



Report Title: Development of Scenarios

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1. Introduction

1.1 The Housing Need and Demand Assessment (HNDA) Tool developed by the Scottish Government's Centre for Housing Market Analysis (CHMA) has been used to assess the total future number of additional housing units required in the Falkirk Council area. Version 2.02 of the Tool has been used to develop the three scenarios considered by the Council. This paper looks at the way the Tool has been used in Falkirk and especially the processes around the selection of the HNDA scenarios.

2. Development of Scenarios

2.1 The Falkirk Council Housing Need and Demand Assessment Working Group initially looked at possible scenarios to run through the Tool. It was decided that the Group would come up with three options that included a low, medium and high scenario and took into consideration changes in house prices, rents and incomes in previous years that have been highlighted in Chapter 2 - Key Housing Market Drivers.

2.2 The three options that the Working Group came up with are shown in Table 1. These Scenarios were run through the Tool and the results sent to the Strategic Housing Group to enable the Group to see what effect the different options had on the number of additional units needed each year by tenure. A preferred option was recommended to the Group and that was Scenario 2.

2.3 Scenario 2 predicts a modest increase in incomes which means that incomes would increase by 4% p.a. to 2023 and then 3% p.a. to 2040. In terms of income distribution, the incomes of the most affluent (the 90th percentile of the income distribution) increase more steadily compared to the incomes of least affluent (the 10th percentile of the income distribution). House prices and rents will rise in line with inflation.

2.4 This compares to Scenario 1 which predicted no income growth until 2020 and then 2.5% growth per annum to 2040. House prices and rents will rise in line with the Office of Budget Responsibility (2015) estimates. Other assumptions are as in Scenario 2.

2.5 Scenario 3 predicted the same income growth as in Scenario 1. In terms of income distribution there would be no change from the current distribution. House prices and rents would not increase until 2020, then there would be 2.5% growth per annum until 2040.

2.6 These three scenarios are outlined in Table 1 with the number of additional units required each year broken down by tenure in the tables after. The total units required each year are the same for each of the three different Scenarios but the distribution between the tenures is different. Scenario 1 has a requirement for more social rent and less buyers than Scenarios 2 and 3. The main difference between Scenarios 2 and 3 is that there is a requirement for more private rented sector properties in Scenario 2 and less below market rent properties. There is also a slight decrease in the number of social rent units and an increase in buyers in Scenario 2 in comparison to Scenario 3 over time.

Table 1: Constructing Alternative Futures Using HNDA Tool Scenarios

		Tool Default	Scenario 1	Scenario 2	Scenario 3
1 Household Projections	1 Household Projection	NRS 2012 based Principal Projection	NRS 2012 based Principal Projection	NRS 2012 based Principal Projection	NRS 2012 based Principal Projection
	1a Household Growth Adjustment	Not used	Not used	Not used	Not used
2 Existing Need	Use HaTAP method	HaTAP 510	Not used	Not used	Not used
	Own existing need figures				
	2a Years from 2015 to clear need	5	10	10	10
	Use affordability model to assign need	No	No	No	No
3 Income, Growth and Distribution	Income data	Herriot Watt	Herriot Watt	Herriot Watt	Herriot Watt
	Growth in median income scenario	Modest increases (core)	Flat	Modest increases (core)	Flat
	Change in income Distribution	Flat	Creeping Inequality	Creeping Inequality	Flat
4 Prices and Affordability	House price scenario	Office of Budget Responsibility (OBR) estimates (core)	Office of Budget Responsibility (OBR) estimates (core)	No Real Growth	Flat
	Income percentile	25%	25%	25%	25%
	Income ratio	4	4	4	4
5 Split Need into Tenure	Proportion of market who buy	50%	50%	50%	50%
	Upper income-to-rent threshold	35%	35%	35%	35%
	Lower income-to-rent threshold	25%	25%	25%	25%
	Rent Growth Scenario	Office of Budget Responsibility (OBR) estimates (core)	Office of Budget Responsibility OBR estimates (core)	No Real Growth	Flat

