

Report **October 2012**

# RICS Research

## The Value of Rural Amenities



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An aerial photograph of a rural village, likely in the Cotswolds, showing a mix of traditional stone buildings and a prominent half-timbered structure. The village is nestled at the base of a large, densely forested hill. The image is overlaid with a semi-transparent purple filter.



# Report for Royal Institution of Chartered Surveyors

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## A report for Royal Institution of Chartered Surveyors

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## Aim

The point that rural housing is the least affordable in the UK is firmly made in both the academic and policy research literature. This is leading to a rapid drift of young people in particular and low income earners out of rural areas into urban communities. The consequences of such out-migration on rural health and vitality as well as on urban congestion and so forth have also been widely explored. This is a pernicious phenomenon that is longing for a solution. A clear understanding of the variety of factors that influence rural house prices is a prerequisite to prescribing far reaching policy solutions to this problem. Curiously, to date, very few in-depth studies have sought to explore the unique inflationary effects of rural attributes on rural housing affordability. This study contributes to filling this gap by measuring, in quantitative terms, the unique contributions of rural amenities on rural house prices.

Specifically, the primary aim of the project was to investigate the complexity of rural housing markets and the impacts of rural amenities on rural house prices. Especially, the study examines the homogeneity of rural markets, the supply of rural housing and dynamics of rural house prices in comparison to adjacent urban settlements and the value placed on specific amenities in urban and rural housing markets.

## Methodology

The methodology included: A survey of rural literature and housing studies; Analysis of secondary housing data including construction of a rural housing index and collection and hedonic analysis of primary housing market data. The study focused on two contrasting local authorities categorised as rural areas but both containing a mixture of urban and rural settlements and isolated housing. The areas were chosen to be the most expensive rural local authority (Amersham) and the most expensive rural local authority outside the South East (Bridgnorth).

## Results

- i.** The growth in price within rural markets is on average higher than for urban markets and particularly during the recent downturn, rural house prices have held their values better than urban house prices.
- ii.** The differences in the price of rural and urban property can largely be explained by the balance of availability of different types of property.
- iii.** There was some evidence that there is a small rural premium unexplained by differences in house type mix.
- iv.** Some amenities such as large plots and extra bedrooms are valued more highly in urban markets; others such as pre 1914 character housing, condition and outbuildings housing are more valued in rural markets.
- v.** Modelling urban and rural properties as separate markets gave significantly better understanding of the sources of the problem than when they are analysed together. Models with rural premium dummy also performed well.

## Conclusions and Recommendations

- i.** The results show that “rural” local authorities contain a mix of settlement types and to base policy on aggregate prices at local authority level will mask real rural housing shortages and the need for local housing. This implies that understanding of local housing need requires detailed study within each local authority. Targeting of national funding to achieve rural housing goals should therefore be formed from an amalgamation of local studies.
- ii.** Provision of affordable housing in rural areas could be facilitated by adjusting the supply characteristics and a focus on providing entry level housing in villages, hamlets and isolated areas based on anticipated household formation.
- iii.** Valuers can use urban comparables to value rural property in adjacent villages in the study area but should be aware of the small differences in emphasis in amenity values. In general valuers should be aware that urban and rural markets show variation in valuation of property characteristics.
- iv.** Further research is needed to extend the breadth of this research to more rural areas in order to develop more robust conclusions. This is particularly important as there were differences in the findings for the two study areas in this analysis.

## 1.0 Introduction

Understanding the differences in the value of property between urban and rural locations in the UK is vital, not only for valuation professionals but also for policy makers. The valuation of rural properties is technically difficult because of the relative rarity of comparable sales. Therefore research that sheds light on valuation of specific amenities in the urban and rural setting can be helpful to valuation professionals. It is also helpful to these professionals to explore the definition of and segmentation within housing markets labelled as rural.

For policy makers it is becoming increasingly important to address perceived inequalities between the urban and rural poor and to seek to maintain diversity in rural communities. Interest in studying rural property price movements has grown. This stems from a common perception that rural areas in England are subject to economic forces which are threatening traditional village communities. In particular, the price of rural housing, especially during the housing bubble of the last decade is one of the factors that have been implicated in the decline of communities.

The aim of the research was therefore to explore the complexity of the rural housing market via literature review, case studies and empirical analysis of multiple sources of property data. The approach was divided into three main phases: a literature review; analysis of secondary data; and collection and analysis of primary data.







The three phases of the project can be summarised as follows:

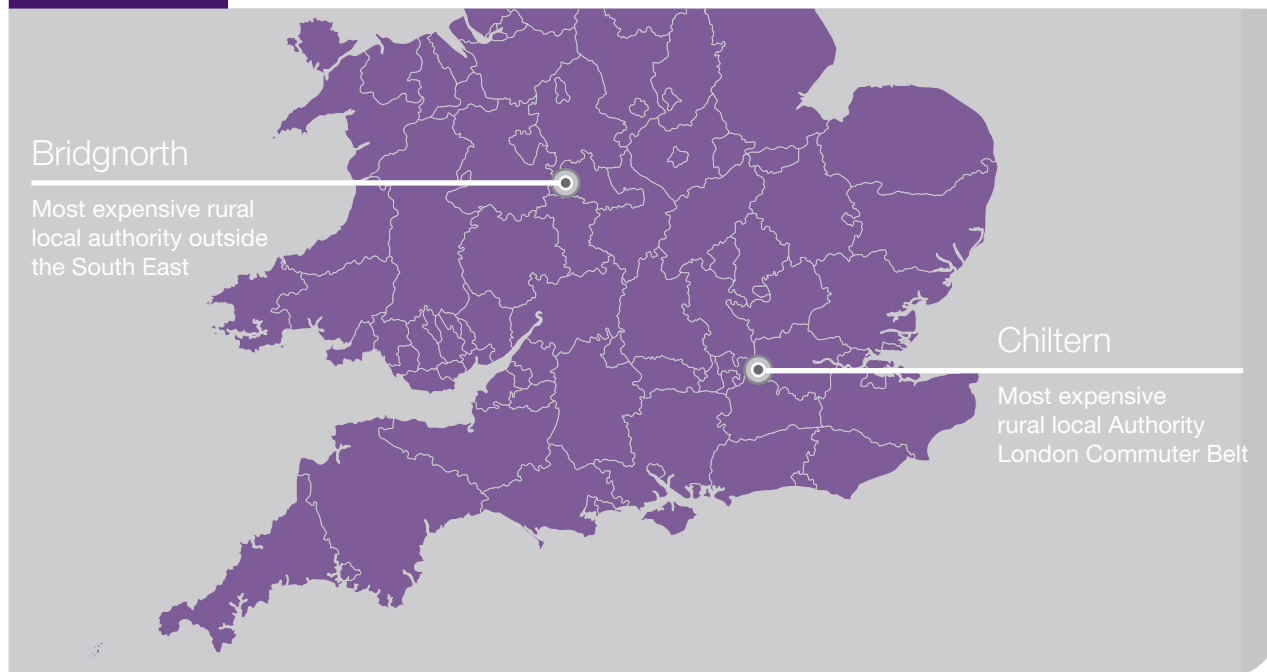
- i.** Summarise the current knowledge base regarding rural housing choices, rural markets and the value of rural amenities via literature review.
- ii.** Compare the structure and dynamics of the rural and urban property markets using secondary data for two case study areas.
- iii.** Explore market segmentation and estimate the value of amenities for a rural housing case study site.

## 2.1 Phase 1: Literature Review

The literature review drew on source material from policy and practice research in this area by the Department for Communities and Local Government, the Welsh Assembly Government, Scottish Executive, Joseph Rowntree Foundation, Countryside Alliance, Campaign for the Protection of Rural England, Commission for Rural Communities, National House Builders Federation, and the Improvement and Development Agency. The review also extended into the academic literature and examined the wider research agenda regarding rural attitudes to housing.

