

# **Bracknell Regeneration Project**

## **Focus Group Analysis**

### **Historical**

Bracknell is located in central Berkshire, approximately 30 miles from central London and between the M3 and M4 motorways. The town was designed and constructed during the post war New Town period between 1950 and 1960's. Built for a population of 25,000, by 1960 the population was already 60,000 with new developments based on increased car ownership. Since 1960 little has been built in the form of developments or improvements resulting in a mix-match of outdated urban architecture that fails to meet modern requirements or current aspirations.

Shopping is restricted compared to other nearby municipalities and lack of evening entertainment means the town centre is deserted for much of the time. The vision is to transform this area into a vibrant, mixed use area with a wide range of facilities appealing to the greater population. Part of the new development will be to implement best practice of energy efficiency, sustainable use of renewable energy sources in the built environment and to encourage more sustainable travel patterns.

With this in mind, Bracknell has a unique opportunity to demonstrate its innovation and leadership by becoming a flagship European project leading the Thames Valley and the South East.

### **Demographics**

Recent census data (Population in Berkshire 2001 Review) gave the population of Bracknell Forest Borough at c.a. 111,500, which is the fastest growing borough in Berkshire with a 13% rise over the period between 1991-1999. This increase comes mainly from inward migration trends showing a net growth of 9,144 people moving into the borough during the 1990's. Ethnicity figures are about 3%, significantly lower than the average for Berkshire of 8%. The largest being Indian, accounting for 20% of the ethnic population. In terms of age, young adults have shown a decline since 1991, but the number of people aged 45-64 has increased as a result of the post war baby boom years. Employment trends show that 33% of the workforce is occupied in Business Activities & Finance, which accounts for one third of all jobs in the area and more people are employed in large companies than the average for Berkshire. Unemployment is low compared to the national average and the duration of the unemployed in Bracknell is shorter than in the rest of the county.

The standard of education has risen steadily in the last few years with 47% of students attaining 5 or more A-C GCSE's, yet this is still below the Berkshire average of 54% and the national average of 49%. However, post 16 full time education has increased by 6% to 77%, which is higher than the Berkshire average of 74%. Moreover, adult basic skills levels are proportionately lower than the South East average for both literacy and numeracy showing the need for more work in this area.

Alongside these socio-demographic patterns, Bracknell whilst comprising some of the most affluent areas of the South East, also includes areas of deprivation and has been ranked 317 out of 354 (with 1 being the most deprived in the country). This may be reflected in the standard of health in the Borough which shows a higher incidence of coronary heart disease, lung cancer and stomach cancer amongst workers than in other parts of the county. However, in terms of long-term illness Bracknell is significantly lower than the national average.

Of the 49,935 dwellings in the borough, 17% is comprised of housing association/council owned and 73% owner occupied. Transport is dominated by car users, as was revealed in the research findings with 71% of households travelling to work by car as opposed to 6% using public transport and car ownership far exceeds the national average (Census 2001 Table KS17 Cars or Vans).

### **Focus group research**

The feasibility study to determine how renewable energy can be incorporated into Bracknell involves considerable local community and stakeholder consultation. It is important to identify different social groupings that make up the population of Bracknell as they may have different perceptions, beliefs and values when it comes to evaluating the development of renewable energy technologies in the town centre. For example, it could be that age is an important social factor determining personal beliefs of renewable energy development in the area.

As a preliminary fact finding exercise, it was decided to conduct focus groups with the intention of raising underlying issues and concerns that might be otherwise missed using alternative research methods at this stage. The focus groups' goal was to probe further into issues raised in the Bracknell research project to gain a fuller understanding of some of the barriers that could be diffused to gain acceptance of renewable energy in the new town development. This type of research tool is a useful way to encourage self-disclosure and observe the thought processes of the participants. Furthermore, discussion groups can offer participants the opportunity to raise often buried or neglected issues that surface through prompts during the debate. It should be emphasised that, whilst focus groups are not intended to reach a consensus, develop a plan or to substantiate preconceived notions, they nevertheless help to uncover the participant's beliefs on a given subject, namely Bracknell town centre, in order to derive an understanding. Moreover, participants' views often shift during the course of the discussion and can be influenced by other participants, enabling the researcher to access issues that might not otherwise be revealed in a large purely quantitative survey, or from one-to-one interviews.

It is hoped that these findings will be used to generate preliminary information and provide contextual data as a resource for a large survey to be carried out in the future, and therefore the exploratory results will inform the development of the next phase of the consultation process. For example, the study should generate background data from illustrative stories, personal experiences or everyday group language that could be

incorporated into questionnaire format. This will ensure that the terms used in subsequent research methods are ones consistently understood by respondents.

