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Executive summary

Growth in the number of households in Queensland is projected to continue

Between 2006 and 2031 the number of households in Queensland is projected to increase from 1,585,500 households to around 2,689,500 households, an increase of 1,104,000 or 69.6 per cent.

The number of households is projected to grow more quickly than the population

Queensland's population is projected to increase by 61.2 per cent between 2006 and 2031, while the number of households is projected to grow by 69.6 per cent. The majority of household growth will be in small households of one or two persons (64.5 per cent of total growth).

Population ageing is projected to drive a shift towards smaller households

The projected increase in the number of couple families without children households and lone person households between 2006 and 2031 (377,600 and 334,500 households respectively) is driven by the ageing of the baby boomers cohort (born 1946–65), who are likely to transition to these smaller household types through their later years.

Couple families without children and lone person households are projected to become the most common household types in Queensland

Couple families without children and lone person households are projected to overtake couple families with children as the most common household type and comprise 30.0 per cent and 25.7 per cent of all households respectively by 2031. Couple families with children are projected to fall from 29.7 per cent of total households (2006) to 24.6 per cent (2031).

Total demand for the construction of new dwellings

The underlying demand for construction of new dwellings between 2006 and 2031 is projected at 1,201,000, including an estimated 44,700 dwellings replaced after demolition, removal or conversion to other uses.

Technical notes

This publication was prepared by the Office of Economic and Statistical Research (OESR), Queensland Treasury, as an update of the 2010 edition (*Household and dwelling projections, Queensland local government areas 2010*). Both editions are based on 2006 Census data. State and statistical division (SD) household and dwelling projections were produced for the Queensland Government by the Queensland Centre for Population Research within the University of Queensland.

Caution should be applied when comparing census output data to that contained in the 2011 edition of the Queensland Government household and dwelling projections. For example, census data are based on usual residents, while the household and dwelling projections are based on the estimated resident population (ERP). Additionally, the household and dwelling projections in the associated tables refer only to private dwelling households and private dwellings.

Note that the future possible impacts of the recent natural disasters in Queensland were not taken into account for this edition of household and dwelling projections. Any short-term impacts resulting from these recent events are not expected to affect the projections over the longer term.

In addition to assumptions about living arrangements and propensities for household formation and dwelling construction, these projections depend on the core assumptions of fertility, mortality and migration underlying the medium series Queensland Government population projections, 2011 edition. Consequently, these projections of households and dwellings have a greater degree of uncertainty than those population projections. Furthermore, the reliability of projections declines as the time horizon is extended and the area under consideration is reduced.

Figures included in text and commentary throughout this publication have been rounded. Those in tables, charts and associated tables published to the OESR website have not.

Detailed information regarding the Queensland Government population projections (2011 edition) which underlie these household and dwelling projections can be found in the following publications available from the OESR website (www.oesr.qld.gov.au): *Queensland Government population projections to 2056: Queensland and Statistical Divisions 2011 edition* and *Queensland Government population projections to 2031: local government areas 2011 edition*. Three supporting background papers for the population projections are also available: *Background research; Methodology, assumptions and scenarios for Queensland*; and *Methodology for local government areas*.



1. Introduction

The living circumstances of Queensland's population are changing. Shifts in both the number of households and the pattern of household structure are likely to occur in all areas of the State over the coming decades, due to population growth, ageing, and societal changes. *Household and dwelling projections, Queensland 2011* contains projections of households, dwellings and underlying demand for new dwellings for the state. These projections provide an insight into the likely living arrangements and dwelling requirements of Queensland's future population.

The projections are based on the Queensland Government's current population projections (medium series, 2011 edition) and assumptions about propensities for household formation within that population. Actual outcomes cannot be predicted with accuracy. If the underlying assumptions do not hold, these projections will not eventuate.

While household and dwelling projections should be used with caution, they are an essential input for government, private and community sector organisations when planning for infrastructure, services and investment. Since many forms of goods, services and infrastructure are delivered at the household or dwelling level rather than to individuals, these projections will assist in identifying the characteristics of future demand as well as the extent of that demand.

In consultation with local governments and the community, the State Government may seek to implement a preferred distribution of growth, which differs from these projections, in order to achieve certain policy and planning objectives.

Mechanisms such as indicative planning population figures and the dwelling targets of the *South East Queensland Regional Plan 2009–2031* (SEQ Regional Plan) may be used to define the preferred distribution of growth.

The current dwelling targets of the SEQ Regional Plan and their relationship to the 2008 edition of projections are explained in the *South East Queensland (SEQ) Growth Management Program Annual Report, 2010*, available from the Department of Local Government and Planning (DLGP).

1.1 Using this report

Section 2 of this report outlines the methodology underlying the 2011 edition Queensland Government household and dwelling projections. The report should be read as a companion to the full set of 2011 edition Queensland Government household and dwelling projections, available at www.oesr.qld.gov.au. Projections are available for the state, statistical divisions (SDs), local government areas and other layers of geography in five-year intervals to 2031, in various electronic formats.

Sections 3–5 of this publication summarise the household and dwelling projections at the state level. The analysis is organised to reflect the logic of the projections methodology: living arrangements data underlie household formation data, which underlie projections of dwellings required and demand for new dwelling construction. Commentary is provided on the relevant changes in age structure.

Household and dwelling projections Queensland 2011 edition

Section 6 presents comparisons between the 2011 edition household and dwelling projections and:

- the previous edition
- alternative projections modelled with small changes in some propensities
- household projections prepared by the Australian Bureau of Statistics (ABS).



2. Methodology

This section provides an overview of the methodology used to generate the 2011 edition household and dwelling projections. Please note that projected households refer to people living in private dwellings only, and projected dwellings and underlying demand for new dwellings refer to private dwellings only. This is in contrast to population projections based on the estimated resident population (ERP, see glossary), which do not distinguish between persons resident in private dwellings and those resident in non-private dwellings (NPDs, see glossary). For the purposes of these projections, those living in NPDs are included in the analysis of living arrangements, then identified and excluded from the projections of households and families.

