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23. The Flow Country: battles fought, war won, organisation lost

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"I had never seen such a desolate landscape. It far eclipsed Galloway and other Highland areas I visited. The sheer size of these great flat bogs (flows) was so daunting. From Morven northwards almost to the sea, 25 miles distant, lay a continuous sweep of low, gently undulating moor covered with bog. It was bisected by the Thurso and Wick railway, but this did little to detract from its appearance of wilderness. Away out in the middle of these flows, miles from the nearest road, there was a great feeling of solitude. ... there was a distinct similarity to the loneliness of the Arctic tundra and its birdlife. I did not foresee then that one of nature conservation's more desperate battles would be fought over these greatest of our boglands in the 1980s."

Derek Ratcliffe writing about his first visit to the Flow Country of Caithness and Sutherland in May 1958 (p. 205 *In Search of Nature*)⁽¹⁾

Introduction

Whilst much of Britain's post-glacial landscape eventually became wooded to a natural tree-line⁽²⁾, the pattern of vegetation development in the uplands and the far north was more varied. By Neolithic times, extensive tracts of open treeless peatland had begun to form, for example across parts of the Southern Pennines⁽³⁾. Subsequent millennia saw the progressive development of further open moorland landscapes in the uplands through direct forest clearances and latterly the consequences of intensive sheep grazing⁽²⁾. In the cool, oceanic post-glacial climate of northern and western Scotland, peatland development blanketed uplands and lowlands alike⁽²⁾. These areas had always been

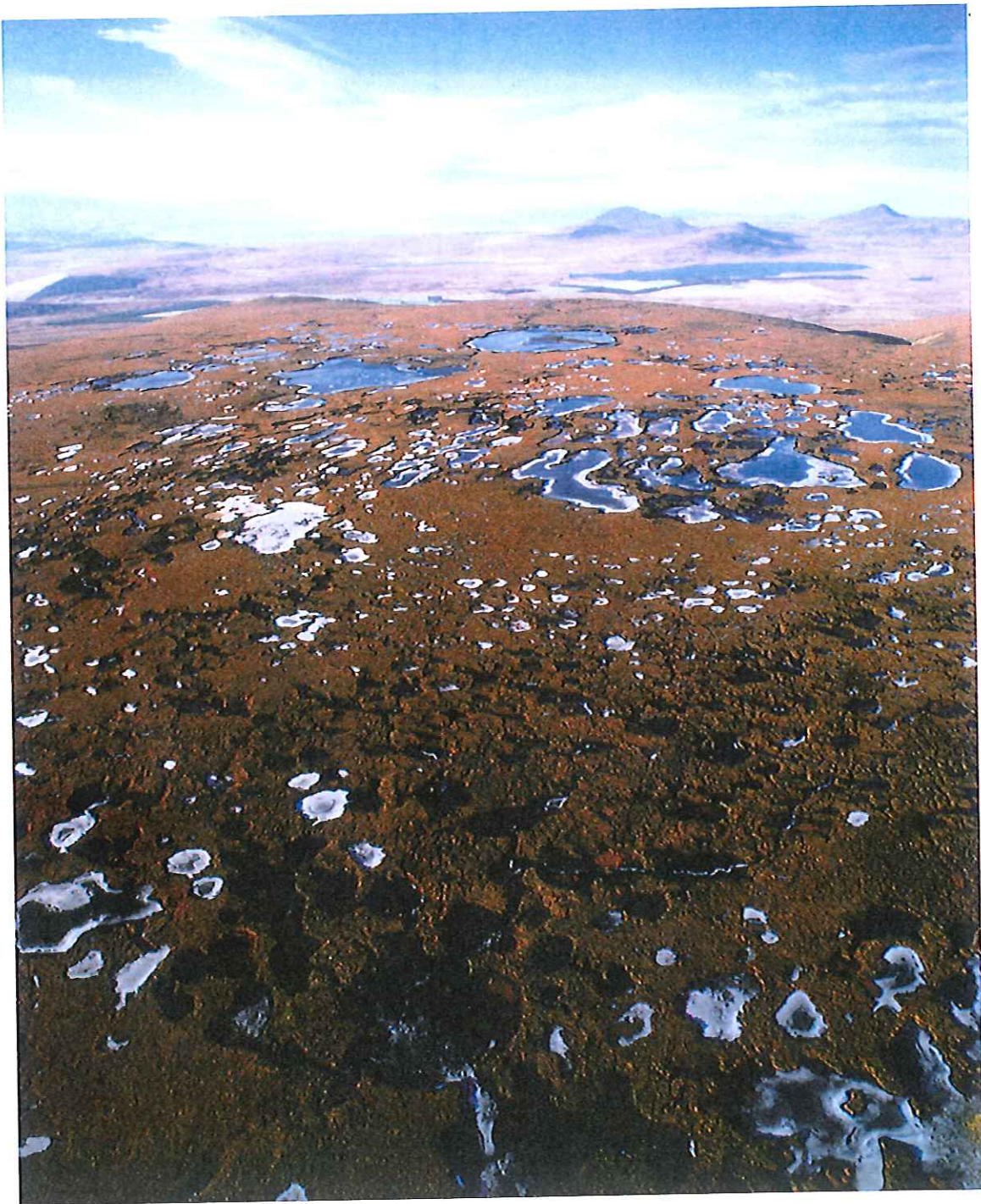


Figure 23.1. Winter view looking west across the Flow Country towards Ben Griam Mor, Ben Griam Beg, and Ben Loyal from Knockfin Heights, Caithness. The extensive areas of bog pools of different sizes are characteristic of the Flow Country of Caithness and Sutherland, 1986. Photo: Steve Moore

largely treeless^(2,4), and as a result, specialised assemblages of animals and plants had developed in association with these open blanket-mire landscapes⁽⁵⁾ as well as the unique cultural landscapes of managed Heather (*Calluna vulgaris*) moorland⁽⁶⁾. The term 'upland' in this context thus also embraces the ecologically related moorlands and peatlands formed at lower elevations in the far north and west of Britain (including the Flow Country of Caithness and Sutherland).

These upland landscapes (Fig. 23.1), their historical development, and their internationally important fauna and flora, were captivatingly described by Derek Ratcliffe in

his 1990 book *Bird Life of Mountain and Upland*⁽⁷⁾, an account which synthesised a lifetime of experience. There is, however, a sad irony in the fact that by the time this volume was published, such areas had already undergone one of the most extensive of land-use changes and ecological transformations experienced by 20th century Britain. In the north of Scotland it had led to, in Derek's words "the most massive single loss of important wildlife habitat in Britain since the Second World War"⁽⁸⁾.

These dramatic changes were caused by widespread and large-scale afforestation of monoculture plantations mainly consisting of non-native conifer trees (Figs. 21.1 & 22.1), stimulated by a combination of government policy and financial incentives. The state's promotion of upland afforestation was driven by differing motivations during the course of the 20th century. Initially, following the alarms of the First World War and the effects of the German submarine blockade, there was perceived to be a national strategic need for pit-props. In later years, and particularly after the Second World War, this strategic requirement was increasingly replaced by a range of economic drivers and incentives⁽⁹⁾.

Until the Second World War the Forestry Commission (FC) had avoided planting on deep peat, even experimentally, but the development of efficient tractor units during the war and the invention of the Cuthbertson plough just after the war led the FC to begin a series of planting trials on deep peat in northern Scotland using new tree species, most notably Lodgepole Pine (*Pinus contorta*) from North America⁽¹⁰⁾. By the 1970s, this combination of tractor unit, double-mouldboard plough, and Lodgepole Pine was being used widely on deep peat, but as late as 1978 the Nature Conservancy Council (NCC) was being assured by FC District Officers that planting was only likely "on the margins of deep peat areas".

Although having been reassured at a Hill Land Use Discussion Group held in Caithness in 1978 that widespread afforestation of the Flow Country would be technically impossible for the foreseeable future, the NCC's Chief Scientist Team (CST) nonetheless began an extensive programme of scientific survey in the area starting the following year, beginning in Caithness as part of NCC NW Scotland Region's development of a conservation strategy for Caithness. The resulting identification of several peatland sites meriting notification as Sites of Special Scientific Interest (SSSI) in Caithness subsequently led to a reluctance at various levels of decision-making in NCC Scotland to consider further peatland notifications in the adjacent district of Sutherland – or indeed anywhere else in Scotland. The CST survey teams thus focused on gathering further information about the largely-unexplored interior of Caithness and Sutherland, particularly about the peatlands and the birdlife, without any strong expectation of further sites being added to the rather meagre list of peatland or ornithological SSSIs and National Nature Reserves (NNRs) which existed at the time in the two districts. Meanwhile the Royal Society for the Protection of Birds (RSPB) was undertaking parallel bird surveys in central and west Sutherland.

In the early 1980s, however, the rate and extent of new afforestation across the uplands of Britain increased markedly, stimulated by ever-improving technologies for the deep ploughing of peat, together with new silvicultural techniques involving use of mixed plantings where a fast-establishing nurse species such as Lodgepole Pine facilitated establishment of more commercially attractive species such as Sitka Spruce (*Picea sitchensis*) (Fig. 23.2). This technically-driven expansion was artificially accelerated by a



Figure 23.2. Forestry deep ploughing of wet blanket-bog in Caithness, looking north towards Lochan Croc nan Lair, 1987. Photo: Steve Moore

grant- and tax-regime which meant that such afforestation offered investors substantial tax advantages and large sums at an extremely good and largely tax-free rate of return, whether or not useable trees were subsequently produced. Through his love of, and extensive time spent in, the uplands of Britain⁽¹⁾, Derek had direct experience of the ecological consequences resulting from this post-war wave of extensive afforestation, documenting in particular the consequences for Ravens (*Corvax corax*) (Fig. 13.4)⁽¹¹⁾, Golden Eagles (*Aquila chrysaetos*) (Fig. 12.4)⁽¹²⁾ and upland flora⁽¹³⁾.

In 1980, Derek had drafted and presented the NCC's evidence⁽¹⁴⁾ to the, then newly established, House of Lords Select Committee on Science & Technology. This addressed not only loss of peatlands and uplands to new afforestation, but also nature conservation concerns arising from the conversion and loss of lowland woodlands⁽¹⁵⁾. The Committee subsequently "expressed concern" about the risks inherent in monocultural plantations. It recommended that forests should be diversified as soon as possible both in age and composition and that special plots should be maintained to monitor changes in soil fertility and the influence of afforestation on wildlife and other environmental features⁽¹⁶⁾. These conclusions rather missed the key point. There was a clear argument that much new forestry was ecologically damaging to important environments and fundamentally inappropriate in some of the landscapes where it was now occurring.

The Government's response in 1982 concentrated nearly exclusively on issues of lowland forestry, although "endors[ing] the recommendation that close attention should be paid to advance forest planning to harmonise the location and design of new forests with other interests"⁽¹⁷⁾.