In order to gain detailed insights into the value impact of specific property attributes, a critical analysis of housing studies literature was undertaken. This review focussed on attributes which intuitively might be expected to have a positive impact on the value of rural housing include space, views, lack of pollution and lack of noise pollution.

**Figure 1** Map showing location of case study sites



## 2.2 Phase 2: Analysis of Secondary Data

Two case study areas were used (see Figure 1): Amersham and surrounding villages, situated in the most expensive rural local authority in the UK according to the Halifax (Halifax, 2008); Bridgnorth and surrounding villages the most expensive rural local authority outside the South East according to the Halifax (2008). Bridgnorth may be seen as a fairly self-contained area in an agricultural district with no single obvious commuting destination whereas Amersham is part of the London commuter belt. The dynamics of these two case study areas may differ accordingly. The following analyses were carried out for both sites:

- i. Examination of the distribution of type of housing stock in specific rural and urban areas using Land Registry (LR) data.
- ii. Descriptive analysis of mean, median and interquartile ranges of house price by LR category, and the same urban rural category splits described above.
- iii. Measurement of average local house price growth to determine whether there are differences in house price growth between local urban and rural markets and between particular named rural settlement and the rest. A repeat sales method using LR data was employed, repeat sales models can provide a sound basis for constructing indices of local markets (Costello and Watkins, 2002; Lim and Pavlou, 2007) and are more data efficient and less processing intensive than traditional hedonic methods.

## 2.3 Phase 3: Collection and Analysis of Primary Data

Collection and analysis of data was undertaken for the Bridgnorth area. Online sources were used to collect asking price and property attributes of residential property in the case study area. This data was then analysed for differences in market supply dynamics between urban and rural areas.

Hedonic analysis of the data collected during the study was used to determine the value of amenities in the urban and rural market and whether the markets could be regarded as integral or separate.



### 3.1 Phase 1 Findings: From Literature Review

The twin pressures of wealthy in-migration and the limited supply of rural housing stock has been blamed for the fact that rural housing prices often exceed the affordability limits of local incomes. This is said to contribute to the tendency of young people to move away from their own communities to set up their own households (Champion, 2006) thus contributing to the ageing of rural populations. However, housing affordability is not a uniquely rural issue nor is housing affordability the only driver of changing rural demographics. There are other complicating factors which may be more important to rural youth than the price of property and traditional village communities rely on more than the presence of young families. The perceived direct link between the price of rural housing, youth out migration and the decline of traditional communities is therefore difficult to perceive. Recent research concentration on the class and conflicts of rural in-migration (Milbourne, 2007) has not given us the evidence required to analyse the links between migration and house price movements.

These features of the rural housing market also make valuation of rural properties quite problematic. A crucial breakdown of the price of residential property falls between the structural attributes of a property and its locational amenities. While in urban markets, density of housing make it quite plausible that multiple properties share similar locational amenities and also can be structurally similar the availability of direct comparator properties within rural markets is much rarer. Valuers may have to look far back in time to find any property in the vicinity which has sold and then it is unlikely to have similar physical and structural characteristics. Where properties at some distance are taken as comparators, the valuation professional needs to have some categorisation of properties in mind in order to be able to derive the value of the subject property from the available distant comparators, through comparative analysis. There are several candidates for such categorisation for example: properties with similar locational amenities; properties in a different village judged as similarly desirable; properties with similar accessibility; and properties in areas with similar property density. The lack of pricing studies within the rural property market makes the choice a matter of judgement for the valuer. Further research that shed light on the trends within rural property markets would enable better consistency and accuracy of rural property valuation.

Given the lack of academic research into the structure and dynamics of rural housing markets and any link this may have to demographic change and rural decline, this section reviews literature from rural research and valuation literature in a first step towards developing a model of rural house pricing which may assist in classifying and valuing rural property. It examines the evidence from rural research and housing literature and suggests key property characteristics which should be important in modelling the price of rural property. The section also evaluates evidence regarding the underlying causes of and solutions to the perceived rural affordability problems.

#### 3.1.1 Availability and affordability of rural property

The upward trend in house prices across all sectors throughout the 2000-2007 period has contributed to a slowing of independent household formation for urban and rural young people (Heath, 2008). A Commission for Rural Communities report (CRC, 2008) showed that the ratio of lower quartile house price to household income is above 6.2 for most of the South and also for large areas of the North of England. Since the private rental market is likely to follow similar patterns, this situation is putting entry level housing out of the reach of many households. However, there are special conditions which may tend to make the problems worse in rural markets. These include the higher levels of owner occupation in rural areas and the fact that right to buy has reduced the social housing stock more quickly in many rural areas than elsewhere (Welsh Assembly Government; 2006b, Chaney and Sherwood, 2000; Cloke et al., 2001).

Rural property has become less affordable in part because of demand driven by the lack of social housing in rural areas (Walker, 2004). Chaney and Sherwood (2000) showed that resale of council houses bought under the right to buy scheme were far more likely to attract in-migration from distance and that these buyers were more likely to be younger and of a higher social class than the previous occupants. The relative premium on rural house prices has also been attributed to the in-migration of middle class urban population seeking the rural idyll leading to gentrification (Stockdale, 2009).

Understanding of demand for rural housing is elusive at a national scale. Surveys of rural housing demand are often carried out at very local scales such as parish councils and rely on detailed knowledge of local conditions and needs. Housing statistics on the other hand represent a generalised view which may mask the differences between types of rural location. In the Halifax study (2008) “rural” was defined at a local authority level by Office of National Statistics (ONS) categories and thus the price of rural housing incorporated market towns, villages, rural settlements and isolated housing. Generalising rural housing statistics masks the differences within the category of rural which potentially exceed the variation between market towns and city suburbs. For example a study in a Norfolk “Area of Outstanding Natural Beauty” (Three Dragons et al., 2005) concluded that 84% of residents could not afford entry level housing and that 15% of homes were not occupied by permanent residents, whereas a Welsh Assembly Government report (2006a) concluded that second homes were not a significant contributory factor to rural house price inflation.

Supply of rural housing is clearly limited in comparison to urban property but the supply deficiencies are not universal and uniform. Commission for Rural Communities (CRC) research shows that the problems of affordability are consistently worse in sparse areas (CRC, 2008) and that the ratio of second homes varies greatly across rural areas. Thus the suitable policy options may also vary and any study of rural areas should recognise and address the differences between areas and definitions of rural. Hodge and Monk (2004) quote work by the countryside agency regarding housing type and suggest that a full hedonic study is needed to understand the factors involved in higher rural house prices.

The recent turmoil in housing markets has led to a decline in house prices in urban and rural areas (CRC, 2009) but rural areas have declined less than urban ones and worsening economic conditions have ensured that affordability of housing has not yet improved. Local authorities have made variable attempts to address the shortfall of affordable housing and have met with mixed success (Gallent et al., 2002). Their efforts are being hampered in part by a negative perception of social or affordable housing and the Nimbyism on in-migrants. Schemes which rely on part ownership or equity and social housing will require some investment by public funding sources, possibly subsidised using planning obligations. When forming affordable housing policy, providers need to ensure that the multiple needs of the rural households are met but also to ensure that there are no inequitable advantages gifted to rural residents solely on the basis of claims to ‘localness’ rather than on income level.

