

Protocol for use of the Wokingham Highway Model

Appendices

- 1. Highway Model Documents
- 2. Development Thresholds
- 3. Scoping Report
- 4. Trip Rates
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Protocol

This protocol is for the use of Wokingham Strategic Highway Model or any other highways models prepared by or on behalf of Wokingham Borough Council (WBC). The modelling work is managed by WBC and carried out by WSP Ltd, to a scope of works provided to and agreed with WBC.

The Wokingham highway models are the property of the WBC. The models themselves, networks and matrices will not be released to external bodies.

All contact for access to the models must be through WBC Highways Development Control Team by emailing HighwaysDC@wokingham.gov.uk.

Highway Transport Model

WBC maintains a Wokingham Strategic Highways Model (hereafter referred to as WSTM). WSTM is based on 2015 transport data that represents an average weekday (Tuesday to Thursday). WSTM is available for

- AM peak hour (08:00-09:00)
- Inter peak hour (average 10:00 16:00)
- PM peak hour (17:00-18:00)

The current version is WSTM4 based on VISUM software.

To ensure compliance with modelling guidance the base year WSTM has been developed in accordance with the Department for Transport (DfT) web based Transport Analysis Guidance (WebTAG) on http://www.dft.gov.uk/webtag and the Design Manual for Roads and Bridges (DMRB) Volume 12. WBC will provide a copy

of the WSTM Local Model Validation Report (LMVR) for the base year models on request. (This is also available on the Council's website.)

The highway model is maintained on behalf of WBC by WSP Ltd.

A full suite of documents describing the modelling and forecasting can be found here and described in Appendix 1

https://www.wokingham.gov.uk/planning-policy/planning-policy-information/evidence-topics/.

Development Thresholds requiring modelling

Transport Assessments (TA) for new developments within the model area may need to use data from the traffic model to assist in demonstrating the impact of the development. This provides a consistent basis on which all development applications of a certain size can be assessed. The thresholds are based on the indicative thresholds contained in the DfT's Guidance on Transport Assessments.

WBC considers that all relevant planning applications should be tested using WSTM 4 subject to applying the thresholds in Appendix 2, but regardless of any existing consent. This is to take account of any changes on the network between one consent being granted and a resubmitted scheme. This requirement will be negotiated on a case by case basis between WBC and the developer (or their consultant).

Modelling Brief

The developer shall supply WBC with a proposed scope of work outlining the testing required. This will need to be discussed and agreed with WBC. What needs to be included in the modelling brief is set out in Appendix 3.

Without an approved scoping report, the model test will not be undertaken and WBC will be required to consider/determine applications based on information supplied which is unlikely to be adequate in terms of meeting the tests of CP4 and CP6 of the Core Strategy.

The approach adopted by WBC in the development of its Core Strategy is to use default trip rates which are detailed in the "Wokingham Strategic Transport Model Forecasting Approach" and is the Council's preferred approach. The trip rates can also be found in Appendix 4

If required, further assessment of different highway schemes or levels of development can be provided. This would need to be included in any scoping report as scenarios. WBC will advise on the additional costs for each scenario.

After consideration of the proposed scope of works and receipt of development details, WBC will confirm in writing the accepted modelling approach to be adopted.

Modelling Results

Model output, unless otherwise agreed, will be provided as set out in Wokingham Strategic Transport Model 4 (WSTM4) Highway Model Outputs report which is available on the Borough website.

The information can include:-

- Actual and Demand Flow
- Junction Turning Flow (only if requested)
- Delay
- Level of Service
- Volume over Capacity (VoC)

WBC will carry out a sense check on the data before it is released. It will be for the developer to use the data as necessary to support their application.

Copies of any reports or analysis generated by this work will be retained and may be used by the Council in any form. The models, including any modifications made as part of this work, will remain the property of the Council. WBC will undertake not to divulge this information to any other third party without first gaining the developer's agreement. However, once the information has been submitted as part of a planning application, it does become public.

Charges

Once the scoping report has been approved by both WBC and the developer, a costing of the work will be sent to the developer (or the consultant) for approval. All costs will be eligible for VAT.

All modelling requests will be charged with a 40% uplift to ensure that the traffic models are maintained and extended, where required, to support assessment of transport proposals within the Borough.

Charges are dependent on the work required to amend and run the traffic model(s) for the development scenarios requested. The amount of work will depend on whether the information requested is available from an existing scenario already modelled or whether it requires the development of new scenarios, modification of or new traffic model zones, network modifications and the number of model runs and analysis.

