Woodcote

Neighbourhood Plan 2013 - 2035

Housing Need Assessment

July 2021

1   Introduction

Local Plan Requirement

The previous South Oxfordshire Local Plan (the Core Strategy) and the emerging Local Plan both use a settlement hierarchy that has 13 'larger' villages. Woodcote is one of these larger villages and was allocated 73 new homes in the Core Strategy.

The Local Plan 2035 proposes that each of the larger villages grow proportionally by around 15% from the 2011 base data, plus any housing allocated to that village through the core Strategy. For Woodcote:

- the Core Strategy + 15% growth   requires 225 new homes;
- completions and commitments   totalled 110 new homes; thus
- the outstanding requirement for NDP   becomes 115 new homes

NPPF Considerations

Woodcote is located on the escarpment at the south-western end of the Chilterns Area of Outstanding Natural Beauty (the AONB). The AONB flows through and encloses the parish. The NPPF requires plan makers to apply a presumption in favour of sustainable development so that strategic policies should, as a minimum, provide for objectively assessed needs for housing, except where a protected area such as an AONB provides a strong reason for restricting the overall scale, type or distribution of development in the plan area. The NPPF further requires (paragraphs 174, 175, 176 and 177) that:

- planning policies should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes such as those in AONBs;
- that plans should distinguish between the hierarchy of international, national and locally designated sites and allocate land with the least environmental or amenity value;
- that great weight should be given to conserving and enhancing landscape and scenic beauty in Areas of Outstanding Natural Beauty'
- that planning permission in designated areas such as AONBs should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest.

An allocation of 225 new homes to a village of some 1000 homes in the AONB represents major development[1] and, as such, exceptional circumstances must be proven. To date the Local Planning Authority have not provided any evidence to support this allocation nor any evidence of:

- a national need for this development;
- any negative impact of refusing it; nor
- that the development cannot be delivered outside the designated area.

AONB Constraints

The Chilterns AONB surrounds and washes over the village of Woodcote. There are limited opportunities for new development within the village boundary, so all development inevitably results in an intrusion into greenfield space in the AONB. Paragraph 4.28 of the adopted Local Plan recognises that some villages are constrained by factors such as the AONB and requires evidence to be provided to justify a lower allocation. A Landscape and Visual Impact Assessment of all potential development sites showed that the constraints of the AONB mean that the target of 115 houses cannot be met without detriment to the AONB.

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[1] Ref paper "What constitutes major development in an AONB"

Woodcote Parish Council was concerned that provision of a lower number of houses might not meet the local need and, therefore, carried out an objective assessment of the housing need for the village. The purpose of the assessment is to ensure that the local need can be met and to assess the mix of house types and sizes to meet those local needs.

Locality Guidance

Locality provides support to neighbourhood planning groups on behalf of the Ministry for Housing Communities and Local Government (MHCLG) including detailed guidance on the preparation of Housing Needs Assessment for Neighbourhood Plans. Normally, where a Local Authority provides a figure for housing this would be adopted for the Neighbourhood Plan. If the figure is not accepted, it should be challenged through the Local Plan process. Woodcote Parish Council did challenge the simplistic arithmetical allocation which resulted in the addition of paragraph 4.28 which recognises the constraints experienced by villages in an AONB.

Where a Housing Needs Assessment is to be prepared, Locality offers a number of sources of data to be consulted. The SHMAA and Local Plan resulted in the figure of 115 houses which, as explained, Woodcote cannot accommodate. Locality suggests using the census data for 2011 as a starting point and the census data for 2001 to assess trends. As indicated in the guidance the census for 2001 may not be broken down into sufficient detail to assess the trends, so ONS forecasts are suggested as an alternate source.

The guidance suggests assessing the existing stock of housing and reviewing how well it meets current requirements. An all-village survey provided useful data on the current housing stock, occupation and utilisation of bedrooms, etc. The guidance also suggests assessing the demographic profile, the age structure and the changes between 2001 and 2011.

The guidance suggests that an assessment of the mix of occupation of houses, particularly considering the age profile is useful to assess the future needs. Oxfordshire County Council use a standard formula for the age profile and number of occupants for different sized houses and this was used in the Woodcote assessment to determine the impact of new housing and the mix of sizes needed to meet the requirements.

The guidance then goes on to discuss the forward forecasts of population growth in each age group. It proposes the use of MHCLG projections. In the Woodcote assessment ONS predictions of birth and death rates were applied to the 2011 data, together with an assessment of the impact of the new housing and house sales. The results showed the potential for greater growth than the MHCLG figures.

Locality gives guidance on how to assess the need for affordable housing. House prices are higher in Woodcote than the average for the district which makes it difficult for young people to get onto the property ladder. However, many of the young people may not qualify for inclusion on the social housing register (there aren't many local Woodcote people on the register), so there is a need for low-cost housing, e.g. small terraced and semi-detached houses rather than large detached houses.