### 3.1.2 Notions of rurality

The notion of a rural idyll, tellingly portrayed by Postman Pat (Horton, 2008) has arguably been responsible for a nostalgic view of the English or British countryside with beautiful scenery, low traffic and a sense of community which is increasingly appealing in a modern society where such amenities are becoming rarities. According to Shucksmith (1990) in the UK in particular, rural living is seen as aspirational and as a status symbol. This has led to the “gentrification” of the countryside and the desire to strictly control the supply of rural housing. Popular perceptions as illustrated by “best village” rankings (anon, 2008) use factors such as crime rate, commutability and availability of property to rate the attractions of village life. A cultural phenomenon such as Postman Pat may indeed shape the cultural common ground in perception of a rural idyll which someone else may be experiencing. However it can hardly be said to dominate the perception of rural communities themselves.

Actually the concept of a rural area may have diverse definitions from describing a county which encompasses urban and rural areas (Halliday and Coombes, 1995) to describing a windswept moor with little or no human habitation. While the vague desire to move to the country may be almost universal, the beliefs and attitudes of actual migrants and long term rural residents are more pertinent to the rural housing debate.

A central question in the increasing in-migration to rural areas and the resulting rise in house prices is the motivation and therefore property choices of the migrating population. Several studies have suggested that the specific amenities of the chosen residence, such as actual view from a property and proximity to green space, may be less important than the perceived lifestyle changes that come with moving to a particular rural location. Stockdale (2009) showed that lifestyle choice, such as a move to self-employment, was more important than access to green spaces in the decision to migrate to rural areas in Scotland. If lifestyle is being bought then it may be more important to dwell within a particularly desirable settlement than to have access to a big garden. Although of course the desirability of a particular named settlement will most likely be determined by the average amenities of property in that settlement resulting in a high correlation between the two.

### 3.1.3 Rural Migration

Studies show the desire to move to the countryside is strong. A recent state of the countryside report stated that 50% of the urban population 'would like' to move to the countryside. Whereas 90% of rural dwellers want to stay in the countryside (Taylor, 2008). Far from declining, the population of most rural areas is now on the increase (Champion, 2006) despite the out-migration of the young. The growth is partly explained by internal migration of older affluent people from the cities (Champion, 2006; Champion et al., 2007). Causes of migration in and out of rural areas are not fully understood but appear not to be wholly driven by housing cost (Jones, 2001; Welsh Assembly Government, 2006b). Suggestions for maintaining vibrant living rural communities put to the Taylor review (2008) stressed the need to include employment considerations along with housing.

Halfacree (1994) examined migration motivations from a number of studies and the dominant pleasures of the countryside appear to be the peace, quiet and feeling of space. However moving to a rural location was usually a secondary motivation for a move whether from rural to rural or from urban to rural. Phillips (2007) contends that the idea that rural residents are uniformly middle class is over simplistic as within the middle class a finer classification is needed. Census statistics suggest that the service classes are more likely to occupy sparse areas with industrialists occupying less sparse rural dwellings. This suggests different requirements in different rural purchasers. A supposition supported by the work of Smith and Phillips (2001) illustrated that differences existed between the patterns of property prices in adjacent rural communities in North Yorkshire. They contend that the ideals and vision of rural living dictates the choice of rural village or remote location and that this leads to differing socio economic dynamics in nearby communities: those in villages desiring a sense of belonging to a community with

a less competitive way of life; those in remote locations requiring an escape from the pressures of urban life but failing to integrate into local communities. Different motivations are also suggested by Halfacree (1994) where rural to rural movers stressed accessibility to services and social networks more than urban to rural movers. Anecdotal evidence from successful implementation of affordable housing schemes in South Shropshire suggest that some rural dwellers value these local networks extremely highly.

Account may need to be taken of other rural traditions which have shaped the way rural settlements have developed, for example inheritance patterns among farming families. These factors may result in asymmetrical valuations of rural amenities between different categories of rural dwellers, making the evaluation of rurality highly complex. In order to target policy which will enable differing local housing needs to be fulfilled, it is necessary for policy makers to understand the open market constituents of rural housing price but also the benefits of proximity to social networks potentially afforded by schemes prioritising local residents.

Thus demand for rural housing is likely to be determined by the changing demographics and to differ across rural locations. Policy makers need to understand the phenomenon of changing demographics in rural areas more deeply in order to be able to tackle affordability appropriately and to target the right type of affordable provision. This section has identified several key rural variables, namely: the presence of views; accessibility to services and local networks; access to open space; peace and quiet which may be important to rural migrants. These are considered in the next section in the context of results from house price models.





### 3.1.4 Valuation of key rural amenities

The value of property is often divided into values derived from the structural characteristics of the property and values related to the location of the property. Structural features include number and size of rooms, age of the property and presence of desirable attributes such as double glazing or a garden. These structural elements are relatively easy to define, measure and compare. Conversely, locational characteristics are often difficult to define and can be measured in multiple ways. The value to a property of open space for example probably depends on the type of open space, the distance of that space from the property, the accessibility of the space and other things.

In selecting the factors to be considered in modelling rural property, it is incumbent on the researcher to choose which amenities to include, how to measure them and whether they mean the same thing in an urban and rural context. In the UK there have been a number of studies into the effect of locational externalities on the price of property. These have included the impact of woodland (Garrod and Willis, 1992), parks, views and noise pollution (Day et al., 2003); property crime (Gibbons, 2004); wind farms (Dent and Sims, 2007); overhead power lines (Sims and Dent, 2005); the value of accessibility and transport infrastructure (Antwi and Henneberry, 1995; Adair et al., 2000) and education value (Gibbons and Machin, 2003; Bramley and Karley, 2007). In most cases an hedonic or adapted hedonic model is used. A review of international hedonic models which included measures of environmental externalities was carried out by Boyle and Kiel (2001). The research conclusions stress the need to include all relevant measures of the externality, to include all other relevant variables and to look at the information pathways by which home owners assess the externality. Sirmans et al. (2005) provided summaries of the most commonly tested variables within hedonic studies of the environmental/natural category and found that, when tested the impact of view or lakeside location was almost always found to be positive suggesting strongly that the presence of a view can be considered as a positive influence on the price of housing.

On the whole, the house modelling literature has concentrated fairly naturally on urban housing. Rural housing markets are more difficult to model because of lack of data and difficulty in defining a unified closed market. However Simons and Saginor (2006) in their meta-analysis of studies of amenities and disamenities in the US showed that rural property suffered greater discounts on average than urban and suburban property to the proximity of disamenity. They also showed that rural properties gained less than urban ones from positive amenities. Such findings may suggest a qualitative difference in attitudes towards amenities between urban and rural dwellers. For a rural dweller, improvements in amenities in an already desirable location are marginal but



siting of a disamenity is a disaster. For an urban dweller in an arguably less desirable location, the benefit of an improvement is felt more keenly and the view of disamenities is more balanced among other priorities. Bearing this in mind, it is valuable to examine the findings of previous studies regarding the constituents of rural living identified from studies of rural migration. The following sections consider in turn views, accessibility, peace and quiet, lack of pollution and the concept of a good neighbourhood.

#### The value of a view

Views have been shown to exert a positive effect on property price by multiple authors (Paterson and Boyle, 2002). The presence of nearby amenities and disamenities are more significant when they can be seen from the ground than when they cannot (Cavailles et al., 2006). Even the impact of pollutants are greater when their effects are visible (Anstine, 2003). Sirmans et al. (2005) provided summaries of the most commonly tested variables within various categories and within the environmental category views were the most tested. Out of 31 studies which tested views of one sort or another only two failed to find significantly positive impacts. Water views are in general more attractive than non-water views (Sander and Polasky, 2009; Jim and Chen, 2009; Bourassa et al., 2003). Views of water and the coast from a property can outweigh the negative aspects of riverside and coastal living (Bin et al., 2008; Speyrer and Rajas, 1991).

