COMET 2036 Reference Case

Modelling Assumptions

Hertfordshire County Council

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Quality information

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1. Introduction

Introduction

1.1 The COMET 2036 Reference Case Model has been developed for Hertfordshire County Council (HCC) to provide a useful starting point for certain model applications such as developer testing and potentially business case use[1].

1.2 This note sets out the assumptions that have been used in the modelling. These assumptions should be carefully reviewed alongside the COMET MSR[2] and COMET LMVR[3] to determine its suitability for use and when analysing model results.

1.3 The rest of this section describes the transport model background and coverage.

Transport Model Background and Coverage

1.4 The COMET 2036 Reference Case Model utilises the recently updated Hertfordshire Countywide Model of Transport (COMET v5).

1.5 COMET is a multi-modal transport model which has been developed with a 2014 Base Year. The modelling suite includes:

- A Variable Demand Model, built in Emme;
- A Public Transport assignment model, built in Emme; and
- A Highway assignment model built in SATURN.

1.6 The Base year highway model represents an average weekday (Monday to Thursday) during April 2014 for the following time periods:

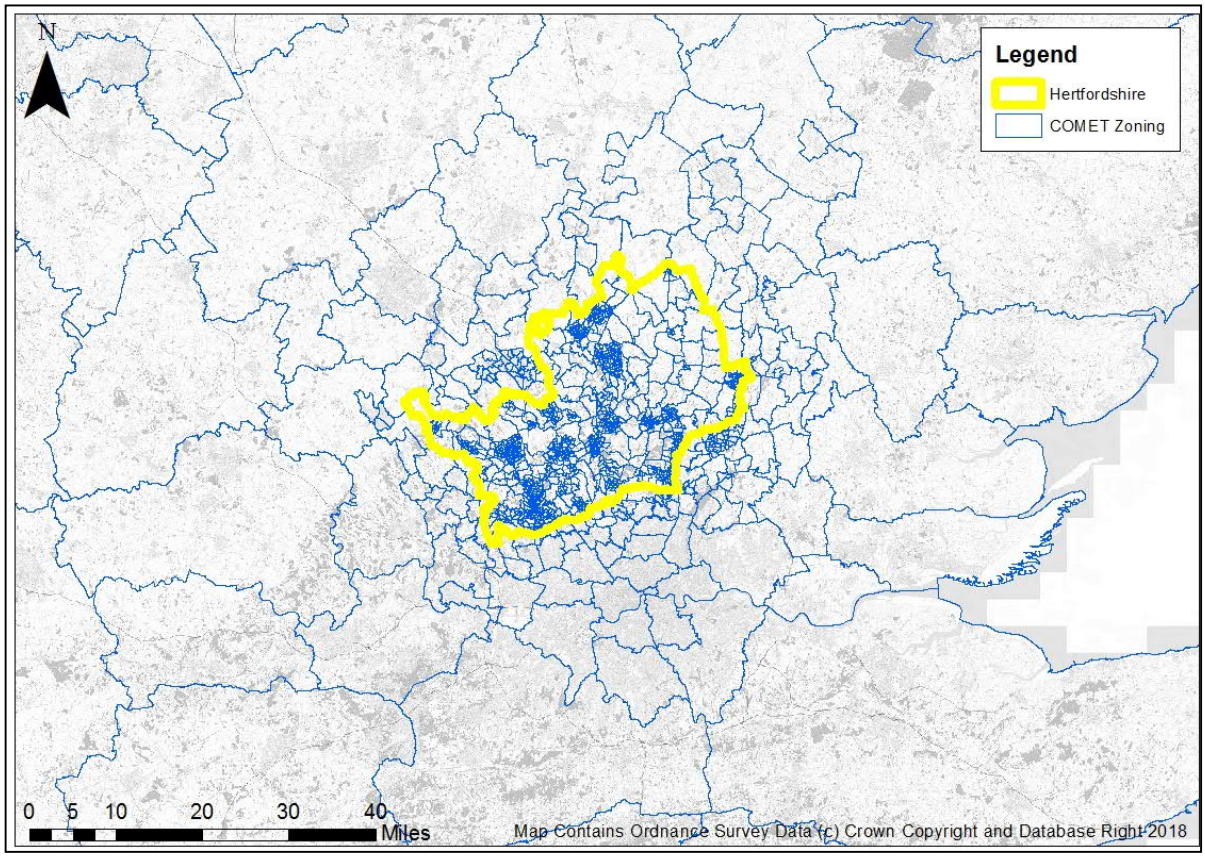
- AM Peak hour: 08:00 to 09:00
- Inter-peak hour: average hour between 10:00 and 16:00
- PM Peak hour: 17:00 to 18:00