2.1 Modelling

2.1.1 Household projections

Household projections were calculated using a propensity method. This method assumes there are two major influences on the projected number of households for any given area:

- the propensities to reside in differing living arrangements for usual residents in each sex and five-year age group (age–sex group), as measured through census data, and then projected forward
- the projected resident population in each age–sex group.

The output of this method is a projected disaggregation of usual resident households by household type at the state and SD level by five-year intervals for the period 2006 to 2031.

The categories of living arrangements underlying the household projections were derived from the Census of Population and Housing. They are as follows:

- parent in a couple family
- child in a couple family
- other related persons in a couple family
- partner in a couple only family
- other related person in a couple only family
- lone parent in a lone parent family
- child in a lone parent family
- other related person in a lone parent family
- related persons living in other family types
- unrelated individual living in a family household
- group household member
- lone person household
- usual resident of a NPD.

The base year from which living arrangement propensities were calculated and projected forward was 2006.

The propensity for persons in each age–sex group to reside in a particular living arrangement for the State and each SD is based on rates of change derived from census data for the period 1996–2006. (Section 6.2 tests the sensitivity of this assumption by modelling small changes to some propensities.) The resulting propensities were then applied to the Queensland Government population projections (medium series, 2011 edition) by age and sex to calculate a distribution of total persons by living arrangement for each SD. Any negative propensities (that is, those for which the extrapolation of intercensal rates of change resulted in negative values for projection years for a particular age–sex group in a particular geography) were reset to zero.

The adjusted projections of total persons by living arrangement for the State and SDs were converted first to families and then to households (by type) through the use of multipliers derived from 2006 Census usual resident data.

Six household types were projected, as follows:

- couple family with children
- couple family without children
- one-parent family
- other families
- group household
- lone person household.

A discrete category of ‘non-classifiable’ households (occupied dwellings from which no census information was received) is also included in the household projections. These are households that were unable to be allocated to other household types. The number of households in this category doubled over the decade to 2006 and accounted for about four per cent of all occupied dwellings in the 2006 Census. For projection purposes, the propensity for persons to be recorded in a ‘non-classifiable’ household was held constant over the period to 2031¹.

2.1.2 Dwelling projections

Dwellings

Dwelling projections include both vacant and occupied private dwellings. For the purposes of the 2011 edition dwelling projections, the projected change in occupied private dwellings was held equal to the projected change in the total number of households for SDs and the state. To account for vacant dwellings, a multiplier derived from 2006 Census data (that is, the vacancy rate or the ratio of vacant to total private dwellings) was applied at each geography². The dwelling projections in this edition have not been disaggregated by dwelling type, as many localised and unforeseen factors can alter the future demand for particular types, styles and sizes of dwellings. The projections include only private dwellings.

¹ OESR assumes that the increase in households identified as ‘non-classifiable’ in the decade to 2006 is related to data collection issues and therefore can not be projected to continue through the period to 2031. In acknowledgement that there will always be a component of the dwelling stock not classified, the 2006 proportion was held constant.

² Similarly, the vacancy rate calculated for the 2006 Census was held constant in these projections due to the stability of this measure for several census periods.



The projected change in the number of dwellings is the growth of total private dwelling stock (occupied and unoccupied) from one period to the next and can be viewed as a net figure. It is equal to the number of new dwellings constructed less the number of existing dwellings lost through demolition and removal (such as in areas undergoing urban renewal or densification), conversions or other reasons.

The projected number of total private dwellings (including vacant dwellings) is the most relevant figure for assessing future demand for most infrastructure and services, as provision needs to be made for all dwellings whether they are occupied or not. Note that both occupied and vacant private dwellings may include structural dwellings such as detached houses, townhouses and flats, in addition to temporary dwellings such as caravans, houseboats, tents and improvised housing.

Underlying demand for new dwellings

The underlying demand for new dwellings refers to the number of new dwellings required to be constructed, in order to accommodate the projected population increase under the assumed household circumstances. It comprises the projected increase in total dwellings plus the replacement of any dwellings lost through demolition, removal or conversion to other uses.

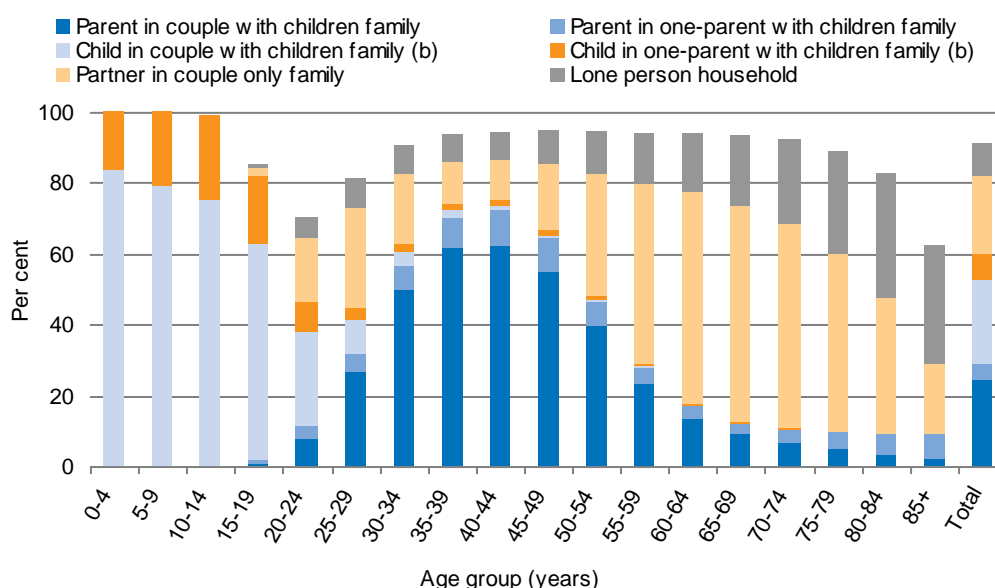
The term 'underlying' implies that this is an indirect indication of demand only, rather than a direct measure. While the actual number of new dwellings constructed in a period may be higher or lower as short-term market forces come into operation, the underlying demand is the most appropriate figure for estimating future long-term demand for construction of new dwellings.

