



Isle of Man
Government

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Area Plan for the East: Draft Plan

Household size and population projections paper

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Evidence Paper No. DP EP5

Cabinet Office

1 Introduction

- 1.1 As this Draft Area Plan follows after the revision of the Isle of Man Strategic Plan housing numbers in 2016, there are updated and thus different statistical datasets available. Of these, the most important for planning purposes are population and household size data and projections derived from the 2016 Isle of Man Census which was published in March 2017.
- 1.2 Thus it is now necessary and appropriate to review the information available from that census, compare it to the information in the Strategic Plan and consider the implications of this new information.

2 Household sizes and the provision of housing units

- 2.1 In planning terms the purpose of housing units is to provide dwellings for households: people live in households, and these households comprise themselves, other family members and their possessions. These households need housing.¹
- 2.2 In order to take a population figure and then arrive at the number of dwelling units that that population requires (be they individual houses, flats, etc.) and what variety of sizes and types of dwellings are appropriate, one needs to understand the size of the households being provided for. This is done by calculating an average household size, identifying household size trends over time and then projecting that out to a confidently predictable point in the future.
- 2.3 This point creates an estimate of the number of households. It is only after that estimate is specified that decisions can be made about what types of places should be provided and in what way.

3 Projected number of private households

- 3.1 The projections are based upon the Isle of Man Population Projections which were published in the 'Meeting our Population challenges' discussion document.² These projections are based on the 2016 census results and were derived using standard international methodology, specifically that of the UN Population Division (UNPD).
- 3.2 These projections comprise three component parts: fertility impacts, mortality impacts and net migration. Age specific fertility and single age, sex specific mortality

¹ Mulder, C.H. *The relationship between population and housing*, Keynote presentation to the 69th Session of the UNECE Committee on Housing and Land Management, 2017.

² Meeting our population challenges, Economic Affairs, Cabinet Office, February 2018
<https://www.gov.im/media/1360674/2018-02-27-meeting-our-population-challenges.pdf>.

rates which determine these parts have been calculated using data from the ten years between 2006 and 2016.

- 3.3 Three variants of the projections are modelled in the population discussion document, representing three different migration scenarios, of 0, 500 and 1,000 net inward migration respectively.
- 3.4 It has been decided to continue to plan for a net inward migration of 500, the assumption made previously in the 2016 Isle of Man Strategic Plan. The population and demography of the Isle of Man is changing, but the net migration and other demographic assumptions are affected by Government policy decisions and there is a clear strategic objective to grow the economically active population, with an increase in this measure specified as a macro-indicator of growth in an inclusive society.
- 3.5 The persistent decline in average household size is another clear trend which can be derived from census data. This can be attributed to an increase in the number of people living alone, which is partly due to choice (not uncommon in a population with migrant workers) and also an ageing population with increasing numbers of widows and widowers³.
- 3.6 An additional assumption for the purposes of projecting the number of private households on the Island through to 2036 relates to the number of individuals who will live in a private household. A proportion of the population in each year will reside in communal establishments such as care or nursing homes and the prison. The previous six census have shown that around 98% of people live in private households and therefore this assumption has been continued through to 2036.
- 3.7 Government's planning review concluded there was a requirement for greater amounts of space for households, an increase in space standards. Larger houses require more space.
- 3.8 Four scenarios have been produced based on the number of residents projected to be on the Island and living in private households through to 2036:
 - Scenario A where the average household size per the 2016 census will remain constant through until 2036
 - Scenario B where the average household size reduces by 0.01 per year from the 2016 level.
 - Scenario C where the average household size reduces by 0.02 per year from 2016. This was the trend rate of decrease between 2011 and 2016.
 - Scenario D where the average household size reduces by 0.0048 per year from 2016. This is the 20 year annual trend rate between the 1996 and 2016 censuses.

³ Ibid. Mulder, C.H.

3.9 Each of these scenarios has been applied to each variant of the population figures.

4. Projections and household size – how does this compare to the Isle of Man Strategic Plan 2016?

4.1 When comparing the household projections in the Strategic Plan and the information available from the 2016 Census, we find some differences at the end of the plan period in 2026.

4.2 In doing so, it is important to be clear that in the Strategic Plan it is assumed that the household size would fall by 0.04 every 10 years or 0.004 every year.

4.3 In the 2016 Isle of Man Strategic Plan, a vacancy factor of 4% was allowed for to represent local market circumstances. This resulted in the following:⁴

Table 1: Increase in number of households + Vacancy factor to 2026

Strategic Plan 2016		
Increase 2011-2026	Vacancy factor	Increase + vacancy
4,885	4%	5,080

4.4 Applying migration and population assumptions derived from 2016 census data to the same vacancy allowance, the following number of households is projected:

Table 2: 2016 Census projections

	Increase 2011-2026	Vacancy factor	Increase + vacancy
Scenario B projection ⁵	3,629	4%	3,774
Scenario C projection ⁶	5,107		5,311

4.5 Two scenarios can be considered regarding household size, one being more pessimistic about the rate of decline in average household size than the other.

5. Population

5.1 The trend projections for population are similarly calculated, and are as follows.

⁴ Isle of Man Strategic Plan (2016) Paragraph 8.4.7.

⁵ Please see the projections from the 2016 Census at the end of this document.

⁶ Please see the projections from the 2016 Census at the end of this document.

