Transport Modelling non technical summary

Summary of approach to transport modelling

This note provides a summary of the likely changes expected to affect our transport system between now and 2041, based on the review of the Local Plan. It is based on modelling carried out using the Coventry Area Strategic Model (CASM) – a strategic transport model, which is used to forecast the likely impact of any changes that are made to land use patterns and to transport infrastructure in the future.

The adopted Local Plan

The initial stage of the modelling focuses on the expected impact of known changes that are considered 'more than likely' to happen, particularly on the city's road network and on levels of congestion. This includes considering the likely impact of population growth and the development of sites that are already allocated in the current Coventry Local Plan, as well as planned development in neighbouring authority areas. Ongoing transport improvements in the area are also included in the modelling where funding has been secured as these can be considered 'more than likely' to be delivered.

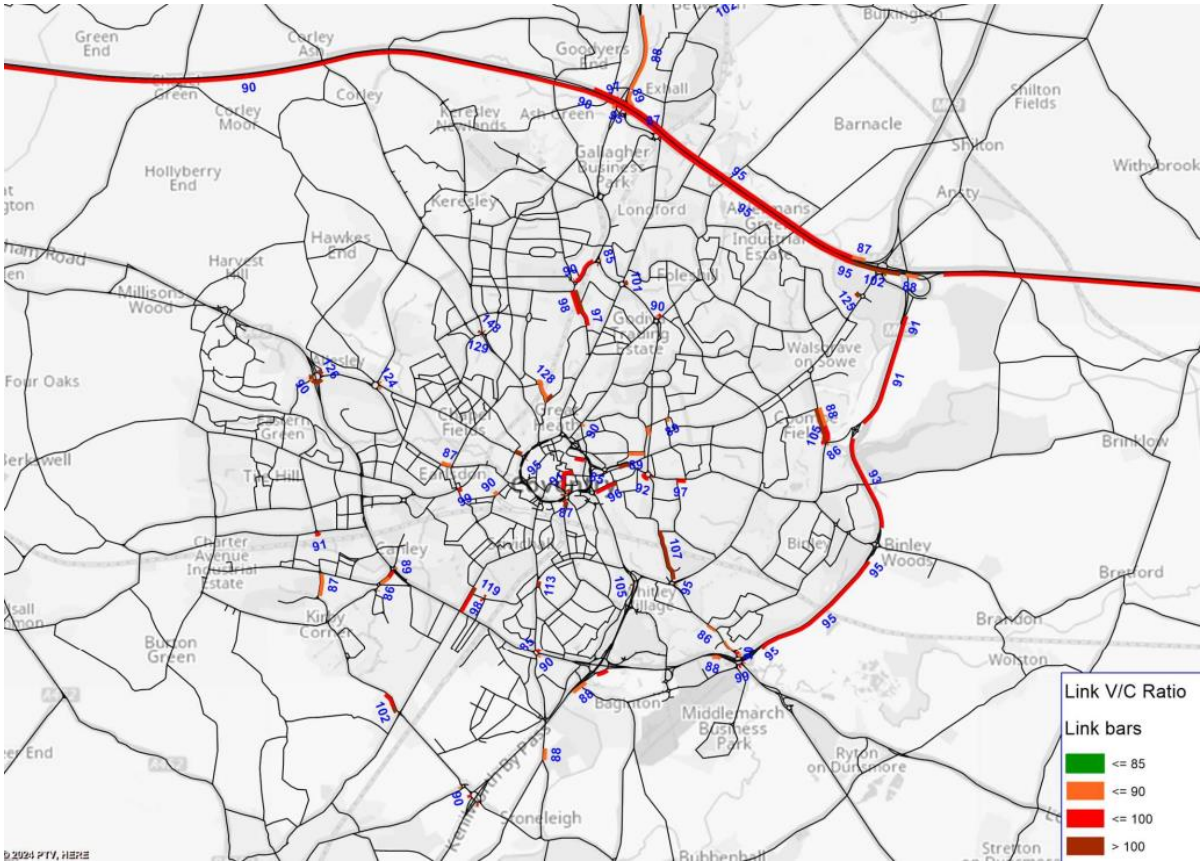
It should be noted that there is much uncertainty associated with future transport trends and that there are many assumptions made when using a transport model to forecast the future.

