

EXCEL CALCULATOR

National Planning Framework 4 Minimum All-Tenure Housing Land Requirement Initial Default Estimates - Step by Step Calculations

USER INSTRUCTIONS

- > This spreadsheet is designed to allow authorities to re-calculate their initial default minimum all-tenure housing land requirements should they wish to do so.
- > There are 14 steps in this spreadsheet, each containing formulae to arrive at the final estimates.
- > However authorities only need to input data to Step 1 (household projections) Step 2 (existing housing need) and Step 3 (flexibility allowance) to adjust their requirement.
- > The remainder of the steps will then re-calculate automatically and do not need to be changed. The final adjusted estimates results are shown at Step 14.
- > Steps 4 to 13 perform a number of functions including:
 - calculate newly-forming households
 - zero any negative household growth
 - deduct Local Authority (LA) national park areas from overall LA totals
 - total newly-forming households and existing housing need
 - annualise figures to create a 10 year total using 15 years of newly-forming households
 - add a flexibility allowance to the total
 - regroup LAs into regional groups (Fife split across Edinburgh and Dundee City Regions)
 - add in completions data

**Scottish Government
Planning & Architecture Division and Housing & Social Justice
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STEP 14 - Round final estimates to the nearest 50 and show housing completions

Unitary Local Authorities, City Regions and National Parks	NPF4 - Minimum All Tenure Housing Land Requirement				Housing Completions
	10 Years Total				
	Existing Housing Need	Newly-Forming Households	Allowance (25% urban, 30% Rural)	Tenure Housing Land Requirement	2010 - 2019
Aberdeen City	500	3,300	950	4,750	7,734
Aberdeenshire	400	4,600	1,500	6,500	12,132
Aberdeen City Region	900	7,900	2,450	11,250	19,866
Angus	150	500	200	850	2,464
Fife (North)	150	700	200	1,050	2,403
Dundee City	400	1,200	400	2,000	2,377
Perth and Kinross	100	1,950	600	2,650	5,560
Dundee City Region	800	4,350	1,400	6,550	12,804
City of Edinburgh	2,150	19,900	5,500	27,550	16,654
East Lothian	500	4,350	1,200	6,050	5,124
Fife (Central and South)	600	2,750	850	4,200	9,613
Midlothian	500	5,950	1,600	8,050	6,271
West Lothian	600	6,500	1,750	8,850	6,568
Scottish Borders	100	1,250	400	1,750	3,512
Edinburgh City Region	4,450	40,700	11,300	56,450	47,742
East Dunbartonshire	250	2,300	650	3,200	3,678
East Renfrewshire	100	3,150	800	4,050	2,999
Glasgow City	3,400	13,750	4,300	21,450	15,338
Inverclyde	200	0	50	250	2,397
North Lanarkshire	900	4,150	1,250	6,300	7,567
Renfrewshire	300	3,600	1,000	4,900	5,846
South Lanarkshire	850	5,400	1,550	7,800	11,341
West Dunbartonshire	350	0	100	450	2,601
Glasgow City Region	6,350	32,350	9,700	48,400	51,767
Argyll and Bute	150	0	50	200	2,025
Clackmannanshire	150	200	100	450	1,145
Dumfries and Galloway	250	50	100	400	2,966
East Ayrshire	200	50	100	350	3,669
Eilean Siar	50	0	0	50	1,270
Falkirk	350	3,850	1,050	5,250	4,579
Highland	700	2,650	1,000	4,350	10,300
Moray	200	1,200	400	1,800	4,514
North Ayrshire	350	0	100	450	3,123
Orkney	50	300	100	450	1,450
Shetland	100	150	50	300	993
South Ayrshire	300	100	100	500	2,400
Stirling	300	2,400	800	3,500	2,878
All Fife	750	3,450	1,050	5,250	12,016

Comparison of minimums to completions

GREEN = completions higher than minimum

BLUE = completions lower than minimum

STEP 1 - RAW DATA - 2018-based household principle projections, by single year, 2022 to 2037

(Equivalent to Step 1 of HNDA Tool)

