

- 1.1 This note provides a response to the Inspector's query (below) regarding household representative rates (HRRs):

"The inspector would like clarification on the method used to derive the Household Representative Rates [HRRs] that were used in calculating the dwelling requirements in the *Birmingham Sub-Regional Housing Study Part 2 Addendum* (September 2014).

Paragraph 5.8 of the Addendum refers to three sensitivity scenarios. Sensitivity 1 involves the use of "Interim 2011-based CLG rates, 2011-2021; return to 2008-based CLG rates by-2031". Sensitivity 2 uses "Interim 2011-based CLG rates, 2011-2021; annual 2008-based rate of change applied between 2021 and 2031".

Please explain exactly how these HRRs were calculated. A table showing the annual average HRRs actually used in the three sensitivity scenarios may be of assistance in clarifying this point."

- 1.2 The three approaches to HRRs post 2021 are Full Return, Indexed and 2011 trend, and are calculated as follows:

Full Return

- 1.3 After 2021, the HRR gradually return to the absolute 2008-based rate for 2031 in 2031. The HRRs between 2021 and 2031 is therefore interpolated. The consequence is that the HRR return to the level anticipated in the 2008 DCLG household projections, which follows the long term trend in the HRR since had been experienced since the 1960s.

Indexed

- 1.4 These HRRs are derived from applying the average rate of change in 2008 based HRRs between 2021 and 2031, to the 2011-based 2021 HRR after 2021. Therefore the growth rate post 2021 is the same as the 2008-based HRR post 2021 and the growth in the HRR follows the same gradient as the 2008-based HRR, but does not attempt to make a catch up the difference as with the full return scenario above. Given the 2008 DCLG rate is was the long term trend, the Index approach is appropriately described as ultra conservative.

2011-based trend

- 1.5 These HRRs are derived from applying the average rate of change in 2011-based HRRs (by age) between 2011 and 2021, to the HRR in each year after 2021. This therefore represents a linear trend based on a continuation of the 2011-based HRRs. In other words it continued the trend in the 2011 DCLG household projections for a further 10 years between 2021 and 2031. It fails completely to either recognise or address the clear evidence

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of suppressed household formation, evident throughout the economic downturn, which is specifically highlighted as a relevant factor in assessing housing need the PPG (Chapter 2a, last part of paragraph 15).

Summary

- 1.6 In responding to this query we provide the following Table 1, which shows the 2011-based HRRs which underpin each of the sensitivity scenarios to 2021.

Table 1: Birmingham Household Representative Rates: % of household population, 2011-2021

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
HRRs	39.068%	39.051%	39.080%	39.150%	39.235%	39.314%	39.400%	39.482%	39.581%	39.692%	39.810%

- 1.3 Table 2 shows the changes in each of the sensitivity scenarios applied in the Barton Willmore report post 2021.

Table 2: Birmingham Household Representative Rates: % of household population, 2022-2031

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Full Return	40.156%	40.497%	40.834%	41.160%	41.481%	41.798%	42.114%	42.441%	42.764%	43.099%
Indexed	39.954%	40.092%	40.231%	40.366%	40.506%	40.650%	40.794%	40.939%	41.069%	41.195%
2011 trend	39.938%	40.062%	40.181%	40.297%	40.410%	40.524%	40.636%	40.766%	40.888%	41.019%

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HRRs by Age

1.5 To provide a further level of detail, table 3 (below) separates out the Table 1 analysis by age group.

Table 3: Interim 2011-based CLG HRRs, 2011-2021

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
15-24	15.351%	15.374%	15.406%	15.439%	15.481%	15.531%	15.583%	15.636%	15.699%	15.768%	15.841%
25-34	42.418%	42.088%	41.768%	41.452%	41.117%	40.782%	40.486%	40.187%	39.900%	39.628%	39.364%
35-44	60.163%	60.482%	60.807%	61.122%	61.356%	61.560%	61.847%	62.110%	62.370%	62.628%	62.888%
45-54	60.709%	61.059%	61.409%	61.745%	62.037%	62.315%	62.625%	62.916%	63.204%	63.498%	63.790%
55-59	62.212%	62.507%	62.783%	63.045%	63.303%	63.578%	63.816%	64.035%	64.256%	64.489%	64.711%
60-64	63.565%	63.696%	63.810%	63.907%	64.016%	64.118%	64.189%	64.253%	64.316%	64.393%	64.454%
65-74	66.150%	66.095%	66.026%	65.931%	65.861%	65.800%	65.698%	65.575%	65.466%	65.365%	65.257%
75-84	76.017%	76.037%	76.041%	76.016%	76.029%	76.046%	75.999%	75.943%	75.886%	75.845%	75.798%
85+	85.716%	85.886%	86.079%	86.197%	86.383%	86.540%	86.648%	86.728%	86.816%	86.927%	87.028%

1.6 Tables 4 to 6 separates out Table 2 by age group for each of the three sensitivity scenarios (Full Return, Indexed, and 2011 trend).