Modelling results should not therefore be treated as definitive. However, they are intended to provide a realistic illustration of what might happen if Coventry City Council continued to deliver its existing commitments under the current Local Plan as well as those improvements to the transport system that are already fully funded. It should be noted that other improvements are being pursued in line with the Council's Transport strategy but these have not been included in the modelling at this point.

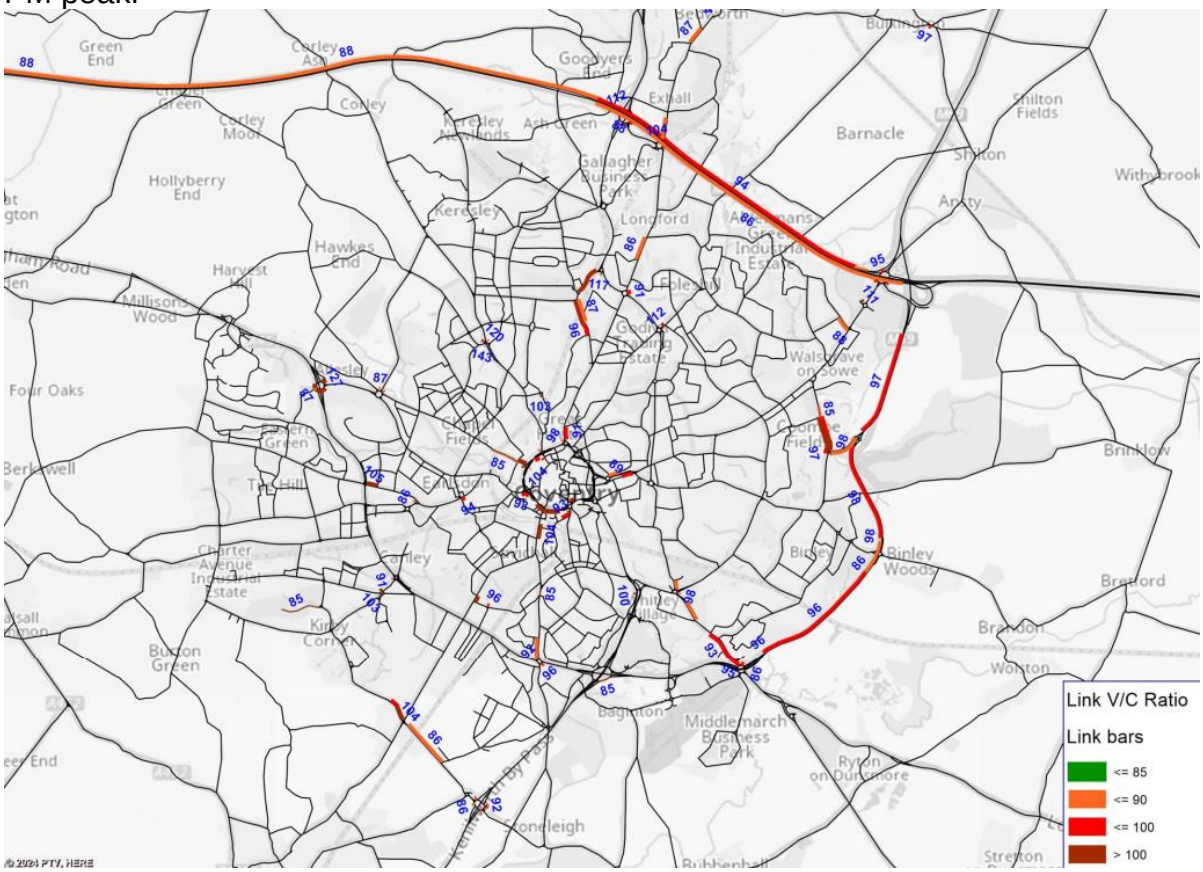
The modelling for the adopted Local Plan suggests that by 2041 there could be as many as 680,000 vehicles on the city's road network in the morning peak, with 660,000 in the pm peak. This represents an approximately 25% increase compared to the numbers observed in 2013 (the year CASM was first built). While these numbers include vehicles of all types, the vast majority (more than 80%) are expected to be cars. As a result of this increase in traffic volumes, the modelling suggests that there will be increases in congestion on some parts of the road network, particularly the M6 and the A46.

