



# **Uttlesford District Council Local Plan**

## **Transport Evidence Topic Paper**

**October 2023**

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**Draft Uttlesford Local Plan 2021 – 2041 (Regulation 18)**

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# Transport Evidence Topic Paper

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# Transport Evidence Topic Paper

## 1. OVERVIEW

- 1.1 This topic paper summarises the transport evidence that has been commissioned by Uttlesford District Council to support the production of the New Uttlesford Local Plan 2021 - 2041.
- 1.2 The evidence has been produced to inform the Local Plan policies and proposals for the Regulation 18 consultation being undertaken in November 2023 of the Draft Plan and will be refreshed following the consultation ahead of the next stage of plan preparation in 2024.
- 1.3 This paper provides a non-technical summary of the transport evidence, with the following Technical Notes available in the accompanying appendices:
1. Transport Study Baseline Report (not summarised in this Topic Paper)
  2. Strategic Assessment of Site Allocations Technical Note
  3. Saffron Walden Model Outputs Technical Note
  4. Great Dunmow Model Outputs Technical Note
  5. Takeley Model Outputs Technical Note
  6. Stansted Mountfitchet Model Outputs Technical Note
  7. A120 Corridor Model Outputs Technical Note
  8. Thaxted & Newport Model Outputs Technical Note
  9. A120 Multi-Modal Corridor Study

## 1.4 Evidence Assumptions

- 1.5 To provide the transport consultants with appropriate and timely data to inform the production of the evidence base several assumptions were made in relation to the proposed strategic sites and the 'emerging strategy'. Plan making is a highly iterative process, but this approach ensured there would be sufficient information available to inform the draft Plan, especially as transport modelling takes several weeks to 'build' and information was required sufficiently in advance.
- 1.6 For the reasons explained above, the transport consultants generally modelled the highest quantum of development for each of the proposals, as is detailed in the table below. This approach ensures the modelling is testing a 'worst case' scenario and further, more refined work can be undertaken to inform future stages of the Plan. The only exceptions being Saffron Walden and Thaxted where a lower quantum of development was modelled, however, the final proposed level of growth in the Local Plan will be assessed in the update of the transport evidence post Regulation 18 as required.

### Modelled housing number vs proposed allocations.

Settlement	Settlement Type	Area Strategy	Number of dwellings modelled	Proposed Strategic Allocations
Saffron Walden	Key Settlement	North	1,000	1,280
Newport	Local Rural Centre	North	500	412
Great Chesterford	Local Rural Centre	North	600	0
Great Dunmow	Key Settlement	South	1500	869
Takeley	Local Rural Centre	South	1900	1636
Stansted Mountfitchet	Key Settlement	South	800	390
Thaxted	Local Rural Centre	Thaxted	451	489
<b>Total Change</b>				<b>-1754</b>

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- 1.7 Overall, it can be seen that the modelling and junction assessments tested over 1,700 more dwellings (an increase of 34%) than is proposed to be allocated in the Draft Local Plan and therefore, it can be considered that in most settlements a 'worse case' scenario was modelled.
  - 1.8 In the south area 4,200 new homes were modelled and the proposed figure in the Local Plan is 2,895. This means the transport model tested 45% more dwellings in the South Uttlesford Strategy Area than is proposed in the Local Plan.
  - 1.9 Furthermore, the transport consultants modelled the allocation of a significant number of dwellings in Great Chesterford which are no longer proposed to be delivered. Finally, a number of large housing site planning permissions have been granted in the district (on appeal) since the modelling was started and this will have an impact on the assumptions made in relation to the number of dwellings in the Reference Case.

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## 2. NATIONAL PLANNING GUIDANCE

2.1 The transport evidence commissioned and considered by the Council, in informing the emerging Local Plan proposals, is robust and proportionate and is considered in line with Government guidance.

2.2 National Planning Practice Guidance produced by Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government states that:  
*It is important for Local Planning authorities to undertake an assessment of the transport implications in developing or reviewing their Local Plan so that a robust transport evidence base may be developed to support the preparation and/or review of that Plan.*

Paragraph: 001 Reference ID: 54-001-20141010

2.3 The guidance goes on to state:

*The key issues, which should be considered in developing a transport evidence base, include the need to:*

- *assess the existing situation and likely generation of trips over time by all modes and the impact on the locality in economic, social and environmental terms*
- *assess the opportunities to support a pattern of development that, where reasonable to do so, facilitates the use of sustainable modes of transport*
- *highlight and promote opportunities to reduce the need for travel where appropriate*
- *identify opportunities to prioritise the use of alternative modes in both existing and new development locations if appropriate*
- *consider the cumulative impacts of existing and proposed development on transport networks*
- *assess the quality and capacity of transport infrastructure and its ability to meet forecast demands*
- *identify the short, medium and long-term transport proposals across all modes*

*The outcome could include assessing where alternative allocations or mitigation measures would improve the sustainability, viability and deliverability of proposed land allocations (including individual sites) provided these are compliant with national policy as a whole*

Paragraph: 003 Reference ID: 54-003-20141010

### **3. THE TRANSPORT EVIDENCE**

#### **3.1 Transport Modelling**

3.2 Uttlesford District Council commissioned transport and planning consultants Tetra Tech to undertake a transport study to inform the spatial strategy options and associated transport mitigation to be included within the emerging Local Plan. To inform this process a series of transport models have been developed and used to assess the alternative spatial options and interventions.

3.3 The transport modelling has been undertaken in two distinct stages:

- High-level strategic modelling to understand the transport impacts of alternative spatial options and to assist with the selection of a preferred growth scenario.
- More detailed (VISUM) local modelling to test the local impacts of the preferred spatial option (the emerging strategy) on key junctions and to identify the necessary interventions and mitigation to meet both transport and wider corporate objectives, including a move towards net zero carbon emissions.

3.4 Transport modelling is a complex process that requires significant data input, coding and interpretation. Modelling the different scenarios can take a number of weeks (or even months) and for this reason, early assumptions had to be made of on the level of growth and location of preferred strategic sites in the towns and villages. In most settlements the model tested marginally higher levels of growth than is presented in the Draft Local Plan. On this basis the outputs can be considered robust and representative.

3.5 Development proposals in Thaxted and Newport were assessed using the district wide strategic model and specific junction assessment, These settlements were assessed differently as they fell outside the zones covered by the more detailed VISUM modelling used in Saffron Walden and in the A120 corridor.