1.7 COMET is most detailed in Hertfordshire; however, it covers the whole of Great Britain as shown in **Figure 1**.The highway model has two distinct levels of detail:

- Detailed (simulation) network and spatially disaggregate demand matrices were represented in Hertfordshire (Area of Detailed Modelling) and adjacent to Hertfordshire (Rest of Fully Modelled Area). The Area of Detailed Modelling and Rest of Fully Modelled Area are collectively referred to as the Fully Modelled Area.
- Less detailed (buffer with fixed speeds) network and more aggregate demand matrices outside Hertfordshire and its vicinity.

[1] To be suitable for business case use, additional steps will have to be taken with regards to constraining planning data to NTEM forecasts and a review of the model performance in the AoI of the scheme in question.
[2] "COMET_MSR_v3.pdf" issued via email to HCC 28th November 2019
[3] "COMET_LMVR_v5.1.pdf" issued via email to HCC 6th November 2019

Figure 1: COMET Zoning System



Note Structure

1.8 The rest of the report is structured as follows:

- **Section 2-** Classification of 2036 Reference Case Assumptions
- **Section 3 -** Infrastructure Assumptions
- **Section 4 -** Planning Data Assumptions
- **Section 5 -** Uses of the 2036 COMET Reference Case
- **Appendix A -** Employment Densities

2. Classification of 2036 Reference Case Assumptions

2.1 The 2036 COMET Reference Case forecast scenarios include several changes to the modelled transport network relative to the 2014 Base Year. This primarily concerns the addition of new transport schemes in the Fully Modelled Area, the adjustment of buffer network speeds in the External Area and the addition of future year planning data.

2.2 Due to the intended purpose of this model (i.e. primarily a consistent starting point for developer testing), the certainty level of new transport schemes and planning data has been considered. New transport schemes have only been included if their certainty level is deemed by HCC to be “Near Certain” or “More than likely” according to the WebTAG definitions in Table 1 (replication of Table A2 from WebTAG Unit M4 – Forecasting and Uncertainty). The infrastructure and planning data assumptions used to create the 2036 COMET Reference Case are detailed in Section 0 and Section 4 respectively.

Table 1: Classification of Future Inputs

Probability of the input	Status	Reference Case Assumption
Near certain: the outcome will happen or there is a high probability that it will happen	Intent announced by proponent to regulatory agencies. Approved development proposals. Projects under construction.	This should form part of the COMET 2036 Reference Case Scenario
More than likely: the outcome is likely to happen, but there is some uncertainty	Submission of planning or consent application imminent. Development application within the consent process.	This could form part of the COMET 2036 Reference Case Scenario
Reasonably foreseeable: the outcome may happen, but there is significant uncertainty	Identified within a development plan. Not directly associated with the transport strategy / scheme but may occur if the strategy / scheme is implemented. Development conditional upon the transport strategy / scheme proceeding. Or, a committed policy goal, subject to tests (e.g. of deliverability) whose outcomes are subject to significant uncertainty.	These should be excluded from the COMET 2036 Reference Case Scenario, but may form part of the alternative scenarios
Hypothetical: there is considerable uncertainty whether this outcome will ever happen	Conjecture based upon currently available information. Discussed on a conceptual basis. One of a number of possible inputs in an initial consultation process. Or, a policy aspiration.	These should be excluded from the COMET 2036 Reference Case Scenario, but may form part of the alternative scenarios

3. Infrastructure Assumptions

Introduction

3.1 This section provides a description of the transport infrastructure options included in the COMET 2036 Reference Case.