The guidance suggests assessing the need for specialist housing for older people. The all-village survey revealed that there are a significant number of 4 or 5 bedroom houses under occupied by older people. At one of the consultations on the Neighbourhood Plan, the appetite for downsizing was assessed and there was limited interest in downsizing as the older people wanted to retain spare bedrooms for children and grandchildren to visit. The assessment has, therefore, allowed for a limited mix of smaller houses for downsizing to release larger family homes.

Deliverability

The Woodcote Neighbourhood Plan (WNP) was made in 2014 and allocated sites for 76 houses. One site with 14 houses has been completed, planning permission has been obtained for 31 new houses and construction has started on two sites and a planning application has been submitted for 20 houses on another site, leaving only one of the remaining allocated sites outstanding. In addition, some 45 windfall developments have been completed or have received planning permission.

2   Issues and Constraints

The population of Woodcote has been falling since reaching a peak of 2700 in 2014 (see graph below), despite more houses having been built, largely because of under occupation of larger houses by elderly residents.
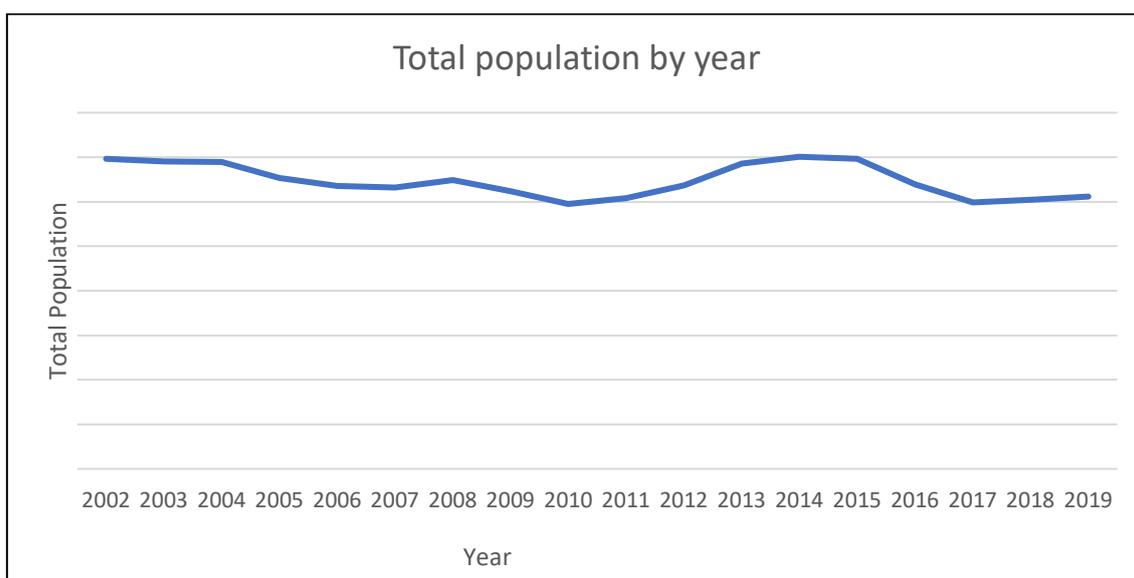
Woodcote has an ageing population with a substantial number (42%) of (often under occupied) four and five bedroom houses. House prices are high (the affordable housing ratio is 12.07 compared with the national average of 7.8) making it difficult for younger people to enjoy the benefits of home ownership. So, there is a demand for genuinely lower price housing but not necessarily affordable/social housing as many of those seeking houses may not qualify for affordable/social housing. There is a limited demand for downsizing in the private sector as evidenced by the responses to the 2017 consultation, and the number of smaller houses being purchased by younger families rather than older residents.

The age profile has implications for the health centre with a high and increasing demand on their services. The health centre (which is part of a joint practice with surgeries in Woodcote and Goring) relies on the ability to dispense prescriptions for financial viability.

Due to the rural nature of Woodcote and its surroundings it is classed as a "controlled locality" for the purposes of assessing the provision of pharmaceutical services, as defined in the "Regulations under the Health Act 2009: Market entry by means of Pharmaceutical Needs Assessment". As the current GP registered population within a 1.6km radius is below 2,750 it is also classed as a "reserved locality" within the "controlled locality" under the same regulations. This means that the ability of the GP practice to dispense is protected. If the village were to become urbanised by excessive growth it might lose the classification as a reserved locality. If the GP registered population exceeds 2,750 the classification as a reserved

locality would be lost and the ability of the practice to dispense would be threatened. Some people in the village may be registered with other GP practices in the area, so the actual population could be higher than 2,750 and still retain its status as a reserved locality. However, the GP practice suggested that the village is unlikely to be attractive to a commercial pharmacy provided the population remains below, say, 3,000.

