

Highways Study – Stage 2 Assessment of Transport Impacts of all growth proposed in the Braintree District Council Core Strategy
Agenda Item 5

Portfolio Area:	Cllr Harley Cabinet Member for Enterprise and Culture
Report Presented by:	Eleanor Dash Planning Policy Manager

Background Papers:	<ul style="list-style-type: none"> • Assessment of Impact of Potential LDF sites on Existing Junctions in Braintree and Witham – Mouchel July 2008 • Core Strategy submission draft
Corporate Implications:	Please refer to table at end of report.
Options:	<p>To agree the recommendations as laid out at the end of this report</p> <p>To agree some of the recommendations as laid out at the end of this report.</p> <p>Not to agree the recommendations laid out at the end of this report.</p>
Risks:	Without suitable transport infrastructure in place, the growth proposed in the Core Strategy will be difficult to achieve and will have a negative impact on existing residents of the District.

Executive Summary

This report summarises the main findings of the stage 2 highways assessment on the impacts of the proposed growth in the District, on the highway network of Braintree and Witham towns. The report concludes that several junctions will need improvement works to accommodate the growth proposed in the Core Strategy including Rayne Road/Pods Brook Road roundabout in Braintree, Hatfield Road/ Gershwin Boulevard roundabout in Witham and the Cypress Road/Braintree Road mini roundabout in Witham. The assessment does not suggest improvements to Witham or Rivenhall A12 junctions or to most junctions in Witham town centre, due to the lack of scope for improvements due to constraints such as buildings, however it concludes that the proposed level of development can still be accommodated

Decision

Members are asked to;

- **note the contents of the report**
- **agree that further discussions should take place between Braintree District Council, Essex County Council and the Highways Agency to**

- discuss whether growth in Witham could contribute to the improvement of the A12 junctions at Witham and Rivenhall**
- **agree that further discussions should take place between Braintree District Council and Essex County Council to seek ways of improving junctions in Witham town centre to decrease congestion.**

1. Background

1.1 In 2008 Mouchel were commissioned to undertake a highways assessment of Braintree and Witham to look at the impact proposed growth locations would have on the transport infrastructure in these towns. It assessed each site's individual impact on the highway network. Mouchel have now published their draft report. This will not be approved as part of the LDF evidence base until the final report has been agreed by Essex County Council and this Council.

1.2 This second stage assessment also includes large sites within the existing town development boundaries, which either have planning permission, are allocated in the existing Local Plan, or have been identified in the work for the Strategic Housing Land Availability Assessment as sites that could come forward. The study will assess how traffic from these sites, in combination with traffic from the proposed growth locations, will impact on the highway. Where junction operation is deemed to be over capacity, schemes for improving the junctions are suggested where possible.

1.3 The assessment has looked at the main growth locations in Braintree and Witham. Growth in other locations, including Halstead and at the regeneration sites in Sible Hedingham and Silver End is not considered to be large enough to have a significant impact on the wider road network. Smaller highway improvements, especially around the entrances to new sites however, may still be required.

1.4 Highways schemes which are identified as required to support development will be included in the Infrastructure schedule in the Core Strategy. This will ensure that developers are aware of the infrastructure requirements of any schemes they are proposing.

2. Findings of the Report

2.1 Braintree

2.1.1 The junction assessments have shown the following junctions in Braintree to be operating within capacity in all scenarios:

- A120 / London Road Northern Roundabout
- A120 / London Road Southern Roundabout
- A131 / Bridge End Lane Roundabout
- A131 / London Road Roundabout
- Convent Hill / Rivermead Roundabout
- Panfield Lane / Deanery Hill Priority Junction
- Panfield Lane / Leisure Centre Roundabout

2.1.2 However there are a number of junctions upon which there are significant impacts and these are discussed as follows;

2.1.3 A131/A120 Northern Roundabout:

Performs acceptably in 2025 'Do Minimum' scenario. The LDF growth causes some queuing on the A131 south arm of the junction but the queuing is not considered significant. The assessment recommends that the junction should be left as it is. Should greater levels of queuing occur, the junction can be modified to improve performance

2.1.4 A131/A120 Southern Roundabout:

Operates satisfactorily in 'Do Minimum' scenario. The LDF scenario could potentially cause some queuing but this is unlikely to occur as traffic is able to use the previous junction instead.