3.6 The models use 2040 as the assessment year which takes into account growth in background traffic and committed development trips and assumes that all proposed strategic growth would have been completed by the end of 2040. Therefore, the impact of the Local Plan growth on the network is fully assessed by the end of the Local Plan period of 2041.

3.7 The modelling tested a number of highway capacity and sustainable transport interventions aimed at mitigating the impact of Local Plan traffic growth on the local and strategic road network. A mitigation package was devised for each settlement. Furthermore, the cumulative impact of these packages was modelled in order to assess the impact on the A120 corridor as a whole. These intervention packages may include measures to improve efficiency or capacity at individual junctions, enhancements to public transport and cycling and walking schemes.

3.8 The individual intervention packages are detailed in the Technical Notes and are summarised in the subsequent sections in this report.

3.9 The output reports of the transport modelling are presented in a series of Technical Notes as detailed below (the summaries of these reports for each settlement is detailed on the following pages):

1. Strategic Assessment of Site Allocations Technical Note
2. Saffron Walden Model Outputs Technical Note
3. Great Dunmow Model Outputs Technical Note
4. Takeley Model Outputs Technical Note
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7. Thaxted & Newport Model Outputs Technical Note

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### **3.10 Local Cycling and Walking Infrastructure Plan**

3.11 The Uttlesford District Local Cycling and Walking Infrastructure Plan is currently under development and is expected to be finalised by early 2024 and this paper will be updated accordingly.

### **3.12 A120 Multi-Modal Corridor Study**

3.13 Uttlesford District Council (UDC) and Essex County Council (ECC) commissioned Essex Highways (Jacobs) to undertake a multi-modal viability study for the A120 corridor in Uttlesford.

3.14 The aim of this study is to consider for the core development scenarios the most viable form of high-quality public transport system (HQPT) would be viable with the level of development planned.

3.15 The study is not yet complete, however, the interim conclusions of the study are summarised in this topic paper.

## **4. STRATEGIC ASSESSMENT OF SITE ALLOCATIONS**

### **4.1 Overview**

4.2 The Strategic Assessment Technical Note details the impacts on the transport network of the sites to be taken forward through the Uttlesford Local Plan, at a strategic, district wide level. It focuses on how the proposed Local Plan site allocations across Uttlesford will impact travel demand on both the Strategic Road Network (SRN) managed by National Highways (notably the M11 and A120), and the local road network managed by Essex County Council.

4.3 For reasons previously explained, the strategic model tested a much higher quantum of development including a number of proposed allocations in Great Chesterford which have not been included in the Draft Local Plan. The findings should be viewed in context because the nature of this high-level assessment also doesn't take into account:

- Any proposed sustainable transport or highway mitigation.
- The potential for traffic to re-route on the network.
- The potential for modal shift or peak spreading to reduce peak demands on the road network.
- The potential for home working / home shopping.

4.4 This assessment provides a high-level overview of demand based upon an "all or nothing assignment of traffic". In this respect it doesn't consider route choice and the factors which may influence route choice, but nonetheless provides useful insight in terms of where people want to travel.

### **4.5 Demand on the Strategic Road Network**

4.6 By 2040 there will be a significant increase in travel demand on the SRN in the Reference Case due to committed planning and transport proposals coming forward within the district and beyond, including the expansion of Stansted Airport. This is reflected in the increase in demand on the A120 in particular.

4.7 The additional impacts of Local Plan related growth are very modest by comparison. In a number of instances, it will add to the demand on sections of the network that will already be under pressure but not be the critical factor in the network's performance.

4.8 The A120 VISUM Model provides more insight into the performance of the network and this is considered in subsequent sections.

### **4.9 Demand on the Local Road Network**

4.10 As with the SRN, by 2040 there will be a significant increase in travel demand on the local road network due to committed planning and transport proposals coming forward within the district and beyond as part of the Reference Case.

4.11 The impacts of the Local Plan related growth will have impacts on the local road network and the increases in demand may exceed capacity on some routes and in various locations this will potentially require some form of mitigation to both reduce demand and increase capacity, but it must also be reiterated that the findings doesn't take into account:

- Any proposed sustainable transport or highway mitigation.
- The potential for traffic to re-route on the network.
- The potential for modal shift or peak spreading to reduce peak demands on the road network.
- The potential for home working / home shopping.

4.12 The A120 and Saffron Walden VISUM Models provide more insight into the performance of the network which are considered in subsequent sections.

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## **5. SETTLEMENTS MODELLING OUTPUTS (VISUM MODEL)**

- 5.1 Growth proposals in Saffron Walden, Great Dunmow, Takeley and Stansted Mountfitchet were modelled using the detailed local (VISUM) modelling and the extensive traffic data collected in 2021. Three traffic models were built: The 2021 Base year; The 2040 Reference model which models the background growth in the district and in neighbouring areas; and the 2040 Local Plan model which adds the proposed Local Plan growth to the Reference model to assess the impact. The modelling software then tests a series of mitigation packages to test how sustainable transport or highway capacity interventions would influence traffic on the 2040 network.
- 5.2 The outputs of the modelling for Saffron Walden, Great Dunmow, Takeley and Stansted Mountfitchet are summarised in the following sections.

## **6. SAFFRON WALDEN MODEL OUTPUTS**

### **6.1 Overview**

- 6.2 It should be noted that the model tested a marginally lower quantum of growth in the town than is proposed to be allocated.
- 6.3 Saffron Walden will see an increase in traffic volumes over the Local Plan period, however, most of the increase in traffic is attributed to the development that is coming forward through existing planning permissions or already committed schemes.
- 6.4 Both the committed schemes and the Local Plan allocations propose new road connections between Radwinter Road and Thaxted Road and these new connections do provide wider benefits for the town and improve journey times on a number of routes in the town. The new road connections and improved junction performance will improve conditions for sustainable transport interventions to improve walking and cycling.

### **6.5 Existing Transport Conditions**

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

### **6.9 Future conditions with background/committed growth (Reference model)**

- 6.10 The Reference Case demonstrates that there will be more traffic on the network, longer delays at junctions and that journey times will increase as a result.
- 6.11 Committed schemes which set to come forward in the intervening period will not stem the increase in travel demand throughout the town, although the new link between Radwinter Road and Thaxted Road being provided as part of the committed developments will see traffic reassign to the extent that the level of queuing and delay at the Radwinter Road – Thaxted Road junction will reduce.