Highway Network Infrastructure

3.2 Table 2 shows the list of schemes sorted by district included in the COMET 2036 Reference Case. The 2036 COMET Reference Case includes individual scheme IDs which have been allocated by AECOM in liaison with HCC.

Table 2: Highway Network Infrastructure List

Scheme ID	Location	Description	District	Implementation Year	Certainty
Brox_1	M25 jct 25-27	Widening of motorway to 4 lanes with hard shoulder running	Broxbourne	Implemented	Implemented
Brox_2	M25 junction 25	M25 junction 25 RIS 2 capacity improvements - Option 2	Broxbourne	2021	More than likely
Brox_3	Hoddesdon	New link to Essex Road roundabout with existing link retained as a local access. New link has greater capacity compared to existing link. Narrowing of Dinant Link W entry to roundabout from 3 to 2 lanes.	Broxbourne	2021	More than likely
Brox_4	Turnford / Brookfield	New 4 lane Link road runs through to Halfhide Lane which then becomes Brookfield Lane W south of the retail park - SB on slip at the Turnford interchange is no longer assumed.	Broxbourne	2031	More than likely
Brox_5	Hoddesdon	Additional lane on eastern arm of roundabout	Broxbourne	2021	Near Certain
Brox_6	Hoddesdon	Roundabout improvements to provide additional eastbound & southbound lanes	Broxbourne	2021	Near Certain
Brox_7	Hoddesdon	A10 Hoddesdon Dumbbell Roundabout - Dinant Link Road - New roundabout to permit access to High Leigh development	Broxbourne	2018	Near Certain - being built
Daco_1	Hemel Hempstead	Lane reallocation	Dacorum	2031	More than likely
Daco_2	Hemel Hempstead	Junction Signalisation	Dacorum	2031	Near Certain
Daco_3	Hemel Hempstead	Rearrangement of junction & signal optimisation	Dacorum	2031	More than likely
Daco_4	Hemel Hempstead	New link between Boundary Way and Wood Lane End (assume single carriageway with 3-way traffic and 30mph. Buncefield Lane north of Boundary Way (between Boundary Way and Cherry Tree Lane and between the A414 and Green Lane will become a quietway so does not need to be added).	Dacorum	2019	Near Certain
Daco_5	Hemel Hempstead	Signal optimisation	Dacorum	2031	More than likely
Daco_6	Hemel Hempstead	Signal optimisation	Dacorum	2031	More than likely
Daco_7	Hemel Hempstead	Signal optimisation	Dacorum	2031	More than likely

Scheme ID	Location	Description	District	Implementation Year	Certainty
Daco_8	Berkhamsted	improvements including traffic lights and pedestrian crossings required in association with MU/6: Land at Durrants Lane / Shootersway (Egerton Rothesay School) and Local Allocation LA4: Hanburys.	Dacorum	2018	Implemented
Daco_10	Hemel Hempstead	New roundabout access	Dacorum	2031	More than likely
Daco_13	A4146 Water End	A4146 HGV ban at Waterend	Dacorum	2017	Implemented
EHerts_1	Bishops Stortford	Junction capacity improvements associated with Bishops Stortford North development	East Herts	2021	Near Certain
EHerts_2	Bishops Stortford	Additional lanes on approach arms	East Herts	2021	Near Certain - being built
EHerts_3	A120 Little Hadham	New A120 bypass	East Herts	2024	Near Certain
EHerts_4	A602 Ware - Watton at Stone	signalisation and upgrade of A10 / A602 junction, upgrade of Anchor Lane junction, realignment of A602	East Herts	2018	Implemented
EHerts_5	Stansted Abbotts	Remove the existing Bus Ln on Ware Rd approach to A10 Amwell Rbt	East Herts	2021	Implemented
EHerts_6	Bishops Stortford	New access from Bishops Stortford North development to A1250 Hadham Road	East Herts	2019	Near Certain - being built
EHerts_7	North Bishops Stortford	30mph single carriageway road connecting A1250 Hadham Road with A120 and B1004 Rye Street. Early accesses to existing roads already being built. Full Spine Road and new A120 access assumed by end of development	East Herts	2031	Near Certain
EHerts_8	North Bishops Stortford	New access from Bishops Stortford North (ASR5) development to Rye Street	East Herts	2021	Near Certain - being built
EHerts_9	Bishops Stortford	Signalisation of existing junction and provision of rear access from Motorway Service area	East Herts	2021	More than likely

