



SCOTTISH EXECUTIVE

Public Attitudes to Windfarms

General



**PUBLIC ATTITUDES TO WINDFARMS
A SURVEY OF LOCAL RESIDENTS IN SCOTLAND**

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MORI Scotland**

**Scottish Executive Social Research
2003**

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ACKNOWLEDGEMENTS

The authors would like to register their thanks to the team of interviewers at MORI Telephone Surveys in Edinburgh, who worked so hard to gain the interviews, and to the 1,810 respondents themselves for giving us their time.

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EXECUTIVE SUMMARY

Background and objectives

MORI Scotland was commissioned by the Scottish Executive to undertake a study examining the attitudes of people living close to windfarms in Scotland. It was decided that the research should focus on the larger sites, i.e., those windfarms with nine or more turbines of which there were ten operational in Scotland at the end of 2002.

The sample was structured in a way that not only allowed separate analysis by windfarm, but also by three zones surrounding the windfarms – up to 5 kilometres, 5-10 kilometres, and 10-20 kilometres. The ten windfarms, ranging in size (number of turbines) were as follows:

Windfarm	Number of turbines
Beinn an Tuirc	46
Windy Standard	36
Novar	34
Hagshaw Hill	26
Dun Law	26
Bowbeat Hill	24
Harehill	20
Tangy	15
Beinn Ghlas	14
Deucherin Hill	9

A total of 1,810 interviews were conducted by telephone between 27th February and 18th March 2003.

Survey Results

- People living close to windfarms (within 20 km) like the areas they live in, mentioning the peacefulness (28%), scenery (26%), rural isolation (23%) and friendly people (20%) as particular strengths. When asked to say what the shortcomings are, most commonly mentioned are a lack of amenities (20%), poor public transport (18%), and lack of jobs (8%). Just five people (0.3%) spontaneously mention windfarms as a negative aspect of their area.
- Three times the number of residents say that their local windfarm has had a broadly positive impact on the area (20%) than say that it has had a negative impact (7%). Most (73%) feel that it has had neither a positive nor negative impact, or expressed no opinion.
- People who lived in their homes before the site was developed say that, in advance of the windfarm development, they thought that problems might be caused by its impact on the landscape (27%), traffic during construction (19%) and noise during construction (15%). However, only 12% say the landscape has been spoiled, 6% say there were problems with additional traffic, and 4% say there was noise or disturbance from traffic during construction.

- There is substantial support for the idea of enlarging existing local windfarm sites, particularly if the increase in the number of turbines involves the addition of not more than 50% of the existing number. A majority (54%) would support an expansion of their local site by half the number of turbines again, while one in ten is opposed (9%). Support drops somewhat if the proposal is to double the number of turbines. In this case, four in ten would be in favour (42%) and one in five (21%) would be opposed.
- People living closest to the windfarms tend to be most positive about them (44% of those living within 5km say the windfarm has had a positive impact, compared with 16% of those living 10-20km away). They are also most supportive of expansion of the sites (65% of those in the 5km zone support 50% expansion, compared with 53% of those in the 10-20km zone).
- Similarly, those who most frequently see the windfarms in their day-to-day lives tend to be most favourable towards them (33% of those who see the turbines all the time or frequently say the windfarms have had a positive impact on the area, while 18% of those who only see them occasionally say the same).
- While many say that they feel that nuclear, coal and oil generation should be reduced, clear majorities favour increasing the proportion of electricity generated through wave (69%) and wind energy (82%). Although around a third say they do not know what the Scottish Executive's policy is regarding these methods of electricity generation, the most common views are that the use of wind energy is to be increased (66% believe this is the Scottish Executive's policy), as is wave energy (52%). Many believe that coal (46%), nuclear (44%) and oil-fired generation (35%) are to be reduced.
- Although few can remember being consulted over the development at the planning stage (13%), and the most common source of information about the proposed site at that time was the local newspaper (40%) rather than the local council planning office (4%) or the developer (1%), few are dissatisfied with the consultation by the developer (11%), with most expressing neutral views.
- Views are broadly similar with respect to the consultation from the local authority, although even fewer can remember being involved in this. People living within 10 km of the windfarm sites are more likely to recall having been consulted by the developer (37%), and are more likely to express a positive view of the process (40%).
- If there is to be greater dialogue during a planning proposal, people would like to see it publicised through their local paper (43%), leaflets through the door (33%) or through public meetings (29%).

CHAPTER ONE BACKGROUND AND INTRODUCTION

1.1 The Scottish Executive is committed to increasing the amount of electricity generated from renewable sources, a commitment which is at the heart of measures to combat climate change.

1.2 The Scottish Executive has set a target of generating 18% of electricity from renewable sources by 2010, and 40% by 2020. The Scottish Executive believes that the 2010 target will be met mainly by hydro and onshore wind developments, but that after that date, other forms of renewables generation such as offshore wind and marine energy will play an increasing role.

1.3 The Scottish Executive Energy Policy Unit commissioned this study to investigate the views of people living in close proximity to existing windfarm sites in Scotland.

1.4 The overall objective of the research was to establish the views of local residents regarding the existence and proximity of their local windfarm. A number of specific issues were explored, including:

- Visual impact
- Noise from the turbines
- Interference with television and radio
- Environmental or ecological effect
- Impact on house prices and other local economic factors
- Disturbance during construction
- Consultation prior to construction
- Attitude to expansion of windfarm sites

1.5 It was important that the research was robust and presented a measure of opinion from a cross-section of windfarms and among people living at different distances from each windfarm, within a total zone of 20 kilometres.

CHAPTER TWO RESEARCH METHODS

2.1 At the time of sampling for the survey, there were a total of 16 windfarms operating in Scotland, with six of these comprising fewer than 9 turbines. The research was conducted among residents living within 20 km of the 10 windfarms with 9 or more turbines¹.

2.2 Sampling involved a number of stages. First, each of the 10 windfarms was located and mapped using a grid reference approximate to the centre of the windfarm. Next, zones were plotted around each windfarm, corresponding to distances of 0-5 km, 5-10 km and 10-20 km. The small user file of the Postcode Address File (PAF)² was then used to list all postal addresses falling within each zone. Sampled addresses with telephone numbers were then selected at random within each windfarm zone in order to achieve target numbers of interviews. These targets were set to allow analysis of the data by windfarm, and by zone across all windfarms collectively. Finally, once contacted, at each address the individual selected for interview was randomly selected from all adults (aged 18+) living at the property. At the analysis stage, data were weighted by population size within each zone for each windfarm site, to correct for the disproportionate sampling strategy.

2.3 A total of 1,810 adults aged 18+ were interviewed between 27th February and 18th March 2003, with a response rate of 28%. The questionnaire was administered using a computer assisted telephone interviewing system (CATI), which allowed both sample management and questionnaire flow to be automated. Thus, routing was scripted into the questionnaire, and all 'read out' lists were randomly rotated to overcome any order bias effects. Furthermore, questions relating to respondents' expectations of windfarms were versioned depending upon whether they had lived in the area when the site was developed, or whether they had moved in afterwards. The questionnaire programme was also able to use information on which windfarm the respondent lived closest to in order to provide context to some of the questions.

2.4 The questionnaire itself (which comprised an interview of around 10 minutes, on average) was designed to run from general questions on the local area to more specific questions related to windfarms. Thus the interview was introduced as being conducted on behalf of the Scottish Executive, and about the local environment and the area where the respondent lives. There was no mention of windfarms in the introduction or in the early questions, which enquired generally about the good and bad aspects of the area.

2.5 At the end of the interview, respondents were asked if they would be willing to take part in further research on the issues covered by the survey (attitudes to the area, impact of the windfarm, processes of consultation, views on expansion of the local windfarm and general attitudes to electricity generating options). A total of 88% indicated that they would be willing to be re-contacted.

¹ Details of the windfarms and populations can be found in the appendices to this report.

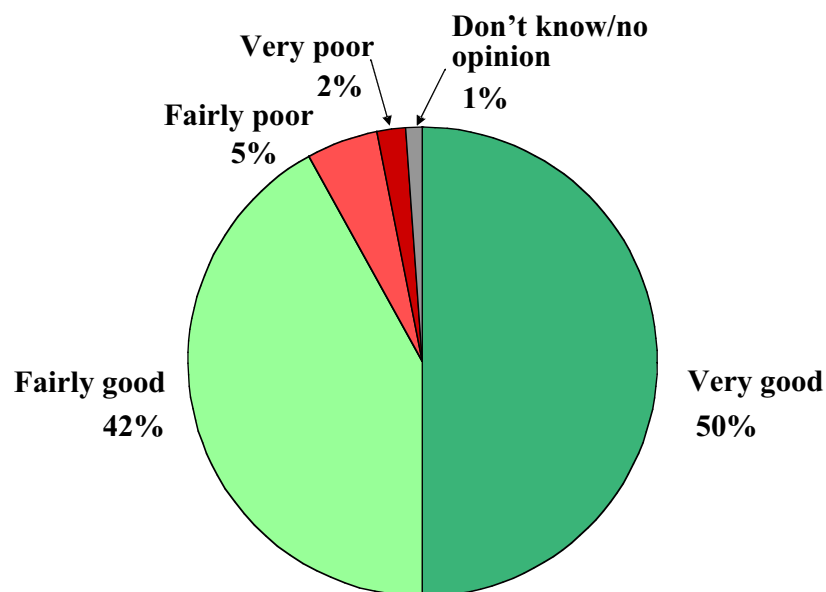
² The Small User PAF is maintained by the Post Office, and contains all postal addresses at which fewer than 25 items are delivered each day, and which are not registered as businesses. It is commonly used as the basis of random probability household surveys.

CHAPTER THREE ATTITUDES TO THE AREA

3.1 People living close to windfarms³ are generally very positive about the area in which they live (chart 1). Most either describe it as ‘very good’ (50%) or ‘fairly good’ (42%), figures which are in line with the Scottish average⁴. Very few say their area is either ‘fairly poor’ (5%) or ‘very poor’ (2%).

Chart 1: Overall rating of the local area

Q Taken as a whole, how would you rate the area as a place to live?



Base: Residents living within 20 km of a Scottish windfarm site (1,810)

Source: MORI

3.2 Asked to describe what they like about the areas, people most commonly say the peacefulness (28%), scenery (26%), rural isolation (23%) and friendly people (20%). The rural isolation does, however, have its drawbacks, and when asked what they dislike about the area the most frequent issues mentioned are a lack of amenities (20%), poor public transport (18%), and lack of jobs (8%). Just five people (0.3%) spontaneously mention windfarms as a negative aspect of their area.

