

Technical Appendix

Housing Strategy

for

North Tipperary

Oct 2001

APPENDIX A: ESTIMATING HOUSING DEMAND

A.1. Background

A.1.1 Objectives

Section 94(3)(b) of the Act requires planning authorities to ensure that housing is available for persons who have different levels of income. In addition to re-affirming the provisions of the Housing Act, 1988, Section 94(4)(c) of the Act requires planning authorities to provide for social and affordable housing by reserving a percentage of land zoned for residential use, or for a mixture of residential and other use. Elsewhere, in Section 93(1), the Act defines housing affordability in relation to the capacity of eligible persons to service a mortgage based on a defined level of income and loan to value ratio. In accordance with Section 94(1)(e) of the Act, this housing strategy has been prepared as a strategy for the four Local Authorities in North Tipperary. In order to comply with these and other provisions of Part V, an analysis of population, household formations, income trends, and house prices in Tipperary North Riding is presented in this section. This analysis forms the basis for the subsequent development of the strategy. An essential part of this analysis is an assessment of housing need and affordability over the life of the development plan. Key inputs to the analysis are county-level estimates of population household size, household income, and house prices, which are used to make a determination on housing affordability within the county. The approach adopted is summarised below:

- Project the number of expected household formations in the county for the period from 2000 to 2006. This involves an analysis of population growth (both natural increase and migration inflows to the county) and trends in household size. Together these factors are combined to generate a forecast of household numbers over the life of the development plan. This analysis culminates in the data presented in Table A.1.
- Project the levels and distribution of household disposable incomes across these households over the period in question. This involves the application of available national income data to Tipperary (NR) and the characterisation of different income

groupings across households within the county. This analysis culminates in the data presented in Table A.2.

- Project the levels and distributions of house prices over the period. The rate of house price inflation is assessed using available data from the Department of the Environment & Local Government. A distribution of house price bands is then constructed which is matched up with the above-mentioned household income bands. This analysis culminates in the data presented in Table A.3.
- Assess housing affordability in the county over the period. This is a key part of the analysis, and is summarised in section A.4. " Conclusions Reached". This analysis forms an important link into the social and affordable housing analysis undertaken in section 4 of the strategy.

A.1.2 Approach

The approach to this task depends on a number of factors. Availability of relevant data is a major consideration in determining the precision and reliability of any analysis. Equally, the depth of the analysis depends on methods currently adopted for assessing "social" housing needs within the county. The structure of the analysis however is flexible and allows for the introduction of new or updated information that may become available during the course of implementation. Such flexibility will be required over the life of the development plan in order to take account of changing circumstances.

A.1.3 Method and Sources

In preparing the strategy, reference is made to the following relevant and available data sets:

- CSO Census of Population and household number figures;
- National population projections (CSO) over the period in question;
- CSO figures on Household Incomes broken down by region and county;
- ESRI projections of national disposable income growth rates over the period;

- Department of the Environment and Local Government data on house completions, house prices, and house price distributions for Tipperary, North Riding;
- National house price projections included in *The Housing Market in Ireland: An Economic Evaluation of Trends and Prospects* (June 2000).

Where data was available on a national basis only, enabling assumptions were necessarily made regarding how - if at all - the position in Tipperary (NR) departed from national trends. In all cases where standard national projections (either in population, incomes or prices) were used, care was taken to make whatever adjustment might render the data-set more appropriate to the particular circumstances of Tipperary (NR). Notwithstanding this issue of the application of (adjusted) national data to the county specific context, a principal concern throughout the preparation of this strategy has been that all available data-sets should be identified and accessed, and that any inference or interpretation drawn from that data should be clearly stated, well reasoned, and well founded. In relation to house price data in particular, a forecasts has been constructed of house price trends in the light of experience and local circumstances, obtaining data regarding local price levels and trends from local auctioneering sources and lending institutions. There will be potentially significant variations in house prices between different areas and different segments of the market e.g. prices for first time purchasers (i.e. that segment of the market which are likely to be most in need of affordable housing) tend to be well below average house prices which also reflect prices paid for other more expensive properties.

A.2. Issues Considered

A.2.1 Population Projections

The 1996 Census of Population, showed that there were 58,021 inhabitants in County Tipperary (NR) at the time. The following factors are relevant to making an assessment of the likely annual change in this population to 2006:

Recent house completions and household planning permissions data from the Department of the Environment and Local Government, and from the planning authorities in Tipperary (NR) provide indications of current trends in the county.

Table B.1 in Appendix B sets out relevant demographic trends in Tipperary (NR) over the ten year period up to 1996. The data show that since 1986, Tipperary (NR) population fell up to 1991, and increased slightly between 1991 and 1996. However, converse trends were behind these changes. Over the entire period, births exceeded deaths and so there was a natural increase, but equally during this time there was also net migration outwards. The balance between these two factors has impacted on the overall direction of population. The data also reveal that the rate of natural increase fell slightly over the period, in line with the State as a whole. The rate of external net-migration also fell, and much more sharply than that of natural increase.

Table B.2 in Appendix B shows recent house completions and planning permissions for new residential dwellings in the county.

A.2.2 Household Sizes and Numbers

In order to translate population projections into numbers of households it was necessary to make an assessment of average household size. Table B.3 in Appendix B shows the recent trend in average private household sizes in Tipperary (NR) The figure fell from 3.59 persons in 1986, to 3.2 persons in 1996. This decline is in line with the State as a whole, where Irish household sizes have been moving towards EU averages which have traditionally been notably lower.

Informed opinion suggests that household sizes in Ireland will continue to decline on average over the foreseeable future. At present they remain above EU average levels by a significant margin. In the absence of any official census data since 1996, likely trends in household numbers and population in Tipperary (NR) since 1996 have been modelled based on observed house completions and the assumptions stated above regarding average household sizes. The results derived from this modelling process represent an approximation of the likely out-turn to 1999. This information is shown in Appendix B, Table B.4.

