

SCIENTIFIC OBJECTION TO THE DESIGNATION OF THE SOUND OF BARRA AS A POSSIBLE SPECIAL AREA OF CONSERVATION

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per pro
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KEY WORDS

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ABBREVIATIONS

ACSSSI Advisory Committee on Sites of Special
Scientific Interest
EU European Union
JNCC Joint Nature Conservation Committee
pSAC possible Special Area of Conservation
pSSSI proposed Site of Special Scientific Interest
SAC Special Area of Conservation
SAMS Scottish Association for Marine Science
SEPA Scottish Environment Protection Agency
SMRU Sea Mammal Research Unit
SNH Scottish Natural Heritage
SSSI Site of Special Scientific Interest

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Executive Summary

On 25 September 2000 the Sound of Barra possible Special Area of Conservation (pSAC) was notified by Scottish Natural Heritage (SNH). The site consists of two areas, one to the north-east of Barra and the other to the south of South Uist and surrounding the northern part of Eriskay. The “species of interest” is the common seal (*Phoca vitulina*) and the “habitat of interest” is “sandbanks which are slightly covered by sea water all the time”. Neither is an adequate reason for designating the site as the construction of the Eriskay causeway (completed summer 2001) has fundamentally changed the geography and biodynamics of the whole northern part of the area due to altered tidal flows. The consequences have destroyed all three *rationales* for the designation: seal numbers, seal densities and the sandbanks.

Numbers: Seal numbers on the Eriskay side of the pSAC, close to the causeway, have dropped from 304 in 1992 to 9 in 2000. This is not a local effect. On the Barra side, numbers have dropped from 250 in 1992 to 46 in 2000. Total numbers on the site have dropped from 762 in 1992 to 140 today. There are any number of common seal colonies on the west coast of Scotland with higher numbers than that. Islay

has 1100; Mull 1800; and Skye well over 2000. SNH has produced no evidence to show why the Sound of Barra should be preferred over more heavily populated sites.

Density: Seal densities have dropped as rapidly as seal numbers. The density of common seals within the Sound of Barra pSAC is now so low that it is barely higher than the average for the whole of Scotland (Table 1).

Sandbanks: The Eriskay causeway has almost totally blocked the flow of water through the Sound of Eriskay, completely changing tidal action. SNH has done no work on the effects of this and local experts suggest that the sandbanks have both moved and changed. Without a great deal of further research, there is no longer any scientific justification for designating this habitat in this location.

Conclusion: Until proper scientific work has been carried out on the effects, both current and likely in the future, of the construction of the Eriskay causeway, this designation should not proceed. **The causeway has destroyed the scientific case for this designation. The Sound of Barra should be dropped from the list of pSACs.**

Table 1: Seal counts, coastline length and seal density for the Sound of Barra and the whole of Scotland (estimated).

Site	Seal count	Coastline length	Density
Sound of Barra 1990-1996 mean	636	50	12.7
Sound of Barra 2000	140	50	2.8
Whole of Scotland (est.)	30,000	11,800	2.5

Map of the Site

SNH's published map of the site as distributed during the public consultation is shown overleaf (Figure 1).

It will be observed that SNH has copied the co-ordinates incorrectly from the Ordnance Survey original.

On the north-south axis the actual 00 is where 03 is shown, and the 00 that is shown is in fact 97.

Figure 1, showing SNH's published map of the site can be found in the Environment section of Land-Care (www.land-care.org.uk) under the heading *Scientific Objection to the Sound of Barra pSAC*.

1. *The Consultation*

Although SNH staff diligently apply restrictive environmental legislation originating in Europe, they are generally reluctant to balance that with the open information policy which is emerging as an equally high priority in Brussels. The public not only has a right of access to publicly held information on the environment, they also have a right to proper consultation on proposals for environmental restrictions. The consultations carried out by SNH for the Sound of Barra pSAC fell a long way short of the standards required in order to discharge Britain's international obligations.

In 1996 both Britain and the EU signed the Aarhus Convention. The currently proposed European Commission Directive transposing that Convention into EU law is founded upon the belief that "effective public participation in environmental decision-making should be encouraged"¹. In particular it is proposed that "Member States shall ensure that... the public concerned has access to a review procedure before a court of law ... to challenge substantive or procedural legality of decisions, acts or omissions subject to public participation provisions of this Directive. Any such procedure shall be expeditious and shall not be prohibitively expensive"². These are substantial

and important rights, which illustrate the seriousness with which the European Commission takes public participation in decision making in this field. The reason is stated in the Explanatory Memorandum to the proposed Directive: "It is becoming clear that effective public participation in environmental decision-making has several benefits. It enables the public to express, and the decision-maker to take account of, opinions and concerns which may be relevant to the decision in question. This increases the accountability and transparency of the decision-making process and contributes to public awareness of environmental issues".

In Scotland this policy is routinely undermined by SNH.³ The reason is not far to seek. In the prefatory "Justification" for the proposed Directive on Public Access to Environmental Information, the Commission states that, "a better informed public is able to carry out a more effective control of public authorities". The Barra pSAC provides a classic illustration of how SNH frustrates the spirit of the new Directive.

This consultation

In March 2001 SNH published an article in its magazine *Scotland's Natural Heritage*

1 *2000/0331 Proposal for a Directive ... for public participation in respect of... plans and programmes relating to the environment ...* Eur-Lex, 2001.

2 The word "public" is defined in the draft Directive as "one or more natural or legal persons" and the phrase "the public concerned" as "the public likely to be affected by, or having an interest in [the decision under discussion]". This is a much broader category than those who would have *locus standi* in a judicial review action under Scots law; it includes those, both organisations and individuals, who have a general concern for the *subject* as well as those with a particular interest in the *site*.

3 It is relevant that only very rarely are SNH personnel drawn from the communities they seek to control. The organisation perpetuates the tradition established by Highland absentee landowners in the nineteenth century whereby factors and gamekeepers are recruited from outside in order to act as more effective "policemen". See *Isles of the West: a Hebridean Voyage* Ian Mitchell (Edinburgh, 2001), *passim*.

headlined “Public Meetings Reassure Sound of Barra Concerns”⁴. The whole thrust of the text was that SNH had “reassured” the people affected by the proposed designation and had “clarified misunderstandings”. Nothing could be further from the truth.

The only published statement of local opinion at the time was in a letter to *The Herald* written by Canon Angus MacQueen, the highly respected priest of Northbay, on 27 October 2000⁵.

If SNH sat round the table with those who planned the South Uist to Eriskay causeway they must have realised that the future of many of the species living in the island waters would be handicapped in many ways. Now they want to turn Ardveenish waters [off Barra] into a maternity/nursery area for the seals and they expect the people of Barra to go along with them.

Ardveenish gives an all-year-round living to the people of Barra who are engaged in the fishing industry.⁶ The seals will naturally move north for their living ...

Nature will balance itself and look after its own.

Please do not misunderstand me, I like seals and when I was very much younger, we killed as many as we required to utilise their precious oil which protected many of my generation from tuberculosis and consumption.

But Hebrideans cared for and conserved all species without payment and before jobs were created for people who try to teach us how to look after our islands and their surrounding waters. Please let our fishing industry, which is worth millions to our economy, continue to thrive.

For expressing his views, the Canon was castigated by, amongst others, the staff of the South Uist SNH office. He describes the reaction he received to his letter as follows:

SNH were furious. I’m a complete upstart, and how dare I, who knows nothing about anything, comment! But I agree. Yes, I know nothing about anything, but I have a feeling about the seals, about the sea, about ourselves, and

4 March 2001, No. 19. The article was derived from a press release, issued on 28 November 2000, with the same heading and similar, though longer, text. The press release went further than the published article in that it contained a statement (considered insultingly patronising by many people on Barra and South Uist) to the effect that SNH had been able to point out to the fishermen of the area what their long-term, interests were. The release also implied that the conservation of the area to date - without which the site would not be “special” in European terms - had been a matter of accident. All human intervention to date was therefore irrelevant to the current state of the site. As far as can be ascertained, the media ignored this release.⁵ Barra has two Community Councils, reflecting old parish boundaries: Northbay, where the SAC is proposed, and Castlebay at the south end of the island, opposite Vatersay, where the famous Kisimul Castle stands.

6 The Barratlantic fish factory, which is the only substantial industrial enterprise on Barra or any of the neighbouring islands, employs about 30 people directly and has a turnover of £4 million per annum. Approximately fifty fishermen fish the waters around Northbay, or Ardveenish as it is alternatively known. The annual value of the catch was recently estimated by Donald Joseph Maclean, the manager of Barratlantic, at about £1 million per annum (interview 5 April 2001). When asked about the pSAC, Maclean said, “It will be an absolute disaster. Barra *is* fishing”. These figures exclude the fishing community of South Uist whose catch within the northern part of the pSAC was recently estimated by Angus Campbell, fish-merchant of Lodaig, as about £400,000 per annum, representing about twenty full time equivalent jobs, both at sea and on land (interview 9 April 2001).

I don't like seeing people taking us for a ride or telling us you can't do this or that. I knew that SNH were dangerous. They consulted who? Did they ask one fisherman? Did they ask the people at the fish factory? Did they ask any of us? We have not been consulted. We the people, the fishermen, the crofters, have not been consulted. The whole thing is ridiculous, absolutely ridiculous. Let the seals alone is my advice to SNH. And let the rest of us who are people live in these islands in peace.⁷

SNH's method of consultation was to arrange public meetings at which they could answer questions rather than to try to elicit opinion by personal contact. The "consultation" was not really consultation at all, it was "explanation", and a deeply deceptive explanation at that. Three meetings were arranged on 24, 25 and 26 October 2000 in, respectively, Northbay, Eriskay and Daliburgh on South Uist.