One way in which transport models predict congestion is by using a 'Volume/Capacity Ratio' (V/C Ratio). This compares the expected level of traffic on a specific road with the maximum that could be accommodated. The maps below show the areas of the city's road network where the V/C Ratio exceeds 85 in the morning and afternoon peaks. These are areas where congestion should be considered likely, while any road with a V/C Ratio over 100 can be considered 'over capacity'.

AM Peak



PM peak:



In summary, the results show that there is likely to be congestion on some parts of the road network during the peak periods. This is particularly the case for the Strategic Route Network (major roads managed by National Highways, including the M6 and A46) although issues are seen on some parts of the local road network as well. This demonstrates the need for further measures to promote walking, cycling and public transport to reduce future traffic volumes.

Furthermore, the impact that any proposed changes to the existing Local Plan would make to these results also needs to be taken into account, and this is set out in the next section.

Impact of proposed changes through the Plan Review

This section builds on the previous section by setting out the expected impact of additional development, which is now being proposed as part of the current Local Plan

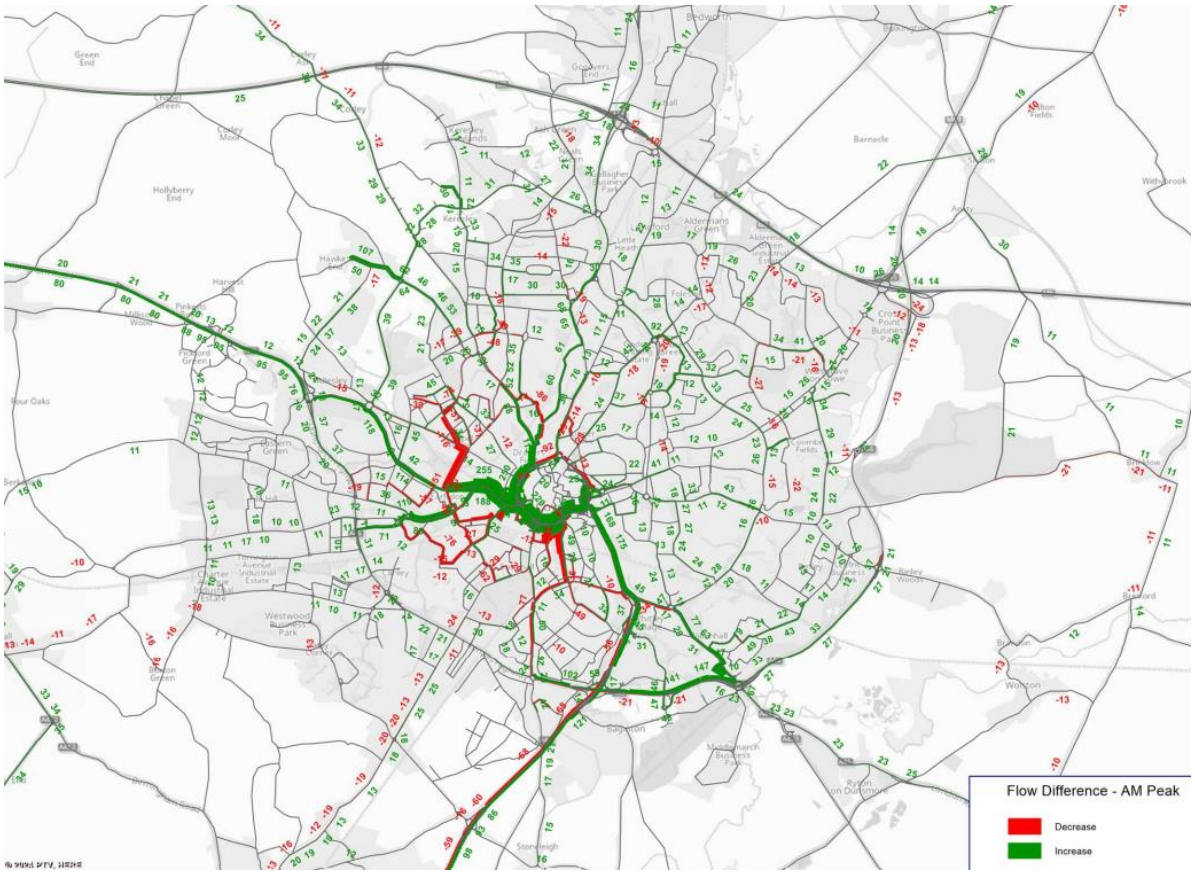
Review. It is again based on transport modelling carried out using CASM. Further details can be found in the Regulation 19 Local Plan and evidence base, which sets out the levels of increased densification, new allocations and the rolling forward of existing allocations where relevant.

