

the north of Denmead, including the area around Bittles Farm to the northwest and Denmead Mill to the north east. The Chalk dips to the south and underlies the Reading Formation at depth beneath Denmead.

The London Clay Formation overlies the Reading Formation in the southern parts of the Denmead Parish area, from Hipley in the south west to Furzeley Corner and Closewood in the south east. The London Clay Formation comprises silty clay and sand, including the Bognor Sand Member.

British Geological Survey data show the presence of significant Head deposits in the Denmead area, largely within tributary valleys of the River Wallington. These deposits comprise sandy silty clay, which is locally gravelly.

Hydrogeology

The Chalk is classified as a principal aquifer by the Environment Agency, and the Reading Formation is classified as a Secondary A aquifer. These formations are deemed to allow significant storage and movement of groundwater.

The London Clay Formation is classified as unproductive strata and is not expected to support significant movement of groundwater.

The Environment Agency classifies the superficial Head deposits as a Secondary aquifer. Where these are of substantial thickness in the Denmead area, they may store and allow movement of groundwater.

Groundwater Flooding Susceptibility

The susceptibility to groundwater flooding within the Denmead area is available as a data set from the British Geological Survey (Map N5.2).

The data suggests there is a very low susceptibility to groundwater flooding from the Chalk aquifer (dark green colour Map N5.2), except for along the outcrop boundary with the Reading Formation near Bittles Farm in the north west and Forest Gate in the north; these coincide with tributary valleys to the River Wallington (topographic lows) and have a very high susceptibility to groundwater flooding (orange and red colours on Map N5.2).

The other areas with a high susceptibility to groundwater flooding are associated with the British Geological Survey mapped Head deposits. These include the areas of Hipley in the west, and the south west part of the Denmead settlement (orange and red colours on Map N5.2).

The Reading Formation and London Clay Formation have not been allocated a groundwater flooding susceptibility category (white / grey areas on Map N5.2). This is because the British Geological Survey does not perceive these to be a source of groundwater flooding in the Denmead area.

The British Geological Survey data set only represents a high level assessment. However, in summary, the areas that are most likely to be at low risk from groundwater flooding are those with a dark green or white / grey colour on Map N5.2 (page 19).

Opportunities

There is a low risk of groundwater flooding in north east and east of Denmead village (including a fraction of Denmead gap).

These areas represent potential sites for new open space for recreational purposes (e.g. a football pitch) as it is shown in the Map N5.2 (see dark green and white areas). It should be noted that any specific site considered for development will require a detailed local assessment.

Challenges

Local geological and hydrogeological conditions should be considered in the promotion of sites in Denmead. The influence of local geology on flooding should be understood and where considered unacceptable, managed to ensure safety to existing development and new property.

Further studies:

Prior to proceeding with the development of a site, a local assessment of the potential for groundwater flooding should be completed; this would include (i) analysis of existing British Geological Survey , Environment Agency and water company borehole and water level records and (ii) further ground investigation specific to the proposed development.

Prior to proceeding with allocation of development sites an assessment of the potential to discharge surface water to ground should be made and used to inform surface water management proposals at the sites. This in turn should inform the development density of the site.

Each site will require consideration as / if it comes forward for development. This consideration may identify the need for a full flood risk assessment.

Source:

Environmental Agency
British Geological Survey

Summary

- The Parish provides a high value environment which offers a wide variety of ecosystem services and open space opportunities both inside and outside the village envelope of Denmead and Anthill Common for local residents, children and local workers.
- Neighbourhood planning may provide further opportunities to improve countryside access by increasing the local rights of way and permissive pathways network.
- The extent to which the natural environment extends its presence into the village itself and contributes to high quality green infrastructure and public realm (i.e. streetscape) is currently limited. However, a neighbourhood plan can address this in terms of public realms schemes.
- The use of existing open space for improved sports, recreation and play facilities and the identification of new open space areas has been identified as a priority in the local plan and the Oikos analysis shows more clearly which spaces might be focused on and which areas are most in need of improved access.
- The potential for more and improved rights of way to provide increased access to the Denmead Gap and also those places with a history of public access needs to be considered (e.g. Harts Copse to Rookwood View/Cemetery; National trail along the Ashling Park Road).
- The most suitable development sites from a flood and groundwater perspective appear to be to the north east of the current village service centre.

Social Capital: Denmead and its people

Introduction

Social Capital covers the people resident or working in a place and their lives. This includes population demographics, heritage and culture, local networks and the health and wellbeing of local people. The indicators chosen provide insights into the current and likely future needs and aspirations of different age and social groups which in turn can inform planning for future community infrastructure including services.