3. Living arrangements

Information about changes in the way individuals group together to form families and households (specifically, the varying propensities to live in particular living arrangements by age, sex and geographic location) is a fundamental input to the household and dwelling projections. Within the overall growth of households and dwellings projected to 2031, substantial shifts in the underlying living arrangements, shaped by societal and demographic influences, are expected to occur. Results are reported here primarily to provide an insight into the total and proportional changes in household types reported at Section 4.

The age structure of Queensland’s population strongly influences the profile of living arrangements (Figure 3.1). A clear lifecycle pattern to living arrangement propensities is evident in 2006 Census data. In particular, children live almost exclusively within a family, 35–49 year olds are most likely to be parents in a family with children, and those aged 55 years and over are most likely to live in a couple only or lone person household as they transition into ‘empty nester’ households, and later widow and widower households. As Queensland’s population age profile changes into the future (in particular, as the population ages), the number of Queenslanders in each of these living arrangements is likely to change.

Figure 3.1 Selected living arrangements by age group, Queensland, 30 June 2006^(a)



(a) Living arrangement figures from the 2006 Census have been converted to an estimated resident population base.

(b) The ‘child’ in these households can refer to a person of any age; the term refers to the relationship between household members, not to the age of the child.

Note: Less common living arrangements, including related and unrelated persons living in family households, residents in non-private dwellings, and members of group households and non-classifiable households, are not shown.

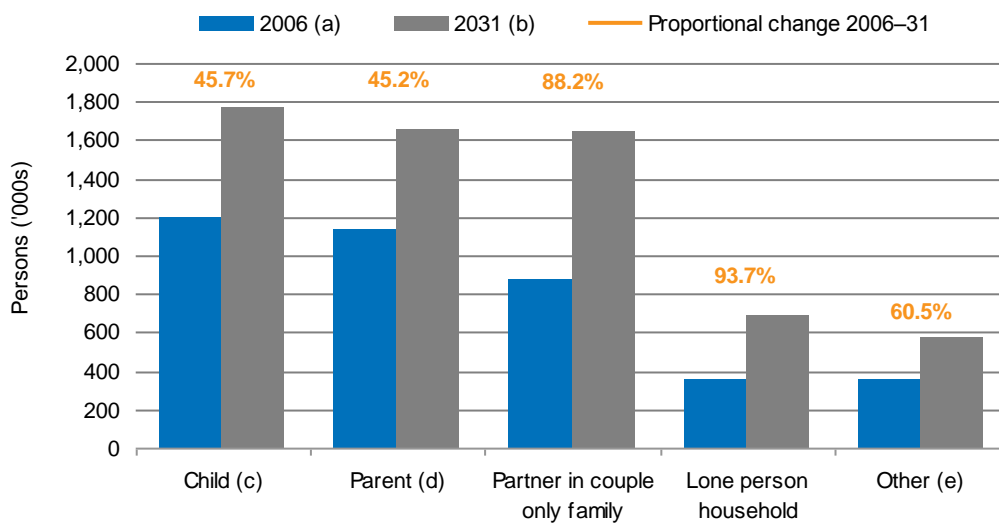
Source: Queensland Government household and dwelling projections, 2011 edition (medium series) data tables (based on Australian Bureau of Statistics 2006 Census)

Not all living arrangements data are included at Figure 3.1. Young people have a high propensity to reside in group households – this reflects the ‘share housing’ phase of many young people’s lives which is associated with transitional economic circumstances (during

study and early career) and this accounts for a large proportion of the living arrangements that have been omitted in these age groups. The other significant living arrangement omitted from Figure 3.1 (as it is not reflected in this edition of household and dwelling projections) is that of persons living in non-private and institutional dwellings. Older persons have a particular propensity to live in such arrangements.

Figure 3.2 summarises the projected change in both the number and proportion of people in living arrangements in Queensland between 2006 and 2031. As Queensland’s total fertility rate is expected to remain high over the projection period, there will be substantial growth in the number of people in ‘child’ and ‘parent’ living arrangement categories. At the same time, population ageing (driven by improvements in health and life expectancies³ and the ageing of the large baby boomer cohort born 1946–65) will have a greater effect of increasing both the number and proportion of people living in couple only families and lone person households. Between 2006 and 2031, it is projected that the number of persons aged 65 years or more residing in couple only families and lone person households will increase by 415,400 and 191,200 persons respectively.

Figure 3.2 Living arrangements, Queensland, 30 June



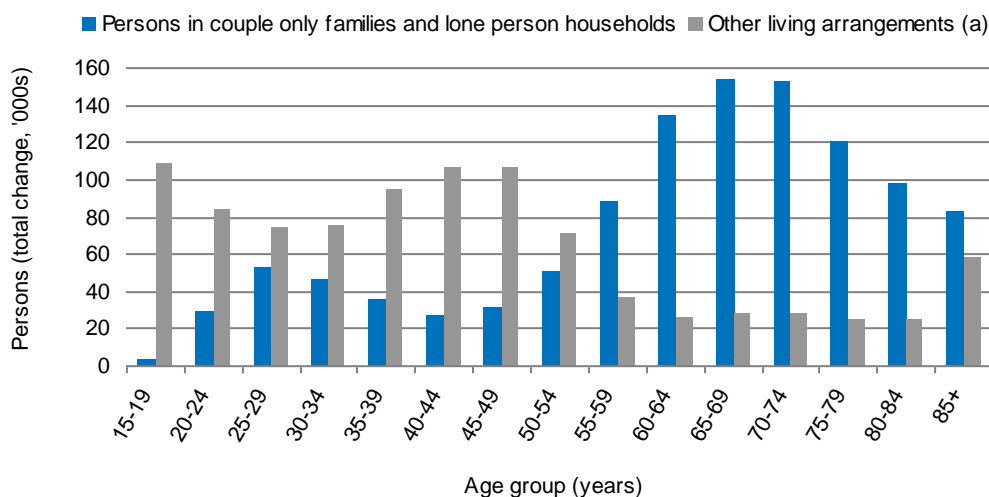
(a) Living arrangement figures from the 2006 Census have been converted to an estimated resident population base.
 (b) Living arrangement figures for 2031 are based on the projected number of residents.
 (c) Includes children in couple with children families and one-parent with children families. The 'child' in these households can refer to a person of any age; the term refers to the relationship between household members, not to the age of the child.
 (d) Includes parents in couple with children families and one-parent with children families.
 (e) Includes related and unrelated persons living in family households, residents in non-private dwellings, and members of group households. Non-classifiable households have been excluded.
 Source: Queensland Government household and dwelling projections, 2011 edition (medium series) data tables (based on Australian Bureau of Statistics 2006 Census)