Scheme ID	Location	Description	District	Implementation Year	Certainty
EHerts_10	Bishops Stortford	Provision of new MSCP with new signalised access and signalisation of A1250 / Northgate End junction	East Herts	2021	Near certain
EHerts_11	Bishops Stortford	Signal optimisation - signals are being refurbished	East Herts	2018	Near certain
EHerts_12	Standon	Signalisation of junction	East Herts	2025	More than likely
EHerts_13	Bishops Stortford	Introduction of traffic calming measures, improvements of pedestrian footpaths and crossing facilities.	East Herts	2021	Near Certain
EHerts_14	North and East of Ware	1.Newarm on A1170 / A10 roundabout and signalisation. 2.Access onto B1004 Widbury Hill East of Ware. 3. Two Accesses are joined by a distributor Road in between which also intersects with Fanhams Hall Road	East Herts	2031	More than likely
EHerts_15	Sawbridgeworth	Upgrades of A1184/West Road/Station Rd junction	East Herts	2021	More than likely
EHerts_16	Buntingford	Capacity enhancements to junction	East Herts	2021	Near Certain
EHerts_17	Hertford	Signal optimisation.	East Herts	2021	More than likely
EHerts_18	Buntingford	Reduced speed limit from 40 - 30mph	East Herts	2021	Near certain
Hmere_1	Borehamwood	Changes to signal staging and timing	Hertsmere	2017	Implemented
Hmere_2	Bushey	Traffic calming & pedestrian enhancements	Hertsmere	2021	Near Certain
Hmere_3	Borehamwood	Upgrade of junction to continental roundabout (DWG files available on AGOL)	Hertsmere	2031	More than Likely
Hmere_4	Borehamwood	Junction improvement with replacement of the Tesco roundabout with signals	Hertsmere	2031	More than likely
Hmere_5	M25 junction 18-25	Smart motorway with hard shoulder running	Hertsmere	2016	Implemented
Nherts_1	Royston	New left in left out access from York Way onto A505	North Herts	2031	Near certain
Nherts_2	Baldock	Signal optimisation	North Herts	2021	More than likely
Nherts_3	Letchworth	A505 / Norton Way. Signal optimisation: add extra stage for the movements from Willian Way	North Herts	2021	More than likely