Table 3: Population and household projections

POPULATION + HOUSEHOLDS	2011	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Population – 2016 Strategic Plan estimate	84,497	88,226	88,845	89,455	90,059	90,656	91,246	91,829	92,405	92,971	93,526
Population 2016 census projection	N/A	82,127	82,565	82,992	83,415	83,810	84,203	84,584	84,962	85,314	85,671
Household size 2016 Strategic Plan estimate	2.33	2.306	2.302	2.298	2.294	2.29	2.286	2.282	2.278	2.274	2.27
Household size 2016 census projection Scenario B	N/A	2.27	2.26	2.25	2.24	2.23	2.22	2.21	2.2	2.19	2.18
Household size 2016 census projection Scenario C	N/A	2.27	2.25	2.23	2.21	2.19	2.18	2.16	2.14	2.12	2.1
Households 2016 Strategic Plan estimate	35,599	37,593	37,923	38,250	38,575	38,899	39,220	39,540	39,858	40,173	40,484
Households 2016 census projection Scenario B	N/A	36,117	36,470	36,821	37,174	37,517	37,862	38,205	38,550	38,887	39,228
Households 2016 census projection Scenario C	N/A	36,243	36,727	37,214	37,707	38,195	38,690	39,188	39,693	40,194	40,706

6. Conclusions

- 6.1 Thus using population projections, and assuming a pessimistic trend decline in household size, (at the faster Scenario C rate), there is an under-provision for households in the 2016 strategic plan which is likely to be corrected by other forces of the housing market.
- 6.2 As noted earlier, the Scenario C rate of the decline in household size is the same trend rate of decrease between 2011 and 2016. When making plans for the future management of land, its uses, and the provision of housing and employment choices, this recent trend is important.

Projections from 2016 Census data

Table 4: Projection population living in private households

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Zero	81,580	81,463	81,329	81,177	81,005	80,821	80,614	80,390	80,149	79,888	79,611	79,320	79,007	78,684	78,333	77,977	77,594	77,197	76,773	76,347
Mig. 500	82,127	82,565	82,992	83,415	83,810	84,203	84,584	84,962	85,314	85,671	86,002	86,332	86,633	86,908	87,170	87,406	87,613	87,803	87,962	88,110
Mig. 1,000	82,632	83,584	84,549	85,497	86,390	87,324	88,239	89,182	90,086	91,012	91,929	92,836	93,716	94,553	95,385	96,175	96,942	97,684	98,384	99,070

Table 5: Scenario A - Average household size remains constant from 2016

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Zero	35,719	35,668	35,609	35,543	35,468	35,387	35,296	35,198	35,093	34,978	34,857	34,730	34,593	34,451	34,297	34,142	33,974	33,800	33,615	33,428
Mig. 500	35,959	36,151	36,337	36,522	36,696	36,868	37,034	37,200	37,354	37,511	37,655	37,800	37,932	38,052	38,167	38,270	38,361	38,444	38,513	38,578
Mig. 1,000	36,180	36,597	37,019	37,434	37,825	38,234	38,635	39,048	39,443	39,849	40,250	40,648	41,033	41,400	41,764	42,109	42,445	42,770	43,077	43,377

Table 6: Scenario B - Average household size reduces of 0.01 per year from 2016

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Average Household Size	2.27	2.26	2.25	2.24	2.23	2.22	2.21	2.20	2.19	2.18	2.17	2.16	2.15	2.14	2.13	2.12	2.11	2.10	2.09	2.08
Zero	35,876	35,983	36,083	36,176	36,261	36,342	36,412	36,476	36,532	36,580	36,621	36,656	36,680	36,701	36,708	36,714	36,706	36,692	36,665	36,636
Mig. 500	36,117	36,470	36,821	37,174	37,517	37,862	38,205	38,550	38,887	39,228	39,561	39,896	40,221	40,537	40,849	41,153	41,446	41,733	42,008	42,281
Mig. 1,000	36,339	36,920	37,512	38,102	38,672	39,266	39,856	40,465	41,061	41,674	42,287	42,902	43,510	44,103	44,699	45,282	45,859	46,429	46,985	47,540

Table 7: Scenario C - Average household size reduces by 0.02 per year form 2016

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Average Household Size	2.27	2.25	2.23	2.21	2.19	2.18	2.16	2.14	2.12	2.10	2.09	2.07	2.05	2.03	2.01	2.00	1.98	1.96	1.94	1.93
Zero	36,002	36,237	36,468	36,695	36,917	37,136	37,349	37,557	37,761	37,958	38,152	38,342	38,524	38,705	38,876	39,046	39,207	39,363	39,508	39,655
Mig. 500	36,243	36,727	37,214	37,707	38,195	38,690	39,188	39,693	40,194	40,706	41,215	41,731	42,243	42,751	43,261	43,768	44,269	44,771	45,265	45,764
Mig. 1,000	36,466	37,181	37,912	38,648	39,371	40,124	40,881	41,664	42,442	43,244	44,055	44,875	45,697	46,512	47,338	48,159	48,983	49,809	50,629	51,456

Table 8: Scenario D - Average household size reduces by 0.0048 per year from 2016

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Average Household Size	2.28	2.27	2.27	2.26	2.26	2.26	2.25	2.25	2.24	2.24	2.23	2.23	2.22	2.22	2.21	2.21	2.20	2.20	2.19	2.19
Zero	35,795	35,819	35,835	35,844	35,845	35,839	35,824	35,801	35,770	35,730	35,683	35,629	35,565	35,496	35,415	35,331	35,234	35,130	35,014	34,896
Mig. 500	36,034	36,303	36,568	36,832	37,086	37,339	37,588	37,836	38,075	38,317	38,547	38,779	38,998	39,206	39,410	39,603	39,783	39,957	40,117	40,272
Mig. 1,000	36,256	36,751	37,254	37,752	38,227	38,723	39,212	39,716	40,204	40,705	41,204	41,700	42,187	42,656	43,124	43,576	44,019	44,453	44,870	45,282



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