large queues on one or more approaches. This form of operation would be suited to this junction location, when congestion occurs during the busy peak periods, and the junction is uncongested at other times.

It has been assumed that no widening is undertaken at the junction, as it is understood that there is no room to extend beyond the current highway boundary.



Outline Cost Analysis

The costs estimates are based on outline design drawings and any quantities shown are indicative only. Further scheme development is required to refine the cost estimate. The cost estimate for delivery excludes the following:

- Third party land acquisition costs and accommodation works costs
- Dedication of Land, Land to be passed over to the council as highway.
- Legal costs
- Landscaping design
- Statutory Undertakers design fees
- Statutory Undertakers diversion and or protection costs
- Ground Investigation cost
- Traffic Regulation Orders & any associated TRO consultation
- Contract documentation for appointment of the preferred contractor
- Tendering of the work

Initial costs for implementing this junction were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£225,000	
Allowances for Design Fees	£45,000	20% of the construction items
Allowances for Preliminaries	£33,750	15% of the construction items
Allowances for Traffic Management	£45,000	20% of the construction items
Allowances for Supervision	£22,500	10% of the construction items
Allowances for Utilities / Electricals	£45,000	20% of the construction items
Sub-Total for allowances and construction items	£416,250	
Optimism Bias	£183,000	44% of sub-total
Cost for Delivery	£600,000	2021 Construction Year

Location	London Road / Toby Carvery junction
Reference	HM20

Description of Problem

London Road is a key road linking Knebworth and other communities to the south of Stevenage with Central Stevenage. The London Road / Toby Carvery junction is problematic as it does not have sufficient capacity to accommodate the future year level of growth, and becomes a problem junction for traffic travelling north-south from Stevenage in the PM peak. Large queues and delays occur on the southbound approach to the junction due to being held up by the London Road/Hertford Road/B197 roundabout downstream.

Mitigation Proposal Details

To provide sufficient network capacity to accommodate the future year level of demand, it is proposed that the London Road/Hertford Road/B197 junction be converted from a roundabout to a signal controlled junction with single lane shared entry on all arms. The signal timings have been optimised with junction improvement based on fixed timings however there may be additional scope to implement demand responsive signals to respond to changes in demand during busy periods. This cannot be modelled because of software limitations but it would be expected to further enhance the operation and capacity of the junction.



Outline Cost Analysis

The costs estimates are based on outline design drawings and any quantities shown are indicative only. Further scheme development is required to refine the cost estimate. The cost estimate for delivery excludes the following:

- Third party land acquisition costs and accommodation works costs
- Dedication of Land, Land to be passed over to the council as highway.
- Legal costs
- Landscaping design
- Statutory Undertakers design fees
- Statutory Undertakers diversion and or protection costs
- Ground Investigation cost
- Traffic Regulation Orders & any associated TRO consultation
- Contract documentation for appointment of the preferred contractor
- Tendering of the work

Initial costs for implementing this junction were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£340,000	
Allowances for Design Fees	£68,000	20% of the construction items
Allowances for Preliminaries	£51,000	15% of the construction items
Allowances for Traffic Management	£68,000	20% of the construction items
Allowances for Supervision	£34,000	10% of the construction items
Allowances for Utilities / Electricals	£68,000	20% of the construction items
Sub-Total for allowances and construction items	£629,000	
Optimism Bias	£276,000	44% of sub-total
Cost for Delivery	£905,000	2021 Construction Year

Location	Rectory Lane / Weston Road and B197 North Road / A602 Lytton Way
Reference	HM21.1 and HM21.2

Description of Problem

The Rectory Lane / Weston Road junction is problematic as the junction does not have sufficient capacity to accommodate the future year level of growth, causing delay and queueing on the Rectory Lane southbound approach.