In fact there was a fourth meeting, held before the three official ones, in Castlebay. This was the one which really mattered since that was the one which was attended by the fishermen. The Western Isles Council's Fisheries Joint Consultative Committee had earlier asked SNH to arrange a meeting with the fishermen to discuss the pSAC. This resulting meeting was attended by about forty people and five SNH staff, including the local Area Manager, John Love. The Western Isles Councillor for Barra, Donald Manford, has described the meeting.

There wasn't a single person there who was for the designation. I would describe the attitude as "quietly hostile". SNH put on this act that they were not aware that there was such hostility towards this designation, and any hostility was

probably due to ignorance: that we didn't know and didn't understand, and if SNH came over and met with people on Barra then they would allay these fears.⁸

The fishermen were against the designation because the area concerned is their winter fishing ground, being sheltered water - which is why the common seal uses it. SNH told the fishermen that the designation would not make much difference to their use of the area. Few trusted this assurance. "They reckoned the razor dredging might be the only fishery affected", said one afterwards. "Well I didn't believe any of it anyway. They just want to take control". When asked to confirm or deny Cllr. Manford's impression of hostility to SNH at the meeting, the same fisherman said, "Their approach would have made you *more* hostile, because they weren't listening to you. They were not there to listen to you, or to negotiate with you in any way. If anything everybody left in a worse mood than when they went there, which is pretty natural; you just feel helpless. That's why people wouldn't turn up at the next meeting [in Northbay]."

Another fisherman who attended, Callum Macneil, is also Chairman of the Barra Heritage and Cultural Centre in Castlebay and a member of the Northbay Community Council. He was disgusted by SNH's pretence that opposition did not exist.

What I was so taken aback by was that they were trying to portray the fact that people weren't worried. I think that is not only standing the facts on their head, but *deliberately* misleading. That is not the way to conduct business, at least not in my opinion. If you have a difference of opinion you accept that and accept that people disagree with you. But don't try to mislead a public body that's above you.

7 Interview, 8 April, 2001

8 Interview 9 April 2001, as following quotes

9 Interview 6 April 2001, as following quotes

The mood of the meeting was one of frustration.⁹

As a native Gaelic speaker and student of the island's past, Macneil was able to put the problem with SNH in a historical perspective.

We've already had this problem with the landlords in the last couple of centuries, so why should we want to give that kind of draconian powers to what is ostensibly a public body? I think it's quite insulting what they are trying to propose and the way they are trying to propose it. They are trying to tell the people of the western isles that we don't know how to look after our own affairs and that we don't know how to look after the environment. If they are trying to say this area needs protecting, without showing there has been any damage to the area, then that's quite insulting. Look at the disaster in agriculture: BSE, foot and mouth, and so on. Why should we trust these people to run our affairs? We haven't needed them all this time so why should we need them now? We're not bigoted or stupid or short-sighted or blinkered, but I see the longer-term damage in that SNH are making themselves into a body that actually dictates to people what should happen here when there is no need for it, when they should be working *with* people.

Describing the attitude of the Barra fishermen generally, Macneil was equally adamant:

I'm certainly not happy and I don't know of any fishermen that would be happy if

they knew what it was about. Why should fishermen be happy about possible restrictions on an area that they didn't have any restrictions on before. *What kind of fool would that be who would accept the reassurances of people who couldn't even give a truthful account of the meeting they attended?* I wouldn't trust them again, and I don't say that lightly. John Love certainly didn't give a true account of the feelings of the fishermen in this place. I don't want to fall out with my conservation body, but the fact is they have to learn that we also have a point of view, and we also need to live here, and we were living here before they were here. People had to adapt to nature. These people not only underestimate the feelings of the fishermen and the general public, they underestimate the intelligence of the animals they are trying to protect.

The last point related to the fact, which was mentioned by Canon Angus and which will be explored in Part 2 below, that the seals have reacted to the construction of the Eriskay causeway in a way which SNH presumably did not predict when they failed to object to that project: they have moved away¹⁰. Seals are not, as SNH apparently think they are, a static feature of the environment, which the pSAC will be if it is imposed. The fishermen have a much more interactive relationship with the seals, and consequently more intelligent understanding of their likely response to threats, than the bureaucrats within SNH. Callum Macneil describes the fishermen's attitude in this way:

I don't know a fisherman that would actually shoot a seal. Why? The fishermen

10 This is similar to the SNH objection to the Islay windfarm which was based on computation of the statistical likelihood of geese flying into the rotor blades *on the assumption that they would never, throughout the twenty-year life of the project, learn to take avoiding action*. The intelligence and adaptability of the goose is well known to all who interact with it. But it seems to be unknown to SNH's office-bound administrators and "scientists". All species of seal are intelligent, but the most intelligent of them is the common seal, which is why it used to perform in circuses.

have a certain respect for every person that uses the sea. Seals have a right to live; they have right to share what you share. The desire to cull is solely because seals are increasing in numbers, the fishing effort is increasing and both impact directly on a finite resource. So if you are going to control one it is unfair not to control the other. I don't think, though, you would find many fishermen volunteering to cull seals. I wouldn't. I am happy for somebody else to do it, provided it is done humanely, but I certainly wouldn't do it myself.

My opinion for what it is worth is that seals do impact on stocks - it is illogical to say that they don't - and the more there are the more impact they will have. Because they have no natural predators they will breed until there is no more food supply. Their food source is also part of man's food source. But fishermen are controlled, whether it is to a proper degree or it is to an over degree or an under degree is a matter of debate. But there is no control over the seals. That is one predator that is not controlled in any way, indeed SNH are trying to encourage more of them and to protect them.

After the Castlebay meeting, the general feeling was that the consultation was a sham, indeed a cynical ploy to *sell* a point of view held by SNH rather than *inquire* into the point of view of the islanders. "If SNH really wanted to canvass the opinion of everybody, they ought to have had the courtesy of writing to the fishermen and inviting them to a public debate to see if they could explain their views", says Macneil. It was obvious that SNH were not listening. "That's why nobody went to Northbay", adds Cllr. Manford. "What's the

point? But SNH tried to sell that as having persuaded people."

The Northbay meeting was a total failure. Only four members of the public turned up, to face a panel of nine SNH staff. One of those four members of the public was Mrs Marybell Galbraith, who is Chair of the Northbay Community Council. Her views on the meeting are clear:

I am very concerned at the content of SNH's press release. It is positively untrue that we are untroubled by the designation; the fishermen are absolutely incensed. The [Northbay] meeting was not advertised for the previous three weeks and was held during a school holiday week when a lot of people were off the island. SNH probably used the low turnout as evidence of lack of concern. This is certainly not the case.¹¹

Mrs Galbraith's memory of the meeting is that:

SNH did not listen to what we said. They were treating us with disdain. John Love was very angry. I said we are not going to listen to unelected bodies telling us what to do, and that did not go down well. We appreciate the beautiful island we live in and we do not want it desecrated.¹²

However, the most peculiar aspect of the two meetings was not SNH's determination to frustrate the process of public consultation, but its obfuscation of the science behind the designation. Since only scientific objections can be entertained to proposed European sites, it is a direct attack on the spirit of genuine consultation to be anything less than totally

11 Letter, 9 May 2001. In connection with the lack of advertising, Callum Macneil, for example, was on the island that week, but was completely unaware of the Northbay meeting.

12 Interview, 5 April, 2001

open with all scientific information relating to the site. Cllr. Manford was at both meetings and he remembers:

At the Castlebay meeting SNH agreed with the fishermen who said the seal numbers trend was increasing, but they went back on that at Northbay where they said the population was fluctuating, some years it was down, and some years it was up, but the trend wasn't necessarily on the increase. And when it was put to them that everybody locally who had anything to do with the sea knew that numbers were increasing their reply was that was "hardly a scientific basis to build our objections on".

The most interesting point about this is the one thing SNH did *not* do was to publish the actual numbers for seal counts, derived from Sea Mammal Research Unit (SMRU) thermal imaging surveys, on which both SNH's designation and this Objection (see Sections 2 and 3 below) are based. This would have shown that numbers are increasing overall in the western isles, but that they are dramatically down in the area of the pSAC. **It should be completely unacceptable for a public body charged with consultation on a scientific point to withhold the science from the public it is supposed to be consulting.**

SNH cannot try to excuse its erroneous account of the feelings of the local community on the basis that they did not understand the mood of the meetings they held because they also received several *written* objections to the designation. The Northbay Community Council wrote to SNH on 11 December referring to a joint meeting of the Northbay and Castlebay Community Councils held on 7 December, saying:

The meeting felt that SNH had an incorrect impression if they felt that there was little local concern about the SAC

proposal. Such an impression was at best erroneous and at worst misleading. It was stated by many people that it was felt it had been pointless to attend the local meeting called by SNH in Northbay to consult on the proposal as the view was widely held that no genuine consultation would take place as SNH were already determined to recommend designation.

Joe MacDougall, the Chair of the Castlebay Community Council also wrote to SNH, on 20 December, about the same meeting, making a similar point:

The joint meeting felt that SNH were under the wrong impression if they felt that the local fishermen were not concerned about these proposals. There was little representation by locals at the meeting held in Northbay because it was their opinion that very little consultation would take place due to the fact that SNH were determined to go ahead with their recommendations.