The primary school currently has fewer pupils (180) than its capacity (210) and would benefit from more primary school age children in the village. The secondary school (Langtree Academy) currently takes pupils from outside its catchment area to make up the numbers – any increase in secondary school age children could be met by reducing the out of catchment intake.

The evidence for the need for additional housing across Oxfordshire was predicated on the anticipated level of economic growth, with the expectation of significant job creation in the Science Vale and Oxford City. Woodcote is remote from both of these (15-20 miles) and unlikely to generate significant requirements for housing of new employees in these areas.

Local employment within the village is mainly at the schools (including the Oratory school), retail outlets and a limited number of small businesses (mainly car repairs). The evidence from an all-village survey indicates that 35% of residents are retired, 10% are home working, 11% work in Woodcote and the remainder (44%) commute to work, typically in Reading or London using the rail services from Reading or Goring. The heads of all 3 schools were interviewed, and most of the school teaching staff in Woodcote Primary and Langtree academy commute to Woodcote. The Oratory is a boarding school and provides accommodation for 63 staff.

There is, therefore, limited demand for employment within the village for local residents, although the updated WNP will allocate more sites for small businesses.

There are a number of societies, clubs and sports activities in the village that depend on a range of ages of the population.

3   Data sources

To carry out this assessment several sources of data were used:
- Population projections supplied by the Ministry for Housing and Local Government (MHCLG).
- Population projections up to 2017 from the Office of National Statistics (ONS).
- Forecast birth and death rates from ONS.
- Census data for 2001 and 2011.
- Oxfordshire County Council (OCC) estimates for house occupancy (adults and children).
- An all-village survey carried out in January 2017.
- Public consultations in 2017, 2018 and 2019.
- Discussions with the schools and health centre.
- Historical data on windfall developments 2017-2019.
- Details of house sales (from estate agents) 2017-2019.
- Electoral rolls for 2013-2019.
- Regulations under the Health Act 2009: Market entry by means of Pharmaceutical Needs Assessment.

4   Objectives

A key goal of the Woodcote Neighbourhood Plan is to maintain the vitality of the village by:
- redressing the age imbalance by encouraging more young families with school age children to move into the village;
- providing new housing to meet local community needs;
- providing a mix of housing types including:
  - some smaller homes for elderly villagers wishing to downsize; and
  - new homes for young families

5   Methodology

To assess the housing need a spreadsheet model was created to analyse the impact of additional housing on the population and age profile. To provide a full picture the analysis needs to consider:
- the remaining houses allocated in the original WNP that have not yet been built
- windfall developments
- house sales (many sales result in families replacing older occupants)
- additional housing allocations in the updated WNP

The analysis process is shown as a flow chart in appendix A and described in detail in Appendix B. The starting point was the ONS population data for 2017, broken down by age. The analysis applied the effect of ageing, birth and death rates to the base data. OCC data for house occupancy was used to assess the effect of additional housing built and house sales since 2017 to produce a forecast population for 2019. The results were compared with electoral roll data to validate the accuracy of the analysis. The electoral roll does not include children and other non-voters so there isn't a direct correlation, but the results were compared with the data for previous years to test the accuracy of the assessment.

The analysis was then rolled forward to 2025. The impact of the remaining WNP housing allocations and estimated forecasts for windfalls and house sales was analysed to provide a base for assessing the impact of additional housing allocations. Finally, the impact of varying numbers of additional houses were added to test the effect on the total population, population of school age children and the age profile. It was assumed that all the new houses would be completed by 2025, although the updated WNP runs to 2035. It is likely that the WNP will be revised again after 2025.

6   Results of Assessment

MHCLG projections for South Oxfordshire suggest a 9% increase in households and a 5% increase in population.

The remaining house allocations from the original WNP, windfall developments and house sales produce a result that goes a long way toward addressing the objectives set out in Section 4. The population increases by 6% to around the 2014 level of 2700 with an 19% increase in primary school age children and 8% increase in the number of houses. So, this is already comparable with the MHCLG projections for South Oxfordshire, suggesting that a further 1% increase in households (about ten houses) would meet the need indicated by the MHCLG projections. However, this would not address all of the issues identified.
The model was then tested with varying numbers of additional houses Table I, below.

	Houses	0-4	5-10	11-19	20-64	65+	Tot child	Tot adult	Total	%age increase in population since 2019
		Age Range								
2014		121	168	479	1384	549	768	2053	2701	
2019		135	168	374	1384	551	584	2029	2612	
	0	158	200	305	1502	614	587	2192	2779	6%
	40	167	210	318	1572	624	616	2276	2891	11%
	50	170	212	322	1588	624	624	2293	2916	12%
	60	172	214	325	1609	628	630	2318	2948	13%
	80	177	219	332	1642	633	645	2358	3003	15%
	100	181	224	338	1678	637	659	2400	3058	17%
	130	188	231	348	1732	643	680	2462	3142	20%