By the mid 1980s the sheer extent of the impacts resulting from new forestry was, however, becoming one of the most pressing nature conservation issues in Britain. Derek had long been working on a major document summarising the current extent and trends in new afforestation, reviewing the range of forestry practices, their implications for nature conservation, and documenting the scale of environmental losses being reported by the NCC's specialists and others⁽¹⁸⁾.

Pro-afforestation interests on the NCC's Council in the late 1970s and early 1980s meant that early attempts by Derek to get this policy document adopted ran into the sand. For its adoption as organisational policy there would need to have been an unacceptable dilution of the proposed stance. Rather than accept such changes, Derek withdrew the report at that time.

The report was eventually published by the NCC in June 1986⁽⁹⁾ under the Chairmanship of William Wilkinson (who was subsequently knighted in 1989) (Figs. 19.6 & 11.8). In his Introduction to *Nature Conservation and Afforestation in Britain*⁽⁹⁾ (Fig. 20.4), William Wilkinson noted that the NCC's views on the relationship between nature conservation and forestry

"...were expressed briefly in 1980 in evidence to the Sherfield Committee on *Scientific aspects of forestry* (House of Lords 1980). The Committee's Report has led to an improvement in conservation prospects for existing broadleaved woodlands...

Over new afforestation, however, we continue to be very concerned. Several recent cases of conflict between forestry and nature conservation interests on important wildlife areas and the portents for continuing losses to wildlife and physical features have convinced NCC that it now has to make its views widely known, so that nature conservation needs in relation to afforestation are understood and recognised. Much has been said in the last ten years or so about the case for further afforestation, but there is no adequate statement about the relationship between afforestation and nature conservation. This paper aims to provide such a statement." (pp. 4-5)

The words "that it now has to make its views widely known" are key, but also in some senses ground-breaking and brave. The NCC was a government agency. It had the statutory right to disagree publicly with Government. However, Government was its funding source and the members of its governing council were appointed by Government – so it did not lightly exercise that right. In a move which particularly angered the Ministry of Agriculture, the NCC had previously questioned Ministry of Agriculture economics in the case of, firstly, Amberley Wildbrooks (Fig. 20.2)⁽¹⁸⁾ and then of Gedney Drove End⁽¹⁹⁾. The NCC Chairman at the time, Sir Ralph Verney, had subsequently experienced an abrupt termination of his appointment after Gedney Drove End. Nevertheless, some would say that afforestation, in particular the Flow Country issue, was the first occasion that the NCC openly and publicly questioned UK Government policy – and within two years the government had announced the abolition of the NCC^(19,20). In common with normal practice amongst Government bodies (and those

lobbying them), discussions about afforestation and the Flow Country had been held without publicity for several years – at both local and national levels. It was because these discussions got nowhere that the NCC, reluctantly, decided to go public. This decision, and in particular the launch of *Birds, Bogs and Forestry*⁽⁸⁾, were not a surprise to other parties (as those parties implied at the time); rather, it was the logical—indeed the only—next step when all avenues of discussion within the Government system had failed.

In passing, it is worth noting that nowhere in *Nature Conservation and Afforestation in Britain*⁽⁹⁾ (Fig. 20.4) is there any record of Derek's leading role as its editor and main author^(see also 21). The document is simply credited to the organisation as a whole in perhaps a classic case of the observation by Harry S Truman (amongst others) that "It is amazing what you can accomplish if you do not care who gets the credit."

The Flow Country Controversy

Introduction

There was a growing number of major conflicts over new afforestation in upland Britain in the 1980s^(15,18,22,23), notably massive and highly damaging new afforestation across sites such as the Berwyns^(19,24) in mid Wales, Creag Meagaidh⁽¹⁹⁾ in the central Highlands, and on Islay⁽¹⁹⁾, which were attracting considerable concern and attention^(25,26), while many other sites, such as Mindork Moss in Dumfries and Galloway, were silently overwhelmed by this wave of expansion. However, issues were rapidly coming to a head in northern Scotland, seen by forestry interests as 'the final frontier'⁽²⁷⁾. Steadily moving closer and closer to centre stage in this story was the destruction of extensive blanket bogs of Caithness and Sutherland – the largest example of a primeval ecosystem in Britain (Figs. 23.1, 24.3 & 24.4). Concern was not limited to conservationists. Elected Councillors from the by now heavily-forested Dumfries & Galloway Region (where trees on many sites were now reaching a mature stage – Figs. 21.1 & 22.1) tried to warn their fellow Councillors in Highland Region of the socio-economic problems of blanket afforestation, but were rebuffed, reporting back sadly that the Highland Councillors seemed intent on not learning from the experience and mistakes of others.

Whilst peatland losses in Caithness and Sutherland had been one of the examples highlighted in *Nature Conservation and Afforestation in Britain*⁽⁹⁾, the rapidity of losses everywhere was giving an increasingly extreme sense of urgency. "Environment and amenity bodies were caught unawares by the speed in which aggressive forestry companies were buying up land"⁽¹⁹⁾.

The key drivers for new afforestation were two types of support from the public purse. First, there were generous rates of grant aid to cover the direct costs of plantation establishment. These had been introduced by the first Margaret Thatcher administration through an amendment to the 1967 Forestry Act⁽²⁸⁾ with the intention of stimulating the private forestry sector. Second, there was the potential to offset remaining establishment costs against other tax liabilities. Such tax-offset potential had existed for several decades and had been established originally in the 1950s to aid capital works on country estates. However, it only started to be exploited on a large scale in a forestry context from the early 1980s. Lean & Rosie⁽²⁹⁾ described the process as follows:

"So when, for example, Sir Austin Bide, honorary president of Glaxo Holdings, brought 532 acres of land at Stennieswater in the Scottish Borders for £158,000 last March, he was making a very sound investment indeed. The cost of creating a forest on Sir Austin's plot is likely to be about £215,000. So on paper, he will pay a total £373,000 for the land and its development. But in return he will get a grant of £53,000 from the Forestry Commission and (assuming he pays the top rate of tax) £129,000 in tax relief – a total cost to the public purse of £182,000. So, one way or another, about half of his forestry investment will be at the cost of the public.

Generous though this seems, many investors do even better. [...] Timothy Colman should recoup 70% of his costs in the Flow Country. And Lady Porter, that scourge of wasteful public spending, will do even better out of the public purse. Assuming again that she pays the top rate of tax, she should receive a cool £511,000 in tax relief and grants – just less than 70% of her investment – from a grateful nation for planting trees in this unique area.

If the people who planted the forests were to hold on to them until they were felled, the taxman would get them in the end, for under Schedule D they would have to pay tax on the profit from the timber. This they generally avoid. Instead they sell the plantations, usually after about 10 years, when the trees – now a dense, dark, prickly thicket – are worth up to £2,700 an acre. It is estimated that some end up with a return rate of up to 33.5% a year on their original investment – which means that the investment has almost doubled in value in two years. It is a remarkable way of turning otherwise taxable income into tax-free capital.

The only thing that is not tax-free is the cost of the land; but many investors take out special forestry loans to pay for the land, with interest only payments – and the interest, too, can be offset against tax."

This represented remarkably easy money for investors – particularly those paying the highest rates of tax. "The Thatcherite boom combined with a favourable tax regime to make forestry attractive to newly-rich investors, whilst generous public finance, a key force driving afforestation, was also available"⁽²⁷⁾. In Caithness and Sutherland, extensive land holdings were acquired by a forestry company called Fountain Forestry which accumulated 40,000 ha between 1980 and 1986⁽³⁰⁾. It then developed and marketed a package of investment services which involved selling-on this land for the creation of new plantations. With clever marketing, some investors probably genuinely believed that they were doing something of environmental benefit (as well as benefiting themselves financially in huge measure), rather than enabling something profoundly damaging to the environment in their name – as several high-profile celebrities were later to find to their cost.

In the summer of 1984 the extent of actual and planned peatland afforestation in Caithness and Sutherland (Figs. 23.3 & 23.4) was already causing an increasing degree of alarm at the NCC and RSPB local level. Meanwhile the CST survey teams were

beginning to feel that as fast as they surveyed sites they were vanishing beneath the forestry plough. By the autumn of 1984, Roy Dennis, RSPB Highland Officer, "alarmed at the rate of commercial tree planting on peatlands in Sutherland and Caithness" had written to the NCC NW Regional Office proposing that four important bird sites be notified as SSSI immediately, emphasising the urgency with the comment that "[t]here is no time to spare"⁽³¹⁾. Notification was, however, a slow process even to obtain agreement that the organisational wheels should start turning, and in this case it was also hampered by the sense that further SSSI proposals would not be welcomed in certain quarters.

The full scale of the developing problem became clear, however, in early 1985 with the circulation of an internal but widely distributed report by NCC's Assistant Regional Officer for Sutherland, Stewart Angus (published in 1987⁽³²⁾). This brought together previously scattered information on actual and proposed forestry plans, together with future projections. As a result of this report, together with continued pressure from the RSPB to act, a case was assembled by CST and regional staff for the notification of 11 new SSSI peatland sites in Sutherland which were considered to hold some of the best remaining peatland habitat and supported substantial breeding wader populations. Some of these sites were huge, barely on a scale seen before, but were ultimately approved by NCC's Scottish Advisory Committee.

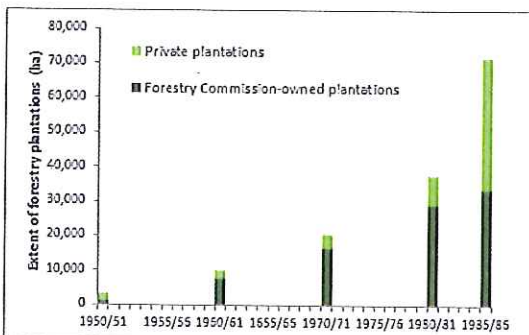


Figure 23.3. Increase in the extent and type of ownership of forest plantations in Caithness and Sutherland between 1950/51 and 1985/86. These were the best estimates presented at the launch of *Birds, Bogs and Forestry*⁽⁸⁾ in July 1987.

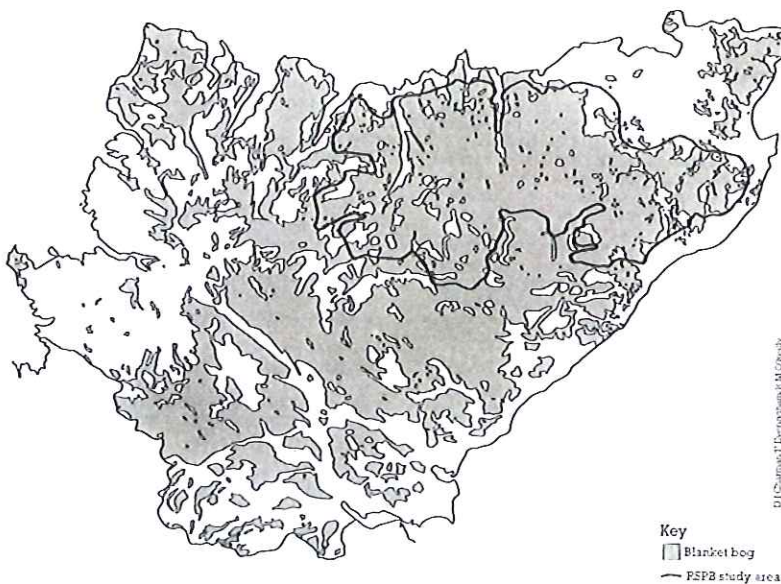


Figure 23.4. The indicative extent of relatively deep peat soils in the Flow Country of Caithness and Sutherland (from Lindsay *et al.* 1988⁽⁵⁾) covering an area of 401,375 ha. The extent of the more limited 'RSPB study area'⁽³⁶⁾ of 184,300 ha is largely in Caithness. For a detailed description of the peat-soil mapping process, see Lindsay *et al.* (1988)⁽⁵⁾.

