

Greater Nottingham Strategic Plan

Memorandum of Understanding

**Between Broxtowe Borough, Nottingham City and
Rushcliffe Borough and National Highways.**

April 2026

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1 Purpose of this Memorandum of Understanding (MoU)

- 1.1 This MoU is intended to inform the examination into the Greater Nottingham Strategic Plan (GNSP) of the respective views of National Highways, the government company charged with operating, maintaining and improving England's Strategic Road Network (SRN - motorways and major A roads) and the GNSP Plan-making authorities on the transport modelling commissioned to support the allocations in the GNSP.

2 Background to Transport Modelling:

- 2.1 Arup with Systra were commissioned to undertake transport modelling of the transport impacts of the GNSP, to develop a mitigation package (with the agreement of the commissioning partners) and assess the impact of mitigation measures in reducing those impacts. (Greater Nottingham Strategic Plan Strategic Transport Assessment, July 2025 – available [here](#)). In addition to the Plan-making authorities and Gedling Borough Council, the steering group included representatives of the local highways authorities (Nottinghamshire County Council and Nottingham City Council), East Midlands Combined County Authority (EMCCA) as transport authority, and National Highways.
- 2.2 Greater Nottingham is covered by one transport model, the East Midlands Gateway Model (EMGM). Following model review and revalidation (which had already been undertaken prior to this GNSP modelling), there are 4 stages to the modelling:
- Stage 1: 2041 Reference Case development (includes development with planning permission or under construction)
 - Stage 2: Strategic Plan testing (reference case plus all other allocations) - no mitigation
 - Stage 3: Development of mitigation measures
 - Stage 4: Mitigation Testing, with strategic highway/public transport mitigation
- 2.3 Two rounds of stage 4 modelling were undertaken, with the second a refinement to improve the levels of mitigation achieved.
- 2.4 The transport strategy accompanying the GNSP has been developed without an agreed regional transport strategy to integrate with as the Nottingham and Nottinghamshire Local Transport Plans (LTP) are out of date and the emerging LTP being developed by EMCCA has yet to be published. Therefore, the GNSP transport strategy has been developed to:
- Respond to the transport challenges forecast by the GNSP scenario test model outputs.

- Reflect the transport interventions which are already proposed and planned for the Greater Nottingham area over the Plan period.
- Align with defined critical success factors which reflect the wider policy objectives of the Plan.
- Provide a plausible set of transport interventions that are proportionate to the scale of investment and growth planned in Greater Nottingham.
- Recognise the types of schemes which are directly deliverable by the GNSP growth sites and other strategically important major infrastructure which is required to address existing challenges in the area.
- Enable development to come forward in a sustainable way in line with the soundness test defined by the National Planning Policy Framework (NPPF).

2.5 The future levels of congestion forecast on the network in the reference case scenario, without GNSP growth, is significant. Thus, the modelling results indicated several challenges associated with the Strategic Plan proposals.

- In common with all major urban areas, increased congestion occurs even without further development.
- There are widespread impacts across the network caused by the aggregate of development growth.
- Problem locations are not necessarily local to development sites.
- The GNSP area has a large number of junctions operating at or close to capacity, so junction operation is significantly worsened by a relatively small increase in trips.
- Significant impacts are forecast on the Strategic Road Network, key radial routes and within the city centre.
- Addressing problems will involve reducing car use for existing trips as well as new trips.

2.6 The transport strategy developed by Arup/Systra is shown to mitigate 37% of morning peak hour congestion and 54% of evening peak hour congestion associated with the GNSP.

3 Further work – Select Link Analysis

3.1 In discussion with National Highways, it was considered worthwhile to undertake some further transport assessment analysis to better understand the difference in impact of development that is committed through an existing planning permission or allocation in an existing local plan, and that which is a new allocation in the GNSP, or increases the quantum of development allocated compared to the existing allocation.

3.2 Arup were commissioned to undertake this further analysis, attached at appendix 2. (National Highways Query Response, ARUP, February 2026). Whilst the analysis does not alter the findings of the transport modelling, it allows for a more detailed level of understanding as to the impact of sites

which are currently uncommitted compared to those sites that can be developed without further contribution to transport mitigation.

3.3 The further analysis (attached at appendix 2) comprises the following tasks:

1. Review of the Do Something (with mitigation scenario) to identify SRN links which are at / over capacity with reference to the routes listed by National Highways in their response.
2. Compare the Do Nothing (base) and Do Minimum (with GNSP no mitigation) scenarios for the links identified in Task 1 in terms of flow difference and whether there are GNSP sites nearby. Assume no change if there is no GNSP site nearby.
3. Use Select Link Analysis (SLA) tool to compare the Do Something (with GNSP with mitigation) and Do Nothing (base) scenarios to compare committed (consented) and uncommitted (new GNSP site) trips to give a trip range per identified link.
4. Prepare a summary technical note of above analysis to articulate range of committed and uncommitted trips per at / overcapacity SRN link.
5. Meeting with National Highways to present and agree findings.

3.4 The key findings from the SLA work are:

For the AM Peak

- High development-related demand is concentrated on the A453 corridor (Clifton), A52, and M1 J23–24.
- Three AM locations were found to have significant impacts from uncommitted development:
 - A52 WB to Nottingham Knight
 - A52 WB to Wheatcroft Island
 - Derby Road EB to A52/QMC
- The majority of uncommitted demand at these locations comes from:
 - East of Gamston, North of Tollerton
 - Chetwynd Barracks
 - Toton Strategic Location for Growth

For the PM Peak

- More links exceed 100% V/C than in the AM, but uncommitted development plays a smaller role.
- One PM location was found to have significant impacts from uncommitted development:
 - A52 WB approach to Wheatcroft Island, driven primarily by East of Gamston, North of Tollerton

3.5 The key conclusions from the SLA work are:

- **Existing and committed development** is already the primary driver of congestion at most stressed SRN locations.
- Only a small number of strategic uncommitted GNSP sites have material additional effects on the SRN—**predominantly along the A52 corridor**.
- PM peak pressures are generally higher overall, even though uncommitted growth is less influential than in the AM.

3.6 The recommendations of the work can be summarised as:

Address existing/committed demand, especially on the A52. A corridor-wide study undertaken by the relevant transport authorities is recommended to understand movements and develop long-term demand management solutions.

Focus on uncommitted strategic sites with concentrated impacts, especially East of Gamston North of Tollerton, Toton, Chetwynd Barracks.

Use masterplanning and delivery controls (e.g. trigger points, conditions similar to the Ratcliffe LDO) to ensure development is phased alongside appropriate mitigation.

- 3.7 It is acknowledged that this supplementary analysis comes with limitations and caveats, as it does not capture the effects of traffic reassignment, displaced traffic impacts, and variable demand modelling. Nonetheless, it provides a valuable evidence base for making informed decisions.
- 3.8 Although the conclusions draw on the “High” hotspots identified in Tables 5.2 and 5.5, it is recognised that “Medium” or “Low” hotspots may still require some level of mitigation via individual planning applications.
- 3.9 The three sites cited in the analysis (East of Gamston, North of Tollerton, Chetwynd Barracks and Toton Strategic Location for Growth) should not be considered an exhaustive list; each development proposal should continue to be tested on its own merits.

4 National Highways Perspective:

- 4.1 The existing transport network is already experiencing high levels of congestion, with the SRN network under significant stress due to background traffic growth. This situation is further compounded by committed and approved developments, which add additional pressure to the network. While some of these developments are contributing to mitigation funding through Section 106 (S106) agreements, the cumulative impact remains a concern.
- 4.2 The introduction of additional strategic allocations within the Greater Nottingham Strategic Plan (GNSP) places further strain on the network, exceeding the capacity impacts caused by background traffic growth and

committed developments alone. Notably, many of the local plan sites are situated in close proximity to the Strategic Road Network (SRN), intensifying the stress on critical junctions and corridors.

- 4.3 A mitigation plan has been shared to address these challenges. While the proposed measures demonstrate a significant reduction in expected congestion levels, residual impacts remain substantial. The deliverability of these mitigation measures is a key concern, particularly as they are highly reliant on achieving a mode shift away from highways mode. This reliance introduces challenges, especially in the context of funding availability and the practical feasibility of implementing these measures.
- 4.4 National Highways is actively engaging with local authorities to address these issues. However, clarity is still awaited regarding the deliverability and funding of the proposed mitigation schemes, which is expected to be outlined in the GNSP's Infrastructure Delivery Plan.
- 4.5 One critical area of concern is M1 Junction 24, which is already a highly congested and over capacity junction. This location is expected to face additional impacts due to the GNSP developments. While Midlands Connect has recommended prioritising Road Investment Strategy 3 (RIS3) funding for improvements at Junction 24, there is no commitment to these upgrades within RIS3, leaving the future of this critical junction uncertain.
- 4.6 The overall mitigation strategy appears to be appropriately modelled, and the proposed measures offer substantial relief compared to the "without mitigation" scenario.
- 4.7 Despite the relief provided by the mitigation measures, the residual impacts still exceed those of the reference case (i.e. the baseline scenario without the mitigation strategy). This underscores the need for a balanced and cautious approach when assessing new developments. Each development must be evaluated on a case-by-case basis at planning application stage to ensure that the cumulative impacts on the network are effectively managed.

5 GNSP Perspective

- 5.1 The congestion impacts of both the reference case and with mitigation scenarios are acknowledged. The Study notes "It is unrealistic to expect a complete resolution of all traffic issues associated with increased background traffic growth and the GNSP development sites. However, the current mitigation strategy delivers a noticeable positive change – ensuring the right people are using the right routes, thereby reducing rat running and encouraging the use of strategic corridors for car-based travel. As new developments come online, additional local schemes may further support this Plan, contributing to a more efficient and sustainable urban environment."
- 5.2 The majority of the GNSP allocations are carried forward from the Aligned Core Strategies adopted in 2014, and many of them already benefit from

planning permission. In addition, the new allocation at Ratcliffe on Soar benefits from a Local Development Order. The transport mitigation associated with those allocations that already benefit from planning permission is already accounted for in existing S106 agreements. A schedule of GNSP sites and their planning status is appended to this MoU (see map and schedule at appendix 1).

- 5.3 Given this, and the points raised in paragraph 2.5 above, it is clear that a significant proportion of the mitigation funding package will need to be sourced largely from mainstream funding rather than developer contributions, important though these will be. Many of these proposed mitigations will be led by the East Midlands Combined County Authority (EMCCA). EMCCA is now exercising the Transport Authority functions of its constituent Councils. EMCCA has £1.5 billion of transport funding available, a significant increase over past levels of investment, and this provides the potential for a step change in transport infrastructure delivery in the area. EMCCA is preparing an area wide Local Transport Plan (LTP), which will replace the City and County LTPs and which, along with developer contributions, will be one of the main vehicles for implementing the transport measures included in the GNSP. Other implementation bodies include National Highways and Network Rail.
- 5.4 The GNSP authorities believe the benefits of growth outweigh its congestion impact and the Plan has been submitted for examination on this basis. They also consider that the transport modelling is likely to overstate the level of congestion, as the model cannot account for behavioural change, such as “peak spreading”, where travel times are chosen to avoid peak times when congestion is greatest.
- 5.5 The transport strategy sets out a package of transport schemes to support the GNSP, however it is acknowledged that other interventions could plausibly deliver comparable outcomes. As such, site delivery and traffic / travel outcomes will be subject to regular monitoring to enable the transport package to be managed and delivered in a proactive way in support of the vision-led approach advocated by the NPPF (2024).

6 M1Junction 24

- 6.1 A range of work is ongoing with the aim of upgrading J24 to create capacity for the developments proposed in North West Leicestershire, South Derbyshire and Rushcliffe.
- 6.2 EMCCA and the Local Highway Authorities, together with Midlands Connect (MC) and Transport for the East Midlands continue to promote upgrading Junction 24 of the M1. Whilst investigating options for upgrading J24 and the wider strategic network was a key MC recommendation for the Road Investment Strategy 3 (2025-31), it is not included in the final RIS. The RIS does however include a new Growth and Housing Accelerator Fund which aims to support transport infrastructure that unlocks housing and employment

sites, aligned with plan-led development and wider place-making objectives which could be a means to accelerate upgrades at J24.