Table B.4 presents an estimated 2000 population figure for Tipperary (NR) of 64,618 this estimate has been based on observed house completions since 1996, and a reasonable assumption regarding average household size. The result suggests that Tipperary N.R has experienced high population growth over the period.

In order to project the population up to the year 2006, the rate of natural increase was also estimated. This data was compared with observed household completions and resulting population trends, and was then adjusted to take account of migration assumptions.

Table B.1 shows that the rate of population natural increase fell from 5.07 (annually, per 1,000 average population) between 1986 and 1991, to 4.03 between 1991 and 1996. It has been assumed that this rate of decline will be maintained into the future (i.e. between 1996 and 2001 the rate will fall to 3.16, and between 2001 and 2006 it will fall to 2.47). This corresponds with the 20.5% fall in the rates which has occurred between each intercensal period from 1986 to 1996). Table B.5 in Appendix B sets out the results of this analysis. Estimates of average household size have been introduced into the table to facilitate a projection of total (and additional) households over each year of the planning period.

A comparison of Tables B.5 and B.4 indicates that the observed population seems to be increasing much faster than the rate of natural increase would suggest. Between 1996 and 2000, Tipperary's (NR) natural increase is estimated to have been 1,196 persons in total. However, Table B.4 which has been prepared on the basis of observed house completions, sets the equivalent increase at 6,597. The clear implication for housing

analysis in Tipperary (NR) is that traditional outward migration has turned to net population inflows into the county - and that this has been occurring at a high rate.

As a further check on population growth, it has been assumed that average annual house completions between 1996 and 2000 (851) will continue up to 2006. This assumption reveals a picture of a population growing very rapidly due almost entirely to inward migration. Table A.1 presents the resulting data.

Table A.1 Adjusted Household Numbers and Population Forecasts – Tipperary (NR)

Year	Household Numbers	Additional Households	Average Household	Population Size
1996	18,132	520	3.20	58,022
1997	18,652	749	3.16	58,940
1998	19,401	823	3.12	60,531
1999	20,224	1,032	3.08	62,290
2000	21,256	1,132	3.04	64,618
2001	22,388	851	3.00	67,164
2002	23,239	851	2.96	68,788
2003	24,090	851	2.92	70,343
2004	24,941	851	2.88	71,831
2005	25,792	851	2.84	73,250
2006	26,643	851	2.80	74,601

A.2.3 Household Incomes

In order to incorporate income levels into the housing strategy it has been necessary to establish annual distributions for Tipperary (NR) over the period to 2006. Income distributions (i.e. the proportions of households in certain income groups) as opposed to averages have been established. This has been done so as to facilitate comparison with price distributions, which in turn provides for an assessment of affordability by reference to income groups. The income distribution for Tipperary (NR) was developed as follows:

- The CSO Household Budget Survey was used to find a national household income distribution (for 1994/95). This distribution is significant as income levels are a key determinant of affordability as set out in Section 93(1) of the Act. It is important

therefore to identify the distribution of incomes across households, as the households at the bottom end of this distribution are those most likely to experience affordability difficulties.

- This distribution was then adjusted on the basis of assumptions made about the gap between Tipperary (NR) and national levels of household income. CSO data on county-level household incomes was used as the basis for adjustment. This adjustment enabled the production of an income distribution table for Tipperary (NR) on the basis that the distribution of incomes across the county (once adjusted by the average deflator shown in the note to Table C.2) mirrors the national trend.
- The derived income distribution was inflated by assumed rates of household income growth. These rates of growth were based upon the Disposable Income Inflation data available from the Economic and Social Research Institute. This facilitated the forecast household income distribution over the life of the development plan (Table A.3).

A representative national distribution of gross and disposable incomes (gross income less income tax and pay related social insurance) is provided in the 1994/95 Household Budget Survey. Disposable income in this context corresponds with the income definition set out at Section 93(1) of the Act.

Table C.1 in Appendix C presents this national distribution across 10 income deciles, and the equivalent annual disposable income. Table C.2 in Appendix C adjusts this national picture to reflect the situation in Tipperary (NR) This adjustment was based on the "Household Incomes Regions and Counties 1991-1998", CSO publication. Two features of particular importance emerge from this adjustment:

- the differential between Tipperary (NR) and national disposable household incomes in 1994 and 1995; and
- the trend in this differential between 1991 and 1998.

Between 1991 and 1998, household income in Tipperary (NR) fluctuated between 94.68% and 96.00% of the national average. Based on this understanding an estimated income distribution for Tipperary (NR) was created and is presented in Table A.2.

Table A.2 Estimated Distribution of Household Disposable Incomes in Tipperary (NR)

Income Range (IR£)	Weekly Disposable Income	% of Households In each Category	Average Annual Disposable Household Income (National) (IR£)	North Tipperary Deflator	Average Annual Disposable Household Income (N. Tipperary) (IR£)	No. of Households in North Tipperary, 1995
		1	2	3	4 (Col 2*Col 3)	5 (17501* (Col 1/100))
1 st Decile	<£77.92	11.57	3,263.00	0.959	3129.22	2025
2 nd Decile	<£121.60	10.54	5,109.00	0.959	4899.53	1845
3 rd Decile	<£154.70	9.48	6,959.68	0.959	6674.33	1659
4 th Decile	<£206.39	9.60	9,033.44	0.959	8663.07	1680
5 th Decile	<£268.76	9.74	11,188.32	0.959	10729.60	1705
6 th Decile	<£340.89	9.56	13,730.08	0.959	13167.15	1673
7 th Decile	<£425.89	9.81	16,723.20	0.959	16037.55	1712
8 th Decile	<£524.18	9.58	19,989.32	0.959	19169.76	1677
9 th Decile	<£698.69	9.78	24,435.84	0.959	23433.97	1712
10 th Decile	>£698.69	10.35	36,156.12	0.959	34673.72	1811
Total		100				17503

The final column shows the estimated number of households in Tipperary (NR) which have an average household income as shown in the column immediately to the left. To facilitate further analysis, this income projection was extrapolated forward over the period of the development plan and is shown in Table A.3.