INPUT ALTERNATIVE HOUSEHOLD PROJECTIONS

Local Authority, National Park and NP Housing Market Areas	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
AberdeenCity	109,300	109,568	109,831	110,075	110,355	110,629	110,884	111,201	111,536	111,946	112,321	112,729	113,134	113,546	113,938	114,285
Aberdeenshire	114,079	114,904	115,675	116,324	116,869	117,363	117,844	118,325	118,756	119,178	119,499	119,878	120,221	120,527	120,844	121,142
Angus	54,621	54,813	54,959	55,050	55,122	55,126	55,189	55,226	55,223	55,244	55,250	55,272	55,295	55,328	55,353	55,386
ArgyllBute	41,608	41,523	41,440	41,290	41,170	40,990	40,803	40,640	40,458	40,292	40,121	39,961	39,808	39,656	39,519	39,370
Clackmannanshire	24,138	24,217	24,278	24,332	24,362	24,364	24,384	24,398	24,408	24,399	24,395	24,392	24,385	24,380	24,387	24,403
DumfriesGalloway	69,930	69,987	70,004	70,025	69,967	69,906	69,869	69,800	69,727	69,647	69,541	69,477	69,423	69,377	69,353	69,331
DundeeCity	71,267	71,358	71,388	71,427	71,434	71,484	71,581	71,701	71,808	71,958	72,158	72,360	72,536	72,708	72,878	73,048
EastAyrshire	55,757	55,818	55,842	55,837	55,796	55,726	55,695	55,649	55,579	55,514	55,499	55,443	55,396	55,345	55,328	55,280
EastDunbartonshire	46,917	47,145	47,366	47,584	47,808	47,952	48,168	48,381	48,612	48,858	49,129	49,377	49,648	49,877	50,145	50,393
EastLothian	48,218	48,702	49,124	49,565	50,009	50,443	50,821	51,259	51,682	52,116	52,575	53,018	53,444	53,866	54,332	54,768
EastRenfrewshire	40,305	40,617	40,926	41,216	41,495	41,815	42,139	42,443	42,777	43,116	43,463	43,780	44,088	44,390	44,699	45,018
EdinburghCity	246,540	248,841	251,104	253,223	255,255	257,284	259,245	261,254	263,156	265,129	267,080	269,040	270,980	272,809	274,672	276,397
EileanSiar	12,775	12,727	12,694	12,649	12,599	12,539	12,478	12,411	12,338	12,253	12,194	12,119	12,066	11,994	11,918	11,866
Falkirk	74,176	74,658	75,105	75,554	75,966	76,319	76,692	77,029	77,395	77,772	78,144	78,502	78,869	79,224	79,585	79,926
Fife	171,156	171,748	172,314	172,711	173,078	173,335	173,621	173,988	174,274	174,634	174,885	175,187	175,506	175,813	176,110	176,338
GlasgowCity	300,830	302,367	303,712	304,948	306,221	307,450	308,678	309,926	311,191	312,651	314,075	315,542	317,022	318,412	319,962	321,447
Highland	111,067	111,657	112,181	112,633	113,007	113,383	113,704	114,016	114,239	114,495	114,699	114,878	115,072	115,280	115,501	115,719
Inverclyde	37,340	37,198	37,076	36,943	36,792	36,607	36,433	36,258	36,122	35,961	35,800	35,618	35,469	35,340	35,198	35,046
Midlothian	41,685	42,318	42,979	43,594	44,213	44,796	45,374	45,968	46,542	47,115	47,709	48,280	48,856	49,432	50,013	50,591
Moray	43,669	43,868	44,071	44,228	44,398	44,520	44,649	44,765	44,848	44,936	45,028	45,141	45,222	45,313	45,415	45,527
NorthAyrshire	64,257	64,268	64,240	64,189	64,113	64,007	63,889	63,757	63,574	63,464	63,318	63,168	63,061	62,909	62,796	62,684
NorthLanarkshire	154,607	155,185	155,785	156,256	156,653	157,072	157,469	157,891	158,249	158,660	159,042	159,414	159,784	160,130	160,504	160,862
OrkneyIslands	10,774	10,830	10,875	10,914	10,952	10,981	11,010	11,024	11,036	11,068	11,089	11,104	11,128	11,159	11,188	11,203
PerthKinross	70,140	70,506	70,835	71,100	71,314	71,499	71,711	71,858	72,003	72,154	72,284	72,437	72,611	72,732	72,890	73,051
Renfrewshire	88,474	88,913	89,298	89,622	89,968	90,259	90,601	90,926	91,264	91,604	91,961	92,380	92,736	93,065	93,488	93,875
ScottishBorders	55,465	55,712	55,920	56,104	56,254	56,339	56,443	56,544	56,661	56,770	56,900	56,996	57,110	57,200	57,305	57,366
ShetlandIslands	10,566	10,612	10,644	10,674	10,706	10,735	10,742	10,753	10,764	10,770	10,766	10,758	10,751	10,738	10,738	10,732
SouthAyrshire	52,978	53,032	53,094	53,113	53,095	53,081	53,063	53,069	53,043	53,012	52,987	52,947	52,913	52,872	52,864	52,807
SouthLanarkshire	149,931	150,609	151,251	151,812	152,297	152,793	153,273	153,814	154,262	154,785	155,297	155,802	156,351	156,888	157,457	157,999
Stirling	40,765	41,070	41,377	41,633	41,892	42,129	42,384	42,629	42,849	43,072	43,324	43,567	43,818	44,084	44,352	44,616
WestDunbartonshire	43,223	43,233	43,224	43,222	43,192	43,172	43,156	43,130	43,111	43,098	43,075	43,074	43,059	43,035	43,009	42,971
WestLothian	81,415	82,214	82,991	83,688	84,357	85,008	85,634	86,267	86,842	87,463	88,049	88,657	89,312	89,903	90,530	91,130
Cairngorms National Park ^{1,2}	8,868	8,964	9,055	9,144	9,237	9,318	9,388	9,467	9,526	9,582	9,620	9,655	9,689	9,727	9,761	9,805
> Aberdeenshire HMA	1,585	1,605	1,624	1,642	1,661	1,677	1,691	1,707	1,720	1,732	1,740	1,749	1,757	1,765	1,772	1,781
> Highland HMA	6,912	6,985	7,053	7,121	7,191	7,253	7,306	7,366	7,409	7,451	7,480	7,504	7,529	7,558	7,583	7,616
> Moray HMA	370	374	378	381	385	388	391	394	396	399	400	402	403	405	406	408
Loch Lomond and the Trossachs National Park ^{1,3}	6,757	6,771	6,787	6,792	6,802	6,811	6,816	6,822	6,821	6,834	6,825	6,811	6,814	6,829	6,832	6,833
> Argyll & Bute HMA	1,335	1,329	1,324	1,316	1,310	1,303	1,294	1,287	1,278	1,272	1,261	1,250	1,243	1,237	1,229	1,221
> Stirling HMA	4,103	4,125	4,148	4,164	4,183	4,202	4,218	4,235	4,247	4,267	4,274	4,277	4,292	4,314	4,329	4,343
> West Dunbartonshire HMA	1,320	1,317	1,315	1,312	1,309	1,306	1,303	1,300	1,296	1,295	1,289	1,283	1,280	1,278	1,274	1,269