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## **6.12 Future conditions with Local Plan growth (including Reference model)**

6.13 The Local Plan Growth Scenario will result in more traffic on the network, as is to be expected with the delivery of around 1,000 new dwellings within the town. The scale and severity of the impacts associated with this increase in demand to travel differs across the network. However, it is considered that it generally performs well, and broadly similar to the Reference Case.

6.14 The key findings are that:

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

## **6.15 Future conditions with Sustainable Transport Mitigation**

6.16 Providing a package of intervention which focuses on the provision of attractive sustainable travel options providing realistic alternatives to the car will offer many benefits to the travel offering in the town, beyond the performance of the highway network.

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

6.18 The sustainable transport interventions that were modelled include:

### Public Transport

- Provide a new bus top on Radwinter Road close to the entrance to Site 003 RES, together with Real Time Information at all bus stops in proximity to the site allocations.
- Increase the frequency of services between Radwinter Road and Audley End Station to at least one bus per hour, preferably two buses per hour.
- Explore scope to re-route some services through the development sites as part of the introduction of a possible town-loop service and/or increased frequencies of services to Cambridge.
- Offer discounted (or free) bus travel to all new residents for 12 months.

### Walking & Cycling

- Provide a fully segregated and continuous cycle link between the development sites and the station.
- Provide a continuous segregated route between Thaxted Road and Radwinter Road for cyclists and pedestrians.
- Provision of a new e-bike for every new household.

## **6.19 Highway Mitigation with a new Link Road for Saffron Walden**

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- 6.20 In seeking to provide a greater understanding of more strategic options available to the town, a second scenario was assessed which focused on a combination of both the sustainable transport interventions and a new link road to the south of the town between Thaxted Road and Newport Road. This link road is above and beyond the link road assessed in the Local Plan scenario as it includes a new link between Debden Road and Newport Road.
- 6.21 The provision of the full link road to the south of the town is a scheme which should only be considered in the period beyond the current Local Plan. It is not deemed necessary or appropriate to mitigate the impact of the Local Plan site allocations.
- 6.22 The scheme itself could have many benefits in terms of the removal of traffic from many existing routes in the south of the town. However, given the lack of wider route choice, many vehicles will still be required to travel through the town centre via High Street. In particular, if they are travelling north towards the M11 and Cambridge. In this respect, the link road would fall short in addressing all of the town's highway capacity issues – delays will remain on key corridors through Saffron Walden although journey times and the average speed of traffic will improve on many routes.
- 6.23 The link road could unlock wider benefits in terms of the reallocation of road space to more sustainable forms of travel within the town, and subsequent improvements to air quality and emission levels. A more detailed analysis of the benefits of the scheme could be explored through the development of a transport business case but the outcome of that process should not have any implications for the delivery of the Local Plan sites.

#### **6.24 Saffron Walden Conclusion**

- 6.25 The transport modelling highlights that because of the Local Plan growth there will be an increase in volume of traffic on the local network with increased junction delays, however, the provision of a new Link Road through the proposed allocations will improve capacity in the town and take some pressure of existing junctions. It will also provide increased route choice and a route that will be used for sustainable transport connections including a dedicated cycle lane.
- 6.26 The package of sustainable transport interventions will contribute to a reduction in the identified impacts on the local network and provide sustainable transport choices and a realistic alternative to the car.

## **7. GREAT DUNMOW MODEL OUTPUTS**

### **7.1 Overview**

7.2 It should be noted that the modelling outputs are predicated on an assumption of a significantly higher quantum of growth in the town and the proposed allocations are actually 42% lower in Great Dunmow.

7.3 The modelled housing growth in Great Dunmow will see an increase in traffic volumes and queueing over the Local Plan period and the majority of this increase can be attributed to the strategic housing allocation of the east of the town. In order to mitigate these impacts, we are anticipating a shift towards sustainable modes of transport from the new development which will be complemented by a series of integrated junction improvements that will address queueing and journey times through the town. The improved junction performance will also improve conditions for sustainable transport interventions to improve walking and cycling.

### **7.4 Existing Transport Conditions**

7.5 The analysis of the volume of traffic, the journey times and average speed of vehicles, together with the efficiency of operation of several junctions within the town points towards a network that currently operates reasonably efficiently albeit with several pinch point within both peak periods, particularly on radial routes into the town from the south, east and west.

7.6 The B1256 is an important link around the south of the town, reflected in the volume of traffic it accommodates. Its operation has implications for movement in and out of the town. The speed of traffic on the corridor varies by around 3mph in peak period suggesting that there are typically no significant issues.

### **7.7 Future Conditions with background/committed growth (Reference case)**

7.8 Analysis of the future committed growth impact on the network demonstrates that there will be more traffic on the network, longer delays at junctions and that journey times will increase as a result.

7.9 This will be particularly apparent on the B1256 where journey times for northbound traffic travelling from the South Dunmow Interchange on the A120 will increase from around 4 minutes to 7 ½ minutes in the AM peak. As a whole, the impacts on the individual junction will be relatively moderate, but the cumulative impact will make the movement of general traffic around the town less efficient.

### **7.10 Future conditions with Local Plan growth (including committed)**

7.11 The Local Plan Growth Scenario will result in more traffic, slower traffic and increases in journey times, as a result of considerable delays across Great Dunmow.

7.12 In other settlements many of the delays on the highway network will be as a result of committed development coming forward in the Reference Case. However, in Great Dunmow, the impacts more directly relate to the Local Plan and provision of an additional 1,500 dwellings in the town, although noting that the LP proposal is for 869 dwellings; so we can expect the updated modelling to show improvements to what is presented here (42% reduction).

The key findings are that:

- Junctions on the main north-south axis through the town formed by North Street / High Street will see increases in delays, as will those on the east-west axis formed by the B1256

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and Stortford Road.

- Of particular note is the B1008 Beaumont Hill / Lime Tree Lane junction, where the increases in delay will amount to around 13 minutes.
- The junctions at either end of St Edmunds Lane would also suffer from queues, with almost a 10 minute delay at its junction to the south with Braintree road in the PM peak period.