Table I: Population Impact of New Homes

		Houses	0-4	5-10	11-19	20-64	65+
			Age Range				
2014			4%	6%	18%	51%	20%
2019			5%	6%	14%	53%	21%
		0	6%	7%	11%	54%	22%
		40	6%	7%	11%	54%	22%
		50	6%	7%	11%	54%	21%
		60	6%	7%	11%	55%	21%
		80	6%	7%	11%	55%	21%
		100	6%	7%	11%	55%	21%
		130	6%	7%	11%	55%	20%

Table II: Population Share by Age Range

Tables I and II show that adding 50-60 houses gives an increase in primary school age children to 212-214 with a total population of 2916-2948, which meets the capacity of the primary school. Increasing the number of houses above 60 could result in the primary school not having enough capacity and raise the total population to a level which could attract a pharmacy, jeopardising the viability of the health centre.

Adding 50-60 houses increases the population by 12-13% and the number of houses by 13-14%, which significantly exceeds the MHCLG projections of 5% and 9% respectively. Unfortunately, the age profile (graph below) is not affected significantly, regardless of the number of houses added.
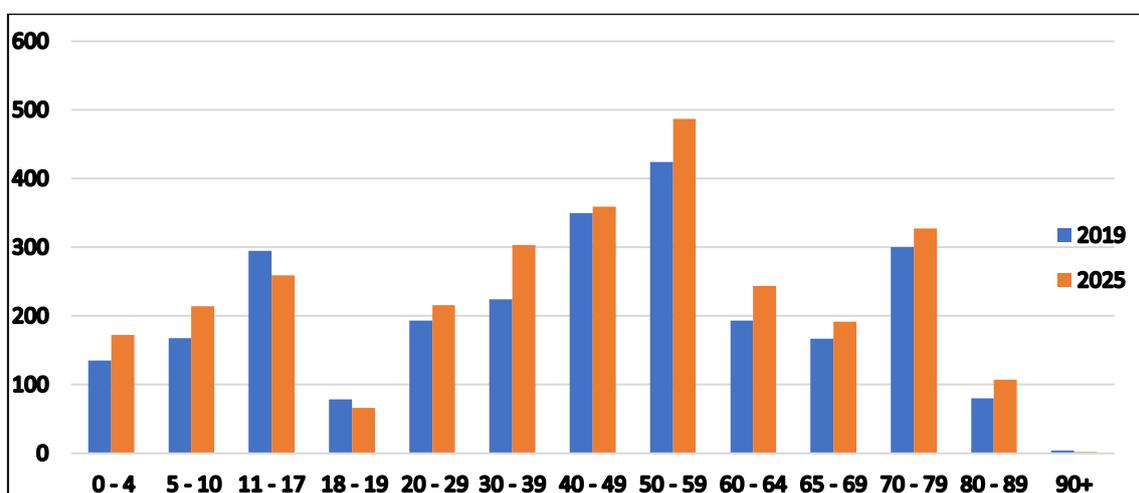
The population figures include the pupils at the Oratory boarding school, where the intake has been reducing, so this accounts for most of the reduction in the 11-19 year age group. The Oratory is due to change to a co-educational school in 2020 which should increase the intake, but this is outside the scope of the model. The effect of varying the mix of house sizes was also tested, in this case keeping to a total of 60 houses.

New Home Size				New Population by Age Range							
1 bed	2 bed	3 bed	4+ bed	0-4	5-10	11-19	20-64	65+	Tot child	Tot adult	Total
6	15	33	6	172	214	324	1605	628	629	2314	2943
5	10	25	20	175	216	328	1616	626	637	2324	2961
8	10	22	20	174	216	327	1612	626	635	2320	2955
6	24	24	6	171	213	321	1605	628	625	2313	2938
6	15	27	12	172	215	325	1609	628	631	2318	2949
6	9	24	21	175	216	328	1616	626	637	2324	2961
12	15	21	12	171	213	323	1604	626	626	2311	2937
20	20	10	10	168	210	318	1600	624	617	2304	2920
15	15	15	15	171	212	321	1604	626	624	2310	2934
6	15	30	9	172	214	325	1609	628	630	2318	2948

Table III: Impact of New Home Size on Population Age Ranges

New Home Size				New Population by Age Range						
1 bed	2 bed	3 bed	4+ bed	0-4	5-10	11-19	20-64	65+	Tot child	Tot adult
10%	25%	55%	10%	5.8%	7.3%	11.0%	54.5%	21.3%	21.4%	78.6%
8%	17%	42%	33%	5.9%	7.3%	11.1%	54.6%	21.1%	21.5%	78.5%
13%	17%	37%	33%	5.9%	7.3%	11.1%	54.6%	21.2%	21.5%	78.5%
10%	40%	40%	10%	5.8%	7.2%	10.9%	54.6%	21.4%	21.3%	78.7%
10%	25%	45%	20%	5.8%	7.3%	11.0%	54.6%	21.3%	21.4%	78.6%
10%	15%	40%	35%	5.9%	7.3%	11.1%	54.6%	21.1%	21.5%	78.5%
20%	25%	35%	20%	5.8%	7.3%	11.0%	54.6%	21.3%	21.3%	78.7%
33%	33%	17%	17%	5.8%	7.2%	10.9%	54.8%	21.4%	21.1%	78.9%
25%	25%	25%	25%	5.8%	7.2%	10.9%	54.7%	21.3%	21.3%	78.7%
10%	25%	50%	15%	5.8%	7.3%	11.0%	54.6%	21.3%	21.4%	78.6%