Work will not start until the Council has received cleared funds for carrying out the work.

Modelling Programme

Once the costing of the work has been agreed, a purchase order will need to be submitted to WBC and contain the following:-

- Name and address to where invoice will need to be sent
- Description of development and location
- Description of work
- Cost

On receipt of the purchase order, WBC will raise and send an invoice for the work. WBC will also raise a purchase order for WSP to carry out the work

Once the funds for the modelling work have cleared, the data will be issued within 10 to 15 working days, depending on the complexity of the work requested.

WBC will carry out a review of the data prior to sending out. If a problem has been identified with the data, WBC will inform the developer/consultant immediately with a revised delivery date.

Future Model Development

In accordance with S30 of the Town & Country Planning Act WBC reserves the right to update the model and the model protocol as necessary. Where reasonably practical this shall be notified to interested parties and/or on the Council's website but may affect the assessment of pre-application and planning applications.

The traffic model will be periodically updated to take account of committed developments. The Council will inform the developer of the appropriate Reference Case against which the developer's scheme/scenario will be compared.

Process Management

The management of the modelling will be the responsibility of WBC Highways DC. All contact will need to be through the following email address:-

HighwaysDC@wokingham.gov.uk

Highways DC will be responsible for arranging and assessing any modelling work whether required by developers or consultants. A modelling log will be maintained to track the progress of the requested modelling.

The modelling log will also identify versions of the master model that can then be updated once developments have received planning approval and hence treated as committed developments for future modelling runs.

Appendix 1 Suite of Documents

WSTM4 Data Collection Report

WSTM4 Local Model Validation Report

WSTM4 Local Model Validation Report Addendum

WSTM4 Forecasting Approach Report

WSTM4 Modelling Outputs Report

All these reports are available on the Borough website and are available at the following address: https://www.wokingham.gov.uk/planning-policy/planning-policy-information/evidence-topics/.

Appendix 2 Development Thresholds

Ref	Land Use		Threshold
1	A1 Food Retail	GFA	>800sqm
2	A1 Non Food Retail	GFA	>1500sqm
3	A2 Financial and Profession Services	GFA	>2500sqm
4	A3 Restaurants and Cafes	GFA	>2500sqm
5	A4 Drinking Establishment	GFA	>600sqm
6	A5 Hot Food Takeaway	GFA	>600sqm
7	B1 Business	GFA	>2500sqm
8	B2 General Industrial	GFA	>4000sqm
9	B8 Storage and Distribution	GFA	>5000sqm
10	C1 Hotels	Bed	> 100 beds
11	C2 Residential institutions – hospitals,	Beds	>50 beds
	nursing homes		
12	C2 Residential institutions – residential	Student	>150 students
	education		
13	C2 Residential institutions institutional	Resident	>400 residents
	hostels		
14	C3 Dwellings (flats and houses)	Unit	>80 units
15	D1 Non-residential Institution	GFA	>1000sqm
16	New Primary School	Pupil	Not included
17	New Secondary School	Pupil	Not included
18	D2 Assembly and Leisure	GFA	>1500sqm

Appendix 3 Scoping report

The following items will need to be included in any submitted scoping report, namely:-

Administration

- Development Title
- Developer
- Consultant contact details, including email and telephone number
- Has the development already been discussed with the Planning Officer? Please give brief contact/discussion details and details of advice received.

Development details

- Development location plan (indicating red line boundaries where these form part of wider Strategic Development Locations (SDL) the test must include an indication of development in the remaining land parcels).
- Description of the current use of the site (if any)
- The forecast year and time periods to be assessed
- Access locations (indicating the development served from each)
- Highway infrastructure changes
- Scaled layout plan of roads and key junctions within and adjacent to the development, separately indicating existing and proposed streets, controls to movement (including bus priorities) including design speed and entry capacity/green-time of junctions as appropriate
- Numbers of housing units and mix of housing (number of dwellings by number of habitable rooms) and indicative location of where these units are located
- Number and Gross Floor Area (GFA) of commercial units including type (by planning use class) including anticipated staff/visitors/customers, parking provision and access/parking controls, and indicative location of where these units are located.
- The initial list of junctions that information is required. (Please note that additional junction information may be required for junctions that WSTM4 indicate that there could be a problem caused by the development. This would be at an additional cost).
- Required outputs from the model.

