

Matter 13 – Transport and Connectivity

Note requested by the Inspector summarising the Council's position regarding residual cumulative impact on the road network

The transport studies that support the Local Plan have examined the cumulative transport implications of Local Plan development and where there are significant traffic impacts highway improvements have been identified that in most cases restore the network operation to better than it would have been without the Local Plan.

Across the whole district the Local Plan transport studies assessed the operation of 43 junctions. This work has identified that 13 junctions will be over capacity by the end of the Plan period (2038) without any Local Plan development. With the addition of Local Plan development two further junctions exceed capacity giving a total of 15 junctions over capacity by 2038. Highway improvements have been identified for 11 of these junctions, leaving only 4 junctions where it isn't possible to fully address Local Plan traffic impacts through highway improvements. Three of these four junctions are in Retford Town and one junction is to the north of Worksop town centre. The four junctions are listed as follows:

- **A60 / B6041 Cannon Crossroads, Worksop** – NCC has a committed highway improvement scheme that will significantly improve the operation of this junction. The NCC improvement doesn't fully mitigate Local Plan traffic impacts but the operation of the improved junction with local plan traffic is significantly better than the operation of the existing junction, so the residual cumulative impact is not severe. In their response to the Transport Assessment Addenda, NCC requested that this junction be identified in the Peaks Hill Farm policy for further assessment at the planning application stage so all appropriate mitigation can be identified.
- **A620 Hospital Road / A638 North Road / Amcott Way / Hallcroft Rd, Retford** – no highway improvements have been identified at this location due to space constraints near the junction.
- **A638 Arlington Way / Grove Street, Retford** – no highway improvements have been identified at this location due to space constraints near the junction.
- **A638 Arlington Way / A638 London Road / Carolgate, Retford** – no highway improvements have been identified at this location due to space constraints near the junction.

Compared to the situation that will exist in 2038 without the Local Plan, across the whole district there will be nine fewer junctions over capacity in 2038 with the Local Plan (the difference between the 13 junctions over capacity in 2038 without the Local Plan and the four junctions listed above where it isn't possible to fully address Local Plan traffic impacts with highway improvements). On that basis, there is a net benefit to the highway network within the district and the residual cumulative impacts of the Local Plan on the road network are therefore not severe.

Considering just the highway network within Retford, the Retford Transport Study (RTS) assessed the operation of 22 junctions, of which seven junctions were demonstrated to be over capacity in 2038 without any Local Plan development. With the addition of Local Plan development two further junctions exceed capacity giving a total of nine junctions over capacity by 2038. Highway improvements have been identified for six of these junctions, leaving only three junctions where it isn't possible to fully address Local Plan traffic impacts through highway improvements alone (the three Retford junctions in the bullet point list above).

Compared to the situation that will exist in 2038 without the Local Plan, when considering just the highway network within Retford there will be four fewer junctions over capacity in 2038 with the Local Plan (the difference between the seven junctions over capacity in 2038 without the Local Plan and the three junctions listed above where it isn't possible to fully address Local Plan traffic impacts with highway improvements). On that basis, there is a net benefit to the highway network within Retford and the residual cumulative impacts of the Local Plan are therefore not severe.

In the Local Plan hearing session held on 24/01/2023 Nottinghamshire County Council raised the issue of land in third-party ownership being required to deliver three of the six junction improvement schemes identified within Retford. As discussed in the hearing the final form of these junction improvements will be subject to detailed design and it may be possible to remove the need for third-party land at two of the three junctions when topographical survey data is available and ownership boundaries are definitively identified. However, if third-party land issues prove problematic it will still be possible to deliver some form of improvements at all three of these junctions within the existing highway boundaries, although these may not be the optimum solutions.

Paragraph 110 (d) of the NPPF requires any significant impacts to be 'cost effectively mitigated to an acceptable degree' and paragraph 111 states that development should only be prevented where the 'residual cumulative impacts on the road network would be severe'.