## **Methodology**

The aspects referred to above concerning the nature of the research were operationalised through discussion group protocol designed to purposively take participants from general to more specific issues relating to the redevelopment of their town centre. Six types of stakeholders were targeted in the research: residents, school children, church affiliations, environmental groups, retired people and businesses. However, this last group had to be abandoned due to problems in recruitment. Whilst 57 companies were contacted, only one or two members said they would be interested in taking part. Reasons for refusal were time factors and discomfort in the knowledge that other organizations would be aware of their views and feelings. Targeting business groups may necessitate one to one interviews or an informal evening whereby they are given presentations and more freedom to air their views without being pressurised.

Of the five groups that were conducted, each session was tape-recorded with permission of the participants and transcribed before analysis could take place. Discussions ranged from one to one and a half hours in length.

The interview questions were framed around general environmental issues to more specifically the incorporation of renewable energy in Bracknell. In the groups carried out, each group member was given a short news article to read; topics varied from climate change, wind farms, fuel poverty to community heating. After which the participants had to decide whether they felt the problem that they had read about was as serious as the report claimed, how they felt the issue might affect them personally and how they viewed the wider implications impacting their lifestyles. This was to generate debate and discussion and introduce subjects whereby information was to be sought later on in the session. General environmental issues were placed in a local context and gradually the external issues were discussed in light of Bracknell town regeneration. Energy issues concerning security of supply were debated and alternatives to national grid reliance were deliberated. This led to individual renewable technologies to be discussed in detail in relation to their incorporation within and outside Bracknell town centre.

## **Results**

The results were generated from analysis following transcriptions of tape-recordings, scoring, categorising and thematics and are subdivided under the following sections summarising knowledge, experience, understanding, views and opinions towards the environment and renewable energy.

### **Section 1: Global Warming/Climate Change**

Global warming and climate change were chosen as introductory topics to act as an ice breaker and facilitate the discussion. Themes emerging from this ranged from belief that the world's climate was changing to the unreliability of scientific evidence. Potential impacts included participants advocating detrimental conditions globally to a situation where the industrial nations were to suffer the greatest consequences. However, some pensioners and older residents considered the short term benefits of hotter summers; although they did point out that future generations may not be so fortunate.

The proponents of the climate change argument gave examples of extreme weather events and the frequency of longer hotter spells, they considered that the situation would not only get worse, but that irreparable harm had already occurred, one participant advocating that the UK and other lands would eventually disappear due to rising sea levels causing mass population displacement. Moreover, responsibility, prudence and the sense of urgency with the emphasis of acting now to decelerate climate change were the main themes that came through from this side of the debate. In contrast to this, there were participants who questioned the validity of scientific data and the limited time that known weather patterns had been recorded, "*the big debate is how much anthropogenic influence there has been, after all we have only been felling rainforests on a big scale in the last 100 years*" and "*I've heard that about ¾ is the earth's natural cycles and the other ¼ is man's interference*". Several participants mentioning the short term benefits believed that they would save energy from a warmer climate, although they did not consider that energy from air-conditioning equipment might counter this! Ideas included a tourist boom for Britain as a preferred holiday destination to escape the intense heat of the Mediterranean, but on a more serious note, the type of world that future generations would inherit was greeted with concern. As one respondent remarked "*it's going to be like the Sahara*".

## **Section 2: Renewable Energy**

Debating global environmental problems led the discussion to consider solutions from alternative energy sources and there was a general consensus that renewable energy must be the way forward. Concerns that oil supplies would necessitate change emerged from all groups and although the retired participants considered that in their "*stage of life it is something in the future*", they still appreciated that renewable energy was better for the environment. For some participants the expense of developing alternative technologies was a factor and they felt more research should take place to harness wave or tidal power. Some questioned the viability of renewable energy in Bracknell and others deemed inadequate information had been disseminated for them to form an opinion.

The subject of oil and its replacement yielded an interesting discussion, not least from the group of older participants. While they accepted that renewable technologies would need to be considered, they believed that progress had been impeded in part by the oil companies, political situations and from lack of government intervention due to financial rewards from the oil industry. Another argument put forward was the historical balance situation on the use of oil, "*its use exists in most people's memories and the idea to look for a substitution has not yet sunk in*". The message being that only when the cost

became prohibitive or supplies dwindled to an almost inaccessible extent would the demand for renewable energy increase. However, several views centred on the need to reduce emissions into the atmosphere and to encourage more research into alternative technology such as already mentioned tidal power, green waste and small scale hydro potential, as one retired participant put forward *“I think they should use more waterwheels and mills, like they have on the Thames – all that power going to waste”*.

Both the school sixth form and the youth church groups demonstrated the least knowledge of renewable energy. Although all participants in these groups admitted that this topic had been covered in GCSE Geography, they confessed to having forgotten it. It can be deduced from these comments that perhaps to some young people knowledge is viewed in terms of subject matter, to be studied and then rejected. Or it may simply be a case that they feel distanced from the affects that these types of new technologies would have on them, after all they have had little direct experience of paying for their fuel. On further discussion, clearer opinions emerged such as whether Bracknell was a suitable place for renewables, for to these participants renewable energy tended to be viewed as wind energy in rural locations.

