

## Attitudes Towards *The Development* of *Wind Farms* in Ireland



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## Foreword

Sustainable Energy Ireland supports the Irish Government's policy to meet its future energy needs in an economically and environmentally sustainable way. Given that Ireland has one of the best wind resources in Europe, wind energy should have a promising future in both the immediate and long term. Indeed, the technical potential for onshore wind power is well in excess of predicted electricity demands for Ireland. The commercial potential will be determined by advances in technology and the balance of costs and benefits of wind energy in the wider context of sustainable development in Ireland.

This report is Ireland's first independent study into the public's attitude to the development of wind energy and the integration of wind farms on the Irish landscape. SEI hopes that the information will be useful in assisting local authority planners, developers, policy makers and the general public in understanding some of the issues and concerns involved.

The transformation of Irish society and its economy has, as in the case of many other countries, relied heavily on the exploitation of apparently abundant, affordable and widely available energy supplies and the services they provide. Such services are intrinsic to the operation of a modern economy with its needs for warmth and comfort, power and light, and mobility and communications.

However our present rate of energy consumption comes at a price. There is a scientific consensus that current systems of energy production and use have the potential to cause long-term and lasting damage to our environment. The evidence of climate change is accumulating. For this, and a variety of other reasons, there is a growing need to mainstream sustainable energy practices into all aspects of our lives. The world needs cleaner and more efficient energy services and systems. Ireland, as a developed country, needs to avail of the opportunities implicit in this challenge while at the same time continuing to provide energy at prices that will allow Ireland to compete in the global market.

Renewable energy is an important part of the Government's strategy to reduce greenhouse gas emissions. The Green Paper on Sustainable Energy, published in 1999, targeted the installation of 500MW of additional generating capacity from renewable energy technologies, mainly from wind, by 2005. Ireland's recourse to renewable energy has been very low to date — just 2% of our energy comes from renewable resources, well below the EU average of 6%. We have the highest energy import dependency in the EU, importing over 85% of all our energy requirements.

Interest in developing and investing in the new technologies and energy sources is rising. With the appropriate support policies, renewable energy resources can benefit the rural economy while making contributions towards meeting our Kyoto targets, delivering secure clean energy for future generations, at a stable and competitive price, while at the same time creating new jobs. This report aims to further this objective.



**David Taylor**

*CEO Sustainable Energy Ireland*

# Summary of the Main Findings

This report is Ireland's first independent study of the Irish public's attitude towards the development of wind energy. The survey was designed by an independent cross-sector steering group to establish the following:

- *Attitudes and opinions concerning renewable energy, in particular wind energy*
- *The level of knowledge and familiarity with wind farms*
- *Attitudes to specific aspects of wind energy, including visual, environmental, social and economic dimensions*
- *Acceptance of wind farms at local level and in differing landscapes*
- *Understanding of national and international energy issues/opinions and policies*

The survey highlighted that just over half of Irish adults are aware of the term 'renewable energy' and that wind energy is easily the best-known type of renewable energy. The main findings were as follows:

- *The study indicates that Irish people are clearly realistic about the probable effects of climate change. Most express some concern about climate change and are aware of the impacts it may have on Ireland. However, few believe that they can personally contribute to reducing climate change. A majority are not aware of the Kyoto Protocol.*
- *There is a high level of support for developing more sources of renewable energy in Ireland (84%), making it the preferred option among energy policies measured within the study.*
- *There is support for encouraging the development of renewable energy sources through lower taxes for businesses that use renewable energy and through government incentives to build wind farms. Among the various energy policies suggested, government incentives to build wind farms is one of the most popular, with 73% saying they would be willing to support such a measure.*
- *Although renewable energy and its sources are well recognised in Ireland, awareness of their contribution to the total fuel supply remains low.*
- *Support for renewable energy is even higher in areas where wind farms are planned or operational.*
- *Approximately half of Irish adults have seen a wind farm.*
- *The study indicates that the overall attitude to wind farms is almost entirely positive. More than eight out of ten believe wind energy to be a very or fairly good thing.*
- *The study highlights that wind farms are seen in a positive light compared to other utility-type structures that could be built on the landscape.*
- *Encouragingly, the study highlights that two-thirds of Irish adults are either very or fairly favourable to having a wind farm built in their locality, with little evidence of a 'Not In My Back Yard' effect.*

Although renewable energy and its sources are well recognised in Ireland, awareness of their contribution to the total fuel supply remains low.

“The survey highlights that in total over eight in ten of those questioned are favourable to the construction of more wind farms in Ireland.”

- The public are not greatly concerned about the impact of medium scale wind farms upon scenic beauty, irrespective of the type of landscape.
- There is a preference for smaller, clustered groups of turbines over larger scale installations. Preference for larger turbines (in smaller numbers) over smaller turbines (in larger numbers) is clear.
- Although it is clear that some developers do consult with the local community, there is room for improvement in genuine consultation with those most affected. Since the public have definite preferences in terms of size and layout of wind farms, it would be advisable to engage actively in two-way consultation, in order to be as responsive as possible to local concerns.
- Very few residents formally objected to existing wind farms at the time that planning was being sought. Nonetheless, those who object form an important group, and it is essential to try to gain a clear understanding of the nature of such objections, as early as possible in the planning phase.
- Those with direct experience of wind farms in their locality do not in general consider that they have had any adverse impact on the scenic beauty of the area, on wildlife in the area, or on tourism.
- There is evidence that local expectations in terms of local employment or economic benefits are not always realised. It may be worth considering the ways in which the community could benefit from a wind farm development being built in the locality. There is interest among a small number in local communities in having an opportunity to become investors in the development.
- Those with direct experience of a wind farm in the locality are generally impressed with it as an additional feature in the landscape, adding interest and perhaps associating the locality with progressive, 'green' connotations. It may be possible to do more to exploit the positive tourist potential of wind farms in attracting the ever-larger numbers of environmentally concerned visitors to the locality.
- Most encouragingly, over 60% of those living in close proximity to existing wind farms would favour either an additional wind farm in the area or an extension to the existing one. Fewer than 20% state that they would be against a further wind farm development, but 7% express themselves as strongly opposed. The key task is to recognise and address the concerns of this group.
- The survey highlights that in total over eight in ten of those questioned are favourable to the construction of more wind farms in Ireland. It is particularly encouraging that those with experience of wind turbines are most favourable to their development and that wind farms are not solely seen as good in theory, but are also seen as beneficial when they are actually built.

# Section One

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## Background, Objectives, Methodology

From a technical point of view, wind energy is now well established, and its potential contribution as a major sustainable energy source in Ireland is very considerable. Further large-scale penetration of wind energy is largely dependent upon recognising and responding to the views of the public towards the development of wind farms.

For this reason, in 2002 Sustainable Energy Ireland (SEI) commissioned two independent surveys — the first, a national survey aimed at identifying public attitudes to renewable energy and to wind energy in Ireland and the second, a catchment area survey more specifically focused on people living with a wind farm in their locality or in areas where wind farms are planned. Fieldwork for the national survey was conducted in November 2002, and fieldwork for the catchment areas was conducted in April and May 2003.

The surveys were carried out for SEI by Lansdowne Market Research and MosArt was commissioned to advise on and develop the landscape related section of the national study. To ensure that the project was balanced and independent in its approach, Sustainable Energy Ireland established a Steering Committee, consisting of Godfrey Bevan (Sustainable Energy Ireland), Maureen De Pietro (Irish Wind Energy Association), Henk Van der Kamp (Irish Planning Institute) and UK consultant, Patrick Devine-Wright (De Montford University). Their contribution was especially useful in ensuring the independent status of the study, and in agreeing the questions and assisting in determining sample sizes and categories for the two surveys conducted within the project.

The project was managed by Sustainable Energy Ireland's Renewable Energy Information Office, who wish to formally acknowledge the work of Lansdowne Market Research and MosArt and the valuable contribution of the project Steering Group in bringing the project to a successful conclusion.

The main objectives of the national study were to:

- *Measure the attitudes and opinions of the public towards renewable energy in general*
- *Explore attitudes towards wind energy in particular*
- *Assess the public's level of knowledge of, and familiarity with, wind farms and wind turbines*
- *Explore attitudes to specific aspects of wind energy, namely:*
  - *Visual*
  - *Environmental*
  - *Social*
  - *Economic*
- *Gauge the level of acceptance of wind farms of different spatial extents (concerning the number of turbines) in a variety of landscape types*
- *Ascertain the public's understanding of general energy issues, options and policies required under the terms of the Kyoto Protocol.*

The national study of general public attitudes and opinions used an Omnibus survey, with 60 nation-wide sampling points. The sample size was 1,200 people and was designed to be nationally representative in terms of age, sex, class and region. The information was gathered using face-to-face interviews. The interviews were based on a series of carefully designed questions and also employed a number of photomontages of different wind farm developments in various landscapes types.

The key objectives of the catchment area surveys were to explore:

- *The perceived effect of a wind farm on the area*
- *The level of consultation prior to planning permission/construction*
- *The level of community involvement in the wind farm project*
- *Perceived levels of controversy surrounding the wind farm*
- *Disruption caused by the wind farm*
- *Overall attitudes to the wind farm and to wind energy generally.*

Face-to-face interviews were also used in the two catchment surveys. The sample sizes were 200 in the areas where wind farms already exist and 150 in areas where full planning permission for a wind farm has been granted but construction had not taken place at the time of the survey. Seventeen wind farm sites were included in the existing wind farm area survey, with a further 19 proposed wind farm sites in the planning permission survey. This ensured a representative spread across all of the regions where wind farms are located and/or planned. The interviews were quota controlled so as to be representative of the total population of the region in which the catchment areas were located. In the survey of existing wind farm catchment areas, 65% of interviews were conducted with people who could see the wind farm from their houses.

# Section Two

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## Public Attitudes in Ireland Towards Wind Energy

This part of the study focused on the awareness and opinions of the public in Ireland concerning renewable energy in general and wind energy in particular. The survey was designed so as to provide a representative profile of general public opinions within Ireland.

The initial questions addressed general issues of awareness concerning energy sources and terms, before asking more specifically about aspects of wind energy. Subsequent questions focused on attitudes towards the possible development of wind farms in the respondents' own localities.

## Awareness of Sources of Power in Ireland

As an introduction to the survey, respondents were asked some initial questions about the sources of electrical power used in Ireland (Chart 2.1).

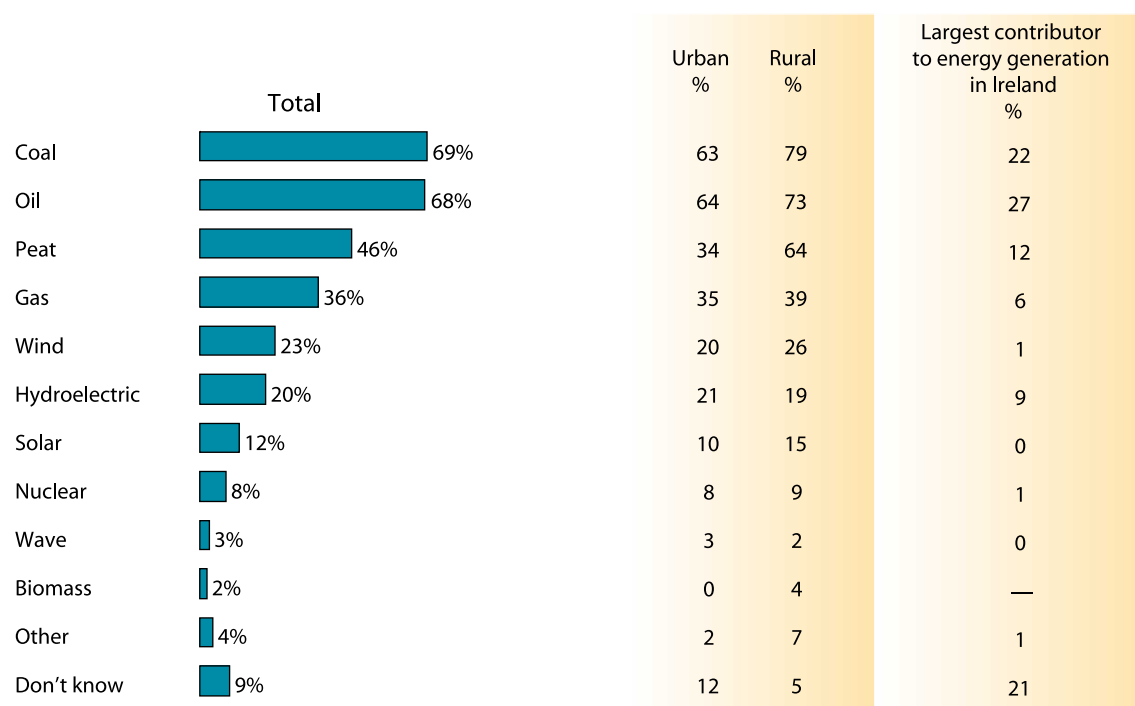
Coal and oil dominate responses concerning the sources of electrical power in Ireland, with 69% and 68% respectively spontaneously naming these as sources. Peat and gas are the next most recognised sources, revealing the high level of importance attributed by the public to fossil fuels as a source of electrical power. Wind power was identified by 23% of respondents, making this the most recognised renewable source of electricity; hydroelectric power is the next most recognised, at 20%.

The relatively low level of recognition of gas as a fuel for electricity production in Ireland, coupled with other results such as the 8% who identified nuclear power as a source of electricity in Ireland, suggests that although the general pattern of recognition is more or less in line with the actual situation, there is nonetheless some lack of knowledge of which fuels are used in Ireland at present and of their relative significance.

Twenty-six per cent of respondents living in rural areas were aware of wind power as a source of electricity, compared with 20% of those from urban areas. This is not surprising given that people in rural areas are more likely to have had direct experience of wind power installations. More rural respondents also identified other renewables such as solar energy and biomass as sources of electricity.

The single largest contributor to electricity production is perceived to be oil at 27%, followed by coal at 22%. Not surprisingly, renewable sources of energy are not widely recognised as major power sources, although 9% of respondents identified hydropower as the single largest contributor to electricity generation.

**Chart 2.1: Awareness of Sources of Power in Ireland**

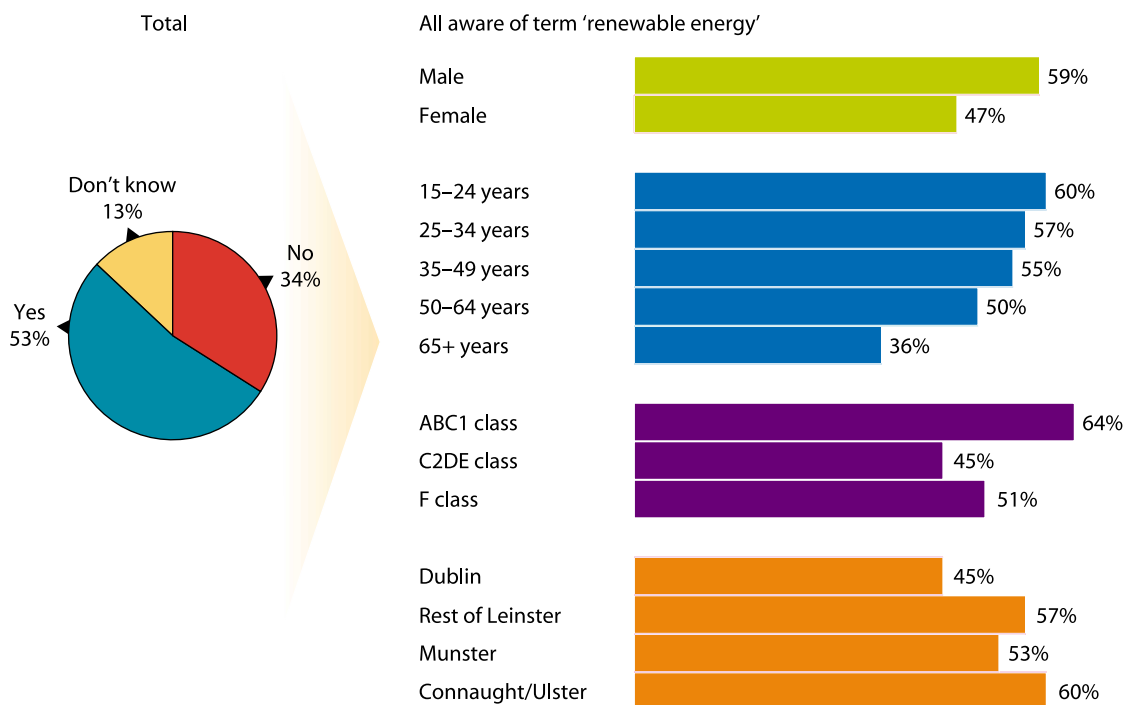


## Awareness of the Concept of Renewable Energy

Just over half (53%) of Irish adults are aware of the term 'renewable energy' (Chart 2.2). Awareness decreases with age — with 60% of people aged 15–24 aware of the term, compared to just 36% of those aged 65 or over. Considerably more males (59%) are aware of the term than are females (47%).

Those in the white-collar ABC1 sector are more likely to be aware of the term, as are people living in areas outside Dublin.

