Department of Geography and Environmental Science

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Analysis of Outcomes from the Bracknell Forest Homes Major Works Investment Programme

Final Report

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Executive Summary

1. Introduction

i. This report presents the findings of fieldwork carried out in Bracknell during Autumn 2012. The research was commissioned by Bracknell Forest Homes, which owns approximately 6,700 properties in the Bracknell Forest area.

ii. The purpose of this research was to investigate tenants' attitudes to a £61 million investment programme carried out by Bracknell Forest Homes from 2008-2013. This programme, known as the Major Works Investment Programme, included new kitchens and bathrooms and upgrading heating, windows and doors in the majority of properties.

2. Review of Academic and Policy Evidence Base

i. Housing improvements can have significant impacts on the everyday lives of tenants. Based on a review of over fifty academic and policy studies, we identify three areas in which we expect to find impacts in Bracknell. These are health and wellbeing, economy and efficiency and neighbourhood and community. We anticipate the most direct impacts will be on health and wellbeing, with fewer impacts on economy and efficiency and neighbourhood and community.

ii. Evidence suggests the largest single impact will be improved health, associated with warmer and better insulated homes. The is also evidence that more modern homes have reduced risk of injury and accident, especially in relation to trips, falls and kitchen accidents. Older people and families with children are usually the main beneficiaries of such improvements. Finally, a more secure and modern home is associated with lower levels of stress and improved mental health.

iii. Housing investment programmes may also make homes more efficient. Running costs, including fuel, may be reduced by improved thermal efficiency (although evidence shows this can encourage people to spend more money heating their homes, because they have confidence that heating a well insulated property will offer value for money). Improved design and layout can also make homes more efficient to live in. Evidence for neighbourhood and community improvements is limited. However, some studies found community benefits, in terms of improved social inclusion and reduced fear of crime.

3. Methodology

i. Our research team carried out 411 door to door surveys of Bracknell Forest Homes tenants in August and September 2012. We stratified our sample by neighbourhood and property type. Our sample was broadly representative of all BFH tenants, although we slightly oversampled women and older people. We also carried out 20 telephone interviews in October 2012, in which we explored themes raised in the survey in greater qualitative detail.

4. Benchmarking Bracknell

i. Based on our analysis of National Statistics and other secondary data, we find Bracknell Forest to be a generally healthy, safe and prosperous place. It offers a very high quality living environment. This trend is generally consistent across all wards in Bracknell Forest.

ii. Data shows Bracknell Forest has levels of health and wellbeing that are similar to other parts of Berkshire, and better than England as a whole. Levels of fuel poverty, which is strongly associated with poor health, are much lower in Bracknell Forest than in other similar and nearby places.

iii. Bracknell Forest offers an exceptionally good living environment. It is the 3rd least deprived local authority in England measured by the quality of indoor living environment, and the 76th least deprived measured by outdoor living environment (a high ranking for a town in Berkshire).

iv. Bracknell Forest is a prosperous place, with high levels of economic activity and gross weekly pay. Property crime is extremely low in Bracknell Forest. The burglary rate fell by over 50% from 2007 to 2012, to 1.86 burglaries per 1000 people compared to 4.50 per thousand in the rest of Berkshire.

v. Bracknell Forest to offers residents the benefits of a Berkshire town, in terms of good health and prosperity, and of a New Town, in terms of high quality living environment.

5. Survey and Telephone Interview Results

i. Our main finding is that the improvement works carried out by Bracknell Forest Homes were popular and of clear benefit to tenants. Around 90% of people surveyed thought the new windows, heating, kitchens and bathrooms were better than before. This compares favorably with housing improvement satisfaction surveys from elsewhere in the UK.

ii. The experience of having improvement work done was positive for the majority of tenants. The professional conduct of contractors and the care Bracknell Forest Homes took to consult and communicate were particularly highly regarded.

iii. The main impacts were on the health and wellbeing of tenants. Over 80% of people felt their home to be warmer, while perceptions of kitchen and bathroom safety also improved. Fear of burglary also reduced for 74% of tenants, which is surprising in a relatively low crime area.

iv. The main impacts on economy and efficiency were non-monetary ones, including ease of cleaning, better storage and more efficient layout in kitchens and bathrooms. Over 80% of people told us they were able to control their heating better, but only 25% told us their heating bills had reduced.

v. Impacts on neighbourhood and community were limited, because Bracknell already offers a high quality living environment. Across most measures, we found a slight improvement in peoples' perceptions of their street and neighbourhood.

vi. The direct economic impact of the Major Works Investment Programme was at least £3.5 million in wages to local employees and a further £3.5 million of associated healthcare savings. Both are conservative estimates.

6. Overall Summary and Recommendations

i. The Major Works Investment Programme was particularly good at creating tenant buy in, through effective consultation and communication.

ii. Impacts on health and wellbeing, economy and efficiency and neighbourhood and community are also identified, in the context of an already healthy, prosperous and safe local environment.

iii. We make five recommendations based on our research and analysis. Bracknell Forest Homes might prioritise improved warmth and thermal efficiency and home safety, as cost effective areas for future investment. Further environmental improvements would benefit neighbourhoods and communities, including non-Bracknell Forest Homes tenants. Finally we recommend prioritising fault fixing and repairs to maintain the quality of the improvement work.

Acknowledgement

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Finally, we acknowledge the 411 residents of Bracknell Forest who shared their time, knowledge and experience with us during this research project.

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Chapter 1: Introduction

1.1 The Research Project

This report presents, analyses and interprets data from a research project carried out in Bracknell Forest during Autumn 2012. The project team was led by Dr Steve Musson, Associate Professor in Economic Geography, and Dr Sophie Bowlby, Visiting Research Fellow, at the University of Reading.

We were commissioned to analyse outcomes from the Bracknell Forest Homes Major Works Programme, which ran for five years until being completed in December 2012. The Major Works Programme aimed to raise the standard of residential housing in Bracknell Forest above the minimum 'Decent Homes Standard' set by central Government. Around £61 million was invested by Bracknell Forest Homes, with improvement work being carried out on the majority of its 6700 owned properties. Improvements were focused on improving kitchens, bathrooms, central heating and external windows and doors. Table 1.1 summarises the work carried out under the Major Works Programme in Bracknell Forest.

Table 1.1: Location and number of properties improved through Major Works Programme

Estate	Number Improved	Work Period
Ascot	169	2009/10
Binfield	99	2009/10
Birch Hill	289	2011/12
Hanworth	356	2011/12
Bullbrook	520	2009/10
Crown Wood	446	2012/13
Forest Park	162	2012/13
Crowthorne	91	2009/10
Deepfield Road	153	2009/10
Easthampstead	517	2009/10
Great Hollands	662	2010/11
Home Farm	112	2011/12
Harmans Water	370	2010/11
Owlsmoor	170	2011/12
Priestwood 1	416	2008/09
Priestwood 2	438	2008/09
Sandhurst	278	2009/10
Town Centre	23	2012/13
Wildridings	252	2010/11
Total	**5523**	**2008/12**

Source: Bracknell Forest Homes

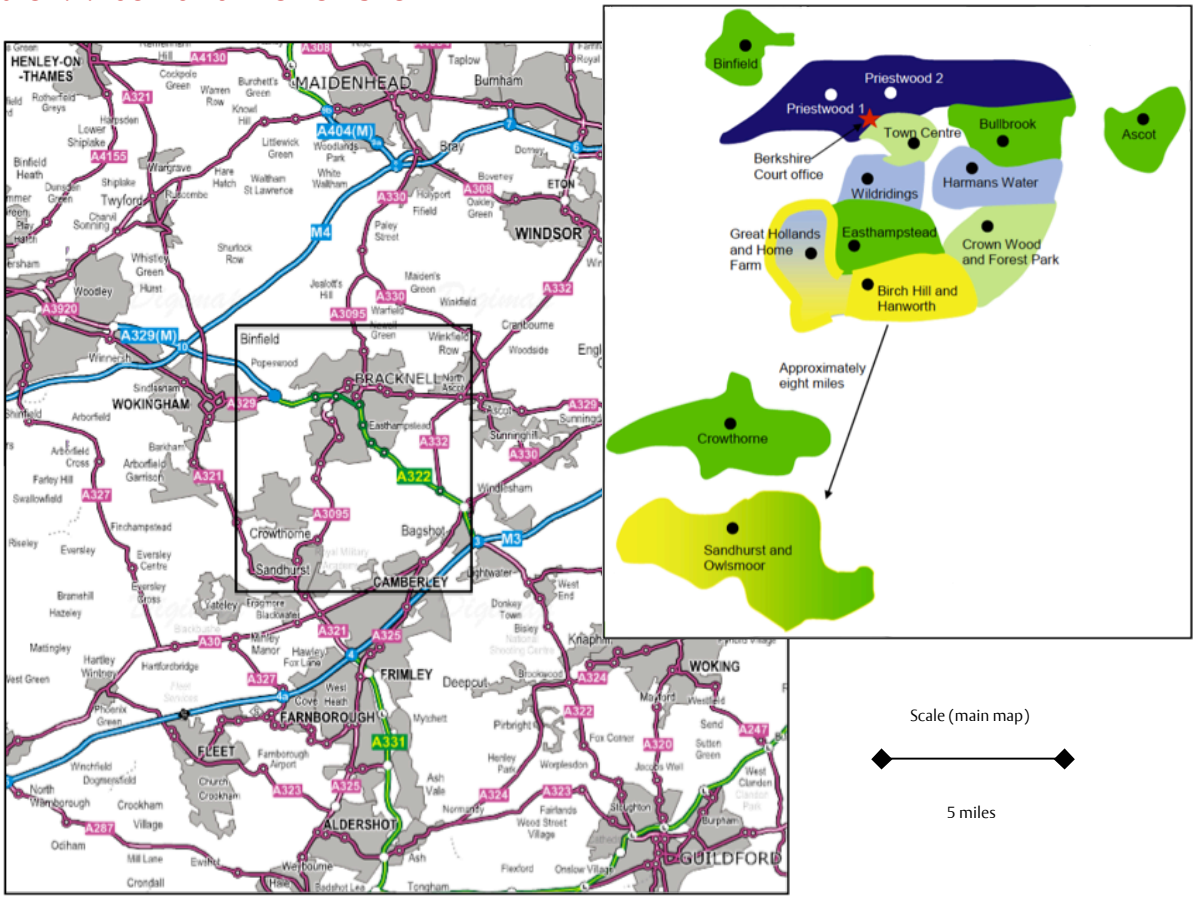
Our brief was to investigate tenants' attitudes towards the work carried out in their property, including the consultation and planning phase, the experience of living through the improvement programme and their overall satisfaction with the outcome. We were also asked

to assess the wider impacts of the Major Works Programme. This included the everyday lives of tenants, on the neighbourhoods and communities in which they live, and on the social and economic life of Bracknell as a whole. Studies of similar investment programmes elsewhere in the UK, most notably in Nottingham and Wakefield, have been carried out during the last five years. We were asked to ensure our research was able to make rigorous comparisons between the experiences of tenants in Bracknell and those elsewhere. Finally, our brief was to make policy recommendations to Bracknell Forest Homes based on our findings.

1.2 The Field Site

Bracknell Forest is a Unitary Authority in the former administrative county of Berkshire. The local authority area includes the towns of Bracknell and Sandhurst, part of Ascot and the large villages of Binfield, Crowthorne and Winkfield. Bracknell was designated as a post-war New Town in the Abercrombie Report of 1944, and as a consequence the built environment mainly dates from the late 1950s and 1960s. As is common in many other New Towns, Bracknell is organised around a series of housing estates. Each has a distinctive architectural design, which in part reflects the period in which the estate was planned and built. The first estate to be built was Priestwood, between 1950 and 1953. The last was Crown Wood, which was not completed until 1980. Bracknell Town Centre, which is expected to undergo an extensive regeneration programme from 2013, is of uncompromisingly modernist 1960s design. Figure 1.1 shows the location of housing estates in Bracknell, in the context of Berkshire.

Figure 1.1: Location of the Field Sites



The majority of properties managed by Bracknell Forest Homes are in Bracknell. Table 1.1 (above) shows over three quarters of properties are in the ten largest estates, most notably Priestwood, Great Hollands, Easthampstead and Bullbrook. However, a significant number of properties are also managed in outlying areas, including Sandhurst, Crowthorne and Ascot. In planning this study, we have been mindful of the different characteristics of estates in Bracknell. Although each has broadly comparable amenities (such as schools, shops, recreational facilities etc.), the style, age and quality of residential buildings varies between locations. For example, Figure 1.2 compares the architectural style of properties in the first estate to be completed, Priestwood, with those in the last, Crown Wood. This is not to suggest one type of property is necessarily better than another. The point is that large numbers of similar houses were constructed in a relatively short space of time in Bracknell. As a consequence, whole estates benefit - and suffer- from good and bad architectural design features.

Figure 1.2: Properties in Crown Wood (top left) and Priestwood (bottom right)

1.3 The Decent Homes Programme

"By any standards, the Decent Homes Programme can be counted as a very significant public policy success. A substantial backlog of repairs and maintenance in social housing existed thirteen years ago and a significant percentage of council rented properties were of unacceptably poor quality: whilst it has yet to be completely eliminated, huge progress has been made, improving the lives of millions of tenants" (House of Commons 2010: para 229).

The Decent Homes Programme was created in response to a requirement for investment in social and local authority housing. In April 2001, it was estimated that 1.6 million homes, including almost 40% of all social homes, failed to meet decent home standard (National Audit Office 2010). An investment fund of £1.6 billion was created, with the aim of bringing every home in the social housing sector to 'decent' standard by 2010. Approximately 50% of all Decent Homes Programme funding was allocated to London Boroughs, including almost £200 million to Haringey. The largest allocation outside London was £86 million to Nottingham.

In 2006, in recognition of the growing complexity of the task, it was announced that only 95% of homes would be decent by the end of 2010. Progress against this target slipped further and by mid 2009 around 86% of social sector homes were 'decent'. It was anticipated over 90% would meet this standard by 2010 (National Audit Office 2010).

Notwithstanding the failure to meet the original or revised targets, the Decent Homes Programme still invested in over 1.1 million 'non-decent' homes and improved the day-to-day and long-term wellbeing of tens of thousands of tenants. For the purposes of the Decent Homes Programme, a 'decent' home is one which:

1. Meets the current statutory minimum standard for housing;
2. Is in a reasonable state of repair;
3. Has reasonably modern facilities and services; and
4. Provides a reasonable degree of thermal comfort.

The House of Commons Housing Select Committee note that the decent homes standard was: "a low standard, which makes it all the more shocking that [so many homes] were below that standard in 2001" (House of Commons 2010: para 19). Many improvement programmes funded through the Decent Homes Programme, like the Bracknell Forest Homes Major Works Programme, exceed this minimum standard.

1.4 The Bracknell Forest Standard

Bracknell Forest Homes aimed to make improvements to properties to meet an enhanced 'Bracknell Forest Standard'. This exceeded the minimum requirements of the Decent Homes Standard. For example, the Decent Homes Standard specified external doors should be replaced if they are old or in poor condition, while the Bracknell Forest Standard replaced external doors on all homes regardless of condition. Meeting (and exceeding) the Decent Homes Standard was fundamental to the existence of Bracknell Forest Homes. It was formed in 2008, after it became apparent the former social landlord, Bracknell Forest Council, lacked the financial resources to improve properties to Decent Homes Standard. The Bracknell Forest Standard was set out in the 'Offer Document' to tenants, which was supported by over 75% of tenants who voted in a consultation ballot in 2007. The Bracknell Forest Standard involved making improvements in five main areas: bathrooms, kitchens, windows, heating and adaptations for people with disabilities. Table 1.2a outlines typical improvement works carried out in kitchens and bathrooms by Bracknell Forest Homes, while Table 1.2b shows completion rates by May 2012. Figure 1.3 shows typical improvement work to a kitchen (also showing an upgraded exterior door and windows) and a bathroom.

Figure 1.3: Typical Improvements to a Kitchen and Bathroom (Source: Bracknell Forest Homes)

Table 1.2a: Typical Kitchen and Bathroom Improvement Works

Kitchen refurbishment	Bathroom refurbishment
Strip out existing kitchen	Strip out flooring and wall tiling
Strip out existing flooring	Remove bath and install new
Re-wire electrics	Remove w/c and install new
Make good plastering	Remove hand basin and install new
Asbestos removal if required	Electrics if required
Install new kitchen	Make good plastering
Renew flooring	Asbestos removal if required
Decorating and making good	Decorating and making good

Source: Bracknell Forest Homes

Table 1.2b: Work Completed by May 2012

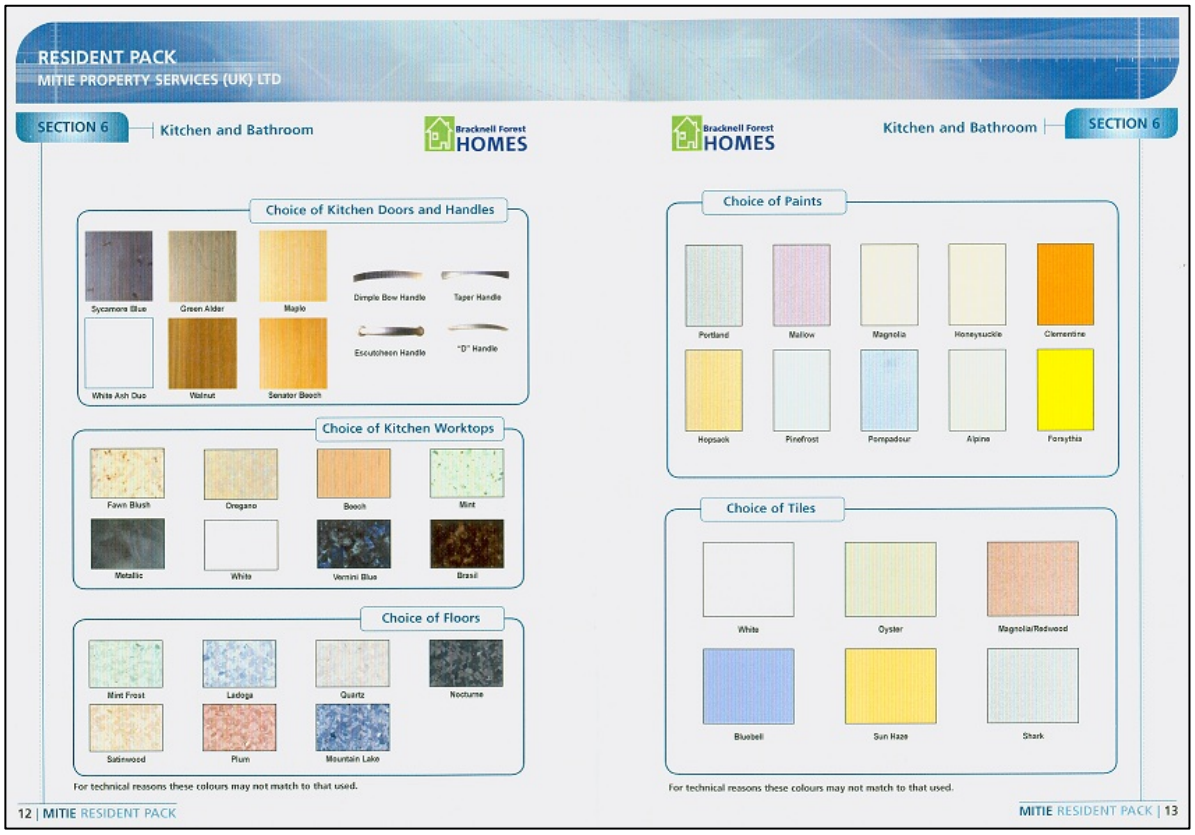
Improvement	Planned	Completed
New bathrooms	3,500 homes	3673
New kitchens	3,300 homes	3356
New windows	1,560 homes	1558
New heating system	3,600 homes	3255
Adaptations	£400,000 spent per year	£730,000 spent in 2010

Source: Bracknell Forest Homes

Bracknell Forest Homes planned the improvement works with great care. For example, contractors worked on a small number of properties in an area at any one time to minimise

neighbourhood-level disruption. Tenants were given a high level of choice, for example in choosing the design and layout of improvements and the final colour scheme and finish. Figure 1.4 illustrates the types of options given to tenants when choosing the look of their new kitchen. The ultimate level of choice for tenants was to opt out of having work carried out whether needed or not. In general, the care taken in consulting with tenants, agreeing work schedules and minimising disruption was a positive feature of the Major Works Programme in Bracknell Forest.