Scenario 1

Table 2: Falkirk (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	288	293	288	304	301	321	238	228	232	215	238	238	227	234	221	237	237	232	225	216	208	201	196	192	188
Below Market Rent	100	97	91	86	75	78	76	72	71	66	72	75	76	77	71	79	83	66	65	64	63	63	63	63	63
Private Rent	76	69	62	57	50	46	47	40	38	36	37	29	24	22	17	12	10	4	0	-4	-7	-11	-14	-17	-21
Buyers	168	158	140	135	119	120	114	107	105	96	102	99	93	92	85	88	86	67	62	57	54	50	47	44	40
Total	632	617	581	582	545	565	475	447	446	413	449	441	420	425	394	416	416	369	352	333	318	303	292	282	270

Table 3: Polmont & Rural South HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	50	51	50	53	52	56	42	40	41	38	42	42	40	41	39	42	42	41	40	38	37	36	35	34	34
Below Market Rent	18	17	16	15	13	14	13	13	13	12	13	13	13	14	13	14	15	12	11	11	11	11	11	11	11
Private Rent	20	19	17	16	14	13	13	12	11	11	11	10	9	8	7	7	6	5	4	3	2	1	1	0	-1
Buyers	23	21	19	18	16	16	15	14	14	13	13	13	12	12	11	11	11	8	7	7	6	6	5	5	4
Total	111	108	102	102	95	99	83	79	79	74	79	78	74	75	70	74	74	66	62	59	56	54	52	50	48

Table 4: Falkirk HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	77	79	77	81	81	86	64	61	62	58	64	64	61	63	59	64	64	62	60	58	56	54	53	52	51
Below Market Rent	27	26	24	23	20	21	20	19	19	18	19	20	20	21	19	21	22	18	17	17	17	17	17	17	17
Private Rent	15	13	12	10	9	8	8	7	6	6	6	4	3	2	1	-1	-1	-2	-3	-4	-5	-6	-6	-7	-8
Buyers	51	48	43	41	36	37	35	33	32	29	31	30	29	29	26	27	27	21	20	18	17	16	15	14	13
Total	170	166	156	155	146	152	127	120	119	111	120	118	113	115	105	111	112	99	94	89	85	81	79	76	73

Table 5: Denny & Bonnybridge HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	48	48	48	50	50	53	39	38	38	35	39	39	37	39	36	39	39	38	37	36	34	33	32	32	31
Below Market Rent	16	16	15	14	12	13	13	12	12	11	12	12	12	13	12	13	14	11	11	11	10	10	10	10	10
Private Rent	10	9	8	7	6	6	6	5	4	4	4	3	2	2	1	0	0	-1	-1	-2	-2	-3	-3	-4	-4
Buyers	30	29	25	25	22	22	21	20	19	17	19	18	17	17	16	16	16	12	12	11	10	9	9	8	8
Total	104	102	96	96	90	94	79	75	73	67	74	72	68	71	65	68	69	60	59	56	52	49	48	46	45

Table 6: Bo'ness HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	29	29	29	31	30	32	24	23	23	22	24	24	23	24	22	24	24	23	23	22	21	20	20	19	19
Below Market Rent	10	10	9	9	8	8	8	7	7	7	7	8	8	8	7	8	8	7	7	6	6	6	6	6	6
Private Rent	7	6	6	5	4	4	4	4	3	3	3	2	2	2	1	1	1	0	0	-1	-1	-1	-2	-2	-2
Buyers	18	17	15	14	12	13	12	11	11	10	11	10	10	10	9	9	9	7	7	6	6	5	5	5	4
Total	64	62	59	59	54	57	48	45	44	42	45	44	43	44	39	42	42	37	37	33	32	30	29	28	27