Table IV: Impact of New Homes Size on Share of Population by Age Range

The rows highlighted in pink are based on the house size mix in the original WNP. The results suggest that a mix with higher percentages of 3 and 4-5 bed houses gives the best results in increasing the number of primary school age children. However, as the village already has a high percentage of 4-5 bed houses – many under occupied by elderly residents (many of which are likely to become available during the Plan period due to mortality rates) – the percentage of 4-5 bed homes should be lowered in favour of smaller (more affordable) homes.

7   Conclusions

i.   Allocating sites for 50-60 houses produces additional school age children whilst keeping the population below 3000.
ii.   The main requirement is for 3 bed and some 4 bed houses for families.
iii. There is a limited requirement for smaller houses or flats.
iv. There is little impact on the age profile regardless of the number of houses or size mix.

8   Recommendation

Update the neighbourhood plan to allocate sites for 50-60 houses with a mix of 10% 1 bed, 25% 2 bed, 50% 3 bed and 15% 4+ bed houses.

Appendix A Flow chart for modelling process.
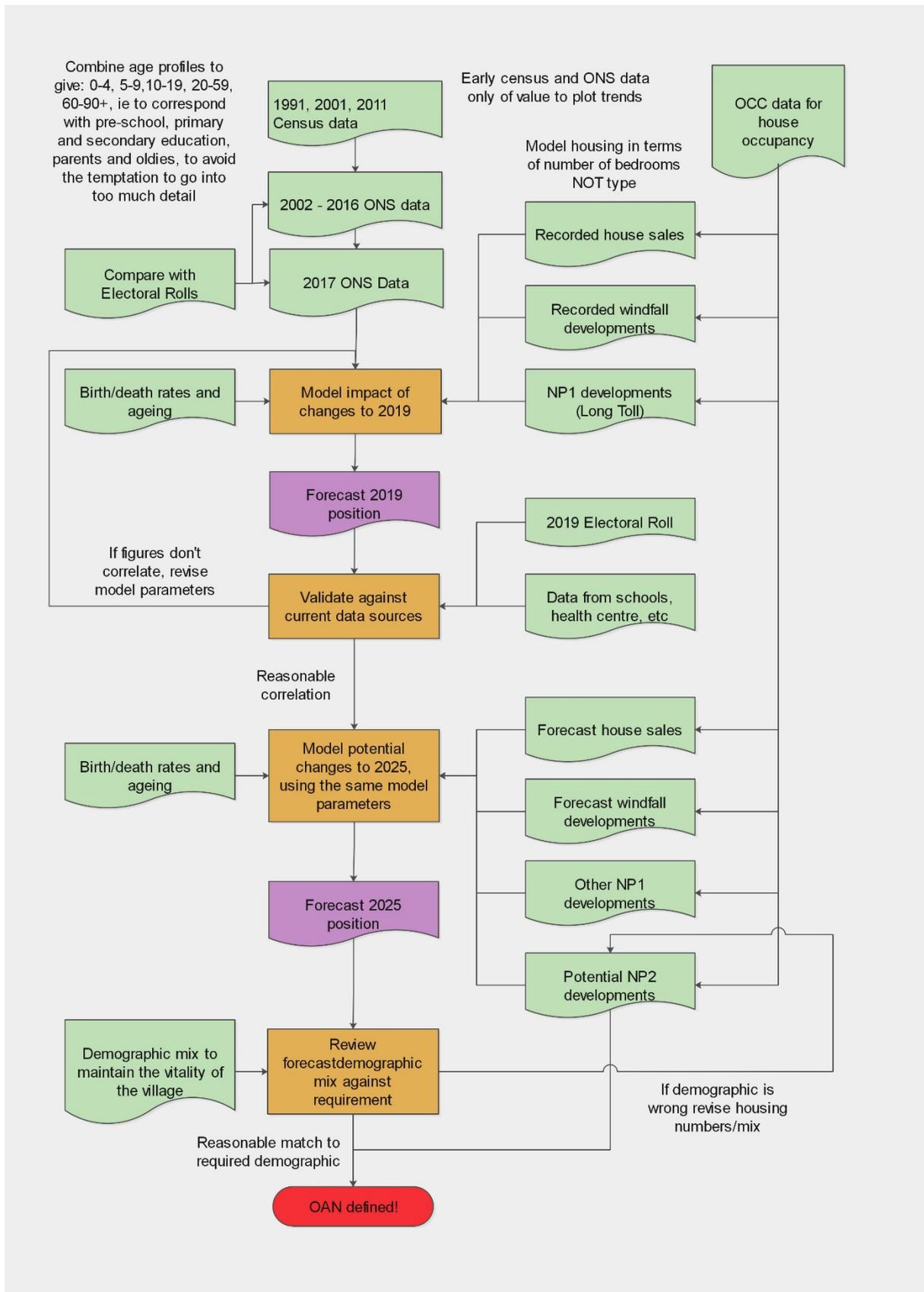
Appendix B The assessment process.