Source:

> Local Authority figures - 2018-based Household Projection, National Records for Scotland (September 2020).

> National Park figures - 2018 occupied households, National Records of Scotland and 2018-based household projections, National Records for Scotland (September 2020) .

Notes:

1. The number of occupied households in each park and each local authority is derived for 2018. For each local authority area within the park the proportion of total households within the park is derived. This proportion is then applied to the local authority household projection to derive a household projection for the whole park and the Housing Market Areas (HMAs) within the Park (the latter are also used further on in the process). The HMAs are used to estimate the household projection for the whole park. Then the proportion of each HMA sub-area of the total is derived. These proportions are then applied to the NRS household projections for the park as a whole (which NRS do produce). The HMA sub-areas are then summed to total.

2. Whilst Angus Council and Perth and Kinross Council are part of the Cairngorms National Park, these datazones are mainly on the Council side of the Park Border and cannot be included for the purposes of the HNDA Tool as datazones cannot be split statistical reasons. The datazones we cannot include for Angus are (S01000708), (S01000710) and for Perth & Kinross are (S01005145), (S01005146) and (S01005417).

3. Two datazones in Perth & Kinross cross into the Loch Lomond and the Trossachs Park boundary (S01005073) and (S01005002) but these datazones are mainly on the Council side of the Park Border and cannot be included for the purposes of the HNDA Tool as datazones can't be split for statistical reasons.

