Note for Winchester EIP Inspector on Assumptions in the Demographic Modelling undertaken for Winchester City Council; and comparison with Modelling undertaken by Barton Willmore

Background

During the round table sessions a significant difference of view emerged between DTZ, acting on behalf of Winchester City Council, and Barton Willmore, particularly around resident workforce growth and whether the Council's proposed provision of about 11,000 dwellings would constrain job growth in Winchester District. The Council maintains that provision of 11,000 dwelling is consistent with the anticipated growth in employment of around 8,750 jobs[1] between 2009 and 2031, while Barton Willmore have argued that around 14,475 new homes would be required to ensure an adequate workforce for job growth of 8,750 new jobs.

The Demographic and Labour Force Projections

There is no substantive difference between the demographic projections prepared by Hampshire County Council (for WCC) and those generated by Barton Willmore in terms of anticipated population growth and household growth. This reflects the fact that both are based on ONS population and CLG household projections.

The difference comes in terms of the estimate of the economically active population. HCC estimated the growth of the economically active population over the period 2011-31 to be 6,550[2]; Barton Willmore at 3,507 under their Scenario 2 Demographic Led scenario which is comparable to HCC's projection in that it is associated with a dwelling requirement of 11,000 new homes.

The difference between the two estimates of economically active labour force is easily explained. In summary:

- HCC used *published ONS forecasts* for 2006-2020 of economic activity rates to estimate changes in activity rates from 2001 levels and how they are expected to change over the period to 2020, and extrapolated the patterns to 2031; and also made modest adjustments in economic activity rates for planned changes in the retirement age already agreed by government (the increase in male and female retirement age to 66 by 2024).
- HCC established the firm baseline for economic activity rates in Winchester using the 2001 Census data, and then modelled changes in activity rates by age group and gender by reference to the national projections for each 5 year period, this being deemed to be a robust basis for long term projections.

In contrast, Barton Willmore have used Annual Population Survey 2010 rates *and have held them constant throughout the plan period*. Barton Willmore have chosen not to use ONS projections of how economic activity rates are expected to change. Hampshire County Council notes that the Annual Population Survey district level estimates are done on very small samples and they do not provide a very reliable source for this type of data. This is highlighted by large

[1] The figure of 8,750 jobs is WCC estimate of jobs that will be created 2011-31, based on the DTZ forecast of 9,270 jobs between 2009 and 2031

[2] Table 4.2 Housing Technical Paper

observed changes in economic activity rates year by year which are more likely to be due to the small sample rather than real changes.

Other Assumptions

The HCC demographic modelling (based on the Chelmer model) does not go beyond identifying the growth in the economically active labour force, to model how the labour market might adjust to a growth in jobs. However the Barton Willmore modelling does this using the PopGroup modelling, since the intent is to establish the need for enhanced in-migration and an enhanced housing requirement.

Discussions between DTZ and Barton Willmore highlighted the other key assumptions in Barton Willmore's employment led scenario.

- Unemployment is assumed at 2.3%, which is below the current level of unemployment in the District (4.3%), and therefore the modelling ignores current surplus labour available to take up jobs in the District.
- A commuting ratio of 0.83, which DTZ understand to mean that for every 100 jobs, 83 will be filled by District residents and 17 by those who travel into the District. This is understood to be calibrated by reference to the 2001 Census patterns of in-commuting (so is effectively projected over 30 years).
- The 8,750 jobs used in the employment led scenario are assumed to be full time equivalent (FTE) jobs, and this is stated to be why there is no need to make allowance for double-jobbing
- All the adjustment required in the labour supply, after the above assumptions are made, is assumed to be met by increased in-migration, with a consequent requirement for additional housing.

It is worth clarifying that that WCC's estimate of job growth of 8,750 was for all jobs (full and part time) not FTE, as assumed by Barton Willmore, since they are derived from forecasts of total jobs (both FT and PT). Expressed in FTE jobs, WCC's estimate of 8,750 extra jobs 2011-31 would be around 7,300 FTE jobs. This compares to the HCC estimate that the economically active population of the District will grow by 6,550 people.