However, the value of a view in New Zealand has been shown by Bourassa et al. (2003) to vary with the availability of views within the measured property market. From this it may be expected that a good view would not command as much premium within a rural setting as within an urban one.



### The value of open space

Open space may be highly correlated with views as nearby parks, water etc will often lead to good views from the property. Living near open space can be attractive but some studies show that busy parks can be undesirable neighbours and that permanence is important, potentially developable land being less valuable than protected land. Open spaces are more highly valued in urban areas than distance to open space is important with space more than 1000m away being of no value locations (McConnell and Walls, 2005; Jim and Chen, 2009; Neumann et al., 2009).

The distribution of open space between that located on the property and that nearby has also been the subject of study and seems pertinent here as rural property is more likely to incorporate large amounts of green space within the property than urban land. Communal space is valued less than owned space (Austin, 2004). It seems probable that different estimates of the value of nearby green space will emerge in these two markets.

### The value of accessibility

Accessibility is a complex concept involving the ease of reaching various needs and wants such as employment, retail establishments, social networks and schools. It can also encapsulate the quality of services such as schooling and health. Usually accessibility is measured by variables such as the distance to a central business district, availability of public transport or by catchment area. The impact of school grades or school quality for example is generally positive whether measured as a zone or using distance measures (Gibbons and Machin, 2007).

In urban studies the presence of a rail link is usually measured as a positive attribute except where so close as to constitute a noise nuisance (Gibbons and Machin, 2007). Adair et al. (2000) noted that accessibility has the greatest impact on low income areas of Belfast possibly due to low levels of car ownership and therefore reliance on public transport. This finding may also hold true in villages served well by public transport. In sparse rural areas, however, public transport may be seen to be largely irrelevant as train services are inaccessible by foot and the frequency and inconvenience make buses impractical for the young and elderly. Only 16% having a frequent service within a 6 minute walk (Powe and Shaw, 2004). Powe and Shaw (2004) suggest that with the high concentration of car ownership access to services used infrequently, such as major food retailing, may be less important than access to good health and schooling. This implies that for rural dwellers without a car the ability to walk to schools and shops may be decisive in the choice of settlement but a specific school bus service or mobile shop may complicate this picture.

### The value of quietness

Noise level estimation in Sweden showed that road noise causes more annoyance than railway noise (Andersson et al., 2008). These findings are consistent with acoustic literature but contrast with a UK study by Day et al. (2003) that looked at income based segmentation of the market and concluded that there were different responses based on income levels. Rail noise was found to have higher impact than road noise and air traffic impact was not measurable.



The study of the annoyance value of noise can become highly technical. As outlined in Nelson (1982) the human ear has a log-linear response to noise so that small increases in the number of decibels cause much greater response in terms of annoyance. A variety of noise indexes have been proposed which consider this nonlinear response but also take into account the time of day when noise levels are highest. However Andersson et al. (2008) suggest that subjective and scientific measures give fundamentally similar results and that measurement at different times of day also give consistent findings. For a rural study, the most likely source of noise annoyance is location next to a major road or rarely a main railway line. There may be noise nuisance from rural activities such as farming if property is next to a major rural producer but this will be difficult to measure and quantify as the activities are highly time dependent.

### The value of clean air

Meta-analysis of 35 studies of air pollution (Simons and Saginor, 2006) showed a significant negative impact of air pollution, comparable to the impact of nuclear power installations at about 9% of property value. However, clean air is also highly correlated to proximity to positive amenities such as green space, water and the coast. When these amenities are taken into account the value of clean air becomes unmeasurable. This makes intuitive sense as buyers will judge the quality of their air from visible signals such as presence of a nearby road rather than from scientific measurements of air quality. The impact of air quality may therefore be captured within other amenity values and not likely to be measurable separately. In particular for a rural study, air quality may be synonymous with rural location (unless there is a specific known pollutant in an area).

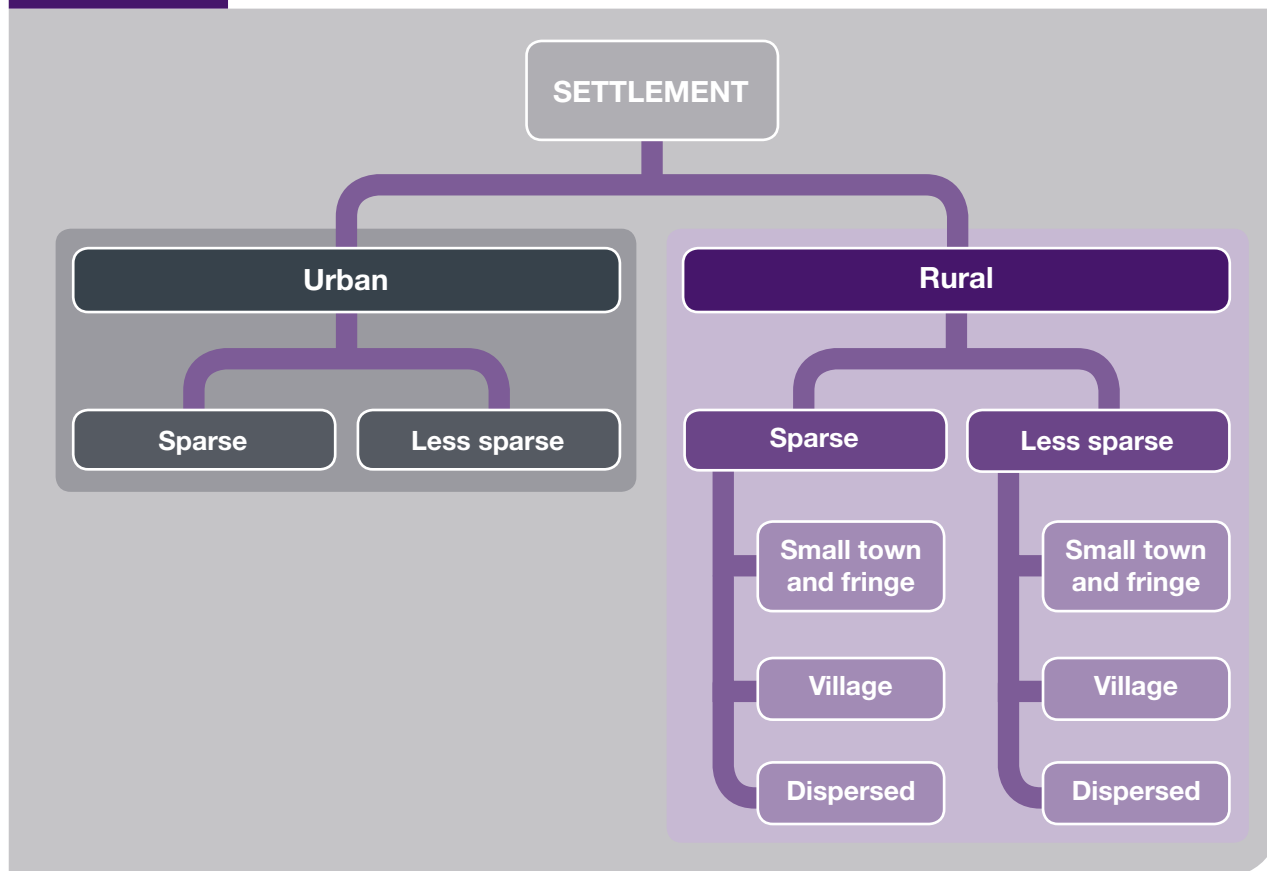
### The value of a good neighbourhood

Kearns and Parkes (2003) examined the causes for dissatisfaction with neighbourhoods and found that rural residents were likely to be dissatisfied with neighbourhood facilities, access and disorder whereas their urban counterparts were more dissatisfied with home condition and facilities. This may be an unexpected finding given the perception of rural neighbourhoods as having many advantages. However it may not be relevant in the urban rural migration debate because the main motivator for moving is rarely dissatisfaction with a neighbourhood. In fact moving from a poor neighbourhood can be made difficult due to lack of demand and therefore difficulty in selling property in a poor neighbourhood. Defining a good neighbourhood being a *priori* is in any case a subjective matter which will include factors such as clean air, noise, crime and open space.