STEP 2- RAW DATA - Existing housing need as at November 2020

(Equivalent to Step 2 of HNDA Tool)

INPUT ALTERNATIVE EXISTING NEED ESTIMATE

Local Authorities, National Parks and NP Housing Market Areas	Existing Housing Need
	Homeless Households in Temporary Accommodation & Household <i>both</i> overcrowded <i>and</i> concealed
Aberdeen City	479
Aberdeenshire	401
Angus	157
Argyll & Bute	148
Clackmannanshire	145
Dumfries & Galloway	265
Dundee City	395
East Ayrshire	196
East Dunbartonshire	245
East Lothian	478
East Renfrewshire	97
Edinburgh, City of	2,140
Eilean Siar	69
Falkirk	371
Fife	740
Glasgow City	3,410
Highland	740

Inverclyde	176
Midlothian	480
Moray	180
North Ayrshire	368
North Lanarkshire	921
Orkney Islands	49
Perth & Kinross	117
Renfrewshire	309
Scottish Borders	103
Shetland Islands	98
South Ayrshire	314
South Lanarkshire	844
Stirling	309
West Dunbartonshire	341
West Lothian	582
Cairngorms National Park ¹	52
> Aberdeenshire HMA	5
> Highland HMA	45
> Moray HMA	1
Loch Lomond and the Trossachs National Park ¹	48
> Argyll & Bute HMA	5
> Stirling HMA	32
> West Dunbartonshire HMA	11

Sources:

> Homelessness figures - Scottish Government Homelessness Statistics (2020)

> Overcrowded and Concealed Households - Scottish Household Survey (2016-18) and Scotland's Census (2011)

Notes

1. Takes the proportion of occupied dwelling in each park HMA sub-area at 2018 and applies those proportions to the local authority total for each area.

STEP 3 - RAW DATA - Flexibility allowance

The flexibility allowance is to provide a contingency or over programming of land to allow for changes in sites coming forward over the 10 year time frame of the Local Development Plan. It gets added to newly-forming households and existing housing need. The calculation does this automatically at Step 13.

INPUT ALTERNATIVE EXISTING NEED ESTIMATE

The default is 25% or 0.25 for urban authorities and 30% or 0.30 for rural authorities

Local Authorities and National Parks	Flexiblity Allowance	Urban or Rural Authorities
Aberdeen City	0.25	Urban
<i>Aberdeenshire</i>	<i>0.30</i>	<i>Rural</i>
<i>Angus</i>	<i>0.30</i>	<i>Rural</i>
<i>Argyll & Bute</i>	<i>0.30</i>	<i>Rual</i>
Clackmannanshire	0.25	Urban
<i>Dumfries & Galloway</i>	<i>0.30</i>	<i>Rural</i>
Dundee City	0.25	Urban
<i>East Ayrshire</i>	<i>0.30</i>	<i>Rural</i>
East Dunbartonshire	0.25	Urban
East Lothian	0.25	Urban
East Renfrewshire	0.25	Urban
Edinburgh, City of	0.25	Urban
<i>Eilean Siar</i>	<i>0.30</i>	<i>Rural</i>
Falkirk	0.25	Urban
Fife	0.25	Urban
Glasgow City	0.25	Urban

<i>Highland</i>	<i>0.30</i>	<i>Rural</i>
Inverclyde	0.25	Urban
Midlothian	0.25	Urban
<i>Moray</i>	<i>0.30</i>	<i>Rural</i>
North Ayrshire	0.25	Urban
North Lanarkshire	0.25	Urban
<i>Orkney Islands</i>	<i>0.30</i>	<i>Rural</i>
<i>Perth & Kinross</i>	<i>0.30</i>	<i>Rural</i>
Renfrewshire	0.25	Urban
<i>Scottish Borders</i>	<i>0.30</i>	<i>Rural</i>
<i>Shetland Islands</i>	<i>0.30</i>	<i>Rural</i>
<i>South Ayrshire</i>	<i>0.30</i>	<i>Rural</i>
South Lanarkshire	0.25	Urban
<i>Stirling</i>	<i>0.30</i>	<i>Rural</i>
West Dunbartonshire	0.25	Urban
West Lothian	0.25	Urban
<i>Cairngorms National Park</i>	<i>0.30</i>	<i>Rural</i>
<i>Loch Lomond and the Trossachs National Park</i>	<i>0.30</i>	<i>Rural</i>

Notes:

> The urban-rural classification is based on the Randall Classification (re-based in 2017).