3.3 There appears to be no direct relationship between the frequency with which people see their nearby windfarm, and their attitude to their area (see table 1). People who can see the turbines all the time in their day-to-day lives are as likely to describe their area as ‘good’ as are those who can see the turbines less frequently.

³ Throughout this report, we have used the term ‘living close to windfarms’ to describe those living within the 20 kilometre zone defined in the sampling process. Any reference to sub-sets of this zone are specifically described in the text.

⁴ *Scotland's People – results from the 2001 Scottish Household Survey*, published by the Scottish Executive. The survey found that 51% found their area ‘very good’ and 41% ‘fairly good’.

Table 1: Attitude to the area and frequency of seeing the windfarm

Q Taken as a whole, how would you rate the area as a place to live?					
	Frequency with which respondent can see the windfarm				
	All the time	Frequently	Occasionally	Never	All
	%	%	%	%	%
Very good	57	44	54	44	50
Fairly good	34	47	40	50	42
Fairly poor	5	7	4	4	5
Very poor	4	1	1	2	2
No opinion	-	1	1	-	1
Base = 1,810					

3.4 While the overall balance of opinion is similar across age-groups, older people tend to be more effusive in their rating of their area, with 56% of those aged 55 and over saying the area is ‘very good’, compared with 35% of 18-34 year olds (see table 2).

Table 2: Attitude to the area and age of respondent

Q Taken as a whole, how would you rate the area as a place to live?				
	Age of respondent			
	18-34	35-54	55+	All
	%	%	%	%
Very good	35	47	56	50
Fairly good	54	48	35	42
Fairly poor	6	4	6	5
Very poor	3	1	2	2
No opinion	2	*	1	1
Base = 1,810				

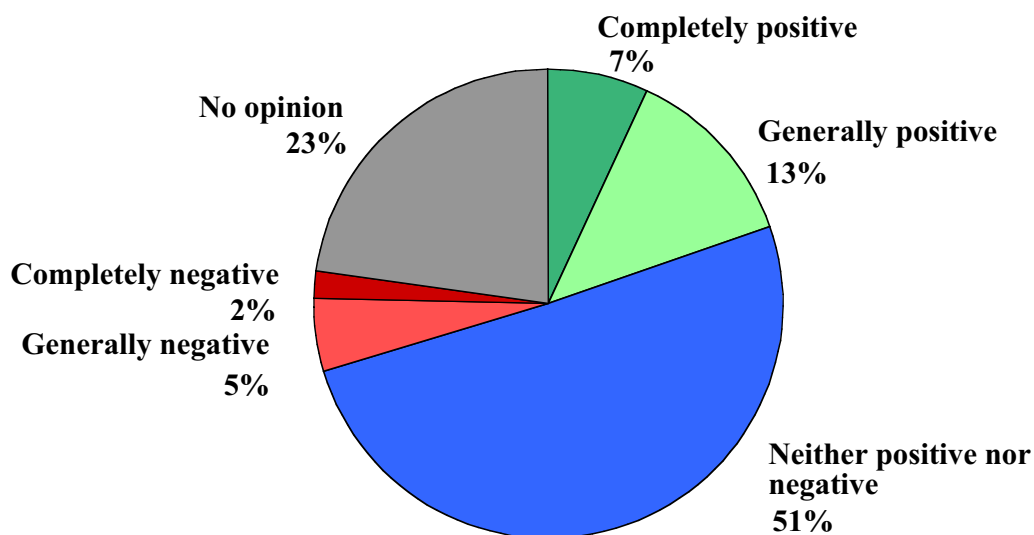
CHAPTER FOUR IMPACT OF THE WINDFARM

4.1 The fact that it is extremely rare for people to spontaneously mention their local windfarm as either a positive or negative aspect of their area suggests that, for most at least, it is not foremost in their minds when thinking of, and describing, the area.

4.2 Once reminded of the fact that there is a windfarm nearby, and asked what they think its impact has been, most say that it has had neither a positive nor negative effect (51%), or say that they do not know what impact it has had (23%). Of those that do pass comment one way or the other, three times as many say that they feel the windfarm has had a positive impact (20%) as say that they think it has been negative (7%) (see chart 2).

Chart 2: Overall impact of the windfarm⁵

Q What effect, if any, would you say the presence of the windfarm has had on your local area?



Base: Residents living within 20 km of a Scottish windfarm site (1,810)

Source: MORI

4.3 Views are very similar in the inner (0-5 km) and middle (5-10 km) zones, with those in the outer zone particularly likely to have a neutral stance. Those living in the inner and middle zones are more likely to be positive about the impact of the windfarm (see table 3).

⁵ Note that figures do not always sum to 100% because of multiple responses or computer rounding of percentages.

Table 3: Impact of the windfarm and distance from the site

Q What effect, if any, would you say the presence of the windfarm has had in your local area?				
	Distance respondent lives from windfarm site			
	0-5 km	5-10 km	10-20km	All
	%	%	%	%
Completely positive	16	17	6	7
Generally positive	29	26	11	13
Neither positive nor negative	39	42	53	51
Generally negative	4	5	4	5
Completely negative	2	1	2	2
No opinion	10	9	24	22
Base = 1,810				

4.4 The populations living close to windfarms are relatively stable, with just three per cent having moved into their homes within the last two years – by contrast, the Scottish average is 20%⁶. As a consequence, most people lived in their property before the local windfarm was developed. There is, however, little difference in the views of those who lived there prior to the development, and those who have moved in since. One in five of both groups (21% and 18% respectively) feel that the windfarm has had a positive impact, while 7% and 4% respectively feel that it has been negative (see table 4).

Table 4: Impact of the windfarm and length of residence

Q What effect, if any, would you say the presence of the windfarm has had in your local area?			
	Length of residence		
	Resident prior to windfarm	Moved in after windfarm construction	All ⁷
	%	%	%
Completely positive	8	9	7
Generally positive	13	9	13
Neither positive nor negative	55	48	51
Generally negative	5	4	5
Completely negative	2	-	2
No opinion	17	30	22
Base = 1,810			

4.5 Differences in opinion across age groups are marginal, with older people slightly more likely to hold a negative view of the impact of the local windfarm than younger people (see table 5).

⁶ *Scotland's People – results from the 2001 Scottish Household Survey*, published by the Scottish Executive.

⁷ The final column in table 4, analysing the responses of 'All' respondents includes the views of a number of respondents (146) who were unsure whether the windfarm had been constructed when they moved into their homes. Most of these people live in the 10-20 km zone.

Table 5: Impact of the windfarm and age of respondent

Q What effect, if any, would you say the presence of the windfarm has had in your local area?				
	Age of respondent			
	18-34	35-54	55+	All
	%	%	%	%
Completely positive	4	7	7	7
Generally positive	14	13	11	13
Neither positive nor negative	54	53	49	51
Generally negative	4	3	6	5
Completely negative	*	2	3	2
No opinion	24	22	24	22
Base = 1,810				

4.6 Few can see their local windfarm from their homes, other than those who live within the 0-5 km zone. It is more common for people to see the turbines when they are travelling on local or major roads or, to a lesser extent, when they are walking in the countryside. Indeed, one in five say that they ‘never’ see the turbines at the windfarm site (see table 6)⁸.

Table 6: Visibility of the turbines and distance from the windfarm

Q In which of the following circumstances, if any, would you be able to see the turbines at the windfarm?				
	Distance respondent lives from windfarm site			
	0-5 km	5-10 km	10-20km	All
	%	%	%	%
From your home	63	14	11	12
When travelling on local roads you use	77	56	43	45
When travelling on major roads you use	64	49	47	48
When you are out walking in the countryside	74	55	27	30
At other times	12	8	6	6
Never see them	2	13	21	20
Base = 1,810				

4.7 People who feel that their local windfarm has had a generally positive impact on the area are more likely to say that they can see the turbines in a variety of circumstances than are those who consider the windfarm to have had a negative impact (see table 7). Thus, it would appear, the situations in which the turbines can be seen have no directly negative correlation with attitudes to windfarms.

⁸ Note that figures sum to more than 100% due to multiple responses.

Table 7: Visibility of the turbines at the windfarm and impression of their impact

Q In which of the following circumstances, if any, would you be able to see the turbines at the windfarm?		
	Overall opinion of impact of windfarm	
	Generally positive impact	Generally negative impact
	%	%
From your home	18	7
When travelling on local roads you use	62	54
When travelling on major roads you use	55	58
When you are out walking in the countryside	50	29
At other times	7	4
Never see them	6	6
Base = 1,810		

4.8 Another way of measuring the visibility of the turbines is to ask how frequently people can see them, rather than in what circumstances. Of those who can see them at least sometimes (that is, excluding the 20% who say they can never see them), one in eight (12%) say that they can see them all the time, and 58% say they can see them at all in the 0-5 km zone. A further quarter say that they can frequently see the turbines. Most, however, say that they can only occasionally see the turbines (63% of those who can ever see them).

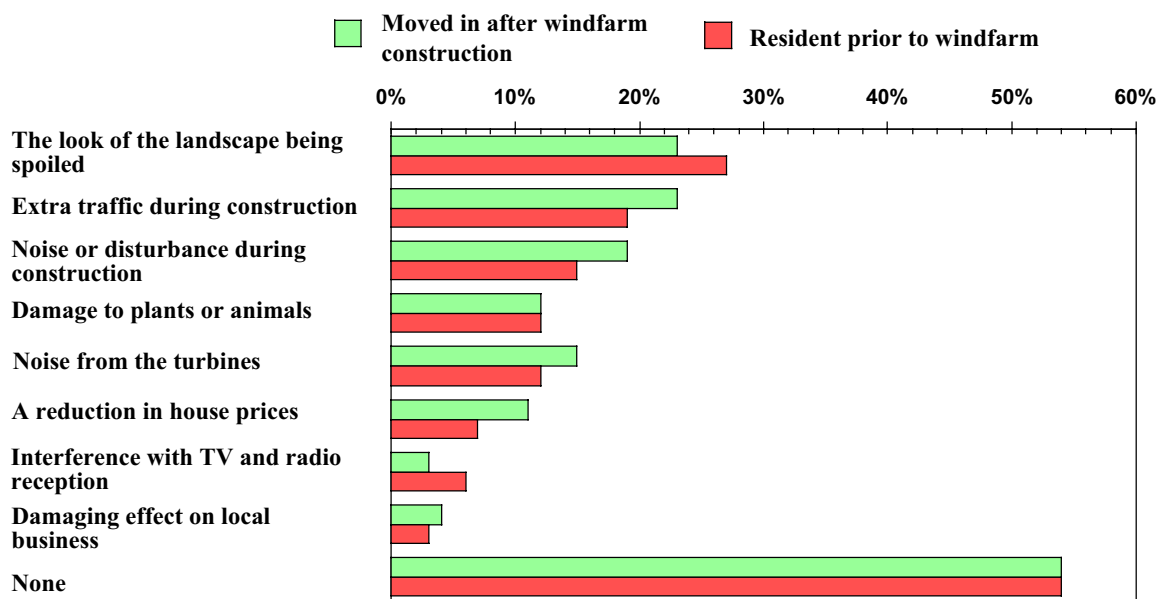
CHAPTER FIVE ANTICIPATED AND ACTUAL IMPACT OF THE WINDFARM

5.1 In order to assess whether people’s concerns about the development of a windfarm in their locality were matched by their experiences following the development, we asked people to think back and recall what factors they thought would cause potential problems when the windfarm was being developed, and what they found actually caused problems. The two questions were asked using the same format, with each potential problem read out in turn (with the order rotated in each interview to overcome order bias). Those respondents who had moved to the area after the windfarm had been constructed were asked to describe which factors they anticipated causing problems before they moved to the area.