- 6.3 MC have commissioned a “Wider Integrated Strategy for Energy Road and Rail” (WiSERR) which is looking at options around J24, which is due to report shortly. In addition, a developer consortium centred on the Freeport are understood to be proposing upgrades to J24 which would address the traffic impacts of the Freeport development, and would be funded by that development. The Freeport has appointed a project manager to develop these work strands into a designed solution for the junction. National Highways are party to these projects.
- 6.4 In addition, North West Leicestershire District Council, Rushcliffe Borough Council and South Derbyshire District Council are currently consulting on the draft [East Midlands Freeport \(EMF\) Strategic Infrastructure and Contributions Supplementary Planning Document \(SPD\)](#). The SPD will help ensure the coordinated and collaborative delivery and funding of necessary transport and other infrastructure for the freeport sites. East Midlands Airport and Gateway Industrial Cluster within North West Leicestershire, East Midlands Intermodal Park (EMIP) within South Derbyshire and the Former Ratcliffe on Soar Power Station within Rushcliffe). The SPD also will help ensure that strategic allocations in adopted and emerging Local Plans, which are not within the EMF sites, make appropriate and proportionate contributions towards this strategic infrastructure where they will benefit from it.

Appendix 1

Strategic Sites in GNSP – planning status schedule

Strategic Allocation	Planning Status	Notes	Map colour
Boots	Full Planning Permission (under construction)	Further developer contributions unlikely	
Field Farm	Full Planning Permission (under construction)	Further developer contributions unlikely	
Toton and Chetwynd Barracks 4,800 homes	Existing allocation (majority of the site does not have planning permission)	Toton and Chetwynd is already allocated in the Part 2 Local Plan for up to 1,300 homes in the plan period (2028). The Part 2 Local Plan did recognise the sites had capacity to deliver significantly more housing beyond the plan period. There is also an implemented planning permission for 282 homes, although these houses have not been constructed. The Strategic Plan seeks to increase the allocation of these sites to 2,700 homes in the plan period to 2041, i.e. an increase of 1,400 homes, which can be considered “new” and therefore previously uncommitted. (The Council also has three pending applications for a total of 1,455 homes in this location (part on the existing allocation, part in the Green Belt). These are subject to discussions with National Highways).	
Former Bennerley Coal Disposal Point	New allocation. No planning permission	124,500 sqm of strategic logistics	
Former Stanton Tip 500 homes	Existing allocation without planning permission	NOTE: ALLOCATION PROPOSED TO BE DELETED FROM THE GNSP	
Broad Marsh 1,000 homes	New allocation, largely without	Separate viability assessment identifies £6 million gap funding required to deliver the site. Subsidy from HE required, HE actively engaged in delivery process.	

	planning permission (planning permission for Diagnostic Centre on part of site).	Predominate housing type will be City centre flats with low parking ratio, limited impact on the SRN.	
Melton Road, Edwalton	Full Planning Permission (under construction)	Further developer contributions unlikely	
Land North of Bingham	Full Planning Permission (under construction)	Further developer contributions unlikely	
Former RAF Newton	Full Planning Permission (under construction)	Further developer contributions unlikely	
Former Cotgrave Colliery	Full Planning Permission (under construction)	Further developer contributions unlikely	
South of Clifton	Full Planning Permission (under construction)	Further developer contributions unlikely	
East of Gamston / North of Tollerton 4,000	No planning permission (applications for 3850 homes submitted)	Existing allocation. Although there is no planning permission, the MoU with RBC/National Highways/NottsCC already sets out some of the off-site mitigation, specifically existing A52 junction improvements.	
Former Ratcliffe on Soar Power Station	Planning permission for Energy from Waste facility, Local Development Order provides planning consent for whole site development	Further developer contributions unlikely outside the parameters set by the LDO, although the specific details of, for example, highway mitigation is yet to be determined. The LDO includes restrictive thresholds on development that cannot be exceeded without appropriate highway mitigation being implemented, in particular improvements to M1J24.	

GREATER NOTTINGHAM STRATEGIC PLAN Planning Status of Sites

- Under construction / Planning Permission
- Local Development Order
- Local Plan allocation / no Planning Permission
- New allocation
- Proposed deletion from Strategic Plan

SITES

- 1 Former Bennerley Coal Disposal Point (Broxton)
- 2 Field Farm (Broxton)
- 3 Toton & Chetwynd Barracks (Broxton)
- 4 Boots (Broxton; Nottingham City)
- 5 Broad Marsh (Nottingham City)
- 6 Former Ratcliffe on Soar Power Station (Rushcliffe)
- 7 South of Clifton (Rushcliffe)
- 8 Melton Road, Edwalton (Rushcliffe)
- 9 East of Gamston / North of Tollerton (Rushcliffe)
- 10 Former Cotgrave Colliery (Rushcliffe)
- 11 Former RAF Newton (Rushcliffe)
- 12 Land North of Bingham (Rushcliffe)
- 13 Stanton Tip (Nottingham City)

Local Authority Boundaries

- Greater Nottingham Strategic Plan
- Neighbouring Authorities

Transport Infrastructure

- Rail Lines and Stations
- Tram Lines and Stops
- M1 Motorway and Junctions
- Primary Route Network (Major Highways)
- Nottingham Midland Station
- East Midlands Airport
- River Trent

0 1 2 3 4 5 miles

Appendix 2 National Highways Query Response, ARUP, February 2026
(Select Link Analysis)

Nottinghamshire County Council

Greater Nottingham Strategic Plan

National Highways Query Response

Reference: GNSP NH Query Response TN

V02 | 13 February 2026

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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Ove Arup & Partners International Limited
One Centenary Way
Birmingham, B3 3AY
United Kingdom
[arup.com](https://www.arup.com)

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1. Introduction

The Greater Nottingham Strategic Plan (GNSP) Strategic Transport Assessment report has been shared with National Highways for review given the presence of the Strategic Road Network (SRN) throughout the study area and the potential for the proposed growth to affect its performance.

A key issue raised by National Highways relates to the ‘growth with mitigation’ scenario, which when compared with the reference case appears to leave several areas of significant congestion unresolved, with adverse implications for the operation of the SRN. Specifically, National Highways commented:

“In order to help understand what the difference would be if the GNSP were not to proceed, it may be helpful to understand the congestion implications if all currently committed development (i.e. all existing development sites, planning permissions and sites allocated in existing Local Plans) were to be implemented. Since this is the vast majority of development proposed in the GNSP, there will presumably be a much smaller difference in congestion between this new “existing plans” scenario and the “with mitigation” scenario than when comparing the “reference case” scenario with the “with mitigation” scenario.”

As no model run is currently available for an ‘existing plans’ scenario, it is not possible to directly compare this with the full ‘growth with mitigation’ scenario. Instead, a proportionate approach has been adopted to illustrate the contribution of committed plan growth and unconsented GNSP growth to conditions at key locations on the SRN.

To support this, the analysis examines the origins and destinations of trips using the SRN links identified as operating close to or above capacity. By aggregating the number of trips that either originate from or are destined for development sites, the approach highlights the extent to which congestion at these locations is associated with consented development (i.e. allocated within existing plans or with planning permission) against additional, unconsented growth proposed by the GNSP. This provides a clearer understanding of the status of different growth components on the most constrained elements of the SRN.

2. Methodology

A high-level methodology was agreed in principle with National Highways in advance of undertaking the assessment. The first step was to review the Do Something (GNSP With Mitigation) scenario to identify SRN links which are forecast to operate at / over capacity with reference to the following routes identified by National Highways¹:

- Each of the major M1 junctions within the area.
- Bramcote and Bardills roundabouts on the A52.
- A52/A6605 Roundabout by Queen’s Medical Centre.
- Nottingham Knight Roundabout.
- A52/Tollerton Lane junction.
- Junctions along the A52 around Radcliffe.
- A46/Melton Road roundabout.
- A453 junctions through Clifton.

This identified the ‘in scope’ links for further review using Select Link Analysis (SLA).

¹ Email from Kate Stephen, Spatial Planning Manager (Midlands) at National Highways to Matt Gregory, Greater Nottingham Planning Manager, Nottingham City Council dated 28 April 2025 09:18

Secondly, SLA was used to compare the Do Something (GNSP With Mitigation) scenario and Reference Case scenario. This was undertaken to determine the origin / destination zones of GNSP trips on each identified 'in scope' link. This demand was aggregated to quantify the volume of trips originating from committed (consented) sites (zones) and uncommitted (new GNSP development) sites (zones) to articulate the ratio of committed and uncommitted trips per at / overcapacity SRN link. For zones containing a mix of consented and uncommitted development, trip demand was divided proportionately.

The findings of this analysis were presented to and discussed with National Highways at a meeting on 13 January 2025.

3. Development Sites

Table 3-1 displays the planning status of residential sites in the GNSP. For each development, it details the number of homes in both the Reference Case and Do Something (GNSP With Mitigation) scenario, the number and percentage of new homes within the Do Something (GNSP With Mitigation) scenario, the number of new homes which have planning consent, and finally the percentage of residential development which is not yet consented.

Table 3-2 displays the status of employment sites in the GNSP. For each development, it details the floor area in square metres (sqm) of employment development in both the Reference Case and Do Something (GNSP With Mitigation) scenario, the sqm and percentage of employment development within the Do Something (GNSP With Mitigation) scenario which is new, the sqm of new employment development which has consent, and finally the percentage of employment development at the site (zone) which is not yet consented.

In summary:

- There are 38,838 new homes in the Do Something (GNSP With Mitigation) scenario in total.
- Of these, 12,500* homes have planning consent which represents 32% of the total new homes proposed by the GNSP. This figure excludes area allocations (e.g. city centre flats).
- Consequentially, 68% of homes are new (unconsented) development.
- There is 1,177,606 sqm of employment development proposed in the Do Something (GNSP With Mitigation) scenario in total.
- Of this, 811,634 sqm of employment development has planning consent (69%).
- Therefore, 31% of employment land is new (unconsented) development.

*Following completion of the analysis presented in this report, it has been noted that the Nottingham City Centre Flats zone allocation includes 4,411 consented new homes (equivalent to 23% of the total allocation). This will in turn decrease the percentage of unconsented development as presented at ID 49 in Table 3-1.

Table 3-1: Status of GNSP Residential Sites

ID	LA	Development	Homes in Reference Case	Homes in GNSP Scenario	New Homes in GNSP	% New Homes	No. New Homes with Consent	Residential % Unconsented
1	Broxtowe	Boots Site (B)	0	627	627	100%	613	2%
2	Broxtowe	Field Farm	129	450	321	71%	450	0%
3	Broxtowe	Toton Strategic Location for Growth	0	1,200	1,200	100%	282	77%
4	Broxtowe	Land west of Awsworth	0	250	250	100%	250	0%
5	Broxtowe	Eastwood	581	960	379	39%	960	0%
6	Broxtowe	Kimberley	149	363	214	59%	363	0%
7	Broxtowe	Chetwynd Barracks	0	1,500	1,500	100%	0	100%
8	Broxtowe	Land Adjacent and north west of Bramcote Crematorium	0	190	190	100%	190	0%
9	Broxtowe	East of Coventry Lane, Bramcote	0	470	470	100%	470	0%
37	Broxtowe	Beeston Business Park, Technology Drive, Beeston	221	310	89	29%	310	0%
38	Broxtowe	Bartons land between High Road & Queens Road West, High Road Chilwell	30	221	191	86%	221	0%
10	Gedling	Teal Close	331	807	476	59%	0	100%
11	Gedling	Top Wighay Farm	38	1,900	1,862	98%	0	100%
12	Gedling	H16 Park Road, Calverton	101	363	262	72%	0	100%
13	Gedling	Land West of A60 Redhill (X2 and X3)	70	220	150	68%	0	100%
14	Gedling	Gedling Colliery	465	941	476	51%	0	100%
15	Gedling	North of Papplewick Lane	225	255	30	12%	0	100%
16	Gedling	Mapperley Plains and Killisick Lane	89	435	346	80%	0	100%
17	Gedling	Bestwood Business Park	0	220	220	100%	0	100%
44	Gedling	Arnold (non-allocated sites)	204	864	660	76%	0	100%
45	Gedling	Carlton (non-allocated sites)	507	1,221	714	58%	0	100%
46	Gedling	Bestwood	35	541	506	94%	0	100%
47	Gedling	Calverton	61	586	525	90%	0	100%
48	Gedling	Ravenshead	66	586	520	89%	0	100%
18	Nottingham City	Chalfont Drive	345	475	130	27%	475	0%
19	Nottingham City	Former Padstow School Site Gainsford Crescent	0	291	291	100%	291	0%
20	Nottingham City	Stanton Tip	0	500	500	100%	0	100%
21	Nottingham City	Clifton West	0	285	285	100%	285	0%
22	Nottingham City	Waterside	204	1,289	1,085	84%	470	64%
23	Nottingham City	Alfreton Road - Forest Mill	0	484	484	100%	484	0%

ID	LA	Development	Homes in Reference Case	Homes in GNSP Scenario	New Homes in GNSP	% New Homes	No. New Homes with Consent	Residential % Unconsented
39	Nottingham City	Farnborough Road - Former Fairham Comprehensive School	0	196	196	100%	0	100%
40	Nottingham City	406 And 408 Derby Road And Northern Dairies LTD, Radmarsh Road Nottingham	0	306	306	100%	306	0%
41	Nottingham City	Western Village, University of Nottingham Campus	0	200	200	100%	0	100%
49	Nottingham City	Nottingham City Centre flats	4973	18,850	13,877	74%	0*	100%
24	Rushcliffe	East and West of Melton Road, Edwalton	1277	1,844	567	31%	1,781	3%
26	Rushcliffe	East and West of Chapel Lane, Bingham	408	1,022	614	60%	1,050	-3%
27	Rushcliffe	RAF Newton	115	528	413	78%	528	0%
28	Rushcliffe	Clifton South	0	3,000	3,000	100%	521	83%
29	Rushcliffe	East of Gamston North of Tollerton	0	3,000	3,000	100%		100%
30	Rushcliffe	Between Platt Lane and Station Road, Keyworth	128	187	59	32%	187	0%
31	Rushcliffe	Land North of Nottingham Road/The Paddocks	0	175	175	100%	102	42%
32	Rushcliffe	Land at Rempstone Road (north)	100	282	182	65%	235	17%
33	Rushcliffe	Shelford Road/Grooms Cottage	216	455	239	53%	400	12%
34	Rushcliffe	Lantern Lane, East Leake	231	365	134	37%	195	47%
35	Rushcliffe	North of Bunny Lane	114	221	107	48%	221	0%
36	Rushcliffe	East of Lbrough Rd/Meadowcroft	109	231	122	53%	180	22%
42	Rushcliffe	North of Grantham Road	0	280	280	100%	280	0%
43	Rushcliffe	Land R/O Mill Lane/the Old Park/South of Hollygate Lane	0	414	414	100%	400	3%

*Following completion of the analysis, it has been noted that the Nottingham City Centre Flats zone allocation includes 4,411 consented new homes (equivalent to 23% of the total allocation).