While an important step forward from the 'no more peatland sites' policy, the notification of these new sites could only be a stop-gap measure. As the NCC's Annual Report for 1985–1986⁽³³⁾ observed:

"If notified, [the new sites] would bring about 23% of the total blanket bog [of Caithness and Sutherland] under statutory protection. However, the rate of afforestation is such that one of the proposed sites, Borralan, has already been almost completely destroyed by deep ploughing prior to planting and two others have been significantly damaged. This all occurred between the initial survey and the final selection of sites of SSSI status. ... the scale of private afforestation in Sutherland and Caithness is beyond the scope of existing protective mechanisms..."

At this time, therefore—in early 1986—the NCC was faced with five substantive tasks:

- to document and establish the scientific case for the importance of the peatlands, the conservation interests present, and the extent of recent losses;
- to establish the global significance of the peatlands as a context for conservation advocacy;
- in the first instance, to obtain means of influencing the decisions concerning new afforestation proposals *before* they were approved, given that most of these were occurring outwith Sites of Special Scientific Interest (SSSIs) and thus beyond the NCC's primary statutory locus;
- then, to protect as much of the remaining undamaged peatlands as possible through either notification as SSSIs or by other means;
- and ultimately, to address the fundamental driver of new afforestation – a system of financial incentives (notably tax relief) which was massively stimulating new upland afforestation.

Others have reviewed various aspects of the Flow Country controversy and its aftermath^(19,27,34,35). We consider here how NCC, and particularly Derek Ratcliffe, addressed these five challenges. A chronology of the key events in this controversy is summarised in Table 23.1 in the Appendix.

Establishing the scientific case

Definitions and delineation

Initial concerns over forestry in northern Scotland had been directed towards a core area of the flattest blanket bogs in Caithness – typically so-called 'patterned mires' with extensive pool systems at the centre of peat masses (Figs. 23.1, 24.3 & 24.4). The advocacy of the RSPB (particularly in its publication *Forestry in the Flow Country: The Threat to Birds* in July 1985⁽³⁶⁾) had until this point focused on this core area (Fig. 23.4) of some 184,300 ha⁽³⁰⁾. The later RSPB publication *Forestry in the Flows of Caithness and*

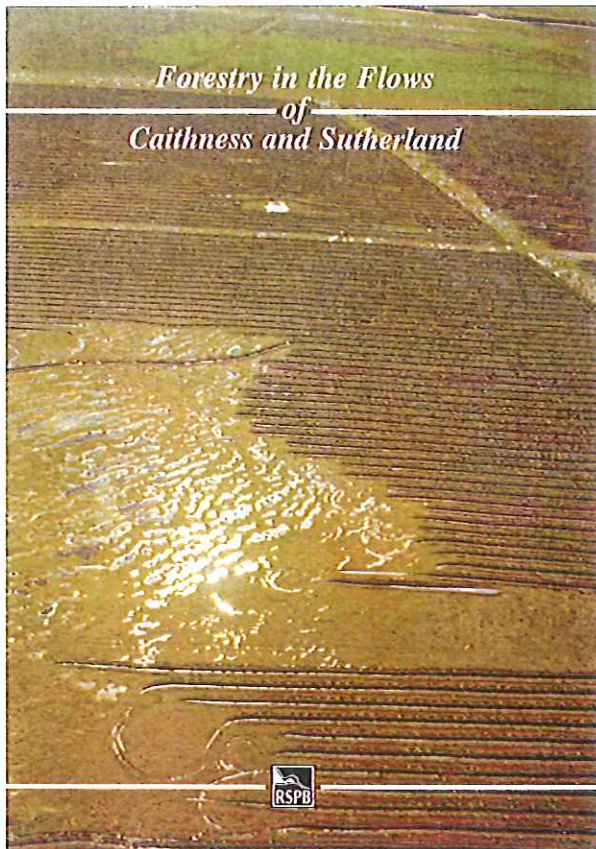


Figure 23.5. *Forestry in the Flows of Caithness and Sutherland*⁽³⁰⁾, presented not only the ornithological importance of the RSPB study area but also an analysis of the economics of afforestation in the Flow Country. The cover dramatically shows forestry ploughing right to the margins of an area of patterned bog.

Sutherland⁽³⁰⁾ (Fig. 23.5) widened its discussion to “prime blanket peatland”, namely the Flow Country of Caithness and Sutherland.

It was very soon apparent that important peatlands were distributed far beyond this core area. In a memorandum⁽³⁷⁾ outlining the key elements of the NCC case, Derek argued instead for the defence of a far larger area of concern:

“Attempting to delineate flow ground¹ as distinct from the moorland as a whole is a highly artificial procedure, and the Flow Country should be regarded as the whole of Sutherland and Caithness east of a line N – S through Strathnaver to Rogart station, excepting enclosed agricultural land. It is described in the *Vegetation of Scotland*^[38] (ed. J. Burnett) p. 442 and the *NCR*^[39], Vol I, p. 277 as a moorland complex covering c. 2,500 km², and we should maintain our view of this larger area as that under discussion.”

That memo was for staff of his own Chief Scientist Directorate (CSD – as the CST had by then become), but a week later he issued a further “aide-memoire on where we stand”⁽³⁷⁾ to CSD colleagues. This stated that:

“There is still a problem over definition of the area which we seek to defend against further afforestation. There is the feeling that the area defined by the RSPB and used by SHQ² in discussions with SDD [Scottish Development Department] is inadequate and there is no reason for NCC, with its wider remit, to feel bound by this.”

1. i.e. dubh lochan complexes or patterned mires

2. NCC's Scottish Headquarters - at senior levels, more sympathetic of afforestation

Derek's clear view of the importance of the *whole* of the Caithness and Sutherland peatland landscapes was strongly supported by the NCC's Chair William Wilkinson (see below).

Terminology was important too. The initial public debate used the term 'the Flow Country' to refer to the more limited RSPB area, but to avoid presentational confusion, the NCC consistently referred to the issue as relating to 'the peatlands of Caithness and Sutherland' to make unambiguous their wider concerns. However, by the time of publication of the NCC's major review of the peatland's ecology in 1988⁽⁵⁾, the term was being increasingly applied to the wider area, with the title *The Flow Country – The Peatlands of Caithness and Sutherland* being careful to reinforce this.

Ultimately, this wider definition of the area of nature conservation concern was of immense tactical significance, with forestry interests now becoming more willing to engage in dialogue concerning the more restricted area of Caithness and east Sutherland, once the NCC had broadened the geographical scope of the argument. In some delicate discussions, the CSD ornithology team explained the logic of working on a larger area to their RSPB colleagues, who then undertook to refer to their own smaller area as a sample where they had undertaken most studies ('RSPB study area'⁽³⁰⁾), and to revert to the larger area as the full region under consideration.

Birds, Bogs and Forestry and The Flow Country

As discussed earlier, the NCC had organised Upland Bird Surveys in Caithness and Sutherland since 1979, whilst the RSPB had undertaken parallel surveys in Caithness between 1980 and 1986. Together they had surveyed 77 extensive sites – several in more than one year. Alongside these ornithological surveys and following pilot studies in 1978, a major programme of peatland survey had also been undertaken by the NCC in seven field seasons between 1980 and 1986. Further information and evaluations were available from separate NCC surveys of rivers and freshwater lochs.

The ornithological studies had been the first extensive surveys of upland birds in Britain. As well as collecting information on breeding densities, they had explored the implications of aspects of breeding biology for survey methodologies⁽⁴⁰⁾. By 1985, however, a comprehensive report summarising all the surveys was urgently needed to document the surveys and to characterise these peatland bird communities in a UK context.

In parallel with the survey work, the need for the NCC to go public on the matter was becoming clear. This would need a decision by its Council. NCC's Chair (William Wilkinson) and senior management asked the four of us to prepare a presentation for the meeting of Council on 14 October 1986. By chance, this happened to be, in part, a joint meeting with the Countryside Commission for Scotland (CCS) at their headquarters at Battleby, near Perth. In addition, two events occurred prior to this meeting which were to have important consequences for the final outcome of the meeting. First, during the summer Peter Tilbrook, NCC NW Scotland Regional Officer, and Stephen Ward, from NCC Scotland HQ (SHQ), had organised a flight for the Chair over the Flow Country to see the scale of the issue for himself. One of us acted as 'tour guide' during the flight, but quite frankly needed to say very little because the scenery spoke for itself. William Wilkinson was visibly shocked by what passed beneath us, mile upon mile of serried plough lines broken only by stream-courses and small islands of unploughed patterned

bogs and their pools (Figs. 23.6 & 23.7). Second, in September 1986 the International Mire Conservation Group (IMCG) held a 10-day field symposium in northern Scotland, specifically to visit the Flow Country peatlands and see the issue of afforestation for



Figure 23.6. Aerial view of forestry ditches dug into a large area of patterned bog within the Flow Country of Caithness and Sutherland. Note the extensive areas of forestry plantations in the background almost as far as the eye can see. 1987. Photo: Mike Pienkowski



Figure 23.7. Low aerial view showing an 'island' remnant of patterned bog in the Flow Country of Caithness and Sutherland within a sea of recently planted forestry. 1987. Photo: Mike Pienkowski

themselves. Today a well-established international force for peatland conservation, in 1986 IMCG was a fledgling international network consisting of leading peatland conservation specialists from Canada, USA, Ireland, Finland, Sweden, UK, Germany, and Austria, with one of us its first Chair. This was their second-ever field symposium. It was part-funded by the NCC on the initiative of Derek Ratcliffe and Derek Langslow, and it was accompanied by a BBC Radio 4 journalist. Radio 4 subsequently devoted an entire programme to the IMCG's travels through the Flow Country.

Two of us who attended the Council meeting and made a joint presentation were so concerned about the importance of this presentation at a venue which we had not previously used that we adopted an extreme belt-and-braces approach. The presentation was therefore carried north as a slide presentation (we were in pre-computer-projection days), backed up by a version on overhead projection sheets, and an ultimate backup (in case of total electrical failure) on huge sheets of paper! CCS joined the NCC Council for the presentation, before withdrawing to leave the Council to decide its position. As they left, they generously commented that the CCS had missed the importance of the area and wished the NCC well in defending it.