Age profile impacts contribute to the creation of small households at both ends of the age profile (Figure 3.3). While population ageing increases the number of small household types at the older end of the age profile, large net gains in young interstate and overseas migrants are projected to drive growth (albeit to a smaller degree) in the formation of small household

³ABS 3302.0, *Deaths, Australia, 2009*; *Queensland Government population projections: Background research 2011* edition, Office of Economic and Statistical Research, Queensland Treasury

types among the younger age cohorts. Both of these lifecycle propensities are evident in 2006 living arrangements data at Figure 3.1.

Figure 3.3 Living arrangements by selected age groups, Queensland, total projected change, 30 June, 2006–2031



(a) Includes related and unrelated persons living in family households, residents in non-private dwellings, and members of group households. Non-classifiable households have been excluded.

Note: Age groups of 0–4, 5–9 and 10–14 are not shown.

Source: Queensland Government household and dwelling projections, 2011 edition (medium series) data tables (based on Australian Bureau of Statistics 2006 Census)

Apart from lifecycle influences, there are numerous human and societal influences on living arrangements and household formation and dissolution. For example, the impacts of divorce, separation, non-marriage structures, lone parent families and co-parenting all contribute to increased fluidity of household living arrangements. Additionally, changing attitudes to social roles, along with liberalisation of legal arrangements regarding marriage, divorce and parenthood, have contributed to an increasing incidence and acceptance of living arrangements that differ from traditional family relationships. Historical changes in these societal influences are captured indirectly in the census-derived living arrangement propensities (and rates of change thereof).

4. Households

This section reports projections of households by type, derived by applying the projected living arrangement propensities to the 2011 edition medium series population projections. The large population increase projected for Queensland to 2031 will drive a corresponding increase in the number of households. Due to the living arrangements effects outlined at Section 3, household growth will be more rapid than population growth in this period, and the distribution of household types familiar to most Queenslanders is likely to change substantially.

4.1 Household projections

As of June 2006, an estimated 1,585,500 usual resident households were living in private dwellings across Queensland (Table 4.1). By June 2031, this number is projected to grow to around 2,689,500 resident households (an increase of 1,104,000 or 69.6 per cent). The highest level of growth in households during the projection period is expected to occur during the five years to 2031 (226,200 households) (Table 4.2). Although both population and households are projected to increase substantially over the next twenty years, the growth rates for each will ease.

Table 4.1 Population and household projections, Queensland, 30 June

	2006	2011	2016	2021	2026	2031
	— number —					
Population	4,091,900 (a)	4,611,500	5,092,900	5,589,000	6,090,500	6,592,900
Households	1,585,500 (b)	1,803,400	2,020,300	2,241,500	2,463,300	2,689,500

(a) Final ERP (rounded).

(b) The 2006 figure is an estimate based on ERP.

Source: (ERP) Australian Bureau of Statistics, *Regional Population Growth, Australia*, 1996 to 2006, cat. no. 3218.0; (projections) Queensland Government population projections, 2011 edition (medium series) data tables; Queensland Government household and dwelling projections, 2011 edition (medium series) data tables

Table 4.2 Projected change in population and households, Queensland, five years to 30 June

	2006–11	2011–16	2016–21	2021–26	2026–31	2006–31
	— number —					
Population	520,600	481,400	495,800	501,900	502,300	2,501,900
Households	217,900	216,800	221,200	221,800	226,200	1,104,000
	— percentage —					
Population	12.7	10.4	9.7	9.0	8.2	61.2
Households	13.7	12.0	10.9	9.9	9.2	69.6

Note: Projected change figures for 2006–31 may not equal the sum of components because of rounding.

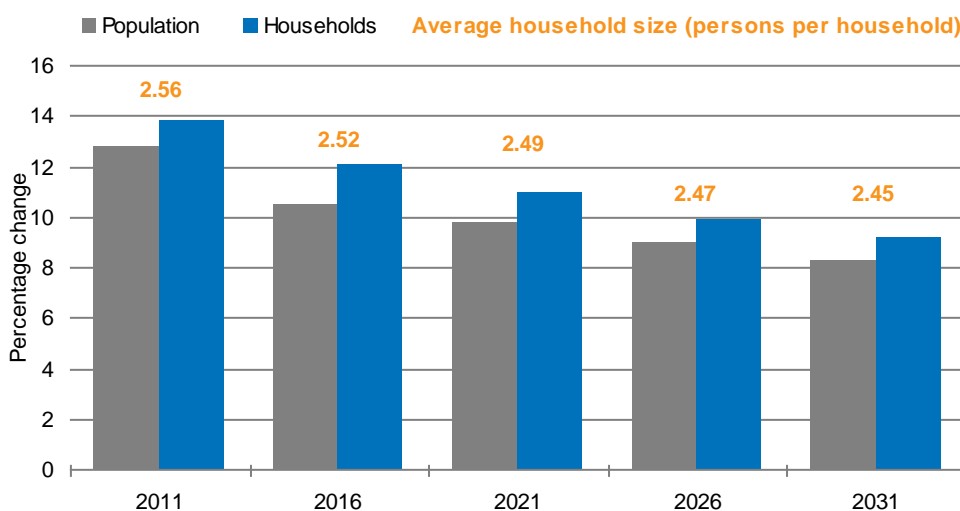
Source: Queensland Government population projections, 2011 edition (medium series) data tables; Queensland Government household and dwelling projections, 2011 edition (medium series) data tables

Of the total growth in households projected to occur in Queensland between 2006 and 2031, slightly over 12 per cent⁴ is caused by changes in the distribution of persons by living arrangements attributable to population ageing as described at Section 3. The balance arises from the projected growth in population.