Table 3-2: Status of GNSP Employment Sites

ID	LA	Development	Employment Dev in Reference Case	Employment Dev in GNSP Scenario	New Employment Dev in GNSP	% New Dev	Sqm of Employment Development with Consent	Employment % Unconsented
3	Broxtowe	Toton Strategic Location for Growth	0	18,000	18,000	100%	0	100%
11	Gedling	Top Wighay Farm	0	49,500	49,500	100%	0	100%
56	Gedling	Teal Close, ALDI Foodstore and Local Centre, Mornando Way	1,818	3,447	1,629	47%	0	100%
1	Nottingham City	Boots Site	0	44,500	44,500	100%	44,500	0%
22	Nottingham City	Waterside	0	21,000	21,000	100%	0	100%
51	Nottingham City	Canal Quarter -Island Site	0	3,750	3,750	100%	0	100%
52	Nottingham City	Phase 1 Unity Square, Sheriffs Way	36,519	58,360	21,841	37%	0	100%
55	Nottingham City	Victoria Centre Huntingdon Street	0	37,000	37,000	100%	0	100%
58	Nottingham City	Nottingham City Centre offices	0	115,741	115,741	100%	0	100%
28	Rushcliffe	Clifton South	0	102,500	102,500	100%	9,871	90%
29	Rushcliffe	East of Gamston North of Tollerton	0	2,500	2,500	100%	0	100%
50	Rushcliffe	Ratcliffe on Soar Power Station	0	757,263	757,263	100%	757,263	0%
53	Rushcliffe	Land on Wilford Lane West Bridgford	2,783	4,098	1,315	32%	0	100%
54	Rushcliffe	East Bridgford Garden Centre	12,469	13,136	667	5%	0	100%
57	Rushcliffe	Landmere Lane Edwalton	3,370	3,770	400	11%	0	100%

4. SRN Locations

4.1 National Highways Key Locations Identified for Investigation

National Highways has identified several key locations on the SRN where there is concern that growth associated with the GNSP could exacerbate congestion. These locations include:

- Each of the major M1 junctions within the area
- Bramcote and Bardills roundabouts on the A52
- A52/A6605 Roundabout by Queen's Medical Centre
- Nottingham Knight Roundabout
- A52/Tollerton Lane junction
- Junctions along the A52 around Radcliffe
- A46/Melton Road roundabout
- A453 junctions through Clifton

4.2 Identifying Over Capacity Model Links

A review of the model links at each of the locations listed in Section 4.1 has been undertaken to assess Volume/Capacity (V/C) ratios - a useful measure for identifying sections of highway operating within, close to, or above capacity. The analysis considers the AM and PM peak periods for the Do Something (GNSP With Mitigation) scenario that includes GNSP growth and associated mitigation.

Table 4-1 presents an extract of model links at the highlighted key locations where V/C exceeds 90% (approaching capacity and shown in amber) or 100% (over capacity and shown in red). A grey colour indicates that the link is below 90% V/C in that time period.

Table 4-1: Over Capacity Links at Key Locations on the SRN, GNSP With Mitigation Scenario

Over Capacity Location	AM V/C	PM V/C
M1 J24-J23 SB	90.4%	
M1 J23-J24 NB	99.2%	101.0%
M1 J24 SB Merge	92.6%	
M1 J24 NB Diverge to A50		99.3%
M1 J24 NB Merge from A50		99.9%
A453 WB approach to M1 J24		100.3%
A50 WB Merge from M1 J24		118.7%
M1 J24-J25 NB		102.2%
M1 J25 SB Merge	105.9%	94.4%
M1 J25 NB Diverge	96.8%	114.8%
A52 WB approach to M1 J25		103.8%
A52 EB approach to M1 J25		100.0%
M1 J26 SB Diverge	102.3%	
M1 J26 NB Diverge	94.4%	107.9%
A610 EB to M1 J26	106.5%	90.6%
A610 WB approach to M1 J26		106.1%
Town Street NB to Bramcote Island	108.2%	122.1%
Toton Lane SB to Bardills Island	98.1%	94.7%
A52 EB approach to Bardills Island		91.9%

Over Capacity Location	AM V/C	PM V/C
A52 NB approach to Bramcote Island		92.6%
A52 SB from Derby Rd Jnc	91.8%	
Derby Road WB from A52 Queens Medical Centre	97.0%	
Derby Road EB to A52 Queens Medical Centre	100.0%	92.2%
A52 SB Diverge to Derby Rd Jnc	100.0%	
A52 SB to Derby Rd Jnc	102.2%	
A52 WB to Nottingham Knight Rdbt	100.9%	
A52 EB approach to Nottingham Knight Rdbt	93.8%	95.3%
A52 WB from Nottingham Knight Rdbt	96.3%	
Loughborough Rd NB to Nottingham Knight Rdbt	105.7%	
A52 WB approach to Wheatcroft Island	100.0%	
A52 EB exit from Wheatcroft Island		109.4%
Melton Rd Exit from Wheatcroft Island		96.6%
Radcliffe Rd WB to Stragglethorpe Rd Jnc	114.6%	95.5%
Radcliffe Rd EB to Stragglethorpe Rd Jnc		111.8%
Grantham Rd EB to Cropwell Rd Jnc	95.3%	100.0%
Grantham Rd WB to Bingham Rd Jnc	95.2%	
A46 SB Diverge to Melton Rd	96.3%	
A453 NB towards Farnborough Rd Rdbt	94.6%	97.8%
A453 SB approach to Green Ln Jnc	99.1%	98.8%
A453 SB approach to Mill Hill Rdbt	94.7%	
A453 SB approach to Crusader Rdbt	92.0%	

Table 4-1 shows that, among the SRN locations identified as areas of concern, a greater number of links exceed 100% volume/capacity in the PM peak compared to the AM peak. Maps showing the over-capacity links are contained in Appendix A.1.

5. Locations Serving GNSP Development Sites

Using model assignment files, SLA has been performed for each of the over-capacity links identified. This analysis can show the origin and destination of trips which are passing through the identified links. This approach has been used to establish how many trips on a given link are going to GNSP specific sites, by displaying the proportion of the trips on the link which are going to or from GNSP site zones. Further, each site has been categorised as consented, unconsented or a ratio of consented/unconsented, thereby allowing an understanding of how many trips on the identified link relate to growth which is already consented. Analysis below has been undertaken separately for the AM and PM time periods.

5.1 AM Period

5.1.1 Select Link Analysis

SLA has been performed for each Over Capacity Location in Table 5-1. The SLA has been extracted for both the Do Something (GNSP With Mitigation) scenario and the Reference Case. By summing trips which go to or from development zones in each scenario, the difference between the two scenarios isolates the number of trips going to development zones which are specifically related to GNSP growth.

Table 5-1: GNSP Site Trips (PCUs) on Identified Links in the AM

Over Capacity Location	V/C	Capacity	Link PCUs	PCUs to Dev Sites	% to/from Unconsented	Unconsented PCUs	Consented PCUs
A453 SB approach to Mill Hill Rdbt	94.7%	3,194	3,026	1,555	34%	525	1030
A453 SB approach to Crusader Rdbt	92.0%	3,400	3,133	1,457	35%	508	949
A453 SB approach to Green Ln Jnc	99.1%	2,802	2,777	1,305	38%	491	814
A52 WB from Nottingham Knight Rdbt	96.3%	4,199	4,046	913	61%	559	354
A52 WB to Nottingham Knight Rdbt	100.9%	2,683	2,707	838	63%	528	310
M1 J24-J23 SB	90.4%	8,857	8,009	649	62%	402	247
M1 J23-J24 NB	99.2%	8,000	7,937	641	26%	168	473
A52 WB approach to Wheatcroft Island	100.0%	1,328	1,328	625	83%	519	106
A52 SB from Derby Rd Jnc	91.8%	4,199	3,853	605	44%	268	337
M1 J25 SB Merge	105.9%	1,930	2,044	553	37%	204	349
A52 SB to Derby Rd Jnc	102.2%	2,989	3,054	464	51%	235	229
A453 NB towards Farnborough Rd Rdbt	94.6%	2,641	2,498	458	66%	304	154
M1 J24 SB Merge	92.6%	1,251	1,159	414	56%	231	183
Derby Road WB from A52 Queens Medical Centre	97.0%	2,000	1,940	407	82%	334	73
Derby Road EB to A52 Queens Medical Centre	100.0%	2,000	2,000	392	71%	277	115
Radcliffe Rd WB to Stragglethorpe Rd Jnc	114.6%	1,843	2,111	274	38%	105	169
A610 EB to M1 J26	106.5%	1,680	1,788	225	20%	45	180
M1 J26 SB Diverge	102.3%	1,940	1,984	217	91%	197	20
A52 EB approach to Nottingham Knight Rdbt	93.8%	2,659	2,494	209	64%	134	75
Grantham Rd WB to Bingham Rd Jnc	95.2%	1,328	1,295	135	34%	46	89
M1 J25 NB Diverge	96.8%	2,098	2,031	134	61%	82	52
Grantham Rd EB to Cropwell Rd Jnc	95.3%	1,328	1,266	132	87%	115	17
Loughborough Rd NB to Nottingham Knight Rdbt	105.7%	927	980	103	52%	54	49
A46 SB Diverge to Melton Rd	96.3%	381	367	89	19%	17	72
M1 J26 NB Diverge	94.4%	1,984	1,873	79	66%	52	27
A52 SB Diverge to Derby Rd Jnc	100.0%	518	518	50	92%	46	4
Toton Lane SB to Bardills Island	98.1%	1,003	984	47	35%	16	31
Town Street NB to Bramcote Island	108.2%	370	401	11	9%	1	10

Table 5-1 ranks SRN links by the absolute volume of demand associated with trips going to/from GNSP development sites, meaning those at the top experience the highest level of development-related traffic. Several A453 links through Clifton appear near the top of the table, highlighting this corridor as a key route serving GNSP sites. The A52 and the M1 between Junctions 23 and 24 also feature prominently as critical locations.

In addition, Table 5-1 shows the percentage of development demand linked to unconsented development, alongside an absolute breakdown of consented versus unconsented demand. While the A453 consistently appears near the top, a significant share of its development-related traffic impact originates from already consented development (approximately 35% remains unconsented). Locations towards the bottom of Table 5-1 carry fewer development-related trips, suggesting a lower level of concern regarding the impact of GNSP growth, particularly unconsented demand, at these locations.

This analysis highlights the locations where a.) development is driving substantive changes in demand and b.) where a high percentage of the additional demand is originating from unconsented development sites. These locations should be the primary focus of the mitigation strategy as interventions here will deliver the greatest impact. The findings show that the A52 experiences both high levels of demand but also substantial pressures from unconsented development which affects its performance. Therefore, managing demand generated by unconsented sites along the A52 and ensuring that development is delivered in a sustainable way should be a priority.