5.2 The expectations of those who lived in the area prior to the construction of the windfarm, and those who moved in subsequently, are similar (see chart 3).

Chart 3: Anticipated impact of the windfarm development and length of residence

Q Which of the following problems, if any, did you think having a windfarm in the area might cause?



Base: Residents living within 20 km of a Scottish windfarm site (1,810)

Source: MORI

5.3 Most people lived in their homes before the local windfarm was developed. These people report having had a range of concerns, with the most common being that the look of the landscape would be spoiled. Most people, however, say that they had no particular concerns (see chart 4).

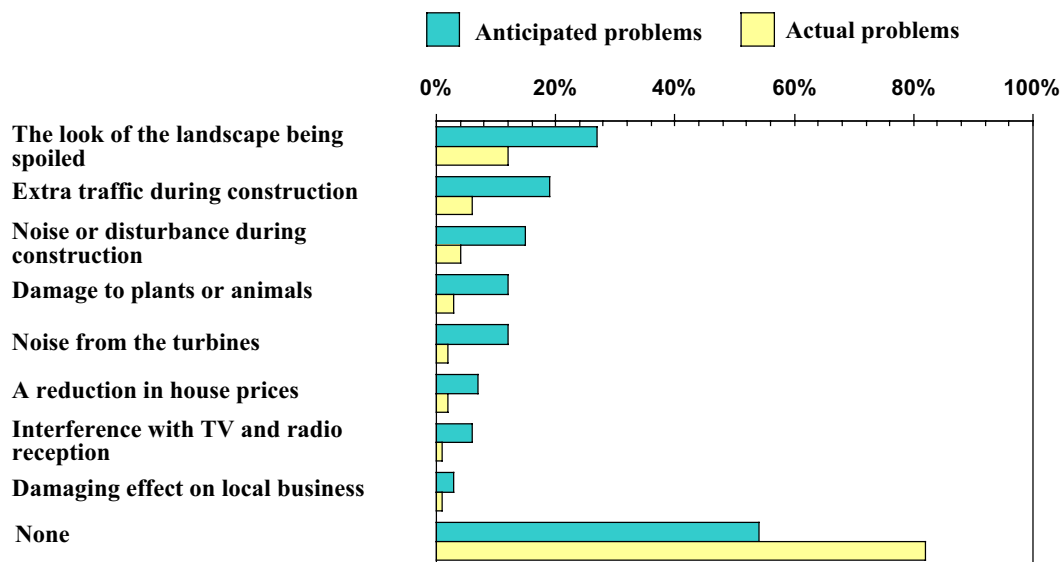
5.4 Of those who lived in their homes prior to the construction, concerns about specific problems that might arise as a result of the windfarm do not seem to have materialised in many cases. Asked to reflect back on their views prior to the construction of the windfarm, people are less likely to say that problems have been caused by the windfarm than they are to

say that they anticipated they might. Furthermore, while around half (54%) anticipated no problems over a range of issues associated with the windfarm development, as many as eight in ten (82%) say that there actually have been no problems (see chart 4).

Chart 4: Anticipated and actual problems caused by the windfarm

Q Which of the following problems, if any did you think having a windfarm in the area might cause?

Q And which, if any, have actually turned out to be problems caused by having a windfarm in the area?



Base: All who lived in their property before the windfarm was developed (1,547)

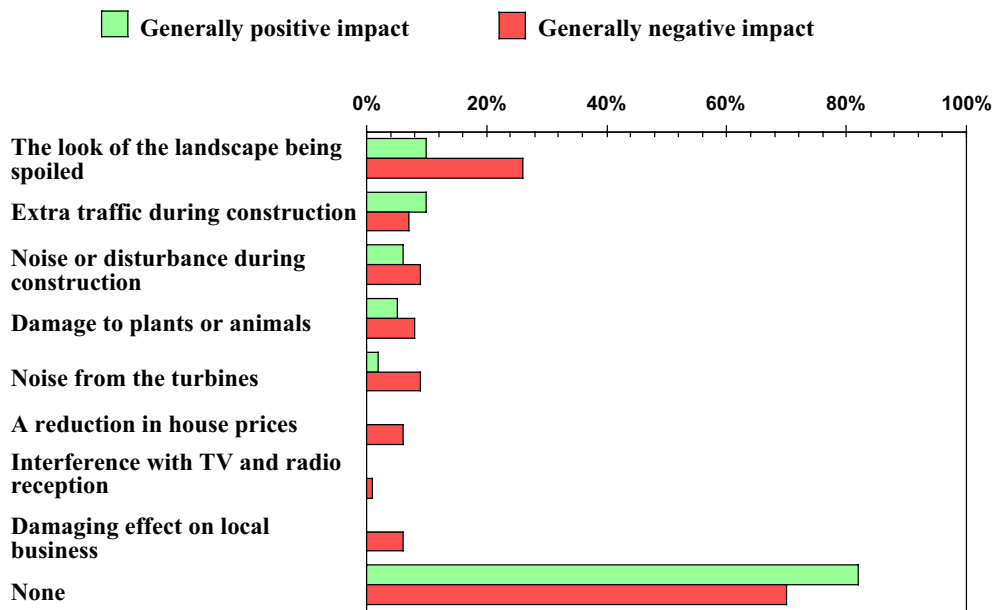
Source: MORI

5.5 More people who lived in their homes before the windfarm was developed feel that its impact has been generally positive (21%) than feel it has been negative (7%), (see para 4.4). The issue on which these two groups differ most in their perception of the detail of the actual impact of the windfarm is on its visual impact (see chart 5).

5.6 Of those with a broadly positive impression of the impact of the windfarm, one in ten (10%) say that it has spoiled the look of the landscape, while of those with a broadly critical impression, one in four say that it has spoiled the landscape (26%). This would suggest that it is the visual impact that is most potent in causing people to dislike windfarms.

Chart 5: Actual detailed impact of the windfarm and overall impression of their impact

Q And which, if any, have actually turned out to be problems caused by having a windfarm in the area?



Base: All who have lived in the area before the windfarm was built, (1,547)

Source: MORI

CHAPTER SIX

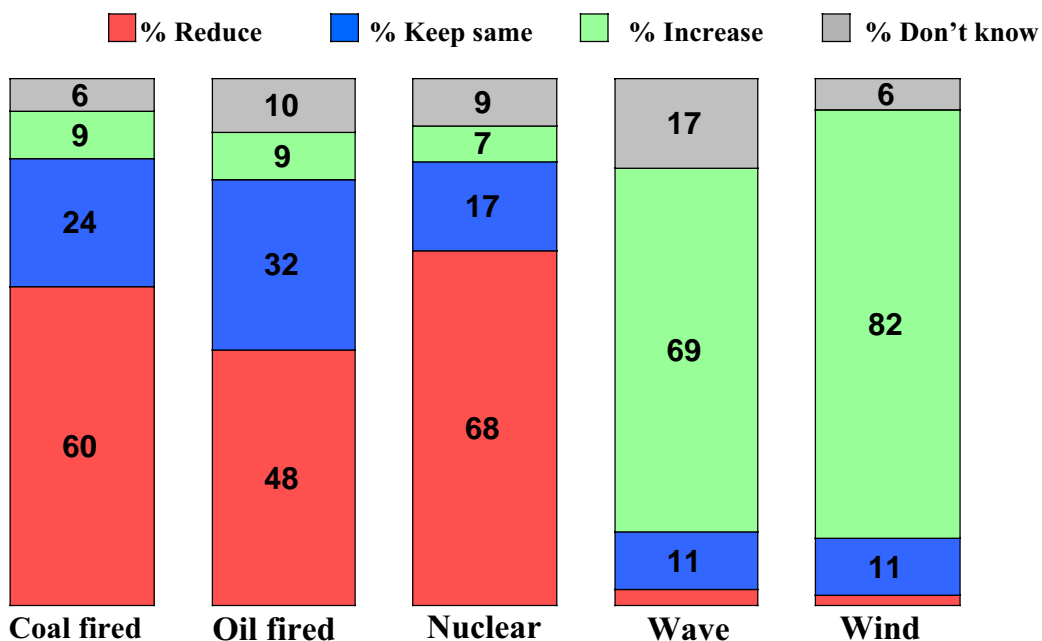
ATTITUDES TO FUTURE ENERGY GENERATION

6.1 One might expect that the views of people living within 20km of Scotland’s windfarm sites regarding future energy generation would be affected by their own experiences. While support or opposition to the expansion of the use of wind energy could not be taken to reflect their attitude to the future of their local windfarm, their views will at least be informed by their experiences.

6.2 The overwhelming majority of people living within 20 kilometres of a windfarm support an increase in the proportion of electricity generated in Scotland through the use of wind power over the coming 15 years (82%), while just two per cent feel that there should be a reduction (see chart 6).

Chart 6: Public support for electricity generation options

Q I am going to read out some different ways of generating electricity. For each one I would like you to tell me whether the proportion of electricity generated in Scotland should increase, reduce or stay at about current levels over the next 15 years?



Base: Residents living within 20 km of a Scottish windfarm site (1,810)

Source: MORI

6.3 Those who feel that the overall impact of their local windfarm has been negative tend to support increased wind energy generation (71%), and just one in ten of this group (10%) thinks that the proportion should be reduced.