**Chart 2.2: Awareness of the Term Renewable Energy**



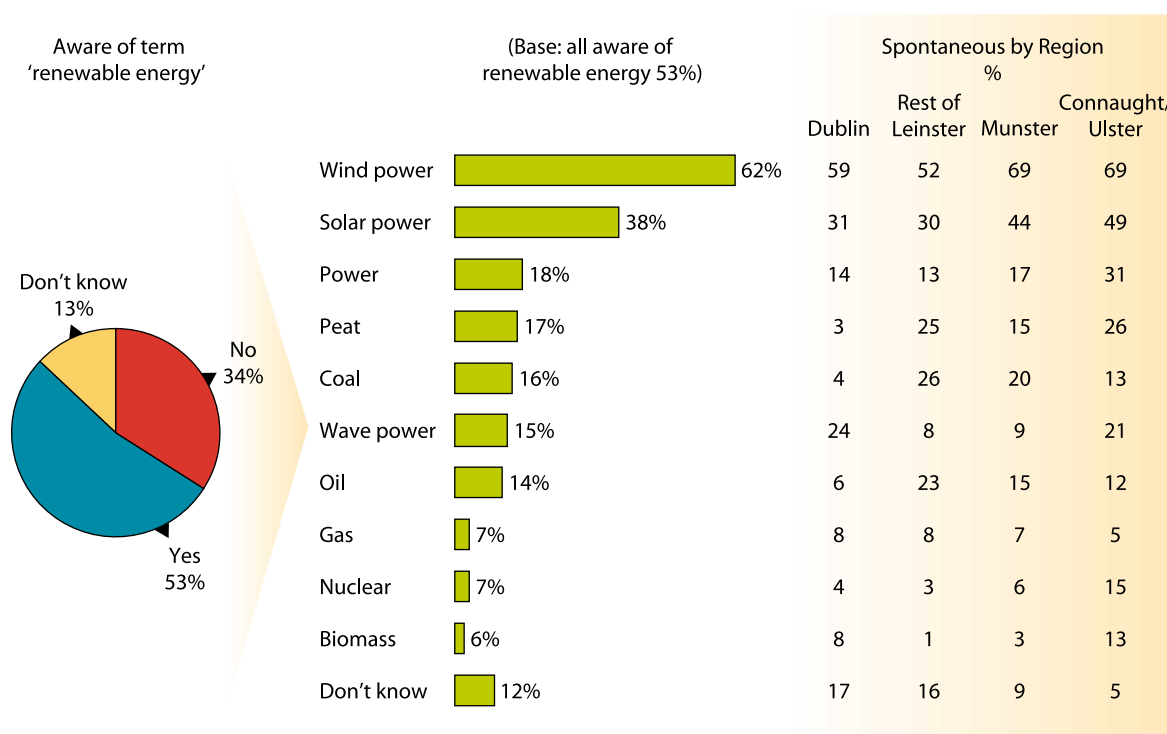
## Spontaneous Awareness of Renewable Sources of Energy

Respondents were asked, without prompting, to name as many renewable energy sources as they could, and Chart 2.3 shows the results for those respondents who had indicated an awareness of renewable energy.

Wind energy is easily the best known type of renewable energy, being mentioned by 62% of the 'aware of renewable energy' group. Solar power is the next best known among this group, at 38% (it should be noted that a small but significant number of respondents also identified coal, oil, gas and nuclear as sources of renewable energy, indicating a lack of precision concerning the real meaning of renewable energy).

Wind power is best known in Connaught, Ulster and Munster. Indeed, this trend is more marked than the figures in Chart 2.3 might indicate, since Chart 2.2 already revealed that more respondents outside Dublin are aware of the term 'renewable energy' in the first place. Combining these two results suggests that some 41% of all respondents in Connaught/Ulster are aware of wind power, compared with 36% for Munster, 30% for Leinster (excluding Dublin) and 26% for Dublin. This probably reflects the location of the majority of wind farms in the country to date.

**Chart 2.3: Spontaneous Awareness of Renewable Sources of Energy**

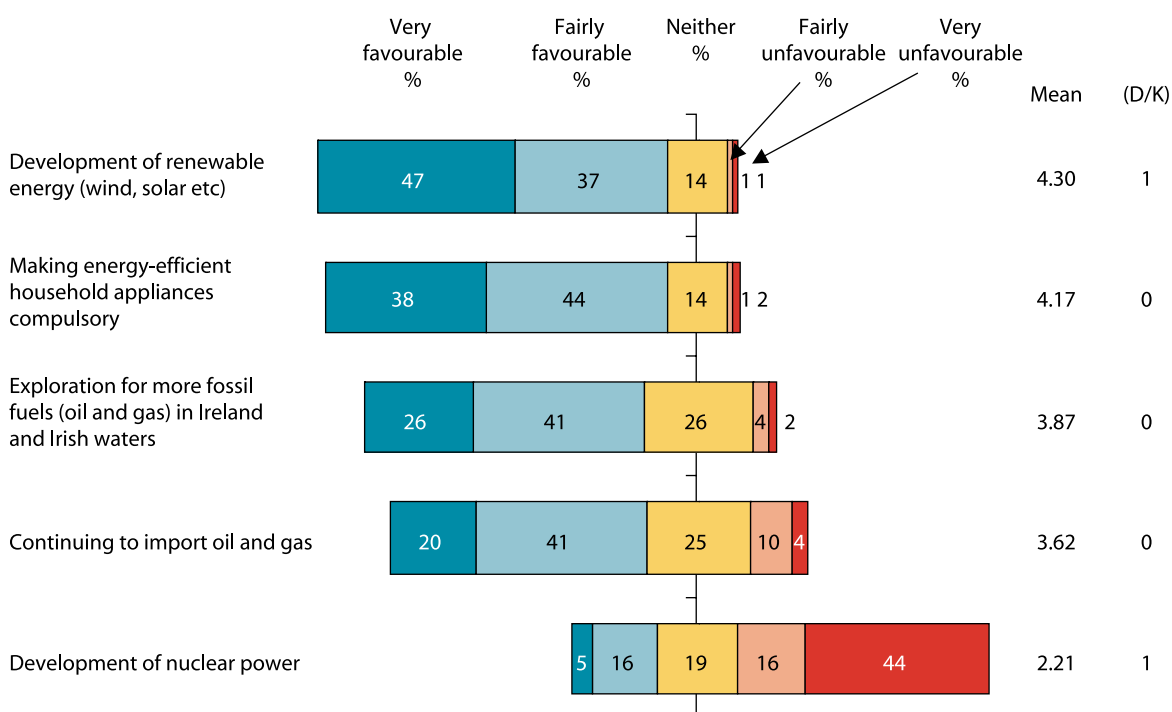


## Attitudes Towards Energy Policy

Respondents were asked to indicate their attitudes towards a set of non-mutually exclusive energy policies, as listed in Chart 2.4. Eighty-four per cent were either favourably or very favourably disposed towards the development of more sources of renewable energy, as compared with 82% in favour of compulsory energy efficient appliances, 67% in favour of further exploration for fossil fuels, 61% in favour of continued imports of oil and gas, and 21% in favour of developing nuclear power.

There is considerable support for continuing to import oil and gas, which suggests that energy security and environmental concerns are not a major priority when people consider these issues.

**Chart 2.4: Attitudes Towards Energy Policy**

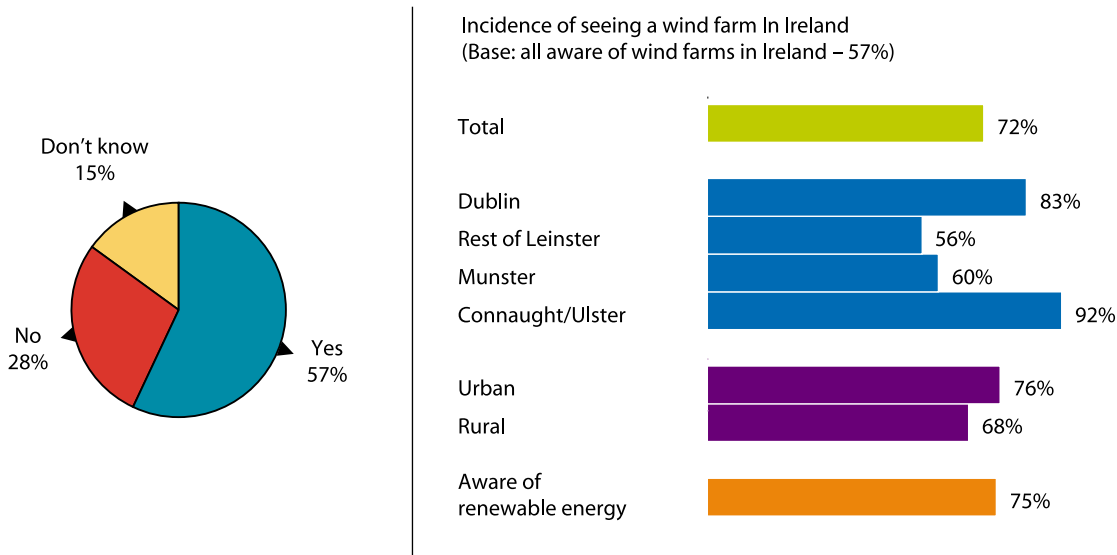


# Awareness of Wind Farms in Ireland

When asked whether there are any wind farms located in Ireland today, 57% of respondents believe that there are; 28% believe there are not; and 15% don't know (Chart 2.5).

Of the 57% who believe there are wind farms in Ireland, over 70% have actually seen one (in Ireland), so that most of the awareness comes from direct personal experience. Rather surprisingly, 83% of respondents in Dublin who believe there are Irish wind farms have actually seen one and the percentages are much lower for respondents in the rest of Leinster and in Munster. However, for Connaught/Ulster the percentage rises to 92%. Presumably this reflects the prevalence of wind farms in this region.

Chart 2.5: Awareness of Wind Farms in Ireland



## Disposition Towards Energy from Wind

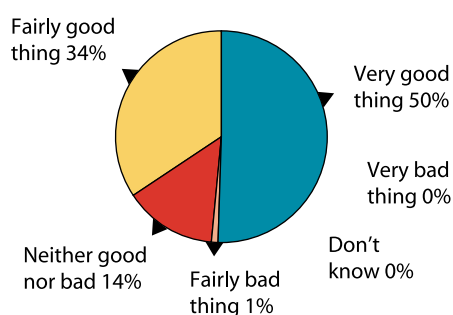
The overall attitude to wind farms is very positive, with 84% of respondents rating it positively or very positively (Chart 2.6). Only 1% rate it negatively ('fairly bad'), with 14% not having an opinion either way, and no one rating wind farms 'very negatively'. Interestingly, this time it is those from Dublin who are most positively disposed; this could arise from the fact that Dubliners are less likely than others to have a wind farm built in their locality.

Chart 2.6 also shows the results for the question of whether respondents would be favourably or unfavourably disposed to a wind farm being built in their local area. Thirty-one per cent were very favourably disposed, and 36% favourably disposed (67% in total). These percentages rise to 44% and 35% (79% in total) when only those respondents who have ever seen a wind farm are included in the analysis.

This result is encouraging. Firstly, some two thirds of respondents would be positively disposed to a wind farm in their locality. Secondly, the fact that the percentage increases among those who have actually seen a wind farm suggests that the structures themselves do not significantly contribute to any negative views of wind energy.

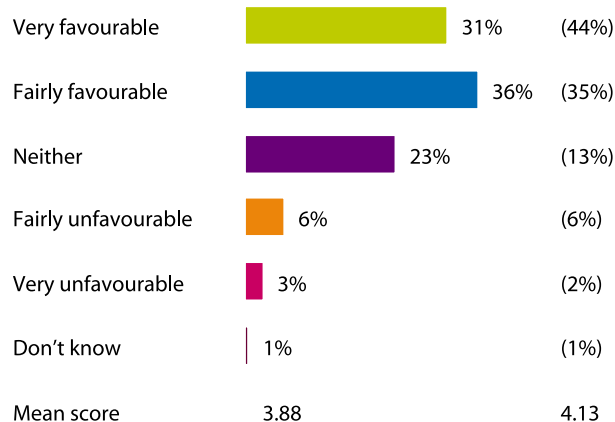
**Chart 2.6: Is Energy from Wind Farms a Good Thing?**

Is energy from wind farms  
a good or bad thing



How favourable are you to having  
a wind farm built in your local area

Ever seen  
a wind farm

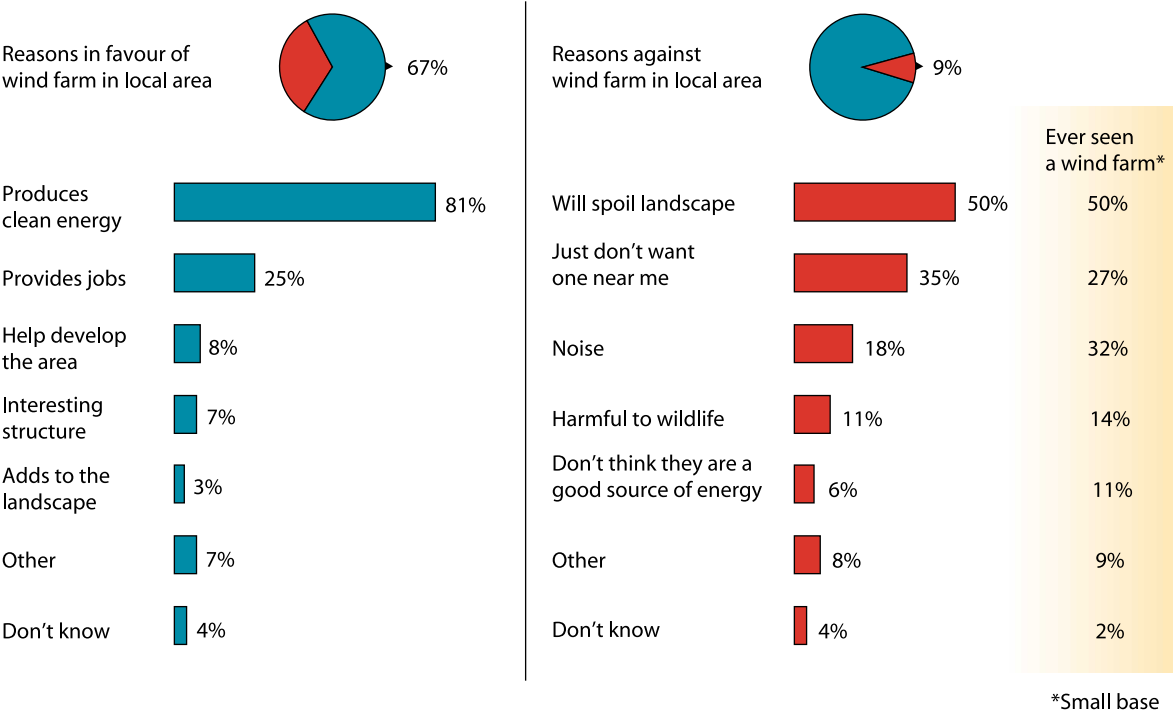


Those expressing an opinion to the proposition of a wind farm being built in their locality were also asked for their reasons for being either favourably or unfavourably disposed to such a development (Chart 2.7).

Of those who are positively disposed to a local wind farm, the overwhelmingly cited reason was that it produces clean energy. Twenty-five per cent were of the view that it would provide employment, and 10% felt that it would add to the landscape in some way. In contrast, the minority of 9% who were opposed to living near a wind farm are more concerned about landscape impacts. One in two of this minority believe that wind farms could be an eyesore, with a further 18% citing noise as a reason for their negative attitude. Only 6% say they would be opposed because they think wind is a poor form of energy. Thus, where negative attitudes are voiced towards wind farms, the visual impact of turbines on the landscape is the strongest influence. It should be noted that the survey of wind farm catchment areas (Parts three and four of this report) reveals that impact on the landscape is not a major concern for those living near an existing wind farm. It should also be noted that a significant 35% of the 9% opposed to a local wind farm did not really have any reason they could articulate, other than that they simply didn't want it.