Table 4: HRRs by age: Full Return

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
15-24	16.100%	16.359%	16.619%	16.878%	17.137%	17.396%	17.655%	17.915%	18.174%	18.433%
25-34	40.320%	41.277%	42.233%	43.190%	44.146%	45.103%	46.059%	47.016%	47.972%	48.929%
35-44	63.227%	63.566%	63.904%	64.243%	64.582%	64.921%	65.260%	65.598%	65.937%	66.276%
45-54	63.810%	63.831%	63.851%	63.871%	63.892%	63.912%	63.933%	63.953%	63.974%	63.994%
55-59	64.505%	64.300%	64.094%	63.888%	63.682%	63.476%	63.270%	63.064%	62.858%	62.652%
60-64	64.750%	65.046%	65.342%	65.639%	65.935%	66.231%	66.527%	66.824%	67.120%	67.416%
65-74	65.676%	66.095%	66.514%	66.933%	67.352%	67.771%	68.190%	68.609%	69.028%	69.447%
75-84	75.682%	75.565%	75.449%	75.333%	75.217%	75.100%	74.984%	74.868%	74.751%	74.635%
85+	86.948%	86.868%	86.788%	86.708%	86.628%	86.548%	86.468%	86.388%	86.308%	86.227%

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Table 5: HRRs by age: Index approach

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
15-24	15.925%	16.016%	16.114%	16.213%	16.319%	16.436%	16.554%	16.671%	16.783%	16.893%
25-34	39.422%	39.469%	39.517%	39.574%	39.638%	39.700%	39.770%	39.822%	39.875%	39.917%
35-44	63.145%	63.348%	63.525%	63.703%	63.883%	64.016%	64.150%	64.240%	64.331%	64.406%
45-54	63.952%	64.100%	64.238%	64.381%	64.530%	64.666%	64.803%	64.913%	65.014%	65.095%
55-59	64.708%	64.736%	64.789%	64.846%	64.924%	65.036%	65.154%	65.271%	65.370%	65.448%
60-64	64.495%	64.562%	64.652%	64.748%	64.860%	65.013%	65.163%	65.309%	65.437%	65.537%
65-74	65.186%	65.156%	65.161%	65.164%	65.186%	65.260%	65.335%	65.416%	65.471%	65.500%
75-84	75.582%	75.414%	75.292%	75.170%	75.072%	75.035%	75.006%	74.978%	74.927%	74.845%
85+	86.908%	86.831%	86.817%	86.788%	86.782%	86.852%	86.917%	86.996%	87.042%	87.046%

Table 6: HRRs by age: 2011-based trend

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
15-24	15.890%	15.939%	15.988%	16.037%	16.086%	16.135%	16.190%	16.277%	16.379%	16.488%
25-34	39.058%	38.753%	38.447%	38.142%	37.836%	37.531%	37.225%	36.920%	36.614%	36.309%
35-44	63.161%	63.433%	63.705%	63.978%	64.250%	64.523%	64.795%	65.068%	65.340%	65.613%
45-54	64.098%	64.406%	64.714%	65.022%	65.330%	65.638%	65.946%	66.254%	66.562%	66.870%
55-59	64.961%	65.211%	65.461%	65.711%	65.961%	66.211%	66.461%	66.711%	66.961%	67.211%
60-64	64.542%	64.631%	64.720%	64.809%	64.898%	64.987%	65.075%	65.164%	65.253%	65.342%
65-74	65.168%	65.079%	64.990%	64.900%	64.812%	64.723%	64.634%	64.546%	64.457%	64.368%
75-84	75.776%	75.754%	75.732%	75.710%	75.688%	75.666%	75.645%	75.623%	75.601%	75.579%
85+	87.160%	87.291%	87.422%	87.553%	87.685%	87.816%	87.947%	88.078%	88.210%	88.341%