B.1. Source data

As indicated in the main body of this document one of the primary sources of data was the population forecasts supplied by the Office of National Statistics (ONS) for Woodcote. The data is broken down by age and sex. For the purposes of the assessment the male and female figures were added together. A sample of the source data for ages 0-12 is shown in Table B.i.

Year	Age	0	1	2	3	4	5	6	7	8	9	10	11	12
2002		23	20	24	40	30	29	24	26	31	38	30	36	41
2003		27	25	19	22	41	31	25	23	29	28	41	33	42
2004		24	25	26	20	21	37	30	30	22	29	26	48	47
2005		27	20	28	24	23	21	34	28	29	26	32	27	50
2006		22	29	19	21	25	27	27	34	28	29	28	32	33
2007		18	26	27	21	21	30	26	28	35	30	29	31	35
2008		19	19	22	30	17	27	26	29	28	34	28	32	49
2009		19	21	19	22	33	17	27	28	28	30	32	36	42
2010		22	17	22	18	23	32	16	28	25	26	34	34	46
2011		20	24	21	24	20	25	35	18	27	28	30	35	45
2012		21	18	26	21	23	22	26	32	23	24	30	33	45
2013		20	25	23	27	25	24	25	29	35	25	25	32	44
2014		12	19	34	25	31	25	27	23	30	34	29	26	41
2015		38	14	21	37	24	28	27	27	23	29	36	30	35
2016		16	38	15	23	39	27	30	29	31	25	32	38	32
2017		21	23	31	18	20	33	23	32	30	31	30	36	43

Table B.i sample data from ONS

To present the results, the data was aggregated into age ranges: 0-4, 5-10, 11-19, 20-59 and 60+, giving the results shown in table B.ii.

	0-4	5-10	11-19	20-59	60+	Tot child	Tot adult	Total
2002	137	178	549	1480	353	727	1970	2697
2003	134	177	533	1487	360	711	1980	2691
2004	116	174	559	1496	344	709	1980	2689
2005	122	170	541	1468	353	698	1956	2654
2006	116	173	502	1470	375	666	1971	2636
2007	113	178	491	1483	367	659	1973	2632
2008	107	172	508	1480	382	660	1989	2649
2009	114	162	495	1444	408	647	1976	2623
2010	102	161	456	1451	425	605	1990	2595
2011	109	163	466	1414	456	622	1987	2608
2012	109	157	483	1386	502	628	2009	2637
2013	120	163	491	1386	526	651	2035	2686
2014	121	168	479	1384	549	648	2053	2701
2015	134	170	483	1356	554	666	2031	2697
2016	131	174	413	1356	565	615	2024	2639
2017	113	179	387	1350	569	582	2016	2598

Table B.ii aggregated ONS population data

B.2. Assumptions made in the assessment

To model the effect of ageing of the population, the source ONS data by year was rolled forward year by year, moving the age figures up one year, ie:

Population (age x, year y) = Population (age x-1, year y-1)

The effect of birth and death rates was modelled using ONS average data for Woodcote for births (26 per annum) and death rates as shown in table B.iii.

Age	50	51	52	53	54	55	56	57	58	59
Deaths/1000	3.1	3.1	3.1	3.1	3.1	4.7	4.7	4.7	4.7	4.7
Age	60	61	62	63	64	65	66	67	68	69
Deaths/1000	7.6	7.6	7.6	7.6	7.6	12	12	12	12	12
Age	70	71	72	73	74	75	76	77	78	79
Deaths/1000	19	19	19	19	19	34	34	34	34	34
Age	80	81	82	83	84	85	86	87	88	89
Deaths/1000	60	60	60	60	60	111	111	111	111	111

Table B.iii Death rates per 1,000 population by age (ONS data)

Two other attrition rates were also applied. An allowance was made for 18+ year olds leaving the village to attend university and not returning to the village, as in table B.iv. A further allowance was made for older people (80+) leaving the village to enter nursing homes, etc. outside the village, as in table B.v.

Age	18	19	20	21
No leaving per 1000	500	400	200	100

Table B.iv 18+ leaving for university and not returning to the village

Age	80	81	82	83	84	85	86	87	88	89	90
No leaving per 1000	50	50	100	150	150	200	250	300	300	350	500

Table B.v older people leaving to enter nursing homes, etc

When Oxfordshire County Council (OCC) assess the impact of major housing developments on the requirements for local services, such as schools, libraries, etc, they use a set of average occupancy figures for houses of varying sizes (table B.vi).