Chart 2.7: Reasons for Being Favourable/Unfavourable to Having the Wind Farm Built in the Local Area

Base: all those favourable/unfavourable to having wind farm built



## Wind Farms and the ‘Not In My Back Yard’ (NIMBY) Effect

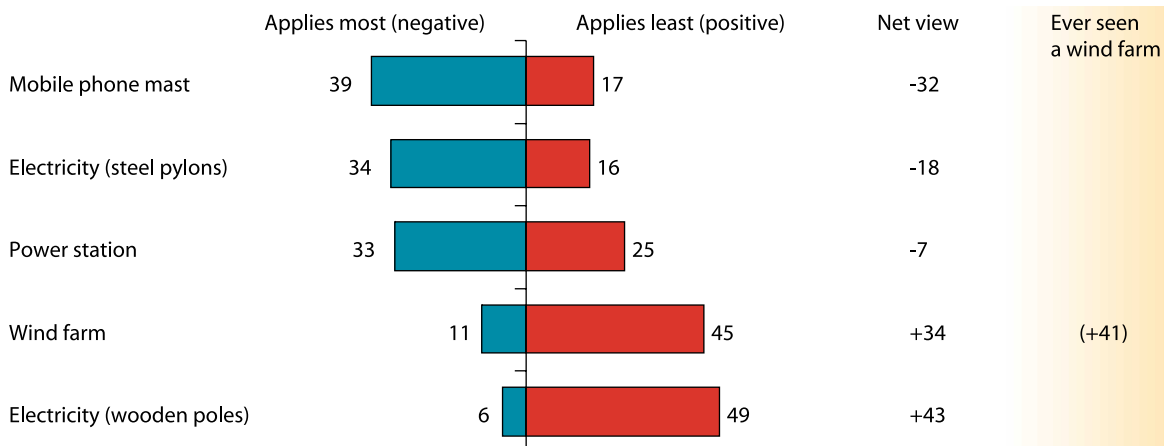
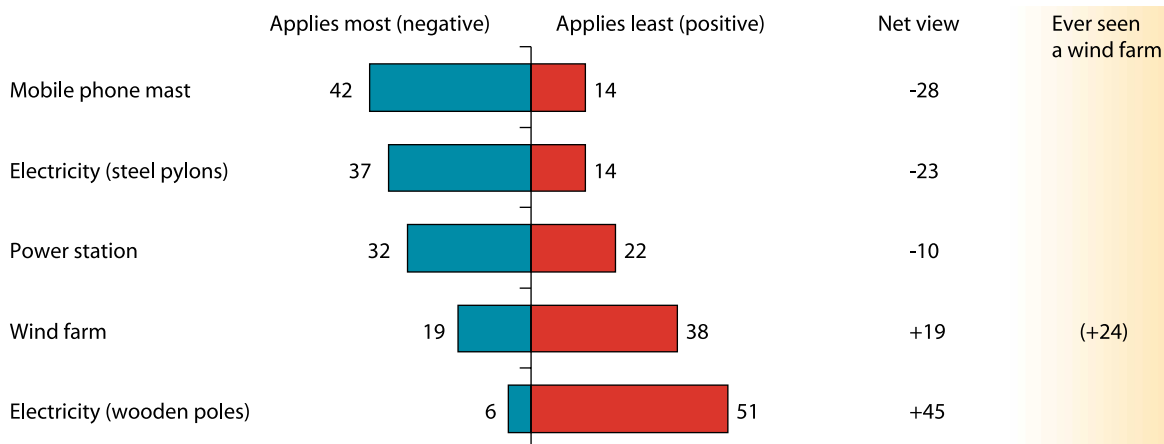
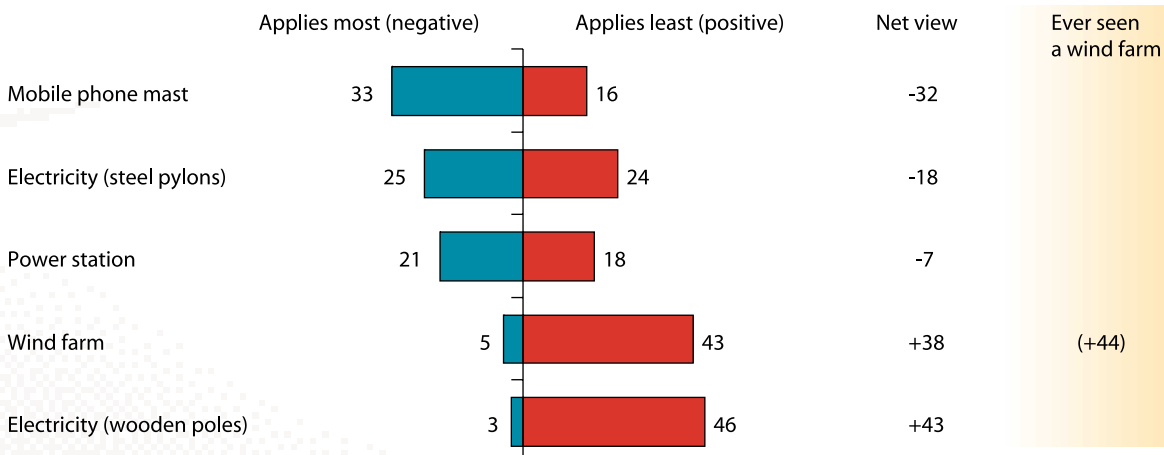
Thus far, the survey results suggest a generally positive disposition towards wind farm developments in the locality of the respondents. In practice however, it might be expected that householders do find changes in their local landscape objectionable. Often, it is not that people are opposed to a specific development, per se — rather that they wish to maintain the status quo in relation to their locality and, prefer to see the development taking place elsewhere. The survey asked a number of questions to investigate the relative strength of the ‘Not In My Back Yard’ (NIMBY) effect when applied to wind farms or to a number of other developments that could also impact on the locality. This was done by asking respondents to state the extent to which a number of different statements could apply most or least to wind farms, to mobile phone masts, to steel electricity pylons, to a power station, or to wooden electricity poles (Charts 2.8, 2.9, and 2.10). The statements included:

- ‘It would be very controversial [if one were nearby]’
- ‘I would be very unhappy if one were built nearby’
- ‘I would campaign against having it built near here’

In all three cases, mobile phone masts fare the worst, and wooden electricity poles are considered the least objectionable. Only the wooden poles are seen as more acceptable than wind farms. This is encouraging, although it must be noted that the responses do indicate that there would be some opposition to a wind farm.

Given that the erection of most structures will attract some degree of opposition, it is encouraging that wind farms are placed at the favourable end of the NIMBY scale. Especially encouraging for wind farms is that the scores are much more favourable among those who have seen one before.

Results from the NIMBY study are also relevant to how wind farms might be connected to the national grid, with little concern expressed regarding the use of timber poles as compared to the steel lattice pylons sometimes required for larger projects.

**Chart 2.8: The NIMBY Effect — I would be very unhappy if one were built nearby****Which of these structures applies most/least to this statement?****Chart 2.9: The NIMBY Effect — It would be controversial****Which of these structures applies most/least to this statement?****Chart 2.10: The NIMBY Effect — I would campaign against having it built near here****Which of these structures applies most/least to this statement?**

## Economic and Environmental Effects

The survey revealed that attitudes towards wind energy are influenced by a perception that wind is an attractive source of energy (Chart 2.11). Over 8 in 10 recognise wind as a non-polluting source of energy, while a similar number believe it can make a significant contribution to Ireland's energy requirements. People therefore seem to have little difficulty with the concept of wind energy.

Some 47% of respondents agreed or strongly agreed that wind farms represent a positive addition to the landscape. While this is encouraging for wind farm promoters, it should also be noted that 43% felt that they should not be located in areas of scenic beauty and tourism. These are not insignificant percentages, and they would have to be carefully borne in mind.

**Chart 2.11: Attitudes to Wind Farms**

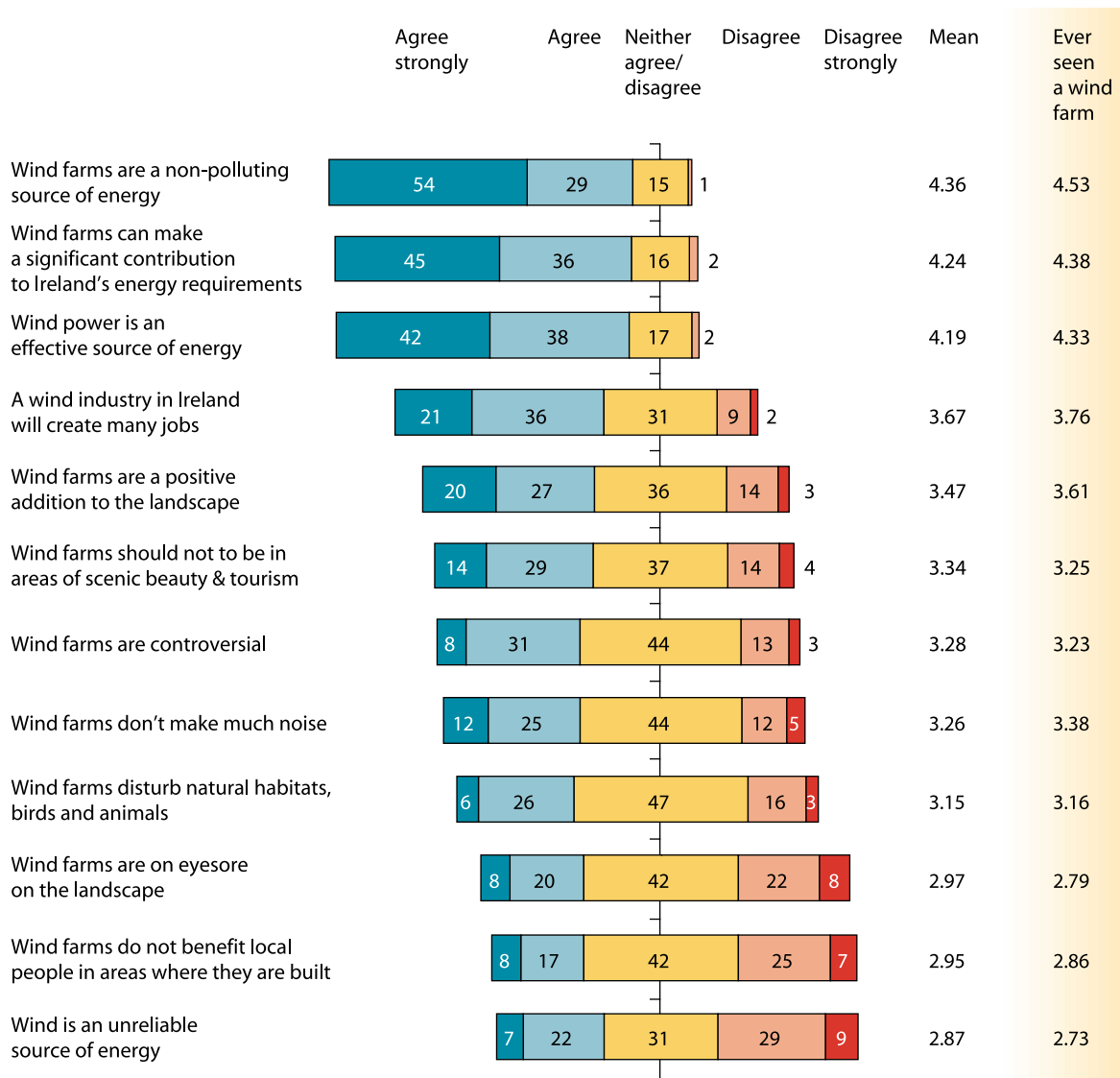


Chart 2.11 also indicates that almost 50% believe wind farms are a positive addition to the landscape and 39% agreed that they are controversial, revealing a considerable divergence of opinion on this issue.

Responses to the more detailed statements listed in Chart 2.11 regarding wind farms suggest a lack of direct experience and knowledge of their economic or environmental impacts among many people. Almost one in two neither agree nor disagree that wind farms disturb the natural habitats of birds and animals. Opinions are also divided as to whether wind farms are an eyesore on the landscape: 28% agree, 30% disagree and 42% neither agree nor disagree. The same lack of a definite opinion is revealed in relation to the other issues explored: noise levels, local benefits and the reliability or otherwise of wind power as an energy source. The study therefore reveals considerable uncertainty regarding the effects of wind farms.

However, the finding that people who have seen wind farms rate these economic and environmental factors more favourably is a further indication that some experience of the structures tends to translate into positive attitudes towards wind energy.

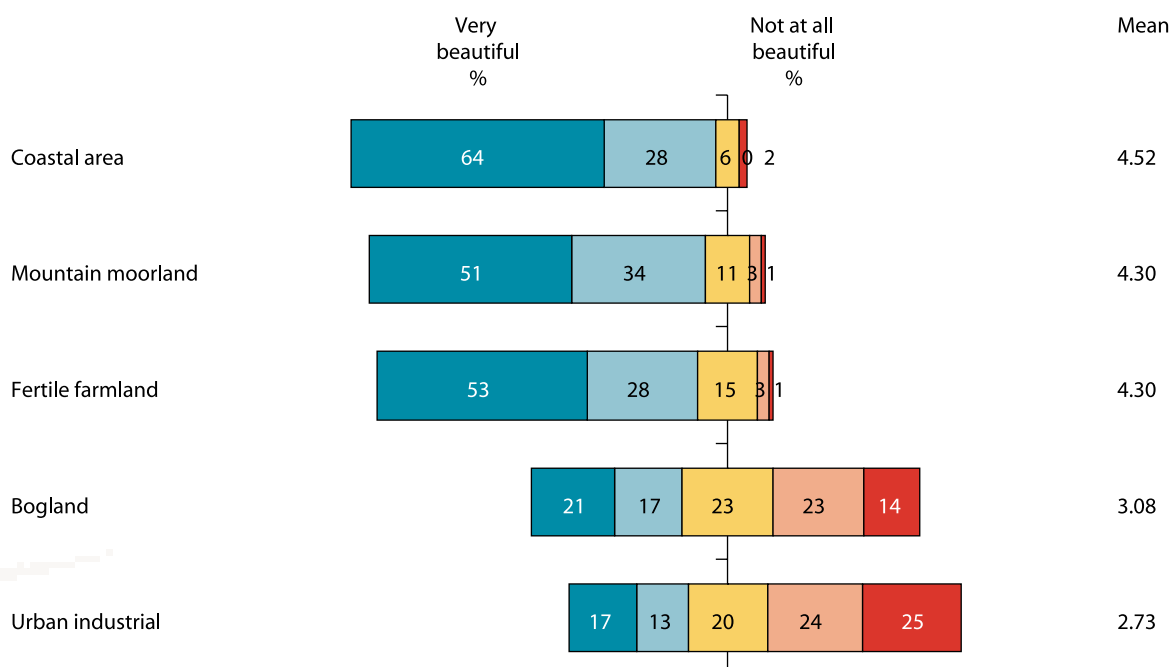
## Effect of Wind Turbines on the Irish Landscape

As an entry point into exploring the perceived impact of wind farms on the landscape, respondents were asked to rate five different landscape types in terms of their scenic beauty or otherwise (Chart 2.12). The five landscape types were: coastal, mountain moorland, fertile farmland, bogland, and urban industrial. Respondents were shown panoramic photographs of the different landscape types, to assist them in their rating (see Appendix pages 44/45 for photos).

Of the five landscape types examined, coastal landscape was evaluated as the most beautiful, with over 9 in 10 citing it as very or quite beautiful. Mountain moorland and fertile farmland also received high levels of endorsement for their scenic beauty.

Unsurprisingly, the urban industrial landscape ranked most poorly among the five, although not significantly more so than bogland.

**Chart 2.12: Perceived Beauty of Landscapes**



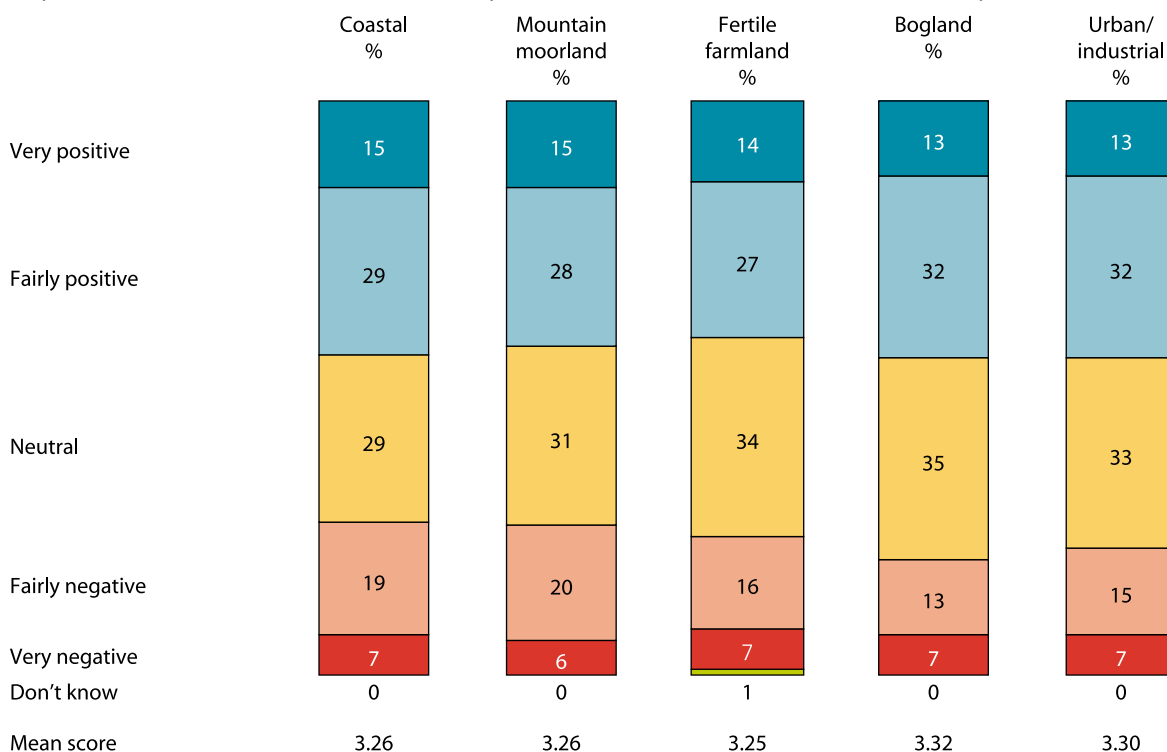
The study next took the above five landscape types and superimposed different wind farms on them to determine the perceived impact upon scenic beauty (see Appendix pages 45/46 for photos).