Figure 1.4: Sample of Information Given to Tenants about Improvement Options



1.5 Structure of the Report

We have organised this report into six chapters, which build the evidence base for our final summary and recommendations. Three themes run through our project: health and wellbeing, economy and efficiency, and neighbourhood and community.

Chapter 2 is a review of existing academic and policy evidence. There is an extremely large scholarly literature on the sociology and psychology of the home, the impacts of housing investment and the potential for regeneration programmes to achieve community-level change. We identify and analyse the most relevant examples. Chapter 2 also reviews policy evidence, including impact assessments of other housing investment programmes.

Chapter 3 outlines our research methodology. We justify our choice of research methods and describe the methods through which information was collected and analysed. We also consider

the ethical implications of our research and explain our duty of care to those who participated in our project.

Chapter 4 summarises a range of background statistical information that allows us to contextualise our research. We carry out a benchmarking process that builds a picture of Bracknell Forest in 2013. The 2011 Census of Population and 2010 English Indices of Deprivation are particularly valuable sources of comparative information, but we also draw on other high quality survey data.

Chapter 5 presents our research data, including questionnaire results and follow-up interviews. A very large quantity of information was collected and we present the most relevant and insightful aspects in this chapter. This is organised using our three themes: health and wellbeing, economy and efficiency, and neighbourhood and community.

Finally, Chapter 6 summarises our findings and makes five policy recommendations. These are informed by relating our research findings to the benchmarking data and academic and policy literature.

Chapter 2: Review of Academic and Policy Evidence Base

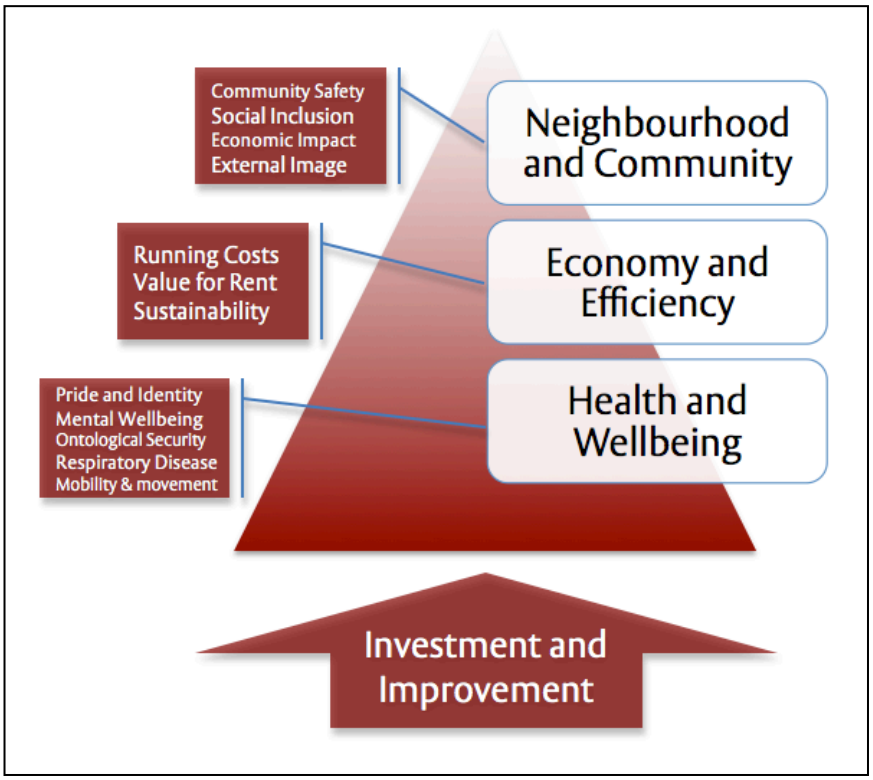
2.1 Introduction

Housing provides necessary shelter for human survival, along with a wide range of other benefits. A useful way of thinking about these is to recognise that housing can provide a wide range of services to residents. These range from basic shelter to services for physical health such as warmth, the ability to maintain personal hygiene, and the ability to prepare and consume food safely. Housing can (or can not) enable goods such as clothing, food, domestic equipment, IT and media equipment to be stored. Housing may offer services which affect individuals' psychological and social wellbeing such as feelings of safety and security, feelings of privacy. It may enable or limit social interaction with co-residents, and allow residents to express social status and personal identity through the decoration and presentation of the home environment. Housing may also offer opportunities for or barriers to social interaction with non-residents.

The services that housing can provide are affected by the nature of the building technology and design that are used in creating the house. To give two examples: the design of internal space will affect the possibilities for private space within the home and the space that can be comfortably shared by residents; the nature of the heating and insulation technology will affect both the cost of providing thermal comfort and the temperatures that can be maintained within the house. Moreover, such technical and design features have both economic effects and social meanings that are important. Different heating, lighting and cooking technologies influence the costs of heating and lighting a house and the costs and speed of cooking food. Possession of 'modern' or 'fashionable' décor and domestic equipment can affect people's sense of social status and self-esteem while room for children to play or adults to sit and chat can influence social interactions. Changes to the interior fittings of houses - such as new heating technology, new equipment for bathing or cooking or new windows - can have a wide range of direct and indirect effects on the physical and psychological health of residents. These factors also influence the monetary costs and physical effort of running a home.

A large body of academic and policy literature analyses the impacts of various features of housing design, technology and tenure upon residents' health, economic and social wellbeing. In the review of existing evidence that follows, we organise this literature into three broad areas: health and wellbeing, economy and efficiency and neighbourhood and community. Of these, the largest body of evidence exists in relation to housing and health. Many of the most clearly defined impacts of housing improvement are in this area. Impacts relating to the economy and efficiency of the improved property are also well defined, but more difficult to associate directly with improvement work. Finally, there is some evidence of links between housing improvements and neighbourhood level change, although this tends to be contradictory and difficult to relate to specific interventions like the Decent Homes Programme. This understanding of the relationship between investment and outcomes is visualised in Figure 2.1. We also focus on evidence of programme-level outcomes from the Decent Homes Programme. These provide important context for our understanding of the Major Works Programme in Bracknell, in terms of the tenant satisfaction, value for money and sustainability achieved in comparable investment programmes in the UK.

Figure 2.1: Impact Model of Bracknell Forest Homes Investment Programme



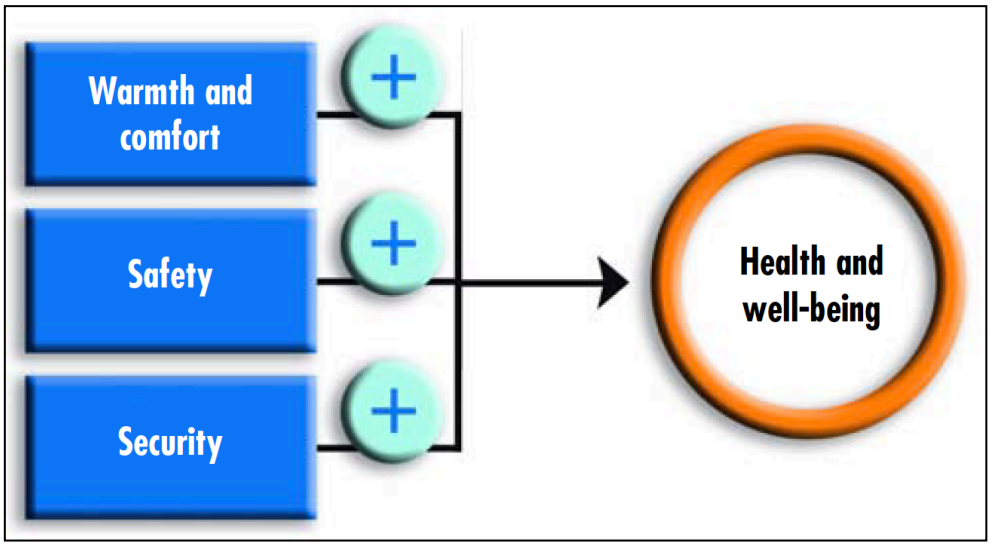
2.2 Health and Wellbeing

Such is the strength of evidence for the relationship between good housing and good health that University of Warwick Law School (2010) considers investments like the Decent Homes Programme to be quasi-health promotion initiatives. They suggest if investment is not made in housing, this results in disproportionately large health and social care costs. Preventative low cost housing interventions, in warmth and comfort, security and safety, offer value for money over health treatment costs. A wide range of other policy and evidence reviews develops the housing-health link.

2.2.1 Conceptualising Health, Wellbeing and the Home

Health policy analysis in the UK tends to focus on the relationship between cold homes and poor health. We also consider other aspects of health and wellbeing, including mental wellbeing, risk of injury and accident and social inclusion of vulnerable groups. In doing this, we draw on the conceptual model of health and housing developed by Green, Stafford and Pugh (2011) (see Figure 2.2), while recognising the importance of local circumstances in determining which areas of investment have the greatest impact. For example, in areas of relatively high crime, investment in security tends to produce the greatest health benefits (Gilbertson et al 2011).

Figure 2.2: Health Impacts of Housing Investment (Source: Green, Stafford and Pugh 2011: 31).



Many of the services provided by housing affect the mental and physical health and the general wellbeing of residents. This study is concerned with the impact of physical changes to housing on the health and wellbeing of residents, including their satisfaction with their housing situation. A range of other social and economic influences can also impact on health, wellbeing and housing satisfaction; ideally, assessment of the impacts of material housing improvements would control for the impacts of such social and economic factors to ensure that apparent effects are not caused by external factors. It is also important to recognise that physical changes to housing may impact on people's wellbeing and health in combination with external social and economic factors.

The range of social and economic factors that are relevant to this study are evidenced by studies of people's satisfaction with their housing and feelings about their dwelling – for example, whether they feel their house is a 'home' (Somerville 1992; Mallett 2004). These include:

1. The quality of social relationships with co-residents. Most obviously, people living in situations of domestic abuse often feel that their house is a 'prison'. Other problems in family relationships or relationships with neighbours can also affect levels of satisfaction with housing (Kosberg and Garcia 1995; Renzetti et al 2001);
2. The degree of control people have over their housing conditions. In particular, there is academic debate about the effect that tenure has upon 'ontological security'; that is security about their own being derived from a sense of rootedness and control over living conditions. Saunders (1990) argues that those who own their homes experience greater 'ontological security' than renters. However, Hiscock et al (2001) suggest a more nuanced picture in which tenure does not solely determine ontological security. Indeed, features of the neighbourhood, the house type, fears of repossession and personal skills in DIY all affect people's feeling of control and self-determination and hence their ontological security;
3. The ability to decorate and present the dwelling in a socially approved manner. House decor, cleanliness and style can enhance and express a desired social status and social identity both for individual residents and those sharing a dwelling (Madigan and Munro 1996, Woodward 2003, Reimer and Leslie 2004). This is linked to point (2) above inasmuch as lack of money and tenure restrictions on changes to the dwelling may limit

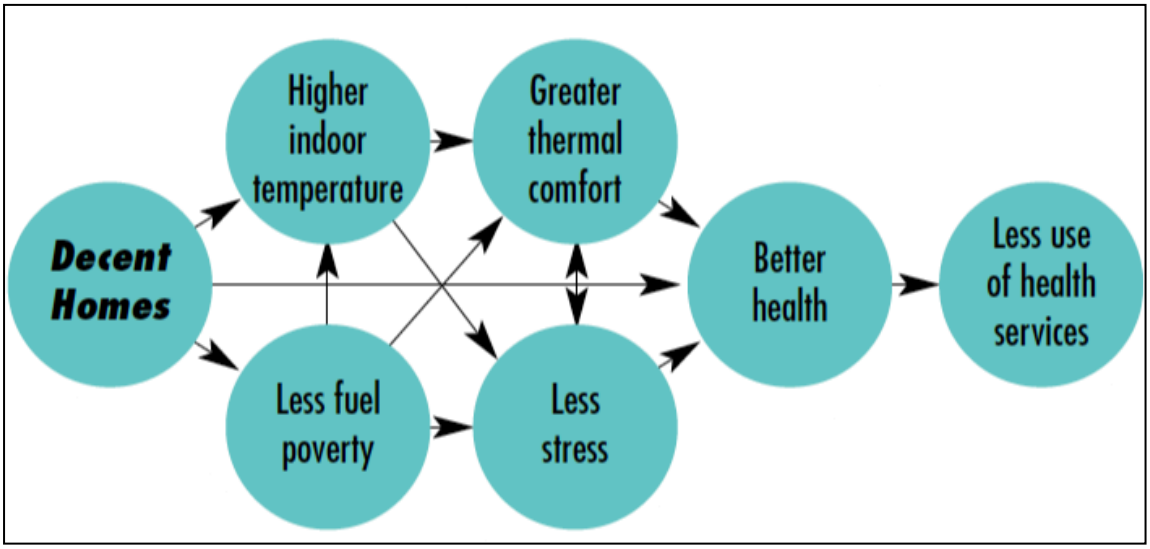
residents' ability to control the internal and external appearance of the dwelling. Moreover, improvements that affect the presentation of the home and that may have been imposed on residents do not necessarily improve satisfaction and can induce stress, however appropriate their technical features may be (e.g. Gilbertson et al 2006).

Studies of the impacts of housing improvements on mental and physical health also take account of the effects of other aspects of people's lives on their health, such as a poor diet resulting from poverty or depression resulting from unemployment or family breakdown. Many studies of the impact of housing improvements on residents' physical and mental health have been carried out. A recent synthesis of a number of systematic reviews of such studies concluded that "Overall, warmth and energy efficiency interventions seemed to have the clearest positive impacts on health … interventions that reported the largest effects were targeted at vulnerable groups, including those with existing health conditions and the elderly" (Gibson et al 2011: 181). They also conclude that studies of the impact on health of other internal housing improvements, such as re-housing tenants in better physical dwellings or housing refurbishment, had less clear results, sometimes because of the inadequacy of the study design.

2.2.2 Health Impacts of Cold Homes

The most extreme measure of the healthcare costs of cold housing is Excess Winter Deaths (EWDs), which compares the number of deaths between December and March to the number in both the preceding August to November and the following April to July. EWD estimates the number of additional deaths that occur during the winter months. In general, as average winter temperatures decrease, the number of EWDs increases. Friends of the Earth (2011: 23) suggest that: "Each centigrade degree reduction below 18 Degrees in [average annual] temperature in the UK corresponds with an extra 3,500 deaths". There is strong evidence of a relationship between EWDs, low thermal efficiency of housing and low indoor room temperatures. For example, Green and Gilbertson (2008) find room temperatures below 18 Degrees Celsius constitute a risk to cardiovascular health, while older people are at risk of hypothermia in temperatures below 10 Degrees Celsius. Conversely, energy efficient homes are associated with lower levels of EWD. For example, Gilbertson et al (2008: 15) note that: "In the UK, up to 50,000 more people die in the winter compared with the summer months. These excess winter deaths are far higher than the European average" [those countries with the lowest levels of EWD are those in Scandinavia]. Furthermore, they argue: "Death is only the tip of an iceberg of residents submerged by impoverished lives. An enduring legacy of the Decent Homes Programme energy efficiency improvements will probably be the alleviation of stress caused by fuel poverty, increased thermal comfort and the subsequent improvement in mental health" (ibid: 19). Figure 2.3 illustrates a mechanism by which the Decent Homes Programme might reduce fuel poverty and enable better health as a result.

Figure 2.3: Pathways to Health through the Decent Homes Programme (Source: Gilbertson et al 2008: 15)



Although measures of EWD bring the health risks of cold housing into particularly sharp focus, there is also evidence of widespread lower-level effects. For example, the rate of respiratory disease for children living in cold homes is more than double the rate for children in warm homes (Friends of the Earth 2011). Mental health is also negatively affected by cold housing, with adolescents living in cold homes more than five times more likely to experience mental health problems than those living in warm homes (ibid). Cold housing is also associated with minor illnesses like colds and flu, and can exacerbate underlying conditions like arthritis and rheumatism (Gilbertson and Green 2008).

2.2.3 Injury, Accident and Security in the Home

Pennington et al (2010) suggest improvements to home design reduce the risk of injury and poisoning and that children and the elderly are likely to be the main beneficiaries. In a wider sense, the families and carers of vulnerable people may also benefit from the improved mental health and wellbeing of their families, friends and carers. In their study of housing and health in Leeds, Green, Stafford and Pugh (2011) argue safety improvements offer better value for money, in terms of health outcomes, than improvements that make homes warmer and more secure. In particular, they highlight the significance of falls in the bathroom (especially when getting in and out of the bath), trips on staircases, and burns from cooking appliances, as particularly commonplace hazards that can be relatively easily addressed by improvement and investment.

Home security features, including upgraded windows, doors, fire and carbon monoxide alarms, are also associated with improvements to mental health and wellbeing. Pennington et al (2010: 15) note that reduced fear of crime and lower incidence of burglary benefit different groups of people: "In terms of fear of crime children, women, people with mental illness and the elderly are likely to be the greatest beneficiaries. In terms of experience of crime, young men are likely to be the greatest beneficiaries". As such, the stress and emotional injury caused by actually experiencing crime can be separated from the day-to-day worry – perhaps without foundation – that a person might become the victim of crime. Although improved home security may be a by-product of upgrading the thermal efficiency of windows and doors, in some locations it can lead to substantial improvements in the mental health of tenants.

Gilbertson et al (2008) note upgrading windows and doors to a higher security standard substantially reduces both the actual occurrence of burglary and general fear of crime. Such is the impact, in terms of comfort, security and psychological ill health, they argue: "Burglary crime [in our study area] is a bigger social problem than ill health arising from cold, damp or unsafe accommodation. Improving security is probably the most cost-effective investment for improving the health of council tenants and members of their households" (ibid: 33). Their study took place in an area of relatively high crime (Ealing, West London) where home security interventions would be particularly cost-effective. Even so, their evidence suggests the health benefits of increased security were dramatically greater than those of increased warmth: "In comparison to the warmth programme the security programme has 40 times more beneficiaries per year, yields 54 times more [quality life adjusted years] and runs for twice as long. *Thus as a rough rule-of-thumb, it should yield something less than 108 times the health gain of the warmth programme*" (ibid: 36, *emphasis added*).

Design of the indoor environment can make a difference to health. Pennington et al (2010) considered trip hazards to be of particular importance in households with elderly or young residents. Taske et al (2005) also find evidence to suggest good repair and improved layout reduce the number of falls and accidents for people over 75 years of age, while modifications to home design are also strongly associated with a reduction in accidents and injuries in households with children and young adults. In their analysis of health impacts from housing investment in Sheffield, Gilbertson, Green and Ormandy (2006: 15-16) argue safety improvement is a major – if difficult to quantify – outcome. They note that before upgrade work began: "Over 85% of kitchens needed remodelling to improve ergonomics and minimise accidents resulting in falls, scalds and burns. Over 80% of the kitchen floors [were] uneven and often covered with layers of damaged and slippery linoleum or carpets, increasing the likelihood of falls. Over 90% of bathrooms [had] a cramped and inefficient layout, with old floor covering which increases the likelihood of slips and falls; baths are old fashioned and slippery … Windows are old fashioned with very few meeting BS standard for restricting opening and reducing falls". Because of the unpredictable nature of accidents, the health benefits of improved safety are more difficult to calculate than benefits from improved thermal comfort. However, the very wide range of safety improvements made through the Decent Homes Programme, especially in kitchens and bathrooms, should not be underestimated.

2.2.4 Social Inclusion and the Home

A final area of health benefits is associated with increased social inclusion and the impacts this has on psychological wellbeing. In some respects, this overlaps with neighbourhood and community impacts discussed in Section 2.4 below. Pennington et al (2010) note community pride and identity can have a positive impact on mental health. This can most clearly be related to pride in the appearance and condition of an improved property, but may also extend to potential benefits from improvements to community facilities and shops that are catalysed by the direct investment.

Taske et al (2005) associate housing programmes that reduce isolation and increase the quality of the living environment with good mental health. Their review finds evidence that rehousing people away from slum dwellings leads to better mental and physical health in the long term, especially for people who suffer from anxiety and depression. In less extreme circumstances, they also establish a relationship between neighbourhood-level regeneration schemes and improved health, particularly when social isolation is tackled by community initiatives. They

note: “significant improvements in general feelings of safety … feelings of a sense of belonging to community and social networks and significant reductions in concerns about criminal activity and behaviour of young people” (ibid: 26).