2.1.5 A131/Cuckoo Way Roundabout:

This junction is proposed as the access point for The Great Notley Business Park. The junction is nearing capacity in the 'Do Minimum' scenario and the LDF scenario puts the junction significantly overcapacity. The assessment suggests that the Business Park should be accessed via a 'left in, left out' entrance and that a left slip could be implemented on the Cuckoo Way roundabout, should queuing become a problem on the A131 Southern Arm

2.1.6 Church Lane/Convent Hill Roundabout:

The junction is nearing capacity in the 'Do Minimum' scenario, with queues on the Convent Hill arm causing problems at the Rivermead roundabout as well. The LDF development traffic makes little difference to the AM peak but increases the PM peak queue on Bradford Street by 24 vehicles. Due to the location of the junction in a residential area where traffic could re-route to avoid congestion, the assessment suggests that no major changes are required.

2.1.7. Rayne Road/Pod's Brook Road Roundabout:

The junction is working well within capacity in the 'Do Minimum' scenario. However, as an entrance point for the Panfield Lane growth location, once the LDF is implemented, the amount of traffic using it increases significantly, causing excessive queuing in the AM peak on three arms and on one arm in the PM peak. An improvement scheme involving enlarging the existing roundabout within the current highway boundary has been tested. Combined with construction of a traffic calmed link road between Springwood Drive and Panfield Lane, the assessment shows the junction will adequately accommodate the LDF traffic.

2.1.8 Rayne Road / Aetheric Road Signalised Junction:

There are significant capacity problems at this junction in both the 'Do Minimum' and LDF scenarios, with large queue length increases due to the LDF growth. However the assessment concludes it is likely that the construction of a traffic calmed local link road between Springwood Drive and

Panfield Lane would reduce traffic at the junction when compared to the Do Minimum scenario. This would remove the requirement for any further mitigation measures at the junction.

2.2 Witham

2.2.1 The junction assessments have shown the following junctions in Witham to be operating within capacity in all scenarios:

- Hatfield Road Service Area;
- Cressing Road / Rickstones Road Roundabout

2.2.2 However, there are a number of junctions upon which the impact is significant and these are discussed as follows;

2.2.3 Hatfield Road/Gershwin Boulevard Roundabout:

This roundabout is the proposed site access for the Lodge Farm growth location in Witham. The junction is, however, already experiencing some capacity problems in the 'Do Minimum' scenario. The addition of the LDF traffic adds to these problems. The assessment therefore recommends that the junction be enlarged to the North West, as part of the Lodge Farm development.

2.2.4. Hatfield Road/Maltings Lane Priority Junction:

This junction is experiencing minor problems in the 'Do Minimum' scenario, which are made worse with the addition of LDF traffic. However, due to the small flows on Maltings Lane, queues remain relatively short (at under 15 vehicles) and it is likely that drivers would re-route. The assessment therefore suggests that it would not be necessary to improve this junction.

2.2.5 Hatfield Road/Spinks Lane Signalised Junction:

This junction is over capacity in all scenarios, including 'Do Minimum'. There is very little scope to improve the junction. However, it is not performing significantly worse with LDF development traffic added. The assessment therefore recommends that this junction is left as it is.

2.2.6 Collingwood Road/Maldon Road Signalised Junction:

This junction is already performing poorly in the 'Do Minimum' scenario and there are predicted increases in queue lengths in both LDF scenarios. However, it is likely that many of the trips would re-route locally along Guithavon Valley and Mill Lane, or between Chipping Hill and Spinks Lane. Due to lack of space to improve this junction and the possibility for re-routeing, the assessment suggests that additional mitigation measures are not appropriate at this junction.

2.2.7 Cypress Road/Braintree Road Mini-Roundabout:

This junction has capacity problems in both AM and PM periods in the 'Do Minimum' scenario – the queues being significant enough to back through the mini-roundabout to the north. This problem is due to increased traffic on Braintree Road and exacerbated by the addition of LDF development traffic. The assessment has tested a number of mitigation schemes including one put forward by Ardent who are working for the developers of the Forest Road

growth location. They conclude it would appear that, subject to safety audit, future congestion at the junction could be largely mitigated by converting it to a priority T-junction.