- *Note:* The 1995 figures are as shown in Table A.2 and are based on CSO 1994/95 Household Budget Survey. The percentage growth factors for income are

taken from the ESRI's Medium Term Review projections for national disposable income growth up to 2006

Table A.3 Household Income Distribution – Tipperary (NR) 1995-2006

Average Disposable Income 1995 – 2006 (IR£)												
Tipperary North Riding												
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
% growth		10.5	13.9	13.5	10.6	12.1	13.1	10.5	7.8	7.7	8.0	7.2
1 st Decile	3129	3458	3938	4470	4944	5542	6268	6926	7466	8041	8684	9309
2 nd Decile	4900	5414	6167	7000	7742	8678	9815	10846	11692	12592	13599	14579
3 rd Decile	6674	7375	8400	9534	10544	11820	13369	14772	15925	17151	18523	19857
4 th Decile	8663	9573	10903	12375	13687	15343	17353	19175	20671	22262	24043	25774
5 th Decile	10730	11857	13505	15328	16953	19004	21493	23750	25603	27574	29780	31924
6 th Decile	13167	14550	16572	18809	20803	23320	26375	29144	31418	33837	36544	39175
7 th Decile	16038	17722	20185	22910	25339	28405	32126	35499	38268	41215	44512	4717
8 th Decile	19170	21183	24127	27384	30287	33952	38400	42432	45741	49263	53204	57035
9 th Decile	23434	25895	29494	33476	37024	41504	46941	51870	55916	60221	65039	69722
10 th Decile	34674	38315	43641	49532	54782	61411	69456	76749	82735	89106	96234	103163

A.2.4 House Prices

A quantified assessment of housing affordability must inevitably correlate estimated incomes with appropriate house price data. The price data used in this analysis has been based upon the system of data collection currently operated by the Department of the Environment and Local Government and it has been assumed that it provides a sufficiently "representative" fit for Tipperary (NR). The following analysis presents,

- (a.) the estimated distribution of house price data for Tipperary (NR) (in 2000 prices), based upon the Department's data system;

- (b.) the value ranges projected forward based on assumptions about the direction of house prices. (For this exercise house price forecasts, on a national basis, derived from the report, *The Housing Market in Ireland: An Economic Evaluation of Trends and Prospects*, were used - see Table D.3 in Appendix D. This provides an overview of the assumed price growth of the assumed total housing stock, but retained in various price categories;
- (c.) Locally adjusted price forecasts. We have constructed our own forecasts of house price trends in the light of experience and local circumstances. A survey was conducted of local auctioneers, property valuers and lending institutions. This survey indicated that the annual growth figures should be reduced from the levels predicted by the Bacon Report. The annual growth used in this analysis are as outlined in table A3.1 below.

<i>Year</i>	<i>Annual Projected Growth</i>	<i>Locally Adjusted Growth</i>
2001	20%	10%
2002	16%	10%
2003	13%	8%
2004	8%	8%
2005	6.5%	6.5%
2006	5.5%	5.5%

- (d.) the distribution of annual total household numbers across these forecast value ranges (assuming the overall value distribution remains constant).

The outcome of this analysis is a projected annual overview of the estimated numbers of Tipperary (NR) housing units grouped within gradually increasing price ranges. Table D.1 in Appendix D opens this analysis by comparing the average price of a house in Tipperary (NR) and the State as a whole over the years 1995-2000.

During this period, the price of an average house in the State increased by 131%. In Tipperary (NR) the increase was 95%.

Drawing upon the house price and distribution data available from the Department of the Environment and Local Government, Table D.2 in Appendix D has been prepared to show the estimated proportions of all houses in Tipperary (NR) which fall within a given value distribution. A price distribution across various house bands was calculated using average house prices over the 5-year period, 1995 to 2000. Using the 2000 price band as the starting point, each price band was deflated using the relevant annual price increase, going back to 1995. An average proportion of households was then calculated in each of the relevant house price bands.

This distribution of house prices - combined with a corresponding distribution of incomes - facilitates an assessment of the number of new household formations, which are likely to encounter affordability problems.

To structure this analysis over the period of the development plan however, it is necessary to develop similar house price band data for each year of the analysis. This data is developed and presented in Table D.3 in Appendix D and Table A.4 which show the anticipated rate of house price increase over the period 2000 to 2005, and the implications of this inflation for the house price band structure. Both new and second-hand price increases have been factored into an average increase as the analysis presented addresses the assumed entire housing stock, and not just new developments. This is consistent with the requirement that the housing strategy should have regard to the total housing position in the county. The resulting data structure provides the basis for the housing affordability analysis which follows.

Table A.4 House Price Band Inflation

Year	Average Price Increase	Price Bands											
2000	Up to	50,000	50,000	70,000	90,000	110,000	130,000	150,000	170,000	190,000	Greater than		
			to 70,000	to 90,000	to 110,000	to 130,000	to 150,000	to 170,000	to 190,000	to 210,000		210,000	
2001	10.0%	Up to	55,000	55,000	77,000	99,000	121,000	143,000	165,000	187,000	209,000	Greater than	
			to 77,000	to 99,000	to 121,000	to 143,000	to 165,000	to 187,000	to 209,000	to 231,000		231,000	
2002	10.0%	Up to	60,500	60,500	84,700	108,900	133,100	157,300	181,500	205,700	229,900	Greater than	
			to 84,700	to 108,900	to 133,100	to 157,300	to 181,500	to 205,700	to 229,900	to 254,100		254,100	
2003	8.0%	Up to	65,340	65,340	91,476	117,612	143,748	169,884	196,020	222,156	248,292	Greater than	
			to 91,476	to 117,612	to 143,748	to 169,884	to 196,020	to 222,156	to 248,292	to 274,428		274,428	
2004	8.0%	Up to	70,567	70,567	98,794	127,021	155,248	183,475	211,702	239,928	268,155	Greater than	
			to 98,794	to 127,021	to 155,248	to 183,475	to 211,702	to 239,928	to 268,155	to 296,382		296,382	
2005	6.5%	Up to	75,154	75,154	105,216	135,277	165,339	195,401	225,462	255,524	285,585	Greater than	
			to 105,216	to 135,277	to 165,339	to 195,401	to 225,462	to 255,524	to 285,585	to 315,647		315,647	
2006	5.5%	Up to	79,288	79,288	111,003	142,433	174,433	206,148	237,863	269,578	301,293	Greater than	
			to 111,003	to 142,433	to 174,433	to 206,148	to 237,863	to 269,578	to 301,293	to 333,008		333,008	
% of units within each band			10.73	19.48	25.82	19.08	11.28	5.17	2.48	1.78	1.45	2.8	

