

Task 5.2 Upgrade Base Year Road Networks

Inputs

As 5.1.

Processing

- network structure:
 - check network structure by overplotting on a map base
 - compare coded link distances with crow-fly calculation using network node coordinates
 - if necessary, compare junction and link network geometry with available plans
 - if necessary, merge existing network data files for different time periods (and years) and apply consistency checks
 - as a result, correct junction and link data files as necessary
 - extend network to connect with the revised zoning system
- network characteristics:
 - define link type classification to be used in applying standardised link parameters such as capacity
 - update link-specific variables (e.g. free-flow speeds, lane capacities, link tolls)
- speed/flow curves:
 - specify speed/flow curve to be used (Akcelik, Conical etc)
 - specify their allocation to link categories and the parameter values to be used
- network modelling:
 - review and update routing parameter; consider sensitivity tests for optimising value
 - determine assignment procedure to be used (equilibrium, volume averaging etc)
 - determine through sensitivity testing the number of iterations required for acceptable convergence
- test/validate the networks, using test paths, comparisons with journey time surveys and independent traffic counts etc.
- develop a data-storage system with relevant file naming, version numbering, data extraction macros, directory structure and QA procedures

Outputs

An inventory library of all significant junctions.

A common database for all base and future networks.

Revised model network data files for the base year.

A data storage and management system

Technical note.