Whether renewable energy would make a difference to the majority of the population was debated in the environment group who argued that as long as people could *“plug in, turn the switch and expect electricity to come out of the wall”* they would not be concerned with how it got there or by which ever means.

### **Section 3: Energy Efficiency**

The topics of conversation gradually shifted from the general to more specifically areas that mattered to individuals, such as their own energy usage and awareness of how they either practiced or could improve energy efficiency in their homes. In all groups, the most common responses referred to appliances and lights being switched off when not in use. The idea that too much energy was being wasted became apparent from pensioners, environmentalists and residents, although the older groups considered that younger generations used more electricity than they did. Measures to improve the current situation were put forward by the environment group whilst the residents questioned the ways in which energy efficiency was being targeted. Most group members alluded to the wastage of energy, both in the home and in the excessive lighting in evidence along large stretches of motorways as noted by one participant, *“they say that if you look down on the earth, it’s all lit up like a Christmas tree”*. Energy saving measures such as eco friendly appliances was referred to by the 6<sup>th</sup> form and some participants mentioned using energy saving light bulbs. Schemes to increase efficiency included; subsidised insulation packages, offsetting energy reduction with lower council tax and continued reinforcements of the energy efficiency message.

For the school and church group, parental persistence prevailed in energy conservation matters, although one student believed responsibility should lie with all household members. The most concerned group when it came to energy saving were the pensioners. Some complained of inefficient appliances, yet blamed replacement costs for

improvements, one solution being to *“have a time switch for every radiator”*. Having said that, the vigilance by which this group spoke about saving energy conflicted with their view of *“the younger generation”*, as noted by one participant referring to the behaviour of her grandchildren, *“they stay out all night, get up at midday and leave all the lights and heating on in all the rooms”* and *“we want the heat to be on where we are, but not in the rest of the house”*. Yet, it is not simply a case of remembering to switch off appliances. The environment group accused the entire electrical appliance industry, who they believed were *“slighting against conservation ..because each power socket has got 25 adaptors and it is impossible to turn them all off”*. Conversely, one resident questioned whether turning off lights actually saved much electricity and that perhaps too much turning on and off would in fact damage the filament, thus requiring more energy in the replacement.

Regarding energy efficiency in the town centre, residents thought that it should be viewed as a selling tool for shop keepers, *“I think we should encourage new shop owners as they move in, perhaps give them a reward or charter for conserving energy like cheaper rents”*. Yet this group recognised the difficulty in persuading people at work to be more concerned with energy usage giving examples of computers being left on and office lighting in *“perpetual illumination”*.

For energy efficiency it can then be assumed that whilst some people described the meticulous methods they used to reduce fuel bills, others conceded that *“different people have different circumstances”* and some were honest enough to say that they knowingly wasted energy.

#### **Section 4: Fuel Poverty**

The heating of homes directed discussion to those members of society who fell into the classification of fuel poverty (where more than 10% of household income is used to cover fuel costs). Neither youth group had heard of the concept but several of the retired participants remarked that price of fuel meant rationing the use of heat to one or two rooms in their houses and they all thought the council should do more in providing them with a better system. This was echoed by the residents and environment group with a recommendation that the government should improve home insulation as a primary measure before distributing winter fuel payments.

The environment group demonstrated the most knowledge of this topic and one member alluded to 50,000 winter deaths from cold living conditions relating to fuel poverty. This he believed mainly affected the elderly and those on state benefits *“£100 per person is not enough for some people and it costs the health service something like 1 billion pounds a year”*. Several group members representing residents and the environment group argued for council insulation schemes and one in fact thought that Bracknell had such a system in place. It was however, pointed out that not all homes could be insulated very effectively. *“There is very little you can do with a mobile home with regard to insulation, but perhaps reductions in council tax or increased housing benefits might help in cases like this”*. To admit that finances and insulation were the sole causes of fuel

poverty in the elderly may on the surface be the case, yet underlying this, historical and cultural traditions featured. This was especially evident from residents whose stories of elderly relatives revealed that unheated houses were less to do with *“lack of money, but the conditioning that heating was a luxury”*. Thus it is not simply to provide warm houses, but to change a lifetime’s habit that to be warm is the expected rather than an extravagance.

## **Section 5: Transport**

Lifestyle issues prevailed as discussions moved towards transportation. Recent petrol increases generated much debate from impacts on personal budgets to whether it would encourage people to seek alternative means of transport. All groups raised doubts as to the efficiency of the local bus and train services, most considering them unreliable, inadequate and expensive, although the church group felt that Bracknell offered good public transport. One participant from the residents group advocated walking as a healthy alternative to driving or using public transport, but another quickly pointed out how unsafe the walkways were and that the town construction considered cars in preference to people in its original design. This was also the opinion of those who cycled in to the town who complained of insufficient cycle ways, one person even confessing to cycling on the pavements at times.