7.13 In other settlements many of the delays on the highway network will be as a result of committed development coming forward in the Reference Case (in other words, development that will come forward irrespective of whether the Local Plan comes forward or not as they sites in question already have planning permission). However, in Great Dunmow, the impacts more directly relate to the Local Plan and provision of an additional 1,500 dwellings in the town, albeit noting again that the actual LP proposal is for 869 dwellings and so we can anticipate the impacts will be less than shown here.

#### **7.14 Future conditions with Sustainable Transport Mitigation**

7.15 The proposed strategic allocation site is only 1.5km from the town centre of Great Dunmow so can be considered within reasonable walking & cycling distance of a range of services that the district's second largest town has to offer.

7.16 Providing a package of interventions to mitigate the impacts of the Local Plan site allocations through attractive sustainable travel options that will provide realistic alternatives to the car, will provide some benefits to the travel offering in the town. Consideration has also been given to making better use of the existing highway capacity to supplement improvements to the walking, cycling and public transport offer and these are detailed below.

7.17 The sustainable transport interventions that were modelled include:

##### Public Transport

- Provide a new bus stop (including shelter, seating and Real Time Information) on the B1057 adjacent to the new development.
- Increase the frequency of the no. 324 Stebbing to Bishops Stortford service from 1 bus every two hours to 1 bus every 30 minutes.
- Extend route of the no. 323 service to serve the development and help achieve the increase in service frequency.
- Introduce modal filters on the route to provide greater priority for buses and reduce journey times.
- Offer discounted (or free) bus travel to all new residents for 12 months.

##### Walking & Cycling

- Develop continuous traffic free cycle route between the development and the town centre via the River Chemer.
- Develop shared use path via Church Street in Church End, then south-west along Church Street to the bottom of Lime Tree Hill before heading south over the playing fields to the Great Dunmow Recreation Ground and The Causeway.
- Provide signalised crossing of Church End and narrow the carriageway to one lane to enable a segregated shared-use path connection to an off-road route parallel to the river.
- Reduce the speed limit on Broadway from 60mph to 30mph and introduce street lighting and speed reduction features.
- Provision of a new e-bike for every new household.

#### **7.18 Future conditions with Highway Capacity Interventions**

7.19 An integrated package of junction improvements across Great Dunmow will improve the efficiency with which the highway network operates. The additional demands placed on the

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network from the site allocations means that a move away from priority give way junctions is required, particularly on several strategically important intersections in the town.

- 7.20 Introducing traffic signals in these locations provides a tool through which to better manage and regulate traffic flow and optimise capacity on the exiting network. It forms a proportionate and viable approach through which to facilitate growth.
- 7.21 Furthermore, the signalisation of the junctions will complement the delivery of a comprehensive package of sustainable transport measures within the town. The signals will include green phases for pedestrians and cyclists and as such improve the safety and comfort of active travel users on the network.
- 7.22 The highway capacity interventions that were modelled were:
- B1008/B1057: Widening to provide turn pockets/ flare at all approaches together with the signalisation of the junction.
  - B1256 /Braintree Road: Signalisation of the junction.
  - B1256 / Station Road: Signalisation of the junction.
  - Dunmow South Interchange (southern junction): Chelmsford Road Northbound and A120 off-slip approach arms widened to allow for separate left-turn lane.
  - Parsonage Downs / B1008: Parsonage Downs approach arm widened with left-turn flare.
  - Flich Industrial Estate / Chelmsford Road: Estate approach arm widened with left-turn flare.
  - B1256 / Blackwater Drive: B1256 approach arms widened to two-lane entry.

### **7.23 Great Dunmow Conclusion**

- 7.24 The transport modelling highlights that as a result of the Local Plan growth there will be an increase in volume of traffic on the local network with increased junction delays, however, the model tested a much higher 'worse-case' scenario quantum of development of 1500 homes whilst the Local Plan is actually proposing 42% less homes of 869.
- 7.25 The modelling does suggest that over 50% of trips in the AM peak from the proposed allocation site are distributed around the local network within the town centre. This highlights the opportunity for a significant percentage of these local trips to shift to more sustainable modes for short, local trips.
- 7.26 The location of the proposed allocation close to the town centre, the package of sustainable transport and highway interventions (together with the lower quantum of proposed development) should result in a more efficient network which also provides enhancements for cycling and walking and will see a significant reduction in the identified impacts on the local network.

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## **8. TAKELEY MODELLING OUTPUTS**

### **8.1 Overview**

8.2 It should be noted that the modelling outputs are predicated on an assumption of a higher quantum of growth in Takeley and the proposed allocations are lower.

8.3 Takeley will see an increase in traffic volumes and junction delays over the Local Plan period, however, most of the increase in traffic is attributed to the development that is coming forward through existing planning permissions or already committed schemes. The proposed strategic allocation will provide sustainable transport interventions that will mitigate the Local Plan growth impact including strengthening connections to the public transport interchange at Stansted Airport.

### **8.4 Existing Transport Conditions**

8.5 The analysis of the volume of traffic, the journey times and average speed of vehicles, together with the efficiency of operation of several junctions within the town points towards a local road network that generally operates efficiently, the centre of Takeley being the exception.

8.6 In terms of the strategic network, the volume of traffic on the A120 appears to impact on the efficiency with which it operates reflected in tangible differences in journey times on the corridor.

### **8.7 Future Conditions with background/committed growth (Reference case)**

8.8 The Reference Case model demonstrates that committed schemes set to come forward in the intervening period will have a significant impact on the operation of the A120 with large increases in journey times for eastbound traffic looking to access Stansted Airport. The impact on the local network is more marginal with no tangible changes in its operation.

### **8.9 Future conditions with Local Plan growth (including committed)**

8.10 The Local Plan Growth Scenario will result in more traffic on the network, as is to be expected with the modelling of around 1,900 new dwellings within the village, although noting the LP proposal is for 1,636 dwellings. The impacts will be most pronounced on the local road network, and in the centre of Takeley, where without intervention delays will be experienced in both peak periods.

8.11 It should be noted that as part of the site allocations an access road would be provided between Parsonage Road and Dunmow Road to the east of the village. Whilst general traffic could access the route at either end, there would be no through route, with a modal filter on Smiths Green Lane enabling access for buses, pedestrians and cyclists only.

