

ANNEX A:

BLACK COUNTRY HOUSEHOLD GROWTH SCENARIOS

Annex A: Black Country Household Growth Scenarios

This section presents the household growth scenarios developed and tested as part of the Black Country Study (Mott MacDonald, 2004¹) using the ‘Chelmer Population and Household Model’ (CPHM).

Scenario 1: The existing trend line with continuing outward migration

This is the policy off scenario, that is in the absence of RPG/Regional Spatial Strategy (RSS) policies to reduce population decentralisation by containing household growth and house building within the conurbation.

This scenario that assumes the continuation throughout the period 2001-2031 of average migration flows experience over the period 1999-2002 (a loss of 4,200 per annum).

Taking account of births and deaths this continuation of a net migration loss of 4200 persons per annum for the four Black Country districts as a whole results in a reduction in population of 84,500 persons over the period 2001-2031 accompanied by a net loss of 2,400 households.

This scenario forecast shows the following population and household totals and changes for each district.

Table 5.10: Black Country Study: Scenario 1 Population Projection (000s)

	Population		Population Change		
	2001	2031	2001-2011	2011-2021	2021-2031
Dudley	305	291	-1.8	-4.2	-7.3
Sandwell	285	263	-8.9	-6.2	-6.5
Walsall	253	235	-4.1	-6.2	-8.1
Wolverhampton	238	207	-9.8	-10.0	-11.4
Black Country	1,081	997	-24.6	-26.5	-33.4
<i>Cumulative position</i>	-	-	-24.6	-51.1	-84.5

Table 5.11: Black Country Study: Scenario 1 Household Projection (000s)

	Households		Household Change		
	2001	2031	2001-2011	2011-2021	2021-2031
Dudley	125	132	+4.3	+3.9	-1.1
Sandwell	115	114	-1.4	+0.8	-1.2
Walsall	101	101	+0.6	+0.5	-1.9
Wolverhampton	97	90	-1.8	-2.1	-3.2
Black Country	439	436	+1.7	+3.2	-7.3
<i>Cumulative position</i>	-	-	+1.7	+4.9	-2.4

¹ Black Country Study: Population and Household Scenario Forecasts 2011-2031, Graham Smith, Mott MacDonald, October 2004.

For the Black Country as a whole although the continuation of current trends in migration results in significant losses in population over the two ten year periods to 2021 there is still an increase in households and a consequent requirement for an increase in dwelling stock. In the ten-year period from 2021 to 2031 the continuing loss of population results in an absolute loss of households resulting in higher vacancy rates and/or reduction of the housing stock through clearance.

Scenario 2: Meeting of RPG housing targets to 2021 with zero net migration after 2021

This scenario assumes that the levels of house building and demolitions used for RPG policy are achieved over the period 2001-2021 and that over the period 2021 to 2031 that zero net migration takes place for each district.

This results in a population increase of 90,000 persons, a growth in households of 58,800 and implies a net inward average migration level of 480 persons per annum over the period, a significant change to current migration trends.

The actual RPG assumptions are as follows for each district

Table 5.12: Black Country Study: Scenario 2 Completions and Demolitions

	2001-2011		2011-2021	
	Completions	Demolitions	Completions	Demolitions
Dudley	6,400	1,100	9,750	1,500
Sandwell	9,000	5,600	9,750	3,900
Walsall	5,000	500	8,250	1,000
Wolverhampton	5,000	1,100	8,250	1,500
Black Country	25,400	8,300	36,000	7,900

For the Black Country as a whole RPG expects 61,400 new dwellings to be completed along with 16,200 demolitions, a net increase in dwelling stock of 45,200 dwellings over the period 2001-2021.

The CPHM operation then uses these completions and demolitions as input controls and migration becomes an output. On this basis, in the first ten-year period migration levels represent on average a small net outflow from the Black Country as a whole (-150 pa), a significant reduction from current trends of over 4,000 persons per annum. In the second ten-year period the migration flow reverses from the historic outward migration flow to a net inward flow of migration of some 1600 persons per annum, a significant step change.

This scenario forecast shows the resulting population and household totals and changes for the Black Country.

Table 5.13: Black Country Study: Scenario 2 Population Projection

	Population		Population Change		
	2001	2031	2001-2011	2011-2021	2021-2031
Black Country	1081.1	1171.3	+18.5	+42.9	+28.9
<i>Cumulative position</i>	-	-	+18.5	+61.4	+90.3

Table 5.14: Black Country Study: Scenario 2 Household Projections

	Households		Household Change		
	2001	2031	2001-2011	2011-2021	2021-2031
Black Country	438.8	497.6	+16.6	+27.1	+15.1
<i>Cumulative position</i>	-	-	+16.6	+43.7	+58.8

The planned increase in households in the Black Country implicit in RPG policy is some 2,300 per annum over the period 2001-2021. The scenario of a balance of inward and outward migration in then period 2021-2031 therefore results in a household increase of 1,500 per annum. The total increase in households over the whole period is 58,800 households accompanied by a population increase of 90,300 persons. This scenario can only be sustained by a significant shift in current outward migration to a position of net inward migration

Scenario 3: The continuation of RPG house-building and clearance rates (2011 to 2021) through to 2031

This scenario assumes for each district that RPG housing targets are fully met up to the end of 2021 as with scenario 2, but that the same building and clearance rates for 2011-2021 are carried forward to the period 2021-2031.

As in the previous scenario migration becomes an output of the CPHM. For the first two ten year periods the migration flows are the same as the scenario above i.e. a reversal of current migration trends, but in the period 2021-2031 the net inward migration flow required to sustain this level of house building increases to 3,200 per annum as compared to a current net outward migration flow of 4,200 persons per annum.