For those who used cars, younger group members voiced concern over the financial implications if petrol prices were to continue to go up. This point was raised by those who were still studying but had a part time, low income job and by those learning to drive who believed that instruction would increase at the same rate. The two youth groups also considered that if too many people sought alternative transport, buses and trains would become overcrowded. Moreover, the majority of car users agreed with this participant, that *“petrol prices would have to increase phenomenally for me to stop using my car”* and some viewed the increases as inevitable. Accustomed lifestyle came through strongly as a factor in the reasons for extended car use, along with convenience and safety in connection with taking children to school as opposed to allowing them to walk. It was debated whether people actually did more with their lives because they drove everywhere, but they all agreed that by walking nothing would get done in most people’s demanding daily life.

Moreover, most car users considered public transport as impossible for them as voiced here *“there is no viable alternative to using public transport – the system is in a mess”* However, not everyone used a car and all put one participant of the retired group said they relied almost entirely on the bus or train for transportation. This spawned much debate over public transport provision in Bracknell town, such as the lack of service in some areas after 6pm and on Sundays, preventing some elderly people from going out during these times. Many described their situation as *“paralysing”* in this respect. The gaps between services and reliability were heatedly voiced as depicted by this person *“we go down to our bus stop ten minutes before it’s due, stand there and hope, and it could come up anytime 20 minutes later or not at all – they have a license to run a schedule, they should be made to abide by it”*. Suggestions to an improved performance bus

service came from the retired group, including the recommendation of gas powered buses that they believed other councils used. Other issues emanating from this point in the discussion included the price of public transport, students suggesting subsidised rates for those in full time education and the “*illogical*” proposed new bus station mentioned by the retired. Not everyone had heard of the new development, but the pensioners and environment group were under the impression that a bus station was to be built on the opposite side of town to the railway station. This worried several more elderly participants who explained that it would impinge their mobility as they found it difficult to walk long distances.

That said, some participants did walk to work on a regular basis, but problems in the design of the town made their journeys uncomfortable as mentioned by this resident “*I don’t like walking by sides of the roads – all those fumes, but I have to. When car drivers can see me I feel safer*”. They were referring to the system of underpasses that are a feature of Bracknell town centre. Another resident reiterated this by describing her route to work “*sometimes you are in no-mans land, you can’t see where you have come from or where you have to get to, no one would know you were there*”.

As has been illustrated here, several themes emerged at this point in the discussion, mainly the need to improve public transport and the necessity for the town design to incorporate open pedestrian access.

## **Section 6: Community Heating & Biomass**

Keeping the debate within the town centre and ideas for improvement, views about the possibility of community heating and a biomass plant sourced by local renewable energy were examined. One participant from the church youth group had first hand experience of this system whilst living in France, others from the residents and environmentalists groups were aware of examples, but concerns came from the environment group as to the extent of such a system, although they were in favour of the scheme in principle. Residents thought that community heating could be incorporated into building design and some people were in favour of a biomass plant in Bracknell town centre if the building was of a reasonable size in keeping with the rest of the town centre buildings, others considered that the industrial areas outside of the town would be better sites. Worries came from the possibility of the system breaking down and the types and amounts of emissions that could be expected of a biomass boiler.

Sourcing the fuel through waste wood and energy crops generated doubt as to the capacity of the borough to produce enough wood on a continuous basis but most groups were of the opinion that farmers could be encouraged to grow more energy crops.

Biomass is generally not a well known concept among the general public, yet participants from each group demonstrated some knowledge in this area. However, some especially those from the environment group did express the need for more detailed information before they could make an informed decision for district heating in the town centre.

Those who had experienced district/community heating had either seen it abroad or in blocks of flats, one participant mentioned a nearby scheme in Woking and another in a sports centre. The benefits were highlighted in the idea that pipes would run under the road and therefore never freeze, although the thought of having to dig up the roads in existing developments to lay underground pipes was considered too much of an upheaval. Hence high rise buildings were deemed more suitable locations for community heating by the environmentalists as opposed to more rural areas and doubts arose about the transmission distance from Bracknell to outlying villages. Although one person from this group did point out that “*No new power station should be built without this concept being incorporated into them*”.