A.2.5 Housing Affordability Analysis

Section 93(1) of the Planning and Development Act, 2000, defines an eligible person as someone,

"who is in need of accommodation and whose income would not be adequate to meet the payments on a mortgage for the purchase of a house to meet his or her accommodation needs because the payments calculated over the course of a year would exceed 35 per cent of that person's annual income net of income tax and pay related social insurance".

A key requirement of the housing strategy in Tipperary (NR) is to identify the number of eligible persons which might be anticipated over the duration of the development plan. An assessment of the likely number of such eligible persons (or eligible households) requires that a comparison be made between projected house prices for the county, and projected ranges of disposable incomes of different households. Drawing upon the "35%" definition of housing affordability contained in the Act, a simple "annuity" formula has been developed to assess affordability against four key variables which are central to the analysis. These are:

- household income;
- house price;
- mortgage interest rate; and
- loan to value ratio.

A note on the derivation and structure of the annuity formula is contained in Appendix E. Before attempting to arrive at any final assessment of housing affordability in Tipperary (NR), it was considered useful to develop some understanding of how sensitive any particular outcome might be to a given level of change in the four key variables. This is not to suggest that the affordability analysis is uniquely vulnerable to changes in the input variables. Rather it is simply to acknowledge that any analysis or forecast can only be considered reliable to the extent that the input variables upon which it is based remain accurate and relevant. Table A.5 illustrates how - for a fixed house price of £100,000 - changes in two of the three variables can influence the income threshold at which an affordability problem would be encountered.

Table A.5 Mortgage Servicing Costs under Different Scenarios**(a) Significance of different loan to value ratios**

House Price (IR£)	Loan to Value Ratio	Loan Size (IR£)	APR	Term (years)	Monthly Repayment (IR£)	Annual Repayment (IR£)	Annual Disposable Income *
100,000	0.90	90,000	0.05	25	526.13	6,314	18,039
100,000	0.85	85,000	0.05	25	496.90	5,963	17,036
100,000	0.80	80,000	0.05	25	467.67	5,612	16,034

(b) Significance of different interest rates

House Price (IR£)	Loan to Value Ratio	Loan Size (IR£)	APR	Term (years)	Monthly Repayment (IR£)	Annual Repayment (IR£)	Annual Disposable Income *
100,000	0.90	90,000	0.06	25	579.87	6,958	19,881
100,000	0.90	90,000	0.07	25	636.10	7,633	21,809
100,000	0.90	90,000	0.08	25	694.60	8,335	23,815

- a projection of the total numbers of households in the county each year to 2006, and a breakdown of these according to household disposable incomes (Tables A.1 and A.3);
- an overview of the evolving distribution of house prices (Table A.4);
- an overview of the estimated housing "affordability" potential of the projected households.

The purpose in this section of the analysis is to draw these lessons together in order to develop conclusions on which to base the affordability aspect of the housing strategy for Tipperary (NR).

Table A.6 brings together information previously presented on numbers of households, household incomes broken down across income deciles, and the number of incremental or new households formed. This data is forecast over the period 1999 to 2006.

Table A.6 Income Distribution of Annual Additional Households

% of Households		Total Households						
Year	1999	2000	2001	2002	2003	2004	2005	2006
11.57	2,340	2,459	2,590	2,689	2,787	2,886	2,984	3,083
10.54	2,132	2,240	2,360	2,449	2,539	2,629	2,718	2,808
9.48	1,917	2,015	2,122	2,203	2,284	2,364	2,445	2,526
9.6	1,942	2,041	2,149	2,231	2,313	2,394	2,476	2,558
9.74	1,970	2,070	2,181	2,263	2,346	2,429	2,512	2,595
9.56	1,933	2,032	2,140	2,222	2,303	2,384	2,466	2,547
9.81	1,984	2,085	2,196	2,280	2,363	2,447	2,530	2,614
9.58	1,937	2,036	2,145	2,226	2,308	2,389	2,471	2,552
9.78	1,978	2,079	2,190	2,273	2,356	2,439	2,522	2,606
10.35	2,093	2,200	2,317	2,405	2,493	2,581	2,669	2,758
Total	20,224	21,256	22,388	23,239	24,090	24,941	25,792	26,643
Average Household Incomes (IR£)								
Year	1999	2000	2001	2002	2003	2004	2005	2006
11.57	4,944	5,542	6,268	6,926	7,467	8,042	8,685	9,310
10.54	7,741	8,678	9,814	10,845	11,691	12,591	13,598	14,577
9.48	10,545	11,821	13,369	14,773	15,926	17,152	18,524	19,858
9.6	13,687	15,343	17,353	19,175	20,671	22,262	24,043	25,775
9.74	16,952	19,003	21,493	23,749	25,602	27,573	29,779	31,923
9.56	20,803	23,320	26,375	29,145	31,418	33,837	36,544	39,175
9.81	25,338	28,404	32,125	35,498	38,267	41,214	44,511	47,715
9.58	30,287	33,952	38,399	42,431	45,741	49,263	53,204	57,034
9.78	37,024	41,504	46,941	51,870	55,915	60,221	65,039	69,721
10.35	54,782	61,411	69,455	76,748	82,735	89,105	96,233	103,162
Total Additional Households per Year								
Year	1999	2000	2001	2002	2003	2004	2005	2006
11.57	119	131	98	98	98	98	98	98
10.54	109	119	90	90	90	90	90	90
9.48	98	107	81	81	81	81	81	81
9.60	99	109	82	82	82	82	82	82
9.74	101	110	83	83	83	83	83	83
9.56	99	108	81	81	81	81	81	81
9.81	101	111	83	83	83	83	83	83
9.58	99	108	82	82	82	82	82	82
9.78	101	111	83	83	83	83	83	83
10.34	107	117	88	88	88	88	88	88
Total	1,032	1,132	851	851	851	851	851	851