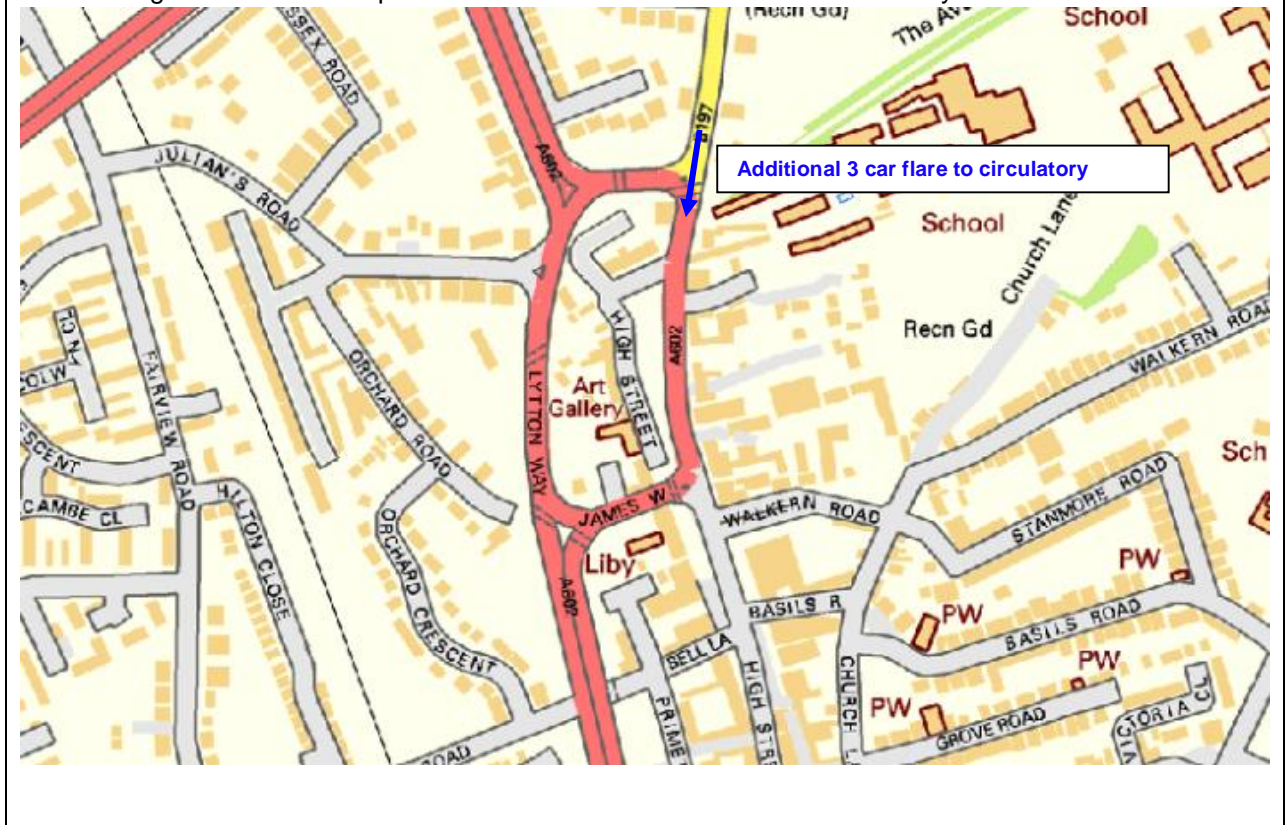
The B197 North Road / A602 Lytton Way junction is also problematic as the North Road approach to the elongated roundabout does not have sufficient capacity to accommodate the future year level of growth, resulting in delay and queueing on the B197 North Road southbound approach.

The delay at the Rectory Lane / Weston Road junction is directly related to the delay at the B197 North Road / A602 Lytton Way junction, as traffic which would normally travel through the North Road / Lytton Way junction is rerouting away from the junction due to the delays and capacity constraints, and rerouting onto Rectory Lane, a rural road which cannot accommodate the volume of rerouted traffic.

Therefore, mitigation of the B197 North Road / A602 Lytton Way to provide sufficient network capacity will result in the rerouting traffic to divert back onto the B197 North Road, alleviating traffic flows on Rectory Lane.

Mitigation Proposal Details

To provide sufficient network capacity to accommodate the future year level of demand, it is proposed that a 3 car flare is implemented on the B197 North Road approach to re-join the circulatory of the junction, through the removal of the edge of carriageway marking, and the realignment of the splitter island and grassed area. This provides 2 lanes for traffic to enter the circulatory.



Outline Cost Analysis

The costs estimates are based on outline design drawings and any quantities shown are indicative only. Further scheme development is required to refine the cost estimate. The cost estimate for delivery excludes the following:

- Third party land acquisition costs and accommodation works costs
- Dedication of Land, Land to be passed over to the council as highway.
- Legal costs
- Landscaping design
- Statutory Undertakers design fees
- Statutory Undertakers diversion and or protection costs
- Ground Investigation cost
- Traffic Regulation Orders & any associated TRO consultation
- Contract documentation for appointment of the preferred contractor
- Tendering of the work

Initial costs for implementing this junction were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£50,500	
Allowances for Design Fees	£10,000	20% of the construction items
Allowances for Preliminaries	£7,500	15% of the construction items
Allowances for Traffic Management	£10,000	20% of the construction items
Allowances for Supervision	£5,000	10% of the construction items
Allowances for Utilities / Electricals	£10,000	20% of the construction items
Sub-Total for allowances and construction items	£93,000	
Optimism Bias	£41,000	44% of sub-total
Cost for Delivery	£134,000	2021 Construction Year