Cost issues surrounding the building and construction of a biomass plant did not dampen the general enthusiasm people had of the system, yet some would be happier to support such as scheme if there were financial benefits from doing so. Other issues that participants raised were efficiency and reliability including this remark from the church youth group, “*if it’s going to save energy and is part of the redevelopment, it is not a bad thing, if sourced from renewable energy*”. One resident suggested that combined heat and power plants should appear in design briefs for new developments, but went on to say “*how do you say to a developer that it is cost effective?*” Picking up on the idea, another participant, who had heard that annual savings on fuel bills with community heating could be significant, considered that developers building houses with community heating should use this as a good selling point “*buy this house and save £x amount*”. Size and design of a proposed plant featured in the environment and residents group and both felt that the biomass plant could fit within the town centre as long as it was incorporated in the overall design, however fears over emissions generated discussion as to what would be an acceptable amount after it was agreed such a system would be CO<sub>2</sub> neutral. In particular, the residents and environment group voiced concern over particulates, although after further discussion, this group agreed that it would still be better than using oil.

Sourcing the plant generated doubts in all groups and most participants were unsure of the Borough’s capability to fuel a biomass plant. Comments like this came from each group “*I can’t believe you’d ever have enough woodchip*”. Most importantly, participants were concerned about the number of vehicles entering the plant and therefore would wish to know how much and how often these vehicle movements would be, also how far they would need to come from. The quantity and efficiency of woodchip to feed the system concerned some people, yet others believed after some discussion the “*borough does generate a great deal of green waste just by lopping trees and cutting hedges and clearing, so that in itself must be a basis for a constant supply*”. Still others were anxious about running out of fuel to burn which prompted the idea that all the borough’s trees would have to be cut down to keep the plant going. Information as to how many acres of land would be needed to grow energy crops such as coppice to power the plant occupied some people. “*I would have thought that a built up area like this wouldn’t have enough space to grow it*” was a comment that came from the retired group. They also hoped that school playgrounds would not have to be requisitioned for the scheme

Others remarked that farm land was underutilised and generated a bad return, therefore farmers should be encouraged to grow crops such as coppice and other energy crops for biodiesel so that further diversification could help to fuel their vehicles. The 6<sup>th</sup> form suggested that farmers should sell their coppice to *“the people who own the plant and then it helps the system as it could go back into the economy”*. To assuage fears of supply, members of the residents group suggested that a continuous resource should be put in place before the construction of a biomass plant and farmers should be growing willow coppice now so that in five years time they would have a ready market. Another suggestion and perhaps far reaching was to grow coppice on most of the borough’s verges. Only the retired group had doubts about growing coppice on agricultural land and one participant expressed it was *“like going back to medieval times”*.

### **Section 7: Security of Energy Supply & ESCO’s**

Whilst most people had considered that their energy was not always guaranteed, the idea of an energy services company was a difficult concept for some group participants to understand. Most felt that more information was needed, such as would residents of Bracknell be obliged to obtain their energy from the company, what would happen if the company ceased to operate, who exactly would own the company and what share would they have (after they realised it would be a public/private partnership) and would it be possible to change companies if they were unhappy with the service.

How secure the current energy supply was, yielded some interesting debates. Most people had experienced the inconvenience of power cuts at certain times and all were aware of more serious incidences in countries such as the US and Italy in recent times. In short people were concerned about such an occurrence happening to them.

Opening the discussion with the school 6<sup>th</sup> form, students explained that they knew very little about which companies supplied them with energy, *“we know our energy comes from the national grid, but don’t who where it is from”*. However, they were keen to find out more and suggested that this type of information should appear in the local magazine ‘Town and Country’, the radio, posters around the town and on Bracknell Forest Borough Council website. As the dialogue progressed, the proposal of an ESCO seemed to generate more excitement amongst this group as came from this comment. *“The idea behind it is good because if it was cooling heating and electricity and the company controlled the whole thing, I think it’s a good system”*. Residents were also fairly in favour of an energy services company and considered that retailers and other businesses in the town would benefit from such a scheme, as if it was possible to import and export from the grid, when one failed the other could be used as a back-up. They also felt that the council should ensure that the cost was low and that an agreement ought to be signed to guarantee a user with an agreed price. However, there were concerns from buying energy from a single supplier, and whether the company was trustworthy raised some doubts from the residents and environment group. The church youth group also wondered whether many people could be persuaded to change companies, as some they knew had switched to another user two or three times already. On a more pragmatic note,

one member of the environment group did not think that people would actually notice a difference in the energy supply apart from the fuel bills *“it wouldn’t look any different, we’re only interested that it still comes out of the wall and as long as it is cheap we wouldn’t mind which company it was”*. Only the pensioners group were against the idea of an ESCO, the reasons being, they preferred to subscribed to a national organisation as they feared a local company *“would be making somebody very rich”* as opposed to (as they viewed it) a *“shared out national company”*.

Having said that, the retired group still voiced concerns over the security of their energy, yet their solution was to use fossil fuels in the form of coal that they still believed could be accessed if mines were reopened. For the current insecure situation they directed culpability towards the French, who they thought supplied most of Britain’s energy. However, they were open to further discussion about an energy services company as long as they were given more information about it.