The balance of labour force requirement not met by growth in the economically active population associated with provision of 11,000 new homes, can readily met by other mechanisms by which the labour market can adjust to an increase in demand, which are ignored by Barton Willmore:

- Currently unemployment in Winchester (Annual Population Survey) is around 4.3%. A reduction of unemployment to 2.3% would entail around 1,250 local people filling jobs with no additional need for in-migration.
- Given significant growth in part time jobs in recent years compared to full time jobs, the number of people doing two jobs may increase. Based on Oxford Economics data for the East of England, around 1 in every 10 people in the past have had more than one job.
- Net out-commuting may fall. There is significant out-commuting from Winchester District and the Barton Willmore modelling does not appear to make allowance for more people to decide to work locally.
- HCC have modelled increases in economic activity rates but if there is additional demand for labour it can be expected that economic activity rates could rise above the level assumed by

HCC, to match those typical of a number of other Hampshire authorities that have higher economic activity rates than Winchester District.

- Barton Willmore have held net in-commuting constant. However additional in-commuting may well be a good solution to meeting some of the labour demand in Winchester District, particularly if jobs are created in the PUSH part of the District. This would allow people living in the neighbouring urban districts, where unemployment is higher and economic activity rates lower than in Winchester District, to benefit from jobs just across the District boundary, where the Core Strategy allocates significant employment land.

Chris Cobbold, Director, DTZ

8th December 2012

Attachments

Annex 1: ONS Economic Activity Rate Projections used by HCC

Annex 2: Winchester specific Activity Rate Projections used by HCC

Annex 3: Economic Activity Rates used by Barton Willmore

Economic activity rates[1,2], People

United Kingdom (per cent), Seasonally adjusted

	16-17 (In FTE*)	16-17 (Not in FTE*)	18-24 (In FTE*)	18-24 (Not In FTE*)	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+
1984	34.8	87.5	24.5	86.8	80.2	79.0	83.6	85.6	84.4	80.0	67.5	39.0	10.7	3.4
1985	38.5	91.8	27.7	88.0	81.0	79.8	84.2	85.8	84.5	78.8	67.4	36.6	10.4	3.3
1986	41.9	91.5	28.2	88.1	81.3	80.8	83.6	85.9	84.9	78.8	66.8	36.0	9.7	3.0
1987	41.9	92.9	29.0	89.2	82.1	81.2	84.0	85.9	84.5	78.7	66.5	36.9	9.2	3.0
1988	47.7	93.0	31.3	89.0	82.8	82.5	85.0	86.9	84.6	78.3	66.8	37.0	9.0	3.3
1989	47.0	93.5	33.3	89.7	83.8	82.6	85.1	86.7	85.6	79.3	67.1	38.4	10.9	3.4
1990	46.5	92.0	37.6	89.1	84.2	83.1	85.5	87.3	86.2	78.8	68.1	38.4	11.0	3.3
1991	48.6	91.3	36.5	88.0	83.7	82.9	85.2	87.7	85.4	78.8	67.6	38.9	11.1	3.0
1992	43.9	85.7	32.8	86.3	82.8	81.9	84.6	86.8	85.9	78.9	66.2	37.5	11.1	3.4
1993	38.2	82.6	33.7	85.9	83.0	82.3	84.1	86.7	85.2	78.8	65.0	37.9	10.3	2.8
1994	42.2	84.6	35.5	85.7	83.2	82.4	83.9	85.8	85.4	78.7	65.6	37.7	10.6	2.6
1995	43.9	82.9	36.4	85.9	83.6	82.1	84.2	85.3	84.9	78.6	64.6	37.1	10.8	2.8
1996	47.7	81.2	42.1	86.0	83.0	82.6	83.7	85.5	85.1	78.5	64.7	37.0	10.4	2.6
1997	50.4	79.4	44.3	86.3	83.8	83.2	83.8	84.8	84.7	78.7	63.6	38.9	10.7	2.6
1998	48.8	83.2	44.5	86.0	83.9	83.3	83.6	85.2	84.0	78.9	64.4	36.5	11.4	2.5
1999	49.1	83.9	44.9	86.5	84.5	83.9	84.0	85.7	84.9	79.0	65.4	37.5	11.9	2.6
2000	49.8	83.5	47.1	86.0	84.7	84.2	84.5	85.9	84.6	79.4	66.0	38.0	11.4	2.7
2001	45.6	81.7	45.5	85.8	84.1	83.7	84.6	85.7	84.4	79.5	66.6	39.2	10.7	2.4
2002	45.4	78.5	46.5	86.1	84.9	83.1	84.5	85.3	85.1	80.0	67.4	39.4	12.6	2.5
2003	45.4	78.4	45.2	85.4	83.8	83.0	84.4	85.5	85.0	81.0	69.8	41.0	13.5	2.7
2004	43.7	77.9	47.1	85.4	83.5	83.3	84.3	85.2	84.7	81.1	69.6	42.7	13.7	2.8
2005	42.7	74.7	44.3	84.4	83.9	84.0	83.7	85.3	85.5	81.6	70.3	43.1	14.5	3.0
2006 (p)	43.0	76.3	46.6	85.0	84.2	83.7	84.0	85.4	84.9	81.3	70.4	42.3	13.7	2.7
2007 (p)	42.4	75.5	47.2	84.9	84.3	83.8	84.2	85.4	85.0	81.6	70.9	42.9	13.9	2.7
2008 (p)	41.8	74.7	47.7	84.8	84.4	83.9	84.1	85.5	85.0	81.9	71.3	43.3	14.2	2.7
2009 (p)	41.2	73.9	48.1	84.7	84.5	84.0	84.2	85.5	85.1	82.2	71.7	43.8	14.4	2.7
2010 (p)	40.7	73.1	48.4	84.5	84.5	84.0	84.1	85.5	85.1	82.5	72.1	44.2	14.6	2.7
2011 (p)	40.2	72.4	48.8	84.4	84.6	84.1	84.2	85.4	85.1	82.7	72.5	45.1	14.9	2.7
2012 (p)	39.7	71.6	49.1	84.2	84.7	84.1	84.2	85.4	85.1	83.0	72.9	45.9	15.1	2.7
2013 (p)	39.2	70.8	49.5	84.1	84.7	84.1	84.2	85.4	85.1	83.3	73.3	46.7	15.3	2.7
2014 (p)	38.7	70.0	49.8	84.0	84.8	84.2	84.2	85.4	85.2	83.6	73.7	47.5	15.5	2.6
2015 (p)	38.2	69.2	50.1	83.8	84.8	84.3	84.2	85.4	85.2	83.9	74.2	48.3	15.8	2.6
2016 (p)	37.8	68.4	50.4	83.7	84.8	84.3	84.2	85.4	85.2	84.2	74.6	49.1	16.0	2.6
2017 (p)	37.4	67.6	50.7	83.5	84.9	84.4	84.1	85.4	85.2	84.5	75.0	49.9	16.2	2.6
2018 (p)	36.9	66.8	51.0	83.4	84.9	84.5	84.1	85.4	85.2	84.8	75.4	50.7	16.4	2.6
2019 (p)	36.5	66.0	51.3	83.3	84.9	84.5	84.1	85.3	85.2	85.0	75.8	51.5	16.7	2.6
2020 (p)	36.1	65.2	51.5	83.1	85.0	84.6	84.2	85.3	85.2	85.3	76.2	52.3	16.9	2.6