Pennington et al. (1990) found that the inclusion of dummy neighbourhood variables reduced the significance of their focus variable, noise from the nearby airport, and rendered it insignificant. Gibbons (2004) also observes a large change in focus variable significance, in this case property damage and burglary on the inclusion of neighbourhood variables. Inclusion of a neighbourhood variable can therefore improve the performance of a predictive pricing model but reduces the explanatory power of the individual amenities which constitute a “good” neighbourhood. The inclusion of neighbourhood as a dummy variable can therefore be seen as an alternative formulation to the inclusion of individual rural amenities.





**Figure 2** Urban Rural Classification


### 3.2 Classification of Urban and Rural Property Markets

From the analysis of the perception of rurality above, it appears that many different classifications of rural property are possible. In this research the classification explored is derived from the Office of National Statistics. The classification was defined for the Office of the Deputy Prime Minister in partnership with Department of the Environment Food and Rural Affairs, the countryside Agency and the Welsh Assembly Government (Bibby and Shepherd, 2004). The classification is available at census output area level and can be linked via available look up tables to other geographies including postcoded data or map references. Output areas (around 125 households) are assigned to urban, rural village, rural small town and fringe, or dispersed and are also contextualised within sparse and less sparse areas as illustrated in the tree diagram in Figure 2.

The assignment is based on land use density and results in a categorisation of urban settlement form rather than socio-economic judgments of employment basis. For a study of housing, it is appropriate as physical settlement form is an essential component of the desirability of rural property purchase. Arguably with wealthy in-migration the concentration of settlement with rural employment pattern will not demonstrate rural house inflation.

Using the postcode lookup, an urban/rural classification can be assigned to each property in the two case study authorities allowing the analysis by urban/rural category. Some postcodes may overlap more than one output area and therefore some postcodes could contain property of more than one urban/rural class. This was not a frequent occurrence and for consistency in such instances the densest classification was always assigned.

### 3.3 Phase 2 Findings: Secondary Data Analysis

As outlined above a crucial question for policy makers is whether the lack of affordability of housing in rural areas is solely due to higher prices being paid for similar property in a rural setting or whether it is in part or entirely due to differences in the available rural housing stock. The two situations could lead to differing solutions to the affordability problem. In one case, simply increasing the supply of appropriately sized accommodation could result in equalisation of property prices. In the other case, newly built affordable homes would quickly move upwards out of the reach of low income households. This section looks at literature and empirical evidence for the distribution of housing stock and the availability of affordable rural homes.

To gather evidence on the issue, two areas were chosen for this study that had been identified as problematic in terms of housing affordability by the Halifax Building society report (Halifax 2008): Chiltern, the most expensive rural local authority in England; and Bridgnorth, the most expensive rural local authority outside the South East of England. In addition these areas are seen to have low affordability.

The choice of area was also informed by the different characteristics of the areas with Chiltern situated just outside London served by commuter lines into the capital. Bridgnorth in contrast has no single commuting destination sitting between Birmingham and Wolverhampton to the East, Shrewsbury to the West, and Telford to the North.

Chiltern is described as a rural local authority by the Halifax study. In fact the district council of Chiltern is just outside the M25 motorway, a major ring road around London. It encompasses large conurbations such as Amersham, Chesham, Gerrard's Cross and Beaconsfield with many villages in between. Chiltern would usually be characterised as London commuter belt and therefore there is an expectation that proximity to transport links may be highly important rather than proximity to local business districts in the value of local property. In fact the lower half of the area (closer to London) is regarded as more desirable and higher priced than the northern sector (Chiltern District Council, 2004).

Housing affordability in general is a problem for Chiltern with an average price of almost £450,000 in 2008 – this being well above the spending power of most average earners (Halifax, 2008). The district council have also identified a great need for affordable housing provision which justifies the insistence of affordable housing provision on all new development sites in the district.

According to the 2004 survey (Chiltern District Council, 2004) there are just over 36,000 households in the district and the vast majority (nearly 80%) are owner occupied. Just under half are within the major towns of Amersham and Chesham. A survey of estate agents for the same study stated that urbanised areas of Chiltern are less expensive than rural ones. They also observed that there was an under supply of property and that two main driving factors were access to train stations and catchment areas of good schools. The lack of one bedroomed properties was also mentioned as a factor in the cost of property in the area. However, within the statistics generated for the report there was no consideration of the differences between urban and rural areas per se, a North South divide for the region was considered however. Although Chiltern is described as a rural authority the needs of rural areas are treated no differently except for the standard government policy of exception sites for new development giving lower thresholds for the provision of affordable housing and different rules for the pricing of land made available for affordable development in rural areas.

Bridgnorth is the most expensive rural local authority outside the South East. However the average house price within Bridgnorth is significantly lower than for Chiltern at just under £270,000. Bridgnorth is within the largely rural county of Shropshire but is within easy commute of Birmingham, Wolverhampton and other urban areas. The town of Bridgnorth is by far the biggest settlement in the area and there are several smaller towns and villages down to tiny hamlets which are dispersed widely through the district. Just outside the district are other large towns such as Kidderminster and Telford.

Shropshire as a whole is one of the least densely populated areas of England, 64% of the population both of Shropshire as a whole and of Bridgnorth district live in the urban areas. Only 8% of the land area of Bridgnorth district is described as urban (Shropshire County Council, 2007). With a 2001 census estimate of around 20,000 households, the population of Shropshire is also ageing at a faster rate than the country as a whole with the birth rate falling and rural schools coming under pressure to close. With a sparse population the council see service delivery to rural areas as a future challenge and therefore rural community life may be under greater threat in this local authority than in Chiltern.

### 3.3.1 Data Collection

Data on property sales in the two case study areas was obtained from the Land Registry database. The Land Registry records all open market transactions of property in England and Wales and records details such as the price and date of sale, the address and postcode and the type of property. Computerised records are available from 1995 to date and complete datasets from the two case study authorities were purchased.

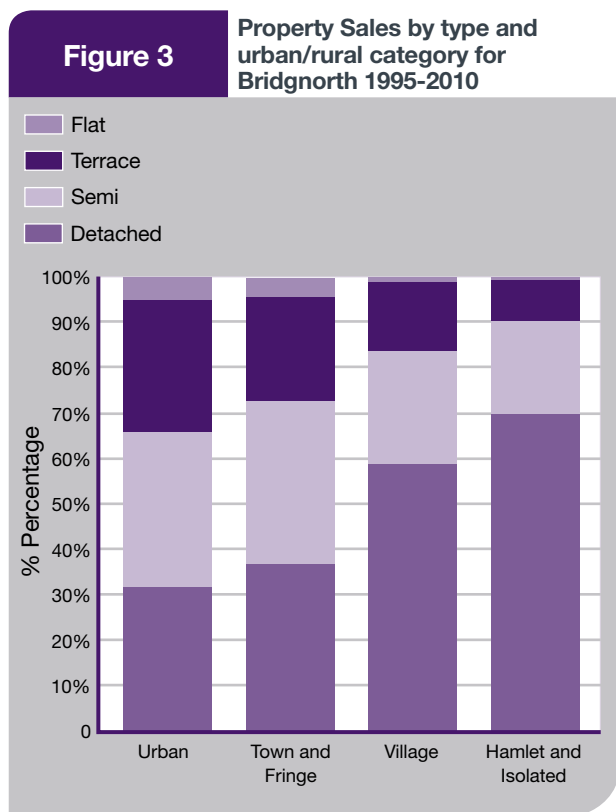
The analysis used in this paper is data comparison of the sale of housing stock in the case study areas by type of property and urban/rural class. The frequency of sale, average price and variability are compared within and across the two areas. While this is not necessarily a true reflection of the amount of property available on the market to buy, it is likely to be a fairly robust proxy for most of the period where demand for housing was high and prices rising.