6.4 While people are generally able to express their own view as to whether different methods of generating electricity should increase or reduce, many are less sure of what the Scottish Executive policy is⁹.

Table 8: Perceptions of the Scottish Executive’s electricity generation policy

Q As far as you know, is it the Scottish Executive’s policy that the proportion of electricity generated in Scotland using each of these methods should increase, reduce, or stay about the same over the next 15 years?				
Row percentages	Increase	Stay the same	Reduce	Don’t know
Coal fired power	6%	16%	46%	32%
Oil fired power	10%	18%	35%	37%
Nuclear power	10%	12%	44%	34%
Wind energy	66%	5%	1%	28%
Wave energy	52%	9%	2%	37%
Base = 1,810				

6.5 The two methods of generation that majorities believe are proposed to increase are wind and (more narrowly) wave energy (see table 8). Public attitudes are therefore broadly in line with the Scottish Executive’s policy (see footnote).

⁹ The Scottish Executive, as part of its commitment to tackle climate change, is fully committed to the increased development of renewable energy. This commitment extends to all forms of renewable energy technology, from wind (onshore and offshore), hydro and biomass to wave, tidal and solar. Early in 2003, the Scottish Executive set a target for 40% of Scottish electricity generation to be from renewable sources by 2020. While existing fossil-fuelled generation will still have an important role to play for many years, Scottish Ministers have said that they will not support the further development of nuclear power stations while waste management issues remain unresolved.

CHAPTER SEVEN ATTITUDES TO EXPANSION OF THE LOCAL WINDFARM

7.1 While most people living within 20 kilometres of a windfarm are broadly in favour of expanding the proportion of electricity generated using wind energy, and many also recognise that this is the Scottish Executive’s policy, this does not mean that they would support the expansion of their local windfarm. In order to test levels of support, we asked people whether they would support or oppose their local windfarm’s expansion by 50% in terms of the number of turbines. This was presented in numeric terms, with the CATI system automatically calculating the number of turbines that would be added with reference to the existing number of turbines at the local site for each respondent. Subsequently, people were asked whether they would support or oppose an expansion by 100% over the current number of turbines.

7.2 The majority would support an increase in the number of turbines by 50% (54% would support this, including 26% strongly in support). On the other hand, one in ten (9%) would oppose expansion. Those living closest (within 5 km of the site) are most likely to support expansion (65%), and are also most likely to strongly support (36%) expansion. The level of opposition does not vary across the zones (see table 9).

Table 9: Level of support for 50% expansion of local windfarm

Q To what extent would you support or oppose increasing the number of turbines at the windfarm by 50% (figure calculated and provided on basis of existing size of site)?				
	Distance respondent lives from windfarm site			
	0-5 km	5-10 km	10-20km	All
	%	%	%	%
Strongly support	36	33	25	26
Tend to support	29	27	28	28
Neither support nor oppose	23	23	25	25
Tend to oppose	4	4	5	5
Strongly oppose	4	7	4	4
No opinion	4	6	13	12
Base = 1,810				

7.3 There is no correlation between the size of the existing windfarm and attitudes to expansion, with one of the smallest and the largest windfarms both having local populations overwhelmingly in favour of expansion (see table 10). Indeed levels of support are fairly consistent, with Beinn an Tuirc and Tangy standing out as having relatively high levels of support.

Table 10: Level of support for 50% expansion of the local windfarm

Q To what extent would you support or oppose increasing the number of turbines at the windfarm by 50% (figure calculated and provided on basis of existing size of site)?			
	No. of turbines at present	Support	Oppose
		%	%
Beinn an Tuirc	46	82	6
Windy Standard	36	52	8
Novar	34	59	11
Hagshaw Hill	26	49	10
Dun Law	26	49	10
Bowbeat Hill	24	56	9
Harehill	20	57	10
Tangy	15	80	5
Beinn Ghlas	14	59	8
Deucherin Hill	9	59	6
Base = 1,810			

7.4 Support for windfarm expansion falls, and opposition rises, if the proposed additional number of turbines were to double (see table 11). Furthermore, while levels of support do not seem to correlate with the number of turbines that would be added in a 100% expansion plan, levels of opposition are generally higher in sites where the number of additional turbines would be largest.

Table 11: Level of support for 100% expansion of the local windfarm

Q To what extent would you support or oppose increasing the number of turbines at the windfarm by 100% (figure calculated and provided on basis of existing size of site)?			
	No. of turbines at present	Support	Oppose
		%	%
Beinn an Tuirc	46	66	28
Windy Standard	36	41	18
Novar	34	43	26
Hagshaw Hill	26	35	22
Dun Law	26	39	23
Bowbeat Hill	24	42	19
Harehill	20	45	20
Tangy	15	69	13
Beinn Ghlas	14	47	16
Deucherin Hill	9	50	17
Base = 1,810			

CHAPTER EIGHT INFORMATION AND CONSULTATION

8.1 The overwhelming majority of local residents lived in their current homes at the time of the construction of their local windfarm (86%).

8.2 The survey findings regarding recollection of information provision and consultation need to be viewed in the light of the fact that some of the windfarms were constructed several years ago, so that people responding to this survey were being asked to reflect back over a long period of time. The planning process for Hagshaw Hill, for example, commenced in the Spring of 1994, with consent granted in January 1995.

8.3 That said, around one in three (37%) say they do not think they received any information about the development prior to its construction, and a further one in seven (14%) cannot remember. The most common single source of information, as is often the case, was the local newspaper, from which 40% say they got information about the proposed development. Very few say that they got information from the local authority (4%), from a public meeting (2%) or from the developer (1%).

8.4 It appears that those living closest to the developments were more likely to have received (or are more likely to recall having received) information. Just one in seven (13%) of those living in both the 0-5 km and the 5-10 km zones say that they didn't receive any information. They would appear to have been more likely to receive information through the local authority, and public meetings, in particular (see table 12).

Table 12: Sources of information and distance from the windfarm

Q When the windfarm was first proposed, where did you get any information about the proposed development?				
	Distance respondent lives from windfarm site			
	0-5 km	5-10 km	10-20km	All
	%	%	%	%
Local newspaper	40	62	37	40
Local authority or planning office	13	8	4	4
Word of mouth	11	11	3	4
TV or radio	3	8	3	4
Public meeting	12	10	1	2
The developer or operator	4	2	*	1
Local campaign groups	2	2	*	1
Environmental groups	*	*	-	*
Some other source	13	7	6	7
Got no information	13	13	41	37
Cannot remember	16	9	14	14
Base = resident prior to development = 1,547				

8.5 Not only do many people feel that there was little or no information directly forthcoming from the planning authority or the developers (from what they can remember), they either do not remember, or do not believe that there was, any consultation.

8.6 Two thirds are not aware of any consultation by the developer prior to the construction (64%), and a further quarter (23%) cannot remember. Just one in eight (13%) of all respondents can recall any consultation from the developer, and just three percent say that they responded to the consultation.

8.7 Once again, there are signs that those living closest to the proposed windfarms are more likely to say they were consulted, and to have responded to the consultation (see table 13).

Table 13: Recall of consultation by developer and distance from windfarm

Q Did the developer conduct any public consultation about the windfarm that you were aware of at the time? IF YES: Did you respond to the public consultation?				
	Distance respondent lives from windfarm site			
	0-5 km	5-10 km	10-20km	All
	%	%	%	%
Yes, was consultation and responded	13	10	2	3
Yes, was consultation but didn't respond	21	28	7	10
No consultation by developer that aware of	42	41	68	64
Cannot remember	24	20	23	23
Base = resident prior to development = 1,547				

8.8 Around one in three (34%) of those living within the 5 km zone recall some consultation by the developer, including around one in eight (13%) who say they responded, although more (21%) say they did not. The pattern is broadly similar in the 5-10 km zone, while it is in the outer, 10-20 km zone where few (9%) recall any consultation.

8.9 In spite of this rather low recall of consultation across the 20 km zone as a whole, there is little dissatisfaction with the level of consultation by the developer. While around one in ten (11%) is dissatisfied, one in four (24%) is satisfied. The majority express no view either way. In the inner zone, within 5 km of the windfarm sites, the reaction is more favourable. Four in ten (41%) say they are satisfied with the level of consultation, and just seven per cent say they are dissatisfied. Views in the 5-10 km zones are similar (40% satisfied and 11% dissatisfied).

8.10 Even among those that feel that the local windfarm has had a generally negative impact on the area, just one in six (18%) is dissatisfied with the consultation by the developer prior to construction.

8.11 Recollection regarding consultation by the local authority is poorer. Once again, very small minorities remember having been consulted (9%), and just 1% say that they responded to the planning department.

8.12 Although fewer people recall any consultation by the local authority, or say that they participated in it, the pattern of greater activity in the zones closest to the proposed windfarms is repeated in respect of consultation by the local authority (see table 14).

Table 14: Recall of consultation by the local authority and distance from the windfarm

Q Did the local authority planning department conduct any public consultation that you were aware of at the time? IF YES: Did you respond to the public consultation?				
	Distance respondent lives from windfarm site			
	0-5 km	5-10 km	10-20km	All
	%	%	%	%
Yes, was consultation and responded	8	5	1	1
Yes, was consultation but didn't respond	15	17	7	8
No consultation by local authority that aware of	46	49	64	62
Cannot remember	31	29	28	28
Base = resident prior to development = 1,547				

8.13 One might expect that the very low level recall of any consultation by either the developer or the local authority might lead to substantial dissatisfaction with the amount of consultation prior to the sites being constructed. This does not seem to be the case (see table 15). People are as likely to say that they are satisfied as dissatisfied, and most express no opinion either way.

Table 15: Satisfaction with level of consultation by the developer and the local authority

Q And how satisfied or dissatisfied were you with the level of consultation by the developer/local authority?		
Satisfaction with consultation by the.....	Developer	Local authority
	%	%
Very satisfied	7	4
Fairly satisfied	16	14
Neither satisfied nor dissatisfied	46	44
Fairly dissatisfied	7	10
Very dissatisfied	4	6
No opinion	19	22
Base = resident prior to development = 1,547		

8.14 Respondents were asked to say how they feel that information provision, and consultation, could be undertaken for any future windfarm proposal.

8.15 People are most likely to say that they got information about the proposals to develop their local windfarm site from their local newspaper (see para 8.3), and this is also the mechanism that people are most likely to say should be used in future (43% suggest this).

Around three in ten suggest leaflets through the door (33%) or public meetings (29%), (see table 16).

