

REVISIONS TO CHILD YIELD MULTIPLIERS FOR NEW DEVELOPMENTS

Research Group, September 2015

1. SUMMARY

- 1.1. This note sets out revisions to the multipliers used to forecast the number of children living in planned housing developments.
- No significant changes are proposed to the 'general multipliers' used by the County Council to forecast the number of school-aged children in new developments **where a detailed housing mix is not yet known.**
 - Overall, the 'general multipliers' for new developments will remain at 25-35 primary children per 100 dwellings and 18-25 secondary pupils per 100 dwellings.
 - It is proposed to increase the general multiplier for the pre-school population to 20-30 children aged 0-3 per 100 dwellings.
 - **Where a detailed housing mix is known,** changes to the detailed multipliers for social rented housing and market housing are proposed. These changes reduce the number of children expected in market properties but increase the number in social-rented properties.
- 1.2. Table 1 presents the proposed detailed multipliers. Note that the multipliers for secondary age children represent the likely 'peak' as primary pupils age through. This figure will be reached a while after the development is complete.

Table 1: Proposed detailed child yield multipliers for Cambridgeshire (number of children per 100 dwellings of given size)

Age group	Number of bedrooms					
	<i>Market housing & intermediate Housing</i>			<i>Social rent</i>		
	2	3	4+	2	3	4+
0-3	0	20	35	40	60	70
4-10	0	20	40	15	80	120
11-15	0	15	30	0	40	90

- 1.3. For planning purposes, the Research Group advises against the use of a single mid-point figure. Instead, greater use of the full range is advised, particularly during early discussions. At all points it is important to be clear that any particular child forecast is based on a set of assumptions regarding the nature of the proposed development. If these assumptions change, so too will the child forecasts.

2. INTRODUCTION

- 2.1. This paper is an update to the paper produced by the Research Group in March 2009 in light of the information from the 2011 Census and other information now available.
- 2.2. Forecasting the number of children living in new developments is necessary but remains an inexact process. While some key variables - such as dwelling size and tenure mix - can be identified in advance and factored into forecasts, there remain many intangibles to do with location and design that affect the types of people and households attracted to an individual development. As new developments settle and mature, so do their populations, meaning that infrastructure needs to evolve over time.
- 2.3. This note sets out proposed refinements to the multipliers used by Cambridgeshire County Council Research Group to assess the education requirements of new developments. The multipliers are intended as a guideline only and, in some cases, an alternative approach may be more appropriate.
- 2.4. Whilst a multiplier range is proposed for calculating child yield (see para 1.3), for the purpose of calculating developer contributions (S106 Agreements) where a detailed housing mix is not yet known, the top end of the range must always be used to guarantee that the County Council can cover its statutory obligations as the Education Authority.

3. PREVIOUS MULTIPLIERS

- 3.1. The Research Group has built up child yield guidelines for new developments over many years. The last general and detailed multipliers were set out in a paper dated March 2009. The 'general guidelines' for new developments were 25-35 primary pupils per 100 dwellings and 18-25 secondary pupils (age 11-15) per 100 dwellings. The detailed multipliers are set out in table 2.

**Table 2: 2009 detailed child yield multipliers for Cambridgeshire
(number of children per 100 dwellings of a given size)**

Age group	Number of bedrooms					
	<i>Market housing</i>			<i>Social rent</i>		
	2	3	4+	2	3	4+
0-3	0	20	30	30	60	60
4-10	0	30	50	0	80	140
11-15	0	20	35	0	40	120

4. EXAMINATION OF GENERAL MULTIPLIERS

- 4.1. The 'general guidelines' for new developments were 25-35 primary pupils per 100 dwellings and 18-25 secondary pupils (age 11-15) per 100 dwellings or 3.5-5 pupils per year group per hundred dwellings. A guideline of 18-25 children aged 0-3 is also widely used. Table 3 shows the number of children of different ages from four new developments identified by the 2011 Census. The four developments were chosen because they were easily identifiable either

because they were parishes or were distinct areas that could be built up from census output area data.

- 4.2. The 2011 Census results suggest that the guidelines of 25-35 primary-aged pupils and 18-25 secondary-aged pupils per 100 dwellings are still reasonable. The number of secondary-age pupils in the Loves Farm and Orchard Farm developments is below this range. These are the two newest developments so the number of secondary-aged pupils is still increasing as the larger younger cohorts move through.