### 3.3.2 Results

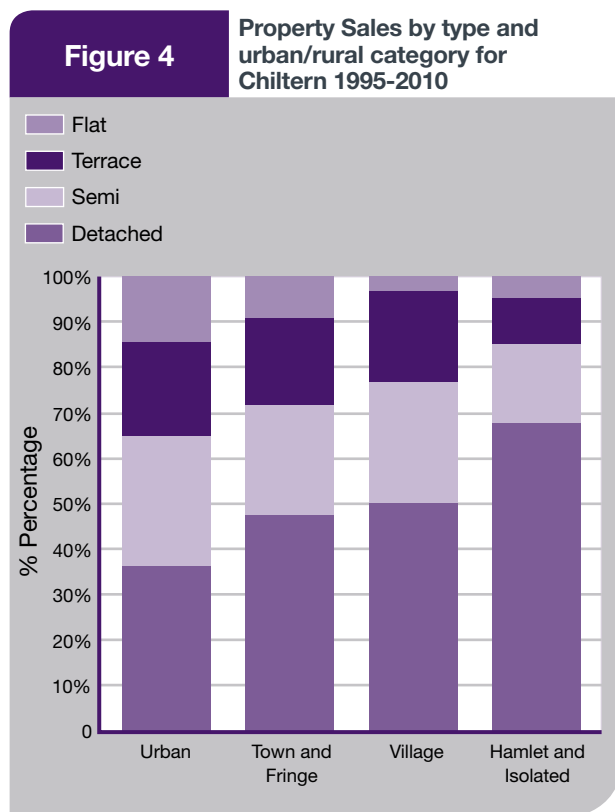
Figure 3 shows the property sold in Bridgnorth by property type. The proportion of different property types is very different among the classifications with flats more concentrated in the town and detached property dominant in hamlets and isolated property.

The lack of availability of terraced property and flats in hamlets and isolated properties may contribute to a lack of affordability as they tend to be among the lowest priced property. The high percentage of detached property, more than double in hamlets and nearly double in villages over towns and fringe may tend to lead to higher prices on average for rural housing.

Sales by property type for Chiltern show a similar pattern but the scale of differences is smaller as shown in Figure 4. If new builds are considered, it appears that the trend is towards detached and terraced property and away from semidetached properties. In the longer term therefore the type distribution within the urban property market may tend towards the rural.



Source: LR price paid dataset/ons



Source: LR price paid dataset/ons



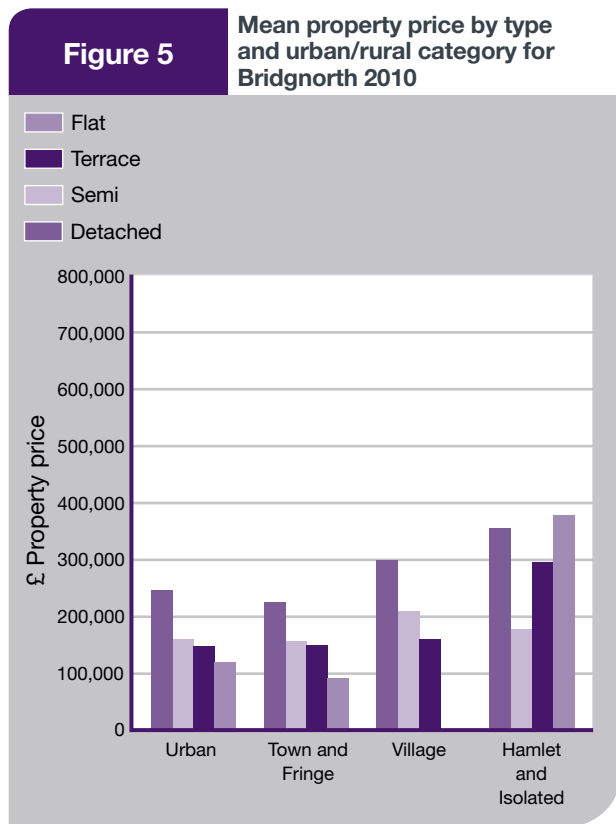
The price of property for Bridgnorth by type is shown in Figure 5. Terraced property shows the highest prices in villages whereas semi detached property shows similar price levels in urban and village property with only hamlet and isolated property selling at a higher price. For detached properties and flats, a clearer distinction is seen.

This implies that a small first family home is priced similarly wherever it is located. However flats are rarely available, only seven flats were sold in Bridgnorth hamlets and isolated properties over 15 years. Clearly if individuals are looking for a flat in their local village they could wait a very long time. The available flats command a very high price, the quality of such flats probably varies greatly with isolated and hamlet flats perhaps being located in prestige buildings with spacious rooms.

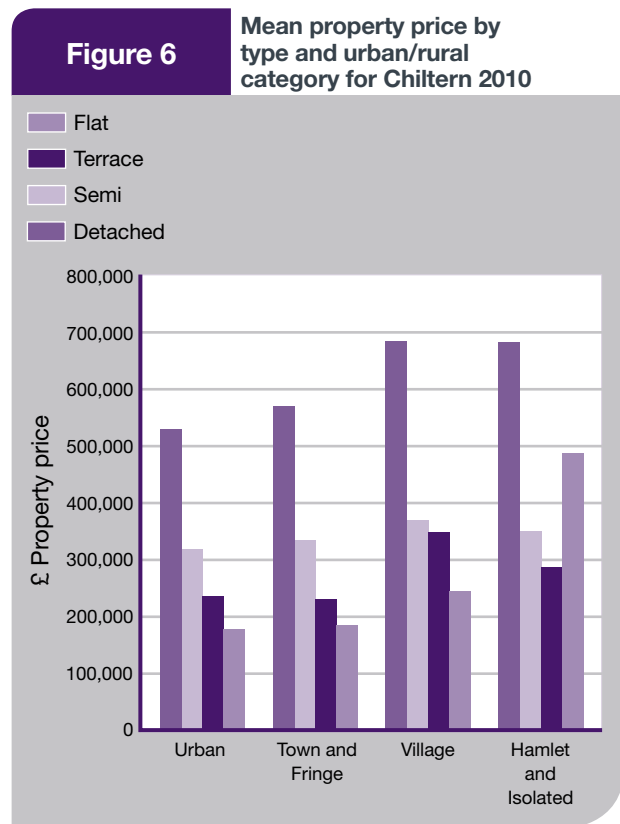
The price of detached property also varies greatly with flats, terraced and semidetached showing a more centralised distribution. The largest standard deviation is exhibited within flats in hamlets and isolated villages. In general the variability in sold prices is higher among hamlets and isolated villages and the highest prices are realised by rural property.

If Chiltern is considered, the picture is similar as displayed in Figure 6. In this case flats are similarly priced from urban to villages with flats in isolated property and hamlets being at a premium price. Terraces and semi detached increase slowly with decreasing settlement size. The highest prices in each property type are distributed across categories but once again the variability of realised prices in hamlets and isolated villages is higher than in more concentrated settlements. Detached property shows the most variability among types.