The NCC's subsequent debate was fairly heated for that forum, with senior SHQ officers essentially opposed to the proposals developed by the CSD in consultation with local officers, but Council members were generally supportive. During the debate, the Chair was able to speak with complete conviction because of what he had witnessed on his Flow Country flight, and we were able to back up questions about the true international significance of the area thanks to the unequivocal collective statement about the area made by the IMCG. Perhaps most importantly of all, Derek's quiet but firm interventions as Chief Scientist both validated his staff's conclusions and answered technical objections. These interventions included both the compatibility of conservation protection (but not of afforestation) with existing land-uses and an answer to the Director for Scotland's view that moving from the RSPB boundary to a more comprehensive framework (see above) would undermine the NCC's credibility. Derek pointed out that the change in circumstances more than justified this, as the FC had said previously that it had never been their intention to plant on the flows.

The Council agreed that:

- a. The scientific evidence established the unique nature of the whole area and the impracticability of subdividing it.
- b. The NCC's objective should be to prevent any loss or fragmentation of the interest and every effort must be made to secure the area.
- c. The NCC was not committed to the RSPB boundary and Director Scotland should go back to the Technical Group [of the Scottish Office] and attempt to safeguard as much as possible.
- d. In view of the need to make decisions at short notice, a small group from Council would convene to advise as appropriate.

Whilst the original survey and reporting timetabling had envisaged production of a technical ornithological report followed by a technical peatland ecosystem report, through mid-1986 and at the Council meeting it became clear that the NCC instead

urgently needed a high-profile publication which would present the totality of the conservation argument against peatland afforestation in Caithness and Sutherland. Consequently the technical ornithological report metamorphosed, and Derek guided this metamorphosis into what was to become *Birds, Bogs and Forestry*⁽⁸⁾ (Fig. 23.8), an account not just of the ornithological survey work but incorporating the other key elements of the NCC's case. *Birds, Bogs and Forestry*⁽⁸⁾ was written by the four of us and edited by Derek and our NCC colleague Philip Oswald. Whilst leaving the drafting of the report to his staff, Derek repeatedly provided detailed editorial input as the report developed, in particular shaping its structure as well as contributing sections outlining effects of afforestation on bird communities and addressing the lack of compensatory gain with the establishment of different bird communities in the new plantations.

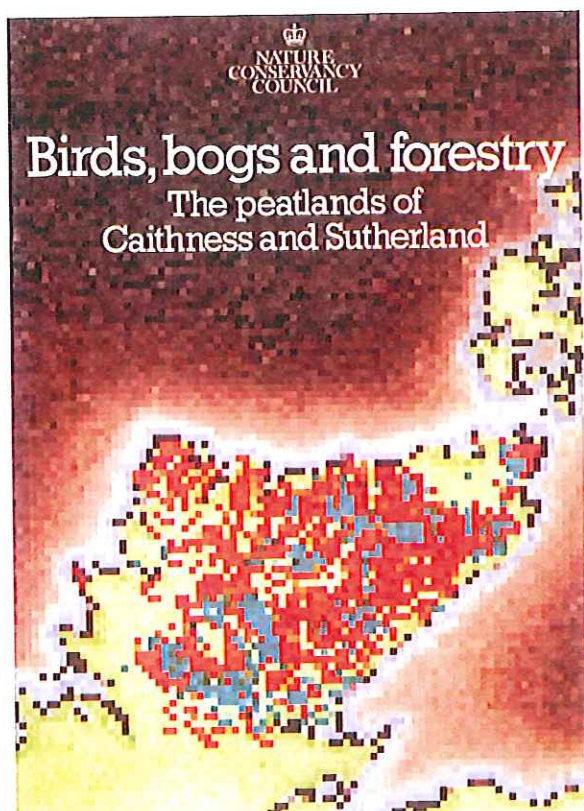


Figure 23.8. *Birds, bogs and forestry*⁽⁸⁾ was the first publication by the Nature Conservancy Council about the Flow Country of Caithness and Sutherland and its ornithological and ecological importance, nationally and internationally. It was launched on 23 July 1987.

The report's production was also aided by clear direction from the very top. William Wilkinson, immediately after the October 1986 Council meeting, specified that "[t]his work has the highest priority of any other within NCC including renotification [of SSSIs required under new legislation] and individuals having the necessary skills need to be identified and put on notice even if not immediately required."

By November 1986, an initial draft of the overview report had been produced and was widely circulated for peer review to national peatland and ornithological experts, and for comment and input by other NCC staff. In early 1987, an advanced draft was supplied to the Chief Scientist of the Department of the Environment (DoE), whom Derek had kept informed of the process and who had been periodically briefing Ministers. Sir Martin Holdgate responded supportively, and with about a page of helpful suggestions on wording and structuring points.

The eventual launch of *Birds, Bogs and Forestry* (Fig. 23.8) by the NCC was thus the

conclusion of a long process of consultation and technical review, both within and outside government, such that the issue was not a surprise to other interests, despite claims that the report had been "kept under wraps to date"⁽⁴¹⁾. The launch was a high profile event at the Institution of Civil Engineers in London on 23 July 1987. With a sensitive political awareness, the NCC's Chair, supported by the authors, Derek, Great Britain Headquarters staff involved, the Senior Press Officer, and many local staff involved, had originally been keen to launch the publication in Scotland and preferably in Caithness or Sutherland – close to the area of concern. That desire was strongly vetoed by John Francis, ex-Scottish Office and then NCC's Director for Scotland as well as by others in

NCC's Scottish Headquarters. The predictable outcome was that much of the media commentary focused on the English location of the launch venue and what that implied, rather than addressing the key message of the report. Many Scottish MPs were invited to the launch. Robert MacLennan (MP for Caithness and Sutherland and now Baron MacLennan of Rogart) was, however, apoplectic with rage at the perceived insult and did not attend (Alan Vittery, personal communication). MacLennan famously described the NCC scientific claims as "preposterous"⁽¹⁹⁾. He considered that the "forests were a godsend and the NCC seemed bent on 'sterilising' the land, just like the Highland Clearances of evil memory"⁽¹⁹⁾. Furthermore, several interests came to the launch with prepared statements that tended to attribute contents to the report which were not in fact included in it, although this did not necessarily prevent their comments from being reported.

The NCC Chair's presentation⁽⁴²⁾ was uncompromising:

"... This is a very special place in the world. It is because it is still unique, despite the damage already suffered, the 'balanced' solution, normally so sensible, cannot in this case be right. There are occasions when "absolutes" must prevail. We all see the need to look after Westminster Abbey, St Peter's, Venice, the Taj Mahal, and revile those who blew up the Parthenon. We are right to give such consideration to these man-created masterpieces of civilisation. Do the masterpieces of God and nature deserve anything less?

During recent years great concern has been expressed about loss of wildlife habitat in Britain and indeed world-wide, for example tropical rain forests. Many of these losses took place before nature conservation and certainly the legislation to support it was conceived. The destruction of the forests in mediaeval times and earlier, the almost total loss of the fens in the 17th and 18th centuries, the wartime and post-war inroads into the coastlands, lowland heaths, chalk grasslands, and old hay meadows mostly occurred in response to perceived national needs or because adequate knowledge existed. Here too nothing illegal has been done, but the area of the Caithness and Sutherland peatlands already lost to forestry represents perhaps the most massive loss of important wildlife habitat in Britain since the Second World War. As from today the situation is different; the picture and issues are clear; any further losses will be deliberate."

NCC's second major report *The Flow Country*⁽⁵⁾ (Fig. 23.9) took longer to prepare⁽²¹⁾, being based on detailed field surveys spanning several years of survey and covering the whole of the peatland area within Caithness and Sutherland. In all, 399 sites were surveyed in detail, many sites only accessible for survey by walking in from the nearest road and camping for two or three days (Figs. 24.5 & 24.6⁽²¹⁾). With the working title *Tundra Britain* – it was a technically much more complex (and larger) report than *Birds, Bogs and Forestry*⁽⁸⁾ and included the first-ever assessment of the global extent of blanket bog, compiled painstakingly by correspondence with peatland experts worldwide in the days before instant communication by email was possible.

The Flow Country

The peatlands of
Caithness and Sutherland

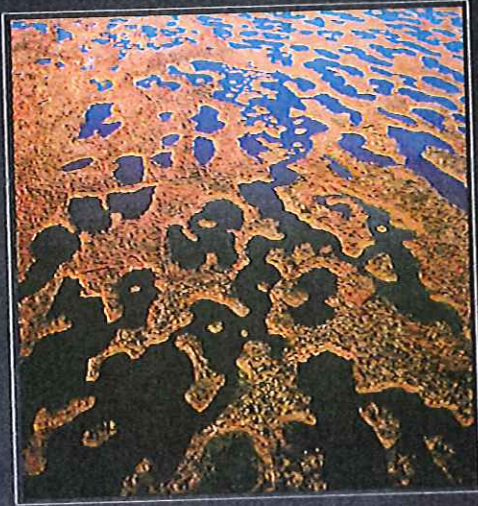


Figure 23.9. *The Flow Country*⁽⁵⁾ presented the first detailed vegetational and ecological accounts of the patterned bogs in the Flow Country, the international importance of these bogs, and an analysis of the global extent of blanket bog. It was launched in May 1988.

In parallel with the preparation of this new overview report, liaison continued at regional, Scottish, and UK levels with interested departments and agencies (see below). It is worth highlighting at this point that the NCC became a pivotal focus of information in these ongoing discussions because it had embraced the emerging technology of computer mapping or GIS (geographic information systems). It had quickly become evident early in the Flow Country case that the critical questions all hinged on the overlap of interests. The distribution of peat, the distribution of high-quality peatlands, the pattern of breeding wader distributions, the areas approved for forestry planting, and the distribution of high-quality agricultural land – all overlapped in a variety of ways. Our initial attempts to synthesise these various interests consisted of large acetate overlays, each representing a different feature of interest. More overlays were required to cater for the ever-expanding range of maps, until around 23 acetate sheets were lying one on top of the other, rendering interpretation of the overlapping interests virtually impos-

sible. The need for information about the way in which these sectoral interests overlapped was obvious, and so it was decided that a novel approach was required.

As part of an evaluation process looking at the utility of computer mapping within the NCC coordinated by Chris Goodie, it was agreed that Doric Computer Systems would convert all the acetate maps into digital format and then use Arc/Info GIS to assist with overlay analysis (Fig. 23.10). Derek Ratcliffe and Derek Langslow both strongly supported this transition to new technology. They could see that the whole tenor of the debate was suffering increasingly from what could reasonably, under the circumstances, be termed 'the fog of war'. What was needed was clarity of information about the way in which the various land-use interests and natural features were distributed and overlapped across Caithness and Sutherland. Such clarity would help to cut through some of the wilder and more questionable claims being made by various interest groups and enable a more measured discussion to be had based on agreed facts.