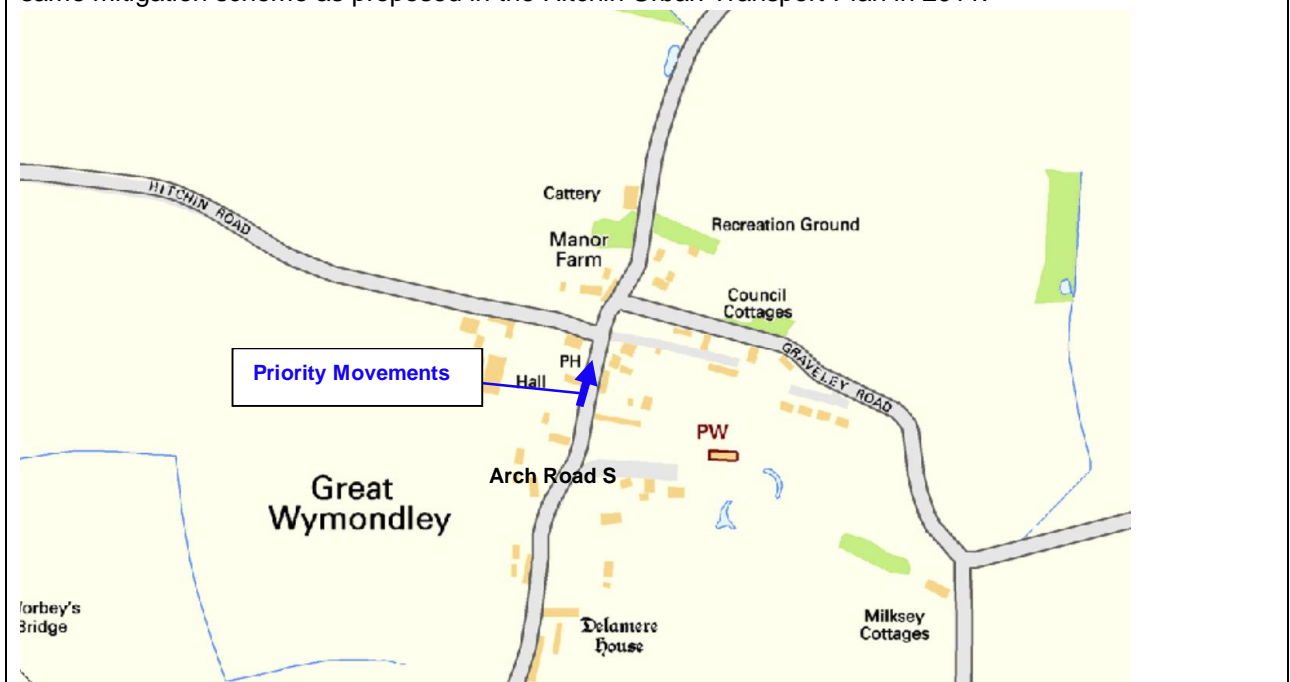
Location	Arch Road/Hitchin Road junction
Reference	HM22

Description of Problem

The Arch Road/Hitchin Road junction is located in the centre of Great Wymondley village, west of A1(M) junction 8. The priority junction is operating over capacity with delays and long queues on the Hitchin Road approach (west arm). Hitchin Road is a shared single lane and there is a large volume of right turning traffic into Arch Road which is creating delays and restricting the straight on movement.

Mitigation Proposal Details

To provide sufficient network capacity to accommodate the future year level of demand, it is proposed that the priority movements are changed at the junction, so that Arch Road south and Hitchin Road are the major arm movements and Arch Road north becomes the minor arm with give way priority. This is the same mitigation scheme as proposed in the Hitchin Urban Transport Plan in 2011.



Outline Cost Analysis

The costs estimates are based on outline design drawings and any quantities shown are indicative only. Further scheme development is required to refine the cost estimate. The cost estimate for delivery excludes the following:

- Third party land acquisition costs and accommodation works costs
- Dedication of Land, Land to be passed over to the council as highway.
- Legal costs
- Landscaping design
- Statutory Undertakers design fees
- Statutory Undertakers diversion and or protection costs
- Ground Investigation cost
- Traffic Regulation Orders & any associated TRO consultation
- Contract documentation for appointment of the preferred contractor
- Tendering of the work

Initial costs for implementing this junction were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£7,000	
Allowances for Design Fees	£1,400	20% of the construction items
Allowances for Preliminaries	£1,100	15% of the construction items
Allowances for Traffic Management	£1,400	20% of the construction items
Allowances for Supervision	£700	10% of the construction items
Allowances for Utilities / Electricals	£1,400	20% of the construction items
Sub-Total for allowances and construction items	£13,000	
Optimism Bias	£5,800	44% of sub-total
Cost for Delivery	£18,800	2021 Construction Year

Location	A1072 Gunnels Wood Road/Clovelly Way junction
Reference	HM23

Description of Problem

The A1072 Gunnels Wood Road is one of the key routes through Stevenage and this particular junction with Clovelly Way is close to the proposed site for the West of Stevenage development which produces a large number of additional trips in the Preferred Option scenario.

