Local Road Network

Coventry is well connected to the national road network having good access to the A46/M40, M69, M6, M45/M1 and M42. Highways England manage the strategic road network which surrounds Coventry and is crucial to its national connectivity needs. This includes the A46 corridor which has been designated as an Expressway in the Highways England Road Investment Strategy. This busy corridor is already benefitting from major investment at Tollbar Island to introduce a grade separated underpass. Further improvements are planned at Brandon Road and Walsgrave near the B4082 to introduce grade separation to improve traffic flow. Further enhancements are likely to be necessary within the plan period, such as the A46/Stoneleigh Road junction located in Warwickshire, which supports access to several major employment sites within Coventry including the University of Warwick and Westwood Business Park. Future capacity enhancements on the strategic highway network which support Coventry's economic growth proposals will be supported.

Coventry's well maintained and managed local highway network is considered to be an asset for the city which should be protected. The historic evolution of the city has left a legacy of a concentric web of radial roads enabling direct linkages between the strategic road network and the Coventry ring road. Recent improvements to the road network as part of a major Pinch Point programme has helped to address local congestion hotspots and improve traffic flows, most notably on the A45 and A4600 corridors.

The emerging Key Route Network as highlighted in the West Midlands Strategic Transport Plan will be made up of main metropolitan roads - operating at agreed performance standards. This network will serve the main strategic demand flows of people and freight across the metropolitan area and provide connections to the national strategic road network. It will also serve large local flows which use main roads and provide good access for businesses reliant on road-based transport and will use highway capacity effectively to cater for movement by rapid transit and core bus routes, the Metropolitan Cycle Network, Heavy/Light Goods vehicles and private cars to support growth on key corridors.

Figure 10.2 – Highway Connectivity

A major programme of public realm works in the city centre has helped to achieve a step change in the quality of the city centre environment and pedestrian connectivity. On-going works will be promoted in the CCAAP and will seek to enhance the quality of the adjacent public realm, increase the efficiency of traffic flows and improve the permeability of routes which cross the ring road for pedestrians and cyclists. Changes to the ring road may also support opportunities to facilitate the creation of new development sites. Where appropriate, new developments should seek to support and accommodate these proposals.

Impact of Growth on the Road Network

A comprehensive and independently developed strategic transport model has been carried out by WSP Planning Consultants to assess the impact of planned development proposals on the highway network over the plan period. The appraisal is based on the outputs of the highway element of the Coventry Area Strategic Model (CASM). The model has assessed the impact of the expected additional trip generation from planned residential and commercial development on the local highway network.

The model was used to firstly assess the proposed growth on a 2013 road network plus 'committed' schemes (i.e. those which are either completed, under construction or have committed funding). This was referred to as a 'Do Minimum Scenario'. Following this, a selection of 'Do Something' scenarios were modelled to understand the impact of various additional highway capacity improvement schemes on the network which are considered necessary to mitigate the impact of new development up to 2031. The model was also run to consider the total impacts of the growth planned within this Local Plan (by location) having specific regard to the impacts of the proposed SUE's. Finally, the model has also been used to test the impact of potential growth in other local authority areas adjacent to the city, primarily in Warwickshire and Solihull and the impact this could have on the city's highways.

The schemes of greatest significance included:

- Keresley: Proposal for a new distributor link road connecting Long Lane and Winding House Lane, delivered as part of a wider strategic highway upgrade between the M6 Junction 3 and the A45
- Eastern Green: Proposed new grade separated junction from the A45 to provide primary site access;
- Highway improvements at the A45, A46 and A444 to support improved access to Whitley Business Park. This will also include a new road bridge across the A45 to support access to the Whitley South development site (in Warwick District); and
- Walsgrave: Proposed inclusion of a new blue light access linking the A46 to the University Hospital as part of a new grade separated junction to replace the existing Clifford Bridge Road roundabout.

All scenarios have been run on a 'worst-case' basis to understand the potential impacts from additional vehicular traffic. Therefore, no adjustments for demand management, higher than average public transport patronage or increased walking and cycling have been made to the vehicle trip generation assumptions. The adoption and promotion of sustainably focused policies to achieve a real and sustained shift from private car use will be a priority for the Council; but equally it is important to know that the road network has the capability and resilience to accommodate the maximum additional demands placed upon it; within acceptable tolerances.

If all Local Plan development proposals are delivered within the plan period, it is estimated that the overall number of vehicle trips on Coventry's road network might increase by around 42% in the AM peak and 37% in the PM peak between 2013 and 2031, see table 10.1. Network delays per vehicle might be expected to increase by similar amounts, but due to the generally resilient highway network and relative lack of congestion compared to other major urban areas, modelling suggests that this would result in only a 1.4 minute increase in journey times per trip during the peak time.

Table 10.1 - Cordoned Coventry Network CASM Highway Demand / Trip Rate Changes

	2013 AM Peak	2031 Local Plan Growth AM Peak	% change	2013 PM Peak	2031 Local Plan Growth PM Peak	% change
Cars	71,633	102,046		77,973	106,361	
HGVs	4,511	5,213		2,970	3,392	
LGVs	7,040	10,909		5,899	9,032	
Total	**83,185**	**118,169**	**+42%**	**86,842**	**118,786**	**+37%**

The further modelling work which takes account of all Local Plan growth proposals and planned road infrastructure measures reduces delay in the network to 33% in the AM peak and 28% in the PM peak. This equates to a reduction of over 20% when compared to only the do minimum scenario. Although total vehicle kilometres increase, the overall

uplift in journey making is indicative of the improved connectivity across Coventry which will support increased economic growth and activity.