[1] Historical estimates are consistent with published National Statistics in the Integrated First Release. For more details on how historical estimates were calculated see: www.statistics.gov.uk/downloads/theme_labour/lfp_2005_methodology.pdf.

Source: ONS

[2] Figures refer to the spring quarter of each year (March to May)

* Full-time education

Annex 2: Winchester specific Activity Rate Projections used by HCC

ONS EA rates - estimated for 2031

NEW

	DISTRICT Name	24UP Winchester	24UP Winchester	24UP Winchester	24UP Winchester	24UP Winchester	24UP Winchester	24UP Winchester
Gender	YEAR	2001	2006	2011	2016	2021	2026	2031
Male	ECONAM16	0.372	0.337	0.310	0.286	0.264	0.243	0.222
Male	ECONAM17	0.544	0.493	0.453	0.418	0.386	0.355	0.324
Male	ECONAM18	0.586	0.581	0.578	0.574	0.570	0.566	0.561
Male	ECONAM19	0.749	0.743	0.739	0.735	0.729	0.723	0.718
Male	ECONAM2024	0.799	0.792	0.789	0.784	0.778	0.772	0.766
Male	ECONAM2529	0.914	0.905	0.901	0.896	0.892	0.888	0.884
Male	ECONAM3034	0.933	0.922	0.918	0.914	0.911	0.907	0.904
Male	ECONAM3539	0.945	0.940	0.936	0.931	0.928	0.923	0.919
Male	ECONAM4044	0.947	0.940	0.937	0.933	0.929	0.924	0.920
Male	ECONAM4549	0.947	0.950	0.948	0.945	0.943	0.940	0.938
Male	ECONAM5054	0.913	0.920	0.926	0.931	0.936	0.942	0.947
Male	ECONAM5559	0.838	0.858	0.874	0.884	0.892	0.901	0.911
Male	ECONAM6064	0.632	0.681	0.711	0.734	0.755	0.776	0.797
Male	ECONAM6569	0.232	0.291	0.311	0.332	0.353	0.493	0.516
Male	ECONAM7074	0.123	0.137	0.133	0.127	0.122	0.117	0.112
Female	ECONAF16	0.401	0.383	0.361	0.343	0.327	0.311	0.295
Female	ECONAF17	0.575	0.549	0.517	0.492	0.469	0.446	0.423
Female	ECONAF18	0.607	0.603	0.605	0.606	0.608	0.609	0.610
Female	ECONAF19	0.654	0.650	0.651	0.653	0.654	0.655	0.657
Female	ECONAF2024	0.674	0.670	0.672	0.673	0.674	0.676	0.677