4.2 Average household size

Growth in the number of households is projected to exceed population growth in each five-year period to 2031 (Figure 4.1), resulting in a continuation of the long-term decline in average household sizes. Queensland's average household size is assumed to decline from 2.58 persons per household in 2006 to 2.45 persons per household in 2031.

Figure 4.1 Projected change in population and households (five years to 30 June) and average household size (30 June), Queensland



Source: Queensland Government population projections, 2011 edition (medium series) data tables; Queensland Government household and dwelling projections, 2011 edition (medium series) data tables

4.3 Household types

Continued population growth will see growth in all household types at the State level throughout the period to 2031 (Table 4.3). This growth will be faster in small household types (couple families without children and lone person households) due to the demographic effects identified at Section 3. Small households are projected to represent 64.5 per cent of the total household growth over the period 2006 to 2031. Couple families without children will increase by 377,600 over the 25 years to 2031, and lone person households will increase by 334,500.

⁴ This calculation was made by applying the 2006 age–sex distribution to the projected total population at 2031, then applying the assumed 2031 living arrangement propensities to that population. This analysis indicated that using the 2031 age–sex structure resulted in projected growth in the number of households 12 per cent higher than if the 2006 age–sex structure was applied in 2031.



Table 4.3 Household projections by type and projected change, Queensland, 30 June

	2006 (a)	2011	2016	2021	2026	2031	Change 2006 to 2031	
							number	percentage
	— number —							
Couple families with children	470,800	504,300	537,000	575,200	618,600	660,500	189,700	40.3
Couple families without children	428,100	504,600	585,700	663,600	734,800	805,700	377,600	88.2
Lone person households	357,200	417,100	481,700	550,200	619,500	691,700	334,500	93.6
One-parent families	176,000	208,000	232,500	255,300	277,900	302,000	126,000	71.6
Group households	64,300	69,100	73,500	77,800	83,200	90,000	25,700	40.0
Other families	19,200	21,400	23,100	24,600	26,500	28,700	9,560	49.8
Non-classifiable households	70,000	78,900	86,800	94,700	102,700	110,900	40,800	58.3
Total households	1,585,500	1,803,400	2,020,300	2,241,500	2,463,300	2,689,500	1,104,000	69.6

(a) The 2006 figure is an estimate based on ERP.

Note: Total households and projected change for 2006–31 may not equal the sum of components because of rounding.

Source: Queensland Government household and dwelling projections, 2011 edition (medium series) data tables

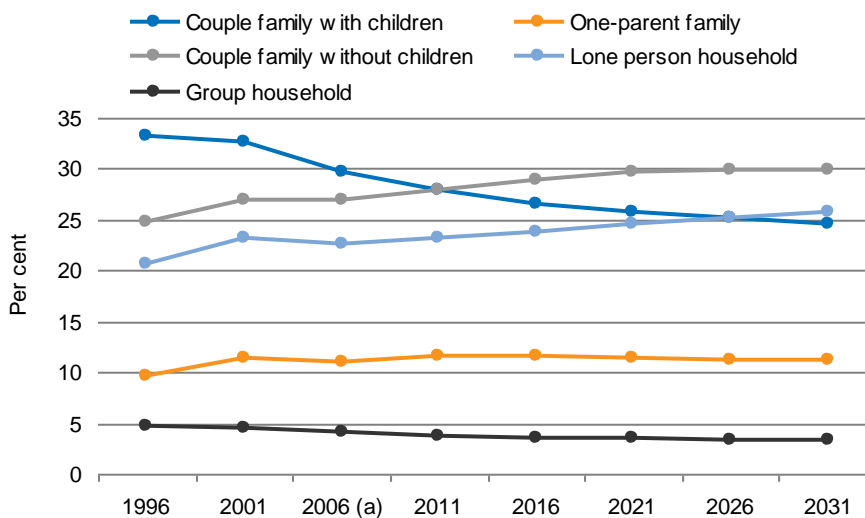
Couple families with children are projected to increase in number by 189,700 by 2031. While this was the most numerous household type in Queensland in 2006 (470,800 households), it is projected to account for only 17.2 per cent of total projected household growth. One-parent families are projected to increase in number from 176,000 in 2006 to 302,000 by 2031. As a proportion of total households with children, one-parent families are projected to increase from 27.2 to 31.4 per cent over this period. The proportion of households with children is projected to decline from 40.8 per cent in 2006 to 35.8 per cent in 2031.

The number of group households, a relatively small category in comparison to the other household types, is projected to increase from 64,300 in 2006 to 90,000 by 2031.

The shifts in the relative prevalence of household types over previous years and the projection period are indicated at Figure 4.2. Couple families with children have historically been the most common household type in Queensland and comprised 29.7 per cent of all households in 2006. Although this household type has traditionally represented the image of the 'typical' Queensland family, this household type has been declining as a proportion of total households at least from 1996. By 2011, it is expected that the proportion of couple families with children will be equal to that of couple families without children households (27.9 per cent) and will decline further to 24.6 per cent by 2031. One-parent families and group households as a proportion of all Queensland households are projected to remain stable over the projection period.

In contrast, couple families without children and lone person households (27.0 per cent and 22.5 per cent of all households respectively in 2006) are projected to increase in prominence. Couple families without children are likely to become the most common household type in Queensland between 2011 and 2016 and lone person households the second most common around 2026. By the end of the projection period, couple families without children and lone person households are projected to comprise 30.0 per cent and 25.7 per cent of all households respectively, representing a substantial shift in Queensland's household structure.