Research on accessible housing issues has emphasised their importance and impact on residents’ health and safety and on the liveability of domestic environments. Modifying housing for elderly residents can prolong the period of living independently, although some modifications are too specific to the occupier to be useful to subsequent residents. This is of concern to social housing providers who need to ensure investments in housing improvements continue to be valuable when tenants change (Hwang et al 2011). Ormerod and Thomas (2006) see housing investment as an opportunity to enhance the accessibility of properties for people with disabilities and to positively affect their social inclusion. For example, the installation of new doors can create level access over the threshold, while replacement windows often have large handle opening and require less effort to use. Refitted bathrooms and kitchens may have matt surface finishes to reduce glare and improve accessibility for people with visual impairments. The Decent Homes Programme, which does not specifically address accessibility, is seen as a missed opportunity by Ormerod and Thomas (ibid). For example, new uPVC doors and frames typically have higher threshold strips than the timber doors they replace, while new kitchens and bathrooms might reduce tonal contrast between surfaces and increase glare from new tiles and paintwork.

2.3 Economy and Efficiency

The second broad area of evidence on the impacts of housing investment is economy and efficiency. This can be measured in monetary terms, for example in value for rent, financial investment and running costs, or in non-monetary terms, such as time spent on cleaning and maintenance. The majority of evidence relates to monetary benefits, which are more easily quantifiable. We have already identified some potential non-monetary efficiency gains, for example by making properties more liveable for tenants with disabilities. Further non-monetary benefits are also discussed below.

Conceptually, we can understand the home as providing an economic service; as an asset in its own right and through the economic sustainability of the shelter, heat and lighting it provides. For homeowners, the capital value of their house is of considerable importance. This especially applies in the UK, where long run trends for rising house prices have meant that for most homeowners this is a major asset, seen - sometimes erroneously - as a reliable investment (Lowe et al 2012, Jones et al 2012). Conversely, renters may feel dissatisfaction simply because they lack such an investment. They also may be concerned that they are paying overly high rents for the quality of the housing they receive (poor value for rent). As such, there is some evidence that residents in social housing are less satisfied with their housing situation than owner occupiers simply as a result of the different economic benefits offered by owner occupation compared to social housing (Elsinga and Hoekstra 2005).

A further important economic aspect is a dwelling’s running costs. This is not so clearly tied to tenure although renters, including those in social housing, have limited ability to reduce costs by improving their heating and lighting equipment and house insulation. On the other hand, homeowners are liable for a wide range of maintenance costs, which for those in rental property are the obligation of their landlords. For elderly homeowners and those on low incomes, organising and paying for maintenance can promote significant anxiety and financial hardship

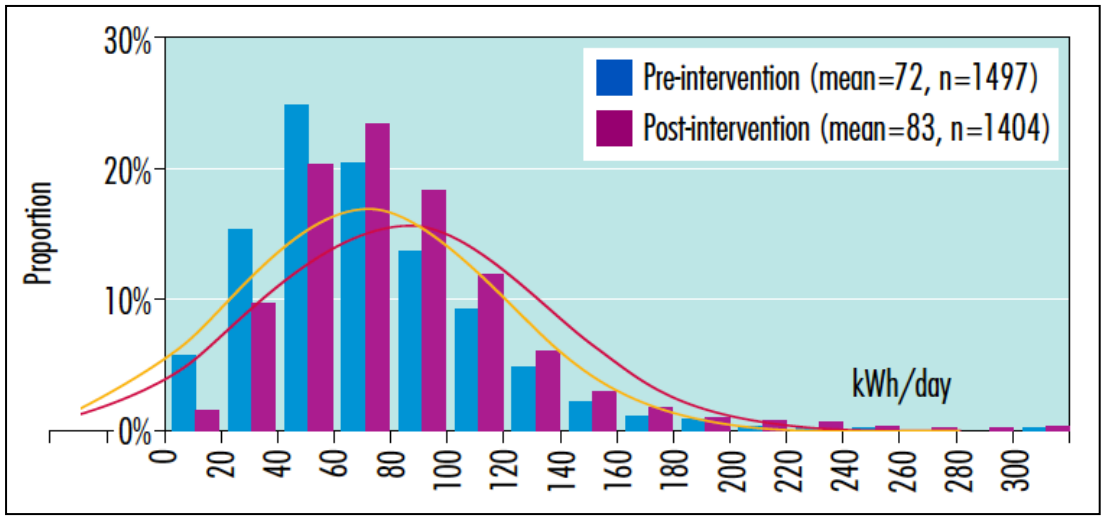
(Van Zandt and Rohe 2011). For tenants, investments by their landlord in housing improvements may encourage other investment on the part of the tenant in, for example, painting or gardening as well as better general upkeep of the property (see for example our discussion of Hickman et al 2011 below).

For people on low incomes, such as many of those living in social housing, heating the house has become a significant cost. Recent rises in energy prices mean many more are now in fuel poverty (Hills 2012). Although much social housing is more thermally efficient than cheaper private sector housing, Hills (ibid.) estimates that about 1 in 6 of those living in social housing were in fuel poverty in 2009. Many people in fuel poverty are extremely frugal in their use of heating and limit their activities in order to conserve heat (Jenkins et al 2011). However, a study of households in fuel poverty who had had grants to improve heating and insulation found that the main benefit was not less expenditure on heating but better thermal comfort. Most households did not report lower heating bills but rather improved mental and physical health and "feeling more at home - a sense of 'living' rather than just 'surviving' there" (Gilbertson et al 2006:12). As they explain "A key part of feeling 'more at home' may be the expansion of 'useable' space within homes. Before improvements a third of householders reported using fewer rooms during the cold months, often with detrimental effects on both their mental and physical well being (ibid: 11).

Chahal, Swan and Brown (2012) also argue the potential energy savings associated with improved efficiency will be negated by residents heating their homes to a higher, and more comfortable, temperature. Drawing on the work of Camco (2011) and others, they suggest as much as 25% of possible savings will be used to increase thermal comfort in improved properties. Instead of taking advantage of lower fuel bills, tenants use more energy to heat their homes. Chahal, Swan and Brown (2012) also suggest the Decent Homes Programme has tended to impose energy efficiency measures on tenants, even if they are reluctant to accept them. They note: "one of the key drivers for social housing to engage with sustainable retrofit was the need to adhere to Government policy and targets. However, even if residents are not offered the opportunity to refuse it is imperative that they are still consulted. This will go some way in ensuring that residents are getting the best out their energy efficiency measures and offers the best chance of long lasting effects" (ibid: 7).

Gilbertson and Green (2008) offer further evidence that improved energy efficiency can lead to increased fuel bills. Their survey of over 2,000 residents in the Warm Front Scheme, the Government programme to tackle fuel poverty in the UK, found average fuel consumption rose after insulation and heating work had been carried out. They attribute this increase to poor quality insulation being installed, increased ventilation of warmer homes, and a lack of knowledge about how to use the new heating system effectively. Figure 2.4 shows that, from pre- to post-intervention, mean energy consumption increased from 72 kWh/day to 83 kWh/day.

Figure 2.4: Increase in Energy Consumption after Warm Front Measures (Source: Gilbertson and Green 2008: 7)



The Centre for Sustainable Energy (2011) offers an alternative perspective on poor energy consumption outcomes. They consider the Decent Homes Standard to be below the level needed to address economy and efficiency issues like fuel poverty and improved environmental performance. They argue: "it is widely accepted that the existing Decent Homes Standard does not go far enough in improving environmental performance and quality within housing, particularly with regard to alignment to current national targets for carbon reduction within the built environment." (ibid: 7). They calculate the additional cost of bringing the 710,435 social housing in London up to minimum Government energy efficiency targets to be £3.9 billion, or £5,543 per property. This is over and above the investment required to bring a property to Decent Homes Standard.

The internal design and characteristics of a dwelling and the layout of rooms such as living rooms, kitchen and bathrooms affect the effort required to move around and carry out activities within the home. The materials used and the placement and design of such features as worktops, electric plugs and showers can facilitate or hinder activities. Hickman et al (2011) found evidence in Wakefield that 63% of tenants in modernised homes had spent more money on their home as a consequence of improvement works, and that 57% would like to do so. They collected rich qualitative data on the ways in which the improvement programme had motivated residents to invest time and money in their homes, for example by employing window cleaners, carrying out further decoration work or renovating the garden. It is clear that the Decent Homes Programme in Wakefield had changed the attitude of tenants towards their home, encouraging greater pride and ownership. One of their respondents summed this up particularly succinctly: "I'm always cleaning. I just want to keep it nice. I wish I could freeze it exactly how it was when they had finished the work and keep it exactly like that" (Portobello resident, Female, quoted by Hickman et al 2011: 57).

2.4 Neighbourhood and Community

Satisfaction with a dwelling usually depends not only on its internal features but also on the characteristics of the neighbourhood within which it is situated (Kearns et al 2000). Indeed, one of the services that a dwelling provides is access to a particular neighbourhood. For example, using data from the 1997-8 Survey of English Housing Parkes et al (2002: 2413) found that housing satisfaction: "and the general appearance of the neighbourhood were closely associated with neighbourhood dissatisfaction, although perceptions of noise, friendliness, community spirit, schools and crime were also important". Other studies suggest neighbourhood characteristics have an effect on mental and physical health independent of the socio-economic characteristics of residents (Pickett and Pearl 2001; Riva et al 2007; Kim et al 2008). For example, a study in Glasgow (Ellaway et al 2001) found that, after controlling for socio-demographic characteristics, people's physical and mental health is negatively affected by the perceived level of poor 'neighbourhood cohesion' and problems such as noise, crime, anti-social behaviour within their neighbourhood. Those in work were more likely to perceive lower levels of neighbourhood cohesion, but perceived fewer problems with their neighbourhood, perhaps because they spent less time there. A recently published longitudinal study also suggests: **"**both low socioeconomic status and neighbourhood deprivation seem to have cumulative, long-term, effects on self-reported health" (Ellaway et al 2012: 135). They also note that poor self-reported health is linked to lower life expectancy and higher levels of morbidity. These aspects of neighbourhood characteristics are not directly linked to housing quality although poor housing can contribute to a perception of an area as low status and socially undesirable which may be part of the complex processes leading to poor self-reported health.

Although the focus of the Decent Homes Programme has understandably been on making improvements to properties, there is evidence of some neighbourhood and community outcomes. For example, Bashir et al (2011) interviewed over 200 residents in lower income neighbourhoods across the UK about their perceptions of neighbourhood change. They found 'neighbourhood infrastructure', including transport links, facilities for children and young people and security and policing, had potential to make a significant difference to peoples' lives. They argue: "The majority of residents saw their future life opportunities being intimately linked to their neighbourhood and its fortunes. This casts doubts on the feasibility of the current policy focus on housing and labour market mobility as a response to poverty; rather, it emphasises the centrality of neighbourhood change" (ibid: 27).

Pennington et al (2010) also identify community-level impacts in their analysis of the Decent Homes Programme in Salford. In addition to noting the importance of a well-maintained physical environment in reducing fear of crime and enhancing feelings of safety, they find evidence that improvement to the general physical environment can enhance feelings of community pride and identity. They note that: "Good communication, high standards of work, good maintenance and high levels of community engagement/involvement in decision making will maximise positive impacts" (ibid: 117). They also note the potential role of urban green space in enhancing mental health, promoting physical activity and promoting social cohesion. However, they caution: "Poorly maintained general physical environments may have negative impacts on health and wellbeing, for example, reduced use/physical activity as a result of raised levels of fear of crime or increased physical injuries" (ibid: 114).

Green and Pugh (2008) consider the Decent Homes Programme in Sheffield to have potential to revitalise not only individual properties, but also the liveability of entire neighbourhoods.

Drawing on their wider academic work in this area (for example Green, Grimsley and Stafford 2006), they argue investment in the social rented sector can act as a catalyst for all homes in a neighbourhood. They note a mechanism by which: "Unhealthy people tend to have low incomes, gravitating to deprived neighbourhoods where poor 'liveability' is reflected by lower housing costs. They then experience an additional 'neighbourhood effect''. Air pollution and deprivation impact more on the health of lower income residents" (Green and Pugh 2008: 6). They argue that, by investing in the social rented sector, greater security, improved social cohesion and a better living environment can be secured for all residents. In a related study, Gilbertson, Green and Ormandy (2006) argue the Decent Homes Programme in Sheffield performs a social justice function: "By especially involving health and quality of life in the poorest neighbourhoods of Sheffield, the Decent Homes Programme will help integrate the occupiers of Sheffield Council dwellings into the mainstream economic and social life of the city" (ibid: 2).

Hickman et al (2011) provide the most comprehensive study of neighbourhood and community-level impacts from the Decent Homes Programme. They report mixed results, where some neighbourhoods experienced significantly increased levels of tenant satisfaction with the area where they lived, while other neighbourhoods saw declining overall satisfaction after improvement works were carried out. They found satisfaction with parks and open spaces, positive feelings about bringing up children in an area and overall quality of life all improved, but not consistently between different neighbourhoods in the study area. In some respects, this might be attributed to declining 'neighbourhood infrastructure' in some areas, for example: "the closure of important and valued places for social interaction, such as pubs, shops, and cafes" (ibid: 60). It is even argued that warmer, more comfortable housing may result in a declining sense of neighborliness and community in parts of Wakefield, because it encourages people to spend more time in their home.

Bennington et al (2011) also identify wider community-level benefits associated with the Decent Homes Programme: "These included boosting economic development through the provision of local jobs and training (sometimes targeting disadvantaged groups such as unemployed people, members of black and minority ethnic communities, and women); through the use of local suppliers; involvement in community initiatives; and links to neighbourhood regeneration schemes" (pp 24). Community-level benefits are more difficult to assess, especially in areas where social housing forms the minority of properties: "One submission, for example, highlighted that local authority stock exceeded 40 per cent in only one Census Enumeration District in the local authority area; in this case it would be hard to identify plausible relationships between Decent Homes investment and wider social outcomes" (pp 24).

Dayson et al (2013) consider the impact housing associations in northern England have on their local economies. They found property refurbishment and major repairs and maintenance by housing associations were major contributors to local economies. Two thirds of spending on construction was retained in the northern England economy, generating almost half a billion pounds per annum in the region. Such is the economic significance of housing associations that almost 2% of GVA in northern England can be attributed to them. Furthermore, they estimate that every job in a housing association supports 1.8 FTE jobs in the wider Northern economy.

In our conceptual model of impacts from the Decent Homes Programme in Bracknell, we saw the most direct potential for change in tenants' health and wellbeing. Three broad areas emerge from the academic and policy literature: the warming of cold homes, improved outcomes in

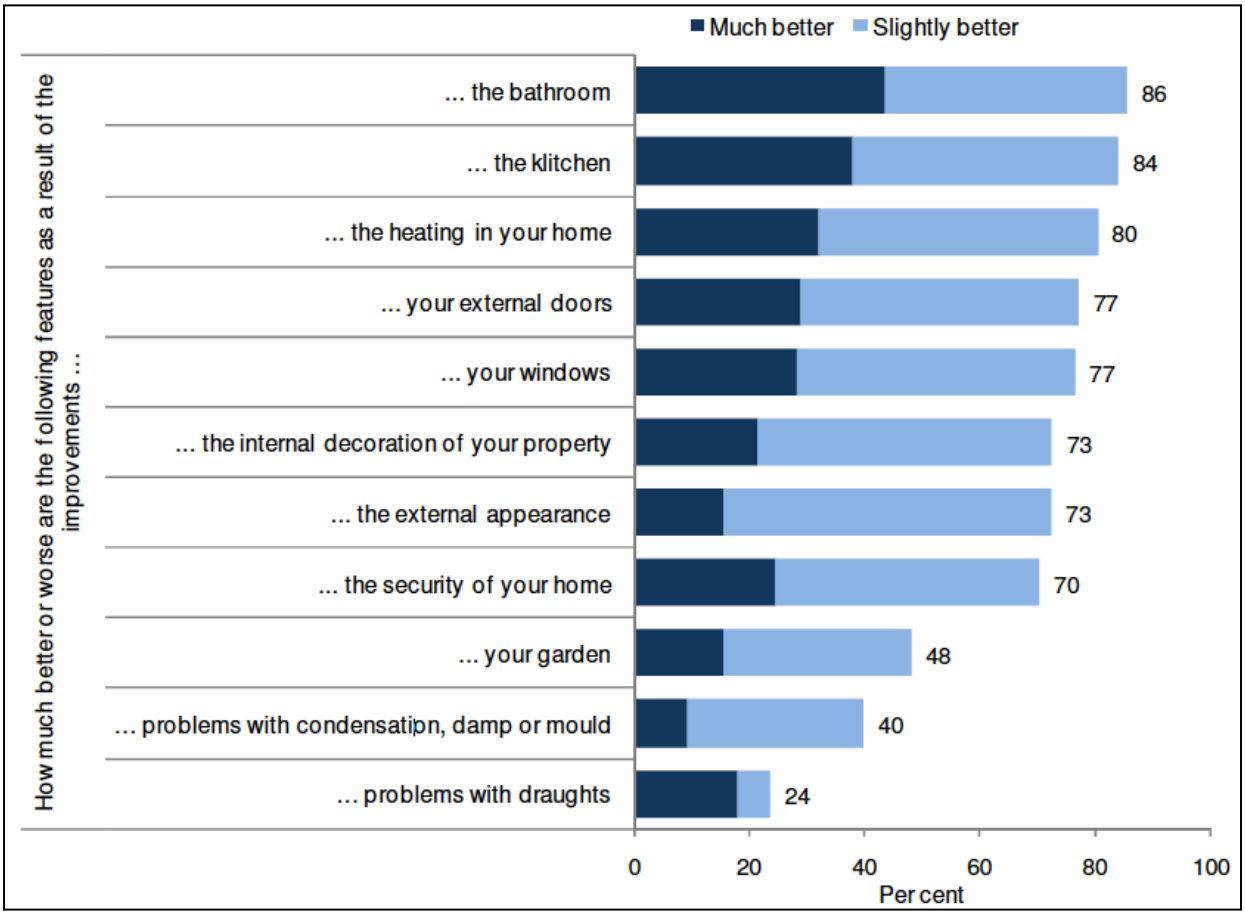
relation to injury, accident and safety, and greater social inclusion. These are areas where tangible social and financial benefits have been observed in other studies. We also note potential for change in the economy and efficiency of properties and for neighborhoods and communities, although in both cases the evidence we reviewed presents more mixed messages and change is less-readily attributable to specific interventions.

2.5 Measuring Impacts from the Decent Homes Programme

2.5.1 Tenant Satisfaction

Hickman et al (2011) provide a comprehensive analysis of outcomes from the Decent Homes Programme. Their study of Wakefield and District Housing Association's Decent Homes Programme found 70% of tenants considered at least eight of eleven possible improvements to have directly improved their home. More specifically, they found 86% of tenants rate the bathroom as much or slightly better, but only 24% of tenants rate their home as less draughty (see figure 2.5). However, the authors warn that when considering less tangible improvements like reduced draughts, damp and mould, tenants are likely to be less certain about the level of improvement than for more tangible benefits like a new kitchen. Furthermore, they argue it is difficult to separate out the impact of the improvement programme from other potential factors, like rising energy costs or personal experiences of crime.

Figure 2.5: Perceived Impact of Decent Homes Programme Improvement Works in Wakefield (source: Hickman et al 2011: 31)



The Department for Communities and Local Government commissioned a national review of evidence about the impacts of the Decent Homes Programme (Bennington et al 2011). This review found very high levels of tenant satisfaction with improvements, typically over 90%. The main impacts were, unsurprisingly, in relation to the physical condition of properties. In particular, satisfaction with kitchen and bathroom improvements often exceeded 95%. Tenant satisfaction tended to be lower while improvement works were being carried out, but increased afterwards as changes and improvements bedded in. Pennington et al (2010) found disruption during improvement works disproportionately affected vulnerable tenants including elderly people and children. For example, indoor air pollutants associated with the work, like paint fumes and dust, may impact on the health of vulnerable people in the short-term. Stress, associated with anticipating and experiencing work, may also have negative mental health effects (see also Gilbertson, Green and Ormandy (2008)).

Notwithstanding high levels of tenant satisfaction, Bennington et al (2011: 142) identify two groups of persistently dissatisfied tenants. They note: "By some distance, the most prevalent issues causing instances of dissatisfaction were the high expectations created by the Decent Homes Programme in some areas and the specific criteria of the Decent Homes Standard, which meant that some properties were excluded from the programme". In some respects, detailed consultation about improvement works might work against tenant satisfaction, if it creates levels of expectation that cannot be sustained.