Several other interested parties lodged formal objections. The Western Isles Fishermen's Association objected on scientific grounds, in particular that "SNH have not undertaken proper scientific assessments" and that the "scientific information [on which the designation is based] is fundamentally flawed." This related both to seal numbers and to the changes in the sandbanks in the sound of Eriskay since construction of the causeway. The Western Isles Council also submitted a lengthy objection, on 15 December, focusing on the insufficient scientific evidence for the designation. On 26 January 2001, Calum MacDonald MP (Western Isles) also wrote on behalf of the whole electorate saying this was "a designation too far".

Finally, the Macneil of Barra combined the scientific argument with the point about SNH's bureaucratic posture. Having been associated with the island for seventy years, and also having

been a Professor of Law at Cornell, Harvard and Oxford Universities, the clan chief can speak with unique authority. On 27 January 2001 he wrote to object to the designation because:

Officials of SNH approached me last summer in the hope of securing my support for the Sound of Barra SAC. In the course of that conversation it became painfully apparent that absolutely no significant scientific investigation had been carried out concerning either the need for or the impact of this SAC... SNH is singularly inappropriate to serve as the Scottish Executive's sole consultant in these matters. Does it want to enlarge its empire? Do foxes want larger flocks of chickens? Environmental problems will be solved neither successfully nor adequately until *everyone has a voice in their solution.*

The community response

SNH's policy of failing to inform local communities of the scientific facts, and of trying to deceive the government as to the state of local opinion, became so obvious to the people living in the area blighted by this possible designation that it has been decided that a petition should be submitted to the Scottish Parliament. Amazingly for a community which, according to SNH, was now reconciled to the SAC, the following people and bodies agreed to support it:

- The Western Isles Fishermen's Association
- The Scottish Crofters Union, Barra Branch
- The Castlebay Community Council, Barra
- The Northbay Community Council, Barra
- The Eriskay Community Council
- The Loch Boisdale Community Council, South Uist,
- Cllr. Donald Manford (Barra)
- Cllr. Ronald Mackinnon (Loch Eynort)

- Cllr. David Blaney (Eriskay and Loch Boisdale)
- The Estate of Barra
- South Uist Estates Ltd.

This list represents *every* democratically-elected body or representative of the area and *all* large commercial interests. **The whole community is against this designation. For SNH to say that the people are reconciled to it is a simple lie.**

The purpose of the petition will be to ask for a formal investigation into SNH's attempt to mislead government as to the state of public opinion on the proposed designation. The support of the Community Councils and the local Councillors on the Western Isles Council reflects the solid electoral opposition to the designation. The Northbay Community Council wrote, on 13 July, in a sense which summed up much of the previous debate: "We feel strongly that SNH have not consulted in any meaningful way, and that the statements they have made to date are inaccurate and misleading". Likewise, the Area Vice-President of the Scottish Crofters Union wrote, on 14 July, declaring his organisation's support for the petition: "I can confirm that our membership is united in opposition to the imposition of yet another intrusive designation and the complete distortion and misrepresentation of our views by an arrogant and untruthful SNH."

After the end of the consultation, the whole process was summed up publicly by Macneil of Barra in a letter to the *Times Literary Supplement* which was published on 31 August 2001:

The "scientific" basis for an SAC to protect seals is nothing short of laughable. Local consultation was a farce. Not only had SNH already made up its mind long before, but it thereafter misrepresented local views.

2. Seal Numbers

SNH gives three reasons to justify the designation of the Sound of Barra pSAC: seal numbers, seal density and the existence of sub-tidal sandbanks in the northern component. The latter is a “habitat type of community interest” in Annex I of the Habitats Directive. The common seal is an “animal species of community interest” in Annex II, whilst size and density of the seal population are separate criteria for site selection as laid down in Annex III, paragraph B (a). Seal numbers will be considered in this part; density in part 3; and sandbanks in part 4.

As will be seen in SNH’s justification for the site (see Appendix A), the main reason for the site’s designation is given as follows:

Around 600 adult [common seals] haul out at the site to rest and moult. The site holds the largest relatively discrete colony of common seals in the Outer Hebrides, representing 2.9% of the British population in 1992, 1.7% of the British population in 1996 and around 1% of the EU population of the species.

Both the numbers and densities quoted are wrong. Although further information is given in the justification, no new arguments are advanced. The most notable feature of the whole document is that it entirely omits data from the 2000 counts, which renders the argument completely out of date since it does not take account of the effects of the construction of the Eriskay causeway.

The designation is unscientific

Reproduced overleaf is a spreadsheet which gives every count of seals ever made in the waters off the west coast of Scotland, from the Mull of Kintyre to Cape Wrath (Table 2). The source is the Sea Mammal Research Unit (SMRU), a department of the National Environment Research Council. The blank squares represent years and places where no count was carried out. The figures printed in red indicate those counts made in June or very early July, during the breeding season. The figures printed in blue represent those counts made in late July or August, during the moult. It will be seen that numbers are in general about a third higher for the moult count than the breeding season count. It should also be remembered that seal counting is an extremely hit-and-miss affair. The authors of the main paper on the subject say this:

Common seals spend an unknown proportion of their time in the water and these counts can therefore be regarded only as minimum population estimates. Consequently, if such counts are to be used to assess long-term trends, it is necessary either to estimate the proportion of seals which were in the water at the time of the survey, or to assume that this proportion does not vary from year to year or from site to site.¹

For this reason the figures in Table 2 should be treated with caution. But they are the only ones available. Their inadequacy as an aid for deciding between competing sites for the location of controversial conservation

1 “Methods for Estimating the Population Size of Common Seals”, P.M. Thompson and J. Harwood, *Journal of Applied Ecology* (1990), vol 27, p. 924.

TABLE 2: Counts of common seals on the west coast of Scotland and in the Western Isles.

*Blank entries represent year/locations for which no data has been collected.
Area names are those used by the Sea Mammal Research Unit (SMRU)
except the black lined "Area of pSAC", which represents only the
area of the pSAC.*

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Lewis and Harris	77												
North Uist	270												
Benbecula	114												
South Uist	308												
Barra	137												
Area of pSAC	233												
Kinlochbervie							18						
Eddrachillis Bay							136						
Enard Bay													
Summer Isles	5												
Little Loch Broom													
Gruinard Bay													
Loch Ewe													
Gairloch													
Torridon													
Applecross		4											
Plockton		23											
Rona		1											
Raasay		3											
Kyle													
Skye		439											
Sound of Sleat		18											
Loch Nevis		20											
Canna													
Rum													
Eigg													
Muck													
Arisaig		26											
Ardnamurchan		50											
Mull		139											
Loch Linnhe		49											
Loch Creran		10											
Lismore		221											
Loch Etive		37											
Firth of Lorn		367											
Coll				242									
Tiree				15									
Treshnish Isles		6											
Colonsay													
Oronsay													
Jura				144									
Islay				165									
West Coast Kintyre		140		232									

*Red figures represent breeding season counts.
Blue figures indicate counts at the moult.*

1987	1988	1989	1990	1991	1992	1993	1994	1995	1996 June	1996 August	1997	1998	1999	2000 July	2000 August
					516					926				79	594
					356				198	524				260	747
					212				71	255					379
					812				372	685				122	552
					460				164	255				56	250
					762				287	510				94	140
				33							69				
				207							253				
				6							13				
				80							120				
	1														
	3									5					
	7									1					
	2									7					
	18									3				63	36
	48									45					134
	427									277					271
	22									101					163
	3									38					155
	58									9					1
	2518				1405					1729				458	2181
	96									78					
	30	68								75					26
				41						19					
				10						2					
				29						36					
				25						56					
	456	519								213					596
	128									151					443
	1545		1017	876	827	955				1061				607	1626
	110									135					158
	36				12					66				2	67
	942		492	405	340	687				621				134	467
			35							26				2	31
			470							331				237	529
			369							946				437	989
			124							238				156	454
	29									41					31
			109							83					102
			24							0					75
			375							125				336	549
			724							605		583		661	1118
			1168							1113		43		219	769

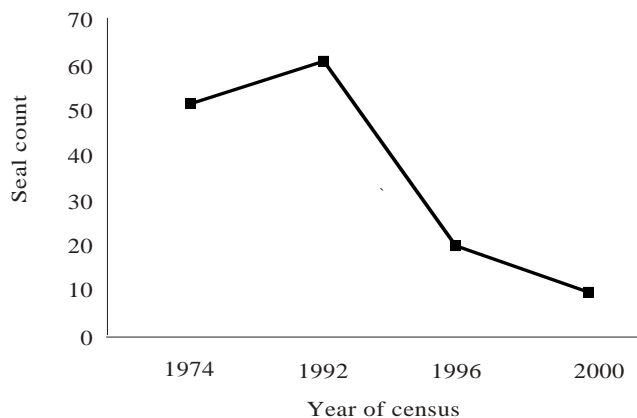
designations was recognised by the Advisory Committee on Sites of Special Scientific Interest (ACSSSI) when it gave judgement on the Islay pSSSI/pSAC for the common seal.²

The Committee notes with some concern the lack of data on which to assess this SSSI in the context of other possibilities in the same area. Counts for the SSSI are available in only three of the last nine years, whereas the SSSI guidelines recommend five years of counts, presumably in consecutive years.³

The same observation applies to the Sound of Barra pSAC, only more so as the data are even more scarce. The ACSSSI was discussing an SSSI designation and hence the SSSI guidelines. The guidelines for SACs are even vaguer than those for SSSIs, but that does not reduce the responsibility of the government to

assess the site in scientific terms⁴. Writing in 1997, the JNCC recommended only two sites, Mousa in Orkney and the Wash and North Norfolk Coast in England, though it said others would be published “when preparatory work has been completed”⁵. A glance at Table 2, will show that the only “preparatory” work which has been carried out after 1997 has been the count in 2000. Despite the ACSSSI’s strictures, SNH has not applied the SSSI Guidelines’ requirement of counts in five consecutive years. Indeed, the Director of the SMRU said recently that “the SMRU conducts surveys of common seals around the whole Scottish coast in cycles of five years. We cover one region each year. We conducted surveys of the Hebrides in 2000 and this year we move to Orkney. Unfortunately it will be 2004 before we are due to resurvey the Hebrides. We would, of course, like to survey more frequently but the funding is not available”⁶. SNH may or may not be right to

FIGURE 2: Common seal numbers within 1km of the Eriskay causeway as a percentage of numbers within the Uist side of the pSAC.



