

APPENDIX A

Mathematical models for the assessment of the numerical adequacy of development plan housing allowances

Common assumptions (best case scenario = existing effective land supply and all allocations effective and delivering housing at target rate)									
Plan periods	2020 - 2030	2031 - 2035	2036 - 2040						
Plan periods in years	11	5	5						
Strategic Housing Targets (2000 per annum)	22000	10000	10000						
Flexibility (10% = 200 per annum)	2200	1000	1000						
Strategic Requirements including flexibility	24200	11000	11000						
Strategic Requirements (annualised)	2200	1100	1100						
Minimum 5 year effective land supply to be maintained at all times	11000	11000	11000						
Supply attrition rate (annual completions) as per target	2000	2000	2000						
Existing five year effective supply on 1.1.2020 plus programmed units	7500	4500	4500						
Percentage of new allocations constrained at end of each plan period	0.00%	0.00%	0.00%						

Methodology A

Deduct the existing five year effective land supply and post five year programmed effective units from the strategic requirements to determine the allowances

Plan Period	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Totals
Strategic Requirements including flexibility	24200											44000
Existing 5 year effective supply at 1.1.2020 plus programmed units	7500											15000
Allowances	16700					16700		6500		8000		29000
Steady state out-turn												
Effective supply + programmed units	7500											Effective ¹ 01.01.2031
Allowances	16700											
Total supply - start of period 1	24200											
Attrition (annual completions)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	
Residual supply		22200	20200	18200	16200	14200	12200	10200	8200	6200	4200	2200
Minimum 5 year effective requirement	11000	11000	11000	11000	11000	11000	11000	11000	11000	11000	11000	
Supply (years equivalent)	11	10.1	9.2	8.3	7.4	6.5	5.5	4.6	3.7	2.8	1.9	
Deficit in maintaining 5 year effective supply								800	2800	4800	6800	8800

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Methodology B

Ensure allowances are adequate to maintain the minimum five year effective land supply at all times

Plan Period	2020 - 2030	2031 - 2035	2036 - 2040	Totals
Gross Strategic Target including flexibility of 10%	24200	11000	11000	44000
Annualised Gross Strategic Target including flexibility of 10%	2200	2200	2200	
Total requirement to maintain minimum 5 year effective supply to 31.12.30	33000	22000	22000	77000
Existing 5 year effective supply at 1.1.2020 plus programmed units	7500	4500	3000	15000
Allowances required to maintain minimum 5 year effective supply at all times	25500	6500	8000	400

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Effective ¹ 01.01.2031
Effective supply + programmed units	7500											
Allowances	25500											
Total supply - start of period 1	33000											
Attrition (annual completions)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	
Residual supply		31000	29000	27000	25000	23000	21000	19000	17000	15000	13000	11000
Minimum 5 year effective requirement	11000	11000	11000	11000	11000	11000	11000	11000	11000	11000	11000	
Supply (years equivalent)	15	14.1	13.2	12.3	11.4	10.5	9.5	8.6	7.7	6.8	5.9	5

Notes

- The best case scenario is never likely to be achieved in reality. Components in the existing effective supply can move into the constrained supply, the annual rate of supply attrition can exceed the strategic target and new allocations to satisfy the allowances may not become effective during the plan period. Large allocations with lower than anticipated annual completion rates can have a significant adverse impact on the performance of the development plan in delivering the strategic target. The flexibility percentage is insufficient to resolve these additional negative pressures on the effective land supply or, in the case of Methodology A, to maintain the minimum five year effective land supply to the end of the plan period.