Interviewees were then asked to indicate whether the impact of a wind farm on scenic beauty is either very positive, fairly positive, neutral, fairly negative or very negative (Chart 2.13).

Regardless of the perceived scenic beauty of the relevant landscape, the perceived impact of a ten turbine wind farm was similar in all five landscapes. Between 40% and 45% stated that the landscape impact of the wind farm was positive irrespective of how they previously rated the scenic beauty of the same landscapes presented earlier without wind turbines. Approximately one third of respondents stated that the wind farm has a neutral impact on scenic beauty of all landscape types with the remaining 20–26% feeling that the impact is negative.

### Chart 2.13: The Effect of Wind Farms on the Irish Landscape

Respondents were next asked to rate the scenic impact of different numbers (cumulative effects) and spatial



extents of wind farms on two of the landscape types of particular potential importance to wind farm developments – mountain moorland and fertile farmland. The spatial extents included were a development of five turbines and one of 25 turbines. In addition, photomontages with two distinct wind farms each comprising ten turbines were shown to the respondents (Charts 2.14, 2.15 and see Appendix pages 46/47 for photos).

Perceptions of impacts are similar in respect of both mountain moorland and fertile farmland, with over 40% of respondents stating that the impact of a five turbine wind farm is positive (either fairly or very positive). More than 30% feel the impact is neutral, and over 20% judge the impact to be negative (either fairly or very negative).

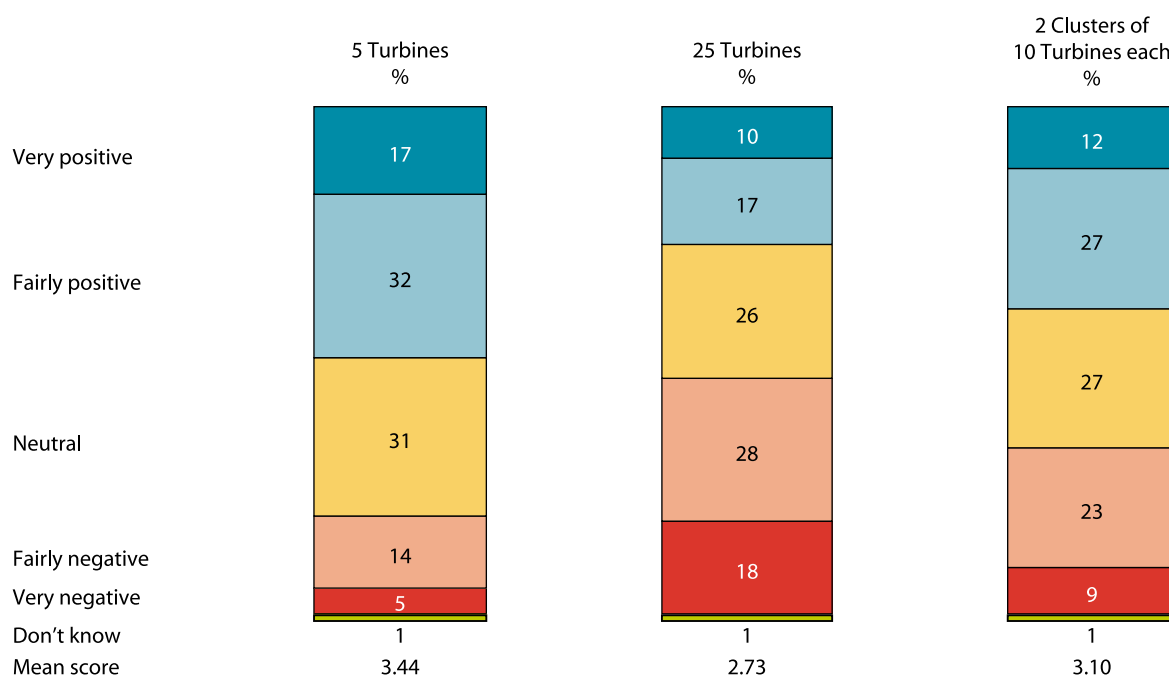
Perceptions are somewhat less favourable as the number of turbines increases. In relation to fertile farmland and mountain moorland, 27% (fertile farmland) and 28% (mountain moorland) judge the impact of a 25 turbine wind farm to be positive in terms of scenic beauty, 26% are neutral (both landscape types) and the remainder judge the impact to be negative.

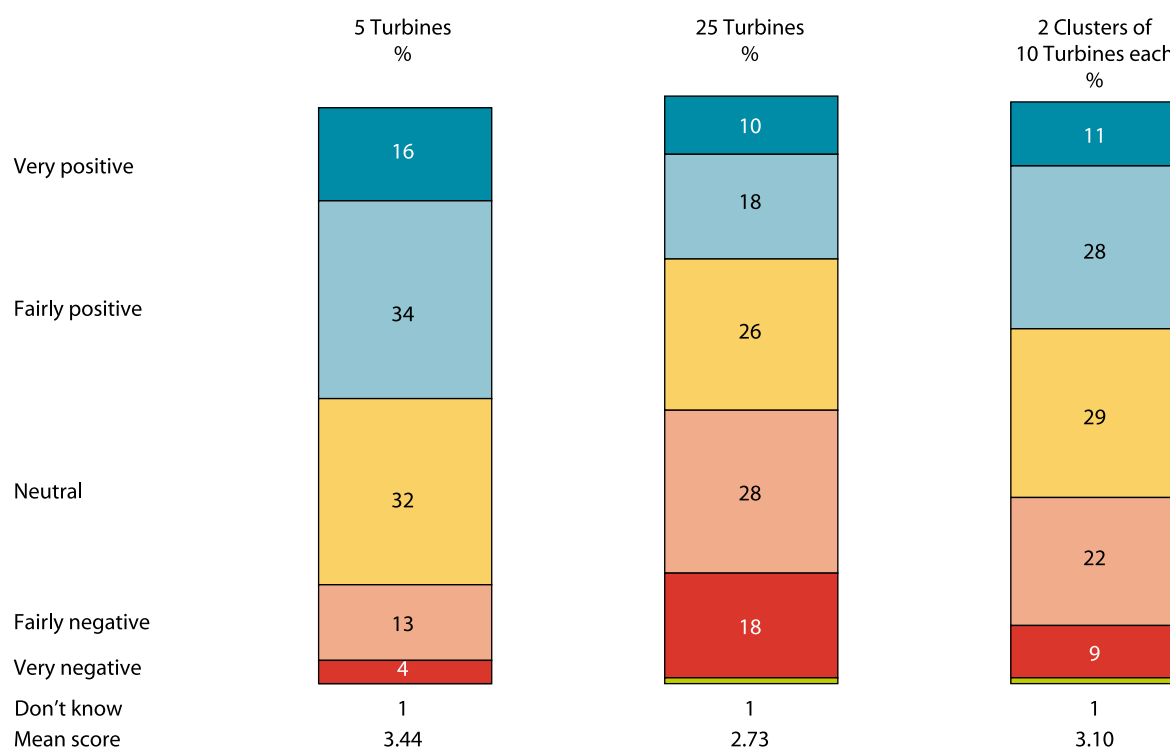
## 18

An investigation of the existence of a cumulative effect was undertaken by asking the respondents to classify the impact of two distinct wind farms in the same landscape, each comprising ten turbines. The impact on scenic beauty was deemed to be more negative than just one wind farm with ten turbines, highlighting that cumulative effects do exist. However, it is also important to note that the impact of two wind farms with ten turbines was less negative than the impact of one single large wind farm of 25 turbines. This result suggests that the public would prefer smaller wind farms, even if this means that more than one wind farm is visible in any given landscape. In summary:

- *There is little perceived difference in impact between mountain moorland and fertile farmland landscapes*
- *Smaller wind farms (whether 5 or 10 turbines) are regarded more positively than larger farms of 25 turbines*
- *Clustering turbines into visually distinct wind farms is felt to be more positive (from the point of view of impact on scenic beauty) than a single development of 25 turbines*
- *Those who judge the impact on scenic beauty to be 'neutral' represent quite a sizeable proportion (from 22% to 32%)*
- *Almost half (46%) of respondents perceive a negative impact from larger wind farms comprising 25 turbines, regardless of landscape type.*

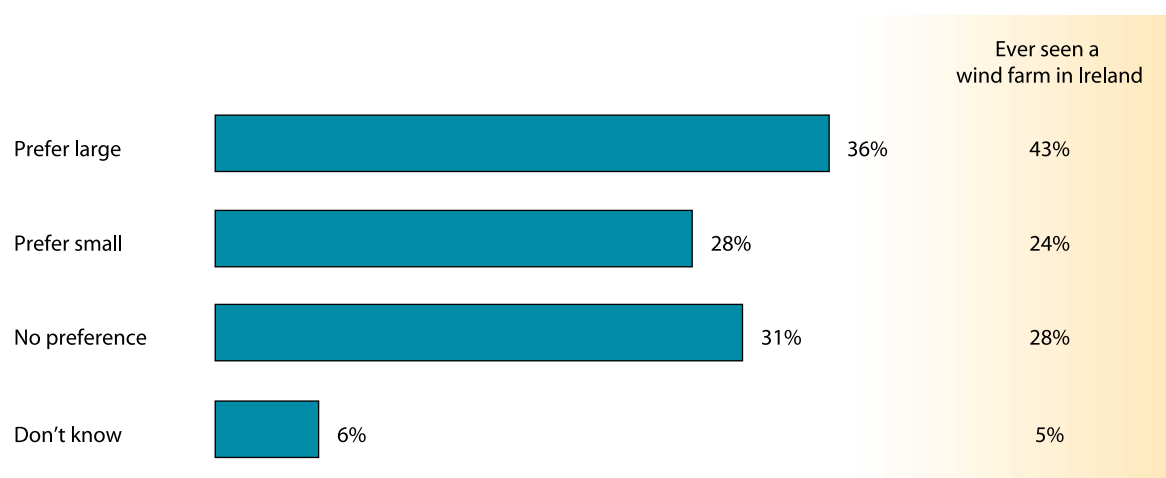
**Chart 2.14: Effect of Turbine Type on Wind Farm Perception — Fertile Farmland**

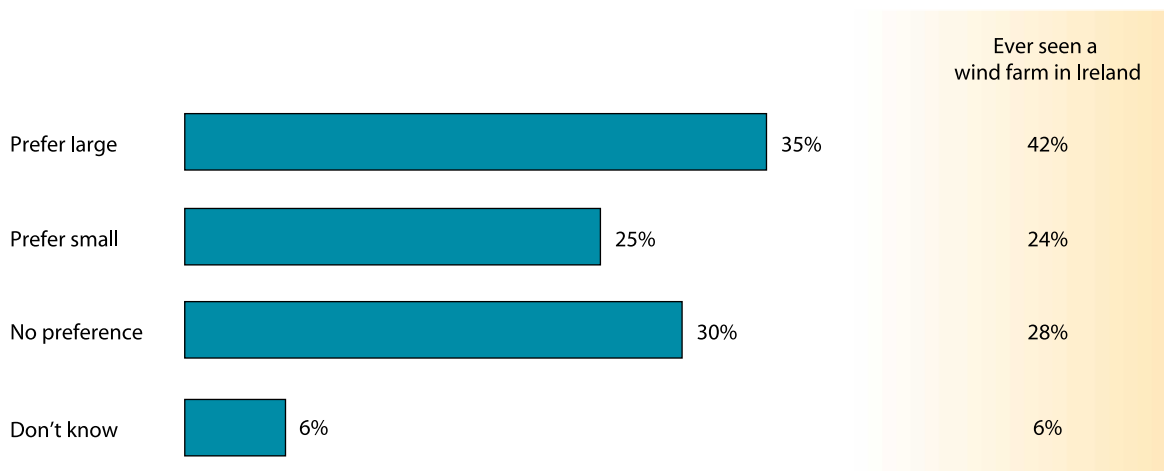


**Chart 2.15: Effect of Turbine Type on Wind Farm Perception — Mountain Moorland**

Respondents were also asked whether they would prefer to achieve renewable energy targets using a large number of small turbines (25 machines of 1 Megawatt capacity) or a smaller number of large turbines (10 machines with a capacity of 2.5 Megawatt) (Charts 2.16, 2.17 and see Appendix page 48 for photos). More respondents (35–36%) favoured the photomontages of fewer but larger turbines over the greater number of smaller turbines (25%–28%). Around 30% had no preference. The number in favour of larger turbines increased to 42% (fertile farmland) and 43% (mountain moorland) among those who have ever seen a wind farm previously in Ireland, again suggesting that direct experience tends to lead to more favourable evaluations.

Based on this data, it may be that wind farms with a smaller number of large turbines may be more acceptable than a larger number of small turbines, although of course this would in practice depend on many site-specific considerations.

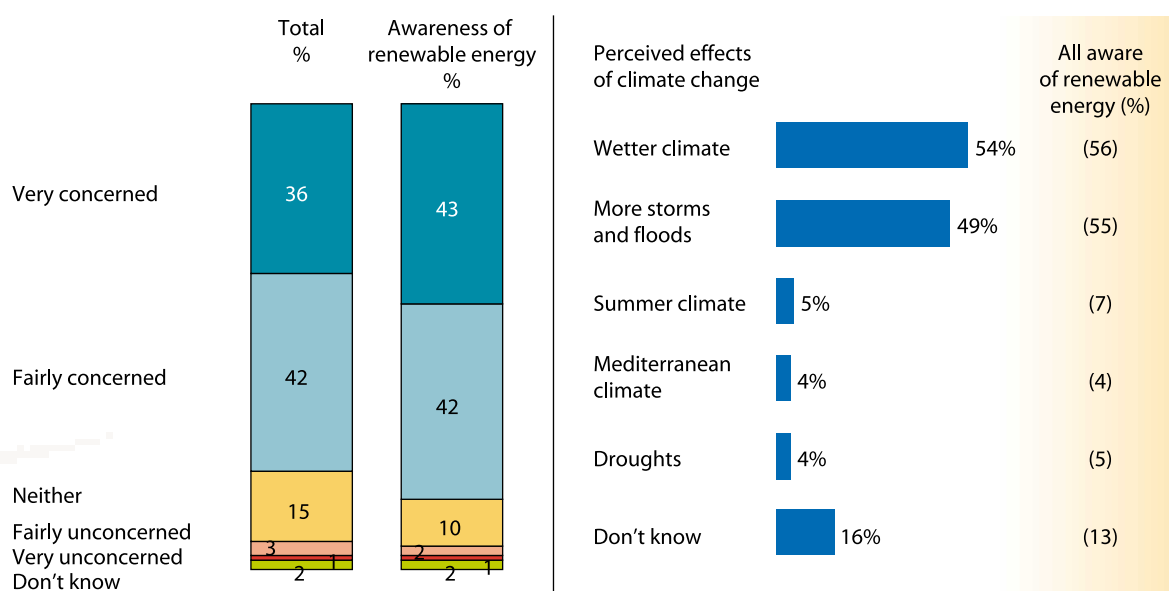
**Chart 2.16: Small Versus Large Turbines — Mountain Moorland**

**Chart 2.17: Small Versus Large Turbines — Fertile Farmland**

## Knowledge of Environmental Issues

The next section of the survey probed interviewees concerns about, and the perceived effects of, climate change. This is important since concern for climate change may well have a considerable impact on people's support of energy from renewable sources, such as wind energy.

Chart 2.18 indicates that over three quarters of respondents feel concerned about the issue of climate change, while very few expressed a lack of concern. Furthermore, the study suggests that Irish people are realistic about the probable effects of climate change. Few believe the result in Ireland will be a Mediterranean or sunnier climate. Most respondents (54%) believe the climate will be wetter and 49% fear an increase in the incidence of storms and floods. However almost 50% feel there is little or nothing they can do to prevent it, with only 10% stating they think they could do a lot.