The variability among flats and apartments in hamlets and isolated dwellings is a strong feature of both rural property markets. Flats which realise over £1m were sold in both Bridgnorth and Chiltern and could distort the data considerably. This may be a feature of the Land Registry classification which is problematic for further analysis and warrants further investigation.



Source: LR price paid dataset/ons

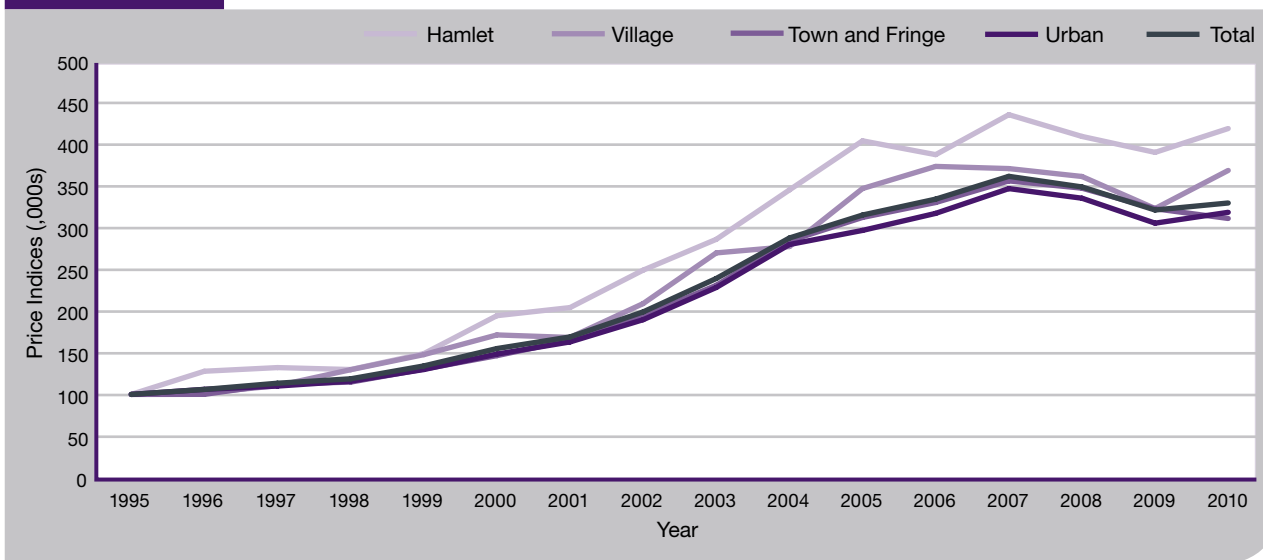


Source: LR price paid dataset/ons

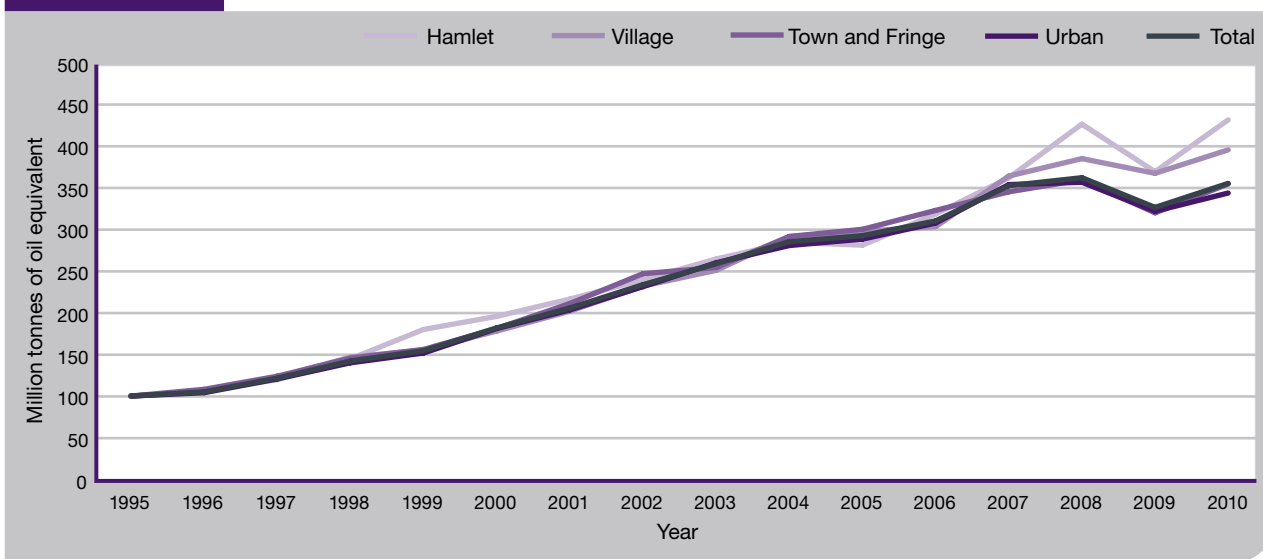
Price indices were calculated for each of the two areas by urban rural classification and in total these indices suggest that the gap between the price of property in urban and rural settlements may be growing rendering the rural property less affordable over time. In Bridgnorth (Figure 7) the differences are consistent over the period analysed. The more rural the category, the greater the growth in general. In Chiltern, however (Figure 8) the difference between urban and rural category has become marked since the start of the housing market downturn in 2007 with village and hamlets maintaining their value whilst town and fringe decline.

This third result demonstrates that the dynamics of urban and rural markets may differ with the more rural settlements experiencing slightly higher growth. When this is added to the results of the supply and pricing analyses the conclusion that further, more detailed, analysis of property by urban and rural classification is warranted.

**Figure 7** Price indices for Bridgnorth by urban/rural class



**Figure 8** Price indices for Chiltern by urban/rural class



### 3.4 Phase 3 Findings: Hedonic Analysis

**Table 1**

**Property Sales by type and urban/rural category for Bridgnorth**

Variables	Mean	Standard Deviation	Dummy Variables	Sum
Asking price	264366	166781	Detached	210
Ln asking price	12.34	0.5	Semi	147
Number of Bedrooms	3.03	1.1	Terrace	90
Number of full Bathrooms	1.04	0.3	Flat	44
Number of Ensuites	0.43	0.6	Off road parking	414
Number of Cloaks	0.41	0.5	Garage	224
Number of Storeys	1.97	0.7	Outbuildings	18
Number of reception rooms	1.65	0.9	Garden	373
Acreage	0.22	1.2	Good view	129
Distance nearest CBD	1.651	2.3	New build	80
Distance nearest train	5.749	3.5	In excellent condition	149
			In need of modernisation	24
			pre1914	146
			Modern	215
			quiet	51

#### 3.4.1 Data Collection

Property data was collected from the websites used by property agents to advertise their stock. Two of the largest such sites in the UK are Rightmove.co.uk and Move.co.uk. These sites claim market coverage of 90% and higher than 90% respectively and were selected as the sources of property lists. Data was collected for a period of 4 months from February to May 2011, this can be a peak time for listing of property. Asking price and property details were collected for those properties already on the market and listed during the period.

The result was a dataset of 587 properties, 491 of which had fairly complete records and could be identified by postcode. When this is compared to the number of sales recorded in the area by the land registry over the whole of 2010 (568) the sample seems reasonable. As anticipated the number of properties is limited in comparison to studies of urban areas but, as seen below, yielded useful and significant results. Table 1 summarises the average property details for selected variables.