Table 3: Number of Children living in new developments in Cambridgeshire taken from the 2011 Census

Age	Cambourne	Hinchingbrooke Park	Loves Farm	Orchard Park	All 4 New Developments	Cambs
0-3	863	189	217	167	1,436	29,607
4-10	1,093	258	175	167	1,693	47,588
11-15	582	161	77	116	936	35,546
Dwellings	3,094	790	648	734	5,266	259,245
Children per hundred dwellings						
0-3	28	24	33	23	27	11
4-10	35	33	27	23	32	18
11-15	19	20	12	16	18	14

Source: Table QS103 EW, 2011 Census, ONS

Notes on the developments

Cambourne = started in the late 1990s and is still underway

Orchard Park, Cambridge fringe = started in 2006 and is close to completion

Loves Farm, St Neots = started in 2009 and is still underway

Hinchingbrooke Park, Huntingdon = started in the late 1990s and was recently completed.

- 4.3. With reference to the 0-3 population, the guideline was 18-25 children per 100 dwellings. The figures here indicate a higher range of 23-33 children aged 0-3 per 100 dwellings, which equates to around 6-8 per year group per 100 dwellings. This is much higher than the other multipliers of 3.5-5 per year group per 100 dwellings and is likely to represent the typical "bulge" in numbers of young children which occurs soon after a development gets underway.
- 4.4. A further validation is from a summary of the seven new estates surveys carried out by the Research Group from 2006-2012. The surveys covered a variety of sites across the county and Suffolk and, among other questions, asked about the tenure and household structure and age of people living in new housing. Table 4 shows the results from these surveys. The number of 0-3 year olds per 100 dwellings is lower at 22.6 children per hundred dwellings. Giving this evidence a new guideline of 20-30 children aged 0-3 is more appropriate.

Table 4: Number of Children per hundred houses taken from the summary of new development surveys

Age group	No. of children	No. of Properties	No. per 100 units
0-3	876	3883	22.6
4-10	1028	3883	26.5
11-15	540	3883	13.9

Source: Summary of new development surveys 2006-2012, Research Group 2013: The number of children in new settlements (Cambourne and Red Lodge) and other substantial developments.

5. EXAMINATION OF THE DETAILED GUIDELINES FOR MARKET AND INTERMEDIATE DWELLINGS

Previous multipliers

- 5.1. The previous multipliers were based on a specially commissioned table from the 2001 Census (C0511), which gave the age of 'wholly-moving household' residents according to tenure and property size. This table gave more information about the ages of children in different sized properties than was previously available from standard Census outputs. The Census is by no means a perfect evidence base for new developments, however it is one of the best sources of data at a local level. Table 5 shows the proposed multipliers for market and intermediate housing.

Table 5: Previous child multipliers for market/intermediate dwellings

Number of children per 100 market/intermediate dwellings

Age group	Number of bedrooms		
	2	3	4+
0-3	0	20	30
4-10	0	30	50
11-15	0	20	35

* Note that the 11-15 figures shown here relate to the likely peak in numbers as 4-10s age through. Around the time the development is complete numbers will be lower: 10 per 100x3-bed and 20 per 100x4-bed

Additional validation

- 5.2. Similarly two tables were commissioned from the 2011 Census for wholly moving households. Table CT0390 showed tenure by accommodation type by number of bedrooms by age and Table CT0389 showed residents by tenure by accommodation type by number of bedrooms. From these tables it was possible to replicate the 2001 table. Table 6 indicates lower figures than were found in the 2001 Census and suggests that the multipliers should be revised downwards.

Table 6: Number of children per 100 market/intermediate dwellings moving into new housing in Cambridgeshire recorded by the 2011 Census

Age group	Number of bedrooms			
	1	2	3	4+
0-3	2	7	21	36
4-10	5	5	17	41
11-15	1	2	8	20

Source: ONS 2011 Census Tables CT0389 and CT0390

- 5.3. Further validation is available from the summary of new estates surveys carried out by the Research Group. Table 7 shows the results from these which are similar to those shown found in Table 6.

Table 7: - Number of children per 100 market/intermediate dwellings taken from New Estates Surveys 2006-2012

Age group	Number of bedrooms			
	1	2	3	4+
0-3	0	9	22	30
4-10	2	6	15	46
11-15	0	2	8	25

Source: Summary of new development surveys 2006-2012, Research Group 2013. Number of children in new settlements (Cambourne and Red Lodge) and other substantial developments.

Proposed Multipliers

- 5.4. Taking account of the information above, the proposed multipliers are shown in table 8.