Warnings of future power failures and the perceived consequences yielded much discussion amongst the school, environment and residents group. Students of the school and some residents thought that such a situation could be catastrophic if large towns were without power for any length of time such as voiced by this student. *“It could cause people to be stuck in lifts or the underground, traffic lights wouldn’t work causing major accidents and people would be sleeping in the street because they couldn’t get home”* Residents were particularly concerned of the possibility that hospitals and emergency services could be without power. Nearer to Bracknell, issues such as not being able to go to school, was first greeted with delight by the students, but the realisation that computers and televisions would not be working at home either made these participants think more deeply about the impact this might have. The residents, environmentalists and sixth form inferred that affluent industrial societies took energy for granted and given a large scale power failure the effects on people’s lives could be significant. However, the environment group and school believed power cuts would need to be frequent and prolonged before people might give serious consideration to conserving energy *“we’ve had power cuts before and we know they don’t last for very long, but if we were out for a week, then people would start to notice”* as voiced from one of the students.

## **Section 8: Wind Energy**

Whilst a biomass plant is one of the main considerations for Bracknell town centre, other renewable technologies were debated. Wind turbines are often an emotive topic for discussion, but the groups in Bracknell revealed diverse views, prior knowledge and opinions as to the location, visual intrusion, noise issues and the type of turbine that would be most acceptable to them.

In recent months wind energy has received much press, publicity and changed legislation regarding implementation. Whilst public support has been high, the development of this type of technology is frequently dogged by local controversy and conflict. This has led to greater, although not always very informed knowledge about this type of renewable technology and at least minimal awareness was demonstrated by nearly all group

participants. Several people mentioned that Britain had been quoted as one of the windiest places in Europe, but lagged behind other countries such as Germany and Denmark. The urgency of finding alternatives to oil resurfaced in the discussion and several participants felt that wind energy was a resource to be exploited for the future energy supply of the country. One commented that energy companies would be keen to pursue the wind option *“because they face what amounts to fines if they can source 10% power from renewable energy by 2010”* referring to the renewables obligation. This participant also went to say that given the deadline, corners would be cut in development and structure of renewables and questioned their reliability in this respect.

In each group at least one participant had seen wind turbines and several had experienced them at close quarters. The locations varied from Palm Springs in the US, to France, Germany and rural areas in Britain. Visual impact of turbines provoked a mixed response from *“I don’t have a problem with turbines, they are big, but I don’t think they are ugly”* to *“a blot on the landscape, but at the end of the day they are not causing any real problem”*. Some participants referred to them as elegant and a few felt they actually enhanced areas. For this person, *“It uses the earth’s resources in the most natural way and the least polluting”*, others considered them to be *“no worse than electricity pylons”* and preferable to an incinerator, but to one person they were *“terrible intrusions stretching endlessly across the horizon”*. This respondent was also concerned that areas within national parks might soon be *“covered”* in turbines spoiling areas of natural beauty and proposed designs that resembled old windmills. Yet even these it was felt would look *“out of place”* in the Yorkshire Dales. A solution to less intrusive structures led the discussion to consider smaller installations that could be attached to buildings, but one of the environment group participants believed that vibration could be a problem and another did not think that smaller turbines would generate enough electricity. However, as one participant phrased it *“if every house was self sufficient for just 2% of its electricity, it would be a remarkable national contribution”* and this was certainly food for further discussion. Other recommendations for small turbines came from the church group with suggestions that smaller turbines could be installed in schools, providing energy and education concurrently.

Much of the wind debate centred on the issue of noise and wind turbines, either participants believing they were noisy or acceptably quiet. Interestingly, many of those who had *heard* that turbines were noisy, but had not experienced them first hand, deemed this to be the case *“I’ve heard they are noisy, but haven’t been close to one”* and it was thought *“if people hear about this scheme they’d be more likely to campaign against one going up near them”*. In contrast, all those who had visited a wind farm or single turbine described them as reassuringly quiet *“I take what I here about them with a pinch of salt, I’ve been close to them and they are definitely not noisy”*. One other participant remarked *“new technology makes them quieter than they used to be”* and others mentioned that compared with everyday noises, the sound of the blades turning would be marginal and unnoticed. That said, one or two participants were keen to have figures in decibels before they made up their mind about wind turbines.

Debating the idea of a turbine for Bracknell yielded some interesting comments and suggestions for the best place to site this technology. On top of the council building was one consideration, but a wind turbine on a roundabout in the town centre put forward by another respondent was shouted down as an unsuitable place. For most participants, either a hill top outside the town or an industrial site close the town centre were the preferred sites for a wind turbine and as put forward by a student *“when people drive around the town, they will be able to see that Bracknell is actually caring about the environment and then other towns will want to do the same”*. Other proposals included the council landfill site, although doubts were raised about wind speeds due to its tree lined position and wind speed reliability was questioned by some as came from this comment *“as our wind is not the same strength all the time it would need to be put in a consistently windy place”* and another participant thought that wind speeds would need to be more than an annual average of 10 metres per second to be viable.