5.1.2 Problem Locations

Table 5-2 presents, for each link identified in Section 4.2, the Volume/Capacity (V/C) ratio under three scenarios:

- The Reference Case;
- The Do Something (GNSP With Mitigation) scenario; and
- A high-level Sensitivity Test scenario (presented as ‘Calculated Existing Plan V/C’), which recalculates V/C after removing unconsented PCUs on the link from the total link PCUs.

This Sensitivity Test scenario provides an indicative view of conditions if only trips generated by consented development were included on the link. This is presented to indicate links which are approaching capacity before any unconsented development traffic is added. However, it is important to note that this approach has limitations in that the effects of traffic reassignment and variable demand are not captured.

An observation from earlier model runs undertaken to inform development of the GNSP transport mitigation strategy is that congestion persists in the Do Something (GNSP With Mitigation) scenario despite the scale of mitigation proposed. This outcome is attributed to the nature of the mitigation measures which seek to balance modal shift with getting traffic onto the right routes to discourage rat-running on local roads. As a result, trips that may previously have avoided the SRN due to congestion reassign onto it when capacity becomes available. Consequently, congestion is not eliminated but redistributed, with increased usage of the SRN rather than a net reduction in demand.

This response demonstrates the scale of the challenge in trying to manage demand on the urban SRN and is an important consideration when interpreting the Sensitivity Test results presented in Table 5-2. The recalculated Volume/Capacity ratios (derived by removing unconsented PCUs) should be treated with caution. If such a scenario were modelled, it is likely that displaced demand would again be attracted to the SRN, resulting in consistently high V/C ratios at the locations identified, irrespective of whether unconsented growth were to be delivered.

The penultimate column of Table 5-2 shows the percentage of unconsented PCUs relative to total PCUs on each link. Locations where this percentage is below 10% are shown in green, indicating that only a small proportion of flows (within typical daily fluctuations) relate to unconsented demand and are therefore less of a concern.

The Unconsented PCUs column of Table 5-2 highlights in red those locations where unconsented demand exceeds 10% of total link demand and the V/C ratio is greater than 100%. This identifies three priority locations for further investigation, all of which are located on the A52. For each of these, additional analysis

has been undertaken to determine whether specific development sites are contributing significantly to the unconsented demand on the link.

The final column of Table 5-2 assigns a category (low, medium, high) indicating the level of concern regarding the potential impact of GNSP development demand at each location. A brief rationale for each link is also provided to explain the basis for classification.

Table 5-2: Analysis of Problem Locations in the AM

Over Capacity Location	Reference Case V/C	Calculated Existing Plan V/C (without unconsented PCUs)	With Growth & Mitigation V/C	Link PCUs	Unconsented PCUs	Consented PCUs	Unconsented PCUs / Link PCUs	Rationale for Concern
A453 SB approach to Mill Hill Rdbt	58%	78%	95%	3,026	525	1030	17%	MEDIUM - whilst V/C <100%, >5% V/C increase from Ref Case and link flow >10% unconsented
A453 SB approach to Crusader Rdbt	62%	77%	92%	3,133	508	949	16%	MEDIUM - whilst V/C <100%, >5% V/C increase from Ref Case and link flow >10% unconsented
A453 SB approach to Green Ln Jnc	100%	82%	99%	2,777	491	814	18%	LOW - under 100% V/C and under 5% change
A52 WB from Nottingham Knight Rdbt	91%	83%	96%	4,046	559	354	14%	LOW - under 100% V/C and under 5% change
A52 WB to Nottingham Knight Rdbt	100%	81%	101%	2,707	528	310	20%	HIGH – overcapacity with a large number of unconsented PCUs impacting the link
M1 J24-J23 SB	94%	86%	90%	8,009	402	247	5%	LOW - under 100% V/C and under 5% change
M1 J23-J24 NB	86%	97%	99%	7,937	168	473	2%	LOW/MEDIUM - although V/C increase is >5%, V/C <100% and link flow <10% unconsented
A52 WB approach to Wheatcroft Island	79%	61%	100%	1,328	519	106	39%	HIGH – at capacity with a large number of unconsented PCUs impacting the link
A52 SB from Derby Rd Jnc	91%	85%	92%	3,853	268	337	7%	LOW - under 100% V/C and under 5% change
M1 J25 SB Merge	104%	95%	106%	2,044	204	349	10%	LOW/MEDIUM - V/C >100% but was already in Ref Case and V/C change <5%
A52 SB to Derby Rd Jnc	77%	94%	102%	3,054	235	229	8%	MEDIUM - V/C >100% and >5% increase but unconsented link flow <10%
A453 NB towards Farnborough Rd Rdbt	88%	83%	95%	2,498	304	154	12%	MEDIUM - whilst V/C <100%, >5% V/C increase from Ref Case and link flow >10% unconsented
M1 J24 SB Merge	99%	74%	93%	1,159	231	183	20%	LOW - under 100% V/C and under 5% change
Derby Road WB from A52 Queens Medical Centre	88%	80%	97%	1,940	334	73	17%	MEDIUM - whilst V/C <100%, >5% V/C increase from Ref Case and link flow >10% unconsented
Derby Road EB to A52 Queens Medical Centre	94%	86%	100%	2,000	277	115	14%	HIGH – at capacity with a large number of unconsented PCUs impacting the link
Radcliffe Rd WB to Stragglethorpe Rd Jnc	110%	109%	115%	2,111	105	169	5%	LOW/MEDIUM - V/C >100% but was already in Ref Case and V/C change <5%
A610 EB to M1 J26	104%	104%	107%	1,788	45	180	3%	LOW/MEDIUM - V/C >100% but was already in Ref Case and V/C change <5%
M1 J26 SB Diverge	97%	92%	102%	1,984	197	20	10%	MEDIUM - V/C >100%, small V/C change but tips over 100%
A52 EB approach to Nottingham Knight Rdbt	66%	89%	94%	2,494	134	75	5%	LOW/MEDIUM - although V/C increase is >5%, V/C <100% and link flow <10% unconsented
Grantham Rd WB to Bingham Rd Jnc	94%	94%	95%	1,295	46	89	4%	LOW - under 100% V/C and under 5% change
M1 J25 NB Diverge	95%	93%	97%	2,031	82	52	4%	LOW - under 100% V/C and under 5% change
Grantham Rd EB to Cropwell Rd Jnc	100%	87%	95%	1,266	115	17	9%	LOW - under 100% V/C and under 5% change
Loughborough Rd NB to Nottingham Knight Rdbt	92%	100%	106%	980	54	49	6%	MEDIUM - V/C >100% and >5% increase but unconsented link flow <10%
A46 SB Diverge to Melton Rd	96%	92%	96%	367	17	72	5%	LOW - under 100% V/C and under 5% change
M1 J26 NB Diverge	91%	92%	94%	1,873	52	27	3%	LOW - under 100% V/C and under 5% change
A52 SB Diverge to Derby Rd Jnc	97%	91%	100%	518	46	4	9%	MEDIUM - V/C >100%, small V/C change but tips over 100%
Toton Lane SB to Bardills Island	98%	97%	98%	984	16	31	2%	LOW - under 100% V/C and under 5% change
Town Street NB to Bramcote Island	106%	108%	108%	401	1	10	0%	LOW/MEDIUM - V/C >100% but was already in Ref Case and V/C change <5%

Table 5-3 summarises the three locations identified for further investigation, showing the origin and destination of unconsented trips i.e. which development sites the unconsented demand on each link is serving.

Table 5-3: Unconsented Demand to Development Sites from AM Problem Locations

Over Capacity Location	Unconsented PCUs	Development Sites Served
A52 WB to Nottingham Knight Rdbt	528	419 to/from East of Gamston North of Tollerton 38 to/from Nottingham City Centre Offices 33 to/from Landmere Lane Edwalton
A52 WB approach to Wheatcroft Island	519	487 to/from East of Gamston North of Tollerton
Derby Road EB to A52 Queens Medical Centre	277	91 to/from Nottingham City Centre Offices 70 to/from Chetwynd Barracks 47 to/from Toton Strategic Locations for Growth

5.2 PM Period

5.2.1 Select Link Analysis

SLA has been performed for each Over Capacity Location in Table 5-4. The SLA has been extracted for both the Do Something (GNSP With Mitigation) scenario and the Reference Case. By summing trips which go to or from development zones in each scenario, the difference between the two scenarios isolates the number of trips going to development zones which are specifically related to GNSP growth.

Table 5-4: GNSP Site Trips (PCUs) on Identified Links in the PM

Over Capacity Location	V/C	Capacity	Link PCUs	PCUs to Dev Sites	% to Unconsented	Unconsented PCUs	Consented PCUs
A453 WB approach to M1 J24	100.3%	4,000	4,011	2,035	15%	304	1,731
A453 NB towards Farnborough Rd Rdbt	97.8%	2,708	2,647	1,410	37%	519	891
M1 J24-J25 NB	102.2%	8,114	8,291	1,098	29%	320	778
A52 EB approach to Nottingham Knight Rdbt	95.3%	4,199	4,000	868	58%	499	369
A453 SB approach to Green Ln Jnc	98.8%	2,845	2,812	520	70%	366	154
M1 J23-J24 NB	101.0%	8,000	8,077	502	65%	326	176
A50 WB Merge from M1 J24	118.7%	3,460	4,109	478	11%	51	427
M1 J25 NB Diverge	114.8%	1,607	1,844	469	31%	145	324
A52 EB exit from Wheatcroft Island	109.4%	1,328	1,452	395	83%	327	68
Derby Road EB to A52 Queens Medical Centre	92.2%	2,000	1,843	346	77%	265	81
M1 J26 NB Diverge	107.9%	2,070	2,233	330	34%	111	219
A52 NB approach to Bramcote Island	92.6%	2,409	2,230	315	66%	207	108
A52 EB approach to Bardills Island	91.9%	2,527	2,322	304	47%	142	162
Radcliffe Rd WB to Stragglethorpe Rd Jnc	95.5%	1,711	1,634	236	74%	174	62
Radcliffe Rd EB to Stragglethorpe Rd Jnc	111.8%	2,667	2,982	219	43%	94	125
Melton Rd Exit from Wheatcroft Island	96.6%	2,000	1,932	215	44%	95	120
A610 WB approach to M1 J26	106.1%	1,781	1,888	180	84%	151	29
A610 EB approach to M1 J26	90.6%	1,680	1,522	136	65%	89	47
M1 J25 SB Merge	94.4%	1,930	1,822	125	61%	76	49
A52 WB approach to M1 J25	103.8%	1,294	1,343	120	77%	92	28
Grantham Rd EB to Cropwell Rd Jnc	100.0%	1,328	1,328	91	40%	37	54
A52 EB approach to M1 J25	100.0%	1,561	1,561	74	89%	66	8
Toton Lane SB to Bardills Island	94.7%	842	798	50	79%	39	11
M1 J24 NB Merge from A50	99.9%	763	762	32	80%	26	6
Town Street NB to Bramcote Island	122.1%	95	116	6	17%	1	5

Table 5-4 ranks SRN links by the absolute volume of demand associated with trips to GNSP development sites, meaning those at the top experience the highest level of development-related traffic. Two A453 links through Clifton appear near the top of the table, highlighting this corridor as a key route serving GNSP sites. The A453 westbound approach to the M1 J24, the A52 and the locations along the M1 also feature as critical locations.

In addition, Table 5-4 shows the percentage of development demand linked to unconsented development, alongside an absolute breakdown of consented versus unconsented demand. Whilst some of the critical locations identified near the top of the table are impacted by demand travelling to/from development sites, a significant share of development-related traffic is already consented (flagged by the percentages towards the green end of the scale).

Locations towards the bottom of Table 5-4 carry fewer development-related trips, suggesting a lower level of concern regarding the impact of GNSP growth, particularly unconsented demand, at these locations.

5.2.2 Problem Locations

Table 5-5 presents, for each link identified in Section 4.2, the Volume/Capacity (V/C) ratio under three scenarios:

- The Reference Case;
- The Do Something (GNSP With Mitigation) scenario; and
- A high-level Sensitivity Scenario, which recalculates V/C after removing unconsented PCUs on the link from the total link PCUs

This Sensitivity Test provides an indicative view of conditions if only trips generated by consented development were included on the link. This is presented to indicate links which are approaching capacity before any unconsented development traffic is added. However, this scenario should be treated with caution for the reasons set out in Section 5.1.2

The penultimate column of Table 5-5 shows the percentage of unconsented PCUs relative to total PCUs on each link. Locations where this percentage is below 10% are shown in green, indicating that only a small proportion of flows (within typical daily fluctuations) relate to unconsented demand and are therefore less of a concern.

The Unconsented PCUs column of Table 5-5 highlights in red those locations where unconsented demand exceeds 10% of total link demand and the V/C ratio is greater than 100%. This identifies one priority location for further investigation. Additional analysis has been undertaken to determine whether specific development sites are contributing significantly to the unconsented demand on the link.