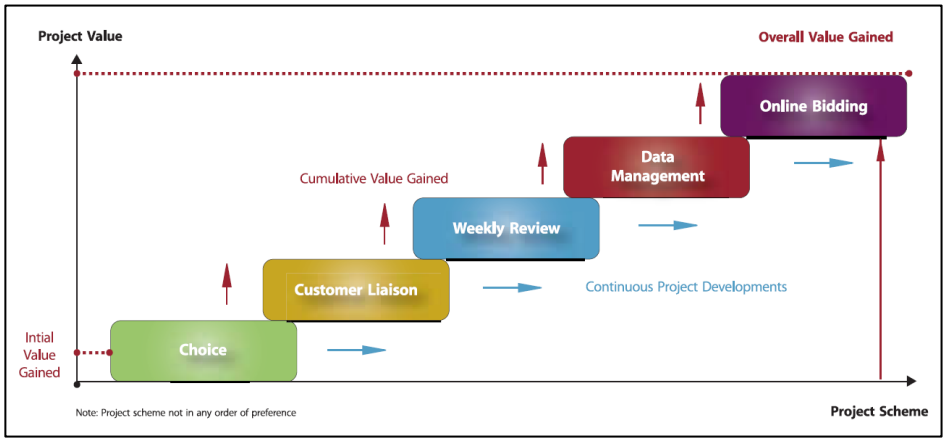
Minimising dissatisfaction is important to the long-term sustainability of improvement works. For example, Bennington et al (ibid.) argue minimising 'refusals', whereby tenants of non-decent properties may not allow work to be carried out, is fundamental to achieving improvements in a very high proportion of properties. If tenants have experience of unsatisfactory work, either directly or through friends and neighbours, they may be more likely to refuse further work.

2.5.2 Tenant Involvement in the Decent Homes Programme Process

The Decent Homes Programme aimed to make sustainable improvements to properties. In part, this related to using good quality materials that would last a reasonable length of time. However, the Decent Homes Programme took a wider view of sustainability, for example by engaging tenants in the decision-making process to ensure their long-term needs were met. By allowing tenants to choose design features: "respondents felt that they were able to achieve a level of tenant commitment, which would in turn give them a degree of ownership over the programme. This would make tenants more likely to maintain their homes" (Bennington et al 2011: 77).

For Birmingham City Council, tenant participation needs to be embedded in the whole project management process. Relationships between tenants and contractors, in terms of managing shared expectations and reviewing and enhancing performance, are both important in this respect. They identify five phases, from customer choice, participation and liaison, through the monitoring of stakeholder relationships by weekly review, through to using data created to maximise efficiency and inform the contractor bidding process (see Figure 2.6).

Figure 2.6: Model of customer engagement in Decent Homes Programme process (Source: Office for Government Commerce 2006: 5)



While Office for Government Commerce (2006) and Bennington et al (2011) focus on the economic imperative for customer engagement, others highlight the importance of participation for tenants' psychological wellbeing. For example, Gilbertson, Green and Ormandy (2006) argue there are four stages in the Decent Homes Programme, each associated with different emotional reactions from tenants. This includes 1) The planning stage; 2) Consultation; 3) Work being carried out; and 4) Settling in. They argue that, while the process of carrying out improvement work tends to impact on tenants' physical health during stage 3, every stage has the potential for emotional impact affecting tenants' mental health. In this sense, not only are the outcomes of the Decent Homes Programme important to tenant satisfaction, health and wellbeing, but the management of the improvement works also plays a role. A well-managed programme, in which tenants are stakeholders, is likely to be less stressful in the short-term and to deliver greater sustainability in the long-term.

2.6 Summary

The academic and policy evidence reviewed suggests that housing improvements can have very significant effects on the everyday lives of tenants. The most obvious and well-established effects derive from improvements to housing warmth and to the costs and ease of supplying such warmth. However, improvements to the efficiency of cooking and bathing through providing new equipment, layouts, materials and design of bathrooms and kitchens can have impacts on the effort and safety of cooking and bathing that will also have beneficial health effects. The specific example of heating suggests that reductions in the costs of upkeep will be realised as improved standards of living rather than simply as a reduction in monetary outgoings. In particular there is evidence that heating improvements can lead to better social relationships in the household through new uses of the space of the dwelling. Changes that create a reduction in fear of crime through better home security may also have beneficial impacts on health although it should be noted that fear of crime is not strongly related to incidence of crime. It is also evident that changes in the appearance and social acceptability of a dwelling and its rooms may have effects on wellbeing through improved perceptions of social approval and hence better self-esteem. The evidence we reviewed suggests the relative impact of improvement works on warmth, safety and security and social inclusion is very context-specific. In areas with high crime rates, home security improvements have greater impact than insulation and heating, even though the majority of evidence suggests a warm home is more important in promoting good health.

Evidence also suggests benefits in terms of the economy and efficiency of the property. This is most clearly evident in monetary terms, for example in reducing running costs and addressing fuel poverty. However, we note the relationship between better energy efficiency and lower fuel bills is not straightforward and several studies have found energy savings to be surprisingly small. We have also reviewed evidence suggesting tenants in modernised and improved properties are more likely to spend their own money and time on maintenance when they feel this effort is worthwhile. At the neighbourhood and community level, the impacts of investment in properties are less clearly evidenced. Although there is clear potential for wider change to be effected, this is mediated by the low density of improved housing in some neighbourhoods and by reduced reliance on community facilities once homes are warmer and more comfortable to live in.

Finally, we reviewed outcomes directly relating to the Decent Homes Programme improvement process. Although some considered the Decent Homes Standard to be low, levels of tenant satisfaction with the consultation, planning and work phases, and with the overall outcome in their home, are generally very high. This may be because many investment programmes made improvements that exceeded the Decent Homes Standard. We note the difficulty one comparable study had in determining which outcomes were the result of improvement work and which were caused by other factors. Tenant engagement in the improvement process is an important determinant of success, in terms of customer satisfaction and as a way of ensuring the sustainability of the Decent Homes Programme.

Chapter 3: Methodology

3.1 Aims

This research project aimed to find out what impacts the improvements to Bracknell Forest Homes (hereafter BFH) housing had, on both residents and the wider community.

We had five main objectives:

1. To assess the social and economic impact of the investment programme
2. To identify both a) quantifiable outputs and b) wider outcomes
3. To consider impacts on BFH customers
4. To assess contributions to BFH targets and priorities
5. To produce recommendations and learning points

In addressing these objectives, we designed and implemented a three-stage research approach:

Stage 1: We identified existing studies and secondary data that allow us to estimate the likely effects of the improvements on such outcomes as death rates, morbidity rates, and accident rates. This type of approach is the one most commonly used in the studies we have reviewed in the previous Chapter and we have drawn on their methods and sources to provide comparable data. We also used statistical and financial data provided by BFH and their contractors, to assess the impact of the major works programme on the local economy of Bracknell Forest.

Stage 2: We carried out a house to house sample survey of residents who had had housing improvements under the Decent Homes Programme. Although many studies have used data on housing satisfaction to assess the effectiveness of Decent Homes Programme improvements few have carried out a detailed survey of residents which examines the various impacts of different improvements. Estimates of health impacts have also largely depended on using national figures to estimate the probable local effects. We decided to see if self-reported health impacts were evident.

Stage 3: We carried out telephone interviews with a subsample of those who had answered the questionnaire and said they were willing to talk to us. The interviews were designed to supplement the questionnaires with more in-depth information on people's experiences, attitudes and feelings – information that a questionnaire is not designed to elicit (King and Horrocks 2010, Bryman 2012).

3.2 Secondary information

We drew on a wide range of government and other official statistics to build a picture of Bracknell in 2012. This includes understanding how the character of Bracknell has changed over time. It also includes comparing Bracknell Forest to other nearby and similar places. This analysis forms an important context to our empirical study.

Our analysis took two forms. First, we profiled the Bracknell Forest local authority area through internal comparisons between wards. Second, we carried out external comparison with a range of similar and nearby places. Four sites of external comparison were selected:

1. Local authorities in the former county of Berkshire. Although Berkshire is an economically and socially diverse place, a comparison between Bracknell Forest and other proximate local authorities is still important, especially when considering the performance of the local labour market, property values and other indicators that have a sub-regional dimension.
2. The South East statistical region. Bracknell is near the centre of this large region, which extends from Dover round the south and west of London to Milton Keynes. Like Berkshire, the South East is characterized mainly by its diversity. However, this area provides important economic context for the Bracknell Forest data.
3. England. Many of the data we use in this section are not collected at the United Kingdom scale. England offers the highest level geographical context against which to benchmark Bracknell Forest.
4. New Towns in Southern England. This is a spatially discontinuous but highly relevant group, which compares Bracknell to places that have similar historical characteristics. Although they subsequently followed different socio-economic trajectories, all had high volumes of new housing stock constructed quickly, in a short time-period, to a highly specified master plan. This makes New Towns a particularly useful comparator for indicators relating to the quality of the built environment. The New Towns are: Basildon, Corby, Crawley, Harlow, Hatfield, Hemel Hempstead, Stevenage and Welwyn Garden City.

The list of possible variables on which to base the benchmarking process is potentially very long. We focus on three main themes, which we feel best contextualise the tenant satisfaction survey and telephone interviews we carried out. These are: Health and Wellbeing, Economy and Efficiency and Neighborhood and Community. Within each theme, a range of specific indicators are used (see Table 3.1).

Table 3.1: Indicators Chosen for Benchmarking

Theme	Indicator	Source
Personal Wellbeing	Life Satisfaction & Happiness	Annual Population Survey
	NHS Mental Health Referrals	NHS Information Centre
	Limiting Long Term Illness	Census 2001/2011
	Fuel Poverty	DECC
Home and Property	Property Values and Sales	Land Registry
	Domestic Energy Use	DECC
	Property Crime	Home Office
	Indoor Living Environment	Indices of Multiple Deprivation
Community and Economy	Barriers to Housing / Services	Indices of Multiple Deprivation
	Economic Inactivity	Annual Population Survey
	Median Gross Weekly Pay	Annual Survey of Earnings
	Deprivation Concentration	Indices of Multiple Deprivation

3.3 Primary Information

3.3.1 Survey of Tenants

We decided to carry out a questionnaire survey in order to ask individuals about their opinions of the improvements to their dwellings. A questionnaire survey allows one to collect quantifiable information on attitudes and opinions from a large group of people in an identical and replicable manner. It is thus ideal for situations in which you wish to canvass opinions from a large number of people and to be able to summarise the main features of their opinions simply.

Questionnaires do have limitations – most notably that it is the researcher who decides the questions to ask and often the possible answers that can be given. This can make it difficult for respondents to express opinions or to tell the interviewer about incidents that are not covered in the survey instrument. Questionnaires can also force respondents to make a clear choice of response and hence can obscure situations where people have complex and contradictory feeling about an issue (King and Horrocks 2010, Bryman 2012). Because of these limitations we supplemented the questionnaire with the telephone interview survey. This approach is discussed further below.

Our questionnaire survey was directed at residents in the BFH dwellings that had been offered at least one improvement. BFH provided us with a list of properties that met this criterion and we decided that a 10% sample of these would be large enough to provide reliable estimates of the attitudes of tenants and of important sub-groups of tenants such as the elderly and people with children.

Bracknell is divided into distinct estates each of which was built at a different period with different housing designs and road layouts. In addition BFH has properties in a number of smaller settlements around Bracknell. The estates in Bracknell are: Birch Hill, Bullbrook, Crown Wood, Easthampstead, Forest Park, Great Hollands, Hanworth, Harmans Water, Home Farm, Priestwood 1 and Priestwood 2, Town Centre, Wildridings. The estates in smaller settlements are: Ascot, Binfield, College Town, Crowthorne, Little Sandhurst, Owlsmoor, Sandhurst, Warfield, and Winkfield.

The list of properties was organised by estate and we decided that we would stratify the sample by estate and take a 10% sample of the properties on each estate. The list of properties also included details of eight types of accommodation - House, Flat, Bedsit, Bungalow, Elderly Flat, Sheltered House, Sheltered Flat, and Sheltered Bungalow. In order to ensure that we achieved a representative sample of household types we decided to also stratify our sample by type of accommodation.

The questionnaire was piloted during August 2012 and a number of amendments were made to reduce its length and improve its intelligibility. The questionnaire was finalised in early September and eight researchers administered it during September and early October 2012. We aimed to sample 10% of properties, based on an address list supplied by BFH. The sample was structured first by estate and then by street. Researchers were given lists of approximately 20 properties in a neighbourhood, from which they were asked to obtain two interviews. We excluded the estates in smaller settlements from our study because these had too few properties to generate reliable data from a 10% sample. The total number of properties in the

target estates was 4597 and we achieved 411 usable questionnaires, giving an overall response rate of 8.94%.

The questionnaire sought information on the types of improvements offered, whether these had been accepted, and, if refused, why. It also asked respondents to rate different aspects of each improvement; to describe any health impacts; to rate the process of having the work done using questions that had been asked in other studies; and to identify and rate any changes in the neighbourhood since the work was done using a form of question taken from the English Housing Survey. Respondents were also asked questions about the members of the household; the ages and employment status of household members; and the overall household income. At the end respondents were also asked if they would be willing to take part in an interview with us. A copy of the final questionnaire is given in Appendix 1.

3.3.2 Telephone Interviews

These semi-structured interviews sought more qualitative information on people's feelings and emotions concerning the house improvements; on the efficiency of the heating, its impacts on their activities and the experience of having the work carried out. The interviews were recorded.

Interviews are a commonly used method in the social sciences, which are considered to provide insight into peoples' complex and sometimes contradictory opinions, feelings and emotions (King and Horrocks 2010, Limb and Dwyer 2001). They are sometimes described as '*conversations with a purpose*'. We used semi-structured interviews, where a list of topics is used as a guide for the interview. However, if the interviewee raises new issues or starts to talk about an issue that comes up later in the topic guide the interviewer will follow the flow of conversation and let the interviewee talk. The advantages are that the topics of interest to the researchers are tackled but the interviewee is not strongly constrained to only talk about the items or questions raised by the researcher. Issues that the researcher had not expected may emerge and interviewees are free to express their opinions and feelings in their own fashion.

The disadvantages of interviews are that they can be time consuming and thus far fewer people can be contacted than with questionnaires. The ways in which a topic is introduced will vary between interviews and it is possible for the interviewer to influence the responses if questions are asked in a biased manner. Respondents can feel socially obliged to respond even when they do not want to and can give deliberately misleading information. Part of the skill of conducting and analysing interviews lies in being aware of these possibilities and avoiding leading questions, coercing interviewees, and being sensitive to the ways in which the interviewee may be interpreting the interview situation (King and Horrocks 2010, Limb and Dwyer 2001).

Long interviews are usually transcribed verbatim and then analysed by identifying recurring themes and concepts (Silverman 2006). In this case the interviews were short – about 10 minutes maximum – so we identified themes from listening to the recordings which were used as the material to analyse. We then partially transcribed the relevant excerpts from the interviews. 52 people said they were willing to be interviewed. We interviewed 26 people. Some people could not be contacted because they did not reply, their phone numbers were not valid or they had moved. We judged that the sample we interviewed was adequate since after about 20 interviews we found repeating themes and no new issues emerged. A copy of the topic guide is given in Appendix 2.

3.3.3 Characteristics of Survey Respondents

Just over a third (36%) of those answering the survey were men and nearly two thirds (64%) were women. This is not unexpected since more women than men work part-time and are hence more likely to be at home when an interviewer calls. However, this proportion differs from the gender balance of BFH tenants (see below). Also since a high proportion of residents were over 70 year old (see below) we would expect more women than men since women have higher life expectancy than men. Almost all the respondents (95%) were White British. This is comparable with the BFH Tenants Survey 2009, which found at least 93% of BFH tenants were white.

Table 3.2 gives details of the ages of respondents. There was a high proportion of elderly people in the sample. 30% of respondents were over 70. This is higher than the proportion of BFH tenants over 70 (25%) and very much higher than the proportion of the population of England and Wales that is over 70 which was 12% in the 2011 Census and about 9% in Bracknell.

Table 3.2: Age of Respondents

Age group	% of respondents[1]
Under 20	2
20-29	7
30-39	13
40-49	17
50-59	14
60-69	15
70-79	16
80+	14

[1] % may not sum to 100 because of rounding errors
12 people did not respond

Table 3.3 and 3.4 give information on the types of household in which respondents were living. Nearly 40% of households were single people and just over half of these were over 70. Nearly 1 in 3 households included children and about 1 in 5 were couples without resident children. Households with 'related adults' were couples or single parents living with adult children.

Table 3.3: Household Type

Household type	Number of households	% of households[1]
Single person household	152	37
Couple alone	90	22
Couple with children	77	19
Single parent with children	41	10
Related adults	42	10
Couple and non-related adults	1	0.2
3 generation family	1	0.2
No Response	7	2
Total	411	100

[1] % may not sum to 100 because of rounding errors

Table 3.4 shoes the proportion of elderly respondents living in different household types. About half of single person households were of people of 70 or more while two thirds of households in which the respondent was 70 or more were single person households. In other words there was a high proportion of people over 70 years old in the sample and many of them lived alone (64% of people over 70 were living alone).

Table 3.4: Age and Household Type

	Respondent Under 70		Respondent 70 and over	
	No	% of sample[1]	No	% of sample[1]
Single person	72	18	77	19
Couple	51	12	38	9
Couple with children	75	18	0	0
Single parent with children	41	10	0	0
Related adults	37	9	5	1
Unrelated adults	1	0.24	0	0
Three Generation household	1	0.24	0	0
Total	278	68	120	29

[1] % may not sum to 100 because of rounding errors
13 people did not respond

Table 3.5 gives details of the employment status of respondents. Given the high proportion of people over 70 in the sample it is not surprising that a high proportion (42%) were retired. About a third (32%) of respondents was employed. In households with a second adult member 26% of second adults were retired and 48% were in employment. Amongst those who had not retired 15% of respondents and 11% of second adults were unemployed. This is a relatively high rate, given the unemployment rate for Bracknell Forest in September 2012 was 5.3% (Nomis2012). However, this is not unexpected for tenants in social housing.

Table 3.5: Respondents' Employment Status

Employment status	% respondents	% other household members[1]
Self employed – full time	4	6
Self employed – part-time	3	5
Employed full time	16	30
Employed part time	9	7
Unemployed	8	8
Retired from paid work altogether	42	26
On maternity leave	1	0.4
Looking after family or home	7	5
Full time student/at school	1	5
Long term sick or disabled	8	7

[1] We asked respondents about the employment status of other household members
9 people did not respond

Table 3.6 shows the majority of respondents were on low incomes. For example, 40% were on less than £200 per week and 17% on more than £200 but less than £400 per week. A third of the respondents were either unwilling to tell us, or said they did not know, their income. If these respondents are omitted from the calculation, 26% of respondents are on less than £100 per week. Since there is no reason to suppose that those who did not answer are better off than those who did do so it is reasonable to assume this higher figure, represented by the percentage of responding households in Table 3.6, is correct.

Table 3.6: Household Income of Respondents

Income Group	% households	% responding households
Less than £100 per week	17	26
Over £100 but less than £200 per week	23	34
Over £200 but less than £300 per week	10	15
Over £300 but less than £400 per week	8	11
Over £400 but less than £500 per week	4	5
Over £500 but less than £600 per week	2	3
Over £600 but less than £700 per week	2	3
Over £800 but less than £900 per week	1	1
Over £900 but less than £1000 per week	1	1
Over £1000 per week	0.2	0.4
Don't Know	21	-
Don't want to say	12	-
Total	396	264

15 households did not respond

Table 3.7 shows income groups by age. It is evident that those over 70 years old are almost all on low incomes and also that they were more willing to tell us their income.

Table 3.7: Household Income by Age Group

	% of households responding	
Income Group	Under 70	Over 70
Less than £100 per week	8	37
Over £100 but less than £200 per week	15	40
Over £200 but less than £300 per week	13	3
Over £300 but less than £400 per week	9	3
Over £400 but less than £500 per week	4	2
Over £500 but less than £600 per week	3	0
Over £600 but less than £700 per week	3	1
Over £800 but less than £900 per week	0.7	0
Over £900 but less than £1000 per week	0.7	0
Over £1000 per week	0.4	0
Don't Know	27	8
Don't want to say	15	6

25 households did not respond

Similar results are shown in Table 3.8 in which the house types are categorised as houses, flats and bedsits, or bungalows and sheltered housing. As we might expect, those living in bungalows and sheltered housing are also far more likely to be on low incomes than those in houses, ordinary flats and bedsits.