#### 3.4.2 Results

Table 2 shows the mean prices of property available for sale in Bridgnorth by property type and urban rural category. The proportion of different property types is very different among the classifications with flats concentrated in the town and fringe and detached property dominant in villages, hamlets and isolated property. The lack of availability of terraced property and flats in villages, hamlets and isolated properties may contribute to a lack of affordability as they tend to be among the lowest priced property. However, rural property has a higher average price for each property type; therefore there is a need to explore property characteristics in more detail.

**Table 2**

**Property Sales by type and urban/rural category for Bridgnorth**

	Rural		Urban	
	N	Mean asking price (£000)	n	Mean asking price (£000)
Flat	0	n/a	44	154
Terrace	10	229	80	180
Semi	28	267	119	181
Detached	84	494	126	285
<b>Total</b>	<b>122</b>	<b>420</b>	<b>369</b>	<b>213</b>



Due to the absence of rural flats, flats were excluded from the ongoing analysis bringing the sample size to 431. It was noted that the lack of availability of starter flats in villages and hamlets will add to the rural affordability issue and make rural property on average more expensive.

Asking price was highly skewed and did not conform to normality therefore a log-linear hedonic regression was carried out in SPSS using the stepwise feature and the results are shown in Table 3 below (Model 1). Structural variables showed the strongest impact on property price. These included, number of bedrooms, number of reception rooms, property type, pre-1914 construction, number of ensembles, presence of a garage were highly significant and had the expected signs. Views, gardens, outbuildings and grounds and good condition also had a positive relationship with property asking price. Variables for noise and accessibility were excluded from the model as they were not significant.

In the next step, the data was split between urban and rural properties and the variables significant at total market level were forced to enter the hedonic regressions (model 2 and model 3). This disaggregation improved the overall fit of the models to the data, reducing the residual error. A Chow test showed that this improvement was significantly better than would be expected from the increase in the number of model parameters. Finally a model inclusive of

a rural dummy variable was run, (model 4) this model had a higher residual error than model 2 and model 3 but not significantly so.

Examination of the coefficients of the separate urban and rural models (models 2 and 3) shows a greater impact of view on the price of rural property, a slightly unexpected result which may be explained by the correlation of good view with property type. That is there were not many urban properties with a good view. This is reinforced by the fact that once a rural dummy is introduced into the model the coefficient for view reduces. Rural properties prices seem to be less sensitive to the number of bedrooms but property type is more important and the character of a pre-1914 house is highly indicative of high asking price. Having large grounds is highly significant but has a larger effect on price for urban than rural property. This can be explained by the rarity and potentially the better development potential of urban land.

Making a comparison between models 1 and 4 shows that the inclusion of a rural dummy improves the fit of the model. It also reduces the size of the coefficients of variables seen to be correlated with the rural dummy (see table 4). Thus outbuildings and a good view are proxying to some extent for rural location.

**Table 3** Summary of hedonic regression models

Model selection using stepwise regression	Model 1 total urban and rural	Model 3 Urban only	Model 4 Rural only	Model 5 Urban rural with dummy
Constant	11.415	11.448**	11.579**	11.431*
Semi	0.119**	0.061	0.186*	0.091**
Det	0.380**	0.293**	0.478**	0.340**
No_bed	0.131**	0.142**	0.087*	0.132**
No_recep	0.046**	0.049**	0.052	0.043**
Pre 1914	0.249**	0.151**	0.241**	0.203**
No_ensuite	0.152**	0.128**	0.126**	0.131**
Good View	0.099**	0.050	0.101*	0.069*
Has Garage	0.104**	0.084**	0.127*	0.102**
Has Outbuildings	0.225**	0.119	0.169*	0.160*
Acreage	0.057**	0.277**	0.052**	0.052*
Excellent_cond	0.063*	0.037	0.125*	0.060*
Rural dummy				0.184**
Sig at 5% * sig at 1%**				
N	428	311	116	428
RSS	24.942	16.207	5.778	22.89
Adj R-squared	0.759	0.641	0.79	0.78
Chow test stat	5.1**			1.4

This study has examined three different aspects of rural property markets as a preliminary step towards the development of a model of the value of rural locations and amenities. These aspects are: the evidence from rural literature regarding the migration of populations from urban to rural locations and the evidence from housing literature regarding the valuation of specific rural amenities; the availability and affordability of property in rural locations from literature and empirical data; and the homogeneity of urban and rural markets within rural local authorities.

The findings of the research are that rural affordability is a complex issue which requires detailed study at local scales. Rurality cannot be reduced to a single categorisation either on the basis of physical settlement size or on the basis of local employment type. National statistics are likely to mislead and yield policy solutions which suit only part of the diverse rural population.

Motivations for the migration of households into and out of rural areas are seen to be highly individual. Cost of accommodation is one factor but is often secondary to lifestyle factors. It has not been possible to form a generalisation of the urban to rural or rural to urban migrant from the available studies and therefore it is not considered appropriate to extrapolate the demand for rural housing from national demographic trends.

Perceived problems with the affordability of rural property stem from multiple causes. The limited housing supply in rural areas may lead to high prices but it also appears that the housing stock in rural areas is of a type which would naturally command higher prices regardless of location being dominated by detached houses.

Where flats and terraced property are available in rural areas they are sometimes available at prices comparable to urban property. Conversely there are some widely variable rural prices and the most expensive property tends to be rural in nature. This may be a feature of the large size of rural property either square footage of buildings or attached plots of land.

Analysis of the measurement of key rural amenities in previous housing studies showed that these attributes have been measured as important in the past. However, deeper consideration revealed that the scale of their influence and indeed the most suitable measures of the various amenities were likely to be different in rural and urban property markets.

The analysis of implicit prices for property characteristics revealed that the structural characteristics of properties have a strong influence on their asking price wherever they are located. However there are subtle differences between the valuation of amenities between urban and rural properties that would be worth investigating through further analysis of urban and rural property as separate markets for the benefit of valuers of rural and urban property. Such differences may be highly specific to the chosen area and therefore further extension to other areas would be necessary before any general conclusions could be drawn.

Comparison of aggregated and disaggregated models showed that there is a significant difference between the implicit price for rural and urban property that cannot be explained by the differences in structural and non-structural characteristics measured in this study. There is a small difference in the constants for the two separate markets and also a significant and positive coefficient for the rural dummy variable in the combined model. These point to an uplift much smaller than that suggested by the raw means unadjusted for property characteristics. It is also possible that this difference could be eliminated if more detailed measurement of characteristics were undertaken.

## 5.0 Conclusions and Recommendations

This analysis of literature and Land Registry data demonstrates clearly that rural and urban property markets cannot be considered to be homogeneous and also that within the rural market there are almost inevitably submarkets which will need to be considered separately. Further research into the characteristics of rural property is needed.

The implication of these findings is that increasing the supply of smaller, starter homes in villages and hamlets would tend to lead to an equalisation of prices across urban and rural property classes and improve affordability. There is very little evidence that the differences in markets are sufficient to accelerate such starter homes to the extent that they would become more unaffordable than equivalent urban starter homes.

The results show that “rural” local authorities contain a mix of settlement types and to base policy on aggregate prices at local authority level will mask real rural housing shortages and the need for local housing. This implies that understanding of local housing need requires detailed study within each local authority. Targetting of national funding to achieve rural housing goals should therefore be formed from an amalgamation of local studies.

Provision of affordable housing in rural areas could be facilitated by adjusting the supply characteristics and focussing on providing entry level housing in villages, hamlets and isolated areas based on anticipated household formation.

Valuers can use urban comparables to value rural property in adjacent villages in the study area but should be aware of the small differences in emphasis in amenity values. In general valuers should be aware that urban and rural markets show variation in valuation of property characteristics.

Further research is needed to extend this research to more areas, in order to make the findings more robust. This is particularly important as there were differences in the findings for the two study areas in this analysis.







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