Summary of approach to transport modelling

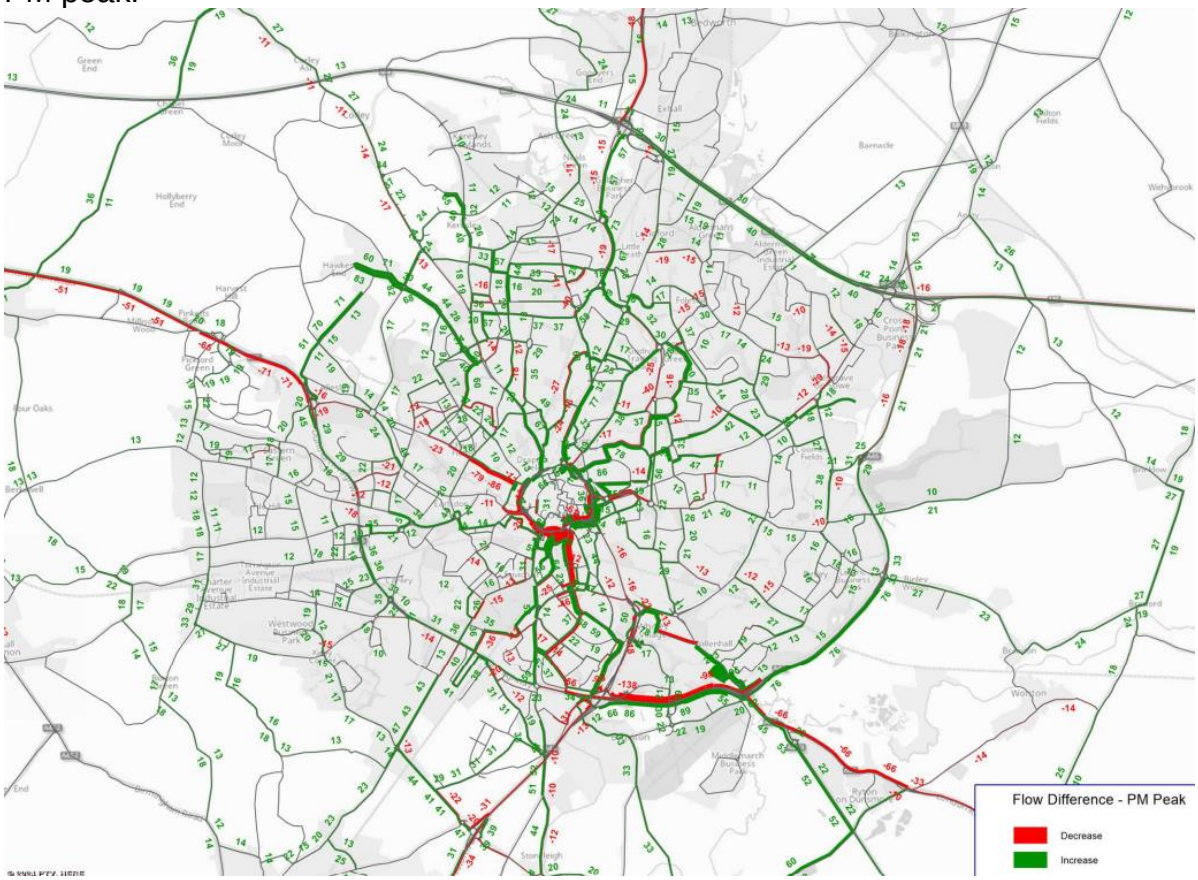
Modelling is again based on creating a realistic illustration of what the city's transport network, and particularly its road network, might look like in 2041. It includes the same transport improvements and the same level of development in neighbouring areas as previously. The only difference is that, within Coventry, instead of assuming that only development which forms part of the existing Local Plan will be delivered, it assumes that the changes which are now being proposed to the Local Plan are adopted.