Table 16: Sources of information to be used in future by attitude to past consultation

Q What methods do you think should be used to make sure people get information and are able to express their views if windfarms are proposed in their area?			
	Attitude to past consultation		All
	Satisfied	Dissatisfied	
	%	%	%
Put articles in the local newspaper	47	42	43
Put leaflets through the door	18	44	33
Have public meetings	36	36	29
Advertise public meetings	15	18	15
Display/exhibition in library/other public building	12	18	10
Put articles on the local radio station	11	9	10
Conduct door to door surveys	4	7	6
Give feedback on outcome of consultation	2	2	2
Have an office on site so local residents can speak to someone about it	2	-	2
Conduct telephone surveys	2	1	2
Set up a dedicated website with information/enquiry address	1	4	2
Just keep on doing what they are, no improvements needed	2	1	2
Set up a telephone enquiry line	*	*	1
Mobile display van	*	-	1
Don't know	9	4	10
Base = 1,810			

8.16 The use of directly delivered leaflets may be more powerful than these figures suggest. Although in most respects the views of those satisfied with the developer's consultation are similar to those dissatisfied, they differ markedly when it comes to the use of leaflets through the door. Those unhappy with the consultation are much more likely to select this as a preferred mechanism (44%) than are those who are satisfied with the consultation that they had prior to the development of their local site (18%).

CHAPTER NINE CONCLUSIONS

9.1 People who live within 20 kilometres of Scotland's windfarms often live in remote and widely dispersed communities. Many only see the turbines on their local site occasionally, for example when using the roads. The existence of the windfarms does not appear to be prominent in people's minds. Concerns, where they existed, that the construction of a windfarm would have a damaging impact have largely not materialised, according to local people. The most prominent long-term impact that people would consider a problem is the visual effect on the landscape. Overall, however, twice as many people think the local windfarm has had a positive impact as think it has had a negative impact on the area.

9.2 People living in zones closest to the windfarms tend to have more positive views, even though they are more likely to see the turbines as they go about their every day lives. They are also more likely than others to support the idea of an expansion by 50% of the number of turbines on the site.

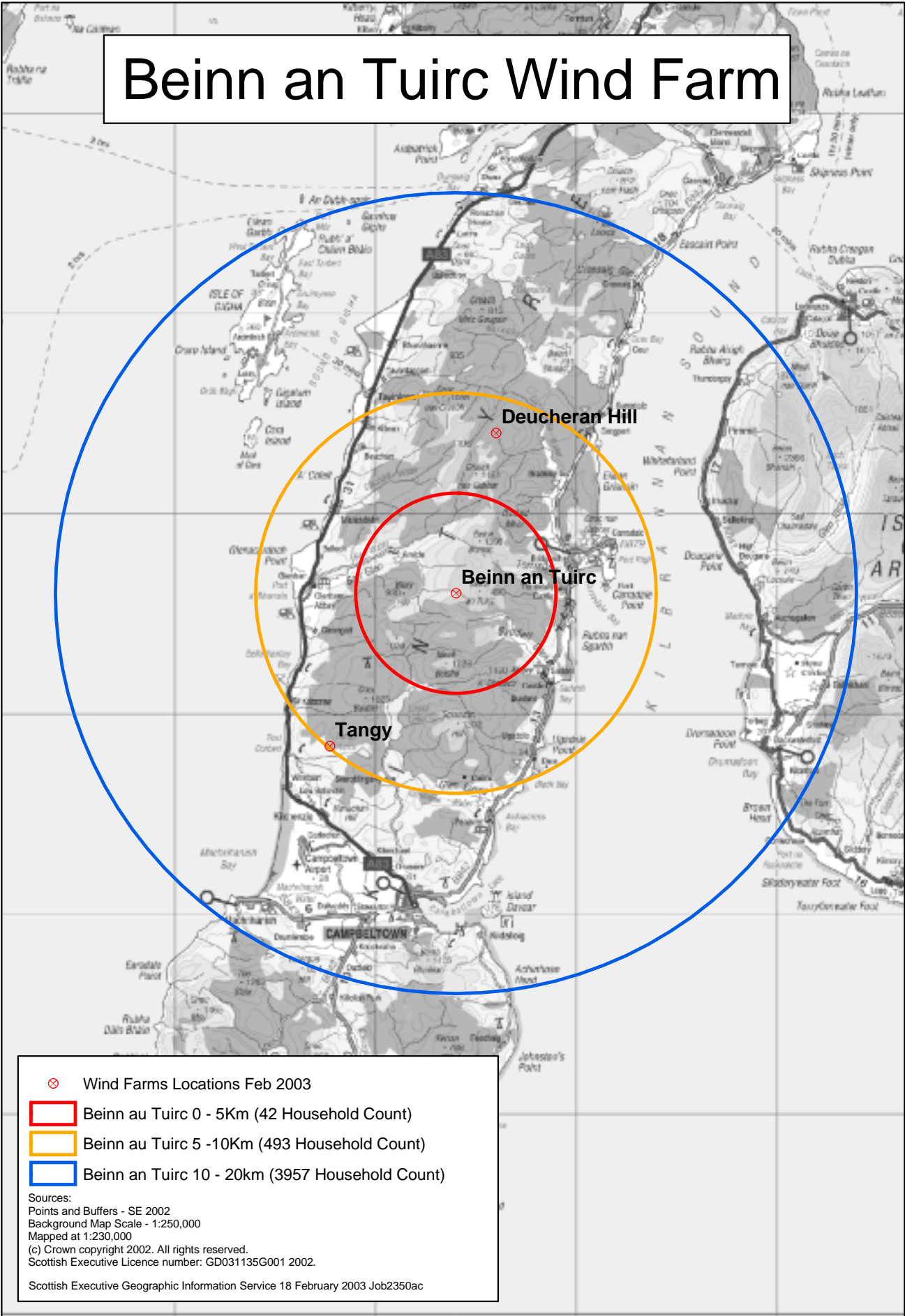
9.3 Support for the principle of an expansion of electricity generation using windpower is overwhelming among people living within 20 kilometres of an existing site.

APPENDICES

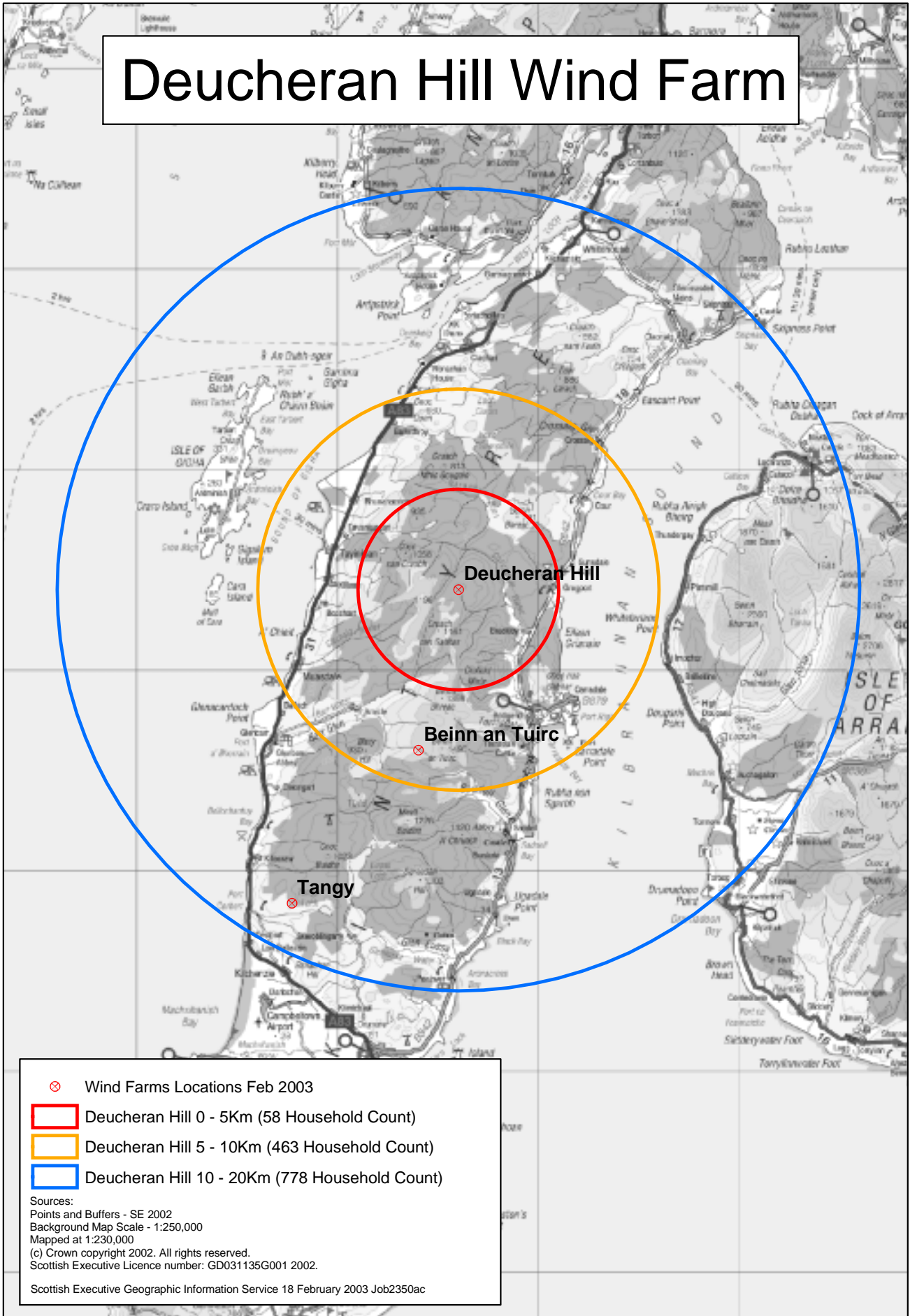
Population and sample distribution

Windfarm Site	Population in 20 km zone	Number of interviews (unweighted)	Number of interviews (weighted)	Percent of sample (weighted)
		(n)	(n)	%
Beinn an Tuirc	4,492	31	48	2.6
Deucherin Hill	1,299	44	13	0.7
Beinn Ghlas	6,854	240	73	4.1
Windy Standard	10,516	144	113	6.2
Harehill	14,239	208	153	8.4
Novar	11,362	200	122	6.7
Dun Law	49,169	147	527	29.1
Bowbeat Hill	35,999	234	386	21.3
Hagshaw Hill	30,908	317	331	18.3
Tangy	4,085	245	44	2.4