With the possibility of a single wind turbine at a location in or around Bracknell, several of the more unsure participants were swayed by the idea in each of the groups and discussion moved towards the merits of incorporating a viewing tower into the structure with most people in favour of this as a concept. The school, retired, environmental and church groups all enthusiastically considered the great views from the viewing platform as put forward by this student *“a viewing tower would make people feel better about a wind turbine and it could also be promoted as a tourist attraction”*. Other benefits suggested, were the potential educational value for local schools and the idea of a permanent exhibition so that local people and visitors could learn more about the technology and why it was there.

How to encourage people who were either opposed or unsure of a wind turbine occupied the latter part of this discussion and education, forewarning and consultation were ways that certainly the environment group proposed to *“mould public opinion”*. The residents also considered that *“people would need to understand the technology before they could accept it”*, yet all groups conceded there would always be a group of people campaigning against such a proposal.

## **Section 9: Solar Energy**

Another technology discussed in detail was solar energy and the possibility of incorporating this into the town redevelopment. Issues arising from the debate included cost of installation, depth of coverage, education for developers, available grants and whether people would like to live in a house with this type of system.

Most participants were aware of solar energy, although not all could tell the difference between PV and solar thermal. Many felt that the cost of installation would be too great for them as individuals to invest in and that perhaps this factor was a deterrent for much of the population, although they agreed that it would be a good way to provide energy for their homes and many people said they would be keen to move into an existing solar house. One of the retired group participants had first hand experience of a solar hot water system and extolled its virtues but warned about using certain *“cowboy”* installers.

Grants to persuade more solar heating and solar PV were advocated by the retired and church groups and pensioners were of the opinion *“if the council or government helped people to install more solar energy in their homes, more people would do it”*. This group also proposed the idea that council taxes could be reduced for those who used such a system.

Other methods to increase the amount of solar energy included involvement with developers before houses were built. The environment and church groups suggested that if solar was incorporated into new buildings within the design such as PV tiles on the roof, the cost would not be vastly different from other systems. Residents were of the opinion that builders should be given more information about solar technology and felt the makers of PV tiles ought to be *“going around to local authorities marketing their product better”*, for example *“saying that a development of x houses will break even at a certain amount”*.

However a few doubts emerged as to the amount of sun required to power solar PV or a hot water system and whether the country produced enough for this to occur. This came mainly from the two youth groups evoking comments like these, *“I know that we have had a good summer this year, but you can’t guarantee that it will be every year and that might put people off from solar power to heat their house”* and *“it would be a good idea as long as it is compatible with our climate”*, the retired group on the other hand had few hesitations in the power of the sun and further anecdotes to emphasise this point included *“...those solar lamps in the garden glow whatever the weather”*.

Using solar energy in the town centre stimulated discussion about the type and amount of coverage that would be acceptable in the new development. Both residents and environmentalists proposed solar PV technology on all new roofs of buildings or in as many places as possible as voiced by this resident *“it’s clean, sparkling architecture and I wouldn’t mind seeing it everywhere in the centre of town”*. Residents also considered that *“a good place to start would be to ensure all public lighting came from renewable sources”* referring to solar street lighting. Other suggestions were street signs and solar powered school signs that were seen as *“a good way of showing the general public what can be done”*. The church group mentioned that solar signs would be less intrusive and low maintenance avoiding the need to dig up roads for replacements, *“if it goes wrong, you just put in another one rather than digging up miles of roads”*. However, the school group raised concerns over possible sabotage with such comments as *“if some idiot put a plastic bag over these things, it might cause accidents, so I think solar would be better on tops of buildings”*.

### **Section 10: Bracknell Town Centre**

Before the discussions drew to a close, groups were asked about Bracknell as a town, and the type of improvements that they envisaged for its future, they were also shown an example of the new development plans. Most people had a very negative opinion about their town as it was, its resources and its design, only some of the church group participants thought that in general Bracknell was a good place to live, but purely because

of the surrounding areas and good communications to other towns. However, the residents' group seized upon the negative elements of the town, proposing that the new development should encompass renewable technology so that it could be a flagship for other towns to follow.

As Bracknell stands at present, most participants remarked on the lack of cycle lanes, safe walkways and the absence of restaurants, bars and shops. The youth groups advocated more cultural events, nightclubs and activities for young people, *“if we had more to do it would lower the crime level, people just hang around and cause trouble and it would help with the social problems”*. Residents and retired participants complained about the lack of shopping facilities and proposed more specialist and fewer charity shops for the new town centre. Some of the retired group reminisced about Bracknell before the war and talked about the *“abundance of shops”* that were situated in the old high street.

