

## MODELLING PROTOCOL

Title:	A5 The Longshoot and Dodwells Junctions Modelling Protocol
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This modelling protocol has been produced by National Highways and agreed with Leicestershire County Council and Warwickshire County Council, as the respective Local Highway Authorities, to assess the impact of development on the operation of the A5 The Longshoot and Dodwells Junctions.

The protocol has been prepared in accordance with the National Planning Policy Framework (2023) (NPPF), Planning Practice Guidance and Department for Transport Circular 01/2022 Strategic road network and the delivery of sustainable development, ('The Circular').

Please note that this modelling protocol is supplemental to pre-application advice and may be identified as a requirement due to appraisal of strategic modelling which is undertaken. Once identified that this modelling protocol is required to support the transport assessment, early engagement is requested with the three Highway Authorities and the relevant Local Planning Authority.

### ***Background:***

The need for a modelling protocol at this location has been identified due to the substantial level of speculative development coming forward which will impact on the operation of an already sensitive location on the Strategic Road Network (SRN) at the A5 The Longshoot and Dodwells Junctions.

At present both junctions are functioning at their operational capacity with queuing regularly observed on both the A5 Corridor and the Local Road Network during the peak periods.

The Highway Authorities are concerned that any further development will undermine the operational capacity of the junctions and exacerbate the existing issues which would undermine the safe and efficient operation of the highway network contrary to the NPPF. In addition to having a greater impact on residents who reside at this locale with their amenity affected through reduced air quality and increased noise pollution.

***Speculative Development:***

Speculative development is defined as any development which has not been allocated within a relevant adopted plan which has an impact on the A5 The Longshoot and Dodwells Junctions.

Any development which is not an allocation, or is on an allocated site but details differ to that identified within the Local Plan e.g., quantum of development, land use, development mix, will be required to undertake an enhanced level of detailed modelling to support any development applications to demonstrate the impact any proposals would have at this location. This modelling may also include a requirement to test the cumulative impact of other speculative development.

The following section sets out our requirements for the modelling which will be required for speculative developments.

***Modelling Assessment Requirements:***

In addition to local requirements, A5 The Longshoot and Dodwells Junctions modelling will take place through stages and the methodologies for each stage must be agreed in writing by the three Highway Authorities (National Highways, Leicestershire County Council and Warwickshire County Council) jointly prior to any modelling work being undertaken and in accordance with the NPPF, the Circular and local arrangements.

The relevant models are as follows:

- Leicestershire Pan Regional Transport Model (Leicestershire CC)  
<https://www.leicestershire.gov.uk/roads-and-travel/road-maintenance/leicester-and-leicestershire-integrated-transport-model-llitm>
- Nuneaton and Bedworth Wide Area (NBWA) Model (Warwickshire CC)  
<https://www.warwickshire.gov.uk/modelling-surveys/traffic-modelling-development-assessments/1>
- A5 Longshoot / Dodwells VISSIM Model (National Highways)

Agreement with the three Highway Authorities on the most appropriate model(s) to be utilised when assessing the development impacts will be critical. The methodology, parameters, assumptions, and inputs should be agreed with the three Highway Authorities prior to commencing any modelling work. It should be noted that if modelling work is carried out prior to agreement of inputs by all three Highway Authorities, this could mean that the outputs of this modelling are not accepted and result in the progress of the development proposals being delayed.

From the outputs of the strategic modelling, utilising either PRTM, NBWA Paramics Model or both, junction impact assessments will be required of the A5 The Longshoot and Dodwells Junctions using the VISSIM model held by National Highways, the latest version to be agreed and accepted by all three Highway Authorities prior to commissioning. This could require further validation work.

Please note that flow data and other outputs cannot be taken directly from PRTM or NBWA and inputted into the VISSIM model, but will first need to be furnished, the methodology for which will need to be agreed by all three Highways Authorities in advance.

This will enable a detailed junction impact assessment to be undertaken to understand how the networks operate with the speculative developments and will be the initial tool to assess any potential mitigation schemes identified by the applicants in this location.

Where mitigation is required, further assessment will be undertaken using the A5 Longshoot / Dodwells VISSIM Model. If the mitigation is strategic then this may require the modelling to be re-run utilising the PRTM / NBWA models.

***Emerging Committed Development:***

It should be noted that all committed developments should be agreed by the three Highway Authorities prior to any model runs taking place.

***Summary***

This note sets the modelling protocol for the A5 Longshoot and Dodwells Junctions, and the form the assessments should undertake. This protocol has been agreed by National Highways, Leicestershire County Council and Warwickshire County Council as the respective Highway Authorities.