**Chart 2.18: Attitudes to Climate Change**

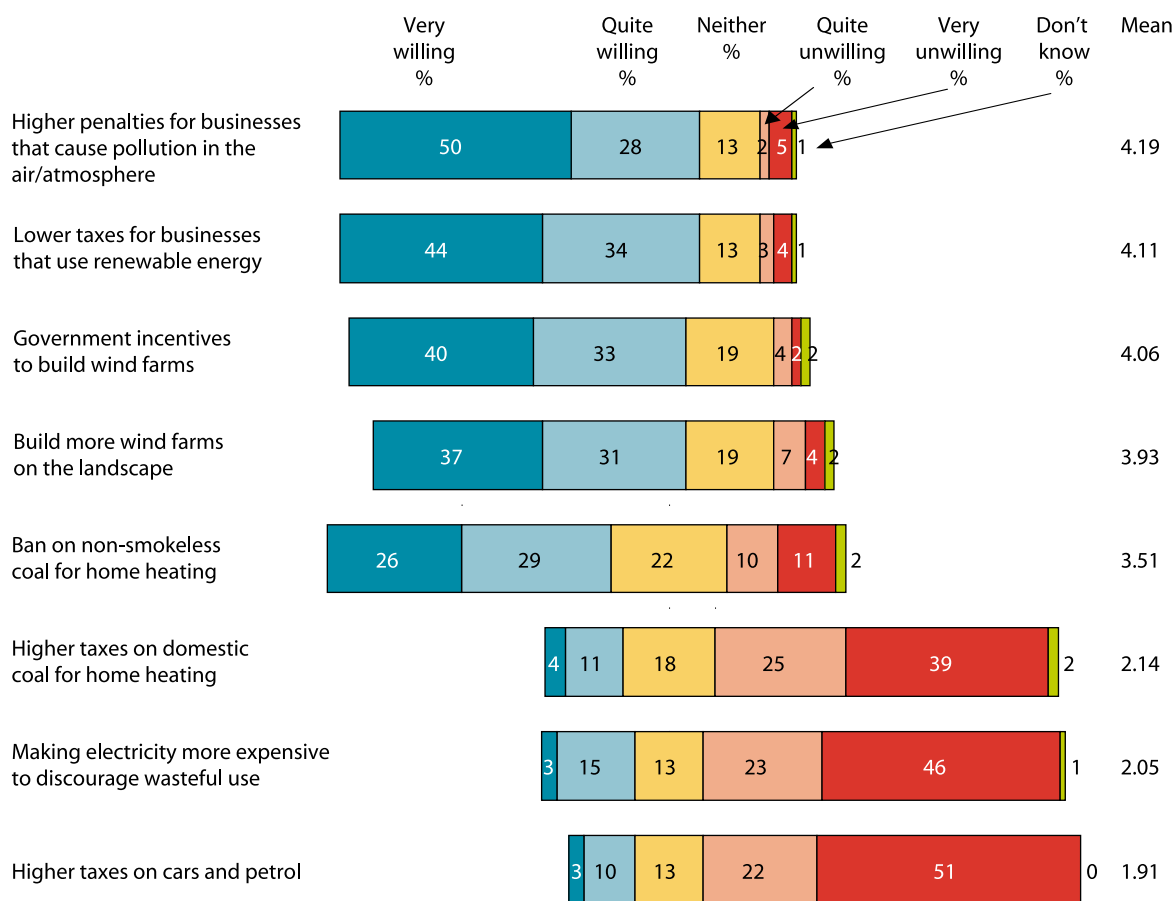
## Measures to Encourage Renewable Energy

Interviewees were asked to rate their willingness to support a range of policy measures to encourage renewable energy and/or discourage pollution (Chart 2.19).

The most popular of the possible measures were higher penalties for polluting businesses and lower taxes for businesses that are prepared to use renewable energy. Close behind these, however, were government incentives for wind farm development and the actual construction of more wind farms.

Other options are less popular: only 13% would support higher taxes on cars and petrol, while 18% would support more expensive electricity in order to discourage waste. Fiscal measures that directly affect consumers are predictably unpopular, with most being opposed to higher taxes on domestic fuel. Interestingly, the majority would support a ban on non-smokeless coal. The survey indicates the highest levels of support are for measures that affect businesses. As indicated above, most people are in favour of penalising or rewarding companies who create pollution or use renewable energy, respectively.

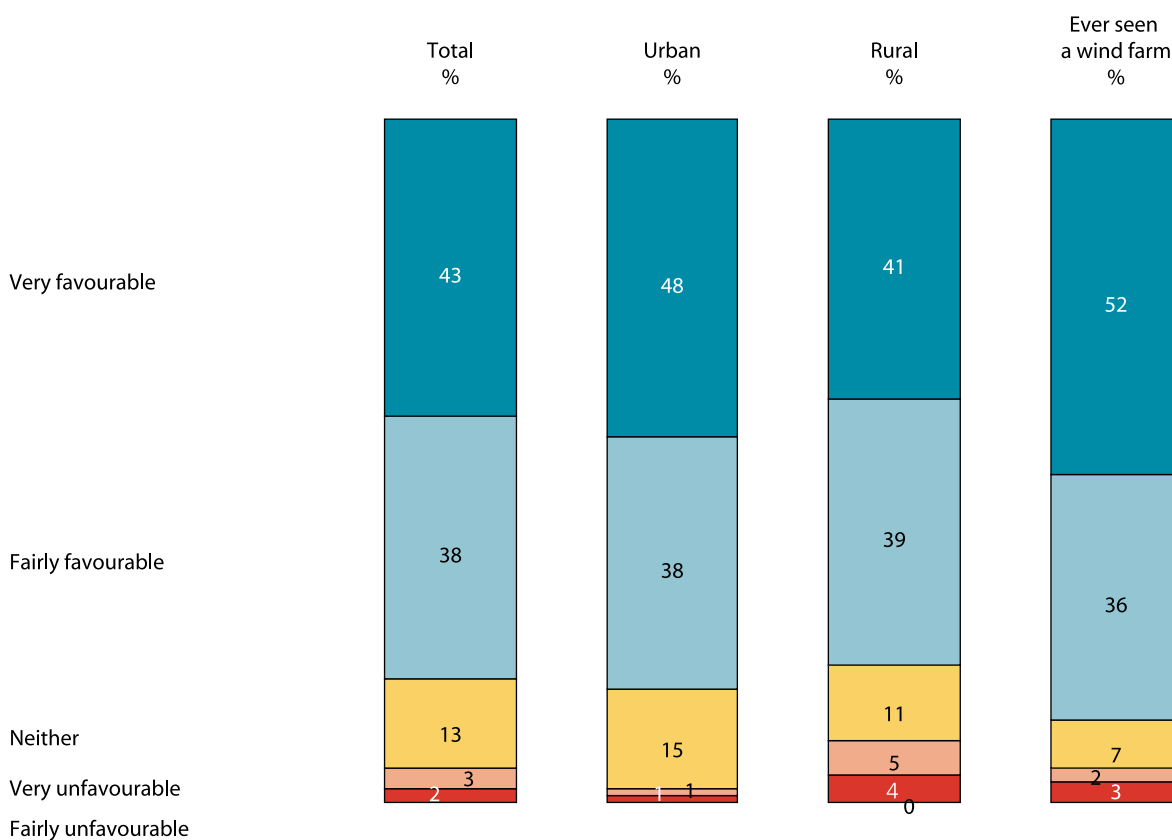
**Chart 2.19: Degree of Support for Promoting Renewable Energy**



## Overall Attitudes to the Construction of Wind Farms

As a final question in this national survey, respondents were asked about their overall disposition towards the construction of further wind farms in Ireland (Chart 2.20). Overall, 81% expressed themselves as being very or fairly favourably disposed towards further construction. It is again particularly encouraging that even more people (88%) are positively disposed towards further development if they have seen a wind farm previously.

**Chart 2.20: Overall Attitudes to the Construction of Wind Farms**



## General Public Survey — Summary Conclusions

Few doubt the efficacy and desirability of wind as a source of energy. Nevertheless, this positive 'green' image needs to be reinforced with messages that promote the economic benefits to Ireland of developing its wind industry.

This issue spans the spectrum of economic activity, from the creation of local employment to the enhancement of energy security and the reduction of imports at national level. The economic and financial interests for Ireland in its development should underwrite the 'feel-good factor' surrounding wind energy.

Overall, the survey results are reasonably encouraging for those interested in the development of wind farms. People express themselves as very positively disposed towards energy from wind farms, and they compare such developments favourably with other likely developments in their areas; few consider that they would be ready to campaign against a wind farm development, although of course this can change when specific proposals are advanced.

However, at the local and practical level, it is essential to educate people regarding the impact of wind farms on their localities and environment and on the landscape in general. About half of the people surveyed feel that wind farms potentially spoil the landscape, and one third 'just don't want one near them'.

More specifically, people will need to be reassured about the issue of noise, as this currently has some negative connotations for the technology. In general, people are unaware about the effects of wind farms on wildlife or their local areas. These issues will have to be addressed in order to foster more public support and minimise the NIMBY effect.

While a sizeable minority (43%) agreed with a statement that wind farms should not be built in areas of scenic beauty, this was qualified later on: just one in four felt that wind farms superimposed on highly scenic landscapes impacted negatively upon the view presented. This would seem to imply that initial prejudices regarding perceived impact of wind farms on scenic beauty are allayed when presented with an image of what it would look like in reality.

Nonetheless, it would be important to recognise people's legitimate concerns and to bear in mind that a significant minority may well feel strongly about any proposed development. From the survey it is clear that carefully considered wind farm planning and design will help to alleviate public concerns. The spatial extent of wind farms as well as the layout, spacing, height and profile of turbines, will all need to be designed in consideration of specific landscape characteristics in question. The survey suggests that a smaller number of larger turbines may be more acceptable. Surprisingly, there is little difference in attitudes towards developments on fertile farmland or on mountain moorland.

The realistic view that Irish people have of the effects of climate change should help in the long-term development of a wind energy policy. Wind power should be placed in the context of combating climate change and the detrimental effects of fossil fuels. People may be persuaded that any failure to develop sustainable wind energy will have far more serious environmental consequences than most concerns regarding the location or aesthetics of the wind farms themselves. However, it is also important to bear in mind that local concerns tend to impact more strongly on people's views than do global issues.

## Section Three

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### **Attitudes to Wind Farms and Wind Energy: Existing Wind Farm Catchment Areas**

Given that wind turbines and wind farms are a relatively new feature on the landscape and are largely confined to remote areas, it is only to be expected that the direct experience by the public of wind farms will be limited. Thus, while the attitude of the general public towards wind farm development is of obvious interest, the views of those living in close proximity to existing wind farms are of special relevance.

For this reason, the study also collected views on wind farm development from the following groups of people living within the vicinity of a wind farm

- *Homes in sight of a wind farm*
- *Homes within a 5km radius of a wind farm — not in sight*

This section of the report outlines the views of these groups, which are treated as a single group for the purposes of this study.

The key objectives of this part of the survey were to explore:

- *The perceived effect of a wind farm on the area*
- *The incidence and quality of consultation during the planning and construction phases*
- *The level of community involvement in the wind farm project*
- *Perceived levels of controversy surrounding the wind farm*
- *What, if any, disruption was caused by the wind farm*
- *Overall attitudes to the wind farm and to wind energy.*

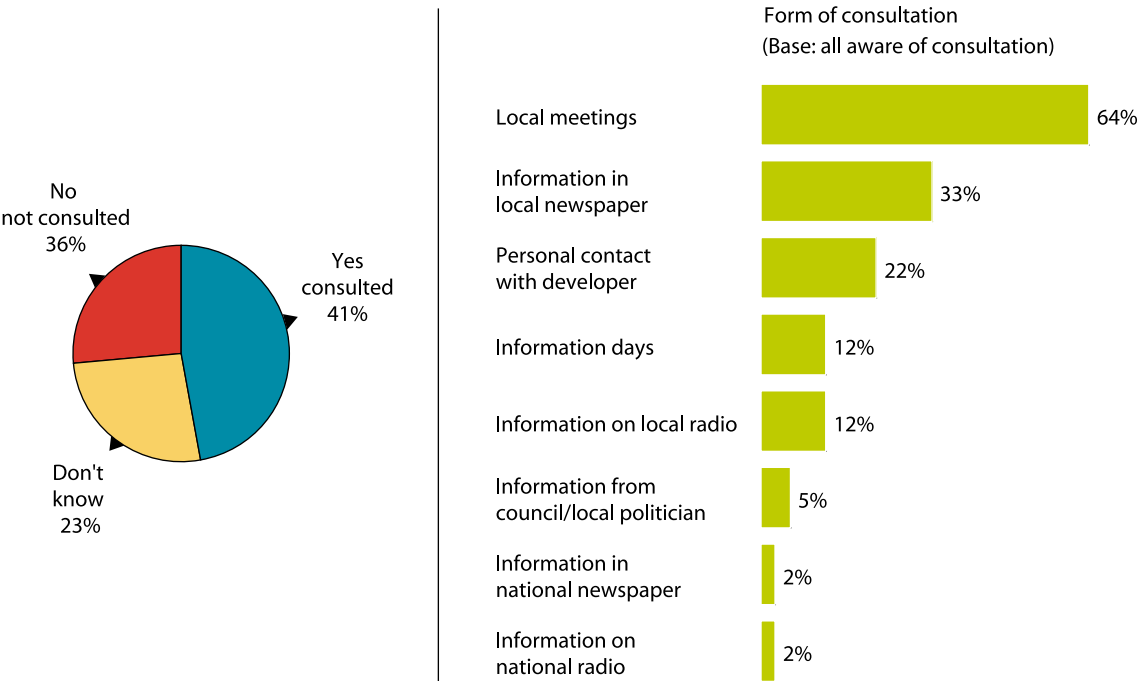
Further details of the methodology are provided in section one of this report (Background, Objectives, Methodology). However, it is worth repeating here that this element of the study involved face-to-face interviews with 200 people spread over 17 wind farm catchment areas. Sixty-five per cent of those interviewed were able to see the wind farm from their home.

## Community Involvement in the Project

Forty-one percent of interviewees said they had been consulted about the proposed development before it was built, compared to 23% who had not been consulted. Twenty-three per cent did not know whether they had been consulted or not (Chart 3.1).

Sixty-four per cent of those who were aware that consultation had taken place stated that it was by means of local meetings. Other frequently used methods were information in the local newspaper (33%), personal contact with the developer, information days organised by the developer, and information provided via local radio. Five per cent mentioned that they had received information from the local council or from a local politician.

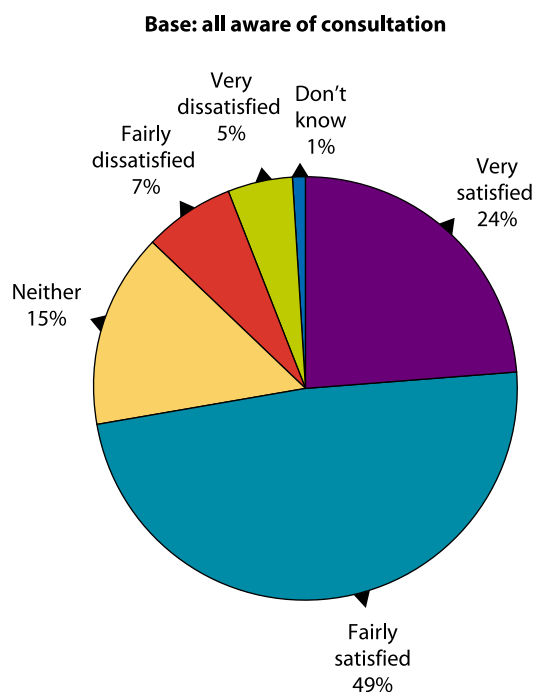
**Chart 3.1: Was the Local Community Consulted Before the Wind Farm was Built?**



Encouragingly, almost three quarters (73%) of those who recalled having been consulted felt satisfied with the process, while 12% felt fairly or very dissatisfied with it (Chart 3.2). This is somewhat surprising given the apparently low level of community involvement in the design or layout of the development (Chart 3.3). Only 8% of respondents felt that the community had been offered an opportunity to comment upon the design or layout, and only 2% were offered an opportunity to invest in the project. This reflects a lack of opportunity for direct involvement by the community in the development.

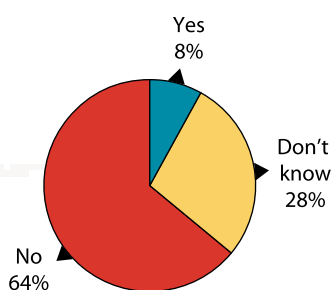
When asked whether they would be interested now in investing in the wind farm, 14% expressed some level of interest, with 5% expressing a high level of interest. While this percentage is small, it does reflect a desire on the part of a minority in the community to have a direct stake in the project.

**Chart 3.2: Satisfaction with Consultation**

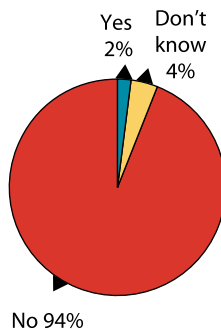


**Chart 3.3: Level of Community Involvement in the Wind Farm Project**

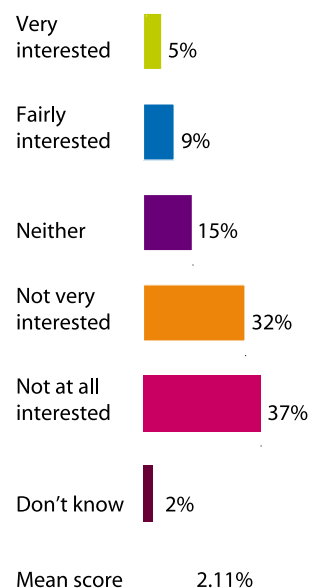
Was the community offered a chance to comment on the design/layout of the wind farm?