This has implications for the performance of the junctions within this model notably:

- The Local Plan will accentuate delays at the junction of the B1256 Dunmow Road and B183 Station Road / Parsonage Road (the 'Four Ashes') with traffic experiencing queues of over three minutes, of which around one and a half minutes is attributable to the impact of the site allocations in the morning peak period.
- In the PM peak period, the Four Ashes junction will continue to experience delays over two minutes, whilst to the south of the village at the junction of Station Road and Takeley Park will also be subject to a degree of delay.
- Despite the proximity of the new housing to the road network around the airport, minimal increases in demand are expected and all accesses into the airport will continue to operate efficiently.

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## **8.12 Future conditions with Sustainable Transport Mitigation**

8.13 The proposed strategic allocation site is located close to existing services in Takeley and is proposing a new local centre, a primary and secondary school. The proposed allocation, therefore can be considered within reasonable walking & cycling distance of a range of services.

8.14 Notwithstanding the wider benefits of focusing mitigation on sustainable travel, its ability to reduce demand to travel by car will benefit the performance of the highway network itself. We are anticipating a shift towards sustainable modes of transport from the new development which will be complemented by a series of integrated junction improvements that will address queueing and journey times through Takeley. The improved junction performance will also improve conditions for sustainable transport interventions to improve walking and cycling. Therefore, the majority of the network will perform as effectively as within the Reference Case, despite the additional 1,900 dwellings within the village.

8.15 The sustainable transport interventions that were modelled include:

### Public Transport

- Increase the frequency of services, particularly those to Stansted Airport and Bishop's Stortford.
- New bus service between the development site and Stansted Airport.
- Provide Real Time Information at all stops.
- Offer free bus travel to all new residents for 12 months.
- Offer discounted rail travel to all new residents for 12 months.
- Provision of a 'mobility hub' multi-modal transport interchange.

### Walking & Cycling

- Local connections onto the NCN plus:
- Improvements to the Flitch Way.
- LTN 1/20 compliant route between Takeley and Stansted Airport.
- Introduce a modal filter on Smiths Green so that it doesn't compromise the safety of cyclists when it is surrounded by development on both sides.
- Provision of a new e-bike for every household.

## **8.16 Future conditions with Highway Capacity Interventions**

8.17 Enabling traffic to utilise the new access road to be provided as part of the site allocations coming forward as a through route will provide benefits to the centre of the village and reduce pressure on the Four Ashes junction on the B1256. However, the benefits to the wider highway network need to be balanced against using the route as a sustainable transport route which will not facilitate through traffic but will provide enhanced connections for public transport and cycling.

8.18 The attractiveness of the through route would see an element of strategic traffic re-route off the A120. This is something that would have benefits to the operation of the A120 itself but could have negative connotations in terms of the place making dimensions of the allocations. Careful consideration would be required to minimise its attractiveness for rat-running and in terms of its design specification, in seeking to prioritise active travel and public transport use within the new community.

8.19 As the route would part of the infrastructure of the sites coming forward, there are no concerns regarding the viability of the intervention. In this respect it could enable an increased focus on sustainable transport measures and higher levels of mode shift to be achieved.

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## **8.20 Takeley Conclusions**

- 8.21 The proposed allocation site is located on (or close to) the routes of regular bus services and is also located within reasonable cycling distance to the public transport interchange at Stansted Airport. Stansted Airport is the largest employment site in the district so there is opportunity to access employment by sustainable modes from the development site. Sustainable transport proposals will be supported by the delivery of a new mobility hub in the area.
- 8.22 The transport modelling highlights that as a result of the Local Plan growth there will be an increase in volume of traffic on the local network with increased delays at the Four Ashes Junction, however, the provision of a new road through the proposed allocations will improve capacity in the town and take some pressure of existing junctions. It will also provide increased route choice and a route that will be used for sustainable transport connections including a dedicated cycle lane.

## **9. STANSTED MOUNTFITCHET MODELLING OUTPUTS**

### **9.1 Overview**

9.2 It should be noted that the modelling outputs are predicated on an assumption of a higher quantum of growth and the proposed allocations are significantly lower (800 tested with 390 dwellings proposed).

9.3 The proposed site allocations are located within reasonable walking and cycling distance of the services within the village and Stansted Mountfitchet rail station which offers regular services to Cambridge and London.

9.4 Stansted Mountfitchet will see an increase in traffic volumes and junction delays over the Local Plan period, however, some of the increase in traffic is attributed to the development that is coming forward through existing planning permissions or already committed schemes.

### **9.5 Existing Transport Conditions**

9.6 The analysis of the volume of traffic, the journey times and average speed of vehicles, together with the efficiency of operation of several junctions within the town shows a network that can broadly accommodate current levels of demand.

9.7 The exception is the A120 where it forms the Bishop's Stortford Northern Bypass. Vehicle speeds fluctuate, and delays occur in the peak periods.

### **9.8 Future Conditions with background/committed growth (Reference case)**

9.9 The Reference Case model demonstrates that there will be more traffic on the network, longer delays at junctions and that journey times will increase as a result.

9.10 As opposed to widespread delays, the network in the area appears to have several specific pinch points where significant delays will occur. However, addressing these pinch points could conceivably have implications elsewhere by shifting traffic further into the network at a faster rate.

### **9.11 Future conditions with Local Plan growth (including committed)**

9.12 The Local Plan Growth Scenario will result in more traffic on the network and delays at particular pinch points, typically locations where priority give-way junctions do not allow side road traffic to join an increasingly heavily trafficked major road. This includes delays at the junction of the B1383 and Gypsy Lane. The volume of traffic on the B1383 means that traffic from the priority give-way side road will be unable to join the B1383 north or south. This junction is specifically addressed in the highway capacity mitigation package which is described below.

9.13 The Local Plan will marginally increase delays at the trio of junctions on Lower Street – Grove Hill in the centre of the village.

9.14 More broadly the Local Plan only marginally contributes towards issues on the network that are already apparent in the Reference Case and detailed above.

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### **9.15 Future conditions with Sustainable Transport Mitigation**

9.16 The benefits of focusing mitigation on sustainable travel with its ability to reduce demand to travel by car will also benefit the performance of the highway network itself and the anticipated shift towards sustainable modes of transport from the new development which will be complemented by a series of integrated junction improvements. The improved junction performance will also improve conditions for sustainable transport interventions to improve walking and cycling.