From this point on, thanks to the willingness of other parties to provide maps for digital conversion, the NCC was able to provide detailed figures about existing conditions, map any combination of sectoral interests, and even model possible future scenarios in a way which no other participant in the debate was able to do. If a working group, or a Minister, required the definitive figures concerning some combination of overlapping interests, the NCC was able to produce the figures almost immediately, thereby helping to emphasise and enhance NCC's reputation as a source of factual

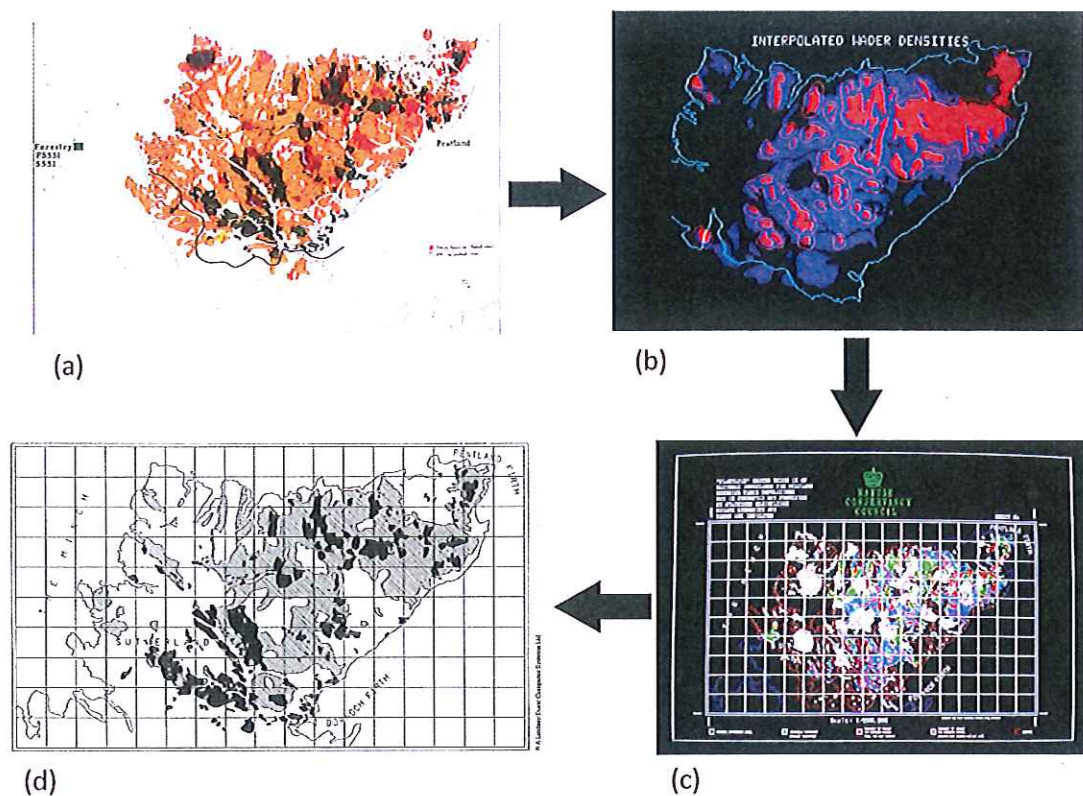


Figure 23.10. Composite image showing the progression of data handling for the Flow Country, beginning with original acetate maps (a), then digitising data (wader densities) (b), then GIS collation of data (more than 30 datasets displayed) (c), and final GIS analysis to show the extent of high-value conservation ground within the plantable zone of Caithness and Sutherland (d). Images: NCC & Doric Computer Systems Ltd

scientific information on which all parties could rely – precisely the sort of reputation which Derek Ratcliffe had sought to foster throughout his working life within the Nature Conservancy and the NCC.

Much of the information that was ultimately published in *The Flow Country* in 1988⁽⁵⁾—including information on international contexts—had been compiled in 1986 by the CSD’s peatland survey and ornithological teams as part of NCC’s overall case. The additional powers of analysis and display provided by the Arc/Info GIS tools meant that this information could now be distributed and queried much more readily. In various formats, therefore, the case was developed for presentation internally to the NCC’s Council and subsequently in various external fora including the Scottish Office’s Departmental Group on the Countryside, and ultimately the Highland Regional Council’s Working Group.

Establishing the global significance

From the outset it had been clear that establishing the *global* significance of the Caithness and Sutherland peatlands would be a crucial element in advocating its protection with Government. William Wilkinson saw the critical importance of such international validation of the NCC’s case and directed that “[t]he exact status of the international importance of the area needs to be established. This should be supervised and authenticated personally by Dr Ratcliffe”⁽⁴³⁾. In response, Derek encouraged his teams to use their professional networks of international contacts to raise the profile of the issue.

The ornithological case was presented at international meetings⁽⁴⁴⁾, whilst support for the peatland context had come from the field symposium of the IMCG. The IMCG's assessment of the Flow Country as "unique and of global importance" and "one of the world's outstanding ecosystems" was vital. Indeed, the wide international expertise within IMCG was crucial in supporting the NCC's claim that the Caithness and Sutherland peatlands were "...possibly the largest single expanse of blanket bog in the world..."^(5,45). John Birks co-ordinated a letter by several peatland ecologists and palaeoecologists to *The Times* (14 March 1988) that drew attention to the Flow Country and its global importance.

Of great significance was a letter⁽⁴⁶⁾ from Jeffrey McNeely, then Director of the International Union for the Conservation of Nature (IUCN) Programme and Policy Division to Dick Steele, NCC's Director General and also an IUCN Regional Councillor.

"Over the past months, the importance of the Flow Country of Caithness and Sutherland has been brought to the attention of IUCN by a number of organisations. I am therefore writing to express IUCN's support for the Nature Conservancy Council report on the region "Birds, Bogs and Forestry: the Peatlands of Caithness and Sutherland", especially the strong recommendations for comprehensive conservation action over a wide area.

As you will note [...] IUCN fully supports the recommendations detailed in the draft report. Furthermore, given the immense significance of the site, both as a unique example of this peatland ecosystem, and as a breeding habitat for a bird community of international importance, I would urge you to consider nominating the Flow Country as the first British wetland listed under the World Heritage Convention.³"

Further validation came from DoE's Chief Scientist Sir Martin Holdgate, who in 1988 was to become the IUCN's Director General. As the case developed, Holdgate was called on to review the NCC's scientific case⁴. In doing so, he was able to contribute important information about the extent and floristics of patterned blanket mires in southern Chile and Argentina, particularly Tierra del Fuego – from his earlier times with the Falkland Islands Dependencies Survey.

And of course, Derek's extensive personal knowledge of European peatlands was also important in establishing contexts:

"The only comparable European blanket bog systems are already extensively or wholly degraded by erosion (Stainmore, Pennines), afforestation (Irthing North Tyne moors, Cheviots; Wigtonshire Flows), or peat cutting (Bog of Erris, Co. Mayo)."⁽³⁷⁾

3. This call was stressed further in a Resolution (17/63) of the 17th General Assembly of the IUCN in Costa Rica (January 1987).

4. Receiving a detailed briefing from the CSD team on 27 February 1987 and following this up with further questions to Derek Ratcliffe.

Influencing new afforestation proposals

At the time, there was no mechanism through which the NCC could influence proposals for new afforestation outside SSSIs. This amounted to 85–90% of the total area. The NCC's immediate concern was thus to obtain some means of influencing decisions regarding this area whilst the wider issue of the extent of statutorily protected peatland remained unresolved.

Between October 1981 and October 1985 the NCC had been consulted by the FC on just 9.4% (41 of 435) Forestry Grant Scheme applications, the approval process for new private forestry⁽⁴⁷⁾.

Through 1986, debate, and high-level communication between the NCC and the FC, concerned the urgent need for the NCC to influence the FC's decision-making process beyond SSSIs. The issue also extended to non-SSSI areas of importance in the public ownership of FC itself.

In a September 1986 press release⁽⁴⁸⁾, the RSPB's Director General Ian Prestt (Fig. 20.1):

"condemned as meaningless the Forestry Commission's consultation procedures designed to protect the outstanding wildlife of the Scottish flow country.

I am appalled to learn of large new areas of Forestry Commission land in Caithness and Sutherland fenced and ploughed for planting with conifers next to SSSIs. [...] The Forestry Commission knows of the great concern over wildlife in this unique area. We regard this new ploughing as a provocative act. They have had these landholdings for a number of years and knowing the concern of conservationists we would expect them to consult widely before sending in the ploughs. [...] This completely disregards the Forestry Commission's statutory obligations to balance the interests of forestry with those of nature conservation.

We are requesting an urgent meeting with these ministers to discuss proper consultation mechanisms between the Forestry Commission and the NCC..."

(See Figs. 23.2 & 23.5-23.7 for examples of this "provocative act".)

In February 1987, following Chair-level communications between the NCC and the FC, full consultation on all new forestry grant applications was finally agreed. This, at long last, gave the NCC a formal locus to make representations concerning all new proposals.

Protecting peatlands: establishing SSSIs

In the 1980s, the only policy mechanism that would allow the NCC to constrain afforestation was for areas to be notified as SSSIs⁵ – although even that mechanism had loopholes which could be, and often were, exploited⁽¹⁸⁾. International designations⁽⁴⁹⁾

5. Although Section 29(1) of the 1981 Wildlife & Countryside Act (WCA) did, and does, allow the Secretary of State to make an order giving protection to "any land ... for the purpose of ... complying with an international obligation."

such as Special Protection Areas (SPAs) under the European Union (EU) Birds Directive, listing of Wetlands of International Importance under the Ramsar Convention, and indeed the World Heritage Site listing proposed by IUCN would all require areas to be notified first as SSSIs. Indeed, most of the few Ramsar sites and SPAs designated until the late 1980s had been restricted to state-owned National Nature Reserves or other well-protected areas.

Whilst the NCC had the statutory authority to notify SSSIs in its own right⁶, as noted earlier, the issue for the NCC was simply that notification on the scale required to protect the peatlands would be unprecedented in scale. An enhanced programme of notification on the scale required would represent a major *de facto* constraint to future land-use change which had potentially substantial employment and socio-economic consequences.

Prior to taking detailed proposals to Ministers, William Wilkinson wanted clarity on the options. He summarised his view⁽⁴³⁾ of the NCC's strategy following the first major presentation to the NCC's Council on 14 October 1986:

"Objectives

1. To try and protect as much as is scientifically justifiable of this unique site preferably as one large block, or in as large blocks as possible, if as would seem, a patchwork of smallish SSSIs would be significantly less effective. The reasons for this are:
 - i. The site would seem to justify it.
 - ii. From an optical point of view one needs to be seen to have tried.
 - iii. To gain more negotiating room.

The difficulties would seem to be in three areas.

- i. The legal framework appears inadequate.
- ii. Largely because of the tax regime, the land values are particularly inflated.
- iii. The sheer logistical problems of carrying out normal notification procedures on this scale.

As a first step therefore we need, through the appropriate channels, to present as good and as well costed a case as possible for special measures on the part of Government, to act upon as Ministers think fit.