Scheme ID	Location	Description	District	Implementation Year	Certainty
Nherts_4	Hitchin	Signal controlled System at junction with optimisation of timings	North Herts	2021	More than likely
Nherts_6	Royston	Widening of junction approach arms	North Herts	2021	Near Certain - being built
Nherts_7	Hitchin	Improve signalised junction and pedestrian phasing	North Herts	2021	More than likely
Nherts_8	Hitchin	Improve signalised junction and pedestrian phasing	North Herts	2021	More than likely
Nherts_9	Royston	Widening of roundabout approach arms	North Herts	2021	Near Certain - being built
Nherts_10	Royston	Widening of roundabout approach arms	North Herts	2021	Near Certain - being built
Nherts_11	Royston	Construction of a new roundabout onto A505, Royston	North Herts	2021	Near Certain - being built
StAlb_1	St Albans	St Albans Road/Sandridge Road/Marshalswick Lane/Beech Road - junction improvement	St. Albans	2021	Near Certain
StAlb_2	Colney Heath	A414 Colney Heath longabout safety scheme	St. Albans	2021	Near Certain
StAlb_3	St Albans	Oaklands development new access onto Sandpit Lane	St. Albans	2021	Near Certain - being built
StAlb_4	Chiswell Green	New Arm to roundabout to serve new hotel development	St. Albans	2021	Near Certain
Stev_1	A602 Stevenage	Junction Signalisation	Stevenage	2018	Implemented
Stev_2	Stevenage	Upgrading of the existing Gresley Way/A602 roundabout to signals	Stevenage	2031	More than likely
Stev_4	Stevenage	Upgrade of A602 / Gunnels Wood Road / GSK junction to hamburger layout	Stevenage	2021	More than likely
Stev_5	Stevenage	Signalisation and capacity improvements at existing junction (A602 phase 1 improvement works)	Stevenage	2018	Implemented
Stev_6	Stevenage (south)	Hertford Road Speed reduction measures & bus gate	Stevenage	2021	Near Certain - being built

Scheme ID	Location	Description	District	Implementation Year	Certainty
Wat_1	Watford	Implement 20 mph zone in defined areas	Watford	2031	Near Certain
Wat_2	Watford	New link road from Dalton Way providing access to Watford Health Campus	Watford	2018	Implemented
WelHat_1	Welwyn Garden City	Welwyn Garden City Town Centre Development	Welwyn Hatfield	2021	More than likely
A1M_1	A1 (M) jct 6-8	Widening of motorway to 3 running lanes between junctions 6-8.	North Herts / Stevenage / Welwyn Hatfield	2026	More than likely
CBeds_1	M1 - A5	New link between M1 and A5 north of Dunstable	Central Beds	2017	Implemented
CBeds_2	Biggleswade	A1 Biggleswade Junction improvements – capacity improvements and dedicated left turn	Central Beds	Complete	Implemented
Lut_1	M1 jnc 11a - A6	New link between M1 and A6 around North Luton	Luton	2022	More than likely
Lut_2	Luton	Dualling of Vauxhall Way between Stopsley Way / Hitchin Road and Kimpton Road	Luton	2021	Near certain
Lut_3	Luton	Widening of Gipsy Lane between Kimpton Road to just before link road to New Airport Way to 4 lanes (no central reserve	Luton	2020	Near certain
Lut_4	Luton	Luton Town Centre Bypass	Luton	Implemented (opened Sept 2014)	Implemented

Public Transport Schemes

3.3 **Table 3** sets out the public transport schemes included in the COMET 2036 Reference Case.

Table 3: Public Transport Infrastructure List

Scheme ID	Location	Description	District	Implementation Year	Certainty
Brox_1	Broxbourne	New bus service High Leigh - Broxbourne Station	Broxbourne	2031	Near Certain
Lut_1	Luton	New Light Rail Transit connection between Luton Parkway and Luton Airport	Luton	2021	More than likely
Stev_1	Stevenage	Hertford Road Speed reduction measures & bus gate	Stevenage	2019	Near certain
Stev_2	Stevenage	Relocation of existing bus station	Stevenage	2021	More than likely
Herts_1	East Coast Main Line and Hertford Loop services	Timetable changes and change in route for Thameslink and Great Northern services	Hertfordshire	2018	Implemented
Herts_2	Heathrow to Harlow	Rationalisation of existing 724 route into route 724, & 302 - splitting it into sections with improved frequency over shorter distances e.g. WGC to Hertford 1bph to 2bph	Hertfordshire	2020	Near Certain
Herts_3	Aylesbury to Watford, and Maple Cross to Watford	Aylesbury to Watford now 20 min frequency on 500 service. 520 retention on section from Maple Cross to Watford Junction section only (rather than Hemel).	Hertfordshire	2019	Implemented
Herts_4	Hemel Hempstead to Stevenage	Route now becomes 300, 301 and 303	Hertfordshire	2019	Implemented