The south arm of the roundabout is operating over capacity when the future year level of growth is applied and creates long queues in the PM peak period.

Mitigation Proposal Details

To provide sufficient network capacity to accommodate the future year level of demand, it is proposed that a segregated left turn filter lane is implemented on the southern approach to this junction. This extra lane removes the bulk of left turning traffic into Clovelly Way from the main roundabout, freeing up capacity for the main straight on movement and right turn.

There is sufficient capacity to accommodate the segregated flare however the roundabout is elevated with subways running beneath it which makes the scheme more complex. Similar mitigation measures for this junction have been explored in relation to the proposed West of Stevenage development.



Outline Cost Analysis

The costs estimates are based on outline design drawings and any quantities shown are indicative only. Further scheme development is required to refine the cost estimate. The cost estimate for delivery excludes the following:

- Third party land acquisition costs and accommodation works costs
- Dedication of Land, Land to be passed over to the council as highway.
- Legal costs
- Landscaping design

- Statutory Undertakers design fees
- Statutory Undertakers diversion and or protection costs
- Ground Investigation cost
- Traffic Regulation Orders & any associated TRO consultation
- Contract documentation for appointment of the preferred contractor
- Tendering of the work

Initial costs for implementing this junction were based on a construction year of 2021 accounting for inflation, with the breakdown of the costs outlined in more detail.

Works Element	Estimated Cost	Notes
Construction Items	£505,200	
Allowances for Design Fees	£101,040	20% of the construction items
Allowances for Preliminaries	£75,800	15% of the construction items
Allowances for Traffic Management	£101,040	20% of the construction items
Allowances for Supervision	£50,600	10% of the construction items
Allowances for Utilities / Electricals	£101,040	20% of the construction items
Sub-Total for allowances and construction items	£934,800	
Optimism Bias	£411,400	44% of sub-total
Cost for Delivery	£1,346,200	2021 Construction Year

Appendix D – EERM V3.1 Planning Data & Growth Assumptions

The 2031 forecast year model run is based on bespoke planning data assumptions for the East of England region; these take growth assumptions at a district level provided by the 21 Local Authorities in the East of England region, allocated at a more disaggregate zonal basis within these districts based on a consultation exercise undertaken in 2008 relating to the Regional Spatial Strategy (RSS) growth targets between 2006 and 2021 (26,810 dwellings) and assuming a linear projection forward to 2031. Given the revocation of the RSS by the current Government and the introduction of the Localism Bill (2011), the overall growth in the East of England has subsequently been controlled to National Trip End Model (NTEM) version 6.2 totals in 2031 for households and employment; this represents the most up-to-date set of planning assumptions for the region. Outside of the East of England, growth totals have been constrained to NTEM v6.2 forecasts, with the exception of the London area, which makes use of the GLA’s London Plan forecasts (Section 4.2.3 SHUM Forecasting Report, 2014).

EERM V.31 Sources of Growth Assumptions:

Element	EERM 3.1
NTEM	NTEM version 6.2
Development distributions	Based on Local Authority consultation undertaken in 2008
EoE Growth Constraint	NTEM version 6.2 totals (at a county level)
Stansted Demand	January 2007 assumptions (either G25, G35)

Appendix E – Caveat associated with scheme costing

Cost estimates, and preliminary designs, are fruitful grounds for disputes, AECOM has included in its Delegations of Authority the requirement for a Risk Assessment and prior AECOM approval to contract where pre-tender design is to be used for quantity take off and/or relied upon by the developer/contractor for finance/tender pricing unless there is an indemnity or waiver obviating AECOM from liability in respect of such quantities/reliance.

Accordingly, in any appointment where we are required to provide a cost estimate or to produce a preliminary/initial design that will be used for cost purposes it needs to be made clear that the pre-tender designs [and estimates] are not fully detailed, that they will need to be developed, revised and refined during the detailed design phase, and, therefore, any quantity [or value] shown or included in or derived from such pre-designs are indicative only.

Where such caveats and express exclusion cannot be incorporated a decision needs to be carefully made, in the first instance, as to whether AECOM can commit to the obligation/risk and the appropriate approval needs to be obtained from AECOM in accordance with the Delegations of Authority prior to contract.