

# Travel Times and Population Catchments



ORH creates sophisticated models to identify optimal locations for a range of public-sector facilities, analysing the interactions between travel times and current and future road networks, population levels and demographics.

## HOW WE DO IT

ORH's travel-time models are based on either Ordnance Survey's Integrated Transport Network for Great Britain or NAVTEQ's global database of street maps. Achievable road speeds are calculated using data on road categories and classifications, as well as routing information for vehicle restrictions, one-way roads and turn restrictions. Raw journey times are calibrated against actual travel times experienced in the study area at different times of day. Routing

software is used to analyse travel times and to customise networks through interventions such as closing roads, changing speeds or changing the direction of travel. This allows ORH to create bespoke range cover models to test numerous scenarios.

Population catchments are created by combining these travel-time data with the latest national survey data, sourced from the UK's Office of National Statistics or its equivalent – for example, the Australian Bureau of Statistics. Future scenarios are modelled using population projections, housing growth information and infrastructure change plans.

Drive time or walking isochrones maps and catchment maps are then produced to exemplify and display service coverage and identify any

overall issues. A more detailed understanding can be gained by focusing on specific performance statistics such as the percentage of people within a 30-minute drive of a service, both currently and in the future.

Outputs from travel time and population analysis are also used as inputs to ORH's optimisation model.

## KEY BENEFITS

- Statistical analysis enables robust, detailed comparison of current and potential coverage
- Clear maps highlight areas of insufficient coverage

ORH creates bespoke range cover models to test numerous scenarios



Optimising Locations  
Travel Times and Population Catchments