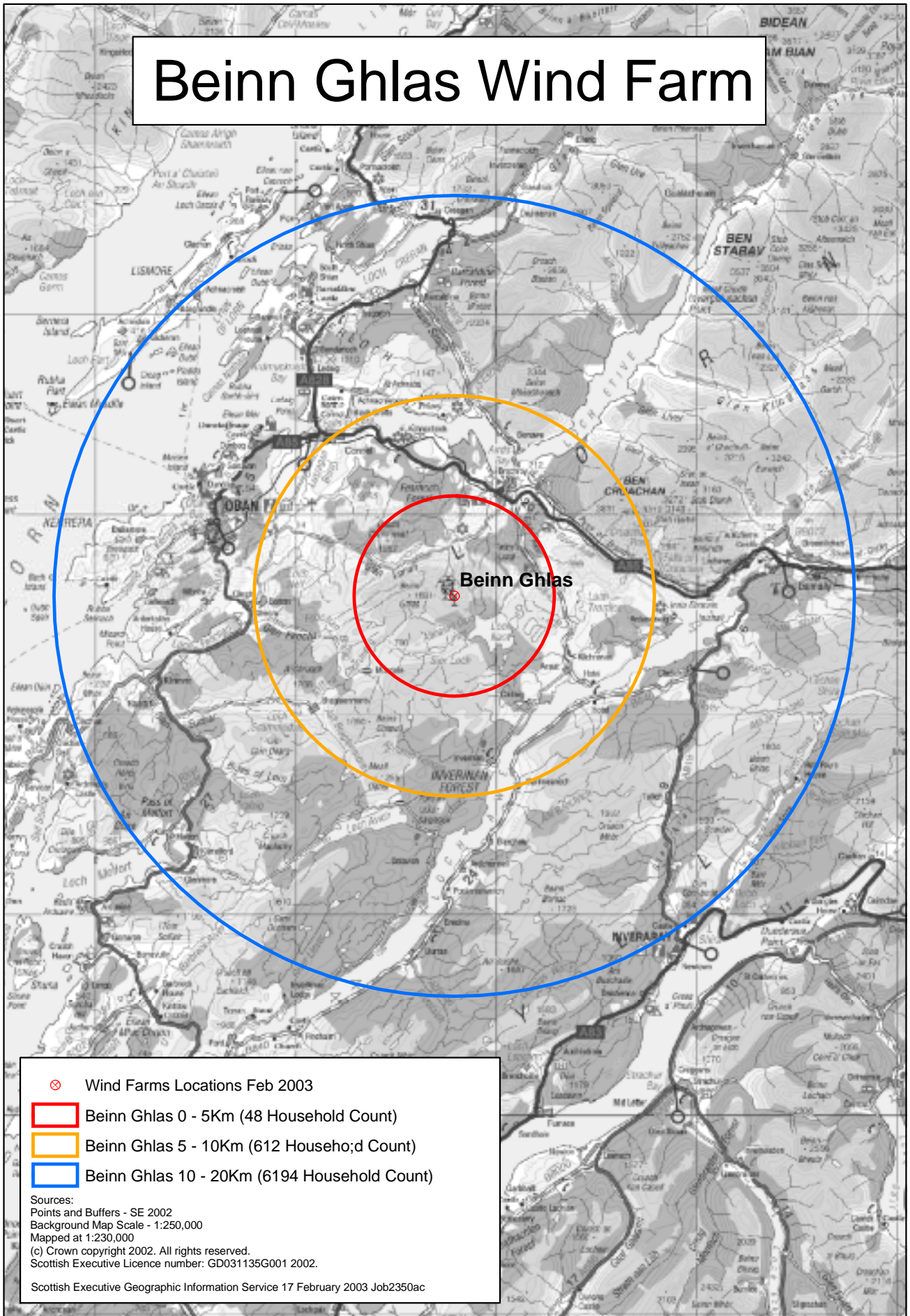
Beinn an Tuirc Wind Farm



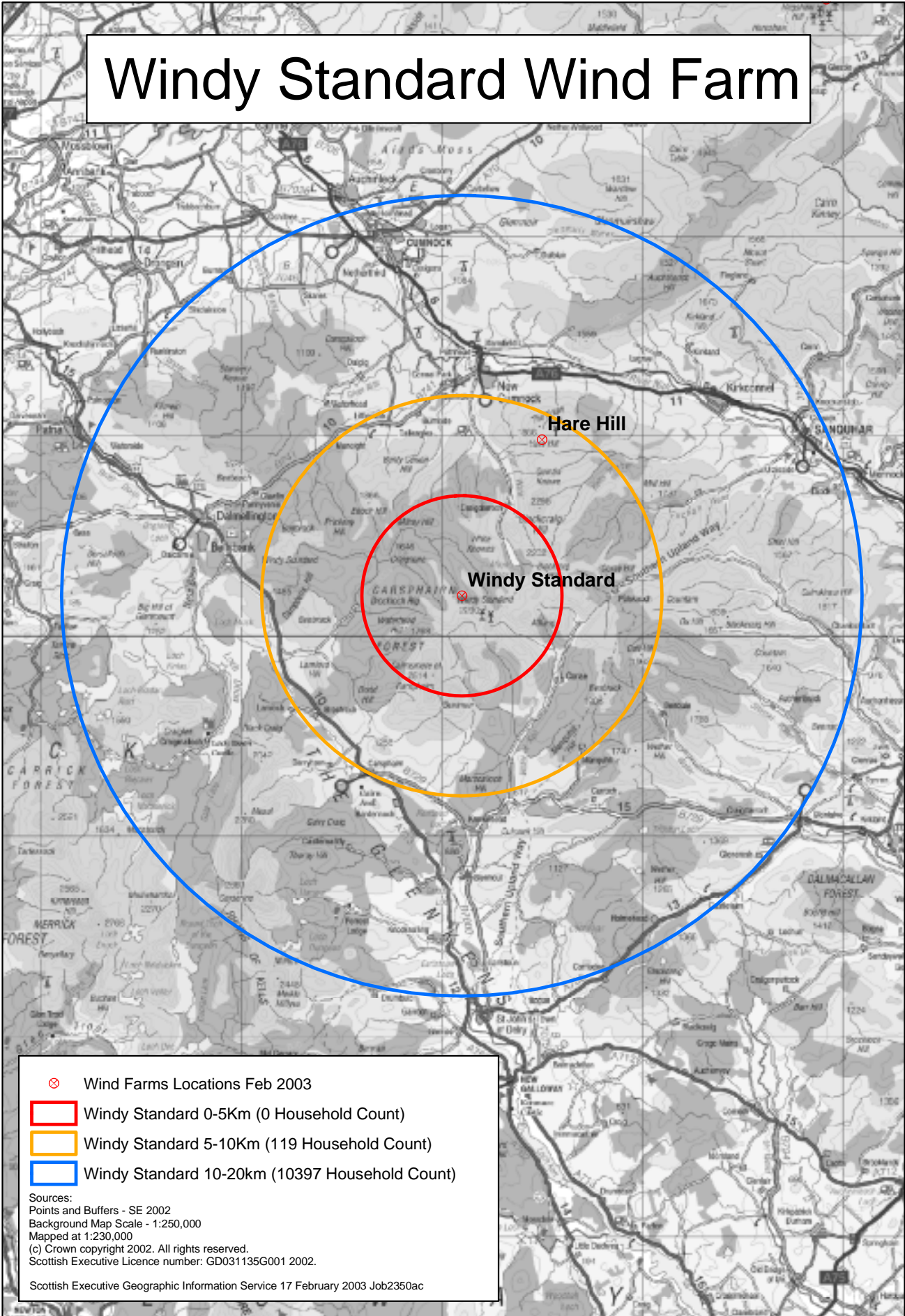
Deucheran Hill Wind Farm



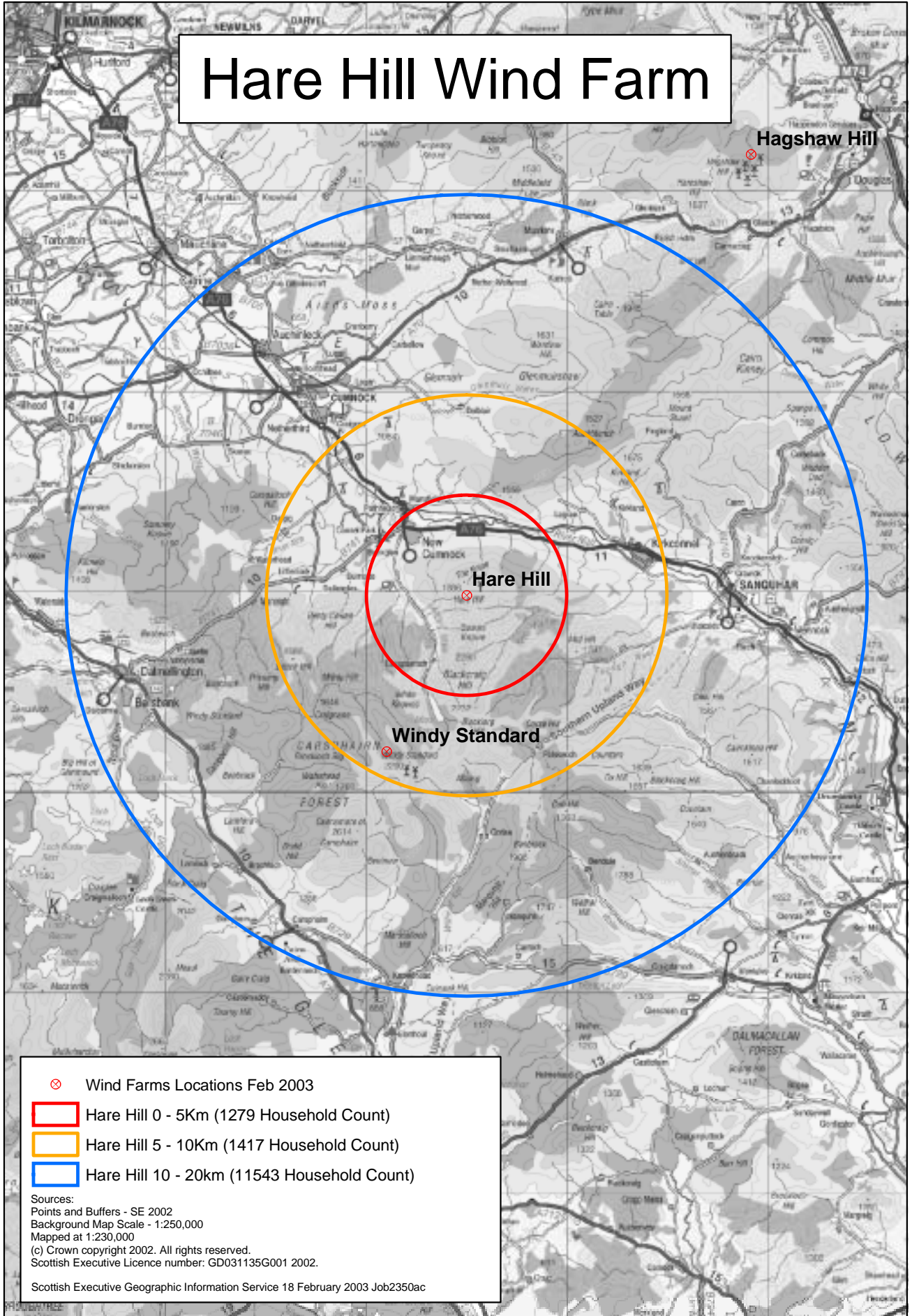
Beinn Ghlas Wind Farm



Windy Standard Wind Farm



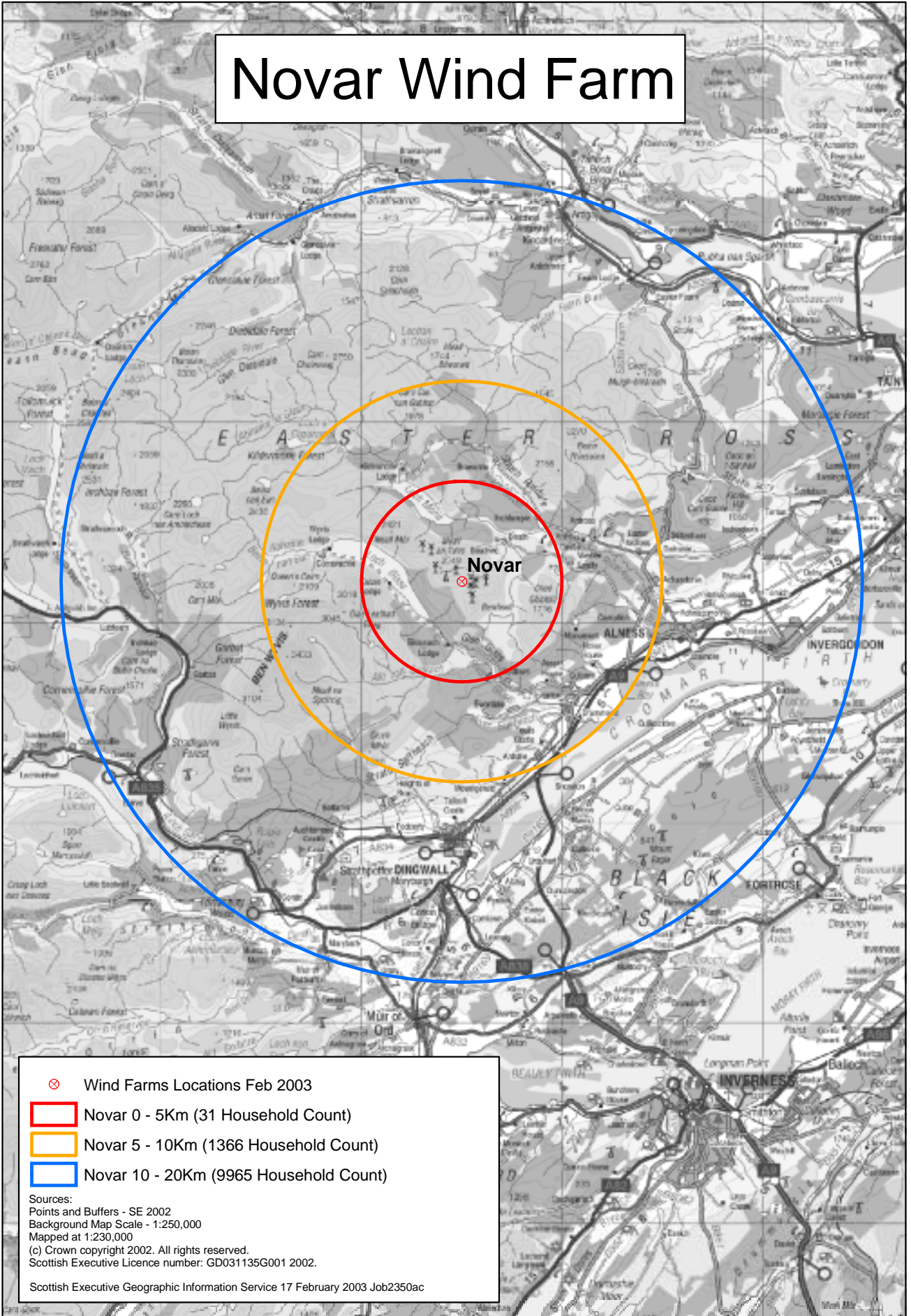
Hare Hill Wind Farm



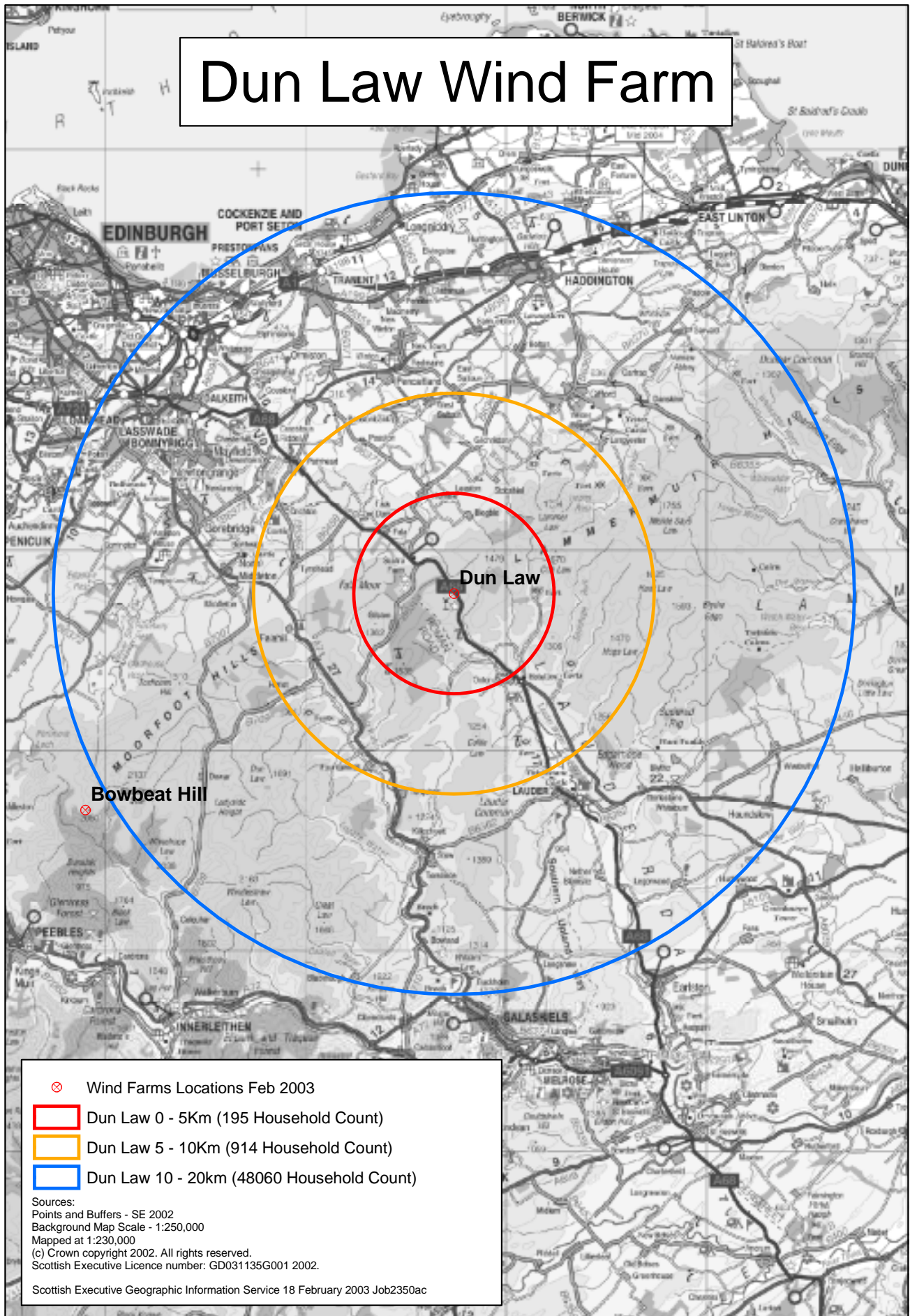
- ⊗ Wind Farms Locations Feb 2003
- ▭ Hare Hill 0 - 5Km (1279 Household Count)
- ▭ Hare Hill 5 - 10Km (1417 Household Count)
- ▭ Hare Hill 10 - 20km (11543 Household Count)

Sources:
Points and Buffers - SE 2002
Background Map Scale - 1:250,000
Mapped at 1:230,000
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Scottish Executive Geographic Information Service 18 February 2003 Job2350ac