Female	**ECONAF2529**	0.808	0.819	0.831	0.839	0.847	0.855	0.863
Female	**ECONAF3034**	0.770	0.778	0.790	0.799	0.807	0.815	0.823
Female	**ECONAF3539**	0.748	0.741	0.748	0.751	0.754	0.758	0.761
Female	**ECONAF4044**	0.791	0.792	0.795	0.798	0.800	0.801	0.803
Female	**ECONAF4549**	0.816	0.823	0.828	0.832	0.836	0.841	0.845
Female	**ECONAF5054**	0.773	0.803	0.828	0.853	0.879	0.905	0.932
Female	**ECONAF5559**	0.618	0.679	0.710	0.743	0.778	0.814	0.849
Female	**ECONAF6064**	0.336	0.363	0.401	0.476	0.552	0.640	0.729
Female	**ECONAF6569**	0.131	0.177	0.194	0.212	0.230	0.341	0.376
Female	**ECONAF7074**	0.056	0.059	0.059	0.059	0.059	0.059	0.059

Annex 3: Economic Activity Rates used by Barton Willmore

Activity Rates At End of the Period

Assumptions by age and gender (1=100%)

	2001-06	2006-11	2011-16	2016-21	2021-26	2026-31	2031-36
Males							
0-4	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5-9	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10-14	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15-19	0.560	0.533	0.533	0.533	0.533	0.533	0.533
20-24	0.667	0.521	0.521	0.521	0.521	0.521	0.521
25-29	0.990	0.990	0.990	0.990	0.990	0.990	0.990
30-34	1.000	1.000	1.000	1.000	1.000	1.000	1.000
35-39	0.970	0.972	0.972	0.972	0.972	0.972	0.972
40-44	0.972	0.974	0.974	0.974	0.974	0.974	0.974
45-49	0.972	0.974	0.974	0.974	0.974	0.974	0.974
50-54	0.923	0.957	0.957	0.957	0.957	0.957	0.957
55-59	0.847	0.879	0.879	0.879	0.879	0.879	0.879
60-64	0.638	0.662	0.662	0.662	0.662	0.662	0.662
65-69	0.466	0.150	0.150	0.150	0.150	0.150	0.150
70-74	0.247	0.080	0.080	0.080	0.080	0.080	0.080
75-79	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80-84	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85+	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Females							
0-4	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5-9	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10-14	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15-19	0.492	0.557	0.557	0.557	0.557	0.557	0.557
20-24	0.692	0.773	0.773	0.773	0.773	0.773	0.773
25-29	0.863	0.504	0.504	0.504	0.504	0.504	0.504
30-34	0.822	0.480	0.480	0.480	0.480	0.480	0.480
35-39	0.882	0.826	0.826	0.826	0.826	0.826	0.826
40-44	0.933	0.874	0.874	0.874	0.874	0.874	0.874
45-49	0.963	0.901	0.901	0.901	0.901	0.901	0.901
50-54	0.868	0.826	0.826	0.826	0.826	0.826	0.826
55-59	0.692	0.659	0.659	0.659	0.659	0.659	0.659
60-64	0.377	0.359	0.359	0.359	0.359	0.359	0.359
65-69	0.257	0.225	0.225	0.225	0.225	0.225	0.225
70-74	0.109	0.095	0.095	0.095	0.095	0.095	0.095
75-79	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80-84	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85+	0.000	0.000	0.000	0.000	0.000	0.000	0.000