-
- 2 The ACSSSI is the government’s independent committee of scientists constituted under the Natural Heritage (Scotland) Act 1991 to advise SNH where there is an unresolved scientific objection to an SSSI designation. No such procedure exists for unresolved scientific objections to SAC designations
 - 3 *South-east Islay skerries SSSI, Consideration of Referral (07/98)* (1999), ACSSSI, para. 37
 - 4 *The Habitats Directive: Selection of SAC in the UK* (1997), JNCC Report 270
 - 5 It is worth observing that the Sound of Barra cannot be a very high priority site since it was also omitted from the original list of SACs promulgated in 1995 by the Scottish Office.
 - 6 Letter from Professor Ian Boyd, 20 June 2001..
-

TABLE 3: Common seal numbers within 1km of the Eriskay Causway (OS Easts: 770-790; OS Norths: 115-145). Total numbers at each count.
Red figures indicate breeding season counts.
Blue figures indicate counts at the moult.

	1974	1992	1996	1996	2000	2000
Total within pSAC area	233	762	287	510	94	140
- on Uist/Eriskay side	165	512	148	274	81	94
Within 1km of causeway	83	304	37	49	9	9

ignore the guidelines for designation on grounds of cost, but it cannot pretend that such a process is scientific within the meaning of the language used by the government's own independent scientific committee set up to assess matters such as these.

The designation ignores the effect of the Eriskay causeway

As Figure 2 and Tables 3-4 show, the construction of the Eriskay causeway through one of the main moulting sites - and an important breeding site - within the pSAC has

more or less destroyed the area as a popular habitat for seals.

SNH's case is based upon seal numbers. Those numbers have dropped dramatically since the building of the causeway and, with the altered tidal flow and consequently disrupted pattern of fish movement, there is no certainty that the seals will return in their former numbers. Indeed there is no certainty that numbers will not drop still further as the ecology of the site changes. SNH has made no attempt to discover the problem or to quantify the consequences. A spokesman said recently that

TABLE 4: Common seal numbers within 1km of the Eriskay Causway (OS Easts: 770-790; OS Norths: 115-145). Average annual figures. *Derived by applying the average of the two counts for 1996 and 2000 to the figures for 1974 and 1992, adjusting the breeding count up and the moult count down to give an annual average on a comparable basis.*

	1974	1992	1996	2000
Total within pSAC area	451	394	399	117
- on Uist side	319	265	211	88
Within 1km of causeway	161	157	43	9
Seals within 1km of causeway as a percentage of numbers within the Uist side of the pSAC	50%	59%	20%	10%

TABLE 5: Average moult season figures for each of the SMRU districts.

South Uist	683
Lewis and Harris	679
North Uist	542
Barra	328
Benbecula	282

he was “not aware that any scientific work has been done to assess the effect of the causeway on the seals within the Sound of Eriskay.”⁷

It is worth noting SNH’s confusion about seal science. In the third paragraph on p. 2 of the Justification (Appendix A), it will be seen that SNH says, “Relatively little is known about the feeding behaviour of common seals”. But in the next sentence, SNH claims definite knowledge: “The shallow sandbanks and sublittoral reefs throughout the site are of

considerable importance in maintaining a food supply for the seals”.

More importantly, it is clear that SNH did not foresee the abandonment of the site by the seals after construction of the causeway. On 31 March 1999, Mary Harman of the SNH office in South Uist wrote to the Planning Officer of the Western Isles Council saying, “SNH has no objection to the proposed development provided a series of detailed conditions ... are attached to the permissions”. Those “detailed conditions” were largely trivial matters, like landscaping, which was the subject of most of the comment. For the rest, SNH asked for nothing more than increased surveying activity, which it does routinely. The exceptional nature of the challenge to local biodiversity presented by the causeway appears to have passed SNH by.

Seal numbers

In its justification for the site, SNH quotes the figure of “about 600” seals as using the site to “haul out and rest”. This is not true. Three counts have been carried out at the moult, in 1992, 1996 and 2000. The totals were, respectively, 762, 510 and 140, which gives an average of 471, not “about 600”.

TABLE 6: Comparison of SNH’s justification for the pSAC with the facts.

Criterion	SNH Justification	The fact
Site average seal population	About 600	471
Site percentage of British totals	1.7%-2.9%	1.4% and falling
Largest colony in the Outer Hebrides	Sound of Barra	Sound of Harris

7 Letter from SNH Secretariat, 3 August 2001.⁸ Note that this figure is not a UK figure. Application of the Habitats Directive is a responsibility of the United Kingdom government and therefore Northern Ireland’s seal counts - common seals are a feature of Strangford Lough, for example - should be taken into account in establishing national totals of which site totals can be expressed as a percentage. Thus stated, these figures exaggerate the importance of a British site in the UK context.

TABLE 7: Common Seal numbers: sound of Barra and Sound of Harris compared. Total seal numbers at each count. Red figures indicate breeding season counts. Blue figures indicate counts at the moult

	1974	1992	1996	1996	2000	2000
Sound of Barra Total	233	762	287	510	94	140
Sound of Harris Total	192	417	118	643	220	555

SNH quotes a total censused British population of adult common seals of 33,200 for 1996.⁸ 471 is 1.4% of that total. If the latest figure is taken, 140 for the site as a whole, the proportion is much smaller - just 0.4%. The fact is that the seals have deserted more than just the area round the causeway. The figures for the Barra side are almost as unfavourable: with seals counted at the moult dropping from 253 in 1992 to just 46 in 2000. By any standard this puts the site out of contention for designation since the Habitats Directive is quite specific that it is the best sites which are to be chosen.

Assuming the requirement for the Western Isles to have a common seal SAC imposed on

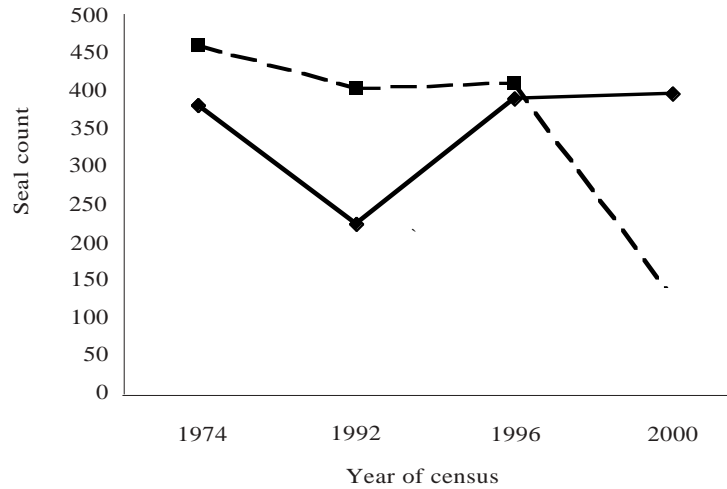
it, the Sound of Barra pSAC is near the bottom of the table of contenders. Taking, for consistency, the moult season figures for each of the SMRU districts in the three years for which they are available and averaging them, Barra appears second from the bottom of Table 5.

The most important concentration of seals in the Western Isles is in the Sound of Harris. Overleaf is an analysis of the relative numerical merits of that composite area with the composite site which has been notified as the Sound of Barra pSAC (Tables 7-8, Figure 3). It is clear that there can be no justification for designating the Sound of Barra on seal numbers alone.

TABLE 8: Common Seal numbers: sound of Barra and Sound of Harris compared. Average annual figures. Derived by applying the average of the two counts for 1996 and 2000 to the figures for 1974 and 1992. Breeding season figures are 34% of moulting season figures

	1974	1992	1996	2000
Sound of Barra	451	394	399	117
Sound of Harris	371	216	381	388

FIGURE 3: Common Seal numbers: sound of Barra (dashed line) and Sound of Harris (solid line) compared. Average annual figures.
Derived by applying the average of the two counts for 1996 and 2000 to the figures for 1974 and 1992. Breeding season figures are 34% of moulting season figures



Taking all this information together, SNH's justification can be compared with the facts as shown in Table 6.

Not one of the SNH facts quoted in its justification is accurate, the main reason being that SNH chose not to include data from the

2000 counts, even though they were carried out many months before the designation was notified at SNH's behest. **The Eriskay causeway changes everything, as the most up-to-date information shows. Since the causeway is a permanent structure, this site should, therefore, be omitted from the list of pSACs.**

3. Seal Densities

The second limb of SNH’s argument about seals concerns not their absolute numbers, but their density. Since the numbers quoted by SNH are inaccurate, the densities will be too. But there is a larger issue than that, namely the flawed way in which SNH arrives at a density figure.