Figure 4.2 Household types as a proportion of total households, Queensland, 30 June



(a) The 2006 figures are an estimate based on ERP.

Note: Non-classifiable households and other families are not shown.

Note: The Australian Bureau of Statistics household definition for the 1996 and 2001 Census collections differ slightly from that used in the 2006 Census, so proportions shown for those years are approximate. These minor variations do not influence the trends shown.

Source: Australian Bureau of Statistics 1996 and 2001 Censuses; Queensland Government household and dwelling projections, 2011 edition (medium series) data tables

5. Dwellings

5.1 Dwelling projections

As of June 2006, there were an estimated 1,660,700 private dwellings in Queensland, including an estimated 75,200 vacant dwellings. In projecting forward the number of total dwellings, the projected change in occupied private dwellings was held equal to the projected change in the total number of households, and a fixed proportion of vacant dwellings added. It is projected that total dwellings will grow to around 2,817,100 private dwellings by June 2031, including 127,600 vacant dwellings (Table 5.1).

Table 5.1 Dwelling projections, Queensland, 30 June

	2006 (a)	2011	2016	2021	2026	2031
	— number —					
Occupied dwellings (b)	1,585,500	1,803,400	2,020,300	2,241,500	2,463,300	2,689,500
Vacant dwellings (c)	75,200	85,500	95,800	106,300	116,800	127,600
Total dwellings	1,660,700	1,889,000	2,116,100	2,347,800	2,580,100	2,817,100

(a) The 2006 figure is an estimate based on ERP.

(b) Equivalent to the number of projected households.

(c) Calculated as a fixed proportion of occupied dwellings.

Note: Total dwellings figures may not equal the sum of components because of rounding.

Source: Queensland Government household and dwelling projections, 2011 edition (medium series) data tables

This projected growth translates to an additional 1,156,300 dwellings between 2006 and 2031 (an increase of 69.6 per cent) (Table 5.2) accommodating the projected increase of 1,104,000 usual resident households over this period. This dwelling figure does not include the replacement of dwellings lost through demolition or other reasons.

The highest absolute growth in dwellings during the projection period is expected to occur during the five years to 2031 (236,900 dwellings). The dwelling growth rate from 2006 to 2031 is projected to moderate, mirroring that of projected households over this period.

Table 5.2 Projected change in total dwellings, Queensland, five years to 30 June

	2006–11	2011–16	2016–21	2021–26	2026–31	2006–31
Number	228,200	227,100	231,600	232,400	236,900	1,156,300
Percentage	13.7	12.0	10.9	9.9	9.2	69.9

Note: Projected change figures for 2006–31 may not equal the sum of components because of rounding.

Source: Queensland Government household and dwelling projections, 2011 edition (medium series) data tables

5.1.1 Underlying demand for new dwellings

In addition to the projected increase in total dwellings, dwelling construction over the projection period will replace some dwellings lost through demolition, removal or conversion. The sum of these two factors can be referred to as the underlying demand for new dwellings: the number of new dwellings that, if constructed, would house the projected population under the modelled scenario of living arrangements.

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In addition to the projected growth of 1,156,300 private dwellings between 2006 and 2031, it is estimated that 44,700 existing private dwellings in Queensland will be replaced after demolition, removal or conversion to other uses (Table 5.3). Thus, the underlying demand for construction of new dwellings between 2006 and 2031 is projected to be 1,201,000 dwellings.

Table 5.3 Derivation of underlying demand for new dwellings, Queensland, five years to 30 June

	2006–11	2011–16	2016–21	2021–26	2026–31	2006–31
	— number —					
A Change in occupied dwellings	217,900	216,800	221,200	221,800	226,200	1,104,000
B Change in vacant dwellings	10,300	10,300	10,500	10,500	10,700	52,400
C Change in total dwellings (A + B)	228,200	227,100	231,600	232,400	236,900	1,156,300
D Replacement of dwelling loss	7,200	8,100	9,000	9,800	10,600	44,700
E Underlying demand for new dwellings (C + D)	235,400	235,300	240,600	242,200	247,500	1,201,000

Note: Total dwellings figures, underlying demand for new dwellings figures, and projected change figures for 2006–31 may not equal the sum of components because of rounding.

Source: Queensland Government household and dwelling projections, 2011 edition (medium series) data tables

The underlying demand for the construction of new dwellings is projected to be strongest over the five years to 2031 when it is estimated there will be demand for some 247,500 dwellings, including the replacement of an estimated 10,600 existing dwellings.



6. Comparison of results

This section describes how the 2011 edition household and dwelling projections compare with:

- the previous edition (Section 6.1)
- alternative projections modelled with small changes in some propensities (Section 6.2)
- household projections prepared by the Australian Bureau of Statistics (ABS) (Section 6.3).

6.1 Comparison with previous series

The 2011 edition Queensland Government household and dwelling projections are based on 2006 Census data and the medium series Queensland Government population projections, 2011 edition. The superseded set of Queensland Government household and dwelling projections released in May 2010 by OESR was based on the medium series Queensland Government population projections, 2008 edition.

Although the 2011 edition medium series population projections for 2031 are 5.1 per cent higher at the state level than the 2008 edition, the 2011 edition household projections for 2031 are only 3.9 per cent higher than the set they replace. This can be attributed to the assumptions of higher fertility and higher net overseas migration that underpin the 2011 edition medium series population projections, resulting in a population with a younger age structure. This population has both a higher ratio of children per family; and higher numbers of persons in age groups that are likely to live in a couple with children family, a one-parent family, other families and group households. Both of these factors contribute to a slower projected rate of decline of average household size at the state level for this edition, resulting in a slightly higher projection of average household size at June 2031 (2.45) than was previously projected (2.42).

Higher growth is projected across all household categories under the 2011 edition compared with that previously projected, although the increase in the projections over the 2008 edition is far less pronounced for couple family without children and lone person household categories.

