WCC Modelling Protocol
Advice Note 000 – Model Licensing

Protocol Category	Model Licensing	Version	002
cc	Warwickshire County Council	File reference	WCC_MP_AN00.V002
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Introduction

1. This advice note (AN) has been produced to explain Warwickshire County Council's (WCC) requirements for Paramics modelling; the model scoping process; and how access and use of WCC's suite of models is controlled.

2. It is accompanied by other advice notes which provide guidance on different aspects of the development and application of these models. This includes advice notes that explain the modelling process, including AN 2 which sets out the expected model scenarios and AN3 which explains what model outputs should be reported.

Modelling requirements

3. WCC require Transport Assessments or Statements to be submitted to support planning applications where appropriate, in accordance with LTP3 Policy LUT5.

   The County Council will require Transport Assessments/Statements to be submitted to support planning applications where it is deemed appropriate. The information should follow the general guidance on Transport Assessments as published by the Department for Transport. Where significant development is proposed, the County Council will require the use of Micro-Simulation modelling techniques to support the Transport Assessment process. The County Council will also work with applicants to scope the individual requirements for the sites/areas under assessment.

4. Where significant development is proposed, WCC will use the modelling thresholds below to determine if the use of Micro-Simulation modelling is needed to support the Transport

Assessment. The County Council will also work with applicants to scope the individual requirements for the sites under assessment.

Roles and Responsibilities

5. The use of WCCs models is to be agreed with WCC in advance. WCC do not take any responsibility for the use of WCCs traffic models for purposes other than engaging with WCC. If modelling is required to satisfy other stakeholders such as Highways England or neighbouring authorities. It is expected that the licensee will engage with all parties separately to ensure that any approach which relies upon the use of WCC microsimulation models is agreeable.

6. The acceptability of the model for use will be subject to checking at the time of release and as well as any issues identified at the scoping stage. This will result in confirmation that the use of the model, for the intended purpose, is acceptable to WCC only.

7. It is not the responsibility of WCC or WCCs modelling consultants to confirm the acceptability of the model or proposed approach to other stakeholders.

8. Similarly, when engaging WCCs modelling consultants it should be noted that they should not be engaged in the production of interpretation arising from the modelling outputs. It is the responsibility of the licensee, through engagement with WCC to provide commentary on the acceptability or otherwise of outputs derived from the county's suite of traffic models.

Modelling thresholds

9. WCC require that any significant development is modelled using micro-simulation models where:

    - the trips associated exceed a threshold of 200 trips generated during the AM, PM or Saturday 3 hour peak periods and is situated in an urban area;
    - the development creates a significant alteration to the highway network;
    - The development is located at a point on the network considered to be of strategic importance; or
    - The development is located at a point on the network considered to be significantly constrained
    - The development or traffic from it is located in an area of sensitivity due to environmental constraints (e.g. within an AQMA) or there is Council Member or public concern.

10. WCC will consider the context and scope of each development and decide whether micro-simulation modelling is required. Where micro-simulation modelling is not required any

junction modelling submitted should be in accordance with the requirements discussed in section 8 below.

Geographical coverage of models

11. **Appendix A** contains details of the model coverage in the county. Where no model coverage exists for the area being considered the developer will need to discuss the best approach to developing a suitable microsimulation model. WCC will under certain circumstances be willing to develop a model in order to undertake the assessment and licence this to the developer.

Developments with Masterplans

12. When a developer considers that it is necessary to develop a number of planning applications which form part of an overall masterplan for a specific site, WCC will consider bespoke licencing arrangements,

Neighbouring authorities

13. Undertaking microsimulation modelling does not negate the need to consider appropriate modelling assessment required by neighbouring authorities. For instance where a development lies in close vicinity to the County boundary there may be a need to assess the impacts of the development within Warwickshire, but for example in the Coventry area, there would be a need to assess impacts with the CASM model. Under certain circumstances it may be necessary to inform the modelling within Paramics from wider strategic models such as CASM.

Junction modelling

14. Where WCC consider there to be impacts which require further investigation it is expected that the developer exports Demand Flows from the relevant Paramics model to inform isolated junction modelling within packages such as Arcady and LinSig. A number of LinSig models are available through our Traffic Control and Information System team (please contact Gafoor Din), these are not covered under this licence.

15. Where junction modelling on ARCADY, PICADY or LINSIG is required, WCC will require the following;

- All input and output electronic files (i.e. vpo , .vpi , .lsgx)
- Reporting on any changes to the default settings and any assumptions made (e.g. changes to intercept values, use of pedestrian facilitites to simulate blocking back).
- Use of queue markers to report on maximum and average queue lengths.
- Queuing may need to be plotted on a plan where one or more junctions require modelling or are affected by blocking back and queuing conditions.