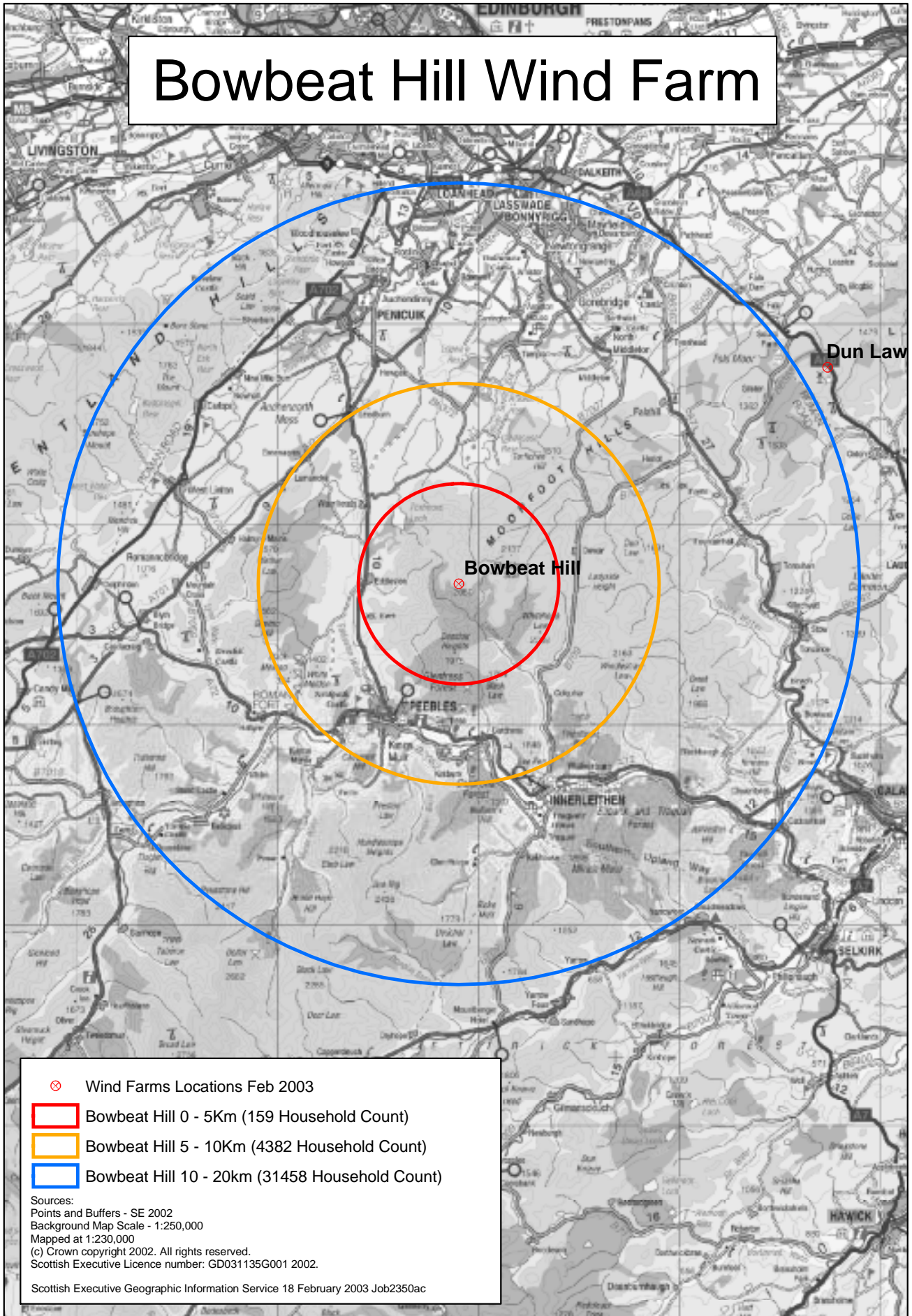
Novar Wind Farm



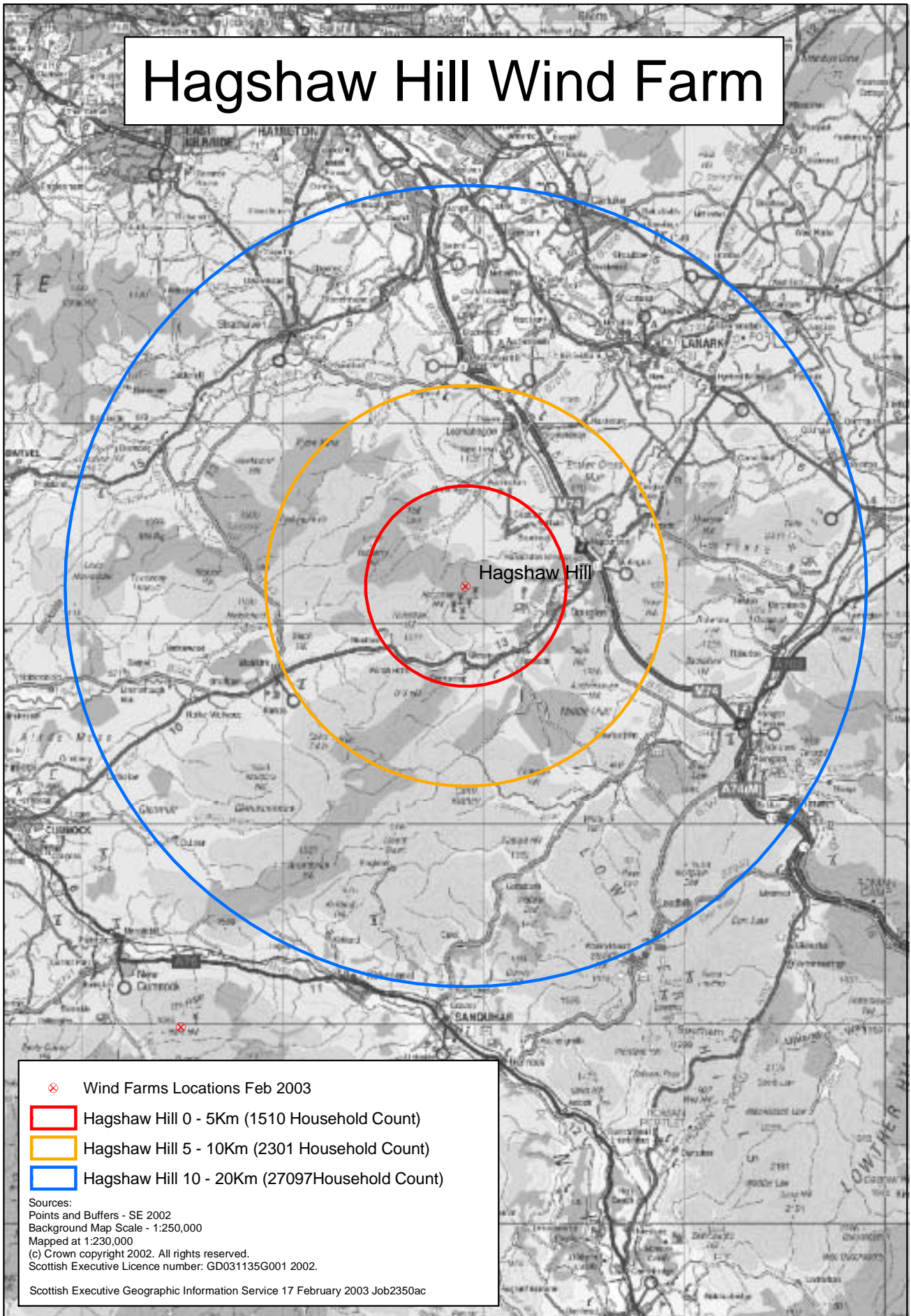
Dun Law Wind Farm



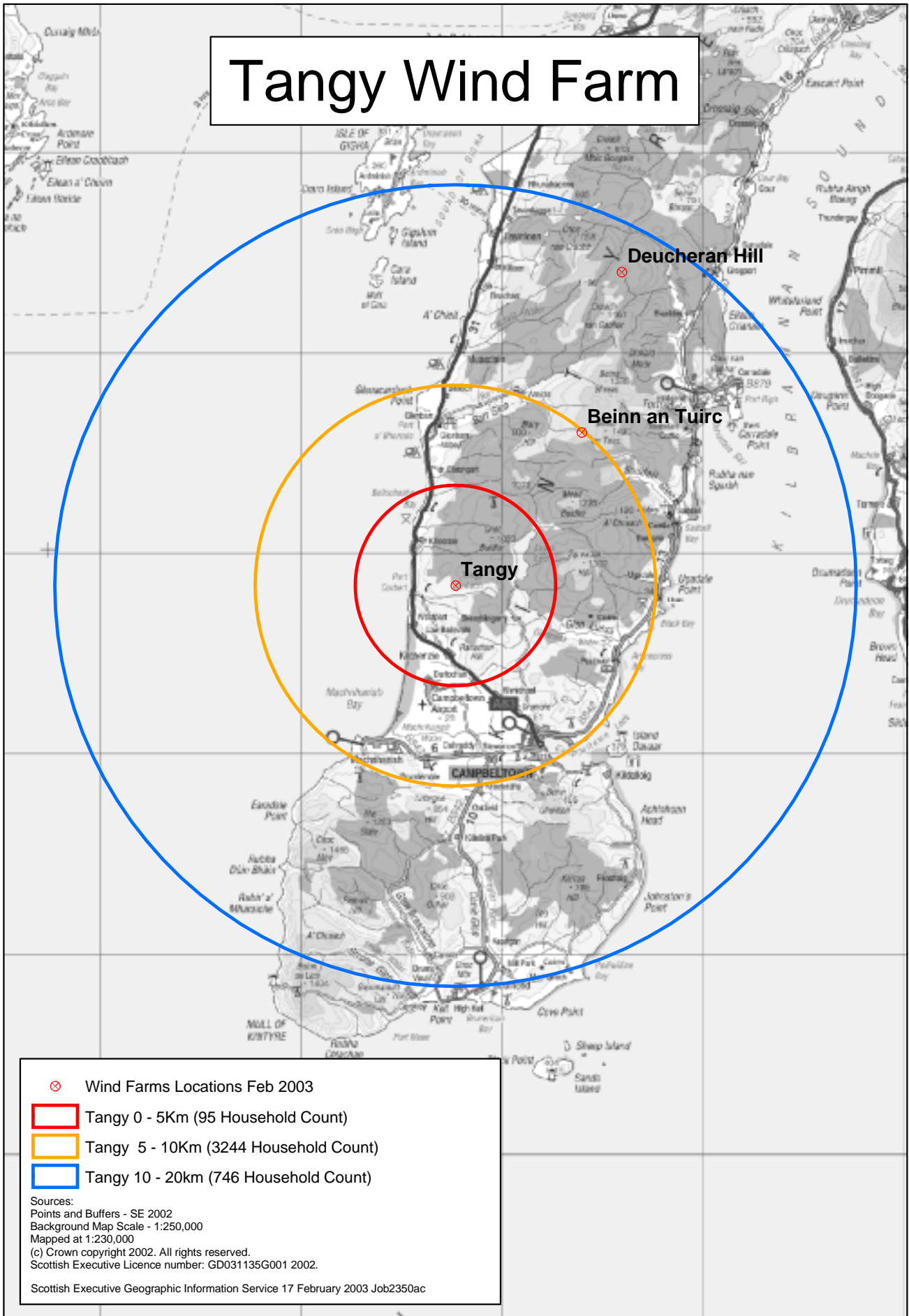
Bowbeat Hill Wind Farm



Hagshaw Hill Wind Farm



Tangy Wind Farm



ISSN 0950 2254
ISBN 0 7559 3571 3
Price £5.00

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