4. Planning Data Assumptions

Planning Data and Trip-Ends

4.1 The forecast planning data (i.e. employment and dwelling growth) by COMET zone for all 10 Hertfordshire districts was collated and provided by HCC. Similarly, to the infrastructure data, only planning data with a high level of certainty has been included. In practice this means the planning data provided contains two elements:

- Completions (completed sites between the COMET base year of 2014 and the current year of 2019); and
- Permissions (planning data with a high level of certainty).

4.2 Outside of Hertfordshire growth assumptions are based on National Trip End Model (NTEM) v7.2 projections.

Planning Data within Hertfordshire

Housing/Dwellings

4.3 The growth projections from HCC are provided for housing and employment, however, this doesn't include population changes. Therefore, AECOM converts housing projections into population by using the average population/household value for the appropriate MSOA and year from NTEM v7.2.

Employment

4.4 Local planning authorities have less control over employment growth and therefore less information on likely growth by location. Much of the employment data provided for the Hertfordshire districts was in terms of employment floor space rather than jobs and has therefore been converted to an estimated number of jobs by AECOM. This conversion process is based on employment densities as defined in the Employment Densities Guide (November 2015 – Homes and Communities Agency). For land use types not included in this guide, site data from TRICS has been used to generate an employment density value. The conversion factors used for COMET can be seen in **Appendix A** .

4.5 Projected conversions/demolitions which involve the change or loss of a certain land use type have been taken into consideration during the employment data collation process. This reduces the risk of double counting job sites.

4.6 In most cases, the conversions/demolitions are directly accounted for in their COMET zone. For some zones, however, deducting the number of units to be demolished leads to negative values. This is due to discrepancies between the planning data and NTEM v7.2 employment allocations. To address this, where reduction of employment exceeds existing employment in a zone, the remaining reduction of employment has been subtracted from neighbouring zones proportionally to reconcile the data. This addresses planning data and NTEM v7.2 employment allocation discrepancies, whilst maintaining the total reduction in employment forecast for each area.

Planning Data Processing

4.7 Population and employment data are processed to be consistent with the NTEM categories. For population, the data are classified firstly by age, gender and employment status into 11 categories, and secondly by car availability into eight classifications. Employment forecasts are included within the attraction data (along with households and holiday homes), with jobs classified into 12 employment categories. The factors used to split total population and total jobs into the categories listed below are derived from the corresponding MSOA and year from NTEM v7.2.

4.8 A summary of the classifications for population, car availability and employment are given in **Table 4**, **Table 5**, and **Table 6** respectively.

Table 4: NTEM Population Categories

NTEM Category	Description
PT01	Children, aged 0 to 15
PT02	Males in full-time employment, aged 16 to 74
PT03	Males in part-time employment, aged 16 to 74
PT04	Male students, aged 16 to 74
PT05	Males not employed / students (i.e. economically inactive), aged 16 to 74
PT06	Males aged 75 or over
PT07	Females in full-time employment, aged 16 to 74
PT08	Females in part-time employment, aged 16 to 74
PT09	Female students, aged 16 to 74
PT10	Females not employed / students (i.e. economically inactive), aged 16 to 74
PT11	Females aged 75 or over

Table 5: NTEM Car Availability Categories

NTEM Category	Description
HHT1	One adult household with no car
HHT2	One adult household with one or more cars
HHT3	Two adult households with no car
HHT4	Two adult households with one car
HHT5	Two adult households with two or more cars
HHT6	Two adult households with no car
HHT7	Two adult households with one car
HHT8	Two adult households with two or more cars

Table 6: NTEM Employment Categories

NTEM Category	Description
E03	Primary & Secondary schools
E04	Higher education
E05	Adult education
E06	Hotel, camp sites, etc.
E07	Retail trade
E08	Health / Medical
E09	Services (business, other, postal / courier) & equipment rental
E10	Industry, construction and transport
E11	Restaurants and bars
E12	Recreation and sport
E13	Agriculture and fishing
E14	Business

Planning Data outside Hertfordshire

4.9 The availability of planning data outside Hertfordshire is limited. Consequently, growth in terms of housing, employment and population in the rest of Great Britain is derived directly from NTEM v7.2.