Table 7: Grangemouth HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	36	37	36	38	38	40	29	28	29	26	29	29	28	29	27	29	29	28	27	26	25	24	23	23	22
Below Market Rent	12	12	11	11	9	10	9	9	9	8	9	9	9	9	9	10	10	8	8	8	8	8	8	8	8
Private Rent	8	7	6	5	5	4	4	4	3	3	3	2	2	2	1	0	0	-1	-1	-1	-2	-2	-3	-3	-3
Buyers	23	21	19	18	16	16	15	15	14	13	14	14	13	13	12	12	12	9	9	8	7	7	7	6	6
Total	79	77	72	72	68	70	57	56	55	50	55	54	52	53	49	51	51	44	43	41	38	37	35	34	33

Table 8: Larbert, Stenhousemuir & Rural North HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	48	49	48	51	50	54	40	38	39	36	40	40	38	39	37	39	39	39	37	36	35	33	33	32	31
Below Market Rent	17	16	15	14	12	13	13	12	12	11	12	12	13	13	12	13	14	11	11	11	11	10	10	11	11
Private Rent	17	15	14	13	12	11	11	10	9	9	9	8	7	6	5	4	4	3	2	1	1	0	-1	-1	-2
Buyers	24	23	20	19	16	17	16	15	14	13	14	14	13	13	12	12	12	9	8	8	7	6	6	6	5
Total	106	103	97	97	90	95	80	75	74	69	75	74	71	71	66	68	69	62	58	56	54	49	48	48	45

Scenario 2

Table 9: Falkirk (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	288	293	288	304	301	321	238	228	232	215	238	238	227	234	221	237	237	232	225	216	208	201	196	192	188
Below Market Rent	100	97	91	86	75	78	76	72	71	66	72	75	76	77	71	79	83	66	65	64	63	63	63	63	63
Private Rent	76	69	62	57	50	46	47	40	38	36	37	29	24	22	17	12	10	4	0	-4	-7	-11	-14	-17	-21
Buyers	168	158	140	135	119	120	114	107	105	96	102	99	93	92	85	88	86	67	62	57	54	50	47	44	40
Total	632	617	581	582	545	565	475	447	446	413	449	441	420	425	394	416	416	369	352	333	318	303	292	282	270

Table 10: Polmont & Rural South HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	50	51	50	53	52	56	42	40	41	38	42	42	40	41	39	42	42	41	40	38	37	36	35	34	34
Below Market Rent	18	17	16	15	13	14	13	13	13	12	13	13	13	14	13	14	15	12	11	11	11	11	11	11	11
Private Rent	20	19	17	16	14	13	13	12	11	11	11	10	9	8	7	7	6	5	4	3	2	1	1	0	-1
Buyers	23	21	19	18	16	16	15	14	14	13	13	13	12	12	11	11	11	8	7	7	6	6	5	5	4
Total	111	108	102	102	95	99	83	79	79	74	79	78	74	75	70	74	74	66	62	59	56	54	52	50	48

Table 11: Falkirk HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	77	79	77	81	81	86	64	61	62	58	64	64	61	63	59	64	64	62	60	58	56	54	53	52	51
Below Market Rent	27	26	24	23	20	21	20	19	19	18	19	20	20	21	19	21	22	18	17	17	17	17	17	17	17
Private Rent	15	13	12	10	9	8	8	7	6	6	6	4	3	2	1	-1	-1	-2	-3	-4	-5	-6	-6	-7	-8
Buyers	51	48	43	41	36	37	35	33	32	29	31	30	29	29	26	27	27	21	20	18	17	16	15	14	13
Total	170	166	156	155	146	152	127	120	119	111	120	118	113	115	105	111	112	99	94	89	85	81	79	76	73