There is no requirement in the NPPF to mitigate at any cost (e.g. requiring third-party land that could prove prohibitively expensive and therefore not cost effective), and the test of acceptability is not whether all junctions can be restored to the same level of peak period operation they would experience if the development didn't proceed (i.e. achieve 'nil detriment'). So if third-party land issues prove problematic at these three junctions it is reasonable within the definitions of the NPPF to deliver 'scaled back' solutions.

Notwithstanding this, even if it is assumed that no improvements can be delivered at all three of these junctions there will still be a net benefit to the highway network within Retford because there will be one less junction over capacity in 2038 with the Local Plan. Therefore, even in this most pessimistic scenario the residual cumulative impacts of the Local Plan are not severe.

Our interpretation of the NPPF is that impacts should be considered in the round, across the whole network, throughout the whole day. In the case of the three junctions in Retford where no improvements have been identified due to space constraints, delays are only forecast for short periods in the AM and PM peak hours in 15 years time. For the remainder of the day when traffic flows are generally lower these junctions are expected to operate well within capacity. When viewed in this context we consider that the residual cumulative impacts of the Local Plan are not severe and the forecast traffic conditions within Retford will be similar to many other towns across the country.

It's also our interpretation that residual cumulative impact is the impact that remains after all mitigation has been considered and not just the mitigation delivered in the form of physical highway improvements. Other relevant forms of mitigation include:

- The provision of complementary land-uses to minimise the need to travel. For example, a primary school on the Ordsall South allocation site.
- Provision of infrastructure that helps to minimise the need to travel. For example high speed broadband to facilitate home working and home shopping.

- Sustainable transport such as new / improved bus services and walking and cycling infrastructure that helps to achieve modal shift away from the private car, for new and existing residents.
- Initiatives to encourage more sustainable travel behaviour, such as offering bus season tickets or cycle purchase vouchers to new residents, electric vehicle charging infrastructure, car share schemes etc.

The transport studies prepared in support of the Local Plan do not reflect any of the above benefits because this type of mitigation is very site specific and therefore difficult to appraise reliably when considering a whole Local Plan. These details will be agreed at the planning application stage and delivered via planning conditions thereby further helping to mitigate the transport impacts of the Local Plan.

Summary of the Number of Junctions Assessed

Study	Total Number of Junctions Assessed	Number of Junctions over Capacity in 2038 without the Local Plan (Reference Case)	Number of Junctions over Capacity in 2038 with the Local Plan	Number of Junctions with Highway Improvements Identified as part of the Local Plan	Number of Junctions over Capacity in 2038 after Improvements (See Note 2)	Difference Compared to Reference Case
Basstlaw Transport Study (BTS) See Note 1	5	5	5	5	0	-5
Retford Transport Study (RTS)	22	7	9	6	3	-4
Worksop Transport Study (WTS)	16	1	1	0	1	0
Totals	43	13	15	11	4	-9

Notes:

1. The A1 Apleyhead Western Roundabout is excluded from the BTS figures to avoid double counting because this was also assessed by the RTS.
2. The WTS did not identify a highway improvement for the Cannon Crossroads junction in Worksop. However, NCC has a committed improvement scheme that will significantly improve this junction.

Summary of Junctions Assessed in the Bassetlaw Transport Study (BTS)

Count	Jn No.	Name	Over Capacity in 2038 without Local Plan?	Over Capacity in 2038 with Local Plan?	Highway Improvements Identified	Over Capacity Junctions with No Mitigation
1	J1	A60 Mansfield Road/A619, Worksop	1	1	1	-
2	J3	A57/Sandy Lane Roundabout, Worksop	1	1	1	-
3	J4	A57/Claylands Ave/Shireoaks Common Roundabout, Worksop	1	1	1	-
4	J5	A57/B6034/Netherton Road Roundabout, Worksop	1	1	1	-
5	J6	A57/B6040 Roundabout, Mantonwood	1	1	1	-
Totals			5	5	5	0

Note: J7 was assessed in both the BTS and the RTA. Details removed from table above because the RTS was the most recent.