Model Development Zones

Background

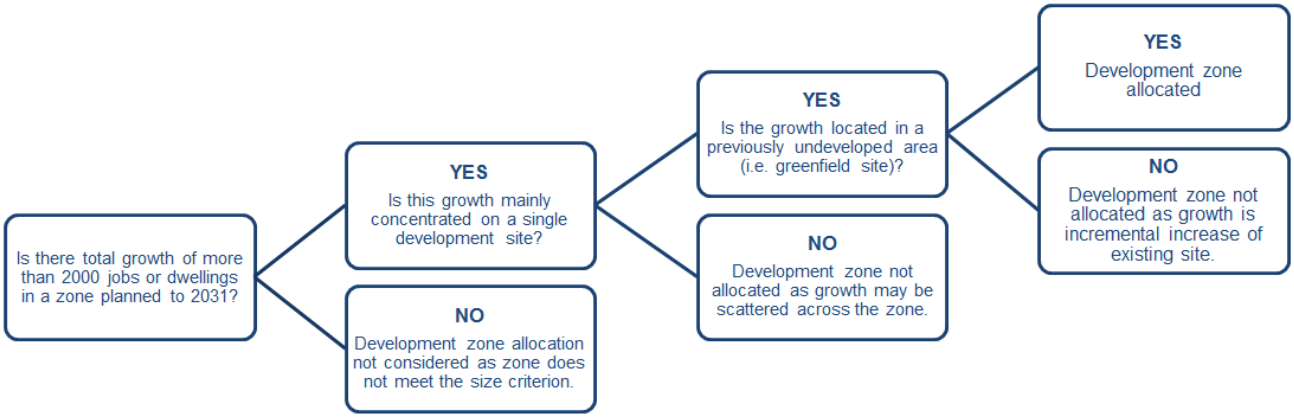
4.10 The following section provides information on development zones in COMET, their likely use for future applications and guidance for using development zones.

4.11 There are a number of locations in Hertfordshire where significant levels of growth (in terms of housing and/or employment) are anticipated to come forward in previously undeveloped areas. The trip patterns of these developments are likely to be materially different to those of the existing land use, and as such require special consideration in terms of forecast demand estimation and loading point(s) onto the network.

4.12 Given the limited number of development zones available in the model (50), care has been taken to minimise the number used at this stage (thereby leaving more available for later applications). To this end, developments are allocated to model development zones according to the selection process in **Figure 2**.

4.13 Specifically, for the COMET 2036 Reference Case scenario, no existing development zones have planning data associated to them. This is due to the level of certainty associated to the sites within development zones. It is expected future applications using the 2036 Reference Case model as starting will make use of development zones as part of development testing.

Figure 2: Model Development Zone Selection Process



Derivation of Development Zone Demand

4.14 Zones which are empty in the Base Model require special consideration in the demand model. The trip-end model generates estimates of trips from them as described in the section entitled COMET Trip End Model Forecast Update. However, it is not possible to apply proportional growth to the base matrix for these zones as the Base matrix has no associated demand.

4.15 A set of gravity models, calibrated by mode and purpose based on the distribution of the base matrices, have been created for the purpose of estimating distribution to and from development zones. Because the incremental variable demand model will be applied to these zones as well as all others, the gravity models are based on base year generalised cost of travel, along with the trip-ends for the forecast year.

4.16 Having estimated the distribution of travel using a gravity model, the total level of trip-making for the development zones is then set to the trip ends from the trip-end model.