Were you offered the opportunity to invest in the wind farm project before it was built?



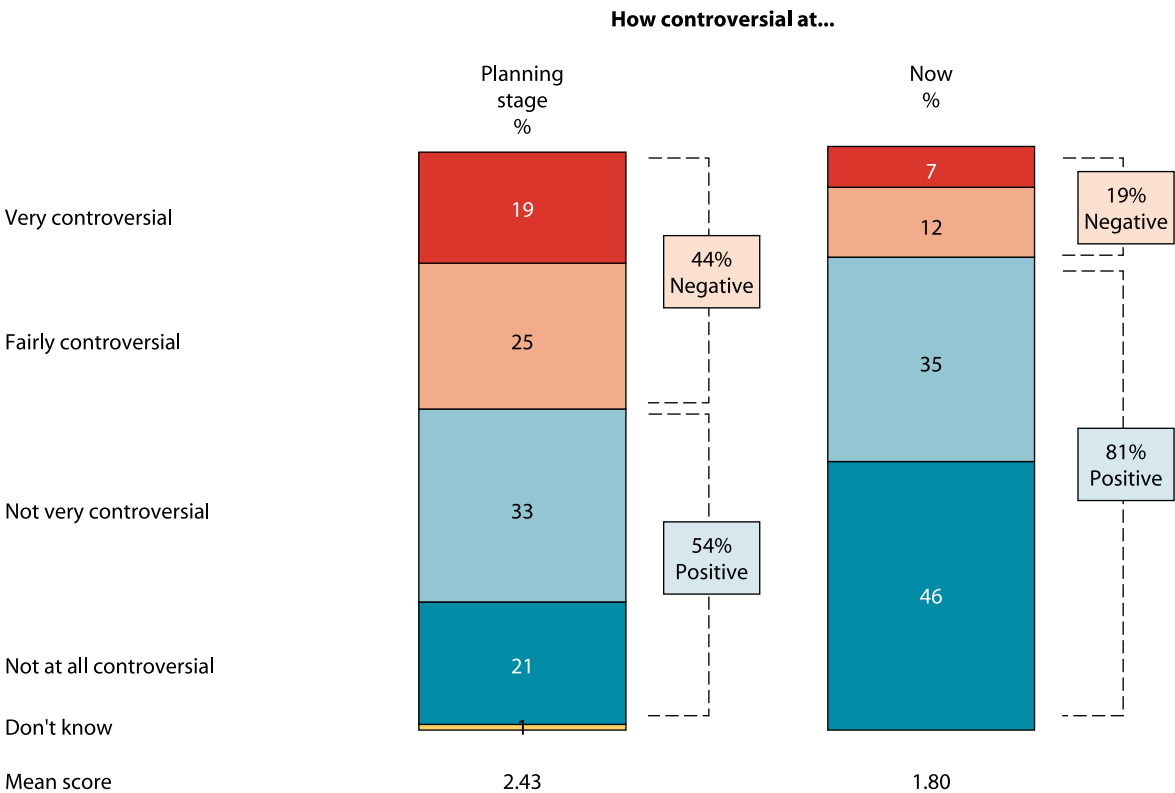
How interested would you be in investing in the wind farm now?



# Level of Controversy and Disruption Surrounding the Development

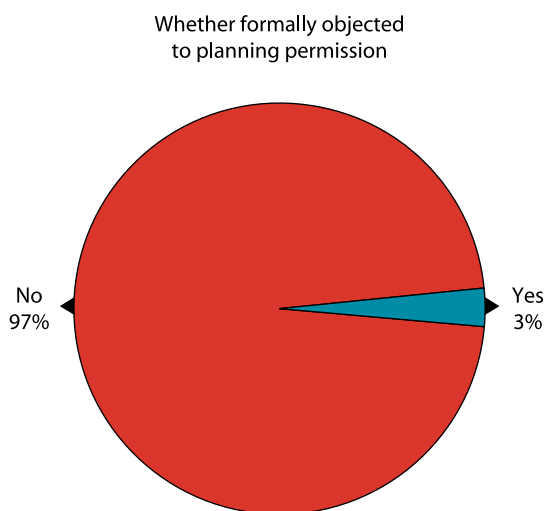
Interviewees were asked how controversial they felt the development was, both at the planning stage and now that the wind farm is operational (Chart 3.4). It is clear from the responses that at the planning stages the proposed development was quite controversial (negative), with opinions fairly evenly divided between those who felt that it was controversial (44%) and those who felt it was not (54%). As might be expected, perceived controversy reduced once the project was completed, with the percentage of those thinking the development is presently controversial dropping to 19%. This suggests that, when communities actually experience the wind farm in operation, it becomes much more accepted. However, it is generally the case that the level of controversy is highest when at the planning stages and that it drops when the development has been completed.

Chart 3.4: How Controversial was the Wind Farm?



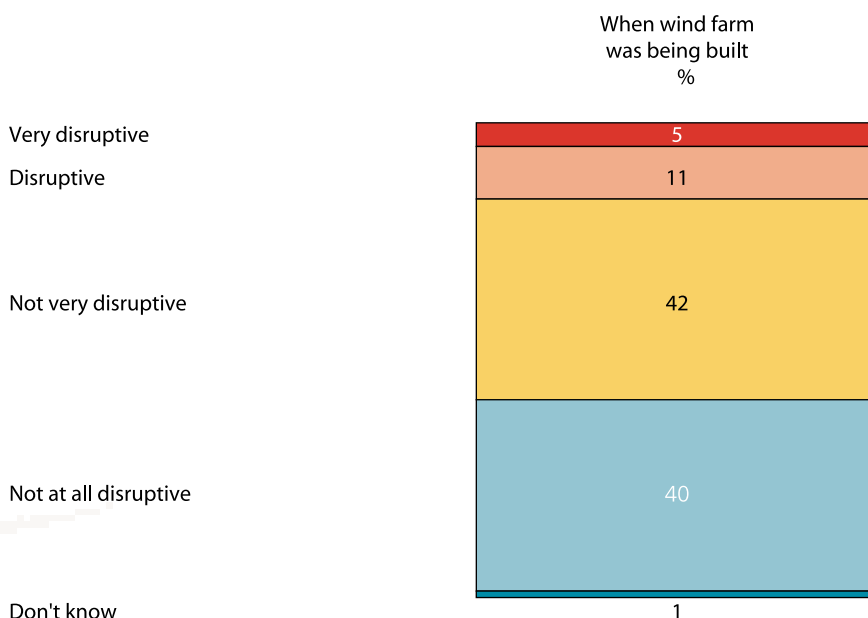
Set against the above findings, the results in Chart 3.5 may appear surprising: despite concerns expressed at the beginning of the process very few people, just 3%, go as far as lodging formal objections to the application for planning permission. However, this opposition may be quite vocal and may lead to the relatively high perception of controversy surrounding the proposal.

**Chart 3.5: Level of Objection to Planning Permission**



Only one in six (16%) of those interviewed felt that the construction work had been either disruptive or very disruptive.

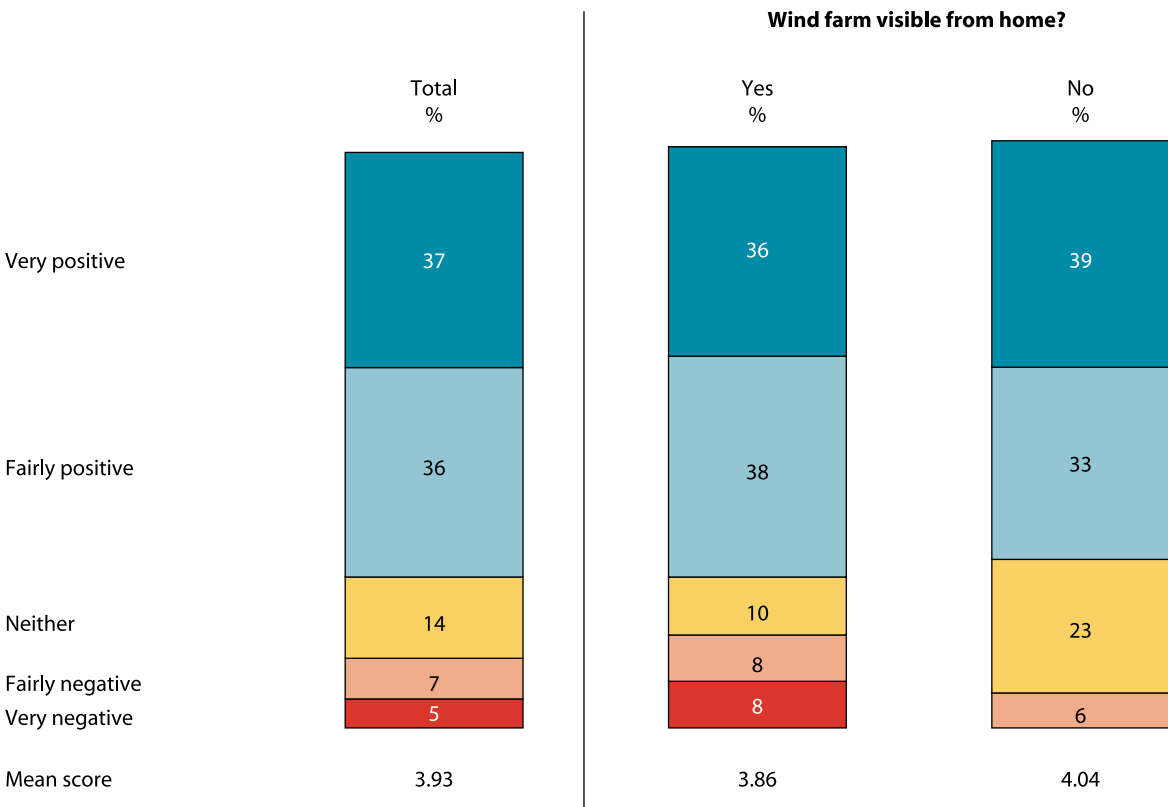
**Chart 3.6: Level of Disruption Caused in Area**



## Effect of the Wind Farm on the Local Area

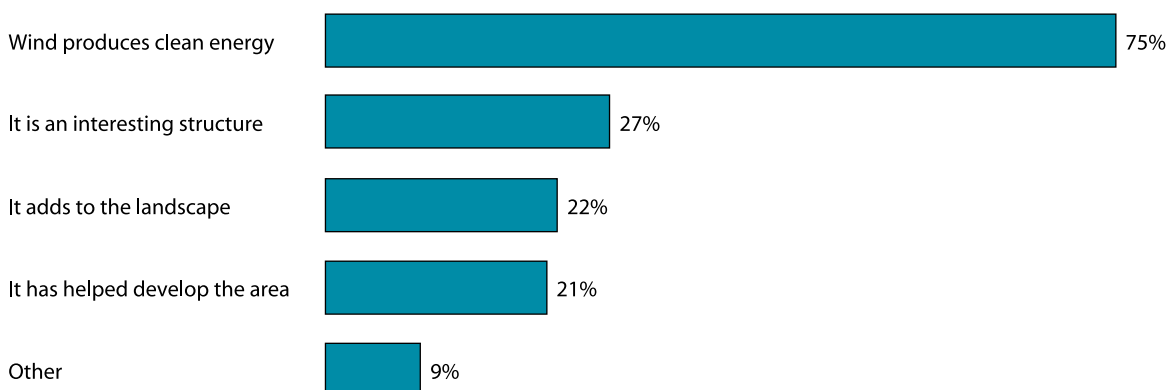
Interviewees were asked for their views on the effect of the wind farm development on their locality (Chart 3.7). Seventy-three per cent felt that the effect had been either fairly or very positive, while 12% felt the effect had been negative, and the balance of 14% felt it had been neither positive nor negative.

Chart 3.7: Effect of the Wind Farm on the Local Area

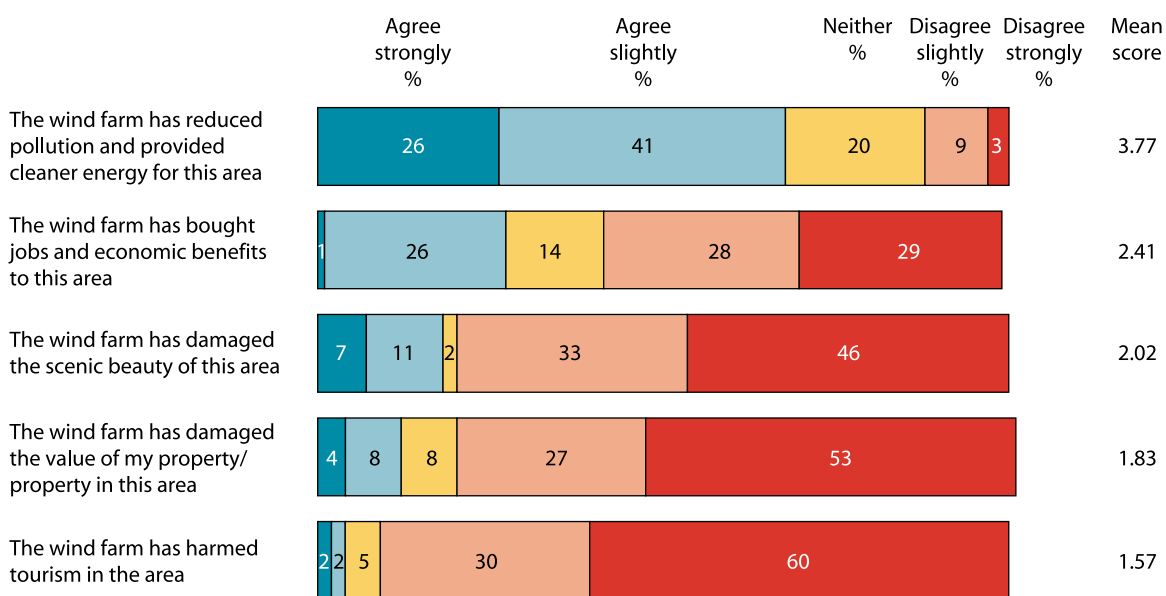


There was little difference between those living within sight of the wind farm and those not in sight of it, in relation to the percentages who felt the development was positive. However, those living in sight of the wind farm tended to have slightly more negative views, with fewer (10%) expressing a neutral view. Of those out of direct sight of the wind farm, on the other hand, 23% expressed neutral views on the impact, and significantly fewer had negative views. Thus, direct sight of the development appears to increase the perception of a negative effect; lack of direct sight of the development tends to increase the perception of a neutral effect.

All those who thought the wind farm had a positive impact were asked in what ways this was manifested (Chart 3.8). Interestingly, 75% of interviewees cited the fact that wind energy is clean as one of the factors; presumably this refers in the main to the view that the wind farm does not cause any local pollution, and associates the area with 'clean' energy. Just over a quarter of the interviewees felt that the wind farm provides an interesting focal point, and just over one fifth felt that it adds to the landscape and has helped to develop the area.

**Chart 3.8: How did the Wind Farm have a Positive Effect?**

Of great importance for future developments are the perceptions of the local community as to whether existing wind farms have impacted positively or negatively on the area. The results in Chart 3.9, therefore, are important and encouraging. There are strong perceptions that the wind farm has actually reduced pollution in the area by providing cleaner energy: in other words, the community links the 'green' image of wind power to a local benefit. Two out of three interviewees believed this, as compared with only one in eight who did not.

**Chart 3.9: Attitude to the Wind Farm in the Local Area**

There should perhaps be some cause for concern that over half of the interviewees (57%) did not feel that the development had brought local jobs and economic benefits, as against 27% who did. There is clearly little agreement on this; it may be that the responses to this question mirror fairly closely the extent to which the interviewees actually did or did not benefit in some way.

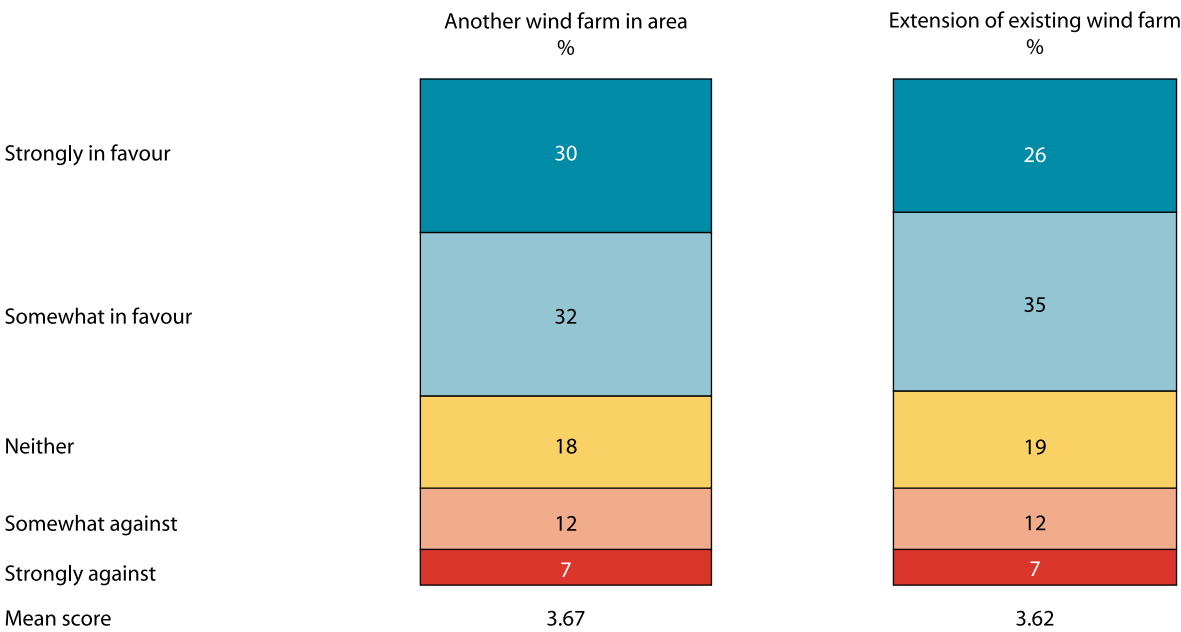
Much more positively, only 18% of the local community believe that the wind farm has been damaging to the area's scenic beauty, with 46% strongly believing that it has not had a negative impact, and a total of 79% disagreeing or strongly disagreeing that there had been a negative impact on the area's beauty. Given that the survey included those who are able to see the wind farm from their home, this is a very positive result. Similarly, only 12% felt that it had impacted negatively on the value of their property, while 80% did not. However, this result should not take away from the genuinely held views among a minority that the value of their property had been adversely affected.