The final column of Table 5-5 assigns a category (low, medium and high) indicating the level of concern regarding the potential impact of GNSP development demand at each location. A brief rationale for each link is also provided to explain the basis for classification.

Table 5-5: Analysis of Problem Locations in the PM

Over Capacity Location	Reference Case V/C	Calculated Existing Plan V/C (without unconsented PCUs)	With Growth & Mitigation V/C	Link PCUs	Unconsented PCUs	Consented PCUs	Unconsented PCUs / Link PCUs	Rationale for Concern
A453 WB approach to M1 J24	70%	93%	100%	4,011	304	1731	8%	MEDIUM - V/C >100% and >5% increase but unconsented link flow <10%
A453 NB towards Farnborough Rd Rdbt	75%	79%	98%	2,647	519	891	20%	MEDIUM - whilst V/C <100%, >5% V/C increase from Ref Case and link flow >10% unconsented
M1 J24-J25 NB	89%	98%	102%	8,291	320	778	4%	MEDIUM - V/C >100% and >5% increase but unconsented link flow <10%
A52 EB approach to Nottingham Knight Rdbt	92%	83%	95%	4,000	499	369	12%	LOW - under 100% V/C and under 5% change
A453 SB approach to Green Ln Jnc	100%	86%	99%	2,812	366	154	13%	LOW - under 100% V/C and under 5% change
M1 J23-J24 NB	86%	97%	101%	8,077	326	176	4%	MEDIUM - V/C >100% and >5% increase but unconsented link flow <10%
A50 WB Merge from M1 J24	108%	117%	119%	4,109	51	427	1%	MEDIUM - V/C >100% and >5% increase but unconsented link flow <10%
M1 J25 NB Diverge	112%	106%	115%	1,844	145	324	8%	LOW/MEDIUM - V/C >100% but was already in Ref Case and V/C change <5%
A52 EB exit from Wheatcroft Island	103%	85%	109%	1,452	327	68	23%	HIGH – overcapacity with a large number of unconsented PCUs impacting the link
Derby Road EB to A52 Queens Medical Centre	81%	79%	92%	1,843	265	81	14%	MEDIUM - whilst V/C <100%, >5% V/C increase from Ref Case and link flow >10% unconsented
M1 J26 NB Diverge	104%	103%	108%	2,233	111	219	5%	LOW/MEDIUM - V/C >100% but was already in Ref Case and V/C change <5%
A52 NB approach to Bramcote Island	53%	84%	93%	2,230	207	108	9%	LOW/MEDIUM - although V/C increase is >5%, V/C <100% and link flow <10% unconsented
A52 EB approach to Bardills Island	89%	86%	92%	2,322	142	162	6%	LOW - under 100% V/C and under 5% change
Radcliffe Rd WB to Stragglethorpe Rd Jnc	80%	85%	96%	1,634	174	62	11%	MEDIUM - whilst V/C <100%, >5% V/C increase from Ref Case and link flow >10% unconsented
Radcliffe Rd EB to Stragglethorpe Rd Jnc	104%	108%	112%	2,982	94	125	3%	MEDIUM - V/C >100% and >5% increase but unconsented link flow <10%
Melton Rd Exit from Wheatcroft Island	71%	92%	97%	1,932	95	120	5%	LOW/MEDIUM - although V/C increase is >5%, V/C <100% and link flow <10% unconsented
A610 WB approach to M1 J26	106%	98%	106%	1,888	151	29	8%	LOW/MEDIUM - V/C >100% but was already in Ref Case and V/C change <5%
A610 EB approach to M1 J26	82%	85%	91%	1,522	89	47	6%	LOW/MEDIUM - although V/C increase is >5%, V/C <100% and link flow <10% unconsented
M1 J25 SB Merge	96%	90%	94%	1,822	76	49	4%	LOW - under 100% V/C and under 5% change
A52 WB approach to M1 J25	105%	97%	104%	1,343	92	28	7%	LOW/MEDIUM - V/C >100% but was already in Ref Case and V/C change <5%
Grantham Rd EB to Cropwell Rd Jnc	100%	97%	100%	1,328	37	54	3%	LOW/MEDIUM - V/C >100% but was already in Ref Case and V/C change <5%
A52 EB approach to M1 J25	102%	96%	100%	1,561	66	8	4%	LOW/MEDIUM - V/C >100% but was already in Ref Case and V/C change <5%
Toton Lane SB to Bardills Island	94%	90%	95%	798	39	11	5%	LOW - under 100% V/C and under 5% change
M1 J24 NB Merge from A50	90%	96%	100%	762	26	6	3%	MEDIUM - V/C >100% and >5% increase but unconsented link flow <10%
Town Street NB to Bramcote Island	116%	121%	122%	116	1	5	1%	MEDIUM - V/C >100% and >5% increase but unconsented link flow <10%

Table 5-6 summarises the location identified for further investigation, showing the origin and destination of unconsented trips i.e. which development sites the unconsented demand on each link is serving. It is of note that the identified link sits on the A52 corridor and is also identified as a problem location in the morning peak hour.

Table 5-6: Unconsented Demand to Development Sites from PM Problem Locations

Over Capacity Location	Unconsented PCUs	Development Sites Served
A52 WB approach to Wheatcroft Island	327	317 to/from East of Gamston North of Tollerton

6. Key Development Sites & Current GNSP Mitigation

After isolating key locations on the SRN where congestion is present in the Do Something (GNSP With Mitigation) scenario and which are impacted by unconsented development, the following development sites were found to be the main contributors:

- East of Gamston, North of Tollerton (site 29) for 3,000 homes and 2,500 sqm employment development (AM and PM peaks);
- Toton Strategic Locations for Growth (site 3) for 1,200 homes and 18,000sqm employment development (AM only);
- Chetwynd Barracks (site 7) for 1,500 homes (AM only);

These development sites already benefit from a number of mitigation proposals defined within the GNSP Transport Assessment report, as listed below and mapped in Figure 6-1.

- **Toton & Chetwynd Barracks**
 - Compact Neighbourhood principles;
 - New Cycle Route;
 - Proposed NET extension; and
 - Bus extension to site.
- **East of Gamston**
 - Compact Neighbourhood principles;
 - New Cycle Route;
 - Proposed NET extension;
 - Bus extension to site; and
 - Bus service frequency increase.

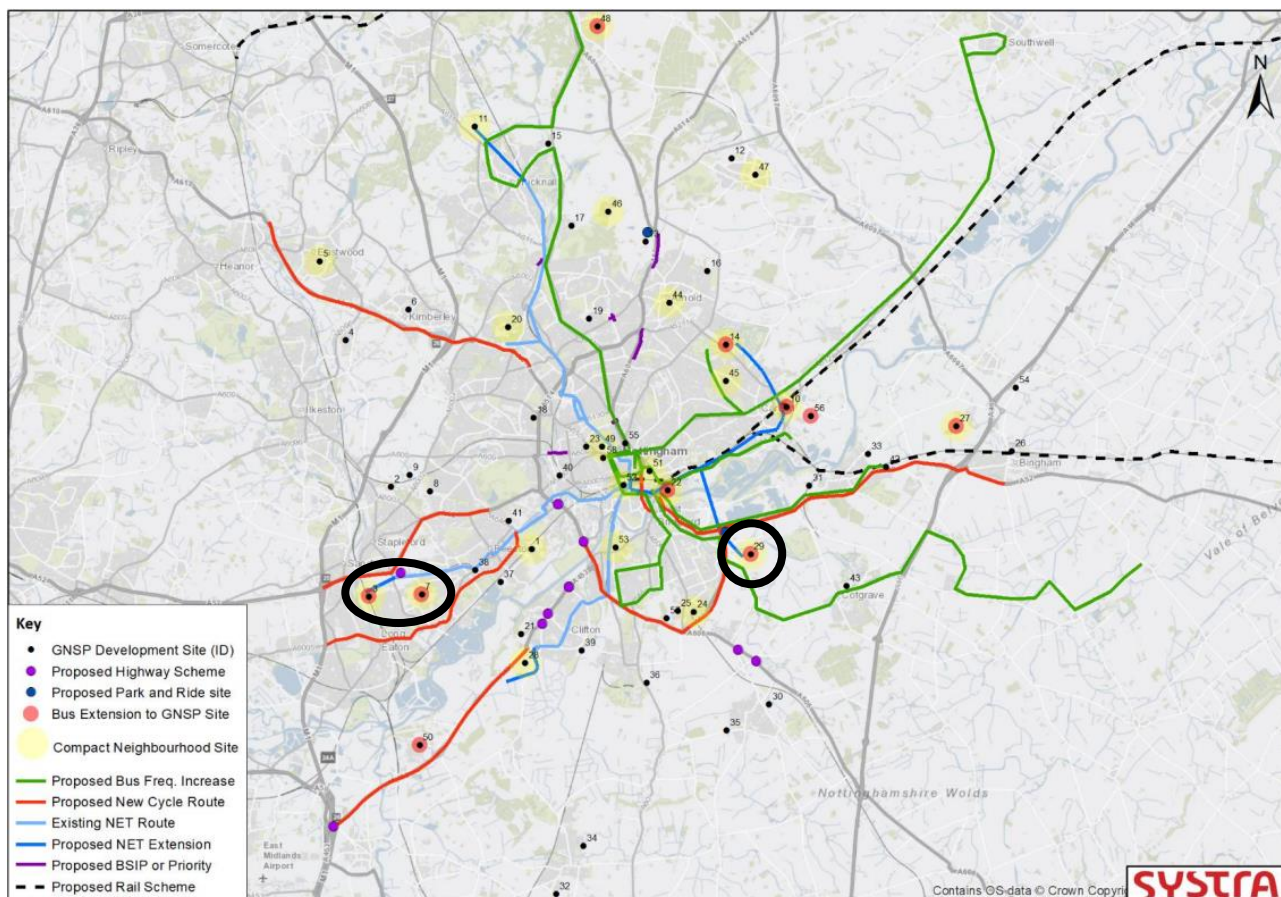


Figure 6-1: Location of GNSP Mitigation Measures

The Nottingham City Centre Offices (site 58) for 115,741sqm of employment development is also identified as a trip contributor in the AM peak on the A52 Westbound to Nottingham Knight Roundabout and Derby Road Eastbound to the A52 Queens Medical Centre. However, the central location of this allocation means that there are numerous modal opportunities available for access other than by car and the Workplace Parking Levy will assist in managing down vehicular demand.

7. Conclusion

7.1 Key Findings

The analysis has highlighted several important observations regarding the impact of GNSP growth on the Strategic Road Network (SRN):

- A substantial proportion of consented development already places significant pressure on the SRN, and this demand will need to be addressed regardless of additional growth.
- For many locations, new (unconsented) growth is not the primary driver of congestion; existing and consented development accounts for the majority of demand. However, there are a small number of strategic sites where unconsented development has the potential to have a significant influence on SRN performance, creating potential hotspots for future issues. This is particularly apparent on the A52.
- Volume/Capacity ratios are generally worse in the PM peak than in the AM peak, although the relative impact of unconsented growth is lower during the PM period.
- The analysis is subject to limitations, notably the absence of a full “existing plans” (consented development scenario model run. However, the Sensitivity Test shows that even if unconsented growth

does not occur, the network would not necessarily operate effectively as the SRN remains an attractive route for many journeys.

7.2 Recommendations

Based on these findings, the following actions are recommended to be incorporated into the mitigation strategy:

- **Address Existing Demand:** Existing and consented development represents the largest share of SRN pressure and solutions must be identified to manage this demand effectively. For the A52 specifically, a dedicated corridor study should be undertaken by the relevant transport authorities to better understand movement patterns and assess options for managing demand to ensure the route operates safely and sustainably in the long term and that sites remain attractive to investors.
- **Focus on Strategic Sites:** The majority of unconsented impacts are concentrated in a few strategic locations. These sites should be managed proactively, potentially using approaches similar to the Ratcliffe LDO, with trigger points and conditions tied to delivery.
- **Collaborative Masterplanning:** There is a need to develop detailed masterplans for the identified strategic sites in partnership with local authorities and National Highways to ensure mitigation measures are integrated and deliverable.

Appendix A

V/C Plots

A.1 PM V/C Plots

Model outputs have been plotted to identify key locations on the network which are at or over capacity. These have been plotted using the 'Growth with Mitigation' scenario models to show where the network is constrained with the growth and mitigation in place.