The most effected routes and junctions are primarily focused in the northwest of the city close to the periphery of the city centre, and to a lesser extent on major strategic corridors in the south and east of the city including the A45 and A46 corridors. This correlates with the anticipated increase in trips associated with the SUE sites in the west and northwest of the city at Eastern Green and Keresley and with planned employment growth in the south and east of the city including the University of Warwick, Whitley and Ansty Park. The greatest expected impacts on the highway network are primarily focused on the following routes:

- A4114 - Holyhead Road
- B4106 – Allesley Old Road / Spon End / Butts
- Coundon Road
- B4098 – Radford Road
- B4119 - Foleshill Road
- A4600 Walsgrave Road
- A428 Binley Road
- A45 corridor between Broad lane and the A46
- A444 north/south corridor
- A46 eastern bypass towards Ansty
- Stoneleigh Road on approach to the A46 (not in Coventry)

To complement this, a set of sustainable development and travel policies have been developed which are designed to enable a greater availability of viable travel choices that can also promote healthier lifestyles, improved air quality and increased access to services, training, skills and education. These, along with high technology solutions to enable agile and home/remote working, can be expected to reduce the car mode share for all trip purposes from 61% to 51% in the morning peak period, a 10% reduction (table 10.2).

Table 10.2 - Targeted 10% Reduction in Single Occupancy Car Use

Mode of Travel	Current Mode share	2031 Mode Share	% Change in Mode Share
Car Driver	44.6%	34.6%	-10%
Car Passenger	16.8%	17.8%	+1%
Cycle	1.8%	3%	+1.2%
Walk	26.6%	29.5%	+2.9%
Bus	8.9%	11.2%	+2.3%

Train	0.8%	1.5%	+0.7%
Other / increased home working	0.7%	2.4%	+1.7%
Total	**100%**	**100%**	

(Note. minor variations due to rounding)

Furthermore, the general increase in trips, combined with changing working practices and advances in technology, is also likely to encourage an uptake in more agile and flexible working arrangements; thereby reducing the number of trips taking place during peak periods.

Achieving a change in behaviour will be most relevant to commuting trips; and if just 10% of all car borne commuters over the plan period were to change their time of travel to before or after the peak hour period, 4,500 trips would be removed from the network in the morning peak. The West Midlands 1,500 Point Survey (2015) shows that Coventry currently has a more concentrated morning peak period than any other local authority area in the West Midlands.

If the impact of change in time of travel is combined with outcomes achieved through targeted modal shift interventions (as outlined in table 10.2) this would reduce the overall increase in the number of trips as a result of Local Plan development as follows:

Table 10.3 – Changes in Trips with Local Plan interventions

Travel Time Period	Total increase in trips as a result of Local Plan development	
	Worst-case scenario	With planned mitigation and behaviour changes
Morning Peak Hour	42%	24%
Evening Peak Hour	37%	19%

In addition to the above measures, the city is actively pursuing a programme of technology led transport improvements which focus on increasing journey time reliability, improved traveller confidence and travel information and streamlining payment systems. This is expected to make travel by different modes a more attractive and realistic option for a wider spectrum of the local population. Preliminary studies have suggested that on a corridor basis using technology to fine tune the performance of the transport network can release at least a 5-10% reduction in congestion benefits.

The IDP sets out the full package of measures which are considered to be essential to support the successful delivery of the Local Plan. With the delivery of these measures in combination with the delivery of sustainable transport policies and infrastructure, the predicted level of increase in traffic is considered to be manageable

Policy AC2: Road Network

1. New development proposals which are predicted to have a negative impact on the capacity and/or safety of the highway network should:

    a) Mitigate and manage the traffic growth which they are predicted to generate to ensure that they do not cause unacceptable levels of traffic congestion, highway safety problems and poor air quality. Highway mitigation and management measures should focus firstly on demand management measures (Policy AC3) including the promotion of sustainable modes of travel, and secondly on the delivery of appropriate highway capacity interventions. Highway capacity interventions should be appropriate to the scale of development and expected impact and will be determined through the associated Transport Assessment.

    b) Developments should seek to support and accommodate, where appropriate, measures which facilitate enhancements to the wider transport network including those set out in the Infrastructure Delivery Plan.

    c) Be served by routes which are suitable for that purpose. Where this is not achievable, proposals will only be considered acceptable if appropriate interventions can be applied to suitably mitigate any negative impacts, including the construction of new access link roads.

2. The Infrastructure Delivery Plan sets out specific measures and funding sources for the transport network improvements which are required to support the delivery of the Local Plan. The level of financial contributions that will be sought from developers for highways infrastructure will be set out in the Council's Community Infrastructure Levy Charging Schedule. The Council may also seek to secure the provision of transportation infrastructure through planning conditions and legal agreements.

3. Further guidance will be contained in the Coventry Connected SPD