Appendix 4 Modelling Trip Rates

Car and Light Vehicles

	Development Type	Number of Sites	AM Peak Hour (0800-0900)			Av. Inter Peak Hour (1000-1600)			PM Peak Hour (1700-1800)		
	речеторгнетт туре		Arrival	Departure	Total	Arrival	Departure	Total	Arrival	Departure	Total
1	Food Retail (A1) per 100sqm	1	2.64	2.14	4.77	6.33	6.09	12.43	6.23	6.89	13.11
2	ood Retail (A1) per 100sqm	3	0.20	0.04	0.25	2.56	2.51	5.07	1.57	1.62	3.19
3	Financial and Professional Services (A2) per 100sqm	10	2.20	0.19	2.39	0.42	0.57	0.99	0.23	1.98	2.22
4	rant & Café (A3) per 100sqm	2	0.00	0.00	0.00	1.68	1.51	3.20	2.68	0.83	3.51
5	Business (B1) per 100sqm	5	1.53	0.16	1.69	0.30	0.33	0.64	0.17	1.30	1.46
6	al Industry (B2) per 100sqm	6	0.51	0.19	0.70	0.22	0.24	0.46	0.10	0.49	0.59
7	or Distribution (B8) per 100sqm	3	0.07	0.06	0.13	0.09	0.10	0.19	0.04	0.09	0.14
8	Hotels (C1) per bed	4	0.33	0.91	1.24	0.27	0.30	0.57	0.59	0.28	0.86
9	Dwelling Houses (C3) per unit	13	0.17	0.41	0.58	0.18	0.18	0.36	0.36	0.16	0.51
10	Dwelling Flats (C3) per unit	8	0.06	0.18	0.25	0.11	0.11	0.22	0.19	0.10	0.29
11	tesidential Institutions (D1) per 100sqm	5	6.75	3.60	10.36	5.22	5.26	10.48	3.47	4.64	8.11
12	Primary School (D1) per pupil	2	0.70	0.58	1.28	0.10	0.10	0.20	0.04	0.08	0.11
13	Secondary School (D1) per pupil	4	0.11	0.08	0.19	0.02	0.03	0.05	0.02	0.03	0.05
14	Leisure Centre (D2) per 100sqm	3	0.25	0.27	0.52	0.35	0.31	0.66	1.01	0.70	1.71
15	Cinema (D2) per 100sqm	2	0.00	0.00	0.00	1.11	0.77	1.89	1.10	1.04	2.14
16	Sports Hub (D2) per pitch	1	1.30	0.70	2.00	0.58	0.62	1.20	2.30	0.80	3.10

HGV trip rates

	Development Type	Number of Sites	AM Peak Hour (0800-0900)			Av. Inter Peak Hour (1000-1600)			PM Peak Hour (1700-1800)		
			Arrival	Departure	Total	Arrival	Departure	Total	Arrival	Departure	Total
1	Food Retail (A1) per 100sqm	1	0.02	0.06	0.08	0.04	0.03	0.06	0.01	0.02	0.03
2	ood Retail (A1) per 100sqm	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Financial and Professional Services (A2) per 100sqm	10	0.01	0.01	0.01	0.00	0.03	0.03	0.00	0.00	0.00
4	rant & Café (A3) per 100sqm	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Business (B1) per 100sqm	5	0.02	0.01	0.03	0.01	0.03	0.04	0.00	0.00	0.01
6	al Industry (B2) per 100sqm	6	0.02	0.01	0.03	0.02	0.03	0.04	0.01	0.01	0.01
7	r Distribution (B8) per 100sqm	3	0.01	0.01	0.03	0.02	0.03	0.05	0.02	0.01	0.03
8	Hotels (C1) per bed	4	0.01	0.01	0.02	0.01	0.01	0.02	0.00	0.00	0.00
9	Dwelling Houses (C3) per unit	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Dwelling Flats (C3) per unit	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	esidential Institutions (D1) per 100sqm	5	0.00	0.00	0.00	0.02	0.02	0.05	0.00	0.00	0.00
12	Primary School (D1) per pupil	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Secondary School (D1) per pupil	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Leisure Centre (D2) per 100sqm	3	0.01	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00
15	Cinema (D2) per 100sqm	2	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
16	Sports Hub (D2) per pitch	1	0.10	0.10	0.20	0.00	0.00	0.00	0.00	0.00	0.00

Appendix 5 Protocol Flow Diagram