No of beds	Age	0-4	5-12	13-19	20-59	60+	Total children
1		0.03	0	0.02	1.23	0.15	0.05
2		0.15	0.2	0.046	1.46	0.29	0.396
3		0.26	0.39	0.358	1.79	0.32	1.008
4		0.42	0.51	0.391	2.27	0.17	1.321

Table B.vi Average occupancy rates for houses (OCC data)

The occupancy rates in table B.vi were used to assess the impact on the population of windfall developments and allocated housing in the Neighbourhood Plan.

House sales also result in changes in occupancy, often with older people vacating a house and a young family moving in. In some cases, it takes two house sales to achieve this effect, as a family may upsize within the village to the vacated house and a second, younger family move into their previous house. Table B.vii shows the occupancy figures used for assessing the impact of house sales. The figures are based on the OCC figures in table B.vi but have a negative value for the 60+ age range.

No of beds	Age	0-4	5-12	13-19	20-59	60+
1		0.03	0	0.02	1.23	0
2		0.15	0.2	0.046	1.46	-0.2
3		0.26	0.39	0.358	1.79	-0.3

		0.42	0.51	0.391	2.27	-0.4
4						

Table B.vii Occupancy changes for house sales

Only 50% of house sales were assumed to produce the occupancy changes in the table to allow for the multiple sales effect described above. A sensitivity analysis was done on the 50% assumption using a range of 30% to 70% and the effect on the total calculated population is shown in table B.viii, where it can be seen that it has a limited impact on the results.

Effective % of house sales	% impact on population
30%	-4.3%
40%	-1.9%
50%	0.0%
60%	0.5%
70%	2.6%

Table B.viii Sensitivity analysis on house sales effectiveness percentage

B.3.   Calculation of 2019 population

As the latest ONS data was only for 2017, the first step in the assessment was to roll forward the population data to 2019. In doing so account was taken of house sales (supplied by local estate agents) windfall developments (approved planning applications from the SODC database) and completions of allocated sites from the first Neighbourhood Plan (WNP1) – ie the Long Toll development of 14 houses.

The impact of house sales is shown in table B.ix, windfalls in table B.x and WNP1 completions in table B.xi.

No of beds	Qty	0-4	5-12	13-19	20-59	60+	Total
1	5	0.075	0	0.05	3.075	0	3.2
2	1	0.075	0.1	0.023	0.73	-0.1	0.828
3	10	1.3	1.95	1.79	8.95	-1.5	12.49
4	26	5.46	6.63	5.083	29.51	-5.2	41.483
Totals	42	6.91	8.68	6.946	42.265	-6.8	58.001

Table B.ix Impact of house sales 2017-2019

No of beds	Qty	0-4	5-12	13-19	20-59	60+	Total
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	3	0.78	1.17	1.074	5.37	0.96	9.354
4	3	1.26	1.53	1.173	6.81	0.51	11.283
Totals	6	2.04	2.7	2.247	12.18	1.47	20.637

Table B.x Impact of windfall development 2017-2019

No of beds	Qty	0-4	5-12	13-19	20-59	60+	Total
1	4	0.12	0	0.08	4.92	0.6	5.72
2	3	0.45	0.6	0.138	4.38	0.87	6.438
3	3	0.78	1.17	1.074	5.37	0.96	9.354
4	4	1.68	2.04	1.564	9.08	0.68	15.044
Totals	14	3.03	3.81	2.856	23.75	3.11	36.556

Table B.xi Impact of completion of WNP1 site on Long Toll

The ONS data was rolled forward with ageing, births, deaths, etc as described in the previous section and the effect of the house sales, windfalls, WNP1 added to give the results in table B.xii

2017 - 2019	No of houses	0-4	5-10	11-19	20-64	65+	Tot child	Tot adult	Total
Impact of house sales	42	7	7	9	43	-5	21	40	61
Impact of infill	6	2	2	3	12	0	6	13	19
Impact of NP1	14	3	3	4	25	3	9	29	38
Total impact of housing		12	11	15	80	-2	34	82	116
2019 forecast		135	168	374	1384	551	584	2029	2612

Table B.xii Forecast 2019 population

Note: the age ranges used in the summary were chosen to correspond to pre-school, primary school, secondary school and retirement ages, rather than the age ranges in the OCC average occupancy figures. When the impact of housing was applied to the ageing data, a number of assumptions were made:

- Redistribution from age ranges to individual ages was done on a pro rata basis, eg figures for the 0-4 age range were divided by five to give the individual 0-4 age figures.
- 25% of the young adults (in the 20-64 bracket) arising from new housing will be 20-29.
- 75% of the young adults (in the 20-64 bracket) arising from new housing will be 30-39.
- 33% of the senior adults (65+) arising from the new housing will be 65-69.
- 67% of the senior adults (65+) arising from the new housing will be 70-79.
- ie. the assumption is that the majority of new houses go to young families or early retirees.
- New housing occupiers in the 11-19 are split 75%/25% between 11-17 and 18-19.