Procedures to be undertaken

2. If, as I am told, normal SSSI procedures are totally impractical either for scientific, logistical or political reasons or a combination of factors, this needs to be established lucidly and in detail.

6. Under WCA Section 28

3. The boundaries of the whole site (or of a number of large sites) needs to be determined. In particular, outlying areas which are not fully up to standard and where loss would not affect other areas which were important, should be eliminated."

As NCC staff wrestled with possible site-protection mechanisms, senior-level inter-departmental discussions developed through the Scottish Office's Departmental Group on the Countryside. This brought together all the concerned land-use agencies, including the NCC, the FC, the Countryside Commission for Scotland (CCS), the Crofting Commission (CC), the Highland and Islands Development Board (HIDB), and the Scottish Office's own Department for Agriculture and Fisheries for Scotland (DAFS).

Different aspects of the issue impacted on each of these bodies. For example, 'tax relief forestry' was so financially profitable to individuals that there were now also schemes being proposed for agricultural land. Any policy changes with regard to the peatlands might also have consequences for small, local woodland schemes being promoted to crofters, whilst the FC and HIDB were keen to encourage the development of the forest industry as part of regional economic regeneration.

A full meeting of the Departmental Group took place on 18 December 1986 with Derek presenting the NCC's scientific case. In the subsequent discussion, the CCS suggested it might be appropriate for the FC to seek a directive for the Secretary of State for Scotland to withhold planting grants in Caithness and Sutherland, initially for a limited period but subject to review. This prompted a good deal of discussion on the statutory locus of FC and Ministers.

The NCC's Director for Scotland, John Francis, then outlined the statutory obligations under which the NCC worked and that to proceed with formal notification of individual SSSIs would be an extremely protracted process with major resource implications. The HIDB expressed disquiet at such a potential landscape-scale designation, especially the implications for the local economy in a resource-poor region. Similarly, DAFS indicated they would not support a complete ban, as they were anxious to promote farm forestry in the area.

One of the issues raised at the meeting was NCC's requirements under Section 37 (S.37) of the Countryside Act of 1968⁽⁵⁰⁾, which states that "In the exercise of their functions ... [the NCC is] to have due regard to the needs of agriculture and forestry and to the economic and social interests of rural areas." Whilst the clause was used at that meeting in an obvious and rather clumsy attempt to undermine the NCC's position, Derek had previously focused on this obligation as an important part of the NCC's case. In an internal minute to his staff⁽³⁷⁾ he had stressed that:

"There is no loss to the nation or even to the local socio-economic scene if no more trees are planted. Forestry is uneconomic here and would never be considered were it not for the high rate of subsidy and profit margins guaranteed by the tax arrangement for private forestry. The only loss is to one private company which is exploiting unsatisfactory rules. The level of public subsidy could be more effectively used to support employment in other ways.

(We say this to comply with our duty under S.37 of the 1968 Act.)"

A few days later, he had developed the argument further⁽⁵¹⁾:

"There is no doubt that there is a strong economic case to be made against further afforestation in the Flow Country. My view is that we should make this case as showing compliance with our duty under 'S.37', but we need to do it very circumspectly. Our approach should be to demonstrate that we have thought about the economic and social implications of "no more trees" in the two districts and to show, as far as possible, that to transfer support from forestry to existing land uses (grazing, sport, fishing) would be more beneficial to the local population. As part of this argument it would be proper to show that the case for public support of forestry has been questioned by others (Ramblers^[26] etc.) and that our own studies show these doubts to be justified."

The 18 December 1986 Departmental Group meeting concluded with acknowledgement that the NCC's Chair "had instructed [NCC's] Director General to conduct negotiations at departmental level and that to a very large extent these considerations would preempt discussion in this Group in the short-term."

Many subsequent meetings of this kind were attended by the CSD specialists, working with colleagues from NCC's Scottish Headquarters. It must be remembered that, at this time, the NCC was a Great Britain body and that this was long before parliamentary and government devolution to Scotland. Nevertheless, some Scottish HQ staff clearly felt greater affinity with the Scottish Office than with their employer. Given that the NCC Scottish Director was acting under instructions from the NCC Council against his own preference, there were inevitable tensions. Whilst Derek was not a natural in respect of organisational procedures, he knew how to deploy such procedures effectively, especially to shield his staff from unreasoned attacks – actions which Derek himself rarely commented on but which were well known and much appreciated by his staff⁽²¹⁾.

The functional end of the controversy came in January 1988 with a decision from Malcolm Rifkind, then the Secretary of State for Scotland (and now Sir Malcolm Rifkind, Member of Parliament for Kensington), to protect half the extent of the Caithness and Sutherland peatlands⁽⁵²⁾:

"We seek to achieve two legitimate objectives: to meet the ecological criteria, which we have done on a scientific basis, and at the same time, take account of the livelihood of those who live in that part of Scotland and who have a legitimate interest with regard to their livelihood and the work opportunities that are available to them."

Described as 'a judgement of Solomon' there was disappointment as to future implications. A *Daily Telegraph* editorial article⁽⁵³⁾ well captured typical feelings within the conservation community:

"Half a cheer for Rifkind

Mr Malcolm Rifkind, the Scottish Secretary deserves half a cheer for his decision to create a 430,000-acre site of special scientific interest in the

unique and barren Flow Country of Caithness and Sutherland. Mr William Wilkinson, the Nature Conservancy Council's chairman dubbed it a step in the right direction. But it still yields too much to those with indefensible vested interests, and allows the further spread of conifer planting which is destroying primæval peat bog with its wading birds, diminishing one of Britain's scarce and thus precious empty landscapes, and possibly putting salmon and trout fisheries at risk – all to provide tax breaks for absentee millionaires.

...

The Scottish Secretary has been half persuaded that tree-planting is a praiseworthy form of private enterprise which creates jobs in a thinly populated area. The argument is dubious at best and has fallen foul of the National Audit Office; [...] An area with immense recreational potential and natural beauty is still at risk of being despoiled at the taxpayer's expense."

Tackling tax-break forestry

The NCC had a particular challenge in addressing the grant and taxation anomalies which drove the destructive and largely unproductive afforestation. This was because, at the time, it was not really expected for a government agency with duties in conservation to make economic arguments, despite statutory responsibilities to have regard to such matters, and the reaction to NCC's actions in the Gedney Drove End case⁽¹⁹⁾, as discussed earlier, had been both swift and brutal.

Derek was keen to make sure that the NCC's analyses in this area were sound, and recruited, as an afforestation specialist, a former Forestry Commission officer (Rob Soutar) who was already unhappy about the FC's grant policies. He worked closely with the NCC's economist, Mark Felton. Similarly, the RSPB had analysts available and made reference to this material in their publications⁽³⁰⁾. The NCC certainly did not shrink from deploying the financial argument in its discussions within Government. Several environmental journalists were becoming interested and concerned at the issue, and raised the profile^(e.g. 29). One of us found himself (with Derek's tacit approval) in an unusually hard-hitting interview for the normally gentle and poetic BBC Radio 4 programme 'The Countryside in Winter' which was broadcast on Christmas Day 1987, finding himself 'trapped' by the interviewer into admitting that this destruction of a national treasure was essentially for the financial benefit for rich people.

Throughout, the RSPB maintained a very high public profile for the issue. Drawing lessons from Des Wilson's highly effective campaigning tactics with respect to removing lead from petrol and other issues⁽⁵⁴⁾, Ian Bainbridge and David Minns very effectively ensured a weekly drip-feed of media stories typically including the tag of 'out-of-control forestry' thereby constantly reinforcing the view that forestry in northern Scotland had little strategic direction. Additionally, they worked with sympathetic MPs to produce regular Parliamentary Questions unpicking taxation arrangements and related issues. Following embarrassment caused by inconsistent and sometimes contradictory

responses, the Forestry Commission eventually dedicated a single staff member to co-ordinate all draft replies to Flow Country / forestry Parliamentary Questions. Indeed so great was the media frenzy which had by now developed that it was even felt across the Atlantic. *Animal Kingdom*, the magazine produced by the Bronx Zoo and widely-read throughout the USA, devoted almost an entire issue to the Flow Country conflict⁽⁵⁵⁾.

The major solution to the underlying problem came from an unexpected quarter. In December 1986, two months after the NCC Council's decision to fight for the Flow Country, the National Audit Office (NAO) reported on the Forestry Commission. The NAO noted a difficulty in assessing the Forestry Commission's performance due to its unusual accounting systems, the very low real rates of return from its investment, and "as regards the private forestry sector, where new investment is stimulated by grants and tax incentives, NAO have some doubts about the national economic benefits derived from the support being made available"⁽⁵⁶⁾. These were damning words, bearing in mind the extremely moderate language normal then in such reports.

The end for tax-break forestry came abruptly on 15 March 1988 in the spring Budget, when the Chancellor, Nigel Lawson (now Baron Lawson of Blaby), announced to a packed House of Commons:

"I accept that the tax system should recognise the special characteristics of forestry, where there can be anything up to 100 years between the costs of planting and the income from selling the felled timber. But the present system cannot be justified. It enables top rate taxpayers in particular to shelter other income from tax, by setting it against expenditure on forestry, while the proceeds from any eventual sale are almost tax free.

The time has come to bring it to an end. ... It is, perhaps, a measure of the absurdity of the present system that the total exemption of commercial woodlands from tax will, in time, actually increase tax revenues by over £10 million a year.

[...] The net effect of these changes will be to end an unacceptable form of tax shelter; to simplify the tax system, abolishing the archaic schedule B in its entirety; and to enable the Government to secure its forestry objectives with proper regard for the environment, including a better balance between broad-leaved trees and conifers."⁽⁵⁷⁾

What happened next ...

More strategic approaches to planning new afforestation

In August 1987, the Highland Regional Council (HRC) established a Working Party to develop a land-use strategy for Caithness and Sutherland, with inputs from all the relevant government agencies. The Working Party met six times between then and January 1989 when the Strategy was finally and formally adopted.

It was a major task for the NCC to ensure that the final Strategy dealt accurately with the issues at stake. The story of this Strategy is for elsewhere, but a detailed

commentary by Derek⁽⁵⁸⁾ on the final draft gives a flavour of the issues the NCC faced (and also, in point 2, his clear view on the critical importance of context (see above) and scale):

"1. The report contains evidence of bias against nature conservation amounting to prejudice. The forestry case and arguments are taken almost entirely at face value and subject to little scrutiny, whereas the nature conservation case and arguments are dissected and questioned in fine detail, in a consistently destructive way. [...]

These are not acceptable tactics. HRC are entitled to say for socio-economic reasons they are not disposed to accept all that NCC wants, but they should not subject our case to a biased attack.