Indicators Focused on

6 indicators were chosen to complement existing knowledge and information already in the hands of or easily accessed by Denmead's Neighbourhood Planning Steering Group:

- S1.1 Current demographic profile of the parish
- S2.1 Life expectancy
- S2.2 Rank of health deprivation and disability
- S2.3 Residents own rating of health
- S2.4 People with a life-limiting long term illness
- S2.5 People who provide unpaid care

S1.1 Current child, teenage and adult density and numbers

Introduction

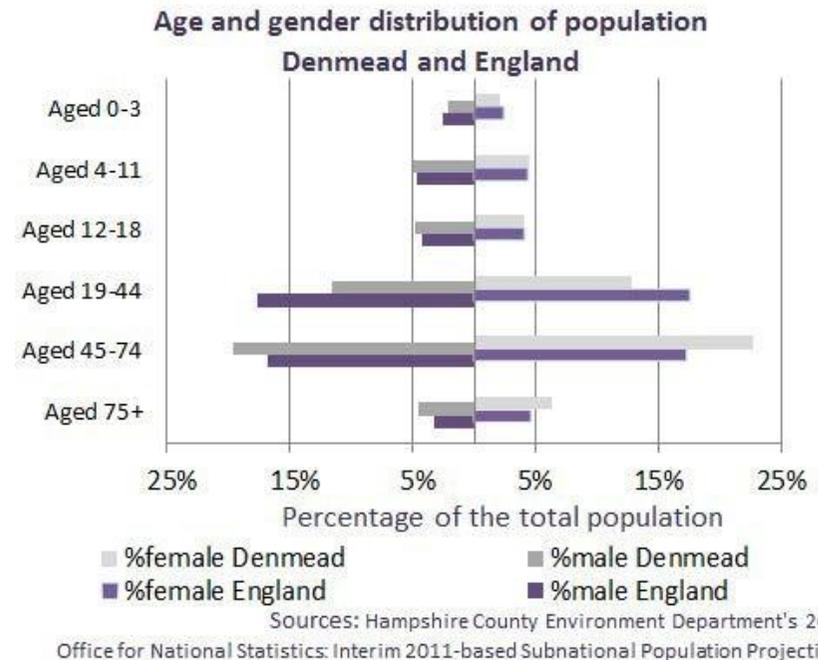
Table 10 and Graph 2 show that Denmead has a different demographic profile than average in England, across many age groups, with a significant bulge of older working age people, including the age group likely to be approaching retirement or recently retired (see the age bands 45-74 and 19-44). In contrast, Denmead has fewer younger working age people or younger adults pre-family formation. It has similar proportions to England in terms of younger children and teenagers.

The significant population bulge of the 45-74 age band indicates that Denmead has a high proportion of mid- and late-career adults as well as people who are approaching or already retired. The oldest age band (75 and over) and the youngest age band (0-3) are more consistent with England averages, suggesting movement into the area by couples with children and out of the area post-retirement. This population profile indicates services of most importance are transport to work, schools and leisure services for working age and early retired people.

Table 10 Denmead's population (Census 2011)

Age ranges	Male	Female	Total
Aged 75+	315	433	748
Aged 45-74	1359	1568	2927
Aged 19-44	807	882	1689
Aged 12-18	330	281	611
Aged 4-11	346	310	656
Aged 0-3	154	141	295
Total	3311	3615	6926

Graph 2 Age and gender distribution (Denmead's population)



Opportunities

The sizeable working age population relative to young children and very elderly means Denmead currently faces a favourable situation with regards to dependency.

Challenges

The under-representation of younger ,working age population in Denmead, as compared to the national population, suggests a need

to identify and address what makes it unattractive or hard for this group to choose to live in Denmead. Housing affordability (both of market housing and social/affordable housing) is likely to be important. Addressing these barriers for younger working age people should be prioritised if Denmead wishes to retain a balance of working age people and post-retirement people going into the future.

In the future, there may be increased demand for services for older people, though this depends on whether people choose to remain in the area or move following retirement. The sizeable proportion of working age adults suggests that a challenge may be to ensure that Denmead offers social and economic facilities that respond to the needs of a relatively high-earning working age segment.

Risks

Denmead needs to accommodate a reasonable balance between planning for three different groups in order to avoid a shifts in the existing population profile that may not be desired:

- Younger and lower income groups seeking more affordable housing, either to start a family or live near family.
- A more prosperous working age group, some of whom have high disposable income.
- Housing for older people, who may wish to downsize or live in a more supportive environment (e.g. retirement complex or residential homes).