To validate the accuracy of the assessment, the results were compared with the electoral roll. There won't be a direct correlation because the electoral roll only contains people who are over 18 who have registered to vote and, therefore omits any who are not eligible to vote. To validate the results the electoral roll was compared with previous years to evaluate the discrepancy between the population and the electoral roll numbers, as shown in table B.xiii.

Year	Total 18+ Population	Electoral Roll	Discrepancy
2013	1971	1912	59
2014	2001	1995	6
2015	2012	2007	5
2016	1990	1962	28
2017	1986	1965	21
2019	2014	1971	43

Table B.xiii Comparison with electoral roll

As can be seen from table B.xiii, the discrepancy between the calculated 18+ population and the electoral roll for 2019 is within the range of discrepancies for previous years, so the assessment method can be assumed to be reasonably accurate in forecasting the population impact of new housing and house sales.

B.4. Forecast impact of future development

The ageing, births and deaths was rolled forward to 2025 (assuming most of the developments will have been completed by 2025), as described earlier. The impact of future house sales, windfalls, further WNP1 development was added to provide a base forecast before adding in varying numbers of WNP2 developments to assess the need for more housing.

House sales were assumed to continue at the same rate, with the impact shown in table B.xix.

No of beds	Qty	0-4	5-12	13-19	20-59	60+	Total
1	15	0.23	0.00	0.15	9.23	0.00	9.60
2	3	0.23	0.30	0.07	2.19	-0.30	2.48
3	30	3.90	5.85	5.37	26.85	-4.50	37.47
4	78	16.38	19.89	15.25	88.53	-15.60	124.45
Totals	126	20.73	26.04	20.84	126.80	-20.40	174.00

Table B.xix Impact of forecast house sales 2019-2025

Windfall developments in recent years have generally occurred at a rate of 4.8 per year, so a conservative figure of 4 per year was used with the impact shown in table B.xx.

No of beds	Qty	0-4	5-12	13-19	20+	60+	Total
1	0	0.00	0.00	0.00	0.00	0.00	0.00
2	0	0.00	0.00	0.00	0.00	0.00	0.00
3	12	3.12	4.68	4.30	21.48	3.84	37.42
4	12	5.04	6.12	4.69	27.24	2.04	45.13
Totals	24	8.16	10.80	8.99	48.72	5.88	82.55

Table B.xx Impact of forecast windfalls

Of the remaining WNP1 allocated sites, three (with a total of 54 houses) are expected to be completed in the near future (assumed completion by 2021). The final allocated site (with 9 houses) is not expected to be completed until the end of the WNP1 period, so has been excluded from the assessment. The impacts of the WNP1 allocations are shown in tables B.xx1 and B. xxii.

No of beds	Qty	0-4	5-12	13-19	20+	60+	Total
1	4	0.12	0.00	0.08	4.92	0.60	5.72
2	14	2.10	2.80	0.64	20.44	4.06	30.04
3	13	3.38	5.07	4.65	23.27	4.16	40.53
4	3	1.26	1.53	1.17	6.81	0.51	11.28
Totals	34	6.86	9.40	6.55	55.44	9.33	87.58

Table B.xxi Impact of combined WNP1 sites – Garden Centre and Chiltern Rise

No of beds	Qty	0-4	5-12	13-19	20+	60+	Total
1	6	0.18	0.00	0.12	7.38	0.90	8.58
2	7	1.05	1.40	0.32	10.22	2.03	15.02
3	6	1.56	2.34	2.15	10.74	1.92	18.71
4	1	0.42	0.51	0.39	2.27	0.17	3.76
Totals	20	3.21	4.25	2.98	30.61	5.02	46.07

Table B.xxii Impact of WNP1 site – Old Reservoir

The impact of the forecast house sales, windfalls and WNP1 allocations was added into the data to give the results shown in table B.xxiii.

2019 - 2025	No of houses	0-4	5-10	11-19	20-64	65+	Tot child	Tot adult	Total
Impact of house sales	126	21	20	27	125	-18	61	114	175
Impact of infill	24	8	8	12	49	5	25	57	82
Impact of WNP1	54	10	10	13	90	12	30	105	135
Total impact of housing		39	37	52	260	0	115	273	388
2025 F/C without WNP2		158	200	305	1502	614	587	2192	2779

Table B.xxiii Forecast population excluding any WNP2 allocations

Finally, various numbers of housing allocations in WNP2 were tested with the results shown in tables I and II in section 6 of the main body of this report. The effect of varying the mix of house sizes was also tested with the results shown in tables III and IV in the same section