2.2.9 A12:

The assessment concludes that the impact of development traffic on the A12 is unlikely to be significant, as the combined impact of the two Witham developments would lead to a maximum increase of 2% in 2-way traffic on the mainline carriageway

2.2.10 Junction 21 Witham South, Junction 22 Eastways and the Oak Road junction of the A12;

These junctions have been reviewed by the assessment in the light of Design Manual for Roads and Bridges (DMRB) merge/diverge standards. DMRB indicates that the merges and diverges of all 3 junctions will fail to meet the recommended standards in the 2025 'Do Minimum' scenario, for at least one peak period, if the existing junction layouts remain. This is due mainly to the increases on the A12 carriageway, rather than increases in local traffic caused by the growth proposed in the LDF.

2.2.11. Of the three A12 junctions assessed therefore, only one would warrant a theoretical widening of a slip road because of the addition of the LDF traffic - the southbound merge at J21, Witham South. However, this would only be appropriate if the mainline carriageway were to be widened to 3 lanes before the junction as well as after, which is very unlikely to have happened by 2025. Oak Road, Rivenhall and Junction 22, Eastways do not see significant increases in traffic using the junctions from the proposed LDF growth.

3. Impacts on the Growth Location in the Core Strategy

3.1 Braintree and Great Notley.

3.1.1. The assessment shows that subject to the mitigation works of a spine road on the Panfield Lane development and suitably designed access from both locations onto the existing network, these growth locations could be accommodated satisfactorily on the local highway network. (We will clarify whether the same conclusion applies to an 18.5 ha business park.)

3.1.2. The spine road which is proposed for the Panfield Lane site would link Springwood Drive with the northern half of Panfield Lane. HGV's traffic will be restricted on the road to the north of the employment areas to avoid large vehicles travelling through new and existing residential areas. The road will be designed as a local link road with low speeds and an indirect route in order to discourage drivers using it as a through route.

3.2 Witham

3.2.1. The assessment shows that subject to mitigation works of an enlargement of the Hatfield Road/Gershwin Boulevard roundabout to include the main access into the Lodge Farm growth location and changes to the Cypress Road/Braintree Road junction, these growth locations could be accommodated satisfactorily on the local highway network. In addition the

assessment notes that if the A12 is increased to 3 lanes in each direction, they would recommend that Junction 21 Witham south, should be widened.

4. Conclusion

The assessment shows that all major growth in Braintree and Witham can be accommodated on the highway network provided mitigation work, such as the proposals identified in the report are implemented.

However the assessment also identifies that some junctions in the centre of Witham will become increasingly congested by 2025 and that this congestion would be present even if no growth were proposed in Witham. Therefore further discussions should be held with Essex County Council on further options for relieving congestion in Witham town including the options for Cypress Road/Braintree Road and Rickstones Road/Cressing Road mini roundabouts.

The assessment also notes that whilst traffic on the A12 is predicted to increase, this is mainly due to increasing traffic on the A12 carriageway and not local traffic. However, BDC is keen to see improvement works take place on the A12 junctions around Witham and Rivenhall, particularly those with short slip roads. Therefore further discussions should take place with Essex County Council and the Highways Agency to seek solutions to these issues.

Recommendations

- 1. To note the contents of the report.**
- 2. To agree that further discussions should take place between Braintree District Council and Essex County Council to seek ways of improving junctions in Witham town centre to decrease congestion.**
- 3. To agree that further discussions should take place between Braintree District Council, Essex County Council and the Highways Agency to seek ways of improving the A12 junctions at Witham and Rivenhall**

Corporate Implications				
Financial:	No direct impact. Highway infrastructure schemes will be funded by developer contributions, Essex County Council and the Highways Agency.			
Legal:	LDF Planning Policy Guidance and Regulations			
Equalities & Diversity:	n/a			
Customer Impact:	The highway and junction improvements suggested will have an impact on existing residents.			
Environment & Climate Change:	All development sites will need to encourage sustainable travel through cycle and footpath improvements and links to public transport. However there is a recognition that many journeys will continue to be made by private vehicle.			
Consultation/Community Engagement:	Local Committees		Partners	✓
	Public		Staff	✓
Key Decision:	No			
Public/Private Report:	Public			
Officer Contact:	Emma Boaler			
Designation:	Planning Policy Officer			
Ext No:	2511			
Email:	emma.boaler@braintree.gov.uk			