This scenario forecast shows the following population and household totals and changes for each district.

Table 5.15: Black Country Study: Scenario 3 Population Projection (000's)

	Population		Population Change		
	2001	2031	2001-2011	2011-2021	2021-2031
Black Country	1081.1	1,205.8	+18.5	+42.9	+63.4
<i>Cumulative position</i>	-	-	+18.5	+61.4	+124.8

Table 5.16: Black Country Study: Scenario 3 Household Projections (000's)

	Households		Household Change		
	2001	2031	2001-2011	2011-2021	2021-2031
Black Country	438.8	509.7	+16.6	+27.1	+27.1
<i>Cumulative position</i>	-	-	+16.6	+43.7	+70.8

Under this scenario the planned increase in households of 2,700 per annum over the period 2011-2021 is carried forward through to 2031. This scenario implies an accelerating population growth reaching 6,300 per annum in the final ten-year period. Over the 30-year period there is a population increase of

nearly 125,000 sustained by what would be high levels of net inward migration as compared to trends over the last twenty years. There is a household growth of 70,800

Scenario 4: assumes the RPG level of house-building to 2021 and a 15% increase in total households over the period to 2031

This scenario assumes for each district that RPG are fully met up to the end of 2021 as with the previous scenarios but that an increase in households of 15 percent of the total number of households takes place between 2021 and 2031.

As in the previous scenarios migration becomes an output of the CPHM. For the first two ten year periods the migration flows are the same as the scenario above i.e. a reversal of current migration trends, but in the period 2021-2031 the net inward migration flow required to sustain this level of household growth increases to 15,500 per annum as compared to a current net outward migration flow of 4,200 persons per annum. Clearly this represents an extremely ambitious housing growth scenario.

Under this scenario the planned increase in households of 2,700 per annum over the period 2011-2021 is accelerated to over 7,000 per annum over the period 2021 to 2031. This scenario implies an accelerating population growth reaching over 19,000 per annum in the final ten-year period. Over the 30-year period there is a population increase of nearly 250,000 sustained by what would be extremely high levels of net inward migration.

Age and household structure in the Black Country

Within the overall population and household changes described above there are also significant changes in the age structure of the population and also the types of households. The overall direction of these changes is common to all three scenarios but the scale of change does vary significantly for different age group and household types between the scenarios.

All three scenario forecasts show the over 60's age group increasing significantly as the peak in births in the post war years rolls through and as life expectancy continues to increase. The table below shows the broad age structure of the population at 2001 and 2031 for the migration trend scenario and the RPG continuing to 2031 scenario.

The CPHM allows changes in household types to be forecast including the age of the head of the household. In all scenario forecasts there is a reduction in married couple households overall but with increases in married couple households above retirement age. All three forecasts show significant increases in one-person households in all broad age groups but especially in the retirement age groups. There are also increases in other multi-person households i.e. non-married couples, non-family related people sharing. Changes in married couple households by age of head of household are shown below for the trend based forecast and the RPG continuing forecast.

Table 5.17: Change in age structure of the population 2001-2031 (000's)

Age Group	2001 Base Population	2031 Scenarios		Change 2001-2031 Scenarios	
		1	3	1	3
0-14	212	180	235	-33	+23
15-29	198	180	231	-18	+33
30-44	238	179	233	-59	-5
45-59	198	160	193	-37	-5
60-74	154	190	200	+35	+46
75+	81	108	113	+27	+33
TOTAL	1081	997	1206	-85	+125

Telford Projections

For this study Mott MacDonald were commissioned to apply the CPHM model to Telford and Wrekin district. The existing trend line (equivalent to the BCS scenario 1) is shown in the table below:

Table 5.18: Telford Population Projections (Equivalent to BCS Scenario 1)

	Population		Population Change (000's)		
	2001	2031	2001-2011	2011-2021	2021-2031
Telford & Wrekin	158.7	204.6	+12.9	+17.0	+16.0
<i>Cumulative position</i>	-	-	+12.9	+31.4	+45.9

Table 5.19: Telford Household Projections (Equivalent to BCS Scenario 1)

	Households		Household Change (000's)		
	2001	2031	2001-2011	2011-2021	2021-2031
Telford & Wrekin	63.8	88.3	+9.3	+9.6	+5.6
<i>Cumulative position</i>	-	-	+9.3	+18.9	+24.5

This scenario that assumes the continuation throughout the period 2001-2031 of average migration flows experienced over the period 1999-2002 (a gain of 700 per annum). This inflow contributes to an increase in population of 45,900 persons over the period 2001-2031 accompanied by a gain of 24,500 households.

The table below outlines the position based on the extension of RPG policy to 2031 (i.e. it is equivalent to the BCS scenario 2).

Table 5.20: Telford Population Projections (Equivalent to BCS Scenario 2)

	Population		Population Change (000's)		
	2001	2031	2001-2011	2011-2021	2021-2031
Telford & Wrekin	158.7	208.2	+22.7	+8.7	+18.0
<i>Cumulative position</i>	-	-	+22.7	+3104	+49.5

Table 5.21: Telford Household Projections (Equivalent to BCS Scenario 2)

	Households		Household Change (000's)		
	2001	2031	2001-2011	2011-2021	2021-2031
Telford & Wrekin	63.8	90.	+12.9	+6.8	+6.8
<i>Cumulative position</i>	-	-	+12.9	+19.7	+26.5

For Telford & Wrekin, RPG expects 20,300 new dwellings to be completed along with 100 demolitions over the period 2001-2021.

For the first ten year period an increase in migration is required from the current 700 to 1626 pa, but in the period 2011-2021 a net outflow is required of 421, before returning to an inflow of 949 per annum to sustain this level of house building in the later 2021-2031 period.