- *Note 1: The household distribution has been derived by taking the household figures shown from 1999 to 2006 in Table A.1 and re-allocating them on the basis of the distribution pattern shown in column 3 of Table A.2.*
- *Note 2: The household income figures have been taken from Table A.3.*
- *Note 3: The figures in the last row of the table represent the anticipated incremental or new households which will be formed in the county over the period of the development plan, and are derived as the difference between total households on a year by year basis.*

Based on the incremental household formations identified in Table A.6, and drawing upon the associated measure of income distribution, it has been possible to establish a series of house prices which represent the maximum price which these new households in Tipperary (NR) can be expected to afford. This series of maximum prices has been derived on the basis of the criteria set out in Section 93(1) of the Act and is presented in Table A.7. In the context of this analysis it has been established that in Tipperary (NR) in the year 2001, 98 new households will be formed whose capacity to afford a house (based on the assumptions defined in the footnote to Table A.7) is limited to £31,161 or below. Equally, 188 households will be formed in the same year whose house price level is limited to £48,790 or below.

Additional Households and House Price Affordability

- *Note: Maximum house prices are based upon criteria set out in Section 93(1) of the Act, and assuming a 6.0% APR, 25 year mortgage, and a 90% LTV ratio*

Given the measure of affordability now established for Tipperary (NR), the remaining element required to complete the assessment of social and affordable housing need in the county is to make some estimate of the price bands at which new housing will be introduced over the life of the development plan. This is presented in Table A.8, which reveals that the cheapest new house price in Tipperary (NR) in 2001 is expected to be £55,000 and that only 5.76% of all new houses will be brought to the market at this price or lower. On this basis it can be expected that of the anticipated 851 new household formations in Tipperary (NR) in 2001, 163 can be expected to experience affordability

problems. The affordability aspect of the housing strategy for the county has therefore been assembled by extending this analysis for each year over the life of the development plan, and quantifying the percentage of each new household cohort which is likely to experience affordability difficulties.

Table A.7 Additional Households and House Price Affordability

Income Year	Additional Households per year based on Income Distribution					
	2001	2002	2003	2004	2005	2006
<IR£77.92	98	98	98	98	98	98
<IR£121.60	90	90	90	90	90	90
<IR£154.70	81	81	81	81	81	81
<IR£206.39	82	82	82	82	82	82
<IR£268.76	83	83	83	83	83	83
<IR£340.89	81	81	81	81	81	81
<IR£425.89	83	83	83	83	83	83
<IR£524.18	82	82	82	82	82	82
<IR£698.69	83	83	83	83	83	83
>IR£698.69	88	88	88	88	88	88
Total	851	851	851	851	851	851
Approximate Affordable House Price (Irl.£)						
Year	2001	2002	2003	2004	2005	2006
<IR£77.92	31161	34433	37119	39977	43175	46284
<IR£121.60	48790	53913	58118	62593	67601	72468
<IR£154.70	66464	73442	79171	85267	92088	98719
<IR£206.39	86268	95326	102761	110674	119528	128134
<IR£268.76	106846	118065	127274	137074	148040	158699
<IR£340.89	131120	144887	156188	168215	181672	194752
<IR£425.89	159703	176472	190237	204885	221276	237208
<IR£524.18	190894	210938	227391	244900	264492	283536
<IR£698.69	233357	257860	277973	299377	323327	346607
>IR£698.69	345284	381538	411298	442968	478406	512851

Numbers of Additional/New Housing Units in Tipperary (NR) within each Price Band

- **Note:** Based on the rate of house price inflation introduced at Table A.4 and assuming that the distribution (or banding) of houses remains unchanged. The first three columns in the Table under each year are taken from Table A.4. The fourth column under each year represents the distribution of total household formations for the year across the house price range (based upon the housing stock value distribution shown in Appendix D, Table D.2.)

The implications of this analysis for the development of housing policy in Tipperary (NR) are summarised in Sections A.3 and A.4 below, which presents conclusions on the likely level of social and affordable housing need which the planning authority believes it will be required to address over the life of the development plan.

Table A.8 Numbers of Additional/New Housing Units in Tipperary (NR) within each Price Band

No of additional units	2001		2002		2003	
49	Up to	55,000	Up to	60,500	Up to	65,340
123	55,000 to	77,000	60,500 to	84,700	65,340 to	91,476
262	77,000 to	99,000	84,700 to	108,900	91,476 to	117,612
205	99,000 to	121,000	108,900 to	133,100	117,612 to	143,748
96	121,000 to	143,000	133,100 to	157,300	143,748 to	169,884
44	143,000 to	165,000	157,300 to	181,500	169,884 to	196,020
21	165,000 to	187,000	181,500 to	205,700	196,020 to	222,156
15	187,000 to	209,000	205,700 to	229,900	222,156 to	248,292
12	209,000 to	231,000	229,900 to	254,100	248,292 to	275,428
24	Greater than	231,000	Greater than	254,100	Greater than	275,428
851						
No of additional units	2004		2005		2006	
49	Up to	70,567	Up to	75,154	Up to	79,288
123	70,567 to	98,794	75,154 to	105,216	79,288 to	111,003
262	98,794 to	127,021	105,216 to	135,277	111,003 to	142,718
205	127,021 to	155,248	135,277 to	165,399	142,718 to	174,433
96	155,248 to	183,475	165,399 to	195,401	174,433 to	206,148
44	183,475 to	211,702	195,401 to	225,468	206,148 to	237,863
21	211,702 to	239,928	225,468 to	255,524	237,863 to	269,578
15	239,928 to	268,155	255,524 to	285,585	269,578 to	301,293
12	268,155 to	296,382	285,585 to	315,647	301,293 to	333,088
24	Greater than	296,382	Greater than	315,647	Greater than	333,088
851						