After viewing plans for the new development, the church and youth groups thought that they were eye-catching and modern and believed the change would make more people visit the town. From that, it can be assumed that development of new technologies should be unproblematic, bearing in mind the changes that have already taken place in the town since World War II. However the environment group were unimpressed by the proposed designs referring to them as *“hideous”* and *“like an airport”*. They were also worried that *“mistakes”* made by the existing town development could be replicated and the new designs would be outdated in a short space of time, they therefore proposed more traditional building methods with sloping roofs built of brick.

For the residents group, renewable energy was the way forward for Bracknell town, but to promote the idea they suggested a permanent exhibition to explain to people especially school children how renewable technologies worked. *“I think it is crucial that people understand why we are doing it, why it works and what the end game is, and that it's not just for money, but that it is going to affect our children and grandchildren”*. If Bracknell used renewable energy, this group believed *“it would act as a catalyst, for other people to follow”*, the meaning behind this would be that the town centre had the potential to act as a demonstration of new technologies, which they thought should be incorporated in the new development plans. They also advocated that *“everything it incorporates should be saying that we are doing something for the environment and the future”*. Finally the residents directing their thoughts to the council proposed that their new civic centre should be *“an absolute model of eco-building”* and *“it should be the first building in the new development”*.

## **Conclusion**

The focus groups covered much ground from discussions ranging between one and one and a half hour. In general, participants demonstrated a depth of knowledge in all of the topics discussed. All exhibited awareness and strong views concerning global environmental issues, either backing proponents of climate change theorists or rejecting them through insufficient evidence. For the majority, renewable energy seemed to be the way forward for the future energy of Britain. Although most were of the opinion that

existing energy sources would have to be either so expensive or impossible to access before renewable energy would become widespread.

Topics of conversation gradually shifted from the general to the more specific areas that mattered to individuals, such as energy usage and how to improve energy efficiency in their homes. Those most aware of the energy they used and most practiced energy savers came from the older groups, who berated younger people for their complacent attitude towards energy conservation. Outside the home, many reported on the excessive lighting both on the roads and in office buildings. Suggestions to encourage retailers in the town to consider energy usage were charters or accreditations that might offset rent or council tax. To counteract fuel poverty, further recommendations were made including insulation grants, although as some participants commented, not all older people have been conditioned to expect warm houses during the winter.

The discussions then shifted to the town centre transport system and whether participants could be encouraged to reduce their reliance on their cars. Even with surges in petrol prices, most drivers thought that public transport in Bracknell was so unreliable and inefficient that it was unlikely that they would use it. The older people who were forced to use it complained about the lack of service and impingement to their mobility and even walking in the town was deemed problematic due to unfriendly town design and intimidating underpasses. Keeping the debate concerned with the town centre, views about the possibility of a community heating system and a biomass plant sourced by local renewable energy were debated. Although few people had experienced this directly, they showed some understanding of the scheme and supported it in principle if it was cost effective and if the plant could be incorporated into the overall town design. Fears of adequate wood fuel to feed the plant were expressed, but most agreed that farmers could be encouraged to diversify into growing more short rotation coppice.

Regarding energy security and the idea of an energy services company, thoughts of the severe impacts that prolonged power failures would cause occupied most participants. Whilst many found the concept of an ESCo difficult to grasp, they supported it if energy would be cheaper but required more information and guarantees that the system would work.

Biomass was one of the primary considerations of Bracknell, but other technologies were debated, namely wind and solar energy. Extensive publicity regarding wind energy meant that people had the awareness, although not necessarily the understanding of how the technology worked or how it was embedded within energy infrastructure. Yet, most were in favour of wind energy and the doubters were persuaded that a single turbine could be sited in Bracknell as long as it featured a viewing platform benefiting education and tourism. Solar technology was discussed with enthusiasm; especially solar street furniture and promotion of PV tiles, yet the efficacy of solar energy were questioned by some as shown by those who voiced reservations about the amount of sun required. However, most people would be happy to move into a house with solar technology, but demonstrated limited awareness of government grant aid that might help those without solar thermal/PV to adopt this technology.

Thoughts about the new plans for the town centre were greeted with excitement by the youth groups and residents, but retired people viewed them with scepticism preferring an image of the pre-war town with all of the idealism and nostalgia that this might imply and the environment group warned about replicating architecture that might soon be outdated. The current negative aspects were discussed by all, but the residents championed the regeneration project as a great opportunity for renewable energy to prove itself as the future energy source for the UK. Perhaps this group of people could be seen as ‘early adopters’ of renewable technologies in the town and may play a significant role in the increased development of renewables in the area, through practical action. It can therefore be assumed that at the most conservative end of the spectrum people are cautiously optimistic for renewable energy in their town whilst for others it would be a unique and pioneering project paving the way for the UK to meet its renewables targets.