Sources:

Office for National Statistics

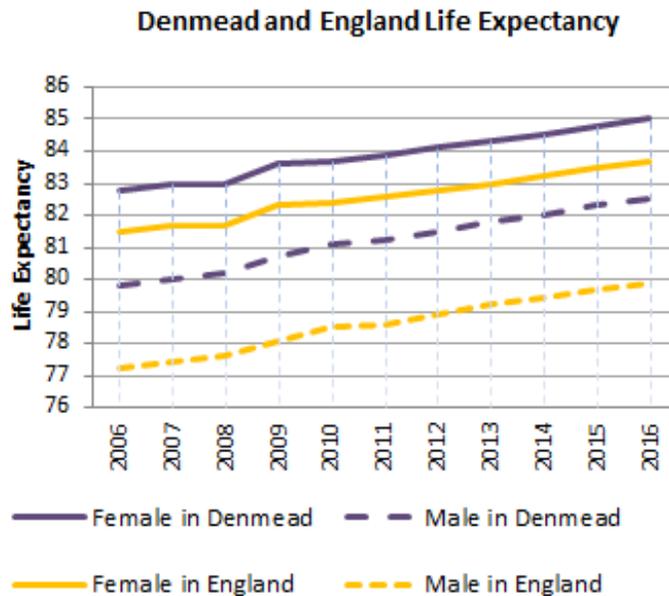
Further studies:

Further breakdown of the age band 45-75 (perhaps at 65 as the 'classic' retirement age) would be informative in terms of understanding the balance of working age and retired/reduced economic activity.

S2.1 Life expectancy

Female and male life expectancy in Denmead are projected to rise in line with national trends (see following graph). Women's life expectancy in Denmead is generally a year above England average. Male life expectancy Denmead is significantly above national average, with male life expectancy projected to continue to rise, remaining almost 4 years higher than England-average life expectancy.

Graph 3 Denmead and England life expectancy



Opportunities

Denmead's residents enjoy above average life expectancy. Considering the population self-reports good health and generally does not experience health deprivation (see S2.2 indicator), this is favourable for quality of life of Denmead residents, including active healthy lives through working age into retirement and later life.

Longer life expectancy means an increasing ageing population, consistent with national trends. However the low dependency ratio and generally good health of residents means that this is likely to be easier to address than in more deprived areas.

Challenges

Future services and public realm will need to adapt to an ageing population.

Risks

Current risks are low and neighbourhood planning, on its own is unlikely to impact on the national trends with regard to growing life expectancy. The risk of doing nothing locally however could affect the quality of life amongst older people towards the second half of the plan period.

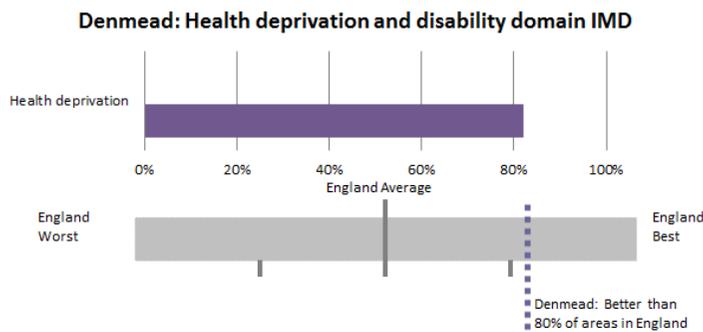
Sources

Office for National Statistics

S2.2 Rank of health deprivation and disability domain of IMD

In the latest Index of Multiple Deprivation (IMD) Denmead area was ranked. 30,174 out of 32,482 in England, where 1 was the most deprived and 32,482 the least. The IMD is broken down further by income; employment; education; health; barriers to housing and services; the living environment; and crime (England). Health deprivation includes premature deaths, impaired quality of life due to poor health and people with disabilities.