Local Plan assessments

16. Where a developer requires access to a model to assess impacts to inform the Local Plan process and provide evidence for an EiP (i.e. prior to needing to undertake a full TA for a planning application), WCC will offer the developer access at 50% of the full licence fee, on the understanding that the remaining 50% would be paid at application stage.

Model scoping and trip rates

17. WCC will decide the specific requirements for micro-simulation model use and advise the developer or consultant on the most appropriate methodologies dependent on:

- Development trip rates during the two modelled 3 hr peaks.

- Location of development and nature of the local road network.

- Planned mitigation on the highway network.

Trip rates

18. Evidence of trip rates for each use class within the development (covering 3 hour AM and PM peak and Saturday peaks), site location and proposed access arrangement (if known at this stage) should be submitted to WCC prior to model scoping meetings. This will assist WCC in ascertaining the modelling requirements and appropriate model access fees.

19. Trip rate estimation should preferably be based upon TRICs outputs following logical and best practice methodologies. Selected sites should be reflective of development type/use, location (e.g. town centre/out of town, should exclude London and Irish sites and should represent "shire" type examples where possible), should take into account local populations and should also have a reasonable sample size. A common sense approach should be adopted, where a reasonable sample size cannot be achieved, selection parameters may need to be relaxed.

20. WCC would like the developer to submit trip rates based on current trip rate forecasts and evidence based forecast trip rates (which should be related to the mitigation measures suggested by the developer). WCC will then assess whether assumptions on modal shift can realistically be accommodated within existing and proposed mitigation measures and whether the related trip rate is suitable for use in the modelling. If, in our professional opinion, the proposed modal shift cannot be achieved, WCC will work with the developer to establish a more achievable level of modal shift.

21. Trip rates should be agreed with WCC and other authorities involved in the process (e.g. Highways England, neighbouring authorities) prior to engaging in modelling work.

Retail developments

22. For retail assessments, WCC are agreeable to discounting of trips to represent linked, transferred, diverted and pass by trips. However agreement should be sought prior to commencing any modelling work.

Mode share targets

23. WCC do not intend to set blanket aspirational mode share targets, as each development site will have differing existing sustainable transport infrastructure and differing possibilities for future provision of measures. Therefore modal shift and the related trip rates will have to be judged on a site-by-site basis. The onus will be on the developer to provide appropriate evidence and realistic mode share forecasts which should be related to the level of mitigation measures to be provided for the site.

Highways England Strategic Road Network

24. Where the developer's site is close to Highways England's Strategic Road Network (SRN), the requirements described in this protocol should be specified in consultation with Highways England.

Licence agreement and fees

25. In order to access one of the models for use in your assessment, please would you sign (on the final page) and return the **attached licence agreement** on behalf of the licensee.

26. The model licence fee is based on the total number of vehicle trips arriving and leaving the development site over the 6 hour modelled weekday period (i.e. 0700-1000 and 1600-1900), or the 3 hour modelled period on Saturdays (1100-1400), whichever is the higher figure. WCC will need to agree this with before the model licence fee may be confirmed.

27. Once WCC have agreed the licence fee, please complete and return the **attached fee schedule**. WCC will then arrange for an invoice to be raised for payment. Please confirm who this should be sent to with their contact details.

28. Model access fees are reinvested into data and model development to ensure WCC have an up to date modelling suite for development assessments.

Model assessment protocol

29. There are two options with regard to progressing the modelling work itself as follows:

30. Option 1 - you commission WCC's modelling consultants Vectos Microsim (VM) to undertake the modelling work on your behalf. VM would look to issue you with a proposal for undertaking the work inclusive of their fee. Please note that VM's costs associated with the modelling work would need to be borne by your client in full and are not covered by the model licence fee.

31. VM normally produce a results spreadsheet which WCC would request is submitted with your TS addendum alongside all models and log runs.

32. Under this option, there would be no requirement for VM's work to be independently audited so the last box in the fee schedule 'The Approved Auditor' may be left blank.

33. Option 2 - undertake the S-Paramics modelling yourselves or use a third party consultant. Under this option, you would be required commission VM to audit your modelling work including documentation of the approach you have followed. If VM identify any problems likely to affect the validity of the model output, you would need to address these prior to submission to WCC.

34. Please note that VM's costs associated with the audit would need to be borne by your client in full and are not covered by the model licence fee.