

Technical Note

Project Title:	Transport Assessments for the Charnwood 2026 LDF
MVA Project Number:	C37829
Subject:	Impact of Worst- Case Assessment Methodology
Note Number:	1
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1 Introduction

- 1.1 The transport assessments undertaken for the Charnwood 2026 LDF utilised an assessment methodology which places the development as an addition to TEMPRO growth forecasts over the period 2005-2026.
- 1.2 Because there is no formal definition of future development assumptions utilised in the forecast levels of TEMPRO growth over the period, all stakeholders to the project agreed that in order to provide a 'worst case' assessment of future traffic and congestion conditions within Loughborough, that each of the development options to be tested should be applied over and above the TEMPRO growth forecasts.
- 1.3 The note details the impacts of this worst case mitigation methodology (Scenario 1), in comparison to a Reference Case situation in which the developments to be tested are defined as part of the background growth assumptions for the town (Scenario 2).
- 1.4 In other words, a number of sensitivity tests have been run in which development related traffic generations have been removed from the forecast TEMPRO growth over the period, prior to assessing the congestion impact of the development, with and without mitigation.

2 Results

- 2.1 In order to ascertain the difference in terms of congestion and the overall percentage mitigation obtained by the development packages between the different assessment methodologies, the following tests have been run:
 - The 2026 Reference Case;
 - Cotes 4,200 dwellings and 12ha Employment 'With-Development' Scenario;
 - Cotes 4,200 dwellings and 12has employment, With Multi-Modal Mitigation and Partial Inner EDR Mitigation scenario; and,
 - Cotes 4,200 dwellings and 12has employment, With Multi-Modal Mitigation and Full Inner EDR Mitigation scenario.

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- 2.2 As the 'worst case' assessment methodology assumes development trip generations are additional to TEMPRO growth, it is clear that reduced overall levels of demand are assumed for each of the above sensitivity scenarios. For the Cotes 4,200 dwelling and 12ha Employment Option, this means that the total levels of demand for each of the scenarios has been reduced by around 2,780 trips, or 12% of overall demand.
- 2.3 The congestion results and the level of mitigation achieved through the partial and full inner EDR packages from 'worst-case' assessment methodology are shown below. By comparison, the level of mitigation achieved by the same packages in Scenario 2 with the development forming part of the overall growth in demand to 2026, are shown overleaf.

Scenario 1- Mitigation Results for Cotes 4,200 Option additional to TEMPRO demand to 2026

	Reference	Cotes – No Mitigation	Cotes- Partial Inner EDR	Cotes- Full Inner EDR
AM Peak				
1,000 Kms with V/C>85%	71	83	72	70
1,000 Kms with V/C>100%	34	41	39	39
% Mitigation			59%	67%
PM Peak				
1,000 Kms with V/C>85%	65	76	70	69
1,000 Kms with V/C>100%	28	39	41	40
% Mitigation			23%	45%
% Mitigation across both peaks			41%	55%

Scenario 2- Mitigation Results for Cotes 4,200 Option included as part of TEMPRO demand to 2026

	Reference	Cotes – No Mitigation	Cotes- Partial Inner EDR	Cotes- Full Inner EDR
AM				
1000 Kms with V/C>85%	59	77	64	63
1000 Kms with V/C>100%	23	32	33	33
% Mitigation			49%	57%
PM				
1000 Kms with V/C>85%	55	67	62	61
1000 Kms with V/C>100%	24	31	31	31
% Mitigation			37%	41%
% Mitigation across both peaks			44%	49%

- 2.4 As might be expected, it is noted in Scenario 2 that the aggregate levels of congestion within the Reference Case are lower in both the AM and PM peaks when compared to Scenario 1.
- 2.5 However, it is also noted that the impact of the development without mitigation in terms of increasing levels of congestion across the town is slightly greater in Scenario 2, with lower levels of background growth applied.
- 2.6 As a result although the % mitigation across both peaks is slightly higher for the partial Inner EDR, the percentage mitigation achieved by both of the inner EDR packages typically falls slightly in Scenario 2 compared to the previous ‘worst case’ assessments. This is enhanced by the fact that the level of demand on the network is correspondingly lower, and therefore the benefits brought about to existing traffic are also lessened.
- 2.7 In the AM Peak this fall in the level of percentage mitigation achieved is approximately 10% in for both the partial and full inner EDR routes, and by a smaller amount for the full inner route in the PM peak. The only element showing any increase in mitigation is the partial route in the PM peak where the higher level of mitigation is due to changed patterns of reassignment in the vicinity of Belton Road/ Meadow Lane with lower levels of demand.
- 2.8 However, the overall levels of change in terms of the level of percentage mitigation achieved are small (from 41% to 44% for the partial inner EDR multi-modal mitigation package and 55% to 49% for the full inner EDR multi-modal mitigation package).

3 Conclusions

- 3.1 Comparisons between the 'worst-case' and within background growth assessments have shown that the overall levels of percentage mitigation achieved by the development option mitigation packages across both peaks remain substantively unchanged.
- 3.2 This is primarily because of the percentage approach adopted, and the fact that the impact of the development in terms of congestion is proportionately greater.
- 3.3 The results also show that both multi-modal mitigation packages tested above for an eastern development option will still require significant further enhancements to more than double the level of mitigation if 100% mitigation in congestion terms is to be achieved.
- 3.4 Possible highway measures that would help increase the percentage mitigation remain as outlined within the Loughborough Transport Assessment Report at para 9.2.23.