Planning Data Inputs

4.17 **Table 7** below shows the planning data by district used as an input to the 2036 COMET Reference Case. The table shows changes to planning data from 2014.

Table 7: Hertfordshire Planning Data by District (Growth from 2014)

District	Zones	Dwellings	Jobs
Broxbourne	1001 – 1500	2655	-2032
Dacorum	1501 – 2000	5397	2159
East Hertfordshire	2001 – 2500	8256	-505
Hertsmere	2501 – 3000	3519	-5140
North Hertfordshire	3001 – 3500	3329	-2618
St Albans	3501 – 4000	4212	-109
Stevenage	4001 – 4500	2603	-1866
Three Rivers	4501 – 5000	2178	1662
Watford	5001 – 5500	5232	457
Welwyn-Hatfield	5501 – 6000	4757	-2991
Total		**42,138**	**-10,983**

5. Uses of the 2036 COMET Reference Case

5.1 The COMET 2036 Reference Case is intended to be an off the shelf model to be used as a starting point primarily for developer testing. It is envisaged future applications of the model will take the inputs as specified above and make adjustments on top to reflect the application.

5.2 HCC and AECOM would advise all developers/scheme promotors should review the COMET Model Brochure and complete the Model Use Pro-Forma following detailed discussions with HCC. Copies of both documents are available from HCC.

5.3 Prior to any testing and use of the 2036 Reference Case, high level checks of the calibration/validation of the base year model in the vicinity of a proposed application will need to be undertaken to determine its suitability for use. This will highlight any strengths or weaknesses of the model in respect to the proposed applications and determine whether or not there may be a need for base year model improvements to increase confidence in forecast year model results.

5.4 The expected steps therefore for a standard application will be:

1. High level checks of base year model performance.
2. Planning data update and Trip End Model Run;
3. Network Update;
4. VDM run;
5. Model analysis and network optimisation; and
6. Results reporting

Appendix A Employment Densities

Table A-1: Employment Densities used for the Calculation of Jobs

Land Use Class	Area per FTE (m2)	Comment
A1 (Retail)	18	Assumed value is the average of "High Street" (15-20) and "Food store" (15-20) in Employment Density Guide. Value for "Retail Warehouse" (90) is excluded as it is significantly higher and would distort the calculation.
A2 (Finance & Professional Services)	16.0	Directly from Employment Density Guide
A3 (Restaurants & Cafes)	18	Assumed average of range (15-20) in Employment Density Guide
A4 (Drinking Establishments)	46	Not available in Employment Density Guide, so derived from 47 TRICS sites.
A5 (Hot Food Takeaways)	59	Not available in Employment Density Guide, so derived from 28 TRICS sites.
B1(a) (Offices)	10	Assumed value is average of the 5 "General Office" types and Call Centres.
B1(b) (R&D Space)	50.0	Assumed value is average of given range (40-60)
B1(c) (Light Industrial)	47.0	Directly from Employment Density Guide
B2 (Industrial & Manufacturing)	36.0	Directly from Employment Density Guide
B8 (Storage & Distribution)	81	Assumed value is average of 3 "Storage & Distribution" use classes.
C1 (Hotels)	100	Value in Employment Density Guide is given in terms of hotel rooms, which is inconsistent with HCC planning data. Therefore, TRICS is used to derive a density value based on 40 sites.
C2 (Residential institutions)	100	Not available in Employment Density Guide, so derived from 49 TRICS sites.
D1 (Non-residential institutions)	36	Not available in Employment Density Guide, so derived from 203 TRICS sites.
D2 (Assembly and leisure)	75	Assumed value is the average of "Fitness Centres" (all types), "Cinema", and "Amusement & Entertainment Centres" in Employment Density Guide. Value for "Visitor & Cultural Attractions" (30-300) is excluded as its range is very large and would distort the calculation.
Sui Generis	92	Not available in Employment Density Guide, so derived from 26 TRICS sites.