Interviewees were also asked whether the development had harmed tourism in the area. Only 4% felt that it had, while nine out of ten felt that it had not; indeed, 60% of respondents felt strongly that it had not damaged tourism.

# Attitudes Towards Further Wind Farm Development

Lastly, interviewees were asked whether they would be in favour of further wind farm development in their area — whether as an extension of the existing wind farm or as a new development (Chart 3.10). Over 60% stated that they would be in favour of further development, and views were similar in relation to a new development or to an extension of the existing wind farm. Indeed, slightly more interviewees were strongly in favour of a new farm than of an extension to the existing one. Nineteen per cent were opposed to any further wind farm development in the area.

Chart 3.10: Favourability to More Wind Farms



## Survey of Existing Wind Farm Areas: Summary Conclusions

In general, the findings from this part of the study are favourable towards wind farms. Not only are people in the immediate vicinity of an existing wind farm positively disposed to the development; those living in direct sight of it are even more positively disposed towards it.

Although many in the community felt that the proposed development had been controversial at the planning stage, far fewer continued to think this after construction had been completed. This may have been helped by the low numbers who felt that the construction phase had been disruptive.

Although the level of consultation was clearly seen to be rather low, the great majority expressed themselves satisfied with it. However, a small percentage of those interviewed said they had lodged formal objections to the development.

There is evidence of a low perceived level of community involvement in the project, with few people stating they had been afforded a chance to comment on the design or layout of the wind farm, and very few being offered an opportunity to invest in it. A small number would welcome the opportunity to invest in it.

Perceptions of the impact of the development on the locality were generally positive, with some three quarters of interviewees believing it had impacted positively — although only a quarter of those interviewed felt that it had brought jobs or economic benefits to the area.

Perhaps the acid test is whether the community would welcome either an extension to the existing wind farm or a second wind farm in the locality. Over 60% would be in favour of either, with more people strongly favouring a new wind farm than an extension to the existing one.

## Section Four

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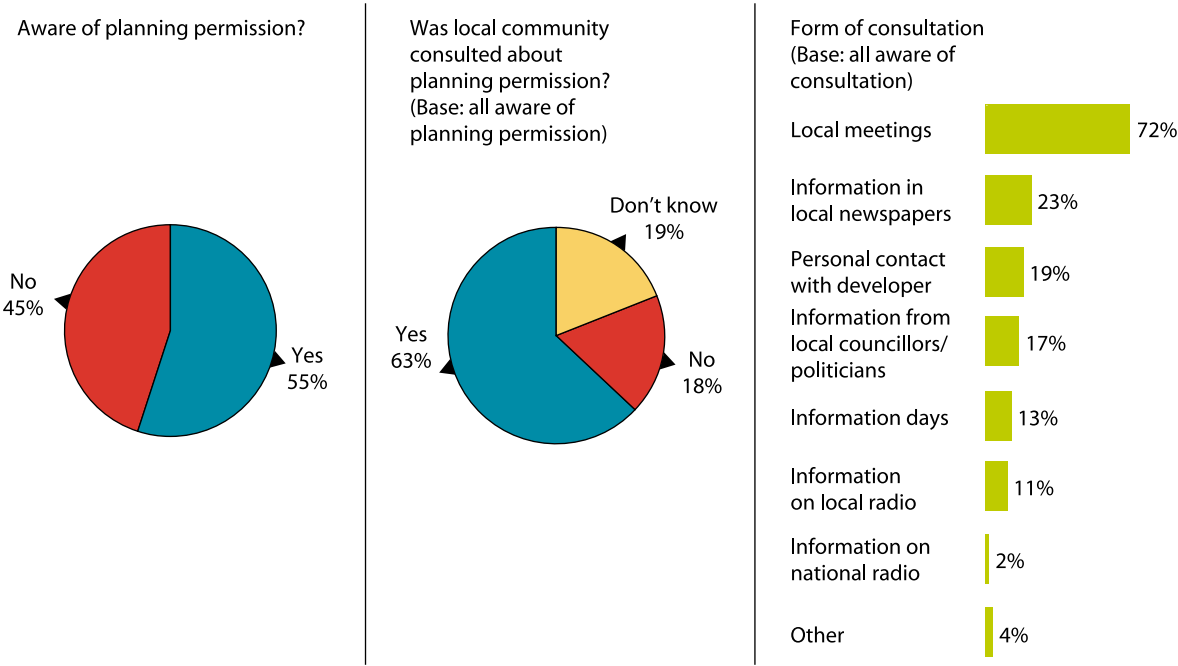
### **Attitudes to Wind Farms and Wind Energy: Wind Farm Planning Permission Areas**

The survey also covered areas where planning permission had already been granted for a wind farm development, but where the development itself had not yet taken place. For this part of the survey, 150 people living in such areas were interviewed. The questions asked mirrored the survey of those living in proximity to an existing wind farm, where relevant. Some of the questions from the general public survey were also included.

# Community Involvement in the Proposed Project

One of the striking findings of this part of the study was that only just over half — 55% — of those interviewed were aware that planning permission had been sought and granted for a wind farm in the community (Chart 4.1). This seems to indicate some flaw in the process by which the local community are informed of the proposed development.

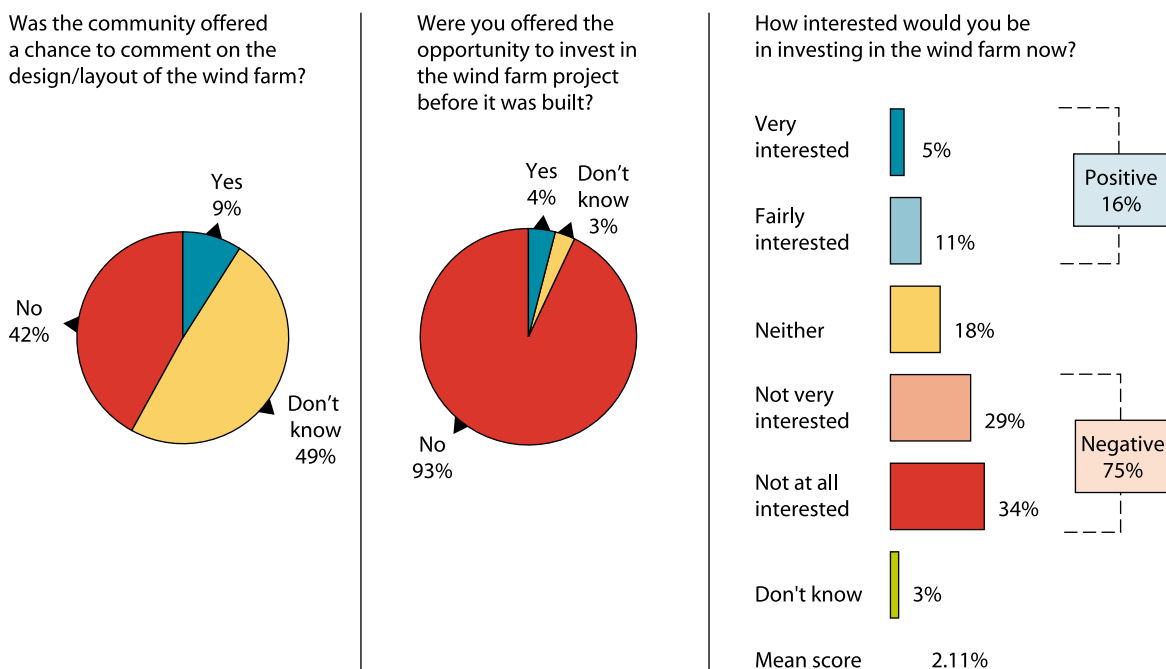
Chart 4.1: Planning Permission for the Wind Farm in the Area



Of those who were aware of the planning permission, almost two thirds stated that the local community had been consulted, and a further 19% did not know. The forms of consultation used were very similar to those cited in the survey of existing wind farm areas: local meetings, use of local newspapers and personal contact with the developer top the list, with local meetings dominating.

Nine per cent of the interviewees (see Chart 4.2) stated that they had been afforded an opportunity to comment on the design and layout of the proposed wind farm, compared with 8% in the study of existing wind farm areas. The percentage of "don't know" responses to this question was 49%, compared with only 28% for the existing wind farms.

**Chart 4.2: Community Involvement in the Wind Farm Project**

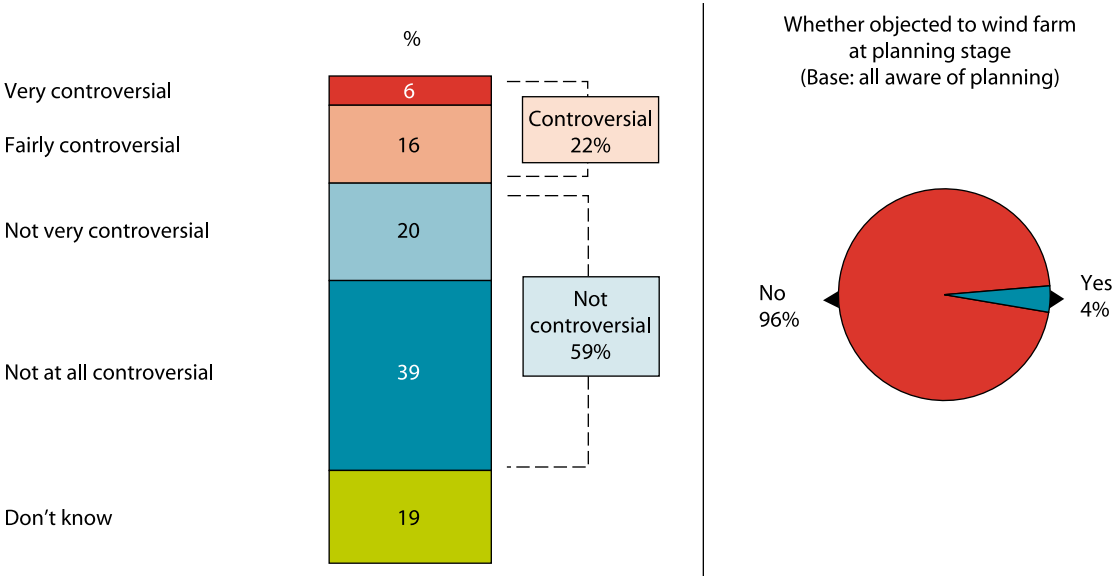


Again mirroring the experience of those living close to an existing wind farm, the interviewees in the planning permission areas generally believed that they had not been offered an opportunity to invest in the project (with only 4% stating that they had been offered such an opportunity), and a similar percentage (16%) stating that they would have an interest in investing in it. The 5% who would be 'very interested' in investing is the same percentage as in the survey of existing wind farms.

# Level of Controversy Surrounding the Proposed Development

It is of interest that far fewer interviewees in the planning permission areas believed that the proposed development was controversial than was the case in the existing wind farm survey. Only 22% felt that it was controversial (Chart 4.3), compared with 44% in the existing wind farm areas. This is somewhat surprising, as it might be expected that the perceived level of controversy would be higher during the planning permission process. It may also reflect a growing understanding of the issues surrounding wind energy. Those who did not know whether or not it was controversial — 19% — represent a much larger group than in the existing wind farm survey (1% don't know), so that the percentage who feel it is not controversial (59%) is similar to the existing wind farm group (54%).

Chart 4.3: How Controversial is the Wind Farm?



Once again, only a small minority (4%) had actually lodged an objection to the proposed development at the planning permission stage.

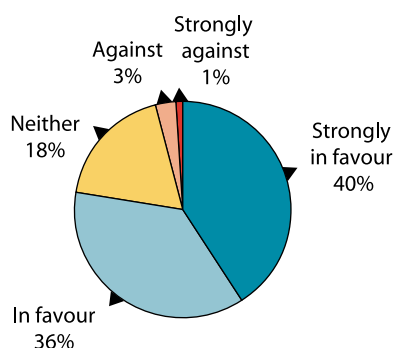
## Attitudes Towards the Proposed Wind Farm

Three quarters of the interviewees expressed themselves in favour of the wind farm being built in their area, with 40% being strongly in favour (Chart 4.4). Four per cent were against the development, with 1% being strongly opposed; it seems likely that these were the people who had lodged formal objections to planning permission being granted.

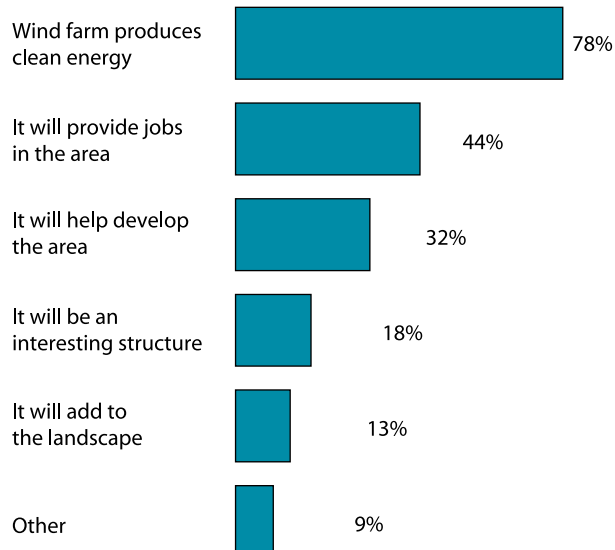
Those who had expressed themselves in favour were asked for their reasons. Seventy-eight per cent cited the fact that wind energy is clean as being a reason in favour; 44% felt that it would provide local jobs; and 32% that it would help to develop the area. Thirteen per cent felt that the development would add to the landscape.

**Chart 4.4: Favourability to the Proposed Wind Farm**

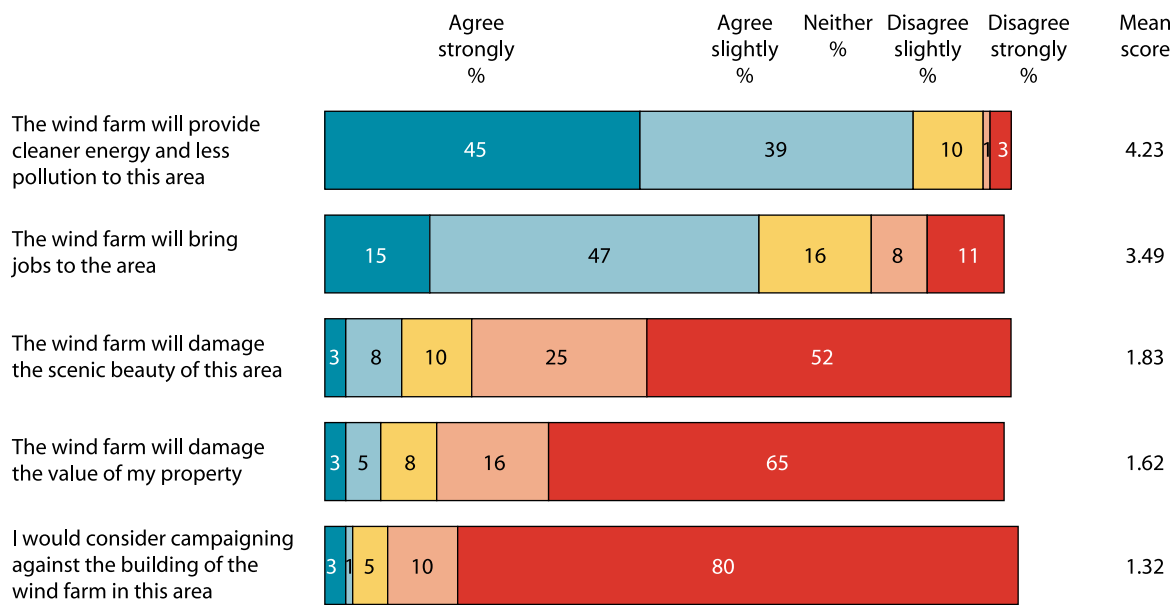
To what extent would you say you are in favour or against the building of a wind farm in this area



Reasons for being in favour of wind farm being built (Base: all in favour)



All of the interviewees were asked to agree or disagree with a set of statements, four of which were identical to those used in the catchment area survey. The responses (Chart 4.5) are generally optimistic: 84% felt that it would contribute in terms of less pollution, and 62% believed it would bring jobs to the area. In contrast, only 11% believed it would damage the scenic beauty of the area; 8% felt it would damage the value of their property; and 4% said they would consider campaigning against the building of the wind farm in their area.