Traditionally, population densities are computed by simply dividing numbers by area. SNH does not compute the density of common seal SACs by this method. Had it done so, the figure would be about 8 seals per square kilometre. Instead SNH quotes a figure of 10 seals per sq km which, it says in its justification, “is based on the standard approach of dividing the mean number of seals by the number of 1 km national grid squares in the pSAC containing

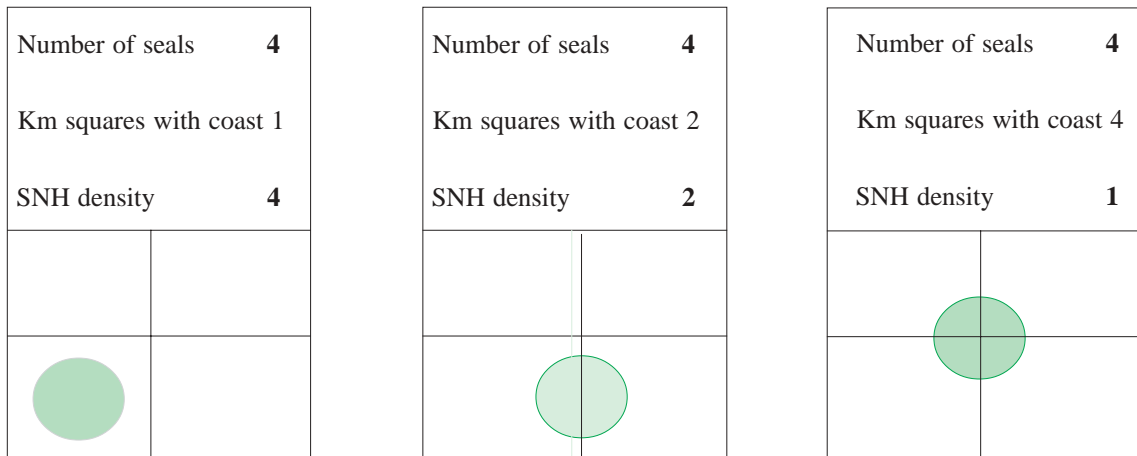
coastline and rounding the seal densities to whole numbers.” This is very misleading.

The common seal, for purposes of conservation designations, can be said to use the intertidal zone only, where it is counted by videoing sites from a helicopter for later analysis by thermal imaging techniques. The intertidal zone is a convoluted set of curves which can, in principle, be thought of as a line with seal density expressed as a number of animals per unit length.

SNH’s method of calculating density is quite different. Any 1 km square on the Ordnance Survey national grid which has coastline in it is taken as a square kilometre of seal area. The total of all such squares for a particular site is then divided into the number

FIGURE 4: Example showing how the SNH method of determining seal densities can result in highly variable estimates.

Consider an isolated island with a censused population of 4 seals. By the SNH method of arriving at a “density” statistic, the apparent density can be anything from 4 to 1, depending on the accident of **where the island falls within the grid** used by the Ordnance Survey, By contrast, if the coastline length of the island is assumed to be 1 kilometre, and the density is calculated the ordinary way, the result is a consistent 4 seals per km, whatever the location of the OS grid.



of seals using the site to give a density figure. It is a simple, but very unpredictable method. Counting map squares is much easier than measuring actual coastline length. But a density figure computed by coastline length is the only true reflection of relative seal density, which is what is required when selecting one site in preference to another since site geography varies considerably.

For example, a site with a relatively straight coastline and no offlying skerries is artificially disadvantaged as compared with an area of densely scattered skerries. For the same density per unit coastline length, an area such as the Sound of Barra will have a much higher seal density on SNH's method simply because there are more 1km squares with coastline in them per unit run of coast. Of course, if a finer grain were used - say 1/10th km squares - then the difference would be much reduced. Since the point of the designation justification is to prove that this site is a better one relative to other

competing ones, it is the relative densities that count. That is why the method of computation is so important.

The randomness of SNH's method

By the SNH method it is possible to vary the number of seals per "km square with coast" by up to 300% depending upon the accident of where the squares within the national grid happen to fall. Since this is the key figure upon which the whole SNH statistical analysis depends, it is worth illustrating the way in which one area can produce three different readings, depending upon the way the map is drawn and therefore three different seal densities for the same number of seals in the same area. An example is given of the extent of this randomness (Figure 4).

The absurdity of using a method which can produce wildly different density figures for the

Table 9: Seal density in the Islay pSAC, Coll, Sound of Harris and Sound of Barra. Seal density is based upon the mean seal count between 1990-2000 divided by the length of coastline.

Site	1990-2000 mean count	Coastline length	Density
Islay pSAC	622	40	16
Coll	768	50	15
Sound of Harris	538	38	14
Sound of Barra	471	50	10

1 *The Natural Heritage of Scotland: an Overview* (undated) SNH, p. 99. It would be interesting to know how many "1 km squares with coast" the country's coast totals. Perhaps it is significant that SNH does not give that figure.

same population should be obvious. Certainly, it is wholly unscientific.

The only truly scientific way - though it is time-consuming, like most accurate work - is to establish the length of coastline on which the seals haul out and divide that by the number of seals present. Seals are not counted in the sea and do not venture in-land. Since mud- or sand-flats are not present in this site, the intertidal zone is narrow. It is perfectly amenable to this approach, which is not susceptible to the randomness of the SNH approach.

Using the best indicator, which is a mean of all recent counts, a table of seal densities (including two other sites for comparison) is detailed in Table 9.

It is quite clear that Barra should not be preferred over the Sound of Harris and that neither of them should be considered until a full investigation into all other possible sites is undertaken on the basis of density computations which are performed using coastline length as

the divisor, not the random and unscientific criterion of "1 km squares with coast".

Furthermore, as far as Barra is concerned, it is hardly necessary to point out that the basis of these calculations is the mean counts from 1992-2000 which totally distorts the current and future position since the construction of the Eriskay causeway has radically altered the ecology of the site. Today, the density is only slightly higher than the density figure for the whole of the Scottish coastline, which SNH takes as 11,803km long¹(Table 1, p. 5).

The seal density in the area of the Sound of Barra pSAC has fallen little more than a fifth of its previous average level. **Therefore, it is clear that on density grounds also the Eriskay causeway has changed everything. The site is clearly no longer "essential to the life and reproduction" (Habitats Directive Article 4.1) of the common seal whose numbers are rising strongly despite their falling on this site. The Sound of Barra should therefore be omitted from the list of pSACs.**

4 The Sandbanks

There is little that can be usefully said about the “sandbanks which are covered by seawater at all times”. In the SNH Justification (see Appendix B) no map is given of the sandbanks and little other locational information is included. The appropriate Admiralty chart (2770) is not reproduced. There is said to be eelgrass in the Sound of Eriskay and maerl beds in the main channel of the same Sound. But since the completion of the causeway, there is no channel of any sort, main or subsidiary. Apart from that, the Justification comprises nothing more than generalities, with no comparison with other sites, or any reason to say why the peculiar features of the sea bed in this area - eelgrass and maerl beds are common in shallow water around the western isles and Hebrides - merit designation in comparison with others of similar but inferior “interest”.

It is worth mentioning that in the original JNCC report seven possible sites were given, but that list did not include the Sound of Eriskay¹. This is not unexpected, since in a comparable area of coastal seabed, there would be enough life to fill the two pages of species description, which is all SNH does, so the site is not unusual - at least SNH gives no indication that it is. In any event, the JNCC Report begins by saying of sandbanks, which are slightly covered by seawater at all times, “This habitat type occurs widely on the north-east Atlantic coast of Europe and is extensive in the UK.”

Not only that SNH itself recognises that these sandbanks are not themselves important and were only mentioned as a feature because they were present anyway on a site notified for seals:

The Sound of Barra is not proposed as one of the best sites for sandbanks... At the Atlantic Biogeographic meeting the UK list was found to be “insufficient” in relation to this habitat. In addition, the EC advised the UK that the dataforms should identify all features of a site which were significantly present and not solely those for which a site had been notified. As a result additional sites have been proposed for addition to the UK list for this feature. Annex I habitats and Annex II species specifically present on sites identified for other interests have also been specifically identified. The sandbanks in the Sound of Barra fall into this latter category as a significant feature within a site primarily identified for the common seal.²

Not only are the sandbanks irrelevant, they appear also to have been destroyed by the Eriskay causeway, or at least significantly altered. The tidal flows in the area will be completely changed by this barrage. The ebb used to flow strongly from west to east through the sound of Eriskay and the flood in the opposite direction, bringing nutrients as well as marine life. Apart from the

1 *Op. Cit.*, pp. 32-3. The sites mentioned are: Fal and Helford, Isle of Scilly, Plymouth Sound, Severn Estuary, Solway Firth, Sound of Arisaig and the Wash and north Norfolk Coast. A further eighteen sites were proposed in 1997 by the UK Marine SACs Project for sandbank and mudflat interest, but the Sound of Barra was not among them. See: *Intertidal Sand and Mudflats and Subtidal Mobile Sandbanks: An overview of dynamic and sensitivity characteristics for conservation management of marine SACs* (1998), Scottish Association for Marine Science, p. 21.

2 Letter from SNH Secretariat, 6 July 2001.

small bridge in the centre of the causeway, that channel no longer exists. Whether the bridged gap will be large enough to maintain sufficient flow to enable the biodiversity of the seabed to be maintained is unknown. Likewise, it is not known if it will eventually silt up and destroy the small remaining flow altogether.

One thing is known and that is that the ferry crews “have already reported significant changes in the sandbanks due to the change in the tidal currents”³. A glance at the chart will show how narrow the gap between the sandbanks is. The ferry channel from Uist to Haun on Eriskay is a dogleg, the crews would have to be very alert to any shifting sandbanks. No answer to this point has been made by SNH. A second point, relating to the other side of the new structure, has been equally ignored: “Since the construction of the causeway, fresh rainwater running into the sea to the west of the causeway has been retained in the area for prolonged periods and there has been no scientific assessment undertaken to ascertain the long-term harm that this may cause to the eelgrass and maerl beds located within the pSAC”⁴.