Note that slight differences in the 2006 household estimates between the previous and current set of household projections are due to use of final rather than preliminary 2006 ERP in the latter projection.

6.2 Alternative projection scenario

As described in Section 2.1, the 2011 edition household projections have been prepared using propensities derived from the Census of Population and Housing in 2006 and earlier. In order to test the outcome of potential small variations in these propensities, an alternative series of household projections was produced. This alternative series modelled a small increase in the propensity for people aged between 15 and 34 years to remain in their family household, plus small increases in the propensities for people to live in multi-family households and the size of group and non-classifiable households.

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Slight decreases in the propensity for young people to leave the family home and set up their own household, combined with small increases in people grouping together, leads to a reduced number of households at 2011 under this alternative series. With nearly 18,000 or 1.0 per cent fewer households but the same population, Queensland's average household size increases slightly to 2.583 persons in 2011, compared with 2.580 as recorded at the 2006 Census. In contrast, the medium series household projections result in a modest decline in household size to 2.557 in 2011 (Table 6.1).

Table 6.1 Households, dwellings and average household size at 2006 and 2011, medium and alternative series, Queensland, 30 June

	2006	2011	
		Medium series projection (b)	Alternative series projection (c)
Resident households (a)	1,585,500	1,803,400	1,785,600
Private dwellings (a)	1,660,700	1,889,000	1,870,300
Average household size	2.580	2.557	2.583

(a) The 2006 figure is an estimate based on ERP.

(b) Projections based on observed propensities from census data for the period 1996-2006.

(c) Projections based on small increases in propensities for adult children to remain in their family home and for people to live in non-classifiable, group and multiple family households.

Source: Queensland Government household and dwelling projections, 2011 edition (medium and alternative series unpublished) data tables

6.3 Australian Bureau of Statistics household projections

The propensity method is used by the Australian Bureau of Statistics (ABS) to project numbers of households, families and persons in different living arrangements for Australia, the states, territories, capital cities and balances of state. For further information about the method and assumptions used to produce these projections see *Household and Family Projections, Australia, 2006 to 2031* (ABS 3236.0, June 2010). Note that the household projections prepared by the ABS use different assumptions and population projections to those that underpin the household projections in this publication. Accordingly, the results for both sets of household projections are not directly comparable.



7. Glossary

This glossary provides a guide to terms used in this publication. It is in alphabetical order. Further details about census data definitions can be obtained from the Australian Bureau of Statistics (ABS) publication *Census Dictionary, Australia, 2006* (cat. no. 2901.0).

Australian Standard Geographical Classification (ASGC)

A geographical framework covering all spatial areas of Australia and the external territories. The ASGC was developed by the Australian Bureau of Statistics to allow statistics from different collections to be spatially comparable. The ASGC has been revised annually since its inception in 1984.

Average household size

Average household size is calculated by dividing the total population (including those in non-private dwellings) by the number of usual resident households in private dwellings.

Census

The Australian Census of Population and Housing is the official count of Australian population and dwellings, and collects details of age, sex and other characteristics of that population. Census statistics are used as the basis for estimating the population at the national, state and local government levels, for electoral purposes and the distribution of government funds. They are used by individuals and organisations in the public and private sectors, for planning, administration, research and decision making.

Child

This is a person of any age who is a natural, adopted, step, foster or nominal son or daughter of a couple or lone parent, usually resident in the same household. A child is also any individual under 15, usually resident in the household, who forms a parent-child relationship with another member of the household. This includes otherwise related children less than 15 years of age and unrelated children less than 15 years of age. In order to be classified as a child, the person can have no identified partner or child of his/her own usually resident in the household.

Couple family with children household

A household consisting of two persons who are in a registered or de facto marriage, and one or more children (of any age) who are usually resident in the same household.

Couple family without children household

A household consisting of two persons who are in a registered or de facto marriage who are usually resident in the same household where no children of any age are usually resident.

Demand for new dwellings

See *underlying demand for new dwellings*.

Dwelling

A structure that is intended to have people live in it, and which is habitable on census night. Some examples of dwellings are houses, motels, flats, caravans, prisons, tents, humpies and houseboats. See *private dwelling, non-private dwelling, occupied private dwelling, vacant dwelling, household*.

Estimated resident population (ERP)

The number of people estimated to reside in an area. During population census years, estimates of the resident population (ERP) are based on census counts by place of usual residence, to which are added the estimated net undercount and the number of Australian residents estimated to have been temporarily overseas at the time of the census. Overseas visitors in Australia are excluded from this calculation. These census year estimates become the base on which estimates of natural increase and migration are added (or subtracted) over the following years. People are deemed usual residents of the address at which they have lived (or intend to live) for six months or more during the census year.

Family

Two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering, and who are usually resident in the same household. Census data recognises a separate family for each couple relationship or for each parent–child relationship where only one parent is present. A small proportion of households contain more than one family. Non-related persons living in the same household are not counted as family members (unless under 15 years of age).

Fertility

Relates to the average number of children women bear and the age at which women give birth. To produce these population projections, assumptions have been made regarding age-specific fertility rates, that is, the likelihood that a woman of a particular age will have children. See also *total fertility rate*.

Group household

A household consisting of two or more unrelated people, where all persons are aged 15 years and over. There are no reported couple relationships, parent–child relationships or other blood relationships in these households.

Household

A household is defined as one or more persons, at least one of whom is at least 15 years of age, who are usually resident in the same private dwelling. Each occupied private dwelling contains one household. (This definition was used by the ABS for the first time in the 2006 Census. Previous ABS definitions of 'household' made reference to common provision of food for all household members.)

Household growth

Growth in the number of households.

Living arrangement

Used to describe the familial and non-familial relationship type of each person, within each family type, and/or within each household type.

Lone person household

Any private dwelling in which there is only one usual resident at least 15 years of age.

**Net overseas migration**

The difference between the number of people settling in a given area from overseas and the number of people departing that area to live overseas. Estimates of overseas migration data are derived primarily from Department of Immigration and Citizenship international passenger and visa records, and are revised for each period to include only those people who have been in (or out of) Australia for 12 of the previous 16 months. By this definition, some temporary residents in Australia are included in the net overseas migration figure.