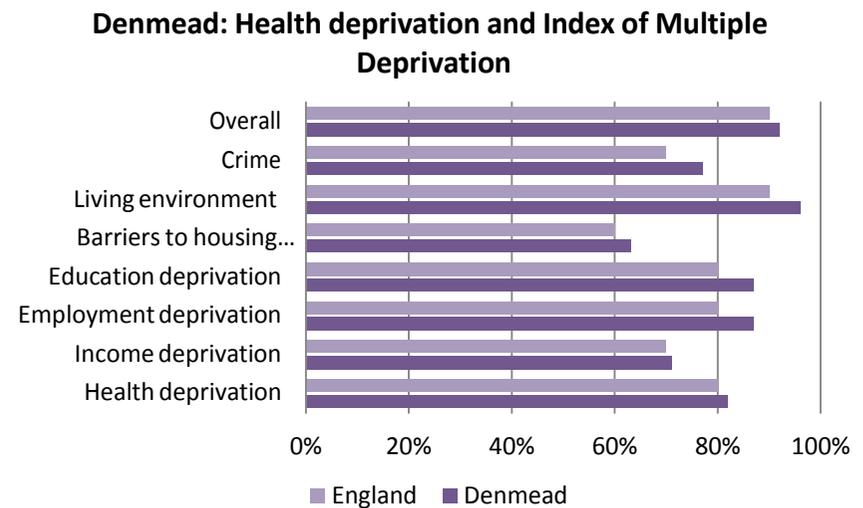
Graph 4 Health Deprivation



Denmead is amongst the 20% least deprived areas in the country in terms of health deprivation. Other deprivation indicators, which provide a snapshot view of 'determinants of health' show that Denmead also enjoys a high quality living environment, generally good employment and good educational attainment and status. These are important

influences on Denmead's healthy population. Of potential concern are income deprivation and barriers to housing services, where Denmead's population experiences more challenges. It is probably that low income and barriers to housing services are inter-related, with housing affordability a likely barrier to housing.

Graph 5 Index of Multiple Deprivation



Opportunities

The general lack of deprivation limits the challenges for maintaining and improving social capital in Denmead - particularly important are favourable education, employment and health indicators.

Challenges

Increased supply of housing and other activities to tackle barriers to housing are important issues to address. Cross-referencing to 'current population' this may also include the challenge of improving the affordability of Denmead for young couples wishing to remain in the area to start a family. Opportunities to provide better paid employment for those in lower paid occupations / sectors would also be important.

Risks

The risks for this are strongly tied to national economic factors and hence the scope for the Parish Council to influence this favourably may be limited. Relevant external factors include recession, limited credit, housing shortages and affordability challenges, as well as (for some residents) the consequences of changes to national housing policy and welfare payment reform.

Sources:

<http://www.uklocalarea.com/index.php?q=PO76LU>

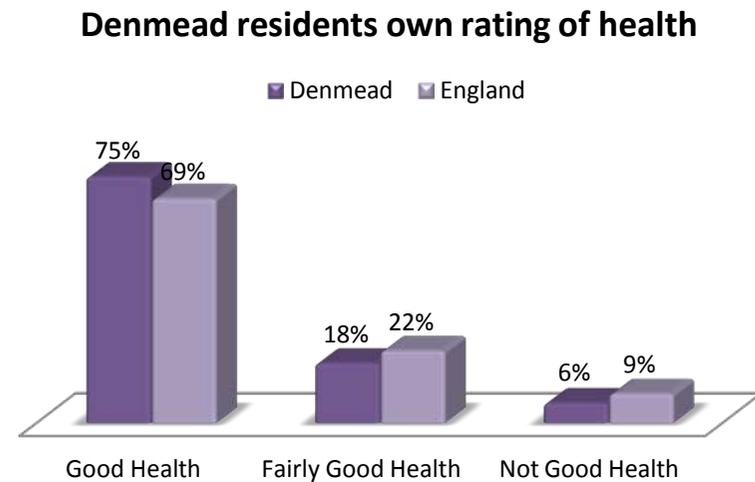
Further studies:

Further breakdown of the age band 45-75 (perhaps at 65 as the 'classic' retirement age) would be informative the balance of working age and retired/reduced economic activity. Household structure would also be informative.

S2.3 Residents own rating of health

2001 census data indicates that in general Denmead residents enjoy good health, outperforming national rates of reported good health. The following graph shows main results to the question: "Over the 12 months you would say your health has on the whole been: Good, fairly good, not good." The 6% of adults rating their health as not good equates to over 400 people.

Graph 6 Denmead: Own rating of health



Source: Neighbourhood statistics

Opportunities

To capitalise on generally high rates of reported health, thought needs to be given to measures to sustain this, particularly for an ageing working age and retired population.

Challenges

Overall high reported good health may limit funding opportunities for addressing specific health problems relative to areas with generally poorer health.

Risks

Generally good health may mask localised concentrations of health disadvantage experienced by low income households or very elderly.

Sources:

<http://www.neighbourhood.statistics.gov.uk/>

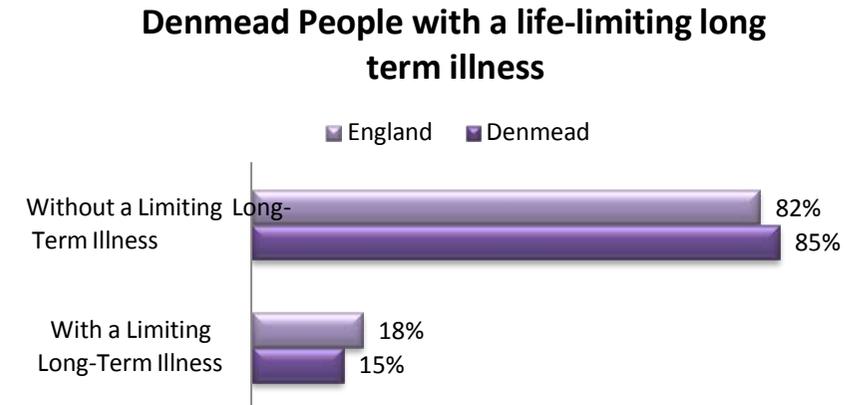
Further studies:

The 2011 census data will provide an important update to this. Joint Strategic Needs Assessment will provide more up-to-date information on health issues affecting specific sections of the population.

S2.4 People with a life-limiting long term illness

Denmead, in 2001, had below average number of people with limiting long term illness. This is consistent with above average rates of reported good health. It is particularly important as Denmead has a generally 'older' (though not 'very old') population profile, which would normally be associated with declining health. The 18% of adults with a limiting long-term illness equates to over 1700 people.

Graph 7 People with a life limiting long term illness



Source: Neighbourhood statistics

Opportunities

Generally below average rates of limiting long term illness mean comparatively less demand for health and social services (and associated costs) to support wellbeing of affected people.

Challenges

The sizeable 45 - 75 age group and above-average life expectancy indicates that Denmead's future population will include a growing number of old and very old people. Depending on their lifestyle and health, this will inevitably mean an increasing rate of limiting long term illnesses, and associated costs/ demand for services. See also 'S25 Unpaid Care'

Risks

The Denmead Neighbourhood Planning Steering group's actions, by taking account of future projections of growing numbers of frail elderly people, or those with life-limiting illness, should consider provision which includes housing and services that support wellbeing of older people with increasing health and support needs.

Sources:

<http://www.neighbourhood.statistics.gov.uk/>

Further studies:

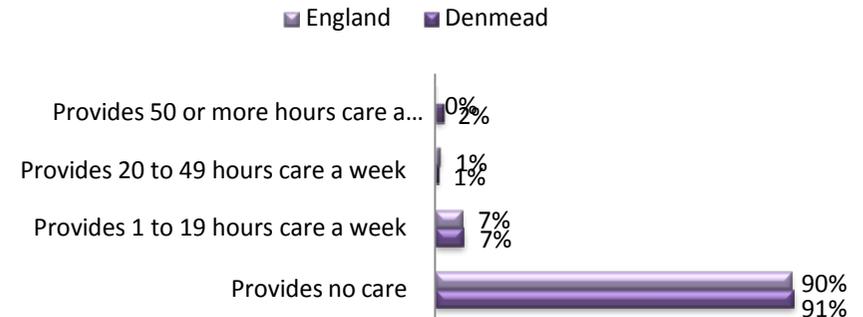
2011 census data will provide important update on this, to reflect current age profile of population. More detailed analysis could draw on the Joint Strategic Needs Assessment (JSNA) to identify what are key health issues which are likely to be linked to age and stroke/heart disease/cancer.

S2.5 People who provide unpaid care

Denmead's levels of people who provide care are consistent with national trends, with the exception that Denmead has a higher rate of people who provide very high levels of unpaid care (50 or more hours care a week). This is nevertheless quite a small number of people (100 people).

Graph 8 People who provide unpaid care

Denmead: People who provide unpaid care



Source: Neighbourhood statistics

Opportunities

Generally, care-provision is consistent and does not exceed national rates, so is not a particular challenge for Denmead at present.

Challenges

In future, it is almost inevitable that demand for family carers will grow in the future, in Denmead as elsewhere in England. Housing affordability barriers in Denmead and the wider area may mean that for some families, they do not live close enough to provide regular care without major sacrifices. Planning that supports increased provision of affordable housing will support family- and community-provided care.