A.3 Assumptions Made

The following assumptions and issues merit comment:

- The fullest possible use has been made of all relevant published data. Where data has been presented on a national basis, efforts have been made to assess trends in the data to ensure that it fits with circumstances in North Tipperary.
- In the analysis presented above recourse has been had to available CSO data on average household incomes. On the basis that the average incomes computed by the CSO are indeed representative, and reflect the income position for a typical household which may present itself as an applicant for affordable housing, these figures can be used with some confidence. However it should be noted that the income criteria set out in Sections 93(1) and 93(3) of the Act differ in one important respect from income criteria used in the CSO Household Budget Survey. Section 93(3)(a) of the Act allows half of the annual income, net of tax and pay related social insurance, "*of any other person who might reasonably be expected to reside with the eligible person*" to be reckoned in any determination of eligibility. Such a definition is different to the concept of average household income used by the CSO. The impact of these definitional issues may not prove to be significant in the final analysis of affordable housing demand. In general, the impact of this issue will be - through the more restrictive definition of additional income set out in Section 93(1)(a) - to lower the incomes of applicant households relative to the anticipated CSO average. This in turn will compound affordability difficulties, and support an argument for some slight upward revision of identified affordable housing need, and the consequent intervention of the planning authority under Section 94(4)(c).
- Significant inter-dependencies exist among the income, house price, and interest rate variables which mean that changes in one factor could change the analysis.
- In the analysis presented in this section, the estimated annual rate of new household formations in the county is taken as a proxy for housing demand. A further aspect of potential housing demand however is the routine requirement to replace unfit

dwellings. This arises in cases of overcrowding or where the fabric and quality of the dwelling is deemed unfit (either for reasons of age or obsolescence, or both). The number of annual completions required to replace such unfit dwellings has been estimated in the past at approximately 1% of the total housing stock.⁸ However because of ongoing improvements to the quality of the national housing stock it is believed that this figure may now be closer to 0.65%. In preparing this model housing strategy however, the planning authority has not reflected this additional demand.

A.4 Conclusions Reached

The analysis at A.1 above suggests that the demand for social and affordable housing in North Tipperary over the period 2001-2006 will exceed the anticipated supply. This outcome is presented below on a year-by-year basis and is summarised in Table A.9.

2001

269 households will have an upper affordability threshold price of £66,464. Assuming an even distribution, this suggests a total of 212 could afford to purchase up to £55,000. 49 housing units will be provided at a price of £55,000. 174 households therefore, that fall into this income bracket would not be in a position to purchase houses at a price they can afford.

In addition to this 126 can afford to purchase houses at prices up to £86,268. Again, it is assumed that 112 can afford up to £77,000 the price at which 123 new units are being provided. Here only all potential homeowners meet the affordability definition. In total therefore in 2001, some 174 households are unlikely to meet the affordability definition. This is equal to **20.4%** of the total additional housing provided in the year. For higher income households, sufficient provision is expected to be made at prices within affordability thresholds.

⁸ A Review of Housing Policy (Report No. 87 of the National Economic and Social Council)

2002

269 households will have an upper affordability threshold price of £73,442. It is therefore expected that 222 households will have an upper limit of £60,500, the price at which 49 units will be brought to the market. The shortfall in this year is therefore 173 units.

At higher incomes, 129 households can afford up to £95,326; again it is assumed that 114 can afford up to £84,700 at which price 123 houses will be available therefore fulfilling the need. This shortfall of 173 units amounts to **20.3%** of the total additional provision in the year.

2003

269 additional households have an upper limit of £79,171, using the same criteria 222 households will have an upper affordability limit of £65,340, the price at which 49 units are expected to come on the market. The shortfall here is 173 units. This 173 amounts to **20.3%** of the total additional provision in the year. For higher income households, sufficient provision is expected to be made at prices within affordability thresholds.

2004

269 additional households have an upper limit of £85,267. It is expected that 223 households will have an upper affordability price limit of £70,567, the price at which 49 units are expected to come on the market. The shortfall here will be 174 units which is **20.4%** of the total additional provision in the year. For higher income households, sufficient provision is expected to be made at prices within affordability thresholds.

2005

In 2005, 269 additional households have an upper limit of £92,088 while 220 households will have an upper affordability limit of £75,154, the price at which 49 units are expected to come on the market. The shortfall here is 171 units. This 171 amounts to **20.1%** of the total additional provision in the year.

2006

269 additional households will have an upper limit of £98,719. It is expected that 216 households will have an upper affordability price limit of £79,288, the price at which 49

units are expected to come on the market. The shortfall here will be 167 units which is **19.6%** of the total additional provision in the year. As in previous years for higher income households, sufficient provision is expected to be made at prices within affordability thresholds.

Table 3.9 shows the proportion of housing estimated to be required for social and affordable housing and the percentages of new house formations unable to afford housing.

Table 3.9 Affordability of Housing in North Tipperary.

	2001	2002	2003	2004	2005	2006
(1) Household formations	851	851	851	851	851	851
(2) No. of households meeting affordability criteria	174	173	173	174	171	167
(2) as a % of (1)	20.4	20.3	20.3	20.4	20.1	19.6

The policy conclusion drawn from the summary analysis for North Tipperary presented in Table A.9 has been that the planning authority will aim to reserve 20% of zoned land (as defined under Section 94(4)(c)) for the purpose of meeting social and affordable housing need.