It will be possible to make authoritative claims for the geography of the site only in light of substantial research after the completion of the causeway. The Scottish Association for Marine Science (SAMS) prepared a management report on this type of habitat for the UK Marine SACs Project (as quoted in footnote 1 on the previous page). In their chapter entitled “Sensitivity to anthropogenic activities”, the scientists say:

The greatest threat to these biotope complexes (i.e. sandbanks slightly covered by seawater) are through the loss of habitat through barrage construction... Barrages restrict tidal amplitude, effectively raising the low water mark. The barrage impact is complex depending on patterns of sediment redistribution. Subtidal areas, including sandbanks, behind a barrage will have their salinity regime affected due to the restricted exchange of seawater.⁵

It would be entirely inappropriate - and unscientific, of course - to make any assumptions about the future of the seabed in the Sound of Eriskay in the absence of any research. None is even planned, much less completed. But there is one irrefutable piece of evidence for the fact that much has already changed: namely the 97.5% reduction in seal numbers within 1 kilometre of the causeway in 2000 from the mean of 1992-6.

Setting aside the fact that even SNH admits that the sandbanks of the Sound of Eriskay are of no great importance to the biodiversity of Britain, no scientific basis can exist for designating this area without a properly researched understanding of the current and likely future biodynamics of the site. No research is either in progress or prospect. For this reason also, the Sound of Barra should be omitted from the list of pSACs.

3 Letter to SNH from Western Isles Fishermens Association, 27 December 2000.

4 *Ibid.*

5 *Op. Cit.* (SAMS), pp.80, 88 As noted in Part 2 above, SNH was asked what work had been done on the impact of the causeway on this site but refused to answer.

5. Conclusion

The Habitats Directive states, in Article 4.1 that sites which qualify should “represent the physical and biological factors essential to the life and reproduction” of the species concerned. It is clear that, following the construction of the Eriskay causeway, this is no longer the case for the common seals of the Sound of Barra. Four main observations can be made:

- The sandbanks are an irrelevance.
- Seal numbers and densities have dropped dramatically, both within the Sound of Eriskay and also off the Barra coast.
- Neither the geography nor the post-causeway biodynamics of the site are now known with sufficient scientific certainty to justify designation of an SAC.
- No research is currently in hand to redress the lack of knowledge.

The Member of the Scottish Parliament for the Western Isles, Alasdair Morrison MSP, summed up the argument succinctly in a letter to this author on 5 July 2001:

My principal concern on the Sound of Barra pSAC is that the impact on the environment of the new Eriskay causeway has not been fully examined. I agree with the stance taken by the Western Isles Fishermen’s Association and other local organisations that it would be misguided to make a decision based on the current available information.

SNH’s three criteria for designating the site were seal numbers, seal density and the sandbanks. All three have been fatally undermined by the causeway. Since that is a permanent structure, an adequate scientific case can no longer be made for the designation of the Sound of Barra as a pSAC. The site should be deleted from the list to be submitted to the European Commission.

Afterword:

SNH's Approach to Science

This document started by recording SNH's approach to public consultation on the Sound of Barra pSAC. It is appropriate to end by making some general comments on SNH's approach to science.


The first point to make combines the consultation with the science since SNH appears to think that that local knowledge is not "science" (see p. 13). To dismiss the fishermen's views on seal numbers as "hardly scientific" is in itself unscientific since science includes *all* knowledge. The Chief Scientist of the UK Department of the Environment, Transport and Regions, David Fisk, discussed precisely this point in a paper published in *The Journal of Environmental Law*¹. Fisk defined science as "a body of knowledge which includes *both* what is known and what remains in dispute... It does not exclude any evidence, however poor the quality". Fisk observed that "it is a common fallacy to suppose that inspecting environmental science will tell us what to do. This leads to an unhealthy pressure to narrow uncertainties". Fisk also drew attention to the dangers of what he called "single expert bias". "Experts will in general overestimate how much of their own views would be held by their peers [and there is] a stronger form of bias which might be called 'disciplinary paradigm bias', which may be shared by all [peers]."

The only solution Fisk saw is to have the science which is used to justify controversial public policy measures assessed by "a multi-disciplinary panel, with *at least one independent outsider*, using a circulation of results, peer review and a subsequent risk assessment step". That is not the process SNH went through in this case. Instead, an inaccurate (see parts 2 and 3) account of single expert (i.e. SMRU) science was adopted by peers (i.e. SNH) with a view to discounting the observations of fishermen without even taking serious steps to find out what those observations are and what their resulting knowledge of the site is. In truth it is not the Barra fishermen but SNH which is "hardly scientific".

But this disdain for certain types of knowledge does not mean that SNH is open with the "science" it does not disdain. Members of the public who object to conservation designations are routinely denied access to the science upon which any objection needs to be based. All the "scientific" information is in SNH hands and so, therefore, is all the power. None of it is in the hands of the objectors, at least at the commencement of the process of objection. This author has been involved with six objections to conservation designations and in each case, SNH has been equally unhelpful. Sometimes information is deliberately withheld; on other occasions its existence is not advertised so that it is unlikely even to be requested. In one case, there was an attempt to charge a large

1 "Environmental Science and Environmental Law", *Journal of Environmental Law* (1998), Vol 10, p. 3

FIGURE 5: Letter from John Markland of Scottish National Heritage


SCOTTISH NATURAL HERITAGE	John Markland CBE <i>Chairman</i>	12 Hope Terrace Edinburgh EH9 2AS
		Telephone Direct: 0131-446 2202 Telephone Switchboard: 0131-447 4784 Fax: 0131-446 2278

Ian Mitchell Esq.
Xana Dubh
86 Lennox Street
Port Ellen
Isle of Islay PA42 7BW

23 August 2001

Dear Mr Mitchell

Thank you for your letter of 31 July 2001, regarding comments made about you by one of SNH's staff, Mr John Love. Such comments are not acceptable and do not have my backing. I apologise for this incident. An appropriate instruction is being issued to staff.

Yours sincerely


John Markland

Chairman: John Markland CBE Chief Executive: Roger Crofts CBE
Working with Scotland's people to care for our natural heritage

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sum of money for seal population statistics which were held by the SMRU but which were being used by SNH in the dispute concerned.

All this is in flagrant contradiction of the evolving EU policy as described on p. 9-10. To ensure equality between the governors and the governed, it should be mandatory for SNH to provide all the scientific evidence, both for and against any designation, free of charge - and promptly.

The last point relates to the fact that SNH can be very slow to reply to questions about the details of the science of a contested designation. Statute allows three months only for the submission of objections to SSSIs - the “consultation” period for European sites is slightly longer, but there is still a deadline - and within that all the scientific arguments have to be discovered, researched, checked and, where appropriate, refuted. In the past, requests from this author for speed have met with the answer that SNH is obliged to respond to information requests from the public within twenty working days (i.e. a month). Normal correspondence response times are less, but *when a designation is being fought: then the full twenty days are usually taken up.*

Another hindrance is the way SNH answers “difficult” questions, often not directly, or in such a way that the answer provokes another question, which then takes another month to have answered, by which time the consultation period might have expired. The strongest possible objection is lodged to this practice and it is suggested that in times of consultation on unwanted conservation designations, the normal

timescales for information provision should be reduced; either that, or the consultation period lengthened to neutralise SNH’s delaying tactics.

The government’s independent scientific advisory committee, the ACSSSI, supports this point, having noted in its judgement on the Islay skerries case:

Although the Committee understands that SNH can be in a difficult situation using data which are supplied by others, the Committee’s task was made much more difficult by the sequential supply of information to the objector, and by the objector supplying information to the Committee which could usefully have been provided by SNH. As a matter of principle, the Committee would expect that all relevant statistics, papers and documents would be provided in good time for adequate consideration by all parties including the objector.²

That comment was made nearly three years ago. But SNH has not altered its behaviour. The situation today is at least as bad as it was in 1998/9. In November 2000 the ACSSSI also adjudicated on the Arran Moors SSSI, saying this about SNH policy of withholding information from objectors:

The Committee readily acknowledges the difficulty that SNH found itself in using “confidential” data supplied and, in some cases, owned by others. However, the Committee’s task was made considerably more difficult because all the scientific evidence supporting the SSSI had not

² *Op. cit.*, para 22.

³ *Arran Moors SSSI: Consideration of Referral (03/00) (2000)*, ACSSSI, para. 11. The ACSSSI talks of the importance of SNH’s providing information in support of a designation. On the principle of natural justice, the law requires that SNH, as an impartial administrative body, also provide all scientific evidence which militates *against* a designation.

been made available to the objectors... As a matter of principle, the Committee would expect all relevant scientific evidence and data supporting the case for notification to have been provided in good time for adequate consideration by all parties, including objectors .³

Finally, it should be noted that SNH staff are not always scrupulous in the ways in which they try to force objectors to conservation designations to desist from their opposition to the organisation's plans. On 30 July 2001 John Love, the SNH Area Manager for the Uists, telephoned Cllr. Donald Manford, the Councillor for Barra and one of the instigators of this objection, to warn him "as a friend" that this author's motives for engaging in his profession were improper. Love made an allegation of criminal involvement - for which, it should be emphasised, the Chairman of SNH has subsequently apologised (Figure 5).

Cllr. Manford was shocked at this underhand way of attempting to deprive his constituents and others of the representation to which they have a right, and upon which they had decided without any outside prompting. Worse than that, Love then appeared to threaten Manford with loss of funding for a conservation project on Barra after he learned that his smear had been reported. "This couldn't help but influence SNH's attitude towards the grant", Manford remembers Love saying to him, although Love is said now to deny the allegation.

