Proceedings of the 1987 Countryside Recreation Conference

Organised by the
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RECREATION AND WILDLIFE: WORKING IN PARTNERSHIP

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WELCOME TO THE CONFERENCE

Roger Clarke

CRRAG Chairman, Countryside Commission

On behalf of the Countryside Recreation Research Advisory Group, (CRRAG), may I welcome you to the 1987 Countryside Recreation Conference. My name is Roger Clarke and I have the privilege of having recently been invited to Chair CRRAG and therefore to begin and end this Conference.

In addition to introducing myself, it might be helpful if I were to mention Hilary Talbot-Ponsonby from the University of Bristol, who is the Secretary of CRRAG. You may wish to meet Hilary if you have any questions about the domestic arrangements or the organisation of the Conference.

Before we move into our first session, a word or two about CRRAG and about the Conference. Firstly, about CRRAG. Many of you will be much more familiar than I am with the workings of the Countryside Recreation Research Advisory Group, while others will be less familiar. However, it seems to me that CRRAG performs a very useful role at a national level, of which this Conference is one kind of expression.

CRRAG is created by, and is a forum for, the national agencies (in which I include the local authority associations) concerned with countryside recreation. It is a forum for them to talk to each other, particularly in relation to the area of research. You might say it has three main jobs. The first is to look at the emerging need for research in relation to the changes which are taking place in countryside recreation policy.

The second is to promote co-operation in the carrying out of research. This is easy to say but difficult to achieve. However, a prime objective of CRRAG is to achieve improved co-operation between us all in the way in which we carry out our research. The third is to disseminate the results of research so that research can feed into the better practice of countryside recreation.

I suppose this Conference fits into the third of those objectives because it is primarily about disseminating the results of our experience so that we may all do better next time.

Other activities of CRRAG with which you will be familiar are the research register, which I think you will all have seen with your papers, and the programme of workshops which are organised on specialist topics through the year. If you want more information about them please speak to Hilary.

CRRAG is currently looking at the way it works to try to see whether there are more effective ways of doing things. I would particularly value any comments that anybody has about that. Please take the opportunity to speak to me, or any of the other representatives of the main agencies concerned with CRRAG during the course of the

Conference, because we would welcome your ideas about the way in which the organisation should develop.

The title of the Conference - 'Recreation and Wildlife: Working in Partnership' - presumes a harmony which may not always exist. At least that was my reaction on 'inheriting' the title of the Conference. I suppose that at its most general level the wildlife interests, at one extreme, may have a kind of paranoia about the impact of public recreation and public access on wildlife and view the public as the source of many of the problems which affect wildlife conservation. And, lest I be accused of bias, at the other extreme, recreation interests may be complacent about the impact of recreation on wildlife and really refuse to see that problems can and do exist.

Now if we remain at that level of generality, clearly we are not going to make very much progress. Therefore, I hope that during the Conference two things will be borne in mind. The first is that we should not avoid the issues. If there are difficulties we should confront them, but let us look for the practical solutions and not remain at the level of generalised rhetoric.

The second is to say that recreation and wildlife working in partnership presumes, and I think correctly, that there is a partnership and that these dual interests are sometimes a conflict and sometimes an opportunity. How can we harness the public interest in recreation in the countryside to the wildlife conservation priority? I hope this is an issue we can bear in mind.

The format of the Conference will be plain to you from the programme. Basically there are three main sections. Firstly, a plenary session this morning and early this afternoon. Secondly, some case study group discussion sessions, and thirdly, tomorrow morning further plenaries, where we look at the interdependence of recreation and wildlife.

Each of the plenary sessions will have a separate Chairman and because my walk-on part is really at the beginning and end I will just say a word or two about each of the Chairmen now and then hand over to the first of them.

This morning's sessions will be taken by Frank Perring, who has recently retired as the General Secretary of the Royal Society for Nature Conservation. This afternoon's Chairman will be Tom Huxley who has recently retired as Deputy Director of the Countryside Commission for Scotland, and was my distinguished predecessor as Chairman of this organisation. I would like to take this opportunity of thanking Tom for his service to CRRAG, an interest that always had a very high priority for him. On behalf of CRRAG, I would like to say how much we appreciated his term as Chairman, and thank him for all he has done. Tomorrow morning the Chair will be taken by Brian O'Connor, Director, England, of the Nature Conservancy Council. As far as I know he has not yet retired. There is one change to the programme. Unfortunately Ian Prestt, the Director General of the Royal Society for the Protection of Birds, is unable to be with us tomorrow morning and his place will be taken by Martin Davies.

INTRODUCTION

Frank Perring

Former General Secretary, Royal Society for Nature Conservation

I may have recently retired from the Royal Society for Nature Conservation but I am not in the habit of retiring! I am delighted to be involved in a Conference which has as its theme recreation and wildlife, and to be able to Chair this morning's session.

This is perhaps not inappropriate as the Royal Society for Nature Conservation and its associated 48 Wildlife Trusts, plus 50 Urban Wildlife Groups, are increasingly demonstrating their willingness, and ability, to open their 1,750 nature reserves for recreation. Hence, the Royal Society for Nature Conservation's involvement with the 'MacMillan Guide to Britain's Nature Reserves' and our move into leisure and learning weekends. We hope to be running about 12 next season with the profits being put back into reserve management.

There has been a rapid increase in guided walks and open days publicised by such national events as 'Wildflower Week'. Alternatively, the Royal Society for Nature Conservation sees wildlife enjoyment as a recreation to be added to, or built into, areas not previously set up as reserves. Hence, our employment over the last three years of an Officer, funded by the Countryside Commission, to promote 'Watch' activities in Country Parks.

Our recent collaboration with Schering Agriculture and with the Countryside Commission has started a movement to set up Pocket Parks by communities throughout Britain, not just in Northamptonshire, where a Pocket Parks Officer, Jo Rose, who is here today, comes from.

Only last month we collaborated with the English Tourist Board in a 'Find out about wildlife in the countryside' week based at the 50 or so Centres run by the Trusts where information about the county or area is displayed. This will be repeated and expanded in 1988.

We hope that these initiatives will bring in more members and resources for management. They will also create problems which we can only overcome by benefiting from the experience gained by experts, wardens and recreational managers such as yourselves. Therefore, I will be listening very carefully to all that is being said because it is going to be very important for the Trust movement in the future.

We have a very promising array of speakers, the first of whom is Tim O'Riordan. Who could be more appropriate than Tim to set the scene for wildlife conservation? He is Professor of Environmental Sciences at the University of East Anglia and the author of the rural part of the UK response to the world conservation strategy. The broad approach, which he takes, is illustrated by his being both a member of the advisory committee for England for the Nature Conservancy Council, and of the Countryside Policy Review Panel of the Countryside Commission. He is also involved with the Broads by being Chairman of the Strategy Committee for the Broads Authority.

In the second session of the morning we will be entertained by Barrie Goldsmith. He is probably known personally to more of the audience than any other speaker. For many professionals in nature conservation the MSc course at University College, London, has been a sine qua non for entry into the profession. For 20 years he has been training graduates who have gone on to become very effective practitioners, both in this country and abroad. The Trust movement has benefited enormously from his many products.

Incidentally, this has given him the advantage of having a string of very able people whom he has directed towards fascinating areas of research for their MSc theses which have produced a series of Reports which deserve to be more widely known. He has gone some of the way towards promoting these Reports by editing two important volumes, 'Conservation in Practice' and 'Conservation in Perspective' and insofar as wildlife is now the 'in' word for nature conservation (and note the number of nature conservation trusts which have become wildlife trusts over the past 12 months) few can be better qualified to speak on the wildlife perspective than Barrie. As you will note, this is one side of the scale, to be balanced later today by Roger Sidaway on the recreational perspective.

ON IMPLEMENTING GOOD ENVIRONMENTAL PRACTICE

Timothy O'Riordan

School of Environmental Sciences, University of East Anglia

SUMMARY

Conservation should be a verb, not a noun. There is little in conservation but much in acts of conserving. The noun becomes a phrase, **good environmental practice.** This is the application of information, advice and management so as to weld the process of conserving within the implementation of land use development – in agriculture, forestry, industrial development, business enterprise and settlement planning. The outcome may not be so simple as to have one's cake and eat it. The aim is to produce a new orientation to land use care so that wealth enhancement, job creation and habitat improvement actually become one and the same thing.

In Britain, we are nowhere near establishing such an exciting requirement. Despite all the rhetoric, the level of ecological understanding amongst those who advise, plan and execute land management remains very poor, and in most cases non-existent. The sense of the past, of historical antecedents and the changing cultural meanings of local landscapes is also rudimentary, yet a vital component of good environmental practice. Sadly policies that might inculcate this imaginative approach are neither financially sound nor institutionally well grounded. The responsible agencies tend to flounder around because they have no effective means of co-ordinating their efforts.

But the future prospect is by no means bleak. Developments in agricultural and forestry technology suggest that more intensive production methods can also be environmentally friendly. For the first time in the nation's history some 2-4 million hectares of existing agricultural land is available for a conscious choice of use, a choice in which good environmental practice can be given much greater priority. Environmental education and educational television have enormous potential for upgrading the state of knowledge in field ecology and landscape history. The emergence of an increasingly leisured society means not only more money for good environmental practice but also greater public contact with and appreciation of such practices.

For this to happen economic strategies will have to be fundamentally altered. More money must be made available for rural, economic and environmental renaissance. Some of the necessary funds should be earmarked from a special capital gains tax levied on all speculative leaps in land values when formerly-agricultural land is transferred into higher value uses. Everyone except the farmers wants the cost of the Common Agricultural Policy to be reduced, but politically that will be difficult to achieve. So member states should strive to ensure that strings are attached to any continuation of even a slightly diminished agricultural budget.

There is no perfect recipe for good environmental practice. Demonstration schemes will need to be set up throughout the country to

reflect the great regional mosaic of landscapes, habitats and economics. These prototype schemes should be independently and equivalently monitored so that the resulting lessons can help pave the way for a brave new countryside.

GOOD ENVIRONMENTAL PRACTICE IN 1987

We are just beginning to turn a corner. Since the war, as is now well known, we have lost something close to half of all the most interesting wildlife habitats and almost all our lowland grass, heath and bog, and calcareous grasslands. Much of what is left is fragmented and fragile, nurtured carefully by official and voluntary agencies, who neither have the powers nor the cash fully to undertake the tasks now expected of them.

Why has this loss caused so much public interest? Arguably more is being spent on the countryside, in terms of pounds per head of affected population, than in the inner city core, despite the rhetoric of recent months favouring a new approach to the city.

The answer lies in part in the public imagination of the countryside. Over generations feelings have been nurtured in the public mind that the British countryside symbolises **stability** amid a welter of change, **purity** in contrast to the decay and pollution of the city, **natural beauty** compared to the 'unnaturalness' of urban areas and **heritage** - of history, of nostalgia for lost youth, and of romanticism - the 'chocolate box' image of rural villages and parochial social relationships as depicted in 'The Archers'. One should add to this the belief, still shared by a majority, that farming is vital for maintaining an adequate food supply - a legacy of the war years - and one can see that in the public mind, there is a political willingness to have the countryside change only slowly and in terms that do not fundamentally undermine these images, no matter how unrealistic they may be.

Nevertheless, the countryside has also provided the seed bed of revival and radical change. The 19th century housing and community reformers began their work in the countryside, as did the great landscape architects nearly a century earlier. So **renaissance** is also part of the countryside image. The relationship between heritage and guided change forms the critical theme of the analysis that follows.

Monitoring of Habitat Losses

Because these habitat losses were not monitored, the realisation that such alteration was taking place came almost too late, and the necessary protective legislation is still not in place. It is only a decade ago that the Nature Conservancy Council published its embryonic paper, Nature Conservation and Agriculture, and less than five years have elapsed since the two Countryside Commissions, the Nature Conservancy Council and the Institute for Terrestrial Ecology, agreed to establish a proper nationwide habitat monitoring system. Even then, as I understand it, these well-meaning agencies have not co-ordinated their approach. A comprehensive and reliable picture of the scale and pace of habitat and landscape alteration may still elude our grasp. It is vital that this monitoring programme be given protected status from future budget squeezes, but sadly that cannot be guaranteed. Any cutback in a programme of this kind seriously jeopardises its effectiveness and its

value in predicting the cumulative wildlife changes caused by myriads of small, unconnected and often well-intentioned land use decisions taken in ecological ignorance. Some of the proposals that follow in the second part of the paper depend upon a reliable habitat monitoring programme.

Managing Key Sites

Inevitably and necessarily the official agencies and the voluntary sector have concentrated on safeguarding the 'high profile' sites - the National Nature Reserves, the Sites of Special Scientific Interest, the key Country Trust Reserves and the National Parks. This is understandable because habitat protection must at least start from an ecologically robust base. In any case, the passage of the Wildlife and Countryside Act essentially forced this strategy. Not only did that legislation give statutory prominence to the top sites, the Government also increased resources to enable most of these areas to be protected against the possibility of irreparable alteration.

TABLE 1
NATURE CONSERVANCY COUNCIL BUDGET ESTIMATES 1987/88-1991/92

	1987/88		1991/92	
	£m	%	£m	%
Site Protection				
Safeguard	7.4	20.2	8.0	15.2
Management	6.3	17.2	7.8	14.8
Existing agreement	6.1	16.7	5.5	10.5
New agreements	1.9	5.2	7.5	14.3
	21.7	59.3	28.8	54.8
Wider environment	2.0	5.4	4.3	8.2
Creative conservation	0.4	1.1	0.6	1.3
	2.4	6.5	4.9	9.5
Total budget	£36.5 m		£52.4 m	

Table 1 shows how far the Nature Conservancy Council gives emphasis to its key site protection strategy. The data are taken from the latest corporate plan. It can be seen that at present nearly two fifths of the total budget is spent on site safeguard, including management, and that in five years' time over half will still be consumed in this way. The wider environment theme is being given more prominence, but the total sums available are small relative to the pay-off in terms of wildlife improvement and public relations. On the

creative conservation front the budget is particularly minuscule. Further investment here should pay off handsomely in future years.

Even with this bias towards site protection and management, it is by no means guaranteed that sufficient resources are available for the continued management of such sites. As we all know, the law of protection for such sites is not absolute. If the necessary compensatory funds are not available then important habitats will be lost. Already the Nature Conservancy Council has lost, through appeal, the ecological intactness of six Sites of Special Scientific Interest, because the Environment Secretary did not accept the Conservancy's scientific case. Every Site of Special Scientific Interest is by no means sacrosanct, because a number reflect regional, rather than national, conservation interest. Nevertheless, it is a matter of some concern that the nation's senior scientific advisory agency on habitat and wildlife matters is not listened to with the fullest care and attention. Nowhere was this more evident than in the political bargaining over the environmental damage that will be associated with the Channel Tunnel development. The Nature Conservancy Council is also considering the sale of some of its recently acquired assets, relying instead on entering into long term leases with the hard pressed voluntary agencies. Without considerable improvement in the capabilities of the voluntary/public sectors to plan for and manage habitats in the full knowledge of the ecological and social history of the sites, coupled with adequate resources, this is unlikely to be an effective long term approach.

To add to these difficulties, some of the present management of key sites is dependent upon the contract labour of Manpower Services Commission teams, or other job survival programmes. Altogether some 35,000, mostly young, people are engaged in practical estate management, usually under the de facto supervision of wardens with many other demands on their time.

Because these teams lose their experienced workers normally after a year, not only is there little continuity but the practical skills in acquired field ecology are dissipated with the break-up of the work gangs. This is a great shame, because some of the people involved could form the basis of a conservation corps, reminiscent of the US Civilian Conservation Corps of the New Deal era, whose talents and experience should be marketable. There is a potential job opportunity here for enterprising self-employed habitat conserving agencies. Here is one area where new policy developments are required.

Strategies for Site Selection

The Nature Conservancy Council is emerging from its purdah-like phase of renotifying and scheduling Sites of Special Scientific Interest. This onerous task has occupied more than 60% of the time of Assistant Regional Officers, even after new staff were appointed, and has dominated the attention of the land agents and surveyors. Now that the Nature Conservancy Council has established a five year corporate plan with an annual update, it has turned its attention to the voluntary sector to encourage the County Trusts and the Royal Society for the Protection of Birds to adopt a similar strategic policy towards land acquisition and management. The Royal Society for the Protection of Birds is already well down this road, with a reasonably well-oiled administrative structure, so does not need much guidance. The National

Trust is also developing 'whole farm' management plans for all of its holdings as a matter of long term policy. The County Trusts are variably adapted to this requirement, which is likely to prove advantageous to the conservation movement as a whole. The approach should enable the good environmental practice to be better co-ordinated, and to ensure that a long term programme of acquisition and management is more securely funded.

This at least is the intention. I have my doubts that it will work in practice. The criteria for site selection are not universally agreed, and in any case their evaluation is a matter of experience and judgement. Sites come on the market in unpredictable and sometimes mysterious ways. Management can be a hit and miss affair, even with the best of intentions. Ecological and historical knowledge of sites may be relatively insecure. But the principle of co-ordination, harmonisation and joint funding is a good one, so long as it is supported by adequate communication, appropriate experienced labour, and a real sense of understanding of the ecological and historical idiosyncracies of each site selected and managed. That 'folk knowledge' needs to be nurtured and tapped.

Buffer Zones and Green Corridors

There are differing views as to the likely success of the so-called 'island' approach to the selection and protection of sites. The selection of important habitats is based on the criteria of **representativeness, naturalness, diversity, rarity** and **threat**. These are necessarily subjective criteria, although panels of informed people can agree on what constitutes the fundamental attributes. What is less certain is how well these sites can maintain their intrinsic wildlife characteristics if the land around is so abused as to threaten the ecological intactness of the protected site. Safeguarding an area somewhat larger than is minimally necessary is important here, especially for species and habitats that need space and isolation. What happens to surrounding land use practices is now recognised as an increasingly important element in site management plans. In addition, conservationists are turning their attention to linking corridors to enable wildlife to move along undisturbed zones from one important habitat to another.

The management principles and requisition strategies of buffer zones and green corridors are still being worked out. But it is gratifying that so much attention is now being given to this policy, as a pure 'island' strategy is not sufficiently secure for long term site protection. I remain to be convinced that the ecological principles and appropriate management techniques are adequately established by the official and voluntary sectors to be certain that this approach meets the requirements now demanded of it. One suspects that this is an area of endeavour where more research, monitoring and experiment will be required. Once again I fear that the resources are inadequate to do the job.

To emphasise this point, it is possible that the Nature Conservancy Council will require that each key site, certainly most of the Sites of Special Scientific Interest, should have a long term management plan. This is a laudable objective but one that could absorb most of an Assistant Regional Officer's time for another decade. I am not sure that this is the best use of Assistant Regional Officer skills, or that this

sufficiently releases the Conservancy from its Site of Special Scientific Interest bondage to give adequate attention to the wider countryside.

This provides me with an opportunity to restate my belief that the career structure within the Nature Conservancy Council might benefit from a rethink. I would like to see a more clearly defined career grading for Assistant Regional Officers, who should be termed conservation officers, based on experience and management-diplomacy skills. Retraining and refresher courses will probably be required, and Assistant Regional Officers will have much more motivation to respond to these should the career and salary ladders become more accommodating and challenging.

In addition, there is a need to reconsider the site designation of potentially new conservation sites, in other words those which should become of great wildlife interest in a generation or more. A 'creative conservation area' would probably suffice and could well encourage landowners to redouble their efforts to dedicate and manage land for creative conservation.

The Wider Countryside

The Nature Conservancy Council, having emerged from its Site of Special Scientific Interest 'sleep', is now actively pursuing a wider countryside initiative. Its Chairman, William Wilkinson, has formed an ad hoc advisory group under a Council member, John Cousins, and has encouraged the county advisory committees to take a more prominent and influential role on this topic. As a consequence, the Council has taken a lead in helping to devise guidelines for improved environmental practice in the onshore oil and gas industry, the electricity industry, the water authorities (a shrewd move in advance of privatisation) and, in time, the extractive industries. The aim is to ensure that both public and private corporations establish codes of practice that are based on sound practical ecological and geological principles, and that they communicate with Conservancy staff when developing schemes or restoring disused sites. This is a major exercise which will take time to show its achievements. Much depends upon the motivation of corporate managers, the relative strength of the economy, the extent of back-up legal safeguards, and the development of suitable scientific and management training amongst key staff. These are demanding qualifications. At present, at least, the enthusiasm is there and the general attitude is supportive. But a great deal remains to be done. There are few actual examples of good environmental practice, and it is not at all clear that the various parties involved fully understand each other. The Eurotunnel experience is hardly an auspicious start. Once again one senses the need for more broadly based skills in ecology, planning and landscape management.

The passage of the European Community Directive on Environmental Impact Assessment (85/337/EEC) in July of next year should provide a more secure basis for ensuring good environmental practice in project design and development. New primary legislation will have to be introduced to implement this Directive. That statute will effectively require developers to take into account, amongst other matters, the natural history of the site before construction begins. They will be expected to safeguard those features or species, which, following consultation with appropriate interests, including the general public,

are judged to be worth saving. Furthermore, if the planning authorities are suitably advised, developers should be required to reinstate habitats degraded by use, so as to create suitable conditions for new habitats in the future.

Admittedly the implementation of this Directive is a year away. Yet legal opinion suggests that even where an Environmental Impact Assessment is not statutorily mandatory, if a proposal is likely to have significant environmental impact it will require a full assessment. This should have important ramifications for major afforestation schemes in environmentally sensitive sites, large arterial drainage schemes and major land reclamation projects.

So environmental assessment is likely to become fairly commonplace over the next decade. Within that assessment, project packaging where environmental gains and losses are traded in a systematic way, could become a standard feature of planning and environmental management. Here should be a golden opportunity to create a new climate of project design where good environmental practice is built in at the outset. Already there are some companies and corporations willing to embark on this exercise. The Central Electricity Generating Board has recently created an Environmental Development Advisory Board partly with this objective in mind. British Coal has developed its own in-house environmental assessment team with a special remit to manage environmental negotiation of this kind. One or two of the major consulting engineering firms are similarly working on this approach. Because this will become accepted practice, so stricter guidelines, better advice and much improved training of developers, planners and consultants will be required. Hopefully here again is an opportunity for the conservation bodies to market their hard won and now highly prized skills.

Urban Nature Conservation

Although CRRAG is a countryside-based organisation, it would be wrong to omit reference to the burgeoning state of the urban wildlife movement. For one thing, nearly 90% of the population spend nearly 90% of their lives in an urban, or at least built-up, environment. In most cases, urban environments are devoid of exhilarating wildlife, creating in part a demand for countryside recreation that is growing by leaps and bounds. An increasingly leisured, affluent and educated public seeks more direct contact with nature, as recent Countryside Commission statistics suggest. Some of that demand can be offset by giving greater attention to urban wildlife management.

Here is an area where there is enormous potential and encouraging evidence of success. The demise of the Greater London Council has not killed off the excellent team of urban wildlife specialists under David Goode. They are busy continuing their achievements and energising the national movement from the Greater London Ecology Unit. The Nature Conservancy Council has established a full time Urban Nature Conservation Officer, who is also helping to ensure that suitable sites are protected with appropriate management. This is a daunting task for one individual, and I would like to see the Nature Conservancy Council promote more investment and staff time into this important initiative. The County Trusts have a more cautious approach to the urban domain. Some have welcomed the urban movement, others are yet to be convinced.

Urban wildlife management is a force to stay, so it would be desirable for the two sides of the habitat management coin to co-ordinate their particular skills in the true spirit of co-operation.

Good Environmental Practice on the Farm

I have left the much discussed topic of agriculture and conservation to the last, not because it is least important. It is merely that this has been so widely canvassed in the many conferences and reports on this topic in recent years, that there is relatively little to say that is new. So let me make a few personal observations on this most fascinating topic, based on research I am currently supervising.

First of all it is unrealistic to expect farming practice to change overnight. Like most of us, farmers will do almost anything if the price is right, but that cannot be the sensible way forward. As matters stand, the vast majority of farmers put food production first, income protection second and habitat promotion third. They have been trained and encouraged to intensify production. They have been advised by the commercial companies to do so. They have also been encouraged by the official agencies to do so. Above all, the incentives of subsidised output prices have propelled them into these priorities.

FIGURE 1
THE ECONOMIC MOMENTUM BEHIND MODERN AGRICULTURE

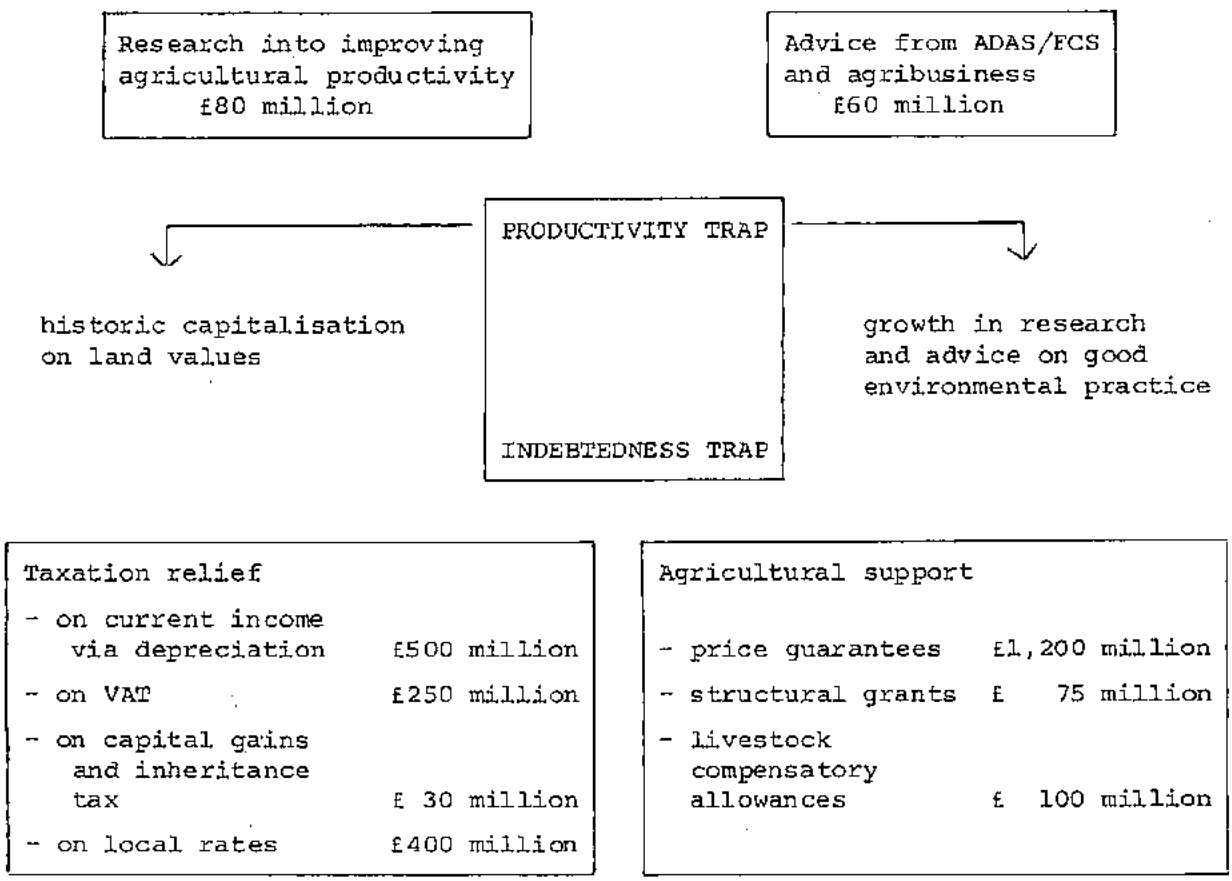


Figure 1 outlines these forces and suggests that the outcome has been an inflation of land values and an increase of indebtedness. It is now estimated that one third of all farms in the UK carry a debt that is greater than half the value of their total assets. This compares with a figure of one seventh of all farms recorded in 1979.

Secondly, despite the good work of the Farming and Wildlife Advisory Groups, the demonstration farms, the various initiatives of the Countryside Commission and the Nature Conservancy Council, and the more recent efforts by the local voluntary groups to offer advice and encouragement on good environmental practice, the fact remains that few farmers have the time or the enthusiasm to become adequately informed about ecological principles and practices. Nor is it easy for them to learn about and appreciate the historical and cultural aspects of their farm landscape features. Consequently, the majority tend to approach 'conservation' in a well-meaning and ecologically illiterate manner by planting trees (often exotic species), restoring hedgerows (without a clear idea of bird nesting and feeding patterns), and by restraining their urge to intensify on the marginal areas, often too small and under managed to fulfil their full wildlife potential.

Figure 2 suggests how this might be done. The aim is to progress from favourable preconditions to an appropriate combination of farm planning and conservation advice and investment. The shift should ideally be from top left to lower right.