2. HRC are bound to approach the whole issue in a parochial manner which fails to take account of the GB or even the Scottish interest as a whole. On this basis, of course they find (6.34) that the social and economic effects of forestry are beneficial. This contrasts with the NAO report of 1986^[56], which found that forestry in the far north of Scotland caused a loss to the national economy, and produced a handful of jobs at high public cost. From their detached stance they were able to say that the best means of subsidising employment in this region was not necessarily through investment on the land in any way. HRC are naturally going to applaud any nationally uneconomic activity which puts millions of pounds into Caithness & Sutherland with no further questions asked.

3. The repeated criticism that NCC has not met its duty under S.37 (e.g. [para] 6.31). No guidance has ever been given on how NCC should interpret this duty (nor how other departments should interpret their reciprocal duty). It is certainly not required that NCC should make statements about this duty every time it produces a technical report on a conservation issue. NCC has taken note of the NAO report as an authoritative statement of the socio-economic value of forestry in the region, which seems to leave little further to be said. But in the interest of local employment NCC also put in its own paper (Felton & Soutar) on afforestation in the region. Chairman NCC also wrote to the Secretary of State for Scotland on 15 June 1987, informing him of NCC's views in its S.37 duty in regard to the Flow Country issues."

In the month before the Strategy was finally agreed by the Regional Council, much work centred on ensuring that the NCC could join the consensus rather than submit a minority report. The NCC Chair's public reaction was "Some gains for nature conservation but less than we wished for."⁽⁵⁹⁾

In the years that followed, and stimulated by the controversies of the mid-1980s, new afforestation in Scotland progressively came under more strategic direction. Initially this was through the production of Indicative Forestry Strategies for each of the Scottish Regions⁽⁶⁰⁾. These, without prejudging other planning processes, broadly indicated areas

of high environmental interest where there would likely be conflicts if new afforestation were to occur. The intention was to direct new afforestation into less sensitive areas – exactly the sort of approach which had been so lacking in the Flow Country.

Policies within the Forestry Commission have also since changed markedly^(15,23). Recent guidance⁽⁶¹⁾ presents policies that have moved markedly on from the 1980s:

“The Forestry Commission has concluded that for conservation and wider environmental reasons there should be a strong presumption against further forestry expansion on the following peatland types:

- Active raised bog and degraded raised bog capable of restoration to active status.
- Extensive areas (exceeding 25 ha) of active blanket bog averaging 1 m or more in depth or any associated peatland where afforestation could alter the hydrology of such areas.

In future, the Forestry Commission will not approve grant applications containing proposals for new planting or new natural regeneration in these situations.”

In addition, there is now a strategy in place for the re-establishment of open habitat on areas deemed to be worthy of restoration management, with the result that a number of afforested peat bog areas are now having their plantations removed and restoration management is being put in place to re-establish open bog habitat⁽⁶²⁾. The one key un-resolved area concerns the question of whether to re-stock 2nd or even 3rd rotation plantations on peat, or whether to restore these areas to bog habitat rather than to re-stock.

Dismemberment of the NCC

On 11 July 1989, the Secretaries of State for the Environment (Nicholas Ridley) and Scotland (Malcolm Rifkind) “without any consultation, and without attempting any proper costings or drafting of proposed legislation, announced the dismemberment of NCC (Fig. 23.11) into three independent country agencies.”^(20,63)

NCC’s principled and robust stance in defence of the Flow Country has been widely acknowledged as “the trigger for the Council’s dismemberment”^(19,20,34,64). The ultimate consequence of that organisational change is for others to document, but with respect to forestry, Sir William Wilkinson noted in his introduction to NCC’s final annual report⁽⁶³⁾ that:

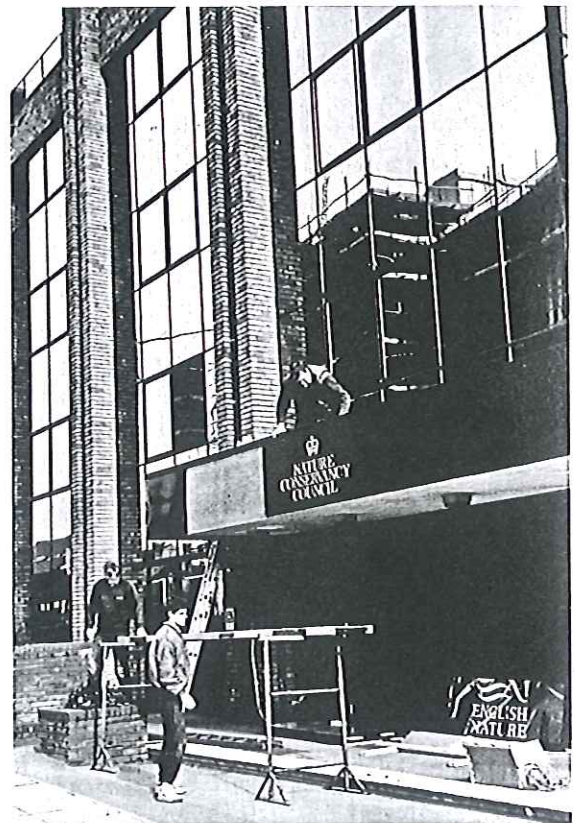


Figure 23.11. Removing the Nature Conservancy Council sign from Northminster House, Peterborough, and replacing it with the name of the new country agency, English Nature, 1989. Photo: Richard Lindsay

"Afforestation too remains a problem in the uplands, though little by little a more sympathetic approach is detectable. The Scottish Office's policy of urging the Regions to draw up indicative forestry strategies is greatly to be commended and should be extended to England and Wales."

One of us reflected with Sir William shortly before his death in April 1996 as to whether the NCC had been right to take on the battle, even though we always knew that there would be a risk to the organisation. We concluded: how could UK exhort South American countries to save the Amazon, if UK could not conserve the Flow Country – and what was the point of a conservation organisation that did not fight for such a uniquely important area?

Designations

In Caithness and Sutherland, following the Secretary of State's 1988 announcement, the focus of NCC work moved to the identification, boundary delineation, and notification of SSSIs. In summer 1988, the NCC established a Caithness and Sutherland Peatland Conservation Project, with a dedicated project team working largely out of NCC's Golspie Office. The Team's final report⁽⁶⁵⁾ recorded:

"Now that the complete suite of SSSIs to arise from the project has been notified or approved for notification, [...] the total area of 'new' peatland SSSIs will be 120,652 ha. Together with an estimated 40,000 ha of peatland lying in pre-1989 SSSIs, the total area of peatland in Caithness and Sutherland to be notified is some 92% of that which in 1988 the Secretary of State for Scotland recognised might be thus safeguarded." (see Figure 23.12).

The task for the Project Team had been immense, involving 24 people. Although in 1988 the work was projected to take 62.5 staff years over five years, by the end it had utilised 50.75 staff years, over seven years⁽⁶⁵⁾ – not including large continuing inputs from CSD and other GBHQ staff. As well as the central notification programme, the team had started important public awareness and education activities, completed further vegetation surveys, and launched a Peatland Management Scheme in 1991 to maintain condition of notified areas.

Following completion of the SSSI notification programme, the way was then clear for formal international designations. In February 1999, the combined SSSI extent was classified as a Special Protection Area (SPA) under the EC Birds Directive (of 145,516.75 ha) and as a Ramsar Site of 143,502.79 ha. Designation as a 143,538.7 ha Special Area of Conservation under the Habitats Directive followed in March 2005. However, 28 years after IUCN first called for its listing as a World Heritage Site, the Flow Country still remains on the 'tentative list' of such potential UK sites (Fig. 23.13).

For a while, the Flow Country peatlands held the distinction of being the UK's largest statutorily protected site. It has ceded that honour following designation of the more extensive North Pennine Moors and Cairngorms Massif SPAs, and a marine SPA over twice the size in the Outer Thames Estuary.

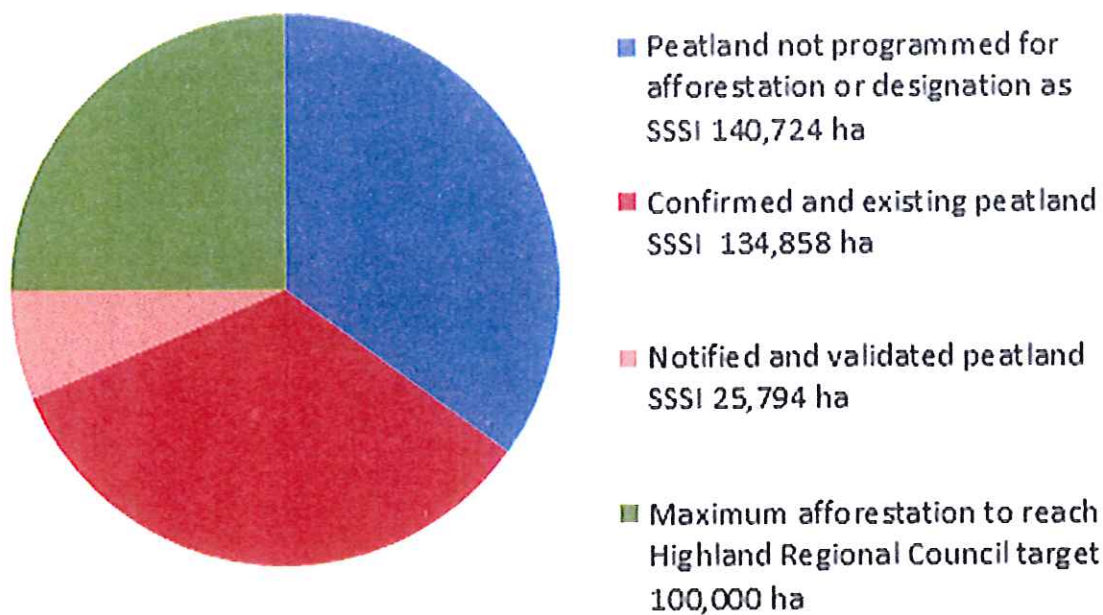


Figure 23.12. The Caithness and Sutherland peatland resource as at 31 March 1996⁽⁶⁵⁾.

Peatland restoration: tackling the damage

Following the RSPB's acquisition in 1995 of their reserve at Forsinard, which included areas of plantations as well as undamaged peatland, pioneering work has been undertaken to restore the damage. This was made possible through two major EU-funded LIFE projects⁽⁶⁶⁾, one in 1994-98 and another in 2000-06. To date, 1,774 ha of conifer plantations have been felled, as well as 158 km of hill drains and 42 km of forest drains blocked with a total 11,128 dams to restore water-tables. Following the LIFE projects, acquisition of open land and plantation adjacent to the reserve has continued on a more local scale with a further 367 ha of plantation and 2,050 ha of open ground acquired for restoration. This is pioneering work, the monitoring of which will help further to refine the techniques used for their potential wider application.

Scientific understanding of afforestation impacts on peatlands

Since the 1980s there has been considerable research to better understand the multiple impacts of peatland afforestation summarised in *Birds, Bogs and Forestry*⁽⁶⁾. We cannot explore this here, other than to note that most recent research on many aspects vindicates the NCC's concerns in the 1980s.

In particular, the NCC's research showed significant 'edge effects' of new afforestation where bird nesting densities were depressed close to new plantations⁽⁶⁷⁾. This results in impacts on bird populations over significantly larger areas than those immediately lost to forestry and was an element of the NCC's case – although there were problems in the early analysis and the concept was highly criticised in some quarters. Most recent research⁽⁶⁸⁾, following 25 years of plantation maturation in the Flow Country, has supported NCC's concerns and found "reduced occupancy [of Dunlin (*Calidris alpina*) and Golden Plover (*Pluvialis apricaria*) (Fig.11.10)] within several hundred metres from forest edges". These edge effects are now one of the many drivers for peatland restoration (above) in the area.

Meanwhile new evidence and understanding in the field of peatland hydrology have brought about something of a paradigm shift in the way that peat-bog systems are thought to function. Hugh Ingram's translation of the seminal Russian work *Water Movement in Mirelands*⁽⁶⁹⁾, together with his 'Ground Water Mound Theory'⁽⁷⁰⁾, brought the realisation that peat bogs function as single hydrological entities and thus allocating the margins to planting while leaving the pool systems for wildlife was not a viable conservation option. Forestry research also highlighted the degree to which the peat-bog surface dries, cracks, and subsides beneath a plantation forest, causing deep drying and major morphological changes to the bog system⁽⁷¹⁾.

The future

One of the more significant outcomes from the EU LIFE-funded Peatlands Project (see above) was the development of a Management Strategy for the period 2005-2015⁽⁷²⁾. This was developed with wide stakeholder and community input, and addresses issues such as the need for strategic development of the renewable energy industry – issues entirely new since the 1980s.

“...the peatlands have suffered over the last decades from policy shifts, varied standards of stewardship, and uncertainties. This Strategy is the first time that a clear, shared vision for the future has been attempted. It is a vision for a future where land uses complement rather than compete with each other.”⁽⁷³⁾

Most recently, through the stimulus of the IUCN UK Peatland Programme, the Scottish Parliament has enthusiastically endorsed the principle of peatland restoration for the ecosystem services provided by such systems, and the Scottish Government has announced the allocation of £15 million to support the restoration of Scotland's peatlands⁽⁷⁴⁾.



Figure 23.13. Bog pools, Blar nam Faioleag NNR, Caithness, 1986. Photo: Richard Lindsay

Final comments

Lowe *et al.*⁽²⁴⁾ reviewed the earlier conflict between forestry and conservation interests in the Berwyn range of mid Wales. They noted how, in inter-agency discussions on land-use:

“it is evident the Forestry Commission [FC], WOAD [Welsh Office Agriculture Department] and ADAS [Agricultural Development and Advisory Service] regarded the designation of an SSSI as essentially contestable. As Lofthouse⁽⁷⁵⁾ emphasised:

“I have observed that when FC, WOAD/ADAS and NCC officers meet together the FC’s view on what land is plantable is not questioned. WOAD/ADAS opinion as to what is or is not improvable agriculturally is accepted. Yet NCC views on what land should be notified as SSSI seems to be more critically examined by the other two.” “

This was very much our impression in much of the intra-governmental debate regarding the future of the Flow Country. Derek’s seminal publication *Nature Conservation in Great Britain*⁽⁷⁶⁾ had concluded:

“Nature conservation has in the past sometimes conducted its business on too apologetic and timid a note. Such a tendency to submissive posture is a recipe for retaining a low peck-order position in the league of land and resource use interests. If nature conservation is to gain the acceptance it deserves as a relevant concern for the whole of society, its practitioners all have to behave as if it really matters. Conservationists must argue their interests and their cases with a firmness and conviction which stem from a visible belief in and commitment to the things they talk about. ... And for all those who affirm the importance of nature conservation, the challenge will be to turn opportunity and intention into achievement. Posterity will judge all of us by deeds and not words.”

That the NCC—under the leadership of Sir William Wilkinson (Fig. 19.6) and the scientific leadership of Derek Ratcliffe—was prepared to act with such conviction was a significant change to the *status quo* (which then expected nature conservation interests ‘to be seen but not heard’) and a challenge to establishment interests. Ultimately the case had positive outcomes for both forestry and conservation. “In terms of the scale of the area concerned and in respect of the longer term consequences, there have been few more significant conservation battles in the UK”⁽²⁷⁾. It was a conflict that could not be avoided.

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We also thank the very many others who contributed to the development of the NCC's case acknowledged by Stroud *et al.*⁽⁸⁾ and Lindsay *et al.*⁽⁵⁾. Thanks also to Julia Newth for helping source publications and to Alan Vittery for information about the launch of *Birds, Bogs and Forestry*⁽⁸⁾.

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Appendix: Table 23.1. Chronology of key events related to the Nature Conservancy Council's (NCC) involvement in the Flow Country afforestation controversy 1970s-1989 and of external events.

Date	Events related to the NCC	External events
1970s		The Forestry Commission assures the Nature Conservancy Council that afforestation of the Flow Country would be technically impossible for the foreseeable future.
Late 1970s - early 1980s		New technical and silvicultural technologies allowed more widespread deep ploughing of peat for planting. Generous grants from the public purse under the 1967 Forestry Act to cover the direct costs of plantation establishment, and a forestry company combining these with the potential to offset remaining establishment costs against other tax liabilities, made this an extremely profitable investment (whether or not the trees grew), especially to individuals in high tax-brackets. By the early 1980s, the rate and extent of new afforestation markedly increased.
1979-1986	NCC organised Upland Bird Surveys (later Moorland Bird Study) in Caithness and Sutherland since 1979, whilst RSPB had undertaken parallel surveys in Caithness between 1980 and 1986. A major programme of peatland survey and separate NCC surveys of rivers and freshwater lochs is also undertaken by NCC.	
1985	Drafting of report by Stewart Angus (NCC Golspie) giving first overview of the extent of peatland afforestation	
1986	Publication of <i>Nature Conservation and Afforestation in Britain</i> by NCC (24/6/86) ⁽⁹⁾	
July		Department of Agriculture and Fisheries for Scotland Report on "the potential for future afforestation in the Flow County of Caithness and Sutherland"

Date	Events related to the NCC	External events
August	Derek Ratcliffe memo ⁽³⁷⁾ outlining the key elements of the Flow County conservation case	Publication of <i>The Theft of the Hills</i> by The Ramblers Association and WWF ⁽²⁶⁾ Inter-agency meeting at Scottish Office to discuss land-use mapping - "Caithness and Sutherland (Flow Country) Forestry Study" (14/8/86)
September	Presentation to NCC's Board of Directors on forestry economics Meeting between NCC's Chairman and Secretary of State for the Environment (Nicholas Ridley MP) with discussion of Caithness & Sutherland peatlands	Visit to Flow Country by International Mire Conservation Group RSPB write to Parliamentary Under-Secretary of State for Scotland (M. Ancram MP) calling "...for a halt to further forestry operations in the flow country until an integrated approach to the future of this area is adopted..."(10/9/86) RSPB issue Press Release condemning further ploughing of Flow Country - "countered and dismissed by a [Forestry] Commission spokesman" (10/9/86) ⁽⁴⁸⁾
October	NCC Council consider major paper on Flow Country : "Peatlands of Caithness and Sutherland" - first substantive discussion by Council (14/10/86)	Consideration by Technical Working Group of Scottish Office Departmental Group on the Countryside (22/10/86)
November	Draft of <i>Birds, Bogs and Forestry</i> produced and widely circulated for peer-review and comment Major internal strategy planning meeting involving key staff from NCC's NW Region, SHQ & CSD; Inverness (18-19/11/86)	
December		Consideration of NCC's case by Scottish Office Departmental Group on the Countryside (18/12/86) National Audit Office published review ⁽⁵⁶⁾ questioning the economic justification of Forestry Commission investing further public funds in afforestation of marginal land in northern Scotland (Review of Forestry Commission Objectives and Achievements; HC 75)

Date	Events related to the NCC	External events
1987		
January		Call by IUCN ⁽⁴⁶⁾ for Flow Country to be designated as first UK wetland under the World Heritage Convention "given the immense importance of the site..." (29/1/87)
February	Council consider scientific case for Flow Country for second time (24/2/87) Council issue Press Release confirming its unanimous view of the importance of the Flow Country (24/2/87) Feature article in <i>New Scientist</i> ⁽⁷⁷⁾	FC extends consultation arrangements with NCC for all grant applications for new afforestation in Caithness and Sutherland (17/2/87)
March	Flight over the peatlands by NCC's Advisory Committee on Science to view intact and destroyed patterned mires.	
June		Publication of <i>Forestry in the Flows of Caithness and Sutherland</i> by RSPB ⁽³⁰⁾
July	Publication and launch of <i>Birds, Bogs and Forestry</i> ⁽⁸⁾ in London, and call by NCC's Chair for a moratorium on future forestry planning in Caithness and Sutherland (23/7/87)	
August		Scottish Environment Minister James Douglas Hamilton asks Highland Regional Council (HRC) for its view on NCC's position by end of September. HRC establish a Working Party
September	Draft copy of <i>The Flow Country</i> sent to Scottish Development Department (10/9/87)	NCC presentations to i) Country Commission for Scotland Commissioners who were determining "its position in regard to afforestation in the flow country", and ii) Scottish Development Department (8/9/87) Highlands and Islands development Board release detailed response to <i>Birds, Bogs and Forestry</i> (30/9/88)
October		Major feature in <i>Sunday Times</i> supplement ⁽⁷⁸⁾

Date	Events related to the NCC	External events
November		Feature in <i>British Wildlife</i> ⁽⁷⁹⁾
1988		
February	Malcolm Rifkind MP, Secretary of State for Scotland announces protection of half the extent of the Caithness and Sutherland peatlands as SSSI (23/2/88) Broadcast of ITV documentary 'Forestry and the Flow Country: paradise ploughed' presented by David Bellamy (9/2/88)	IUCN 17 th General Assembly (Costa Rica) adopts Resolution 17/63 on International Importance of Scottish Peatlands (1-10/2/88) Major debate in House of Lords on NCC annual report which focused significantly on Scottish afforestation issues (17/2/88) [Hansard vol. 493, col. 677-738 ⁽⁸⁰⁾]
March	Meeting between HRC/Scottish Development Department & NCC officials; NCC HQ (4/3/88)	Nigel Lawson announces change of tax regime in Budget ⁽⁵⁷⁾ (15/3/88)
May	Publication and release of <i>The Flow Country</i> ⁽⁵⁾	
November	Initiation meeting for Caithness and Sutherland Peatlands Project Team, Edinburgh (4/11/88)	HRC Caithness & Sutherland Working Party issue revised Land Use Strategy following six meetings since August 1987
1989		
January		HRC consider and agree revised Caithness and Sutherland Land Use Strategy
July	Nicholas Ridley MP, Secretary of State for the Environment, and Malcolm Rifkind MP, Secretary of State for Scotland, announce their decision to break up the NCC into its country components ^(19,64) (11/7/89)	

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Nature's Conscience

The life and legacy of
Derek Ratcliffe



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