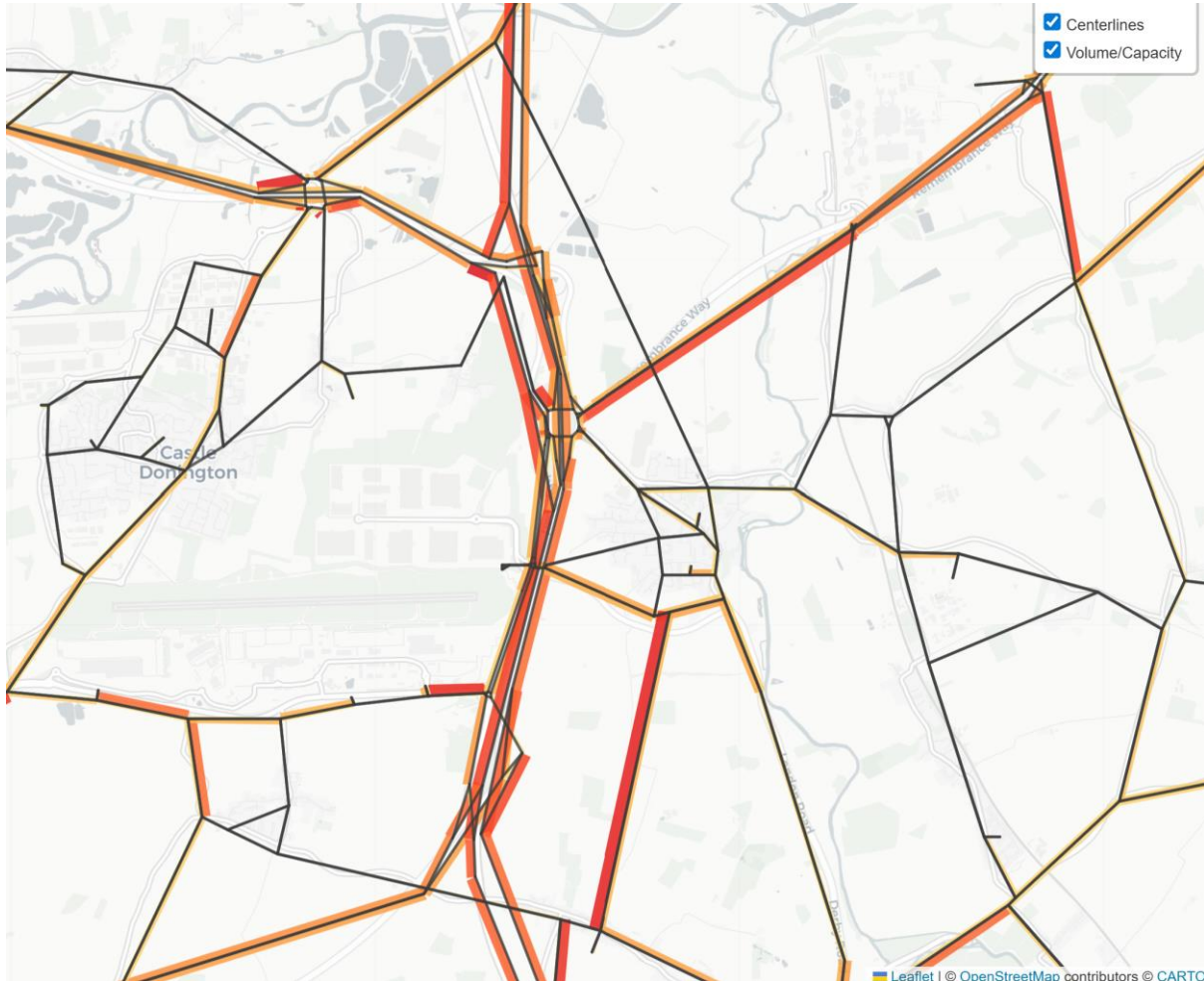


Figure 7-1: M1 Junction 24 V/C in the PM

The M1 Junction 24 is operating at close to capacity. The NB approach arm and the A453 approach are at 101% and 100% respectively.

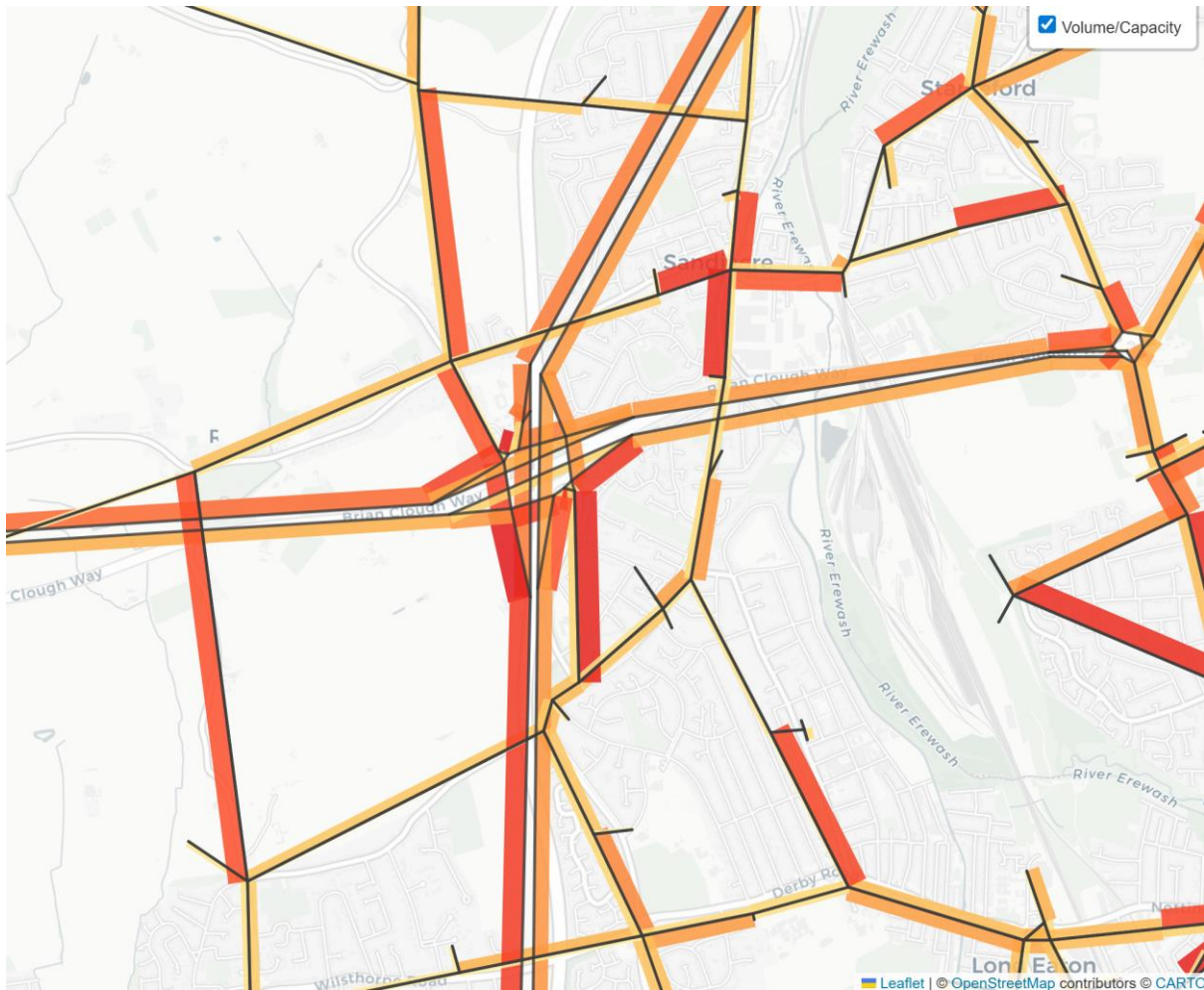


Figure 7-2: M1 Junction 25 V/C in the PM

Junction 25 is also close to capacity. The NB approach is at 102%.

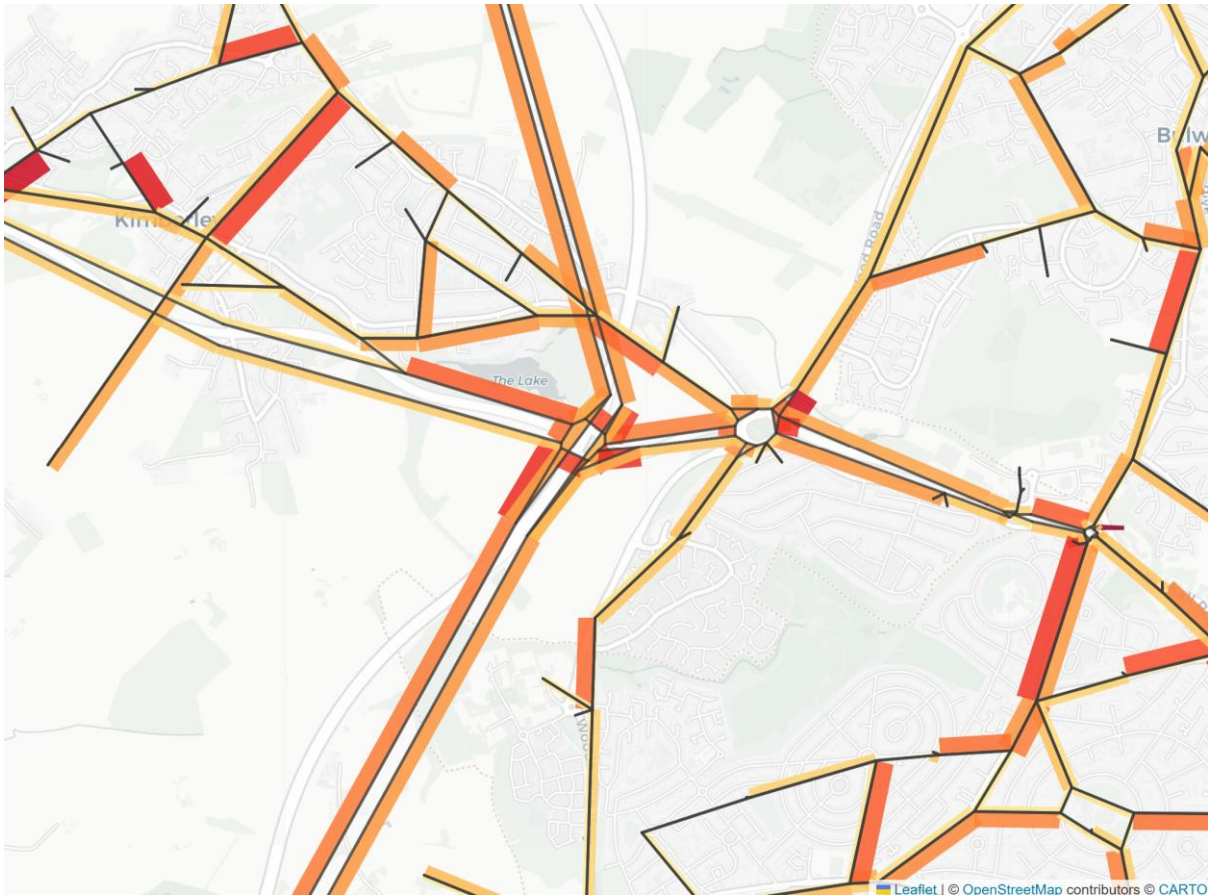


Figure 7-3: M1 Junction 26 V/C in the PM

Junction 26 experiences less issues, but there is still evidence of flows over capacity on slip roads and roundabout circulatory.