9.17 Focusing mitigation on sustainable travel will benefit the performance of the highway network itself, however this only has marginally impacts around M11 J8. This is likely to be as a consequence of the nature of the trips looking to access the airport or commute south towards London.

9.18 The sustainable transport interventions that were modelled include:

#### Public Transport

- Increase the frequency of the no.301 to at least one bus every 30 minutes.
- Provide Real Time information and timetables at existing stops, and a new stop at the northern edge of Site O15 RES.
- Offer discounted (or free) bus travel to all new residents for 12 months.
- Improve station facilities at Stansted Mountfitchet.
- Offer discounted (or free) rail travel to all new residents for 12 months.

#### Walking & Cycling

- Provide a fully segregated and continuous cycle link between the sites and the station.
- Provision of a new e-bike for every household.
- Provide a segregated cycle path running parallel to High Lane and then connecting onto Gall End Lane and Lower Street to enhance the cycle route to the station.
- Improve right of way between High Lane and Normans Way for better pedestrian access to bus services.

### **9.19 Future conditions with Highway Capacity Interventions**

9.20 The introduction of two relatively modest signalised junctions will address pinch points on the network which would otherwise have faced delays.

9.21 Delays impacting traffic on Gypsy Lane will be eradicated as a result of the junction improvement scheme, in both peak periods with no adverse consequences for any of the surrounding junctions.

9.22 The schemes improve the efficiency of their operation without any knock-on effects for the wider network.

9.23 The highway capacity intervention modelled in Stansted Mountfitchet was:

- B1383 / Gypsy Lane. Widening to provide turn pockets / flare at all approaches together with the signalisation of the junction at Gypsy Lane.

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**9.24 Stansted Mountfitchet Conclusions**

- 9.25 The proposed allocation site is located on (or close to) the routes of regular bus services and the rail station. The site is also an acceptable cycling distance to the public transport interchange at Stansted Airport. Stansted Airport is the largest employment site in the district so there is opportunity to access employment by sustainable modes (bus, rail & cycle) from the development site.
- 9.26 The transport modelling highlights that as a result of the Local Plan growth there will be an increase in volume of traffic on the local network with increased delays at the Gypsy Lane junction however, the provision of a signalised junction scheme will mitigate the impact.

## **10. A120 CORRIDOR MODELLING OUTPUTS:**

### **10.1 Overview**

- 10.2 The modelling outputs for the A120 corridor cover the area that is included in the South Uttlesford Area Strategy including: Great Dunmow, Stansted Mountfitchet and Takeley. This modelling also includes development proposals and the transport network at London Stansted Airport. The full Technical Note can be found in the Appendices.
- 10.3 As previously stated, 4,200 new homes were modelled in the A120 corridor and the proposed figure in the Local Plan is 2,895. This means the transport model tested 45% more dwellings in the South Uttlesford Strategy Area than is proposed in the Local Plan.
- 10.4 Growth proposals along the A120 corridor were modelled using the detailed local (VISUM) modelling and the extensive traffic data collected in 2021. Three traffic models were built: The 2021 Base year; The 2040 Reference model which models the background growth in the district and in neighbouring areas; and the 2040 Local Plan model which adds the proposed Local Plan growth to the Reference model to assess the impact. The modelling software then tests a series of mitigation packages to test how sustainable transport or highway capacity interventions would influence traffic on the 2040 network.
- 10.5 The assessment of the performance of the corridor is based upon the following metrics (and is summarised in the following section):
- The volume of traffic on the A120 in both the AM and PM peak periods.
  - Journey times on the corridor in both the AM and PM peak periods, and the associated speed of traffic.
  - Junction delays in both the AM and PM peak periods.

### **10.6 Volume of Traffic**

- 10.7 Analysis of the volume of traffic on the A120 corridor highlights that by 2040 there will be significantly more traffic on the network, driven by committed developments coming forward and a sizeable growth in patronage at Stansted Airport.
- 10.8 Whilst the Local Plan will add further demand to the corridor, the increases are relatively minor, and only a fraction of the growth in demand that will occur anyway. A combination of the sustainable transport interventions and highway capacity based improvements, that are either proposed by the Local Plan, or being delivered anyway through existing schemes, will reduce this impact, to the extent that on the central section of the corridor, the level of demand could be lower than in the Reference Case.

### **10.9 Journey Times & The Speed of Traffic**

- 10.10 Analysis of the journey times and average speed of traffic on the A120 corridor highlights that by 2040 there will be an impact on the efficiency of the operation of the network, driven by committed developments coming forward and a sizeable growth in patronage at Stansted Airport (as captured in the Reference Case).
- 10.11 Whilst the Local Plan will add further demand to the corridor, the increases are comparatively small.
- 10.12 The impact of the Northside development recently granted planning permission and reflected in Mitigation Package 1, screens the benefits of the delivery of sustainable transport measures in the wider corridor. However, alongside the highway capacity improvements on the local network, there will be clear benefits to the SRN, particularly for eastbound traffic in the PM peak period.

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### **10.13 Junction Delay**

10.14 There are existing issues with the performance of M11 J8 and these will be compounded by committed growth coming forward as reflected in the Reference Case. Local Plan traffic will add to pressures at M11 J8 and the A120 junctions serving Great Dunmow, however, the added delays caused by the Local Plan growth are minimal when compared to the Reference Case traffic. The proposed local network and sustainable transport interventions will mitigate some of the impact of the delays seen at junctions on the strategic road network.

### **10.15 A120 Corridor Summary**

10.16 It should be noted that the modelling outputs are predicated on an assumption of a higher quantum of growth in the corridor and the proposed allocations are significantly lower. The modelled growth is 45% higher than is proposed.

10.17 The modelling outputs highlight that even before development comes forward through the Local Plan that the M11 J8 and Dunmow South and East Intersections in particular, will be subject to increasing levels of delay. This is as a result of increases in the volume of traffic and will be felt in terms of reduced speeds and increased journey times.

10.18 The Local Plan will add to the level of demand on the corridor but only marginally when compared to other increases as a result of committed developments and expansion of operations at Stansted Airport and would be expected to be even less when the lower quantum of growth is tested.