Manford was aghast. "It's not like SEPA," he comments, "where there are clear and strict criteria for grant giving. With SNH all grants are discretionary. That leaves the system wide open to corruption".

The question that hangs in the air is this: why can a senior SNH staff member have thought such disreputable conduct necessary if science is the only legitimate criterion for site designation?

Appendix A

SNH's Justification for the site (seals)

APPENDIX A

Additional information for the Annex II Species Common seal *Phoca vitulina*

Site name	Sound of Barra
Grid Ref.	NF 7510
Country	Scotland (Western Isles)
Size	5280 ha
Marine Biogeographic Region	Vlb/c: Mull of Galloway to Duncansby
Head	(The Minch/Outer Hebrides Atlantic coast)

Reasons for recommendation of site

The skerries, islets, undisturbed main island shores and offshore sandbanks in the Sound of Barra consistently support a nationally important breeding colony of the **common seal *Phoca vitulina***. Around 600 adults haul out at the site to rest and moult. The site holds the largest relatively discrete colony of common seals in the Outer Hebrides, representing 2.9% of the British population in 1992, 1.7% of the British population in 1996 and around 1% of the EU populations of the species. During the 1996 breeding survey 165 pups were observed at the site, accounting for around 50% of common seal pup production in the Outer Hebrides. The Sound of Barra pSAC contributes to the series of sites around the British coast that have been selected to maintain the geographic range and status of the common seal.

Site description

The Sound of Barra is situated between the islands of South Uist and Barra in the Outer Hebrides. The coastline is characterised by rocky shores interspersed with small inlets and larger sandy bays. The region experiences some of the strongest winds and largest waves in the UK. However, many of the marine communities in the Sound of Barra are indicative of a degree of shelter from the prevailing weather conditions. In contrast, much of the seabed is exposed to moderate or strong tidal currents.

The Sound of Barra pSAC is a composite site composed of two blocks containing the major islets, skerries and sandbanks that provide haul-out and pupping areas for the common seal colony. The northern block encompasses the Sound of Eriskay, the southern shores of South Uist, the offshore islands of Calvay and Hartamul and the northern shores of Eriskay. The southern block encompasses the convoluted coastline of north-east Barra and the skerries, islets and offshore islands in the Sound of Hellisay. The diversity of marine habitats at the site is a reflection of the variation in exposure and tidal streams around the islands, the range and types of substrata and the varied topography.

APPENDIX A (continued)

Qualifying Annex II species: Common seal *Phoca vitulina*

Seals are marine species that depend on the sea for their food but which also have a need for safe areas of land to haul out to rest, pup and moult. The EU common seal population declined during the late 1980s following an outbreak of the phocine distemper virus. The British population has largely recovered and is now thought to represent at least 40% of the European sub-species *Phoca vitulina vitulina* and nearly 5% of the world population of common seals. Consequently, the UK has clear international obligations with respect to conservation of the species. The minimum size of the British population of moulting common seals in 1996 was estimated at 33,200 (to nearest 100) of which 29,600 (89%) are found in Scottish waters. The major concentrations of the Scottish population are found in the Northern Isles and around the west coast and Inner Hebrides.

Common seals are found in a wide variety of coastal habitats throughout their range. On the west coast of Scotland, common seals habitually utilise rocky shores, islets and skerries as haul-out areas to rest, pup and moult. The seals are usually scattered along the coast in small groups of around fifty animals. The highest concentrations of seals in the Sound of Barra are usually found on offshore islands to the south-east of Bruernish, at Greanamul and Bogha nan Sgeirean Móra and on island shores in the Sound of Hellisay. Eel Rock and rocks to the south of Rubha na Mòine in the Sound of Eriskay are also favoured haul-out areas. Adult common seals can remain very faithful to particular haul-out areas, moving around the same group of favoured locations depending on the prevailing weather conditions, on a seasonal basis and over a number of years. Large colonies are important in maintaining overall population size and are significant as sources of emigration to smaller or newly established groups.

Pupping is highly synchronous and usually takes place on the fore-shore; most births occur in early to mid-June and newly born pups are able to swim within one hour of birth. Common seals undergo a complete annual moult soon after the breeding season and the seals remain ashore for significant periods at this time. Relatively little is known about the feeding behaviour of common seals but they appear to spend a high proportion of their time close to haul-out areas during the breeding and moulting seasons. The shallow sandbanks and sublittoral reefs throughout the site are of considerable importance in maintaining a food supply for the seals; common seals are known to have a varied diet comprising a wide range of fish species, octopus, squid and various shellfish.

Structure and function of Habitat:

- The moult counts of 1992 and 1996 for this site show that this site has supported a breeding and moulting population of common seals indicating that suitable conditions prevail.
- The seals utilise a wide range of skerries, typical of west coast habitat, islets, undisturbed main island shores and offshore sandbanks of the Sound for haul-out, pupping and nursery areas. These provide a range of options for sheltered haul-out depending on the weather and unusual events that may cause short-term disturbance to seals within the site.
- The immediate offshore areas are important for breeding and social interactions for seals.

APPENDIX A *(continued)*

Common Seal Numbers

Context of the site

Based on the mean of the 1991 to 1996 moult counts this site supports an average of 636 seals. Based on the 1996-1997 count in Britain this represents 23% of the Outer Hebridean population (2,820 seals), which in turn represents about 9% of the British common seal population (33,200, to the nearest 100).

Count Data:

- Moulting population numbers were 762 in 1992, and 510 in 1996. In the 1996-breeding season 287 adults and 165 pups were counted. This is the largest concentration of common seals in the Outer Hebrides.
- The 1992 count represented around 2.6% of the British population, based on data from the 1988-1994 surveys when the total British population was estimated at around 29,300 (to nearest 100).
- The 1996 count represented around 1.5% of the British population, based on data from the 1996-1997 surveys when the total British population was last estimated at around 33,200 (to nearest 100).
- These numbers represented 2.9% and 1.7% respectively of the Scottish total population. (The Scottish total population was estimated at around 26,700 (to nearest 100) for 1988-1994 and around 29,600 (to nearest 100) for 1996-1997)

Density:

Based on the mean of the two moult counts seal density for the Sound of Barra pSAC is 10 seals per km². This is based on the standard approach of dividing the mean number of seals by the number of 1 km national grid squares in the pSAC containing coastline, and rounding the seal densities to whole numbers. (The value used for this site was 62 km squares containing coastline).

Summary Table:

	Date of survey		Mean count
	3 Aug 1992	15 Aug 1996	
Sound of Barra pSAC	765	510	636

APPENDIX A (*continued*)

Quality of scientific data available

Estimates of common seal population size are based on counts made at haul-out sites. As an unknown number of seals will remain in the water during surveys, the count of visible animals represents only a minimum estimate of the population size. Aerial surveys of the Sound of Barra common seal population are undertaken approximately every 4-5 years as part of a routine programme by the Sea Mammal Research Unit. Surveys in August 1992 and 1996 were timed to coincide with the annual moult, when common seals appear to spend the highest proportion of their time hauled out of the water. Studies suggest that 60-80% of the population is included in counts made at this time of year. The survey in June 1996 was timed to coincide with the pupping season. These surveys were carried out using the most up-to-date thermal imaging techniques and the quality of the data obtained is considered to be very high.

The marine habitats and communities in the Sound of Barra were comprehensively surveyed in 1996 by the Marine Nature Conservation Review. The coastal and marine habitats in the Sound of Eriskay were surveyed in 1999 by Cordah Limited as a precursor to the planned construction of a causeway from Rubha na Mòine on South List to Rubha Bàn on the Isle of Eriskay. The survey provides a comprehensive description of the littoral and sublittoral communities and an assessment of the extent, distribution and species richness of the maerl and eelgrass habitats. Earlier marine surveys of the region are summarised in Connor & Little (1998).

Boundary justification

Although common seals are widespread, population density varies greatly from place to place, with low numbers at many sites. Consequently, it can be difficult to define the boundaries of specific sites. The Sound of Barra holds a notable breeding colony of common seals and provides extensive haul-out areas, which are thought to be very important for conservation of the species. The Sound of Barra pSAC is a composite site of two blocks encompassing the major islets, skerries and sandbanks that are utilised by the colony. The size and nature of the site reflect the mobile habits of common seals and their natural dispersion patterns. The landward boundary of the site is at the level of MHWS as seals usually haul out on intertidal sandbanks and seaweed covered tidal ledges. The seaward boundary extends to a minimum distance of 500 m offshore, using the simplest straight line boundaries possible. The sublittoral sandbank and reef habitats contribute to maintaining a food supply for the seals.

Biogeography: Geographical distribution of qualifying Annex II species common seal *Phoca vitulina*

The common seal *Phoca vitulina* is one of the most widely distributed of all seal species, occurring along the temperate, sub-arctic and arctic coasts of the North Pacific and North Atlantic. Five sub-species are generally recognised, based largely on geographical distribution.

APPENDIX A (*continued*)

The British population belongs to the European sub-species *Phoca vitulina vitulina*, which is confined to the eastern North Atlantic. It occurs regularly around the northern European coast up to Iceland and Spitzbergen and is occasionally found as far south as the coast of Portugal. Scottish waters hold around 90% of the British population, with notably high concentrations around the Hebrides, Orkney and Shetland. Common seals are less widespread on the east coast of the UK. However, notable colonies are found in several of the east coast estuaries, from the Moray Firth in the north of Scotland down to the Wash and the Thames in the south of England.