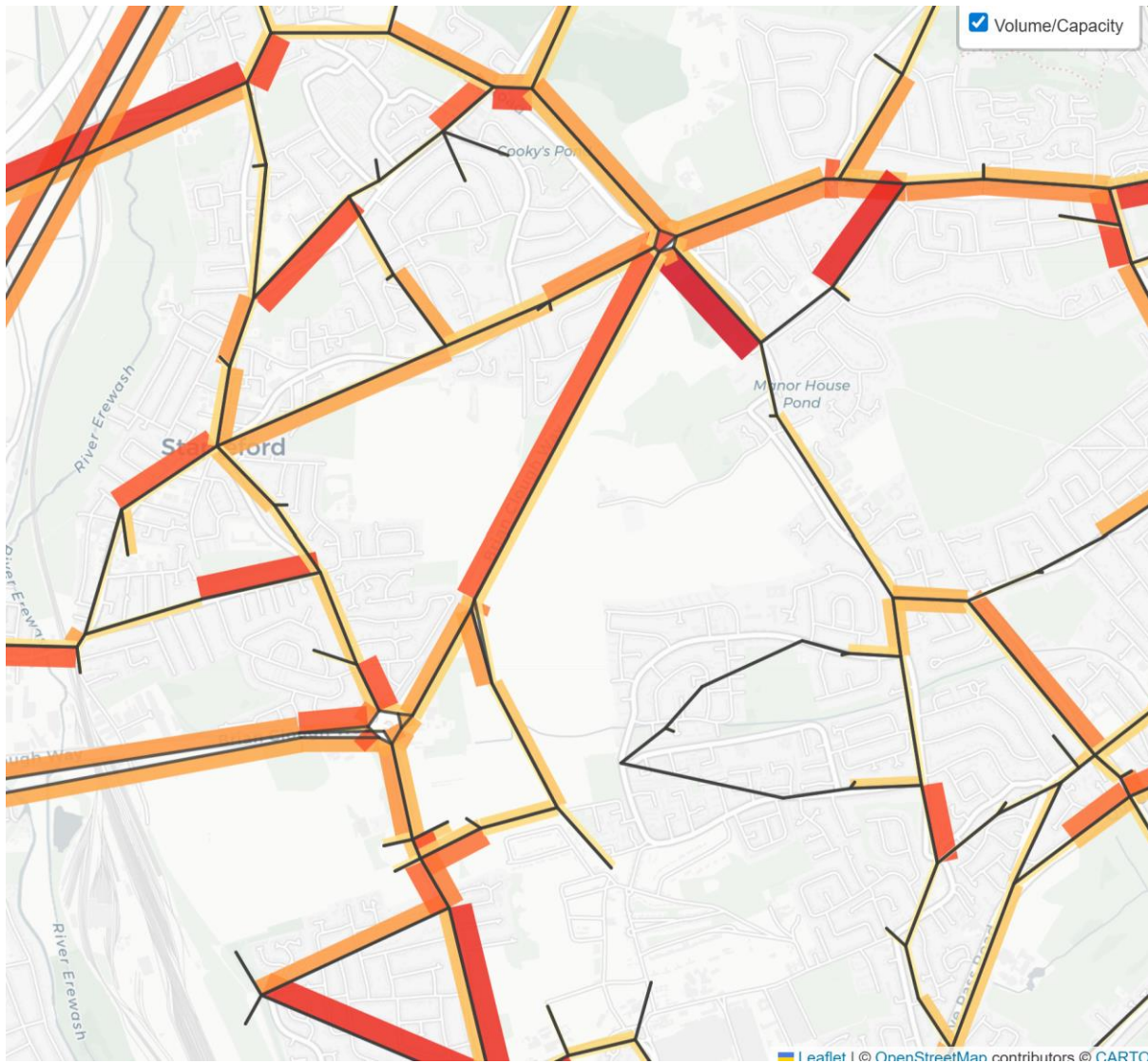


Figure 7-4: Bramcote and Bardills Roundabouts V/C in the PM

Bramcote and Bardills Roundabouts are close to capacity. The Town Street approach to Bramcote Roundabout is operating at 122%.

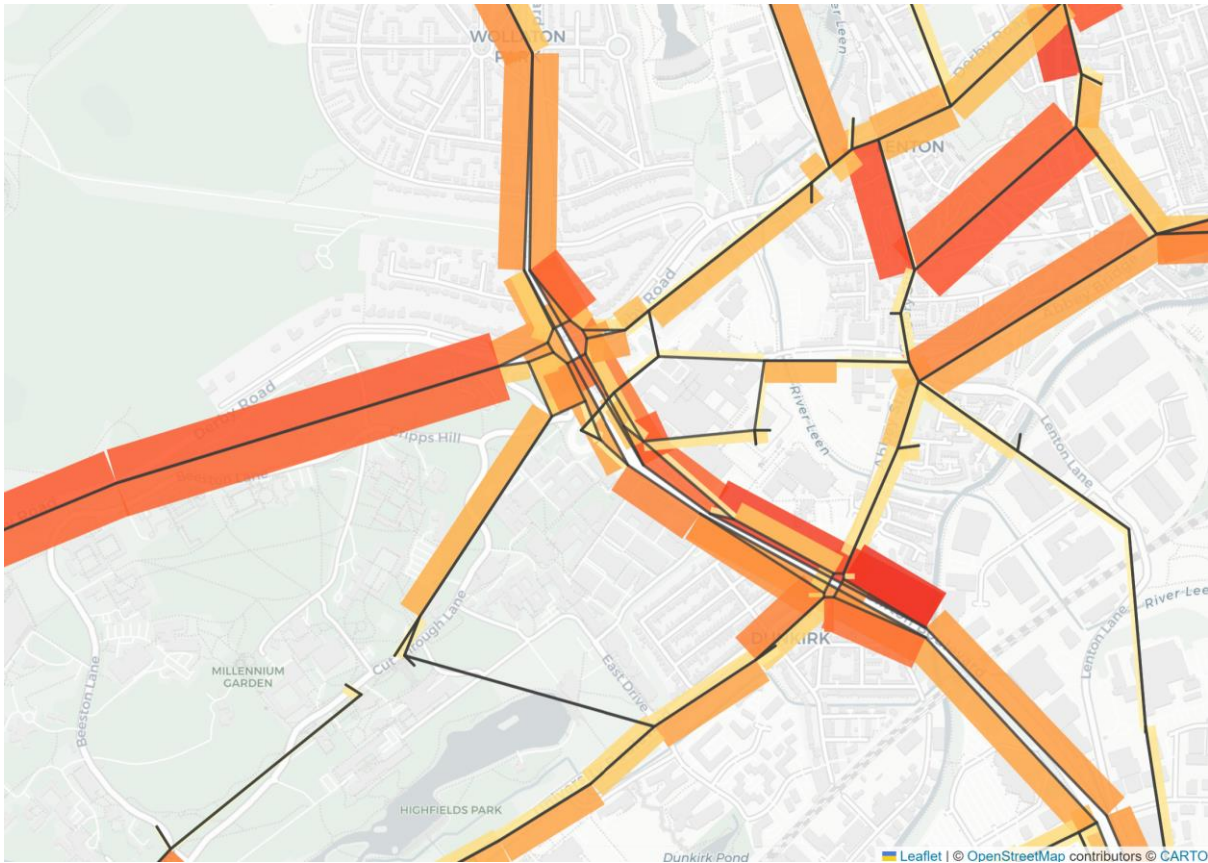


Figure 7-5: A52 roundabout (Queens Medical Centre) V/C in the PM

The A52 roundabout (Queens Medical Centre) is operating close to capacity, but no links are observed above capacity.

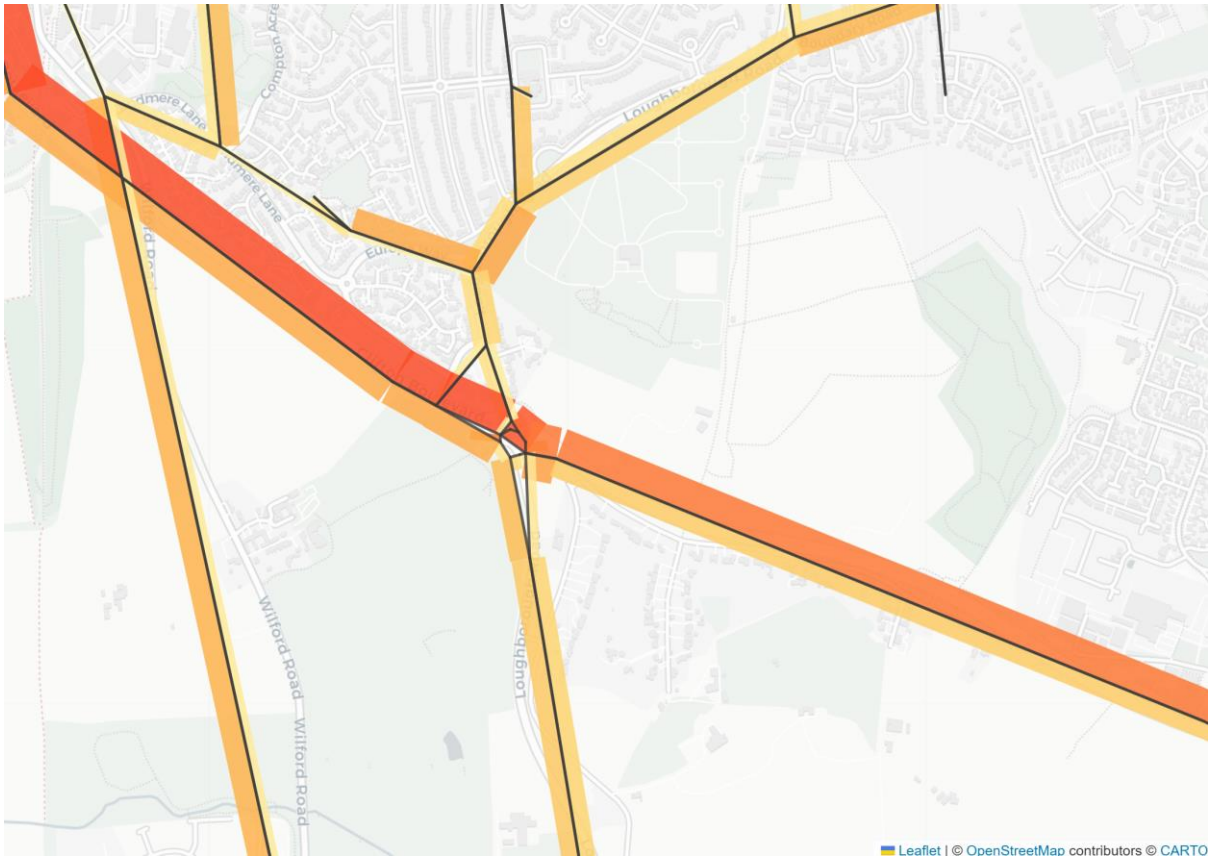


Figure 7-6: Nottingham Knight roundabout V/C in the PM

Nottingham Knight roundabout is close to capacity, but no links above capacity.