Table 12: Denny & Bonnybridge HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	48	48	48	50	50	53	39	38	38	35	39	39	37	39	36	39	39	38	37	36	34	33	32	32	31
Below Market Rent	16	16	15	14	12	13	13	12	12	11	12	12	12	13	12	13	14	11	11	11	10	10	10	10	10
Private Rent	10	9	8	7	6	6	6	5	4	4	4	3	2	2	1	0	0	-1	-1	-2	-2	-3	-3	-4	-4
Buyers	30	29	25	25	22	22	21	20	19	17	19	18	17	17	16	16	16	12	12	11	10	9	9	8	8
Total	104	102	96	96	90	94	79	75	73	67	74	72	68	71	65	68	69	60	59	56	52	49	48	46	45

Table 13: Bo'ness HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	29	29	29	31	30	32	24	23	23	22	24	24	23	24	22	24	24	23	23	22	21	20	20	19	19
Below Market Rent	10	10	9	9	8	8	8	7	7	7	7	8	8	8	7	8	8	7	7	6	6	6	6	6	6
Private Rent	7	6	6	5	4	4	4	4	3	3	3	2	2	2	1	1	1	0	0	-1	-1	-1	-2	-2	-2
Buyers	18	17	15	14	12	13	12	11	11	10	11	10	10	10	9	9	9	7	7	6	6	5	5	5	4
Total	64	62	59	59	54	57	48	45	44	42	45	44	43	44	39	42	42	37	37	33	32	30	29	28	27

Table 14: Grangemouth HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	36	37	36	38	38	40	29	28	29	26	29	29	28	29	27	29	29	28	27	26	25	24	23	23	22
Below Market Rent	12	12	11	11	9	10	9	9	9	8	9	9	9	9	9	10	10	8	8	8	8	8	8	8	8
Private Rent	8	7	6	5	5	4	4	4	3	3	3	2	2	2	1	0	0	-1	-1	-1	-2	-2	-3	-3	-3
Buyers	23	21	19	18	16	16	15	15	14	13	14	14	13	13	12	12	12	9	9	8	7	7	7	6	6
Total	79	77	72	72	68	70	57	56	55	50	55	54	52	53	49	51	51	44	43	41	38	37	35	34	33

Table 15: Stenhousemuir, Larbert & Rural North HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	48	49	48	51	50	54	40	38	39	36	40	40	38	39	37	39	39	39	37	36	35	33	33	32	31
Below Market Rent	17	16	15	14	12	13	13	12	12	11	12	12	13	13	12	13	14	11	11	11	11	10	10	11	11
Private Rent	17	15	14	13	12	11	11	10	9	9	9	8	7	6	5	4	4	3	2	1	1	0	-1	-1	-2
Buyers	24	23	20	19	16	17	16	15	14	13	14	14	13	13	12	12	12	9	8	8	7	6	6	6	5
Total	106	103	97	97	90	95	80	75	74	69	75	74	71	71	66	68	69	62	58	56	54	49	48	48	45

Scenario 3

Table 16: Falkirk (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	232	228	218	218	208	214	133	125	125	116	126	123	118	119	110	116	116	86	76	66	57	48	41	34	28
Below Market Rent	111	108	101	101	94	98	95	89	89	83	90	88	84	85	79	83	83	79	77	74	73	71	70	69	67
Private Rent	95	93	87	87	80	84	82	77	77	71	77	76	72	73	68	71	71	67	66	64	62	61	60	59	58
Buyers	193	188	176	176	163	170	165	156	155	144	156	154	146	148	137	145	145	137	133	129	126	123	121	120	117
Total	632	618	581	581	545	566	475	447	446	413	449	441	420	425	394	415	415	369	352	333	318	302	291	282	271

Table 17: Polmont & Rural North HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	40	40	38	38	36	37	23	22	22	20	22	22	21	21	19	21	21	15	14	12	10	9	8	7	6
Below Market Rent	20	19	18	18	17	17	17	16	16	15	16	16	15	15	14	15	15	14	14	13	13	12	12	12	12
Private Rent	24	23	21	21	20	21	20	19	19	17	19	19	18	18	17	18	18	17	16	16	15	15	15	15	14
Buyers	27	27	25	25	23	24	23	22	22	20	22	22	21	21	19	21	21	19	19	18	18	17	17	17	17
Total	111	108	102	102	95	99	84	79	79	73	79	78	74	75	70	73	73	65	62	59	57	54	52	50	48