**Chart 4.5: Attitude to the Wind Farm in the Local Area**

## Survey of Planning Permission Areas: Summary Conclusions

The results for the areas in which planning permission for a wind farm has been granted (but the development itself has not yet taken place) are similar to those for the areas where there is an existing wind farm.

In this case, rather more of those interviewed said that the community had been consulted about the planning permission. However, once again few felt they had had an opportunity to comment on the design or layout, or to invest in the project. As with the existing wind farm areas, a small number would welcome the opportunity to invest in the project.

Despite any shortcomings in the process of consultation and involvement, few people state that they are opposed to the development taking place. This group may well be important, however, since once again there is a small but important grouping who lodged formal objections to the planning permission application and would consider campaigning against the development proceeding.

People in these communities show themselves to be more optimistic about the expected impact of the development than those living with an existing wind farm. In particular, there is much greater optimism concerning its impact on local jobs and economic benefits.

## Section Five

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### Comparison of Attitudes: General Public; Areas with Existing Wind Farms; Areas with Planning Permission

In addition to the results reported in the previous three sections, interviewees in all three surveys were asked some identical questions concerning their attitudes towards wind farm developments. These comparative results are shown in Table 5.1, in which the mean scores for the three survey groups are presented.

The principal points of similarity and difference between the three groups include the following:

- *Fewer people in the catchment areas (wind farms already exist or planning permission has been granted for wind farms) than in the national survey believe that wind farms disturb the natural habitats of birds and animals or are an eyesore on the landscape. Perhaps this is because people in the specific areas are able to judge this in relation to the actual site for the wind farm. Similarly, fewer people in the specific areas see wind as an unreliable source of energy.*
- *Fewer people in the existing wind farm catchment areas believe that an Irish wind industry will create jobs locally compared to those living in the planning permission catchment areas. Their responses may be coloured by their perceptions that the development has not, or will not, lead to jobs locally (see Charts 3.8 and 4.4).*
- *Those living in the areas where planning permission has been granted appear to be more optimistic about wind energy than either the general public or those living with existing wind farms. All groups surveyed see wind power as an effective energy source; believe that wind farms can make a significant contribution to Ireland's energy requirements; and see wind farms as a positive addition to the landscape.*

**Table 5.1: Comparison of Mean Scores: National Survey Versus***(a) those living in proximity of existing wind farm;**(b) those in areas where planning permission has been granted.***Mean scores <sup>1</sup> (scale 1 – disagree strongly to 5 – agree strongly)**

Statement	National survey	Catchment areas	
		Existing wind farm	Planning permission
'Wind farms don't make much noise'	3.26	3.25	3.32
'Wind farms disturb natural habitats, birds and animals'	3.15	<b>2.86</b>	<b>2.75</b>
'Wind farms are an eyesore on the landscape'	2.97	<b>2.13</b>	<b>2.16</b>
'Wind is an unreliable source of energy'	2.87	<b>2.38</b>	<b>2.25</b>
'Wind farms are a non-polluting source of energy'	4.36	4.42	4.31
'Wind farms can make a significant contribution to Ireland's energy requirements'	4.24	4.15	<b>4.40</b>
'Wind power is an effective source of energy'	4.19	4.22	<b>4.34</b>
'A wind industry in Ireland will create many jobs'	3.67	<b>3.10</b>	<b>3.43</b>
'Wind farms a positive addition to the landscape'	3.47	3.57	<b>3.62</b>

<sup>1</sup> Mean scores showing a statistically significant difference from the national survey scores are shown in '**bold**'.

It is also of interest to compare the responses of people living with existing wind farms with people in planning permission areas to the statements previously reported in Charts 3.8 and 4.5 (note that the questions asked of people in the planning permission areas refer to their beliefs about the future wind farm, while those asked in the existing catchment areas responded on the basis of their actual experience). Table 5.2 below compares the percentages of those in agreement with each of the statements.

As previously reported, the results are fairly positive towards wind farms. Again, however, those living in areas where planning permission has been granted appear to be significantly more optimistic about the impact of wind farm developments; this is the case in respect of all four statements. The difference between perceptions of the local benefit in terms of job creation and economic development are striking. Experience of the actual development appears to reduce people's beliefs in the local economic benefits of the wind farm.

**Table 5.2: Comparison of Views Concerning Local Impact of Wind Farms***(a) those living in proximity of existing wind farm;**(b) those in areas where planning permission has been granted.***Percentage of Respondents in Agreement ('agree strongly' plus 'agree slightly')**

Statement	(a) Existing wind farm	(b) Planning permission
'The wind farm has provided (will provide) cleaner energy and less pollution to this area'	67%	84%
'The wind farm has brought (will bring) jobs and economic benefits to the area'	27%	62%
'The wind farm has damaged (will damage) the scenic beauty of this area'	18%	11%
'The wind farm has damaged (will damage) the value of my property'	12%	8%

# Discussion and Conclusions

Overall, the results of this research should provide a valuable insight for decision makers, planners, local community groups and developers alike as to how people feel about the development of wind farms in Ireland. There would appear to be a high level of support among the general public for the development of renewable resources, and support for wind power seems to be high. This is true for the general public and for people living in the vicinity of wind farm developments. Among the general public, over 80% believe wind energy to be a good thing. This should represent a positive background against which to plan for further development.

## Discussion

1. There appears to be a high level of support among the general public for the construction of more wind farms in Ireland. Two thirds of Irish adults are favourably disposed to having a wind farm built in their locality. Encouragingly, this is mirrored within the local communities where there is either an existing wind farm or planning permission has been granted for one.
2. A large majority of the general public believe that wind farm developments do not impact negatively on the scenic beauty of an area. Among the general public, this is the case irrespective of the type of landscape. Although coastal, mountain moorland and fertile farmland landscapes are all perceived to be more beautiful than either bogland or urban landscapes, perceptions of the effect of a wind farm on any of these landscape types are more or less uniformly positive. Again, the positive evaluation of the appearance of wind farms and their effects on the landscape is reflected in the responses of those living close to a wind development: few of those living close to a wind farm feel that it has damaged the scenic beauty of the landscape.
3. Equally, few of those living in proximity either to an existing wind farm or one for which permission has been granted believe that the development damages the locality, either in terms of damage to tourism potential or to wildlife. This may be because it adds interest to the area, associates the area with clean, green energy, or presents the area as progressive and sustainable.
4. However it is notable that those living in areas where planning permission has been granted (but the development has not yet taken place) appear to be more optimistic about the impact of the proposed wind farm than is the case for people living close to an existing wind farm. In particular, it would seem that people's expectations in terms of job creation and economic benefits to the community are sometimes not realised. This may be because people's expectations are unrealistically high at the proposal stage, or because local people are insufficiently involved in the actual development, construction and subsequent maintenance activity.

“While the vast majority of people in the local community appear to have supported the development of a wind farm, a small percentage expressed themselves as being very much opposed to it.”

5. There is something of a contradiction in the results concerning local consultation. On the one hand, a sizeable percentage of the community reported that they had not been consulted. On the other hand, there appears to be a quite high level of satisfaction with the consultation process. A number of the more detailed findings may shed some further light on this:

- *A significant number of the channels for communicating with the local community would appear to be one-way: information presented in newspapers, on local radio, and so on. In these cases, it would seem to be information provision rather than genuine opportunity for consultation. It is encouraging, though, that local meetings were also employed, as these would allow for much more active two-way communication and genuine consultation.*
- *Relatively few people in the local community felt they had any real say in the design or layout of the development. This is a pity, considering that the public have an opinion about the size and design of wind farms in different landscapes.*
- *Very few people reported that they had been given an opportunity to invest in the development, even though a small minority would welcome such an opportunity.*
- *This would seem to suggest that the level of consultation and involvement of local communities could be greater.*

6. While the vast majority of people in the local community appear to have supported the development of a wind farm, a small percentage (both in areas with existing wind farms and in areas where planning permission has been granted) expressed themselves as being very much opposed to it. A minority of a similar size reported having lodged formal objections to the planning permission application, and it may be assumed that these are the same people who find the wind farm objectionable.

While the numbers here are small, it may be expected that this small minority hold strong and genuinely felt opinions in opposition to the development. It is therefore important to do everything possible to consult with these groups about local issues. In some cases they could assist in shaping plans so that they take account of genuine concerns in the community.

7. However, the overwhelming indication from this study is that wind energy enjoys great support and, more specifically, that the development of wind farms is supported and welcomed. The single most powerful indicator of this is to be found among those living in proximity to an existing wind farm: over 60% would be in favour of a second wind farm or an extension of the existing one. This represents a strong vote in favour of wind farm developments — especially important since it is voiced by those who know from direct experience about the impact of such developments on their communities.

# Discussion and Conclusions cont.

## Conclusions

1. The principal conclusion of this major study of attitudes to wind farms in Ireland is a positive one — that those involved in planning and developing wind farms should expect that the general attitude of the public will be favourable. This is helped by the generally positive view of the public towards renewable energy, and in particular towards wind energy: wind energy is seen as a 'good thing'. Furthermore, people living in proximity to a wind farm also hold these positive attitudes. It is encouraging that those among the general public who have actually seen a wind farm are even more positively disposed towards them than those who have not yet seen one. Even more encouraging is the finding that those who live within sight of an existing wind farm express positive views about it.
2. The survey reveals a high level of awareness of the climate change issue and a realistic view of how it may affect Ireland. This includes an understanding of the possible negative effects of climate change on the locality. Such an understanding may provide a useful context for the promotion of new wind farm developments in Ireland. However, it is also worth bearing in mind that most people don't feel they can play a part in preventing climate change.
3. Landscape type does not seem to affect very greatly the perceptions of the public as to the effect of a wind farm on scenic beauty — although this should not be taken as an indication that people will accept wind farm developments anywhere. Careful planning and design of wind farms in response to contextual landscape characteristics is essential in order to optimise the aesthetic effect and ensure the best possible contribution to local identity. Details as to how wind farms can be planned and designed in response to the character of local landscapes will be detailed in the forthcoming Wind Farm Guidelines to be issued by the Department of the Environment, Heritage and Local Government.
4. However, the public have definite preferences when it comes to the number of wind farms and their spatial extent. There is a preference for smaller wind farms (comprising less than 25 turbines), even if this means having more than one wind farm in the locality. However, this finding should by no means result in a capping of turbines in any one development to ten or thereabouts, because there will often be locations where the scale of the local landscape can easily cater for large schemes if they are carefully designed to relate to local characteristics. The message from the public is that greater care and consideration needs to be given by developers and decision makers alike when dealing with what might be regarded as a large wind farm.
5. The economic benefits of clean energy production, at both the local and national level, should be emphasised in addition to the clean energy image of wind power.
6. It is most encouraging that there is very little opposition for reasons of scenic beauty, tourism and property values. The 'NIMBY' effect appears not to be a major factor in the wind farm catchment areas; indeed the positive effects of the wind farms are strongly endorsed by the local communities.
7. Despite a strong majority in support of wind farm developments, there is a small group of people who do not support them, and it seems clear that this group holds strong views and may either lodge formal objections to the development or consider campaigning against it. Presumably some of these are simply opposed to such developments out of principle, and it may be impossible to alter these views. However, many will have genuine concerns that could be taken into account at the planning and design stages. Where such people have good local knowledge, there may well be constructive ideas that could contribute towards a successful development.
8. There is evidence that a small number of people in the local community would welcome the opportunity to invest in the wind farm. This is understandable, and perhaps more people should be afforded an opportunity to participate in an important local business.

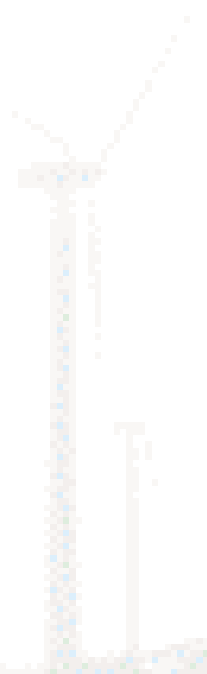
9. It is worth noting that the expectations of the local community in terms of jobs and economic benefits are not always realised. If the reason for this is that expectations were unrealistic in the first place, then care should be taken to correct these views. In any case, it would clearly be important to consider the ways in which the local community could benefit economically from the development.
10. Given the positive views among those living close to an existing wind farm, there could be considerable benefit to be gained from introducing those in future wind farm areas to those already living with a wind farm. This should be considered in the early stages of planning for a new wind farm in a new location.

## Concluding Note

Based on the results of this detailed study of attitudes, it is clear that there is widespread goodwill towards wind farm developments. The positive attitudes among local communities where a wind farm is already situated should provide encouragement.

However, this should not lead to complacency. It is equally clear that there is a minority who may be strongly opposed to the development, with genuinely held reasons underlying this opposition. Although they may be small in numbers, careful planning of the consultation process is clearly vital to success. Above all, building-in opportunities for greater community involvement may well make the difference between success and failure of a proposal. Careful consideration of the messages in the report should increase the probability of success.

“  
The positive attitudes among local communities where a wind farm is already situated should provide encouragement.  
”



# Appendix

## Photomontages Used in Public Attitudes Survey

### Coastal



How scenically beautiful is this landscape?

1	2	3	4	5
Not at all Scenically Beautiful			Very High Scenic Beauty	

### Mountain Moorland



How scenically beautiful is this landscape?

1	2	3	4	5
Not at all Scenically Beautiful			Very High Scenic Beauty	

### Fertile Farmland



How scenically beautiful is this landscape?

1	2	3	4	5
Not at all Scenically Beautiful			Very High Scenic Beauty	

### Urban Industrial



How scenically beautiful is this landscape?

1	2	3	4	5
Not at all Scenically Beautiful			Very High Scenic Beauty	

**Bogland**



How scenically beautiful is this landscape?

1	2	3	4	5
Not at all Scenically Beautiful			Very High Scenic Beauty	

**Coastal with Wind Farm**



What is the impact of the wind turbines upon the scenic beauty of this landscape?

Negative			Positive	
Very	Fairly	Neutral	Fairly	Very

**Mountain Moorland with Wind Farm**



What is the impact of the wind turbines upon the scenic beauty of this landscape?

Negative			Positive	
Very	Fairly	Neutral	Fairly	Very

**Fertile Farmland with Wind Farm**



What is the impact of the wind turbines upon the scenic beauty of this landscape?

Negative			Positive	
Very	Fairly	Neutral	Fairly	Very

### Urban Industrial with Wind Farm Coastal



What is the impact of the wind turbines upon the scenic beauty of this landscape?

Negative			Positive	
Very	Fairly	Neutral	Fairly	Very

### Bogland with Wind Farm



What is the impact of the wind turbines upon the scenic beauty of this landscape?

Negative			Positive	
Very	Fairly	Neutral	Fairly	Very

### Mountain Moorland with Five Turbines



What is the impact of the wind turbines upon the scenic beauty of this landscape?

Negative			Positive	
Very	Fairly	Neutral	Fairly	Very

### Mountain Moorland with Twenty-five Turbines



What is the impact of the wind turbines upon the scenic beauty of this landscape?

Negative			Positive	
Very	Fairly	Neutral	Fairly	Very

Mountain Moorland with Two Groups of Ten Turbines



What is the impact of the wind turbines upon the scenic beauty of this landscape?

Negative			Positive		
←					→
Very	Fairly	Neutral	Fairly	Very	

Fertile Farmland with Two Groups of Ten Turbines



What is the impact of the wind turbines upon the scenic beauty of this landscape?

Negative			Positive		
←					→
Very	Fairly	Neutral	Fairly	Very	

Fertile Farmland with Five Turbines



What is the impact of the wind turbines upon the scenic beauty of this landscape?

Negative			Positive		
←					→
Very	Fairly	Neutral	Fairly	Very	

Fertile Farmland with Twenty-five Turbines



What is the impact of the wind turbines upon the scenic beauty of this landscape?

Negative			Positive		
←					→
Very	Fairly	Neutral	Fairly	Very	

### ***Fertile Farmland: Large versus Small Turbines***



Both of these wind farms generate the same amount of electricity. The turbines in the left-hand picture are smaller and so a greater number are required. The turbines on the right-hand picture are larger and so fewer are required.

Which one do you prefer?

### ***Mountain Moorland: Large versus Small Turbines***



Both of these wind farms generate the same amount of electricity. The turbines in the left-hand picture are smaller and so a greater number are required. The turbines on the right-hand picture are larger and so fewer are required.

Which one do you prefer?

*Images above shown at 45% of the actual size of those used in the survey*



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