APPENDIX B: **Population Data: Tipperary - North Riding**

Table B.1 Demographic Trends, North Tipperary

Population	1986	59,522
	1991	57,854
	1996	58,021
Natural Change	1986-91	1,489
	1991-96	1,167
Net Migration	1986-91	-3,157⁹
	1991-96	-1,000
Annual Rates per 1,000 Average Population		
Natural Increase	1986-91	5.07
	1991-96	4.03
Net Migration	1986-91	-10.76
	1991-96	-3.45

- *Note:* The annual rate of natural increase of 6.69 per 1,000 average population shown in Table B.1 has been derived as follows:

Average population between

$$1986 \text{ and } 1991 = (59522 + 57854) / 2 = 58688$$

Natural change in population = 1,489

Natural change per 1,000

$$\text{average population} = (1489 / 58.688) = 25.371$$

Annual Rate of natural change

$$\text{per 1,000 population} = (25.371 / 5) = 5.07^*$$

* The figure of 25.371 is divided by 5 to reflect the five-year inter-censal period.

⁹ This indicates that 3,157 persons left North Tipperary between 1986 and 1991.

The other annual rates per 1,000 have been derived in a similar fashion.

Table B.2 Demographic Trends, Tipperary (NR)

	1994	1995	1996	1997	1998	1999	2000
House Completions		298	520	749	823	1,032	1,132
Planing Permissions	-	-	833	-	-	1,045	1,422

- *Source: Department of the Environment and Local Government Housing Statistics Bulletin, North Tipperary Local Authorities and Tipperary Institute.*

Table B.3 Household Numbers and Household Sizes – Tipperary (NR)

Year	Private Households	Numbers of People in Private Households	Average Household Size
1981	15,445	5,7234	3.71
1986	16,132	5,7982	3.59
1991	16,631	5,6487	3.4
1996	17719	56767	3.2

- *Source: CSO, Census of Population*

Table B.4 Population and Households 1996-2000

Year	House Completions	Total Households	Average Household Size	Total Population
1996	520	18,132	3.2	58,021
1997	749	18,652	3.16	58,940
1998	823	19,401	3.12	60,531
1999	1,032	20,224	3.08	62,290
2000	1,132	21,256	3.04	64,618

- *Note:* The 1996 figures in Table B.4 differ from those shown in Table B.3 as the latter referred only to private households. Table B.4 applies assumed household size to develop corresponding population estimates.

Table B.5 Natural Increase in Tipperary (NR) Population, 1996-2006

Year	Natural Increase in Population	Rate of Natural Increase*	Natural Increase	Average Household Size	Total Households	Additional Households
1996	58,021	3.16	183	3.2	18132	
1997	58,204	3.16	184	3.16	18419	288
1998	58,388	3.16	185	3.12	18714	295
1999	58,573	3.16	185	3.08	19017	303
2000	58,758	3.16	186	3.04	19328	311
2001	58,944	2.47	146	3.00	19648	320
2002	59,089	2.47	146	2.96	19963	315
2003	59,235	2.47	146	2.92	20286	323
2004	59,381	2.47	147	2.88	20619	333
2005	59,528	2.47	147	2.84	20961	342
2006	59,675	2.47	147	2.8	21313	352

- **Rate of Natural Increase per 1,000 Population*

APPENDIX C: **Income Data: Tipperary – North Riding**

Table C.1 Household Incomes - National (1994/95)

Income range	Weekly Disposable Income (IR£)	% of all Households in each Category	Rolling Average Disposable Wk Household Income(IR£)	Average Annual Disposable Household Income (IR£)
1st Decile	<£77.92	11.57	62.75	3,263
2nd Decile	<£121.60	10.54	98.25	5,109
3rd Decile	<£154.70	9.48	133.84	6,960
4th Decile	<£206.39	9.60	173.72	9,033
5th Decile	<£268.76	9.74	215.16	11,188
6th Decile	<£340.89	9.56	264.04	13,730
7th Decile	<£425.89	9.81	321.60	16,723
8th Decile	<£524.18	9.58	384.41	19,989
9th Decile	<£698.69	9.78	469.92	24,436
10th Decile	>£698.69	10.34	695.31	36,156

– *Source: CSO, Household Budget Survey, 1994/95*

Table C.2 National and Tipperary (NR) per Capita Household Disposable Income (IR£)

	1991	1992	1993	1994	1995	1996	1997	1998
State	5,660	5,901	6,368	6,525	7,098	7,629	8,400	9324
North Tipperary	5,434	5,731	6,179	6,324	6,809	7,390	7,995	8,828
North Tipperary as a % of State	96.00	97.12	97.03	96.92	95.96	96.87	95.12	94.68

– *Source: CSO, Household Incomes Regions and Counties, 1991-1997*

APPENDIX D: House price Data: Tipperary (All)

Table D.1 Average House Prices 1995-2000 (IR£)

	1995	1996	1997	1998	1999	2000
Co. Tipperary	49,934	56,678	68,272	64,958	77,716	97,593
State	60,912	66,174	83,461	96,141	119,977	141,191
Co Tipperary as % of State	82%	86%	82%	68%	65%	69%

– *Source: Department of the Environment and Local Government*

Table D.2 Estimated 2000 Housing Stock Value Distribution

Range(IR£)	% of all Co. Tipperary Houses	
	%	(House No's)
0 to 50,000	5.73	(49)
50,000 to 70,000	14.48	(123)
70,000 to 90,000	30.82	(262)
90,000 to 110,000	24.08	(205)
110,000 to 130,000	11.28	(96)
130,000 to 150,000	5.17	(44)
150,000 to 170,000	2.48	(21)
170,000 to 190,000	1.78	(15)
190,000 to 210,000	1.45	(12)
210,000 and over	2.80	(24)
Total	100.00	(851)

Table D.3 House Price Increase Projections assumed for this exercise

Year	Annual % Increase projected for			
	New Houses	Second-hand Houses	National Average	Adjusted Fig for Tipp (NR)
2000	17	19	18	10
2001	15	17	16	16
2002	12	14	13	13
2003	9	11	10	10
2004	8	9	8.5	8.5
2005	7	8	7.5	7.5

- Sources: (1) *The Housing Market in Ireland: An Economic Evaluation of Trends and Prospects (June 2000)*. These are national figures and predate the measures in the *Government Action on Housing (June 2000)*.