10.19 The interventions proposed to mitigate the increases in travel demand across Uttlesford are all schemes that would be delivered on the local road network and not the SRN. These will still have an impact on the A120 however, in terms of reducing demand through securing a modal shift and through the more efficient operation of the local road network influencing route choice.

10.20 Whilst there is clearly a need for a long term solution to address delays which occur at M11 J8, the key driver for this is not the Local Plan. In this respect no proposed scheme has been identified.

10.21 It is anticipated that when a solution has been determined, Local Plan development sites would contribute a commensurate amount towards the costs of the scheme, proportionate to the scale of impact this technical note demonstrates.

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## **11. STRATEGIC MODEL OUTPUTS**

- 11.1 Development proposals in Thaxted and Newport were assessed using the district wide strategic model and specific junction assessment, These settlements were assessed differently as they fell outside the zones covered by the more detailed VISUM modelling used in Saffron Walden and in the A120 corridor.
- 11.2 For these settlements the Strategic Modelling Output Report summarises what impact the growth will have on specific junctions as this is likely to best represent how the road network will perform as a result of the modelled Local Plan growth.

## **12. STRATEGIC MODEL: THAXTED**

### **12.1 Overview**

- 12.2 A total of three junctions were assessed within Thaxted to understand the potential impact of Local Plan site allocations on the operation of the road network within the village. The junctions were selected based upon their proximity to the proposed allocation sites and their importance to the wider road network.
- 12.3 The B184 Mill End / B1051 Park Street / B184 Town Street / Orange Street junction suffers significant delays as a result of the Local Plan growth and will require an integrated highway scheme in order to mitigate the impact.

### **12.4 Junction Assessment: B184 Mill End / B1051 Park St / B184 Town St / Orange St**

- 12.5 The junction of the B184 Mill End / B1051 Park Street / B184 Town Street / Orange Street comprises a staggered junction with the Park Street and Orange Street forming the minor arms. The analysis highlights that:
- 12.6 The junction operates well within capacity in the Base Year with low levels of delay in both peaks.
- 12.7 Delays increase in the Reference Case (2040), particularly for traffic joining the main road from Park Street in the PM peak (Stream B-ACD) and from Town Street / Orange Street (Stream CD-AB) in the AM Peak, but the junction still operates within capacity.
- 12.8 When Local Plan traffic is added the junction exceeds its operational capacity and delays increase in both peaks with delays of circa 12 minutes on the B1051 Park Street in the PM Peak.
- 12.9 The narrow carriageway will prevent the installation of traffic signals to regulate the flow of traffic and so alternative measures will be required, potentially including reversing traffic priorities at the junction.
- 12.10 It is clear from this assessment that the Local Plan housing growth will have an impact on the operation of the junction and as such mitigating measures should be provided as and when site allocations come forward.
- 12.11 Further, testing of highway capacity and sustainable transport interventions will be tested at a subsequent stage.

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### **12.12 Junction Assessment: B184 Mill End / Bardfield Road**

12.13 The junction of the B184 Mill End / Bardfield Road comprises a three-arm priority junction.

12.14 The analysis highlights that:

- All junction movements operate well within capacity in both the AM and PM peaks during the Base Year with little delay on any arm of the junction. The largest delay is forecast on the Bardfield Road arm of the junction but even this is only around 15 seconds.
- The junction continues to operate within capacity in the Reference Case with only marginal increases in the delay.
- The addition of the Local Plan growth results in Bardfield Road operating over capacity in the AM peak with delays of circa 4 minutes

12.15 In order to mitigate the impact at this junction there appears to be space available within the highway boundary to provide traffic signals to better manage the flow of traffic.

### **12.16 Junction Assessment: B184 Walden Road / B1051 Great Sampford Road**

12.17 The junction of the B184 Walden Road / B1051 Great Sampford Road comprises a three-arm priority junction.

12.18 The analysis highlights that:

- The junction operates well in the base scenario with all movements under capacity and differs little in the Reference Case.
- Local Plan growth will have a minimal impact on the operation of the junction with all approaches experiencing only minor delays in both peak periods.

12.19 As the junction is operating well within capacity in all scenarios and time periods, no mitigation is required in this location.

### **12.20 Thaxted Summary**

12.21 The future performance of the three junctions within Thaxted will vary considerably when the Local Plan site allocations come forward with the majority of those tested performing adequately. However, these conclusions should also be taken within the context of the nature of the assessment, which has assigned flows from the strategic model. This doesn't incorporate the reassignment of traffic due to traffic conditions, and as such represents a worst-case scenario.

12.22 The impact of the growth of traffic on the identified junctions could be mitigated through the delivery of junction improvements, however, further assessments will be required to test potential mitigation in each location.

12.23 Sustainable transport measures should form part of any mitigation package including the provision of e-bikes to all new households and free bus passes for a year. However, the rural location of Thaxted is such that a high degree of modal shift is unlikely to be achievable.

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## **13. STRATEGIC MODEL: NEWPORT**

### **13.1 Overview**

- 13.2 The proposed site allocations are located within reasonable walking and cycling distance of the services within the village and Newport rail station which offers regular services to Cambridge and London. The village has a number of services that could be accessed by walking and cycling including primary and secondary schools, Doctor's surgery and local shops.
- 13.3 It should be noted that the modelling outputs are predicated on an assumption of a higher quantum of growth in Newport and the proposed allocations are marginally lower.
- 13.4 Three junctions were assessed within Newport to understand the potential traffic impacts of Local Plan site allocations on the highway network within the village.
- 13.5 Two of the junctions are existing junctions and were selected based upon their proximity to the allocation sites within the village and its importance to the wider road network. A third junction is a proposed new junction that would provide access to the site from the B1383 to/from the Local Plan sites.
- 13.6 Highway capacity and sustainable transport interventions will be tested at a subsequent stage.