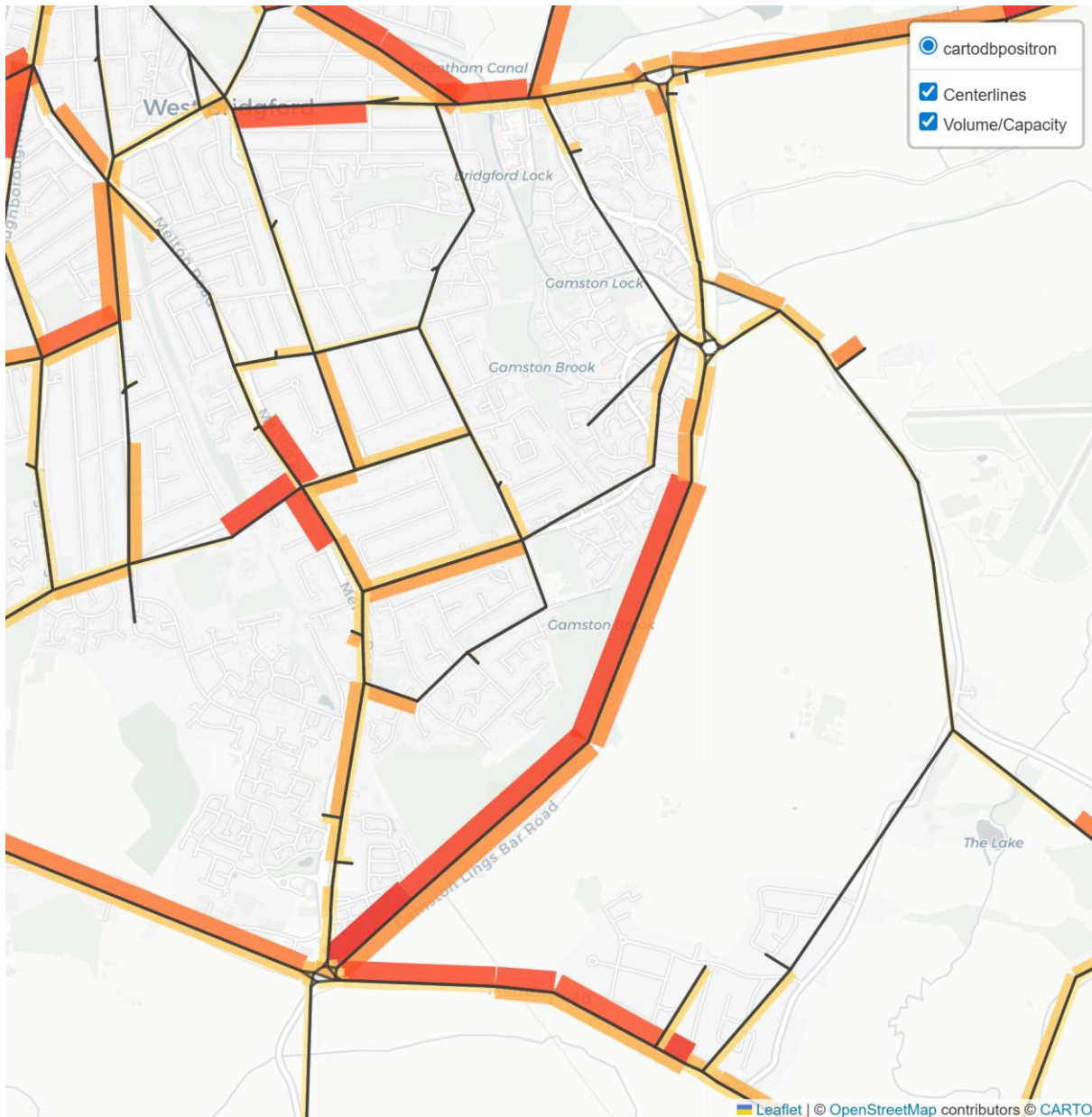


Figure 7-7: Wheatcroft Island V/C in the PM

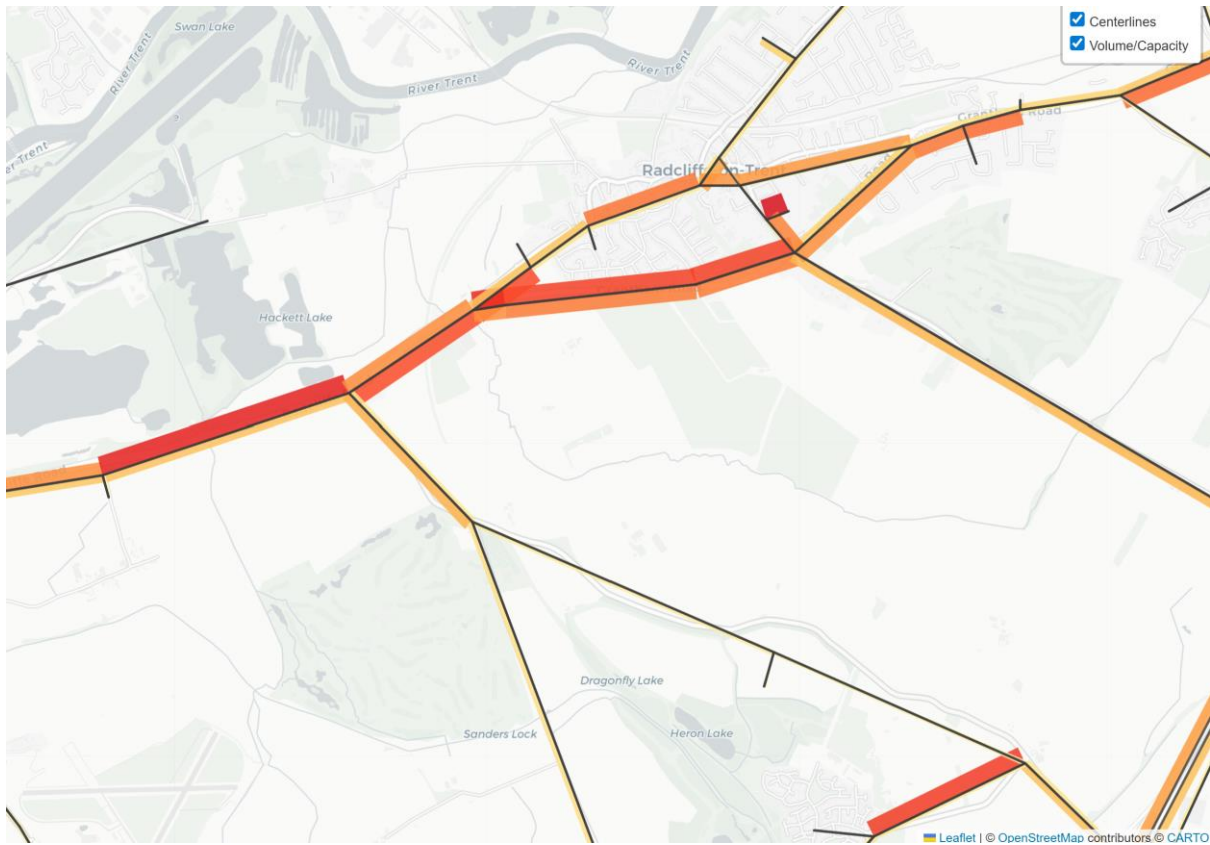


Figure 7-8: Junctions along the A52 around Radcliffe V/C in the PM

Junctions on the A52 surrounding Radcliffe are operating around capacity, particularly the approach to Stragglethorpe Road which is at 112%.

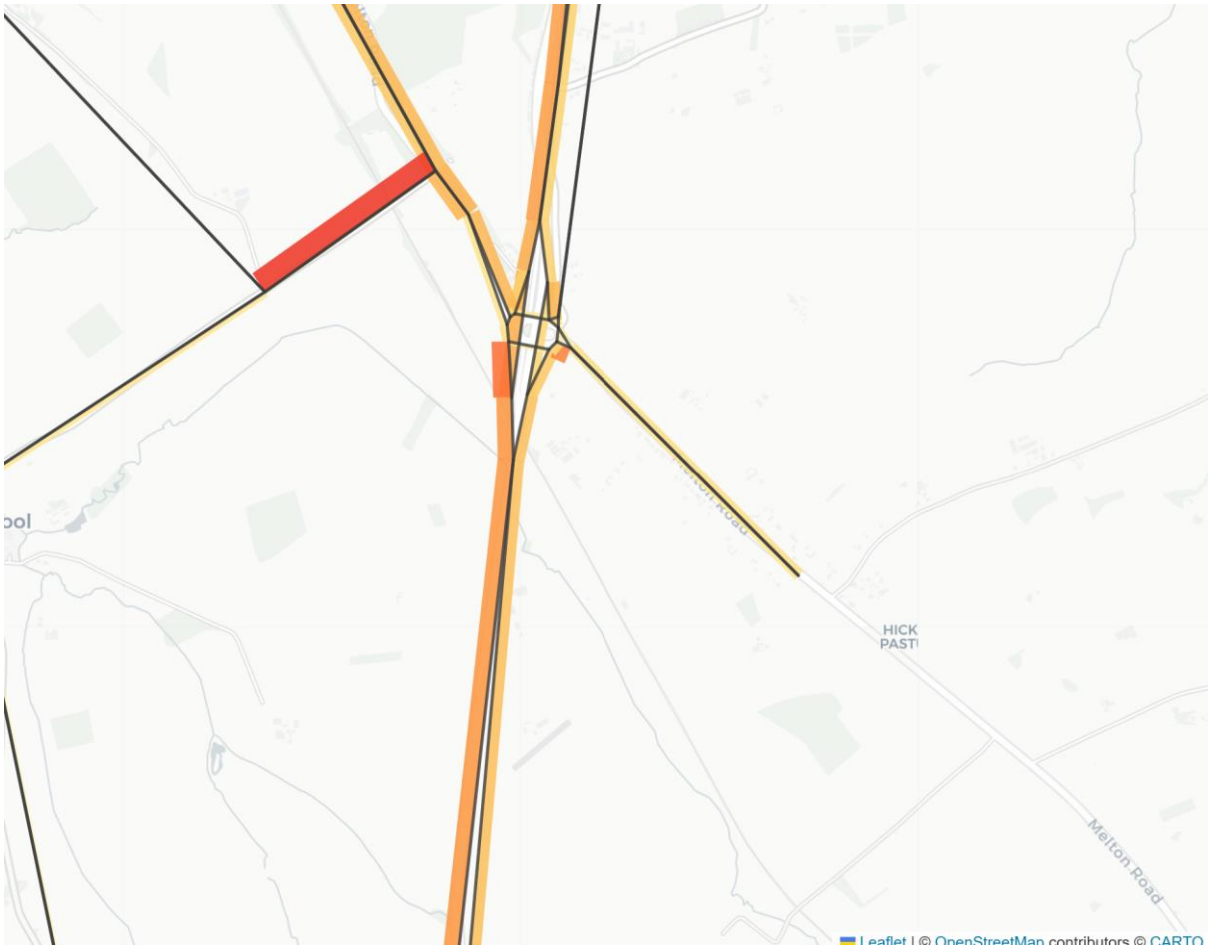


Figure 7-9: A46 Melton Road Roundabout V/C

A46 Melton Road Roundabout is less constrained.

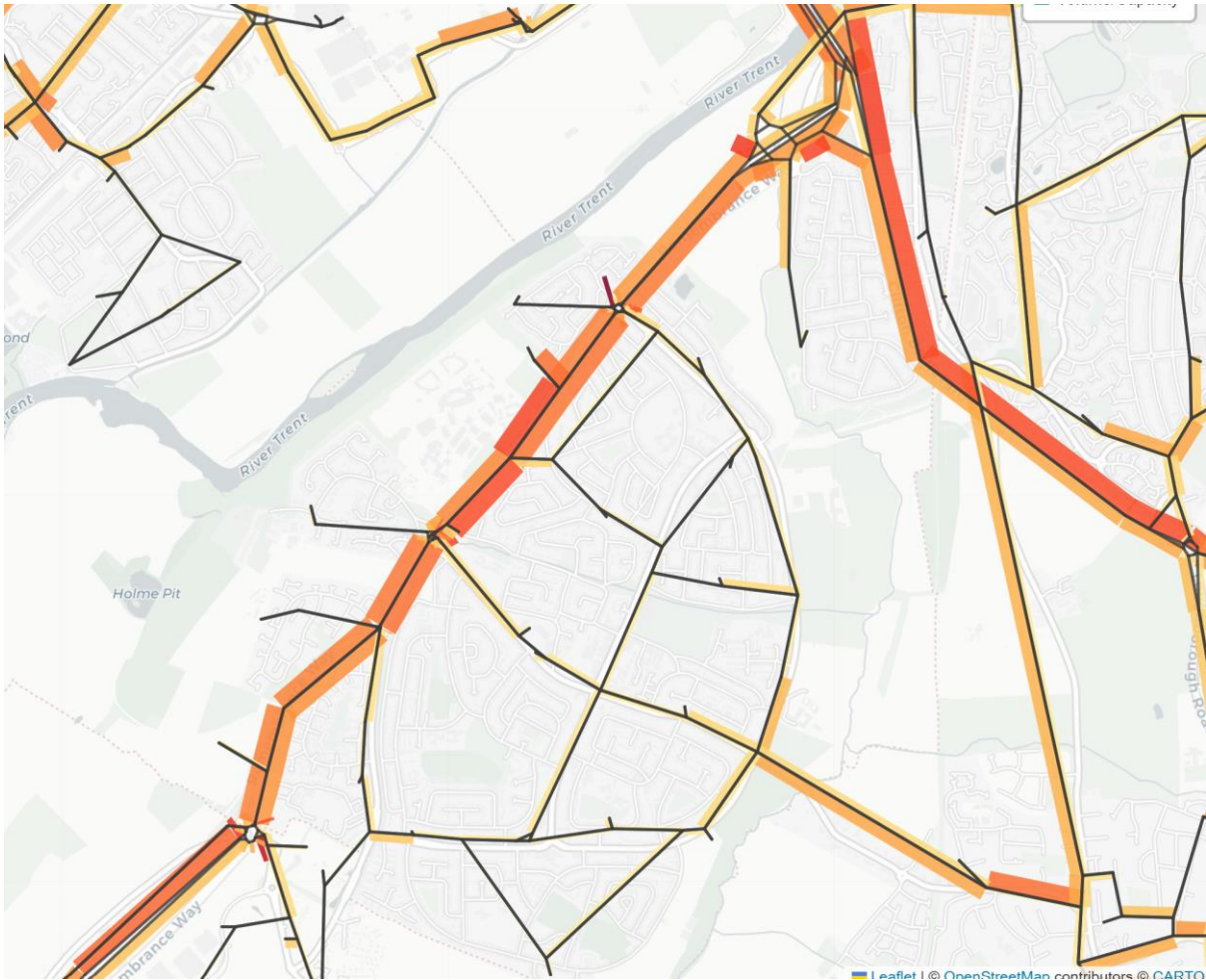


Figure 7-10: A453 through Clifton V/C in the PM

There is evidence of capacity issues at junctions on the A453 through Clifton.

GREATER NOTTINGHAM STRATEGIC PLAN

Memorandum of Understanding between Broxtowe Borough Council, Nottingham City Council, Rushcliffe Borough Council (the Plan-making Authorities) and National Highways

SIGNED on behalf of Broxtowe Borough Council, Nottingham City Council, Rushcliffe Borough Council (the Plan-making Authorities):

A black rectangular box redacting the signature of the representative from the Plan-making Authorities.

27 April 2026

Matt Gregory, Greater Nottingham Planning Manager

SIGNED on behalf of National Highways:

A black rectangular box redacting the signature of the representative from National Highways.

23 April 2026

Catherine Townend, National Highways