Table 18: Falkirk HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	62	61	58	58	56	57	36	34	34	31	34	33	32	32	30	31	31	23	21	18	15	13	11	9	8
Below Market Rent	30	29	27	27	25	26	26	24	24	22	24	24	23	23	21	22	22	21	21	20	19	19	19	18	18
Private Rent	20	20	18	18	17	18	17	16	16	15	16	16	15	15	14	15	15	14	14	13	13	13	13	12	12
Buyers	57	56	52	52	48	51	49	46	46	43	46	46	43	44	41	43	43	41	40	38	37	37	36	36	35
Total	169	166	156	156	146	152	128	120	120	111	121	118	113	114	106	111	111	99	95	90	86	81	78	76	73

Table 19: Denny & Bonnybridge HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	38	38	36	36	34	35	22	21	21	19	21	20	19	20	18	19	19	14	13	11	9	8	7	5	4
BM Rent	18	18	17	17	15	16	16	15	15	14	15	15	14	14	13	14	14	13	13	12	12	12	11	11	11
PRS	13	13	12	12	11	12	11	11	11	10	11	11	10	10	9	10	10	9	9	9	9	8	8	8	8
Buyers	34	33	31	31	29	30	29	28	28	26	28	27	26	26	24	26	26	24	24	23	22	22	22	21	21
Total	103	102	96	96	89	93	78	75	75	69	75	73	69	70	64	69	69	60	59	55	52	50	48	45	44

Table 20: Bo'ness HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	23	23	22	22	21	21	13	13	13	12	13	12	12	12	11	12	12	9	8	7	6	5	4	3	3
Below Market Rent	11	11	10	10	9	10	10	9	9	8	9	9	8	9	8	8	8	8	8	7	7	7	7	7	7
Private Rent	9	8	8	8	7	8	7	7	7	6	7	7	7	7	6	6	6	6	6	6	6	6	5	5	5
Buyers	20	20	18	18	17	18	17	16	16	15	16	16	15	16	14	15	15	14	14	14	13	13	13	13	12
Total	63	62	58	58	54	57	47	45	45	41	45	44	42	44	39	41	41	37	36	34	32	31	29	28	27

Table 21: Grangemouth HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	29	29	28	28	26	27	16	15	15	14	15	15	14	15	14	14	14	10	9	8	7	5	4	4	3
Below Market Rent	14	13	12	12	12	12	12	11	11	10	11	11	10	10	10	10	10	10	9	9	9	9	9	8	8
Private Rent	10	10	9	9	8	9	8	8	8	7	8	8	7	8	7	7	7	7	7	7	6	6	6	6	6
Buyers	26	25	23	23	22	23	22	21	21	19	21	20	19	20	18	19	19	18	18	17	17	16	16	16	16
Total	79	77	72	72	68	71	58	55	55	50	55	54	50	53	49	50	50	45	43	41	39	36	35	34	33

Table 22: Stenhousemuir, Larbert & Rural North HMA (Constrained)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Social Rent	39	38	36	36	35	36	22	21	21	19	21	21	20	20	18	19	19	14	13	11	9	8	7	6	5
Below Market Rent	18	18	17	17	16	16	16	15	15	14	15	15	14	14	13	14	14	13	13	12	12	12	12	11	11
Private Rent	20	19	18	18	17	18	17	16	16	15	16	16	15	15	14	15	15	14	14	13	13	13	12	12	12
Buyers	28	27	26	26	24	25	24	23	23	21	23	22	21	22	20	21	21	20	19	19	18	18	18	17	17
Total	105	102	97	97	92	95	79	75	75	69	75	74	70	71	65	69	69	61	59	55	52	51	49	46	45