**Table 8: Proposed child multipliers for market/intermediate dwellings
Number of children per 100 market/intermediate dwellings**

Age group	Number of bedrooms		
	2	3	4+
0-3	0	20	35
4-10	0	20	40
11-15	0	15	30

* Note that the 11-15 figures shown here relate to the likely peak in numbers as 4-10s age through. Around the time the development is complete numbers will be lower: 10 per 100x3-bed and 20 per 100x4-bed

6. EXAMINATION OF THE DETAILED GUIDELINES FOR DWELLINGS FOR SOCIAL/AFFORDABLE RENT

Previous Multipliers

- 6.1. Accommodation that is “social rented” includes accommodation that is rented from a local authority or from a registered social landlord such as a housing association.
- 6.2. The Research Group’s guidelines have consistently indicated higher multipliers for social rented housing, reflecting the tendency for social housing to contain more children (for a given dwelling size) than market housing. This relates to housing need pressures and allocation policies. Changes to allocation policies can have a major impact on child numbers in social housing, so it is important to validate multipliers regularly. The 2009 multipliers are shown in Table 9.

Table 9: Previous child multipliers for social rented housing

Age group	Number of bedrooms		
	2	3	4+
0-3	30	60	60
4-10	0	80	140
11-15	0	40	120

Additional validation

- 6.3. Validation of these multipliers has been carried out based on data from CORE. CORE (COntinuous REcording) is a national information source, funded by the Tenant Services Authority and CLG, that records information on the characteristics of new housing association and local authority social housing tenants and the homes they rent and buy. Data from CORE allows us to examine the characteristics of new and transferring social-renting households in Cambridgeshire, including the number and ages of children, in relation to the size of their new home.
- 6.4. For this validation exercise, data were obtained for all new lets (including transfers) across Cambridgeshire between April 2010 and March 2013. Table 10 shows the average number of children by age and property size. These findings suggest that the current multipliers underestimate the number of children in smaller properties.

Table 10: Average number of children found per 100 new social housing lettings

Age group	Number of bedrooms		
	2	3	4+
0-3	43	64	78
4-10	15	85	145
11-15	6	44	107

Source: CORE data 2010-2013

- 6.5. Further validation is available from the commissioned tables from the 2011 Census. Table 11 shows the results from these, some of which are lower than those shown found in Table 10.

Table 11: - Number of children per 100 social rented dwellings moving into new housing in Cambridgeshire recorded by the 2011 Census

Age group	Number of bedrooms			
	1	2	3	4+
0-3	4	40	65	57
4-10	2	16	73	105
11-15	1	6	36	78

Source: ONS 2011 Census Tables CT0389 and CT0390

- 6.6. More validation is available from the summary of new estates surveys carried out by the Research Group. Table 12 shows the results from these which are fairly close to those shown found in Tables 10 and 11.

Table 12: - Number of children per 100 social rented dwellings taken from New Estates Surveys 2006-2012

Age group	Number of bedrooms			
	1	2	3	4+*
0-3	3	41	53	
4-10	1	19	73	
11-15	0	7	42	

Source: Summary of new development surveys 2006-2012, Research Group 2013. Number of children in new settlements (Cambourne and Red Lodge) and other substantial developments.

Note: The sample size is too small as only eleven 4-bed social rented properties were surveyed.

Proposed multipliers

- 6.7. Table 13 sets out proposed social rented multipliers based on the findings shown above.

Table 13: Proposed child multipliers for social rented/affordable rented housing

Age group	Number of bedrooms		
	2	3	4+
0-3	40	60	70
4-10	15	80	120
11-15	0	40	90

7. OTHER FACTORS TO BE TAKEN INTO ACCOUNT

- 7.1. In 2012, the government replaced the traditional social rent with a new tenancy called affordable rent. This allows registered housing providers to charge no more than 80% of local market rent (including service charges where applicable) for new affordable homes.
- 7.2. It is too soon to know what effect this change will have on child yield from new developments, which are likely to include properties for affordable rent. For the time-being it is assumed that the yield will be similar as from housing for social rent.
- 7.3. The other main policy that may influence the child yield from new social/affordable rent properties is the recent changes to housing benefit with the introduction of the under-occupancy charge or bedroom tax. Council and housing association tenants who claim housing benefit get less housing benefit if the council decides they have 'spare' bedrooms. It is expected that this measure will increase the child yield in new social/affordable rented properties but it is too soon to know what the effects of this change will be.
- 7.4. Each local authority tends to have their own multipliers for child yield from new developments based on the census or their own research. Table 14 shows a summary of recent research commissioned by Northamptonshire County Council. The figures are close to those that we propose.

Table 14: Number of Children per hundred houses living in new developments taken from Northamptonshire County Council Population Forecasting Report 2014

Age	1 bed	2 bed	3 bed	4 bed
All tenures				
0-3	0	30	32	34
4-10	0	13	32	37
11-15	0	3	17	22
Social Housing				
0-3	0	52	63	92
4-10	0	19	83	58
11-15	0	4	41	100