The maps below show how expected traffic flows across the city change, in both the am and pm, with and without the proposed changes to the current Local Plan. Roads highlighted in green are places where more traffic is expected as a result of the changes, while roads highlighted in red are places where less traffic is expected.

AM peak:



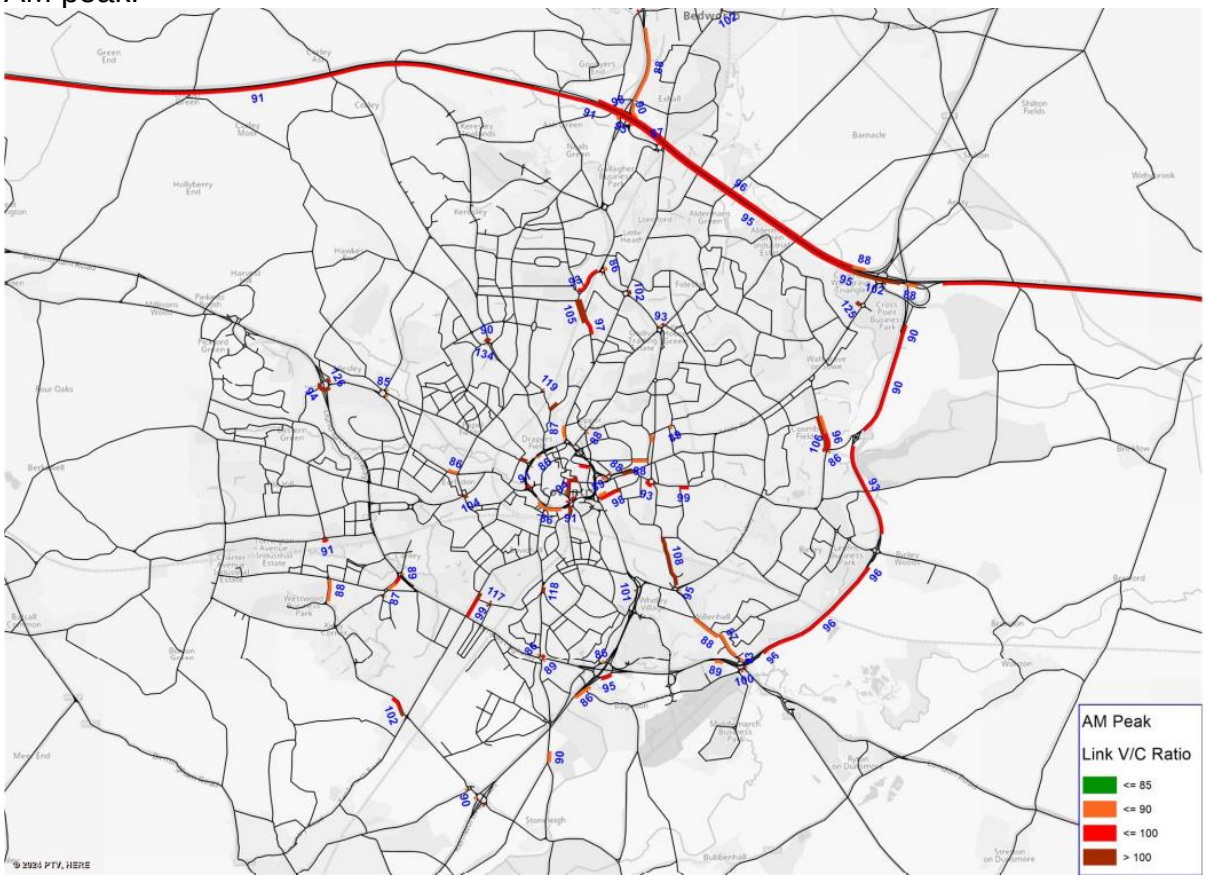
PM peak:



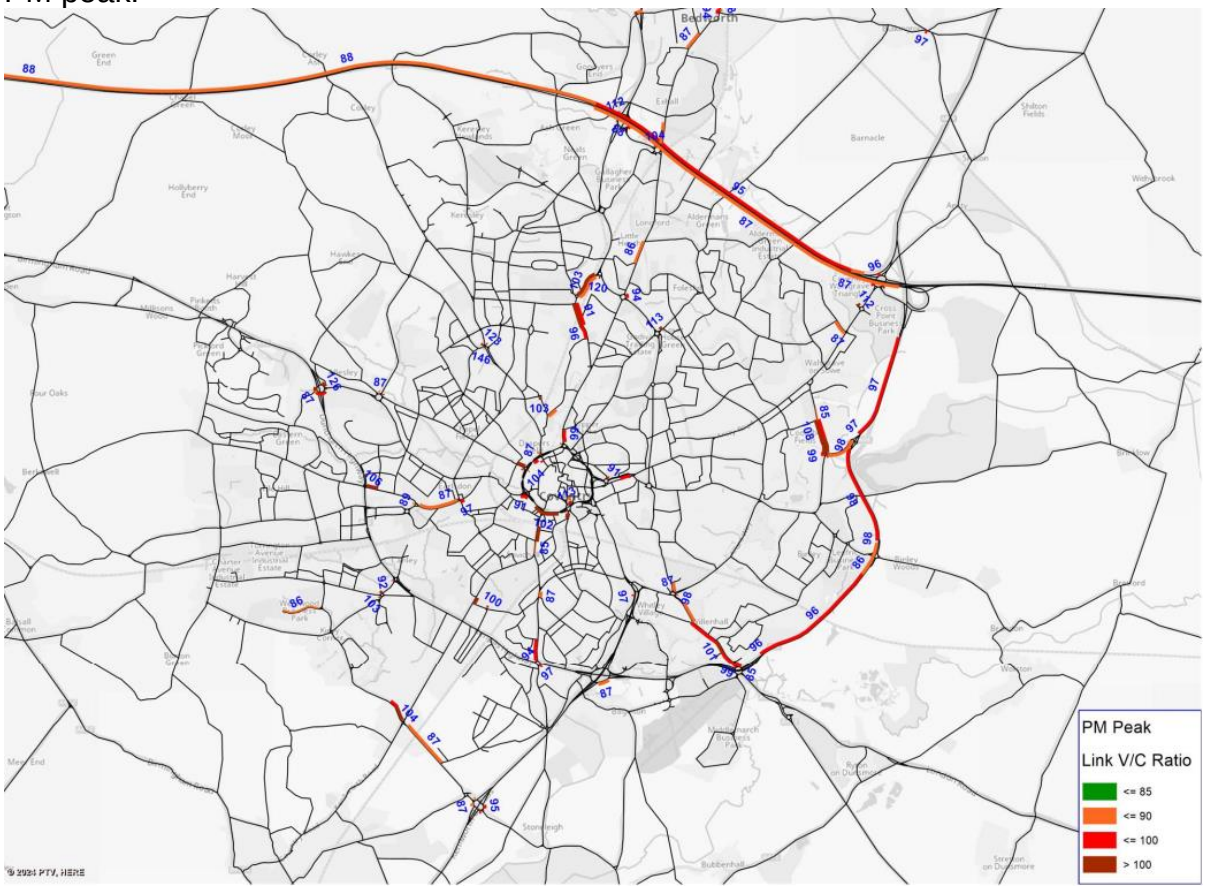
In summary, the results show increased traffic in many parts of the city as a result of the increase in planned development which has been included in the model. However, crucially, the largest increases are located away from areas where congestion was already expected.

The following maps show the areas where congestion is expected to occur if the proposed changes are made to the Local Plan. These follow a similar pattern to the previous forecast based on the existing Local Plan. This suggests that, while the increase in development overall does lead to an increase traffic in many places, it does not significantly affect levels of congestion across the city.

AM peak:



PM peak:



Finally, as stated previously the modelling only factors in transport improvement schemes which currently have funding. Much work is ongoing with partners to secure investment to improve the transport network in line with the aims of the Transport Strategy for Coventry and the ongoing work of the West Midlands Combined Authority / Transport for West Midlands.