Table 3.8: Household Income by House Type

	% of households responding	
Income Group	Houses, Flats, Bedsits	Bungalows, Sheltered etc.
Less than £100 per week	12	32
Over £100 but less than £200 per week	20	31
Over £200 but less than £300 per week	12	5
Over £300 but less than £400 per week	9	3
Over £400 but less than £500 per week	4	2
Over £500 but less than £600 per week	3	1
Over £600 but less than £700 per week	3	1
Over £800 but less than £900 per week	1	0
Over £900 but less than £1000 per week	1	0
Over £1000 per week	0	1
Don't Know	22	18
Don't want to say	14	8

15 people did not respond

3.3.4 How representative is the sample?

We have already seen that the proportion of people of white ethnicity in our sample is broadly consistent with the proportion amongst all BFH tenants. We found that a higher proportion of our respondents were women than for the BFH tenant population as a whole (64% in our sample, 57% for BFH overall). This discrepancy may have arisen for two reasons. First, we were more likely to find the woman at home, because we carried out the survey during daytime and more women than men work part-time. Secondly, we also over-sampled older residents (see below) and a higher proportion of those over 70 are women.

We also looked at other data to see if our respondents were broadly representative of BFH tenants or social housing tenants more generally. In Table 3.9 we compare the age groups of our respondents with the profile for BFH tenants and in Table 3.10 with the profile for Housing Association tenants in England taken from the English Housing Survey. Comparison with the BFH data suggests that we slightly under-sampled those in their 20s and over-sampled those in their 70s and 80s – but also under-sampled those over 80. For most age categories our sample was similar to that of the English Housing Association tenants but again older people were over-represented as we had more respondents over 65 and slightly fewer under 45.

This age distribution of our survey respondents probably results from fewer younger people than older people being at home when our researchers called because more of the former are in paid work. The under-representation of those over 80 is probably a result of this group of people being less willing to respond to a doorstep interview. The differences are not so large as to skew

our results in a problematic way but we have looked at the effect of age carefully in order to allow for the over-representation of people in their 70s and 80s in our subsequent analyses.

Table 3.9: Age Comparison of Respondents and all Bracknell Forest Homes Tenants

Age group	% respondents[1]	% BFH tenants[1]
Under 18	1	0.1
19 to 24	4	4
25 to 29	4	6
30 to 39	13	14
40 to 49	17	17
50 to 59	14	14
60 to 69	16	14
70 to 79	16	13
80 to 84	9	5
85 and Over	5	7
Unknown	3	6

[1] % may not sum to 100 because of rounding errors

Table 3.10: Age Comparison of Respondents and all Housing Association Tenants

Age group	% BFH Tenants	% all English HA Tenants[123]
16-24	5	6
25-34	11	14
35-44	15	18
45-54	17	17
55-64	14	15
65-74	16	13
75 and over	21	17

[1] Age of household reference person
[2] Source: English Housing Survey: Table FA101 (S418)
[3] % may not sum to 100 because of rounding errors
12 people did not respond

We did not have data from BFH on household type or employment status. However, we have been able to compare our results to those from the English Housing Survey. As Table 3.11 shows, a comparison with English Housing Association tenants suggests that we oversampled couples with children and multi-person households and under sampled single parent families. As we noted above the majority of the multi-person households in our survey were parents with adult children (usually young adult children). Finally a comparison with data on employment from English Housing Association tenants (Table 3.12) suggests that we under sampled those who were economically inactive and perhaps oversampled the retired.

Table 3.11: Household Type of Respondents

Household type	No of households	% BFH Households [2]	% all English HA Households [1 2]
Single person household	152	37	43
Couple alone	90	22	17
Couple with children	77	19	15
Single parent with children	41	10	16
Other multi–person household	44	11	9
No response	7	2	--
Total	411	100	100

[1] Source: English Housing Survey: Table FA101 (S418)
[2] % may not sum to 100 because of rounding errors

Table 3.12: Employment status of Respondents

	% respondents	% other people[1]	% all English HA Households[2]
Working full time full time	20	36	24
Working part-time	12	12	9
Unemployed	8	8	8
Retired	42	26	33
Other economically inactive	17	16	26
No response	9	2	--

[1] We asked respondents about the employment status of other household members
[2] Source: English Housing Survey: Table FA101 (S418)

Finally, we considered to what extent the households we sampled were representative of the types of improvement works carried out by BFH overall. Table 3.13 summarises the work completed by BFH by May 2012, and compares our sample to this overall population. We focused on the properties where improvement work had taken place, meaning that the age of properties with each type of improvement is higher in our sample than for the entire BFH estate.

Table 3.13: Comparison of Improvements between Sample and all BFH Properties

	Number of BFH houses improved	% of BFH houses with improvement	Number in sample with improvement	% of sample with improvement
New Bathroom	3,673	67.3	300	76
New Kitchen	3,356	61.5	276	71
New Windows / Doors	1,558	34.9	315	69
New Heating System	3,255	59.6	280	62

In summary, although there are differences between our sample and BFH tenants and English Housing Association tenants these are not extreme differences. Similarly, although we oversampled properties where work was carried out, the focus of this project was intended to be on these properties. We have borne this in mind, as well as the over-representation of older people in our sample, when assessing our results.

3.4 Research Ethics

Our research project was assessed and approved by the University of Reading Research Ethics Committee. We designed, implemented and reported our research with due regard to the confidentiality of personal information and the rights of respondents to anonymity and data protection.

All research participants, including survey and telephone interview respondents, were assured that everything they told us would be confidential. We sought and recorded the explicit consent of participants before beginning the surveys and interviews. Our interviewers were trained to terminate the interview if the participant asked to stop, of if they appeared to be unhappy with any of the questions. This was particularly relevant to questions on income and personal health, which we felt might make some people uncomfortable. The telephone interviews were potentially more intrusive, because we asked more detailed questions about people's opinions and personal circumstances. However, these interviews were only carried out with people who had given us prior permission to contact them. We also gained consent to record the telephone interviews.

We guaranteed the security of our research data, and prevented the disclosure of individual details, in several ways. We did not record any names in the questionnaire or interviews. Quantitative data were aggregated to prevent the identification of individual responses, while quotes from telephone interviews were anonymised by redacting personally specific or highly sensitive information. We held all data securely in password protected University computer systems and locked offices. On completion of the project and after final delivery of the report, all telephone recordings and completed surveys were destroyed.

We guaranteed that answers, options and personal details, including information on who participated in the research and who refused to participate, would not be revealed to BFH or any other organisation.

Chapter 4: Benchmarking Bracknell

This Chapter draws on a wide range of official statistics and other secondary sources to build a picture of Bracknell and its population in 2013. The purpose is to set the scene for the survey and interview research we carried out in Bracknell. Other studies show the importance of understanding the study area when determining the impacts of housing investment. For example in Chapter 2, we noted the importance of local context in shaping the main health and wellbeing benefits of investing in new windows and doors. This Chapter provides an introduction to Bracknell, organised by the three themes we focus on throughout this report: health and wellbeing, economy and efficiency; and neighbourhood and community. Figure 4.1 visualises the data we selected for each thematic area, showing areas of connectivity between sources. We note that fuel poverty intersects with health and wellbeing and economy and efficiency, that indoor living environment links economy and efficiency to neighbourhood and community and that property crime and home security is both a neighbourhood and health issue.

Figure 4.1: Conceptual Model of Relationships between Benchmarking Datasets

Our benchmarking exercise works in two main ways. First, we compare Bracknell Forest local authority area to similar and nearby places. This includes other Unitary Authorities in the former administrative county of Berkshire, New Towns in Southern England, South East England and England as a whole. Secondly, we compare wards within Bracknell Forest. This is important because Bracknell Forest Homes properties are more concentrated in some parts of the local authority area than others, and because some parts of the local authority area appear to perform better than others in relation to our benchmarking criteria.

In selecting the benchmarking data, we have been guided by both conceptual and practical considerations. Conceptually, out selections are informed by the academic and policy evidence

review in Chapter 2. For example, fear of crime is widely understood to affect mental health, so we collect data on reported burglaries and access to NHS mental health services in Bracknell Forest and comparable places. We also take into account practical considerations, like what information is available for an appropriate date and geographical scale. The availability of contemporary, local data from Census 2011 and English Indices of Deprivation 2010 are particularly helpful from a practical perspective.

4.1 Health and Wellbeing

We find Bracknell Forest to be a generally healthy place, with relatively high levels of personal wellbeing and life satisfaction. We understand some people are experiencing poor health and emotional hardship in Bracknell Forest and we are not suggesting this is a trivial matter. However, at an aggregate level, Bracknell Forest compares well to other places. When considering the overall impact of housing improvements on public health and wellbeing, the community-level picture is more important than the particular circumstances of individuals.

Table 4.1 analyses the Office for National Statistics Annual Experimental Subjective Wellbeing Survey, which began in April 2011. Participants were asked to rate various aspects of their emotional wellbeing, on a scale from 0-10. Life satisfaction and feeling things are worthwhile are comparable between Bracknell Forest and other places. People in Bracknell are marginally less likely to feel anxious than those in England as a whole. Overall, we find life satisfaction in Bracknell is typical of Berkshire and Southern England. Data for non-unitary local authorities is not available for this measure, so we cannot make a comparison with other Southern New Towns.

Table 4.1: Life Satisfaction and Wellbeing, 2012

	Where 10 is 'completely' and 0 is 'not at all'			
	Satisfied[1]	Worthwhile[2]	Happy[3]	Anxious[4]
Bracknell Forest	7.41	7.59	7.31	3.07
Berkshire UAs	7.42	7.65	7.33	3.14
Southern New Towns	n/a	n/a	n/a	n/a
South East England	7.5	7.75	7.35	3.08
England	7.4	7.66	7.28	3.15

[1]Overall, how satisfied are you with life nowadays?
[2]To what extent do you feel things in your life are worthwhile?
[3]Overall, how happy did you feel yesterday?
[4]Overall, how anxious did you feel yesterday?
Source: ONS Annual Experimental Subjective Wellbeing Survey

Table 4.2 shows the proportion of resident population accessing NHS Mental Health Services. In Bracknell Forest, these are services provided by the Berkshire Healthcare NHS Foundation Trust, including inpatient care, community rehabilitation, day clinics, drop-in centres and the like. We note a higher proportion of Bracknell Forest residents used these services in 2010-11 than for Berkshire and South East England. The rate was marginally higher than for other Southern New Towns and England as a whole.

Table 4.2: Percentage of Population using NHS Mental Health Service 2010-11

	Number	% Using Mental Health Service[1]
Bracknell Forest	3,186	2.73
Berkshire UAs	16,314	1.89
Southern New Towns	18,843	2.48
South East England	184,619	2.17
England	1,259,650	2.41

[1]Percentage of residents using NHS services in last year

Source: NHS Information Centre 2012

Table 4.3 shows that, notwithstanding the mental health data above, levels of long-term limiting illness in Bracknell Forest are low. We note this information comes from Census 2011, so includes a very large sample size but relies on self-reporting (whereas Table 4.2 uses clinical admissions data, which may give a more accurate health assessment). Bracknell Forest has rates of long-term illness comparable with those found elsewhere in Berkshire, which are low by regional standards and far lower than those for England. Places with high levels of long-term illness tend to be those experiencing greater economic hardship, having historical associations with heavy manufacturing and extractive industries; neither applies in most of the South East. We note Bracknell Forest has a lower rate of long-term illness than other Southern New Towns, and in this respect see it as more similar to Berkshire towns than other New Towns.

Table 4.3: Percentage of Resident Population with Long-Term Limiting Illness (LTLI), 2011

	% with LTLI
Bracknell Forest	12.3
Berkshire UAs	12.7
Southern New Towns	15.9
South East England	15.7
England	17.6

Source: ONS Census of Population

Fuel poverty is widely understood to be a contributing factor to poor health because of its associations with cold housing. While fuel poverty may lead to poor health, its causes relate to individual economic circumstances. For the purposes of this report, the definition of fuel poverty is when a household needs to spend more than 10% of its income on fuel to maintain a satisfactory heating regime. Table 4.4 shows fuel poverty in South East England was higher than the average for England in 2010 and that, in Berkshire, 10% of households were in fuel poverty. Bracknell Forest experienced lower levels of fuel poverty than similar places. This might be explained by relatively high levels of economic activity in the area (see table 4.10 below), or by residential building stock that is more efficient to heat. This argument is supported by indoor living environment data, although higher levels of fuel poverty in other Southern New Towns suggests levels of fuel poverty in Bracknell Forest cannot be entirely explained by the nature of the built environment.

Table 4.4: Fuel Poverty, 2010

	%Households in Fuel Poverty[1]
Bracknell Forest	7.3
Berkshire UAs	10.0
Southern New Towns	13.0
South East England	12.0
England	6.4

[1]Percentage of households defined as 'fuel poor'
Source: DECC

Fuel poverty can be further disaggregated to ward level within Bracknell Forest. While variations can be observed, these are not statistically significant. Table 4.5 compares fuel poverty with economic activity by ward, as a measure of the relationship between fuel poverty and economic circumstances. The economic activity data comes from Census 2001, offers the most appropriate comparison. There is no clear evidence of a statistical relationship between these datasets (which have correlation coefficient of -0.67, indicating a moderate negative correlation). We conclude that, while levels of fuel poverty are lower than we might expect in Bracknell as a whole, there are no significant variations within Bracknell Forest at ward level.

Table 4.5 Fuel Poverty (2003) and Economic Activity (2001) by Ward (Bracknell Forest)

	%Households in Fuel Poverty[1]	% Economically Active
Ascot	5.27	70.36
Binfield with Warfield	5.20	79.19
Bullbrook	5.28	70.53
Central Sandhurst	5.01	79.79
College Town	5.48	81.99
Crown Wood	4.42	84.38
Crowthorne	5.58	67.94
Great Hollands North	5.30	78.38
Great Hollands South	5.31	80.63
Hanworth	4.81	81.75
Harmans Water	5.10	77.30
Little Sandhurst and Wellington	5.33	70.93
Old Bracknell	5.06	75.45
Owlsmoor	4.92	83.69
Priestwood and Garth	5.27	71.56
Warfield Harvest Ride	4.80	81.79
Wildridings and Central	5.19	73.89
Winkfield and Cranbourne	5.60	71.89

Source: University of Bristol (Fuel Poverty by Ward) and ONS Census of Population 2001 (Economic Activity)

4.2 Economy and Efficiency

The second broad area of contextual data focuses on the economy and efficiency of residential property in Bracknell Forest. Although our focus is on properties owned by Bracknell Forest Homes, it is worth noting that 83.00% of all residential property in Bracknell Forest is privately owned (even if some is subsequently let out to tenants by the owner). This level of private ownership is typical for England, although slightly lower than the proportion elsewhere in Berkshire and in South East England. The most meaningful comparison is with other Southern New Towns, which share an urban history as large public housing developments. The proportion of privately owned housing is higher in Bracknell Forest. This might be explained by the higher average house prices and faster pace of house price increase, which may have made buy-to-let initiatives more economically attractive in Bracknell Forest (see Table 4.6). One consequence of high levels of private ownership is that social housing in Bracknell Forest is relatively dispersed.

Table 4.6: Residential Property Characteristics, 2006-2011

	% Private[1]	Mean £[2]	% change 06-11[3]
Bracknell Forest	83.00	274,303	15.43
Berkshire UAs	84.83	290,820	12.35
Southern New Towns	74.43	224,563	11.26
South East England	86.00	284,379	14.75
England	82.00	240,033	16.12

[1]Percentage of dwellings privately owned

[2]Mean residential sale price

[3]Percentage change in mean residential sale price

Table 4.7a and b shows average electricity and gas consumption from 2005-2010. We note that there has been a substantial reduction in energy use across England over this period, especially for gas. Given that over 2,100 properties (or 4.7% of all dwellings) in Bracknell Forest had upgraded central heating, windows and doors during this period, we might expect to see this reflected in a greater reduction in domestic energy consumption than is evident nationally. The lack of any significantly greater reduction in energy use supports the arguments made in Chapter 2, that thermal efficiency improvements are not directly associated with a reduction in energy use.

Table 4.7a Domestic Electricity Consumption 2005-2010[1]

	2005	2010	% Change 05-10
Bracknell Forest	5,041	4,526	-10.22
Berkshire UAs	5,045	4,588	-9.06
Southern New Towns	4,422	4,038	-8.68
South East England	4,927	4,520	-8.26
England	4,602	4,148	-9.87

[1]Mean Electricity Sales to Customers (KWh)

Source: DECC

Source: DECC

Table 4.7b Domestic Gas Consumption, 2005-2010[2]

	2005	2010	% Change 05-10
Bracknell Forest	19,068	15,658	-17.88
Berkshire UAs	19,464	15,928	-18.17
Southern New Towns	18,243	14,651	-19.69
South East England	19,279	15,655	-18.80
England	19,020	15,156	-20.32

[2]Mean Gas Sales to Customers (KWh)

The English Indices of Deprivation provide contextual information relating to the built environment, neighbourhoods and communities. For example, Indoor Living Environment measures the proportion of homes in the private and social sectors that fail to meet Decent Homes Standard or which do not have central heating. Outdoor living environment includes measures of air quality and road traffic accidents, with clear links to health and wellbeing and neighbourhood and community. In our conceptual model (Figure 4.1), we see living environment to link neighbourhood and community to economy and health; while the indoor environment relates more to the efficiency with which a home can be run, the outdoor environment is a better indicator of neighbourhood environmental safety.

Table 4.8a compares the living environment in Bracknell Forest to nearby and similar places. 'Mean Score' indicates the average score given to Lower Level Super-Output Areas (or LSOAs) in each spatial category. A lower score indicates less environmental deprivation. 'Mean Rank' calculates the mean rank position of all LSOAs in the local authority. There are over 34,000 LSOAs in England and a higher mean rank score indicates lower levels of deprivation.

Table 4.8a shows Bracknell Forest is the third least deprived local authority area in England, measured by the quality of indoor environment. This means that Bracknell has exceptionally low levels of non-decent housing and exceptionally high levels of central heating installation, in the private and social housing sectors combined. Other Southern New Towns, especially Basildon, also have very low levels of deprivation by this measure, while Berkshire also performs well by regional and national comparison. Bracknell Forest also performs well on outdoor living environment. On this measure, it is the 76th least deprived of 326 local authority areas. Bracknell Forest far out-performs other parts of Berkshire and Southern New Towns. The data in Table 4.8a suggest Bracknell Forest offers an exceptionally good living environment for its residents.

Table 4.8a: Living Environment: Mean Score and Rank 2010

	Indoor Environment		Outdoor Environment	
	Mean Score[1]	Mean Rank[2]	Mean Score[1]	Mean Rank[2]
Bracknell Forest	3.84	27817	8.96	22723
Berkshire UAs	10.57	22338	19.44	16861
Southern New Towns	6.19	25428	17.41	16861
South East England	15.47	19369	17.42	17690
England	21.69	16241	21.69	16241

[1]Mean score of lower level super-output areas (a lower score indicates less deprivation)
[2]Mean rank of LSOA (out of 34,482. Higher score indicates less deprivation)
Source: English Indices of Deprivation

Table 4.8b: Living Environment: Standard Deviations 2010[1]

	Indoor StDev	Outdoor StDev
Bracknell Forest[2]	4.07	6.87
Reading	15.71	15.78
Slough	9.48	20.43
West Berkshire	9.10	6.80
Windsor and Maidenhead	7.69	13.20
Wokingham	5.16	9.24
Mean (Berkshire)	***8.54***	***12.05***
Basildon	3.07	14.11
Corby	4.95	11.67
Crawley	6.51	10.34
Dacorum	7.40	8.32
Harlow	3.14	11.68
St Albans	6.65	12.83
Stevenage	3.88	11.09
Welwyn Hatfield	6.69	13.90
Mean (South New Towns)	***5.29***	***11.74***

[1]Standard Deviation of mean score of lower level super-output areas; a lower standard deviation score indicates less variance from the mean (i.e. greater consistency)
[2]Bracknell Forest contains 74 LSOAs. These do not map consistently to ward boundaries
Source: English Indices of Deprivation

Table 4.8b measures the standard deviation of the lower level super-output area scores that underpin the average data in Table 4.8a (above). One important consideration is to what extent the living environment in Bracknell Forest might contain pockets of deprivation masked by an exceptionally good quality environment in other areas. Standard deviation, which measures the variance of a group of data from its mean, is an excellent way of assessing the consistency of scores. Table 4.8b compares standard deviation between Bracknell Forest and other similar or nearby local authorities, including those in Berkshire and other Southern New Towns. Bracknell Forest has low standard deviation, indicating that not only are the indoor and outdoor living environment of high quality, but this spatial pattern is extremely consistent across the local authority area.