### **13.7 Junction Assessment: B1383 High Street / B1038 Wicken Road**

- 13.8 The junction of the B1383 High Street / B1038 Wicken Road comprises a three-arm priority give-way junction. The junction has been assessed in two alternative scenarios associated with how the development traffic may access the network from Site Newport 010:
- Option 1 – With access to/from Wicken Road only.
  - Option 2 – With access to/from Wicken Road restricted to westbound turning movements only, together with a new junction onto the B1383 London Road.
- 13.9 The analysis highlights that the junction performs well in both the AM and PM peaks during the Base Year with all arms operating within capacity.
- 13.10 In the Reference Case during the AM peak, the Wicken Road arm of the junction is over capacity with delays, increasing from around 30 seconds in the Base Year to over four minutes in the Reference Case. All other arms operate within capacity.
- 13.11 With the addition of Local Plan traffic, the capacity concerns at the junction are exacerbated and further delays are forecast in the model.
- 13.12 The tested the delivery of site allocation with restrictions on eastbound movements from the site towards the junction and supplemented with a new access onto the B1383 further south. Whilst this mitigation reduces the impact at the Wicken Road junction there are still long delays at this junction.
- 13.13 However, it is unlikely that this would occur in practice because traffic would look for alternative routes on the network (the modelling methodology used for this location is not capable of reassigning trips to avoid delays).The strategic model network does not include Bury Water Lane and Frambury Lane, which would provide alternative routes for some trips.
- 13.14 Development sites within Newport are also likely to be responsive to modal shift opportunities. It is envisaged that the proximity of local bus services and a train station providing direct access to Cambridge and London could result in a higher modal share of sustainable trips than modelled, alleviating, in part, some of the queuing identified.
- 13.15 Potential mitigation through the restriction of eastbound movements from the site

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allocation Newport 010, towards the junction is not sufficient in this assessment to bring the existing junction within its operating capacity during the peak periods. This is still the case when supplemented with a new access onto the B1383 further south. In combination with modal shift outlined above a further assessment would be required to determine whether this would bring the junction towards operational capacity.

### **13.16 Junction Assessment: New Junction on B1383 London Road – Site Access (Newport 010)**

13.17 The performance of a new potential site access to/from the Local Plan site Newport 010 onto B1383 London Road has been modelled as a three arm priority give-way junction. This would be required in line with ECC guidance on site access for developments over 200 dwellings.

13.18 The assessment demonstrates that it would operate within capacity in the Local Plan scenario with little delay at the junction.

### **13.19 Junction Assessment: B1383 High Street / Debden Road**

13.20 The junction of the B1383 High Street / Debden Road comprises a three-arm priority give-way junction.

13.21 The analysis highlights that:

- The junction performs well in both the AM and PM peaks during the base year, reference case and Local Plan scenario with all arms operating within capacity.
- The longest forecast delay for traffic turning right from Debden Road during the AM peak with a delay of around 50 seconds.

### **13.22 Newport Summary**

13.23 The benefits of focusing mitigation on sustainable travel with its ability to reduce demand to travel by car will also benefit the performance of the highway network itself and the anticipated shift towards sustainable modes of transport from the new development which will be complemented by a series of integrated junction improvements. The improved junction performance will also improve conditions for sustainable transport interventions to improve walking and cycling.

13.24 The B1383 High Street / Wicken Road junction will require some form of intervention to mitigate the impact of the additional traffic generated by the Local Plan site allocations proposed in Newport. Potential mitigation has been assessed in the form of restricting eastbound turning movements onto Wicken Road from the site allocation Newport Site 010, together with the provision of an additional junction further to the south of the village.

13.25 These conclusions should also be taken within the context of the nature of the assessment, which has assigned flows from the strategic model. This doesn't incorporate the reassignment of traffic due to traffic conditions, and as such represents a worst-case scenario.

13.26 Further work will be undertaken following the Regulation 18 consultation and this will help provide more understanding in terms of the impacts on the highway network of the sites in Newport. This work will apply more nuanced demand reductions to the modelled trip generation which will better reflect the opportunity for sustainable transport choices including the close proximity of bus and rail travel services.

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## **14. A120 MULTI-MODAL CORRIDOR STUDY**

### **14.1 Overview**

14.2 Uttlesford District Council (UDC) and Essex County Council (ECC) have commissioned Essex Highways to undertake a multi-modal viability study for the A120 corridor in Uttlesford. The aim of this study is to consider for the core development scenarios the most viable form of high-quality public transport system (HQPT) would be viable with the level of development planned.

14.3 The study develops options based on the proposed Local Plan growth including discussions with stakeholders to draw out the promising options for the key locations along the corridor including places to be connected by HQPT (although not expected to be Rapid Transit), as well as complementary measures to support other forms of sustainable transport. Options should consider:

- what level of service provision could be delivered to support the Local Plan growth,
- ensure proposals allow for future expansion for long term service provision that could be delivered beyond the existing plan.

### **14.4 Proposed Services**

14.5 Two new bus services have been proposed across Takeley and Great Dunmow, as detailed below and look to serve the proposed developments. These new services would take residents directly from the new residential areas to local schools, shops and interchange facilities including Stansted Airport.

14.6 Service 1 routes from the Stansted Airport Rail Station, down Parsonage Road into Takeley, then along Dunmow Road into Canfield where the bus service would route into the Residential Site Allocations in Takeley back on to Parsonage Road to return to Stansted Airport Rail Station. It is proposed that Service 1 would operate extended hours to benefit those working at the Airport (including workers already living in Takeley).

14.7 Service 2 routes from the southern end of Great Dunmow High Street, north along the B1008 and turning onto the B1057 where the bus service would loop around a section of the proposed development and return along the same route back into Great Dunmow. This route could be changed as more information is made available regarding forecast traffic movements and planned locations for new amenities.

14.8 To support both proposed services there is the opportunity for these routes to interchange with other routes in the area at proposed mobility hubs as well as supporting sustainable movement in and out of the towns.

### **14.9 Mobility Hubs along the A120 corridor**

14.10 Mobility hubs bring together regular public transport services and active travel in spaces designed to improve the public realm and be easily accessible by walking and cycling. It is considered that mobility hubs could be developed to support sustainable movement along the A120 corridor, particularly within Takeley connecting to Stansted Airport, and Great Dunmow future developments accessing the town centre.

14.11 Mobility hubs rarely work in silo's therefore using the airport as a ready-made hub with a couple of locations within Takeley with additional hubs could unlock sustainable travel to and from the railway station, as well as within Takeley itself.

14.12 Additional consideration should be taken to the active travel routes between each hub to ensure that these align with the hub principles of being safe, inclusive and attractive. This is essential to maximising hub usage as an interchange point for active and public transport

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travel. The same principle could be adopted in Great Dunmow with the town centre acting as a main node, with residential areas benefiting from their own hubs where appropriate.