Non-classifiable household

Includes those households which the census collector determined were occupied on census night but where the collector could not make contact; households that contained only persons aged under 15 years; or households which could not be classified elsewhere because there was insufficient information reported on the census form.

Non-private dwelling (NPD)

A dwelling that provides a communal or transitory type of accommodation. NPDs include hotels, motels, guest houses, prisons, religious and charitable institutions, defence establishments, hospitals and other communal dwellings. A particularly common form of non-private dwelling found in mining communities is 'single persons quarters'. A retirement village may contain both private and non-private dwellings: accommodation units where meals are provided are considered to be non-private dwellings and consequently not included in the projections; however, self-contained units are classified as private dwellings and included in the projections. See *dwelling*.

Occupancy rate

The number of persons per dwelling averaged over all private dwellings. The occupancy rate is calculated by dividing the total population (including those in non-private dwellings) by the number of private dwellings.

Occupied private dwelling

Occupied private dwellings are private dwellings that are ascertained by census collectors to be occupied when the census is taken. For the purpose of these projections, occupied private dwellings are dwellings usually occupied by residents of the area. Self-contained units in accommodation for the retired or aged are included. Each occupied private dwelling contains one household. See private dwelling, unoccupied private dwelling.

One-parent family household

A household consisting of a person who has no spouse or partner present in the household but who forms a parent-child relationship with at least one child usually resident in the household.

Private dwelling

A private dwelling is occupied on a regular basis by an owner or a rental tenant, and is not a commercial, tourist or institutional place of occupancy. Some examples of private dwellings are houses, flats, townhouses, units, caravans, tents, humpies and houseboats. See 'dwelling'.

Projected population

Population projections are estimates of the number of usual residents of an area at a future date.

Propensity for living arrangements

Proportion of persons of each age/sex group who reside in particular living arrangements, as measured in the census.

Statistical division (SD)

The largest sub-state spatial units in the main structure of the Australian Standard Geographical Classification. Queensland is divided into 14 SDs, including the Off-Shore Areas and Migratory SD, which is used to classify the whereabouts of people who were counted in transit on census night, for example, enumerated in airports or aboard ships within Australian territorial waters. In aggregate, SDs cover all of Australia without gaps or overlap.

Total fertility rate

The sum of age-specific fertility rates (live births at each age of mother per female population of that age). It represents the number of children a female would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life.

Underlying demand for new dwellings

Also known as the underlying requirement for new dwelling construction, this term refers to the number of new dwellings that would accommodate the projected increase in the number of households under the assumed living arrangements conditions. It comprises the projected increase in total dwellings plus the replacement of any dwellings lost due to demolition, removal or conversion to non-residential use, plus the change in the number of vacant dwellings. This statistic is particularly useful for the construction industry.

Unoccupied private dwelling

These are structures built specifically for living purposes which are habitable, but unoccupied at the time of the Census of Population and Housing. Vacant houses, holiday homes, huts, cabins (other than seasonal workers' quarters) and houseboats are counted as unoccupied dwellings. Also included are newly completed dwellings not yet occupied, dwellings which are vacant because they are due for demolition or repair, dwellings to let and dwellings where all members of the household were absent on census night.

Usual residence

Usual residence within Australia refers to that address at which the person lives at the reference date, and which they consider to be their primary residence. It is usually the address at which the person has lived or intends to live for a total of six months or more in the reference year. Family and household structures are based on persons usually resident. If all members of a family or household are temporarily absent, the family or household is not counted.

Vacancy rate

Ratio of vacant dwellings to total dwellings (as distinct from the rental vacancy rate). See *vacant dwelling*.

Vacant dwelling

For the purposes of projecting populations and households, private dwellings are considered vacant if they are not occupied by usual residents of the area (private dwellings only). These vacant dwellings are either unoccupied, or occupied by visitors. Houses, units, holiday homes and huts are included among vacant dwellings. Less permanent structures are not included, such as unoccupied dwellings in caravan parks, marinas and manufactured home estates.



The following data tables can be found at the Office of Economic and Statistical Research website: www.oesr.qld.gov.au.

- Actual and projected population by living arrangement, Queensland, 30 June, 2006 and 2031
- Projected households (medium series) by local government area (2010 boundaries), Queensland, 30 June, 2006 to 2031
- Projected households (medium series) by statistical division, Queensland, 30 June, 2006 to 2031
- Projected households (medium series) by regional planning project area, Queensland, 30 June, 2006 to 2031
- Projected households (medium series) by regionalisation strategy area, Queensland, 30 June, 2006 to 2031
- Projected households by household type (medium series) by local government area (2010 boundaries), Queensland, 30 June, 2006 to 2031
- Projected households by household type (medium series) by statistical division, Queensland, 30 June, 2006 to 2031
- Projected households by household type (medium series) by regional planning project area, Queensland, 30 June, 2006 to 2031
- Projected households by household type (medium series) by regionalisation strategy area, Queensland, 30 June, 2006 to 2031
- Projected dwellings (medium series) by local government area (2010 boundaries), Queensland, 30 June, 2006 to 2031
- Projected dwellings (medium series) by statistical division, Queensland, 30 June, 2006 to 2031
- Projected dwellings (medium series) by regional planning project area, Queensland, 30 June, 2006 to 2031
- Projected dwellings (medium series) by regionalisation strategy area, Queensland, 30 June, 2006 to 2031
- Projections of underlying demand for new dwellings (medium series) by local government area (2010 boundaries), Queensland, 30 June, 2006 to 2031
- Projections of underlying demand for new dwellings (medium series) by statistical division, Queensland, 30 June, 2006 to 2031
- Projections of underlying demand for new dwellings (medium series) by regional planning project area, Queensland, 30 June, 2006 to 2031
- Projections of underlying demand for new dwellings (medium series) by regionalisation strategy area, Queensland, 30 June, 2006 to 2031

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