The English Indices of Deprivation offer further insight into the economy and efficiency of residential property, by analysing 'barriers to housing'. This variable measures household overcrowding, homelessness and housing affordability. Given Bracknell Forest's high quality living environment, we might also expect low barriers to housing in the area. However, Table 4.9 shows Berkshire and Southern New Towns generally perform less well than England as a whole on this measure. We attribute this to the relatively high cost of property shown in Table 4.6. While the living environment in Bracknell is of good quality, housing accessibility and affordability at average at best. As with living environment, barriers to housing scores are very consistent within Bracknell Forest.

Table 4.9: Barriers to Housing, 2010

	Mean Score[1]	Mean Rank[2]
Bracknell Forest	21.11	16216
Berkshire UAs	20.87	16413
Southern New Towns	20.43	16920
South East England	22.11	15642
England	21.69	16242

[1]Mean score of lower level super-output areas (a lower score indicates less deprivation)
[2]Mean rank of LSOA (out of 34,482. Higher score indicates less deprivation)
Source: English Indices of Deprivation

4.3 Neighbourhood and Community

The third broad area of contextual data focuses on neighbourhood and community. There is a far greater range of information available for this area than for health and wellbeing or economy and efficiency. However, most datasets, especially those relating to the local labour market, paint a similar picture. As such, we use a carefully chosen sub-set of available data, which illustrates these general patterns.

Bracknell Forest is generally a prosperous place to live. Table 4.10 shows economic activity in the area is high, even in comparison with the rest of Berkshire. Over 80% of the resident population were employed in 2011. Gross weekly pay in Bracknell Forest is also high in comparison with most places, especially other Southern New Towns. Berkshire has exceptionally high levels of pay and, although economic activity is higher in Bracknell Forest than for Berkshire as a whole, gross weekly pay is not.

Table 4.10: Economic Activity and Mean Gross Weekly Pay, 2011

	Econ Act%	Gross Pay£
Bracknell Forest	83.10	568.20
Berkshire UAs	79.70	591.40
Southern New Towns	78.90	513.40
South East England	79.00	554.60
England	76.40	504.70

Source: ONS Annual Population Survey and Annual Survey of Hours and Earnings (resident analysis); both accessed through Nomis

Figure 4.2 maps economic activity by ward in Bracknell Forest, as reported in the 2011 Census. It shows significant differences in economic activity rates across the area, ranging from 83.7% in Warfield Harvest Ride to 69.4% in Little Sandhurst and Wellington. As such, although Bracknell Forest is undoubtedly a prosperous place, there is greater spatial inconsistency for this variable than we have seen above, for example in relation to environmental quality.

Figure 4.2: Economic Activity by Ward in Bracknell Forest. Source: 2011 Census (KS601EW)

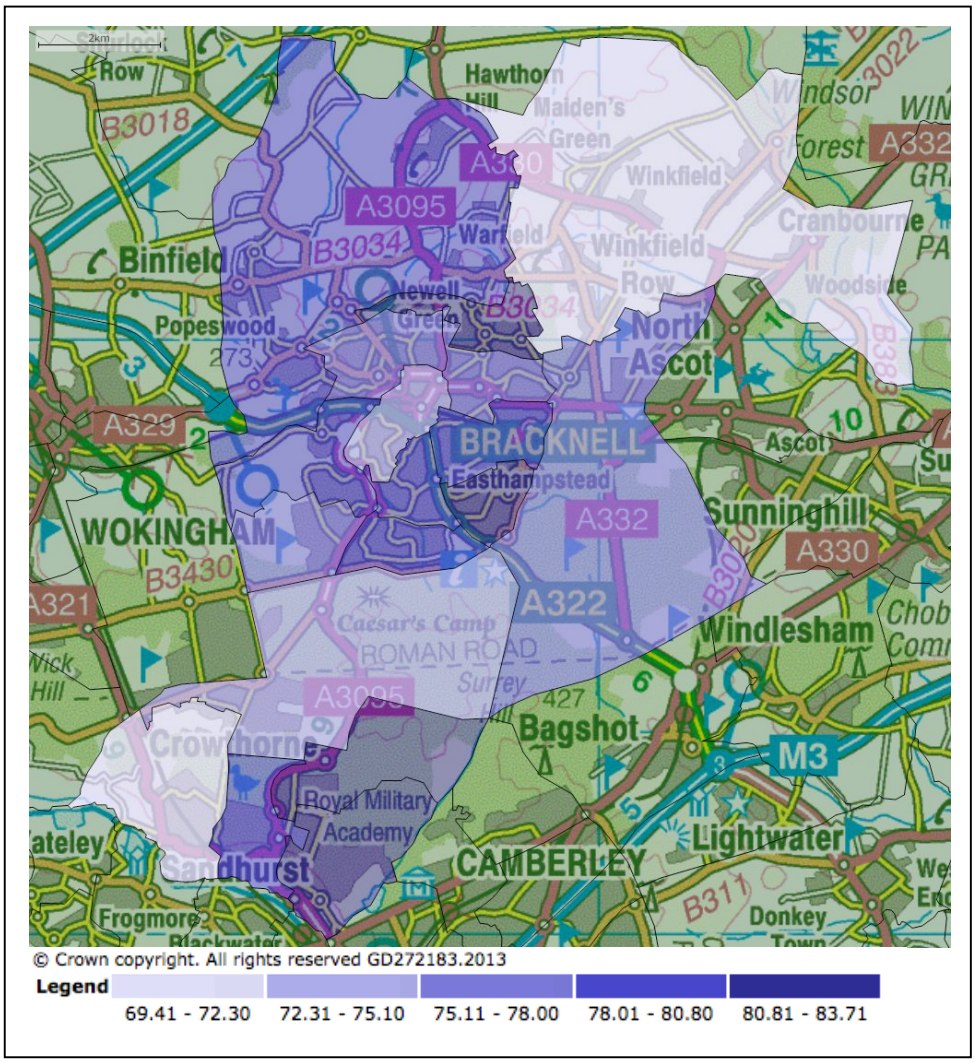


Table 4.11 shows overall deprivation concentration from the English Indices of Deprivation. This includes living environment and barriers to housing, discussed in specific detail above. Deprivation concentration includes five further domains: income, employment, health, education and training and crime. These domains are combined to give an overall indication of multiple deprivation. This provides a general indication of resource accessibility in a community. Bracknell Forest has low concentrations of deprivation. It is the 292nd least deprived of the 326 local authority areas in England. There is variance between local areas within Bracknell. However, analysis of the standard deviation of scores between lower level super-output areas shows these spatial differences to be statistically non-significant.

Table 4.11: Deprivation Concentration, 2010

	Mean Score[1]	Mean Rank[2]
Bracknell Forest	9.4	24951
Berkshire UAs	12.8	22237
Southern New Towns	16.2	19299
South East England	14.8	20724
England	21.67	16242

[1]Mean score of wards (a lower score indicates less deprivation)
[2]Mean rank of wards (out of 34,482 wards. Higher score indicates less deprivation) Source: English Indices of Deprivation

Table 4.12 shows recorded domestic burglaries (i.e. those reported to the Police) in 2007 and 2012. Our analysis of academic and policy evidence shows fear of crime, as well as the actual experience of crime, are important determinant of psychological wellbeing. In our conceptual model (Figure 4.1), property crime links neighbourhood and community data back to health and wellbeing, where this Chapter began. The Crime Survey for England and Wales shows property crime in Bracknell Forest was relatively low in 2007, especially in the context of Berkshire, where the data were skewed by relatively high burglary rates in Reading and Slough. By 2012, property crime had fallen dramatically in Bracknell Forest, by over 50% to a rate of 1.86 burglaries per 1000 population. It is worth noting that, while this fall in recorded property crime coincides with the period of investment in new windows and doors by BFH, the socio-economic mechanisms behind this trend are likely to be too complex to be attributed to one particular factor. In the context of Berkshire, other Southern New Towns and South East England as whole, burglaries in a dwelling are extremely low in Bracknell Forest.

Table 4.12: Burglaries in a Dwelling, 2007-2012 (annual count and per 1000 resident people)

	January – December 2007		January – December 2012		% Change in Count
	Count	per 1000	Count	per 1000	
Bracknell Forest	460	4.07	211	1.86	-54.1%
Berkshire UAs	5703	6.88	3885	4.50	-31.9%
Southern New Towns	3066	4.17	3120	4.07	+0.02%
South East England	30003	3.62	24285	2.81	-19.1%
England	279804	5.47	230297	4.34	-17.7%

Source: Crime Survey for England and Wales 2012

4.4 Summary

This analysis of secondary data has focused on the core areas of health and wellbeing, economy and efficiency and neighbourhood and community. In general, we find Bracknell Forest to be a relatively healthy place with high levels of personal wellbeing. Use of NHS Mental Health Services is slightly higher than in similar and nearby places, but long-term limiting illness is lower. One striking feature of our analysis is how prosperous Bracknell Forest is. Fuel poverty is low, while property prices are relatively high. We suggest this may explain the large proportion of privately owned properties in Bracknell Forest, in comparison to other Southern New Towns. One

important caveat to this overall picture is our analysis of economic activity at ward-level, which indicates a degree of labour market inequality within Bracknell Forest.

Another striking feature of our analysis is the exceptionally high quality of the indoor and outdoor living environment in Bracknell Forest. The quality of housing, measured by central heating installation and the proportion of properties that meet Decent Homes Standard, is extremely high. The outdoor environment is also of consistently high quality across the local authority area. This contributes to Bracknell Forest's low concentration score for multiple deprivation, while property crime data indicates burglary rates in Bracknell Forest are extremely low.

Our overall view is the population of Bracknell Forest benefits greatly from being a New Town in Berkshire. Income levels, house prices and other measures of prosperity are similar to nearby places and are amongst the highest anywhere in England. Meanwhile, environmental quality is similar to other Southern New Towns. In this respect, Bracknell Forest is in a win-win position. The living environment is of better quality than elsewhere in Berkshire, but other New Towns that offer similar environmental quality cannot generally match the prosperity of Bracknell Forest.

Chapter 5: Survey and Telephone Interview Results

5.1 Introduction

In this Chapter, we present data and findings from the 411 surveys and twenty telephone interviews we carried out in Bracknell. We begin by discussing overall reactions to the improvement programme. We then focus on tenants' experience of living through the Major Works Investment Programme, which previous research suggests had the potential to cause stress and disruption. Attention then turns to more specific impacts of the investment programme, organised around our three central themes: health and wellbeing, economy and efficiency, and neighbourhood and community. Finally, we will discuss reasons that some tenants declined improvements that were offered to them, and consider the opinions of a small group of people who were dissatisfied with elements of the investment programme.

5.2 Overall Reactions to the Improvements

The overall reaction of tenants to the improvement works was extremely positive. Table 5.1 gives the responses to questions on tenants' overall judgement of each improvement on a scale of 1 to 5, where 1 was rated as 'much worse' and 5 as 'much better'. Not all respondents had had each improvement so the number responding (indicated as 'n=' in the table below) is less than the total number of respondents.

Table 5.1: Rating of the Overall Effect of Each Improvement (% of responses)

	Much Better	Better	Same	Worse	Much Worse
	5	4	3	2	1
New Windows & door (n = 279)	36	55	7	2	0
New Heating (n = 252)	39	49	6	3	3
New Kitchen (n = 276)	46	45	6	2	2
New Bathroom (n = 300)	47	43	6	2	1

The overwhelming majority of tenants think the improvements have been of clear benefit. At least 90% of respondents thought the improvements had made their windows & front doors, kitchens and bathrooms better. For heating 88% of tenants thought their home was better and 6 % thought it was worse. These ratings compare favourably with those found in analyses of other housing investment programmes. For example, Hickman et al's (2001) review of perceived impacts of improvement works in Wakefield found 77% of tenants thought their windows and doors were better, 80% reported heating improvements and 84% and 86% perceived their kitchens and bathrooms were better respectively (see Figure 2.5 above).

5.2.1 Tenants' Experience of Having the Work Done

We asked our respondents to tell us what they thought of the ways in which the improvements had been carried out from the initial discussion to final completion of the work. We used a series of questions that had been used in the Nottingham Trent study of the Decent Homes programme in Nottingham (Nottingham Trent University KTP 2012). We have already noted in the Literature Review that having work people in the house and the disruption of building work

can be stressful. It thus can create health problems as the stress can worsen existing health problems or there can be direct impacts from dust and cold which may be an unavoidable concomitant of building works. We have also noted that many have argued that it is vital to get 'buy in' from tenants though engaging them in the process for example, by choosing designs and colour schemes.

Table 5.2 shows the results from the survey. Respondents were asked to rate each item on a scale of 1 to 5 where 1 is 'very poor' and 5 is 'very good'. Apart from the judgement of the process 'overall', items are listed from 'best' to 'worst'.

Table 5.2: Rating of the Process of Carrying Out Improvements

	Good	Satisfactory	Poor
	% 4 or 5	% 3	% 1 or 2
Conduct of the workpeople	92	6	3
Level of notice given before the work	89	8	3
Consultation about the design or colour scheme	87	10	4
Care taken/cleanliness of your property	84	8	8
How well were you kept informed (before/during)	80	12	8
Quality of the completed work	79	12	9
Did the contractor keep to the agreed programme?	79	10	11
Standard the contractor left the property	79	11	11
Arrangements made to minimise inconvenience	76	15	10
If a fault occurred, quality of contractor's response	61	13	26
Overall	**83**	**11**	**6**

[1]Half the respondents had had a fault that needed fixing.

More than four in every five tenants rated the improvement process as 'good' or 'very good'. The conduct of workpeople and the way they went about their work were particularly well regarded, while the management of the work process by BFH also scored highly. For example, almost 90% of tenants were rated the notice they were given before the work as 'good' or 'very good', while over 80% of tenants rated the consultation process in a positive way. In Chapter 1, we noted BFH went to great lengths to involve tenants in the decision making process (see for example Figure 1.4). Our evidence shows this process was effective. The vast majority of respondents felt they were consulted and well informed about the work in their home.

These issues were also evident in comments made in the telephone interviews. Many people spoke enthusiastically about the work people – especially about the tiling work. For example:

"*And the work men were marvellous, they were very considerate* (the tenant was unwell at the time when the work was being done) […] *the standard was quite good, especially the tiler […]I mean, I said, my friends, they've got these nice houses and had a lot of work done, I think it's on a par with that*".

"*They* (the workmen) *were really nice and, um, really polite as well*"

Even people who had complaints about the quality of the final product often spoke well of the workpeople. For example one tenant who was very unhappy about the finish of the work in their house also said:

"The workers that I had at my house were fantastic, they really, really were good – apart from one that was a right miserable git […] but, um, the guy, all the other guys, the tiler, I actually wrote a letter to Mitie saying thank you very much […] because that tiler was fantastic"

There were also positive responses to the discussions about the design and colour schemes:

" the fact that everybody gets a choice, and such a wide choice, it's, I mean, that, you know, it's so nice, it really is"

"We're over the moon with the kitchen because what we had before was absolutely revolting […] we got to pick the worktops, the tiles, you know, the handles.."

5.2.2 Fault Fixing

Table 5.2 (above) shows that, although over 60% of tenants rated fault fixing as 'good', around one in four felt the response to fault fixing was a problematic aspect of the improvement programme. We understand that it must be stressful for anyone to experience faults or other problems as a result of work. However, during the course of our research it became apparent that different groups of people understand a 'fault' in different ways.

For example, several tenants who participated in our survey told us they had encountered problems with shrinking window sealants, blistered paintwork and other defective materials. In one particularly extreme example, a tenant told us:

"It took them over two weeks to do it (a small bathroom)*, they'd be in for no time one day, they wouldn't come in the next day, and then they'd be in and it was mess […] and even then the toilet didn't work, it took months to get them to fix the toilet properly […] in the end, what we did,, we, we hired a plumber to come and fix it for us […] he came out and he fixed it, so, he took it apart, it was basically just a seal between the tank and the toilet"*

This seems to be a clear example of a 'fault', where something has gone wrong that can – and should – be fixed. However, many of the problems that tenants encounter were less clear-cut. To give two examples, BFH received just over 100 electrical fault reports in the 2010-11 financial year, but around 25% of these were the result of faulty appliances tripping new circuit breakers. In another property we visited, new pipe work prevented the tenant's existing cooker from fitting flush against the wall. In each case, the tenants were unhappy with the improvement works but the improvement works themselves were not defective. We think that 'fault' is therefore a subjective definition. For a contractor installing new kitchens and bathrooms, faults might be limited to defective work and materials. However, for tenants, faults may be indicative of wider range of problems, including those not directly related to the improvement work.

5.2.3 Duration of the Improvement Process

Figure 5.1 shows the number of days between the first improvement starting and the last one starting in a property. Table 5.3 shows the relevant statistics for the distribution. More than a

quarter of people only had one improvement so that for them the number of days between starting and finishing was 0. For some tenants there was a very substantial time between the first improvement and the last one. A quarter of tenants waited more than a year and a half for all the improvements to their properties to be done.

Figure 5.1: Number of Days Between Completion of First and Last Improvement

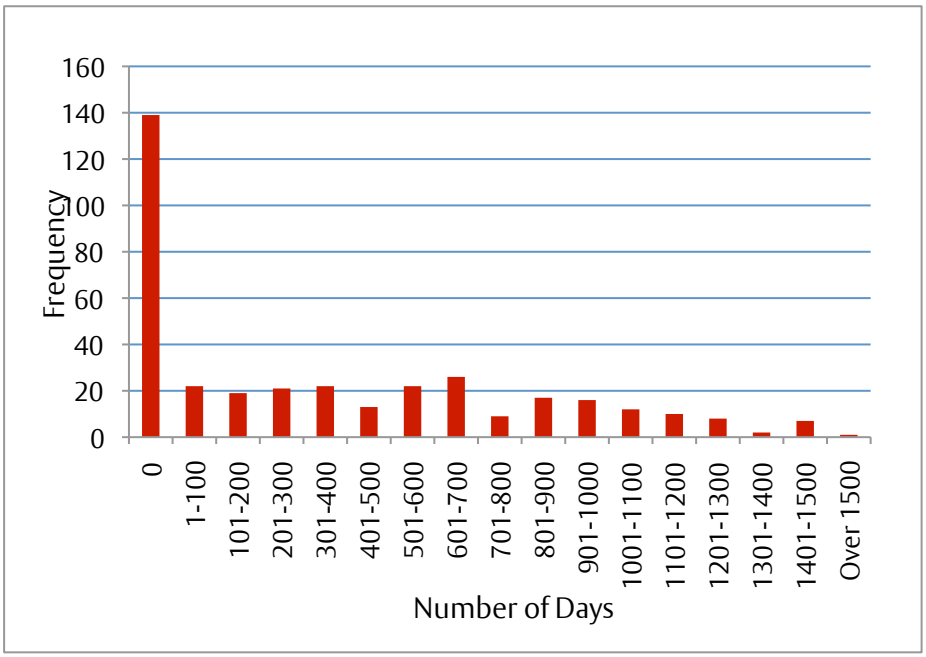


Table 5.3 Statistics for Time between First and Last Improvements

	Days
Mean no of days	376.5
Standard Deviation	426.9
Lower quartile	0
Median	203
Upper quartile	673
Mode	0

The length of time between the first and last improvement might be expected to affect people's satisfaction with the improvement process. However, comparison of people's overall satisfaction with the improvement process and duration showed no relationships between them. There was also no relationship between the duration and people's satisfaction with the individual improvements of new windows, new heating, new kitchens and new bathrooms.

5.3 Impacts of Improvements on Tenants' Lives

In Chapter 2, we established that housing improvements can have a variety of impacts on tenants' everyday lives. Below we discuss the impacts of the improvements under the three headings we used in the Literature Review: Health and wellbeing; Efficiency and economy; Community and neighbourhood.

5.3.1 Health and Wellbeing

We discussed the variety of ways in which housing improvements might affect health and wellbeing in Chapter 2. One group of effects related to improved warmth. In the BFH programme, improved warmth might result from the new windows and doors and more efficient heating. Another group of positive effects on health might stem from a reduction in mould. A third group of effects relate to improved feelings of security and hence less fear of burglary. Finally, new windows can reduce noise nuisance which might improve both feelings of security and stress.