(2) *Local Auctioneers and Lending Agencies*

APPENDIX E: Annuity Formula

Section 93(1) of the Planning and Development Act, 2000, defines an eligible person as a "person who is in need of accommodation and whose income would not be adequate to meet the payments on a mortgage for the purchase of a house to meet his or her accommodation needs because the payments calculated over the course of a year would exceed 35 per cent of that person's annual income net of income tax and pay related social insurance".

The nature of this definition requires planning authorities to relate the mortgage repayment on a house of a particular price to the after-tax income (as defined above) of an applicant. If the monthly cost of servicing a mortgage (for a given house price) is greater than 35% of the applicants after-tax income, then the applicant can be deemed eligible as defined in Section 93(1).

In practice, it is expected that planning authorities will apply this definition to houses in the lowest available price band in the county - it is in this sense that the term "for a given house price" is used above.

To assess eligibility under Section 93(1), the following annuity formula was used to compare monthly after-tax income with the monthly mortgage servicing costs associated with a particular house:

$$PV = Pt \times \frac{[1 - (1+i)^{-n}]}{i}$$

i

where,

- PV = total loan size
- (no greater than 90% of Market Value - Section 93(1))
- Pt = monthly repayment amount
- i = monthly interest rate
- n = number of months over which the loan is to be paid

APPENDIX F: NEEDS ASSESSMENT

Table F.1 NEEDS ASSESSMENT TABLE – TIPPERARY COUNTY 1999/1996

(1)	(2)	(3)
Category of Households (as specified in section 9 (2) of the Housing Act, (1988)	All Housholds 1999 Total No.	All Housholda 1996 Total No.
Homeless persons	5	
Travellers (persons to whom section 13 of the Housing Act, 1988 applies)	41	39
Persons living in accommodation that is Unfit or materially unsuitable	60	43
Persons living in overcrowded accommodation	224	211
Persons sharing accommodation involuntarily and having a reasonable. Requirement for separate accommodation	1	12
Young persons leaving institutional. Care or without family accommodation		
Persons in need of accommodation for Medical or compassionate reasons.	50	25
Elderly persons	24	30
Disabled or handicapped persons	4	
Persons not reasonably able to meet the cost of the accommodation they are occupying or to obtain suitable alternative accommodation	8	29
TOTAL	417	389

APPENDIX G: Planning Permissions Granted 1996 & 2000

Table G.1 North Tipperary Residential Planning Permissions (units) Granted 1996

DED Name	Sum of No. of Units Granted	DED Name	Sum of No. of Units Granted
Abington	1	Kilnarath	1
Ardcrony	3	Kilrush	1
Ballina	90	Knigh	13
Ballinaclogh	2	Lackagh	1
Ballingarry	1	Littleton	2
Ballycahill	2	Lorha West	1
Ballylusky	1	Lorrha East	1
Ballymackey	8	Loughmore	3
Birdhill	4	Monsea	12
Borrisokane	9	Moyaliff	4
Borrisoleigh	8	Moyne	6
Bourney East	3	Nenagh Rural	23
Burgesbeg	1	Nenagh Urban	252
Carrigatogher	5	Newport	109
Castletown	9	Rahelty	3
Clohaskin	1	Riverstown	1
Cloughjordan	1	Roscrea	42
Cloughprior	2	Templederry	4
Dolla	2	Templemore	1
Drom	8	Templemore Urban	12
Foilynaman	1	Templetouhy	2
Gortkelly	2	Terryglass	3
Greenhall	2	Thurles Rural	23
Holycross	10	Thurles Urban	104
Inch	2	Timoney	1
Kilbarron	13	Twomileborris	3
Kilkeary	3	Upperchurch	2
Killavinogue	1	Youghlarra	2
Killea	2	Total	839

Table G.2 North Tipperary Residential Planning Permissions (units) Granted 2000

DED	Sum of No of Units Granted
Abington	5
Aghnameadle	1
Agliscloghane	1
Ardcrony	10
Ballina	68
Ballinaclogh	10
Ballycahill	6
Ballygibbon	5
Ballymackey	13
Ballymureen	6
Balygibbon	1
Birdhill	20
Borridnafarney	1
Borrisinoe	2
Borrisokane	11
Borrisoleigh	31
Bourney East	1
Bourney West	1
Carrig	4
Carrigatogher	16
Castletown	25
Clohaskin	0
Cloughjordan	16
Cloughprior	3
Derrycastle	6
Dolla	3
Drom	15
Foilnaman	7
Glenkeen	1

DED	Sum of No of Units Granted
Gortkelly	2
Graigue	1
Greenhall	5
Holycross	17
Inch	7
Kilbarron	16
Kilcomenty	3
Kilkeary	10
Killavinogue	4
Killea	9
Killoscully	5
Killosculy	1
Kilmore	6
Kilnaneave	1
Kilnarath	5
Kilrush	2
Knigh	32
Latteragh	2
Littleton	6
Longfordpass	1
Lorha West	5
Lorrha East	1
Loughmore	10
Monsea	12
Moyaliff	4
Moycarky	7
Moyne	14
Nenagh Rural	40
Nenagh Urban	300

DED	Sum of No of Units Granted
Newport	245
Rahelty	3
Rathcabban	4
Rathnavinoge	3
Redwood	1
Riverstown	8
Roscrea	146
Templederry	4
Templemore	3
Templemore Urban	10
Templetouhy	9
Terryglass	8
Thurles Rural	26
Thurles Urban	109
Timoney	3
Twomileborris	7
Upperchurch	3
Uskane	1
Youghlarra	12
Total	1422

G.3 Density of Planning Permissions Granted 2000 (MAP)
(Darker area =more permissions granted)