Summary of Junctions Assessed in the Retford Transport Study (RTS)

Count	Jn No.	Name	Over Capacity in 2038 without Local Plan?	Over Capacity in 2038 with Local Plan?	Highway Improvements Identified	Over Capacity Junctions with No Mitigation
1	J1A	A1 Ranby Interchange - Western Priority Junction	-	-	-	-
2	J1B	A1 Ranby Interchange - Eastern Priority Junction	-	-	-	-
3	J2A	A1 Apleyhead Interchange Western Roundabout	-	1	1	-
4	J2B	A1 Apleyhead Interchange Eastern Roundabout	-	-	-	-
5	J3A	A1 Elkesley Interchange - A1/Bridge Road	-	-	-	-
6	J3B	A1 Elkesley Interchange - Jockey Lane / Eskil Way	-	-	-	-
7	J5A	A1 Markham Moor Interchange Southern Roundabout	-	-	-	-
8	J5B	A1 Markham Moor Interchange Southern Roundabout	-	-	-	-
9	J6	A620 Babworth Road/B6420 Mansfield Road/A620 Straight Mile/Sutton Lane	1	1	1	-
10	J7	A620 Babworth Road/Ordsall Road	1	1	1	-
11	J8	A620 Amcott Way/Bridlegate/A620 Hospital Road/A638 North Road/Hallcroft Road	1	1	-	1
12	J9	A620 Amcott Way/A620 Moorgate/A638 Arlington Way	1	1	1	-
13	J10	A638 Arlington Way / Spital Hill / Chapelgate	-	-	-	-
14	J11	A638 Arlington Way/Grove Street	1	1	-	1
15	J12	A638 Arlington Way/A638 London Road/Carolgate	1	1	-	1
16	J13	Ollerton Road / West Hill Road	-	-	-	-
17	J14	A638 London Road/Whitehouses Road	1	1	1	-
18	J15	A638 London Road / Whinney Moor Lane / Bracken Lane	-	1	1	-
19	J16	All Hallows Street / High Street / Goosemoor Lane	-	-	-	-
20	J18	Ollerton Road / Brick Yard Road	-	-	-	-
21	J19	A638 / Main Road	-	-	-	-
22	J20	A638 / B6387 Rectory Road	-	-	-	-
Totals			7	9	6	3

Summary of Junctions Assessed in the Worksop Transport Study (WTS)

Count	Jn No.	Name	Over Capacity in 2038 without Local Plan?	Over Capacity in 2038 with Local Plan?	Highway Improvements Identified	Over Capacity Junctions with No Mitigation
1	J1	A60 Turner Road / B6040 Gateford Road	-	-	-	-
2	J2	A60 Carlton Road / B6045 Blyth Road	-	-	-	-
3	J3	Gateford Road / Babbage Road	-	-	-	-
4	J5	Gateford Road / Carlton Road / Eastgate	-	-	-	-
5	J6	Bridge Place / Church Walk	-	-	-	-
6	J7	Bridge Place / Watson Road	-	-	-	-
7	J8	Watson Road / Ryton Street	-	-	-	-
8	J9	Watson Road / Newcastle Ave / Memorial Ave	-	-	-	-
9	J10	Priorswell Road / Memorial Avenue	-	-	-	-
10	J11	Priorswell Road / Potter Street / Cheapside	-	-	-	-
11	J13	Potter Street / Watson Road	-	-	-	-
12	J14	Park Street / Westgate	-	-	-	-
13	J15	Park Street / Newgate Street	-	-	-	-
14	J17	Netherton Road / Lowtown Street / Newgate Street	-	-	-	-
15	J18	Cheapside / Lowtown Street	-	-	-	-
16	-	A60 / B6041 Cannon Crossroads	1	1	-	1
Totals			1	1	0	1

Note: The Cannon Crossroads junction was assessed after the WTS was produced and the results presented in a separate Technical Note.