In Tables 5.4 and 5.5 below we list people's views on whether the new windows and front door and new heating had affected any of these items. Respondents were asked about a number of specific impacts that each improvement might have had and asked to score them on a scale ranging from 1 for 'much worse' to 5 for 'much better'. Not all respondents had each improvement, so the number responding, (indicated as n= in the table below), is less than the total number of respondents (which was 411).

Table 5.4: Effects of New Windows and Front Door on Health and Wellbeing

	Better	Same	Worse
	% 4 or 5	% 3	% 1 or 2
Warmth (n = 283)	78	15	5
Steamed up windows (n = 99) 1	47	44	8
Stains, rot, mould on windows (n=88) 1	55	34	11
Stains, rot, mould on ceiling (n = 66) 1	53	36	8
Stains, rot, mould on carpets (n=49) 1	45	45	10
Noise reduction (n = 282)	70	25	5
Fear of Burglary (n = 280)	74	24	3

[1]This feature was a problem for a minority of tenants before the new windows were put in.

Table 5.5: Effects of New Heating on Health and Wellbeing

	Better	Same	Worse
	% 4 or 5	% 3	% 1 or 2
Warmth (n = 253)	81	13	6
Steamed up windows (n = 88) 1	45	45	9
Stains, rot, mould on windows (n=76) 1	50	36	14
Stains, rot, mould on ceiling (n = 63) 1	56	29	16
Stains, rot, mould on carpets (n=43) 1	47	42	12

[1]This feature was a problem for a minority of tenants before the new windows were put in.

The largest group of positive impacts of the new windows were improvements in warmth, noise reduction and feelings of security. The largest positive impact of the new heating was warmth. However there was also evidence that about half or a little more of respondents who had had a problem with mould, rot and stains had found this improved by the new windows and the new heating and this should be a significant health benefit to these people. However, a small group felt these problems had worsened since the new heating and windows were put in. BFH recognised this as a potential problem, possibly resulting from increased condensation in better

insulated properties. However, BFH data shows the number of condensation inspections they carried out fell by 35% from winter 2011 to winter 2012. Based on our survey of research evidence in Chapter 2, we would expect such a pattern as tenants get used to improvement work.

Health and wellbeing benefits may also stem from the improvements to kitchens and bathrooms. One group of effects is related to safety from hazards such as tripping and falling and burns from stoves. Another group of benefits relates to improvements in the appearance and social acceptability of the rooms. Table 5.6 gives details of respondents' scores for 4 items relating to the safety and social acceptability of their new kitchen and bathroom.

Table 5.6: Health, Safety and Appearance of Kitchen and Bathroom

	Better	Same	Worse
	% 4 or 5	% 3	% 1 or 2
Safety using kitchen (n = 271)	82	15	3
Safety using bathroom (n= 294)	68	31	5
Mould in bathroom (n = 93) [1]	46	35	18
Appearance of bathroom (n = 298)	92	4	3

[1] This feature was a problem for a minority of tenants before the new windows were put in.

Clearly many tenants felt that there had been improvements in the safety of both the bathroom, and, especially, the kitchen. Problems of mould in the bathroom were improved for about half of those that had experienced them before but a minority (18%) felt these problems had worsened (see discussion of condensation above). Very few people thought that safety in the kitchen or bathroom had worsened. The importance of the improved appearance of the rooms to people's sense of pride in their dwelling and feelings of social acceptability was clear in the telephone interviews. For example:

i) *"I am not worried when my friends who own their own place come over now. It used to be a bit embarrassing because of the state of the place, but I am a lot happier doing it now".*

ii) *"I love it. I feel really proud to have people come in now ... you know ... the ones that had seen it before"*

iii) *"It used to be embarrassing if someone came in and saw into the kitchen and bathroom, but I am proud of them now".*

Overall, it seems that the new windows and front doors and the new heating should have had beneficial effects on the majority of people's health and wellbeing through improved warmth, an improved sense of security and in reduced respiratory illnesses from mould and rot. The new kitchens and bathrooms should have improved safety, reduced respiratory illnesses from mould and rot and improved social wellbeing.

5.3.2 Health Impacts

We have argued above that the improvements should have had positive effects for the majority of tenants who received them based on other studies of the effects of such improvements on

health and wellbeing. However, we also asked tenants to tell us if they thought they had experienced any improvement in health as a result of the work that had been done in their dwellings. Such an assessment will only give a rough and ready estimate of the health effects. It may be difficult for people to remember their health status before the improvements and they may attribute health changes to the improvements which, in fact, are not caused by them. It would have been more reliable to have surveyed people about their self -assessed health status before the work was done and then re-surveyed them a little time after it was done. However, this was not possible.

Respondents reported that 78 people had experienced changes in their health as a result of the work done. This relates to 67 households or 16% of the households surveyed.

Table 5.7: Health Impacts Reported by Respondents

Health impact	Number with improvement	% of reported impacts
Fewer colds and flu	35	34.7
Respiratory improvements	27	26.7
Warmth/comfort improved	9	8.9
Joints and mobility improved	6	5.9
Easier to manage house	6	5.9
Wellbeing improved	4	4.0
Fewer stomach bugs	1	1.0
Other health improvement	5	5.0
Health worse - various	8	7.9
Total	**101**	**100**

Almost all the effects reported to us were positive – reducing colds, flu and respiratory problems. Respondents also reported improvements to mobility and general wellbeing. However, a few people (9%) reported adverse effects, largely relating to worsening asthma in a warmer home.

60% of the respondents who reported effects on their health were aged 60 or more, while nearly half (46%) were 70 or more. These figures are disproportionately large, given the number of over 60 and over 70 year olds in our sample. This clearly suggests that older people were most likely to experience an improvement in their health as a result of the work done. This echoes findings in other studies, particularly those related to improved warmth.

Respondents who had experienced health impacts were more likely to have come from some estates than others, as shown in Table 5.8. Respondents in Hanworth, Home Farm and Wildridings were more likely to have experienced health impacts than would be expected and respondents in Bullbrook and Easthampstead less likely. These results might reflect the nature of the old housing stock and/or the age characteristics of people on the estates, if the estates with high numbers of health impacts also were those with high number of older people. However, as discussed in Chapter 3, the only estate with a clearly higher than expected proportion of people over 70 is Great Hollands and this does not have a higher than expected number of people who experienced a health impact.

Table 5.8: Health Impacts Reported by Estate

	Number of health impacts in area	% of all health impacts in area	% of total sample in area
Birch Hill	5	6	6
Bullbrook	6	7	11
Crown Wood	8	9	12
Easthampstead	5	6	10
Forest Park	0	0	3
Great Hollands	11	13	15
Hanworth	11	13	7
Home Farm	5	6	3
Harmonds Water	9	11	9
Priestwood 1	7	8	10
Priestwood 2	8	9	8
Wildridings	10	12	6
Total	**85**	**100**	**100**

5.3.3 Heating, Warm Homes and Health

Most of the health impacts that people mentioned related to improved heating – for example, the four categories: fewer colds and flu; respiratory improvements; joints and mobility improved; warmth/comfort improved; together account for 74% of all the health impacts mentioned. As such, we expect health impacts to be strongly related to the installation of new heating and the number of health impacts to increase over time. If we are correct, recent heating improvements will not yet have generated as many reports of health impacts as earlier ones. This would mean that current estimates of health impacts are lower than we would find after another year. To test this, we investigated the number of health impacts in relation to the timing of heating improvements. Table 5.9 below shows data relevant to these issues.

First, it is evident by comparing Columns C and D in Table 5.9 that the number of people reporting health impacts correlates to the number of new heating improvements made. This supports the view heating improvements are primarily responsible for the improved health that people have reported. In Column E of Table 5.9, we have used the numbers of people reporting health impacts (Column B) and the number of properties with new heating (Column D) to make a rough estimate of the impact of heating improvements on health. Since the first year and last year relate to very small numbers of properties improved the results are not reliable and we have not recorded an entry in Column E. Some of the health improvement in 2008 may relate to heating work done by the Council rather than BFH. These data do suggest a decline in the number of health impacts reported over time, but given the small numbers in 2008 and 2012 this should be treated with caution and we cannot be sure that further health impacts will be felt in another year or so. Table 5.9 relates to the number of *people* reporting a health impact. Table 5.10 shows a similar analysis for the total number of *health impacts* reported (one person sometimes reported several health benefits so the number of impacts is greater than the

number of people affected). The pattern of impacts over time still broadly parallels the pattern of heating improvement numbers although less closely that for Table 5.9.

Overall it does seem that we can say with some confidence that at least a third of heating improvements generated positive health impacts for residents, and in several cases these improvements were in more than one aspect of health. Table 5.11 shows a similar analysis for all health impacts and the completion of all improvement work. Not surprisingly, since the majority of health improvements are heating related. We find a similar pattern in the results, but make a slightly lower estimate of the percentage of property improvements producing positive health impacts for individuals, at around 27% rather than 30%

We carried out a similar analysis to look at the relationship between house type and health impacts but there was no clear relationship. This may be because we had to group several house types together in order to compensate for low numbers for some of the house types.

Table 5.9 Heating Improvements and the Number of People with Positive Health Impacts

	A	B	C	D	E
Heating Work Year	People reporting impacts	% of total reporting impacts[1]	Number of new heating systems	% of total new heating systems	Heating impact on health (B as % of D)
2008	10	15	1	0.5	**
2009	38	57	123	61	93
2010	13	19	52	26	37
2011	3	4	18	9	22
2012	3	4	9	4	**
Total	**66**	**100**	**203**	**100**	

[1]One person may report more than one health impact
% may not sum to 100 because of rounding errors
** numbers too small for reliable calculation

Table 5.10: Heating Improvements and the Total Number of Health Impacts Reported

	A	B	C	D	E
Heating Work Year	Total number of health Impacts	% of all total impacts[1]	Number of new heating systems	% of total new heating systems	Heating impact on health (B as % of D)
2008	20	16	1	0.5	**
2009	74	57	123	61	95
2010	24	19	52	26	73
2011	6	5	18	9	52
2012	6	5	9	4	**
Total	**130**	**16**	**203**	**100**	

[1]One person may report more than one health impact
% may not sum to 100 because of rounding errors

Table 5.11: Time Since Completion and the Number of People Reporting Health Impacts

	A	B	C	D	E
Year Work Completed	Total number of health Impacts	% of total health impacts[1]	Number of completions	% of total completions	Completion impact on health (B as % of D)
2008	4	2	6	2	**
2009	57	32	95	27	60
2010	55	31	111	32	50
2011	41	23	96	27	43
2012	23	13	44	13	52
Total	**191**	**100**	**352**	**100**	

[1]One person may report more than one health impact
% may not sum to 100 because of rounding errors

Table 5.12: Time Since Completion and the Total Number of Health Impacts Reported

	A	B	C	D	E
Year Work Completed	People with health Impacts	% of all people with health impacts[1]	Number of completions	% of total completions	Completion impact on health (B as % of D)
2008	4	4	6	2	**
2009	29	31	95	27	31
2010	27	28	111	32	24
2011	22	23	96	27	23
2012	13	14	44	13	29
Total	**100**	**100**	**352**	**100**	

[1]One person may report more than one health impact
% may not sum to 100 because of rounding errors

5.3.4 Economy and Efficiency

The improvements made by BFH also had the potential to improve the efficiency and economy of housework and domestic activities. The new windows, kitchens and bathrooms might be easier to clean and use, while the new heating might be easier to control

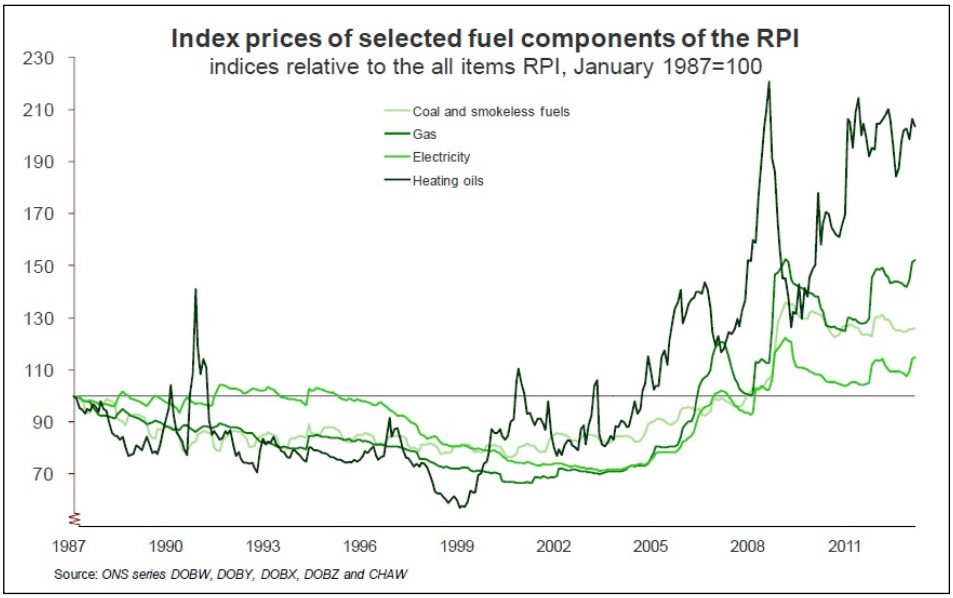
Table 5.13 lists the relevant items that we asked people to score. It is evident that the new kitchens generally provided better storage and layout providing more space for cooking. The new bathrooms were easier to use and washing or showering was easier. The new windows were easier to clean for 62% of tenants while the new kitchen and bathroom were easier to clean for 79-81% of respondents. However, 13% of tenants felt that the storage in the new kitchen was worse than before and 10% felt that it was less easy to bathe than before. For the other items there were very few people who felt that they had got worse.

Table 5.13: Impacts of Improvements on the Efficiency of Domestic Activities

	Better	Same	Worse
	% 4 or 5	% 3	% 1 or 2
Control of heating (n = 281)	81	10	9
Heating Bills (n = 277)	25	65	11
Ease of cleaning windows (n = 311)	62	30	7
Kitchen Storage (n = 275)	81	12	13
Kitchen Layout (n = 274)	85	9	6
Ease of cleaning kitchen (n= 270)	81	15	4
Space for cooking (n = 270)	80	17	3
Cooking smells (n = 267)	62	34	4
Ease of Showering (n = 295)	86	8	6
Ease of Bathing (n = 255)	75	15	10
Ease of cleaning bathroom (n= 298)	79	17	5

Most people (81%) felt that their new heating was easier to control. However, the answers on heating bills stand out as very different from all other responses. Although 82% of respondents had said that their warmth was improved by the new heating, only 25% felt bills had fallen while 65 % said that their heating bills had stayed the same. Energy prices had risen considerably over the period in which the work was carried out as is shown in Figure 5.2 below. Thus the cost of achieving a particular level of thermal comfort with unchanged heating equipment had risen. Therefore even with more efficient heating equipment bills might not have fallen for most people even if they simply maintained their former level of thermal comfort. However, the responses suggest that most people had improved their thermal comfort.

Figure 5.2 Changes in Fuel Components of the Retail Price Index



Source: Bolton P. (2013) House of Commons Standard Note on Energy Prices, SN/SG/4153,

In the telephone interviews, we were able to ask people to discuss whether the heating was more efficient and to discuss the impact of higher energy prices. Respondents found the question of efficiency hard to discuss and for a definitive answer we would need to look at heating kilowatt hours used and prices before and after the improvements for a sample of tenants. From our discussions with tenants we consider that it is probable that for some bills are lower than they would have been without the improvement but it is also likely that some have reacted to greater efficiency by raising the thermal comfort of their homes rather than reducing their bills:

i) *"I couldn't promise you my heating bills have come down at all, but it is more economical to run. The controls are good … I am over the moon with it really".*

ii) *"I just feel completely different about [my house]. It probably hasn't made that big a difference to my bills, but it is just so much nicer here now*

5.3.5 Community and neighbourhood

The BFH programme of work connected to the Decent Homes standard did not make specific improvements to the outdoor environment. However, walking around the areas it is noticeable that the new windows and doors look smart and fresh and will have made a small impact on the appearance of the area. We wanted to find out if the improvements had made any difference to people's feelings about their neighbourhood. Respondents were asked to assess whether the improvements to the houses had had any effect on the neighbourhood or street in which they lived. Their responses are shown in Tables 5.14 to 5.15 below. A very high proportion of people (over 85%) people feel that there has been little change associated with the improvements.

Table 5.14: Change in Neighbourhood Following Improvement Works

Change in Area	% response
Better than before	8
Worse than before	1
Similar to before	89
Haven't lived here long enough to compare	0

% may not sum to 100 because of rounding errors

Table 5.15: Change in Street Following Improvement Works

Change in Street	% response
Better than before	10
Worse than before	1
Similar to before	86
Haven't lived here long enough to compare	1

% may not sum to 100 because of rounding errors

5.3.6 Changes in Specific Problems

Respondents were also asked whether the area had changed since the work was done in relation to six specific issues and their answers are shown in the Table 5.16 (below).

Table 5.16: Perceived Changes in Specific Neighbourhood Problems

a) Were noisy neighbours or loud parties a problem in this area before the work was done? Are they a problem now?

	% replying Before	% replying After
A serious problem in this area	2	4
A problem in this area, but not serious	17	11
Not a problem in this area	79	83

b) Was rubbish or litter lying around a problem in this area before the work was done? Are they a problem now?

	Before	After
A serious problem in this area	4	4
A problem in this area, but not serious	18	13
Not a problem in this area	77	82

c) Was vandalism, graffiti or other damage a problem in this area before the work was done? Are they a problem now?

	Before	After
A serious problem in this area	1	1
A problem in this area, but not serious	6	5
Not a problem in this area	92	93

d) Was the general level of crime a problem in this area before the work was done? Is it a problem now?

	Before	After
A serious problem in this area	4	3
A problem in this area, but not serious	9	7
Not a problem in this area	86	89

e) Was the fear of being burgled a problem a problem in this area before the work was done? Is it a problem now?

	Before	After
A serious problem in this area	1	1
A problem in this area, but not serious	18	11
Not a problem in this area	80	88

f) Were parking difficulties a problem in this area before the work was done? Are they a problem now?

	Before	After
A serious problem in this area	20	23
A problem in this area, but not serious	18	14
Not a problem in this area	59	61

The majority of respondents are happy with the area they live in and do not feel that there are any serious problems in their area. Over 80% of respondents felt there were no serious problems of noisy neighbours, rubbish, vandalism, crime and fear of burglary. There is evidence of a slight perception of improvement in each category, especially in noise, rubbish and fear of burglary. Improvements in noise and fear of burglary could have stemmed from the improvements to windows and doors, and should have a small but positive effect on health.

Parking problems are an exception, insofar as only about 60% of respondents felt it was not a problem and there was a 3% increase in the people who felt that parking problems were serious after the work was done and a 1% increase in those who felt it was not a problem.

In general, with the exception of parking, the effects of the improvement work on people's concern about noisy neighbours, rubbish, vandalism, crime and fear of burglary in the area are very small but positive. What is perhaps more striking is the very low level of problems perceived by tenants when compared with national figures for England. The questions asked were the same as those asked by the English Housing Survey and comparable figures for a national survey of social tenants and Bracknell residents are given below in Table 5.17.

Table 5.17: Proportion of Respondents Perceiving Specific Problems in their Area

	All social tenants (England, 2010-11)[1]		BFH social tenants Before improvements		BFH social tenants After improvements	
	Problem, serious %	Problem, not serious %	Problem, serious %	Problem, not serious %	Problem, serious %	Problem, not serious %
Noise / parties	9.6	19.2	2	17	4	11
Rubbish / litter	11.2	23.6	4	18	4	13
Vandalism etc.	6.7	18.8	1	6	1	5
General crime	7.2	25.6	4	9	3	7
Burglary	9.4	25.1	1	18	1	11

[1]Table FA5322: Perception of specific problems in area, by characteristics of the household 2010-11 (https://www.gov.uk/government/statistical-data-sets/attitudes-and-satisfaction)

5.4 Assessing the Economic Impact of the Decent Homes Programme

In the analyses of other housing investment programmes reviewed in Chapter 2, we identified a range of potential economic impacts that have been associated with other housing investment programmes in the UK. These include direct economic impacts, like labour costs and the supply of materials. It is also possible to identify indirect economic impacts like savings on energy bills for tenants. Finally, long-term, economic impacts might be identified for the NHS and other welfare support providers if the health and wellbeing of tenants is improved as a result of the Decent Homes Programme.