Comparison with other similar sites

Common seals are found throughout the coastal waters of northern and western Scotland, and around estuaries on the east coast of the UK. In northwest Scotland, common seals are particularly abundant on sheltered mainland coasts and the island of Skye. The Sound of Barra pSAC holds the largest relatively discrete breeding colony in the Outer Hebrides. It is a representative site and contributes to the series of sites around the UK coast that have been selected to maintain the geographic range and status of the species.

Appendix B

SNH's Justification for the site (sandbanks)

APPENDIX B (continued)

SUPPORTING INFORMATION: SOUND OF BARRA pSAC

Qualifying Annex I habitats

Sandbanks which are slightly covered by seawater all the time

Shallow sandbanks are characterised by soft sediments that are permanently covered by shallow seawater, typically at depths of less than 20m below chart datum. The Sound of Barra pSAC is notable for a wide variety of shallow sandbank habitats, including gravelly and clean sands, muddy sands, extensive beds of the eelgrass *Zostera marina* and tide-swept maerl beds composed of the coralline red alga *Phymatolithon calcareum*. The diversity and types of community associated with these habitats are determined by sediment type and a variety of other physical factors including geographic location, relative exposure of the coast and differences in depth and salinity of the surrounding water. *Z. marina* beds and maerl beds are distinctive communities, which are characterised by a disproportionately high diversity and abundance of plant and animal species in comparison to the adjacent sedimentary biotopes.

Dense beds of the eelgrass *Zostera marina* characterise sheltered medium sands in the Sound of Eriskay. The eelgrass beds constitute an important reservoir of coastal biodiversity and create a productive and diverse habitat that provides shelter and food for a wide variety of marine species. The eelgrass blades are colonised by abundant filamentous brown algae (Ectocarpaceae), colonial diatoms, the colonial sea squirt *Diplosoma listerianum* and numerous stalked jellyfish (*Haliclystus auricula*). A dense network of roots stabilise the sediments, which are characterised by a diverse faunal assemblage including the polychaetes *Lanice conchilega* (sand mason), *Scoloplos armiger*, *Pygospio elegans*, *Capitella capitata* and *Platynereis dumerilii*, the crustaceans *Ischyrocerus anguipes* and *Dexamine thea*, the echinoderm *Amphipholis squamat* & and the daisy anemone *Cereus pedunculatus*. Motile predators and scavengers including the hermit crab *Pagurus bernhardus* are typically associated with the eelgrass beds. A variety of drift and attached algae are common amongst the eelgrass assemblage including the sugar kelp *Laminaria saccharina*, the sea-lettuce *Ulva* sp. and the red algae *Jania rubens*, *Porphyra* sp. and *Asparagopsis armata*. The *Z. marina* beds serve as an important source of food and shelter for juvenile fish and crustaceans.

Maerl beds composed of the coralline red alga *Phymatolithon calcareum* occur on sands and shell gravels in the main channel of the Sound of Eriskay, and to the south of Flodday on the north-east coast of Barra. Maerl is a term used to denote loose-lying coralline red algae, which develops when crust-forming species become free-living due to fragmentation and the habitat is of high intrinsic value. The maerl beds are essentially confined to areas where there are moderate to strong tidal currents but that are protected from strong waves. Each bed encompasses an area of between 5m² and 35m² at depths of 6-10 m below chart datum and live maerl may attain 60% coverage of the bed. An extremely species-rich assemblage of flora and fauna lives amongst or attached to its branches, or burrowed in the coarse gravel of dead maerl beneath the upper living layer. The associated epiflora and fauna stabilise the maerl deposits and maintain the integrity of the beds.

APPENDIX B (continued)

Filamentous red algae and bivalve byssal threads bind the maerl thalli whereas burrowers and tube-dwellers, including the sand mason *Lanice conchilega* and the polychaete *Chaetopterus variopedatus*, stabilise the surface sediments. The diverse range of floral and faunal species associated with the maerl beds are characteristic of tide-swept mobile substrata. The algal community is composed of predominantly 'southern' species, which are generally uncommon or rare in Scottish waters, including the red algae *Dudresnaya verticillata*, *Grateloupia filicina* and *Gelidiella calcicola* and the brown alga *Tilopteris mertensii*. *Gelidiella calcicola* is almost entirely confined to maerl biotopes. The polychaetes *Spio armata*, *Mediomastus fragilis* and *Prionospio dubia*, the crustaceans *Urothoe marina*, *Urothoe elegans*, *Dexamine thea* and *Cytindroleberis mariae*, the molluscs *Leptochiton asellus*, *Mya truncata* and *Modiolus modiolus* and the sea urchin *Psammechinus miliaris* are typical components of the species-rich associated fauna. Motile animals associated with the maerl beds include the hermit crab *Pagurus bernhardus*, the swimming crab *Liocarcinus depurator*, the topshell *Gibbula magus*, the seven-arm star fish *Luidia ciliaris* and gobies *Pornatoschistus* sp.

The seabed sediments are typically composed of gently rippled fine and medium sands interspersed with small patches of coarse sand, shell gravel, dead maerl fragments and scattered pebbles. Shallow sandy sediments are typically colonised by a burrowing fauna of worms, crustaceans, bivalve molluscs and echinoderms. The polychaetes *Spio decorata*, *Spiophanes bombyx*, *Scoloplos armiger*, *Nephtys* spp. and *Nicomache lumbricalis* and the amphipod crustaceans *Periculodes longimanus*, *Urothoe marina*, *Ampelisca brevicomis* and *Bathyporeia* spp. are typical components of the associated animal-dominated communities. Motile fauna at the surface of the sandbank may include shrimps, prosobranch molluscs, crabs and fish. Where coarse stable material (such as shells or maerl) is present, epifaunal attached species may include foliose algae, hydroids, bryozoans and sea squirts. In the Sound of Eriskay, highly mobile clean sands are characterised by an animal-dominated assemblage of polychaetes and crustaceans. The polychaetes *Nephtys cirrosa*, *Paradoneis lyra* and *Exogone naidina* and the crustaceans *Bathyporeia guilliamsoniana*, *U. marina* and *Pontocrates arenarius* are typical components of the fauna. Shallow medium sands near Stag Rock are characterised by the razor shell *Ensis arcuatus*, the heart urchin *Echinocardium cordatum* and the tube-dwelling polychaete *Chaetopterus variopedatus*. Maerl fragments, shells and any available hard substrates are colonised by a wide variety of algae characteristic of shallow tide-swept mobile substrata including the brown algae *Desmarestia* spp., *Chorda filum* (bootlace weed) and *Saccorhiza polyschides* (furbellows). Shallow sandy sediments may be important nursery areas for fish and feeding grounds for seabirds, waterfowl and seals.

Appendix C

Petition to the public petitions
committee of the Scottish Parliament

APPENDIX C

PETITION TO THE PUBLIC PETITIONS COMMITTEE OF THE SCOTTISH PARLIAMENT

This petition is presented to the Public Petitions Committee of the Scottish Parliament jointly by:

The Western Isles Fishermen's Association
The Scottish Crofters Union, Barra Branch
The Castlebay Community Council, Barra
The Northbay Community Council, Barra
The Eriskay Community Council
The Loch Boisdale Community Council, South Uist,
Cllr. Donald Manford (Barra)
Cllr. Ronald Mackinnon (Loch Eynort)
Cllr. David Blaney (Eriskay and Loch Boisdale)
The Estate of Barra South Uist Estates Ltd.

Letters indicating support from each of the above individuals and organisations are attached hereto.

The joint lead petitioners are:

Councillor Donald Manford
29 Eoligaray, Isle of Barra

Mrs Marybell Galbraith
Chair, Northbay Community Council
24 Ard Mhor, North Bay, Isle of Barra

For the purposes of correspondence, the petitioners' Agent is Ian Mitchell, Xana Dubh, Lennox Street, Port Ellen, Isle of Islay PA42 7BW.

PETITION

The petitioners ask the Public Petitions Committee to take note of the fact that Scottish Executive has indicated its intention to designate the Sound of Barra as a Special Area of Conservation for the protection of the common seal, for which purpose it asked Scottish Natural Heritage last year to conduct public consultation and to report on the results of that consultation.

The petitioners do not feel the consultation process was conducted fairly since SNH issued a press release on 28 November 2000 headed "Public Meetings Reassure Sound of Barra Concerns". SNH refuses to disclose its advice to government on the balance of opinion in the areas to be affected by this designation. Consequently the petitioners are compelled to assume that SNH's press release accurately reflects the advice it has tendered to government.

APPENDIX C (continued)

If this is the case, it is a complete distortion of the truth, which is that the petitioning individuals and organisations--who between them represent every democratically elected body in the area, as well as the fishermen, crofters and estate owners--are all strongly opposed to this designation.

The petitioners therefore feel that SNH is in dereliction of its statutory duty, under Section 3(1)(e) and (f) of the Natural Heritage (Scotland) Act 1991, to "take such account as may be appropriate in the circumstances of ... the interests of owners and occupiers of land and the interests of local communities."

The petitioners are also conscious that this is a complaint which has been made on a number of occasions by other communities in Scotland whose views appear to have been misrepresented to government by SNH. This is therefore not an isolated case; an investigation is urgently called for.

Accordingly, the petitioners ask the Public Petitions Committee:

- (a) to investigate how it was that SNH came to publish the totally erroneous conclusions about local Public opinion on the Sound of Barra consultation that it did**
- (b) to satisfy itself that SNH's general procedures for consultations of this sort comply with the duty imposed on it by Section 3(1)(e) and (f) of the Natural Heritage (Scotland) Act**
- (c) to make such recommendations to the Rural Development Minister as the Committee feel are appropriate as part of the public consultation procedure on this proposed designation.**

Signed:

.....

Cllr. Donald Manford

Date:

.....

Mrs Marybell Galbraith

Date:
