edge analytics GVA

Appendix 2

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Appendix 2: Bradford Housing Requirements Study
The POPGROUP Model

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Contents

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For and on behalf of GVA Grimley Ltd

1.   The POPGROUP Model

Introducing the Software

1.1   POPGROUP is a family of software developed to forecast population, households and the labour force for areas and social groups. It is based on Excel to build on users' existing spreadsheet skills. Users develop alternative assumptions as scenarios. The user remains in control of the areas to be forecast, of data inputs, and of analytical outputs additional to the software's own flexible reporting and graphical routines. In the UK, POPGROUP replicates official projections in regular Data Modules for population and households, with plans for Data Modules for illness and disability, the labour force, ethnic groups and adult care. The software adopts authoritative methods also used by national and United Nations agencies, uses single years of age for population, and has published two peer reviews.

1.2   POPGROUP was first developed at Bradford Council, supported by six Local Authorities: Shropshire, Worcestershire, Bradford, Derbyshire, Buckinghamshire and Staffordshire, and later by the Economic and Social Research Council (ESRC).

1.3   POPGROUP is used by over 90 local and sub-regional organisations in the UK and has been subject to extensive enhancement and development over the last ten years.

1.4   It is now owned by the Local Government Association. Income generated from sales is used to extend the software and support its users. Programming, support and promotion have been provided since 2009 by Edge Analytics Ltd, UK.
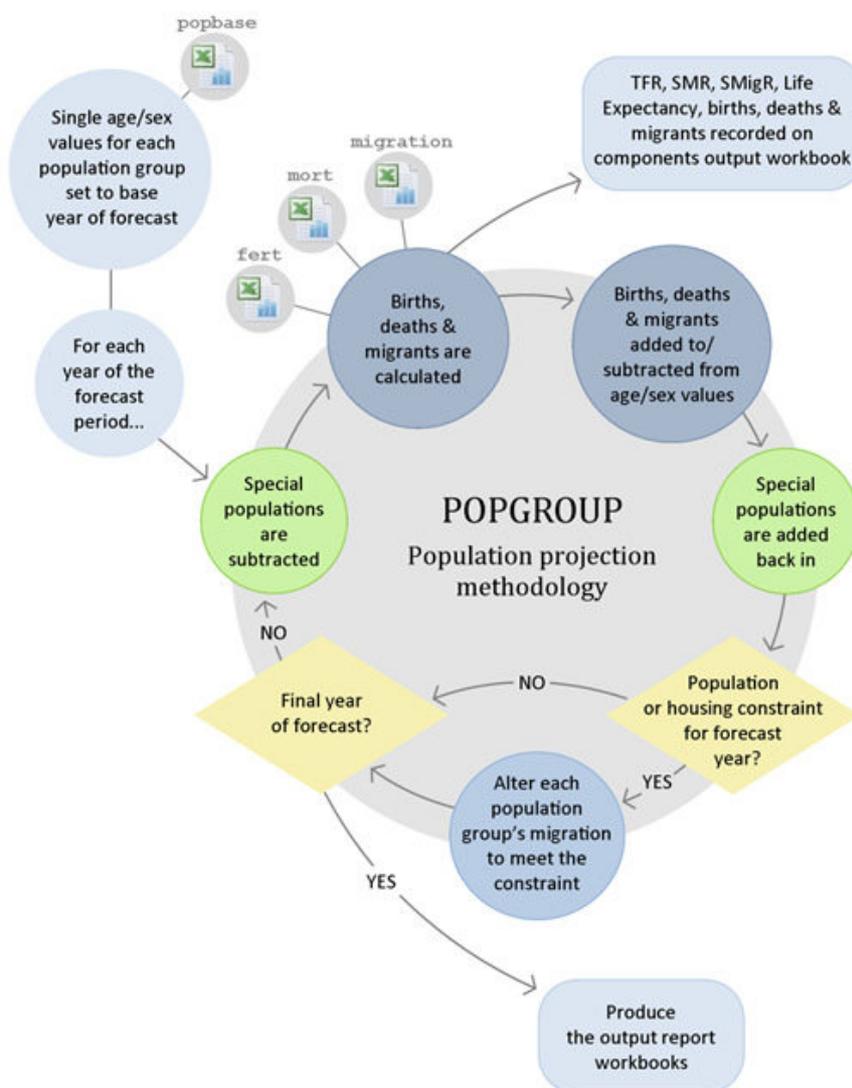
The POPGROUP modelling approach

1.5   POPGROUP and the Derived Forecast software component are used within the Housing Requirements Study to develop a series of population and linked household projections for Bradford.

1.6   Population projections delivered using POPGROUP use a standard cohort component methodology (the methodology used by the UK statistical agencies). The household projections use a standard household headship rate as employed by the Communities and Local Government (CLG) for its household projection statistics.

1.7   In order to align population projections with different forecast levels of job change the model integrates labour force projections. These labour force projections use a standard economic activity rate methodology. A more detailed description of the

population and household projection methodologies is available from the User Guide and Reference Manual on the POPGROUP website www.ccsr.ac.uk/popgroup/about/manuals.html.
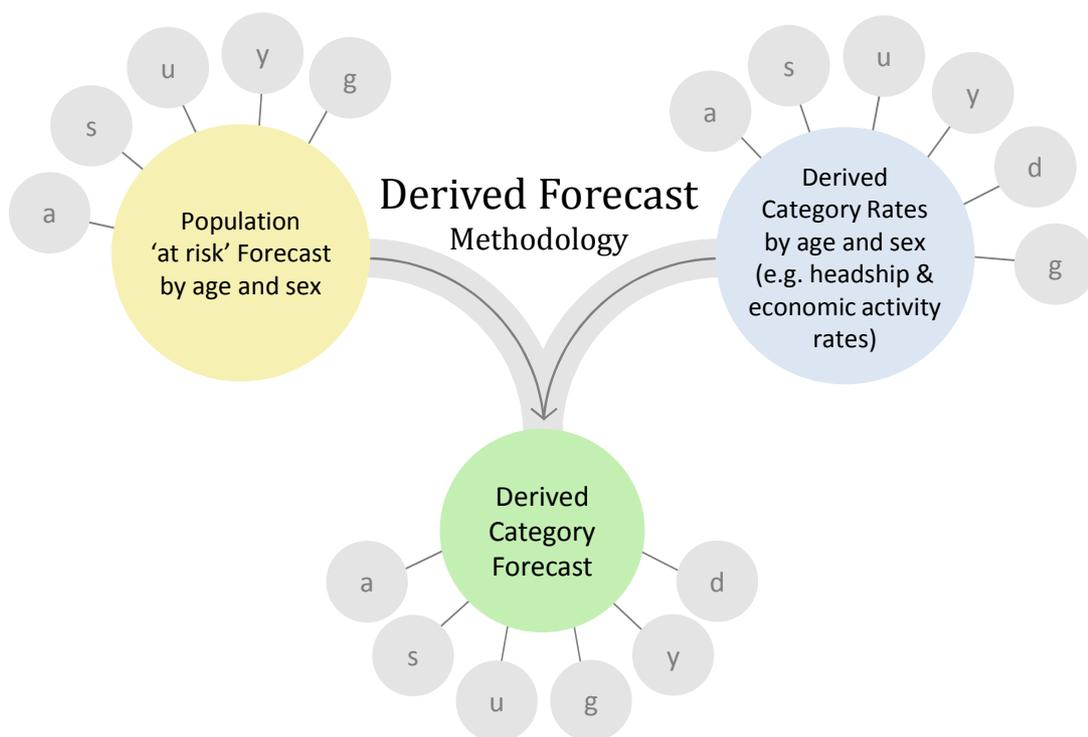
1.8   The following graphics provide a schematic illustration of the operation of the POPGROUP and Derived Forecast methodologies.

Figure 1: POPGROUP population projection methodology

Source: Edge Analytics, 2012

Figure 2: Derived Forecast Model: household & labour force projection methodology

$$D_{a,s,u,y,d,g} = \frac{P_{a,s,u,y,g} \; R_{a,s,u,y,d,g}}{100}$$

D	Derived Category Forecast
P	Population 'at risk' Forecast
R	Derived Category Rates
a	age-group
s	sex
u	Sub-population
y	year
d	derived category
g	group (usually an area, but can be an
ethnic	group or social group)

Source: Edge Analytics, 2012

1.9   Sections 3 – 5 of the Housing Requirements Study include information around the input assumptions used for Bradford within the modeling as part of the research.