Our assessment of the economic impact of the Decent Homes Programme in Bracknell is dependent on the data available to us. We are able to consider two main areas: labour costs and savings for local health and welfare providers. Table 5.18 shows the number of people employed in Bracknell on the Decent Homes Programme from 2007-2012 and the proportion of local

employees (i.e. those living in the RG postal area). Table 5.19 shows a sample of occupations of those employed during 2012. Based on this information, we estimate the total wages paid to local employees in 2012 was £697,000. Between 2007 and 2012, we estimate the total wages paid to local employees to be £3,485,000. This assumes local employees were paid the mean salary for a semi-skilled tradesperson in South East England, £26,211 per annum, over this period (source: Office for National Statistics 2012). As such, the programme added about £3.5 million to the local economy over a five year period.

Table 5.18 Typical Employment on Decent Homes Programme in Bracknell

	Number of Decent Homes Programme Employees		
	Total	RG Postcode	% RG Postcode
2008	63	27	43
2009	63	27	43
2010	63	27	43
2011	63	27	43
2012	63	27	43

Source: Bracknell Forest Homes

Table 5.19 Typical Employment Roles in November 2012

Contractor 1	Contractor 2
Admin	Admin Assistant
Carpenter	Carpenter & Joiner
Driver / Labourer	Customer Manager
Electrician	Customer Care Officer
Electrician's Mate	Driver/labourer
Labourer	Driver/labourer
Painter	Driver/labourer
Painter	Electrician
Plasterer	Office Manager
Plasterer	Plasterer
Plumber	Plasterer
Tiler	Plumber
Tiler	Site Manager
Plasterer	
Labourer	

Source: Bracknell Forest Homes

We are also able to estimate the long-term economic impacts of the Decent Homes Programme for local health and welfare services. This is based on the reported health improvements in our survey and the savings, to the NHS and society more widely, associated with improved health amongst BFH tenants.

It is extremely difficult to calculate potential savings accurately without making a detailed assessment of individual circumstances and of the condition of the property before and after work was carried out. This is beyond the scope of this study. However, we are able to use

information provided by the Building Research Establishment and Regulatory Information Management Systems 'Housing Health Cost Calculator (HHCC)' to make a conservative estimate of health benefits.

The HHCC is a mathematical model that calculates the likelihood of an injury, accident or disease occurring and the associated cost to the NHS and society in general. A wide range of housing hazards are identified and the health impacts classified from Class 4 to Class 1 depending on the severity. Typical costs of treatment for the NHS are identified in every case (see Figure 5.3). Clearly the health impact will not always be Class 1: everybody who lives in a cold house does not necessarily have a heart attack as a consequence.

Figure 5.3 Hazards, Typical Health Outcomes and First Year Treatment Costs

Hazard	Class 1	Class 2	Class 3	Class 4
Damp and mould growth	Not applicable -	Type 1 allergy *(£1,998)*	Severe asthma *(£1,120)*	Mild asthma *(£180)*
Excess cold	Heart attack, care, death *(£19,851)*	Heart attack *(£22,295)**	Respiratory condition *(£519)*	Mild pneumonia *(£84)*
Radon (radiation)	Lung cancer, then death *(£13,247)*	Lung cancer, survival *(£13,247)**	Not applicable -	Not applicable -
Falls on the level	Quadraplegic *(£59,246)**	Femur fracture *(£25,424)**	Wrist fracture *(£745)*	Treated cut or bruise *(£67)*
Falls on stairs and steps	Quadraplegic *(£59,246)**	Femur fracture *(£25,424)**	Wrist fracture *(£745)*	Treated cut or bruise *(£67)*
Falls between levels	Quadraplegic *(£59,246)**	Head injury *(£6,464)**	Serious hand wound *(£1,693)*	Treated cut or bruise *(£67)*
Fire	Burn ,smoke, care, death *(£11,754)**	Burn, smoke, Care *(£7,878)**	Serious burn to hand *(£2,188)*	Burn to hand *(£107)*
Hot surfaces and materials	Not applicable -	Serious burns *(£4,652)*	Minor burn *(£1,234)*	Treated very minor burn *(£107)*
Collision and entrapment	Not applicable -	Punctured lung *(£3,439)*	Loss of finger *(£1,536)*	Treated cut or bruise *(£67)*

Source: RHE and BRE (2012)

HHCC consolidates and condenses this information into a typical first year treatment cost associated with each class of harm. We consider most of the health impacts reported to us in Section 5.3 (above) to be in Class 3 and 5.

Typical first year treatment costs in the HHCC: Class 1: £50,000; Class 2: £20,000; Class 3: £1,500; Class 4: £100. The HHCC also considers direct treatment costs to comprise only 40% of the total cost of health impacts to society. Indirect treatment, such as care in the community and other social support adds a further 60% to the typical costs outlined here.

Based on our reported health impacts and the typical treatment costs in the HHCC, we estimate the first year economic impact of the Decent Homes Programme in Bracknell to be £1,370,000.

The wider economic impact for society, which takes into account indirect costs, is estimated to be £3,425,000. We consider this a conservative estimate, in which all impacts are considered to be Class 3 in the absence of more detailed information. This estimate is for the first year only, and does not take into account future economic impacts for the actual lifetime of tenants and over the functional lifespan of improvements. This is more difficult to predict, but is likely to be far greater than the first year costs.

5.5 Declined Improvement Works

In the analysis so far, we have focused on the impacts of improvements that were carried out. However, our survey also asked people the reasons why they might have declined an improvement that was offered to them. **It is important to note that our survey oversampled the number of people who declined improvement work.** For example, in our survey of 411 tenants, 80 people (or 19% of people surveyed) told us they had declined the offer of a new kitchen. However, data from BFH shows the refusal rate to be around 8% for this improvement. This may reflect the slight oversampling of older tenants in our survey, especially if older people are more likely to decline an improvement. However, we are also open to the possibility that people told us they had declined an improvement when work had, in fact, not been carried out for a different reason. Most obviously, it might be that their property was assessed as 'decent' and therefore not in need of improvement in this round of investment.

Overall, 38% of people told us they had declined an improvement (though see above for an important caveat to this figure). The improvement most often declined was a new kitchen and the one least often declined was new windows and front door (see Table 5.20).

Table 5.20: Number and Type of Improvements Declined

	Number of respondents declining this improvement	% of all those declining who declined this improvement
New windows & front door	35	23
New heating	63	41
New kitchen	80	52
New bathroom	67	44
Total no of people declining	**153**	--

It is clear from Table 5.21 that the most frequently cited reason for declining the work was that the respondents felt it was not needed. We note the possibility that this may indicate the property was deemed to be 'decent', rather than the tenant deciding an improvement was not required. The second most common reason was a preference for doing the work themselves – in some cases this was because they felt they would do the work better or in a way that suited their preferences. A smaller group of people felt it would be too disruptive.

Table 5.21: Reasons for Declining Improvements

Reason for declining	% giving reason[1]
No need	77
Rather do it themselves	39
Too disruptive	18
Did not think work would be of quality required	7
Don't like strangers in the house	4
Neighbours/friends had bad experiences of	2
Problems with previous improvement	1
Not going to be in the property for long	0
Other	38

[1]Respondents could give more than 1 reason

Table 5.22 looks at any differences in the reasons for refusal by those under and over 70. The results are similar for the two groups with two clear exceptions: i) feeling that there was no need for the improvement was cited by 90% of those under but only 65% of those over 70 and ii) finding the prospect 'too disruptive' was cited by only 10% of younger respondents but 35% of those over 70. Very few people in either age group suggested that they disliked strangers in the house but this was a more common reason given by those over than under 70. These results suggest that older tenants are more likely to find the prospect of builders in the house stressful than younger tenants.

There was little overlap between the explanations for declining to have an improvement. Of the 97 people who said they declined because there was 'no need' only 10 people (10%) also said that they 'preferred to do it themselves' and only 5% that they felt the work would be disruptive. These 10 people represented 27% of the 5 people who said that they 'preferred to do it themselves'. Of the 13 people who said it would be 'disruptive' to have the work done, 5 (65%) also said there was no need for it. None of them mentioned preferring to do it themselves.

Table 5.22: Reasons for Declining Improvements by Age Group

Reason for declining	% under 70 giving reason[1]	% over 70 giving reason[1]
No need	90	65
Rather do it themselves	42	39
Too disruptive	10	35
Did not think work would be of quality required	8	5
Don't like strangers in the house	3	9
Neighbours/friends had bad experiences of	3	0
Problems with previous improvement	0	5
Not going to be in the property for long	0	0
Other	44	38
Total no of people declining	**82**	**37**

[1]Respondents could give more than 1 reason

It therefore appears that people who felt the experience would be disruptive – the majority of whom were over 70 - also said that there was 'no need' for the improvement. This may have

been a justification for avoiding the disruption, or reflect the already decent state of the property. However, the majority of those who said there was 'no need' did not give any other reason. The high number of people who said that they did not consider that the improvement was needed (97 people or 23% of the total sample) is surprising at first. However, as we have pointed out above, this may be because people also included not having work carried out on an already decent property in this category.

5.6 Dissatisfied Tenants

We identified a minority of tenants who were dissatisfied with aspects of the improvement work in our survey. In such a large and complex project, where tenants live with the outcome of the improvement work in their own homes, it is inevitable that some problems will arise. However, in comparison with other housing investment programmes, satisfaction with BFH is high (see our comparison with Wakefield in Section 5.2 above). Overall, we found that less than 1% of tenants in our survey – three people in total - felt that every aspect of the work carried out on their home made things worse.

In our survey, 12% of respondents felt that one or more building improvements had made no difference to their housing 10% felt that one or more building improvement had made their housing worse. However, almost all these people gave a score of 4 or 5 to another building improvement. Only 19 people, 5% of the total sample, gave two or more improvements a score of 3 or less. Sixteen of these people gave another improvement a score of 4 or 5. There were only three people who were so thoroughly dissatisfied that they gave no score of 4 or 5. Thus, almost all people who were dissatisfied with one building improvement were pleased with another.

From the telephone interviews complaints were over the quality of the materials used, especially when these caused minor faults. For example:

i) *"I've got a [kitchen] door that was never screwed in properly [...] like the plinths [on kitchen units], I've got a couple of them, I've got one of them that constantly keeps falling down"* but the tenant adds, *"I mean overall, it was lot better".*

ii) *As time's gone on the paint's flaked off the ceiling in the bathroom, all the sealant from around the bottom of the bath has all come off, er, the panel is loose, the light in the bathroom - we're, we're still on the bathroom by the way - the light in the bathroom, I think I've now had 5 different bulbs and these bulbs are supposed to last, like, 5 years [...]. The paint work they done, at the beginning, yeah, that looked nice, but as time went on you seemed to be able to see, I don't know maybe I noticed it more or whatever, but you could see the paint coming through it.."*

It is important to see these comments in context; satisfaction with the improvement works carried out by BFH was high in comparison to other investment programmes and the number of very dissatisfied tenants we surveyed was extremely low. However, as with our discussion of fault fixing in Section 5.2.2 (above), we note that people experience problems and faults in their home in different ways. For some people, even a relatively minor and resolvable issue like a faulty plinth in their kitchen can become a source of dissatisfaction and, ultimately, stress.

5.8 Summary

Our analysis of outcomes from the Major Works Investment Programme is extremely positive. The improvement works made by BFH have had a significant impact on the everyday lives of tenants. Over 90% of people in our survey felt their kitchen, bathroom and windows and doors had been improved, while 88% of people reported an improvement in their heating. From our analysis of existing evidence on the links between housing and health, we know this will have a direct beneficial impact on the health and wellbeing of tenants. Our comparison of health benefits and the year that heating improvements were completed indicates this link is beginning to emerge in Bracknell. The academic and policy evidence shows us this trend is likely to continue in the future.

Our analysis also shows a high level of satisfaction with the way the improvement work was carried out. This extends to the conduct and professionalism of contractors and the way the project was managed by BFH. We note that, in a large project of this type, faults and a degree of tenant dissatisfaction may be inevitable. However, BFH generally compares well to other housing trusts in this respect. Our results show most economy and efficiency gains have been non-monetary, for example with tenants reporting their homes are easier to live in and offered better value for rent. Overall, we estimate the direct economic benefits to the local economy in Bracknell to be around £3.5 million, with knock on health impacts of at least a further £3.5 million. Impacts at the neighbourhood and community level were also limited, although this is unsurprising given the already high quality of the Bracknell living environment we identified in Chapter 4, and the relatively low density of BFH housing stock amongst privately owned or rented properties.

Chapter 6: Overall Summary

6.1: Findings

In our Introduction (Chapter 1) and Review of the evidence base (Chapter 2) we identified a number of features of housing improvement programmes, such as the Major Works Investment Programme, that were significant to their outcomes. These were: the degree of tenant 'buy in' resulting from the consultation and work programme; the socio-economic characteristics of the local area which will affect the importance of different potential impacts from housing improvement; and the types of improvement made which could affect health and wellbeing, economy and efficiency and neighbourhood and community.

6.1.1: 'Buy In'

We noted that:

- Effective consultation with tenants could improve the sustainability of the work done by increasing commitment to maintaining the improvements
- Satisfied tenants were likely to improve the sustainability of the housing improvements by further decoration and good maintenance
- A high number of refusals would limit the effectiveness of the programme

Our findings suggest that BFH tenants appreciated the consultation over the improvement work and most felt positively about the process of improvement. In particular, we note the overwhelming majority of tenants felt well informed about the level of notice they were given and the consultation on design and colour. We had evidence that some tenants had done further work or raised the quality of their housework in order to enjoy the benefits of the improvements. We think our research overstates the number of people who declined improvement work on their home. The rate recorded by BFH, of around 8% of tenants who were offered a specific improvement, is consistent with other housing investment programmes of this type.

6.1.2: The socio-economic characteristics of the local area

Comparison of secondary data on Bracknell Forest with other Berkshire towns, other Southern New Towns and with South East England showed it to be generally prosperous, with a high quality living environment and good environmental quality. Crime levels are extremely low in Bracknell and property crime has declined in recent years. This suggests that households living in poor quality houses in Bracknell will have been very aware that the quality of their

accommodation was significantly below that of nearby houses. The high quality of the environment suggests that the Decent Homes Programme is unlikely to have had major effects on the quality of the neighbourhood – and this is indeed what we have found. Bracknell Forest already performs extremely strongly in this respect.

6.1.3: Health and wellbeing

The review of the academic and policy evidence base showed that in most situations the two most important effects of housing improvements are effects on warmth or thermal comfort and effects on safety within the home. In areas where crime rates and fear of crime are high, improvements to security may have the greatest impact on health and wellbeing.

We found that for BFH tenants there were significant health benefits from improvements to warmth through better heating and new windows and outer doors. Self-reported health impacts suggest that a third of heating improvements generated positive health impacts. There was also evidence of improved safety in the kitchen and bathroom. Both these finding suggest that there will have been not only benefits to individual tenants but benefits to the NHS and society from the prevention of serious illnesses, injury or even death. We have made a rough and conservative estimate of these benefits as being over 1 million pounds for the first year after the improvements have been completed. There will be future benefits for the actual lifetime of tenants and over the functional lifespan of improvements.

A less easy impact to assess in terms of monetary savings or measurable health impacts is improved pride and pleasure in the home environment – but this is likely to have significant effects on wellbeing and mental health. We found good evidence that such pride and pleasure had been very significantly improved.

Fear of crime amongst tenants before the housing improvements was already very low by comparison with social housing tenants in England as a whole. Thus in this area improvements to feelings of security, although clearly beneficial, will not create the major impacts that have been found in high crime areas. However, we did find that fear of burglary had improved as a result of the new windows and outer doors being fitted.

6.1.4: Economy and Efficiency

We found clear evidence that the new kitchens and bathrooms were generally found to be easier to clean and maintain and the kitchen easier to cook in than before although a small minority reported loss of kitchen storage and a reduction in the ease of bathing. Other studies of housing improvement programmes do not generally report estimates of the impact of these

improvements on the physical effort required by tenants to provision and care for themselves. But they are of some significance to tenants and will have knock on effects on health.

Only a quarter of tenants felt their heating bills had improved. While the rise in energy prices will have been responsible for this in part, the improvements in warmth reported by tenants suggest that some may have improved their thermal comfort rather than reduced their energy consumption. This suggestion was reinforced by some of the responses to our telephone interviews. It is also in line with the many other studies we reviewed that have found that when residents in cold houses are provided with better heating and insulation they tend to improve thermal comfort rather than prioritising economy.

Other studies have estimated the wider economic benefits of the programme through the employment of local people and the consequent injection of spending power into the local economy. We estimate that the programme added about 3 ½ million pounds into the local economy over the years 2007-2012, with a further 3 ½ million pounds of related healthcare savings.

6.1.5: Community and Neighbourhood

We showed in Chapter 2 that while the nature of the community and neighbourhood can have significant effects on health and wellbeing, the evidence for the impact of housing improvements on a sense of community and neighbourhood satisfaction is mixed and strongly dependent on the characteristics of the local area. In Bracknell the density of social housing is low and in our interviews tenants commented that the impact of the housing improvements on the appearance of the local area was diluted by this low density. Furthermore, as we have pointed out above, Bracknell has low levels of perceived problems in the neighbourhoods when compared with social tenants in England. Thus it is unlikely that a programme focussed on improvements to the *internal* quality of housing would have had major effects on people's feelings about their neighbourhood and community. Nevertheless, we did find small but consistent improvements in tenants' perception of a range of social problems in their area and, in particular, improvements in problems of noise, rubbish and litter and fear of burglary. These will have had small but positive impacts on some tenants' levels of stress and anxiety.

6.2 Recommendations

Overall the BFH Decent Homes programme has been highly successful. It has improved tenant's health and wellbeing in a variety of ways; it has made BFH properties easier to look after for

residents and more thermally efficient; it has had some small, but important impacts on neighbourhood and community.

We make 5 recommendations relating to areas in which improvements can be made to the implementation of any similar programme in the future and to the types of improvement that are likely to be most socially cost effective.

1. Fixing faults. This was one area in which BFH and their contractors did less well. We recommend that a high priority be given to checking the system for reporting and fixing faults in any future programme of improvement.

2. Warmth. In Bracknell investment in improvements to warmth have been and are likely to continue to be a highly effective way of improving the health and wellbeing of residents, preventing unnecessary ill health and death and hence saving money for the NHS and reducing the burden and anxiety of care for friends and relatives. We have noted that the Decent Homes standard is relatively low. We therefore recommend that efforts are made wherever possible to identify funding to improve the thermal efficiency of housing in line with the best available standards. This is particularly apposite given the likely rise in energy costs in the long term. Such action would benefit tenants through better comfort and potentially lower heating bills but would also benefit society through reduced carbon emissions. It should also improve the long term viability of BFH's housing stock.

3. Safety. Similarly, in Bracknell investment in improvements to the internal safety of the home have been - and are likely to continue to be - a cost-effective way of improving the health and wellbeing of residents. Preventing unnecessary accidents saves money for the NHS and reduces the burden and anxiety of care for friends and relatives. Although the Decent Homes Standard does not deal with issues of accessibility directly, we note that BFH has invested over £2 million on adaptations for accessibility since 2010-11 as part of the enhanced Bracknell Forest Standard. The importance of this is likely to grow as the population ages over the next two decades. We therefore recommend that efforts be made wherever possible to maintain funding and further improve the accessibility standards of the BFH housing stock, with particular reference to elderly and disabled tenants.

4. Neighbourhood improvement. The academic and policy literatures suggest that investment in neighbourhood improvements can have very significant benefits for residents' sense of wellbeing and sense of ontological security. However, in Bracknell the low density of the social housing and the high quality of the external environment suggest that an investment by BFH in neighbourhood improvement would not offer value for money to BFH tenants. This is not to say

that such an investment would not be beneficial to tenants but it would also benefit many other private owner occupiers and landlords. We recommend that such improvement should only be undertaken in partnership with other agencies such as the local authority.

5. Analysing the social impact of investments. In an ideal world, assessment of the impacts of housing improvements would involve the collection of base-line data on social indicators as well as monitoring other significant changes, which might affect tenants' wellbeing such as employment levels or crime levels. We recommend that BFH consider establishing the routine collection of a few relevant items of information from tenants to enable assessment of the impact of future investments and/or to ensure that where large scale investments, such as the Decent Homes Programme, are made that a research programme to monitor and assess its effect is established before work begins.