FIGURE 2
EXAMPLES OF OPTIONS FOR DIVERSIFYING LAND USE

Land use with bias towards	Short term (up to 5 years)*	Medium term (5-10 years)*	Long term (more than 10 years)*
Agriculture	Rotational fallow	Alternative crops organic farming	Lower input farming including new permanent grassland
Landscape and wildlife conservation	Headland fallow Small-scale conservation planting and management	Integration of conservation into agricultural systems, including ESAs	New nature reserves New woodlands
Recreation and alternative	Picnic sites and other public access measures	Rights of way improvements	New country parks New woodlands Urban or urban-induced uses

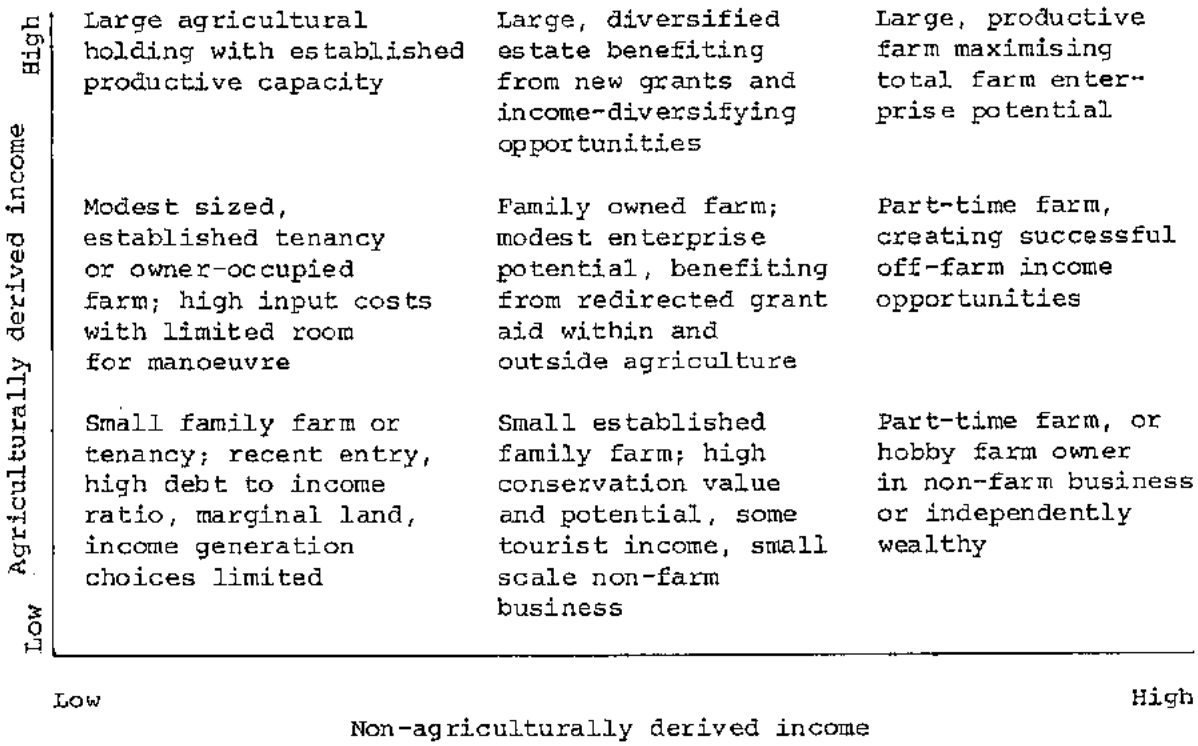
* Length of time for which land would need to be allocated

One should not be critical of farmers at this point. After all, we are trying to turn round practices that extend beyond a generation. The folk knowledge that used to understand local ecological conditions is

dying out. The modern generation of farmer has rarely been able to develop a true conservation ethos. Furthermore, as farming incomes tighten, so it becomes more unrealistic for land occupiers to devote more money to good environmental practice or to divert potentially productive land into seemingly unprofitable conservation estate. The danger of income squeeze is either further intensification or neglect. Neither would be good for wildlife, though on balance, neglect would be preferable. But neglect implies impoverishment and possibly the abandonment of a farm. There is a widespread preference to see people remain on the land. In any case, as it is often stated, good environmental practice does require a vital ingredient of appropriate agricultural husbandry. So the task ahead is one of training, cash and diversification of farming effort. Here perhaps is where the greatest challenge lies.

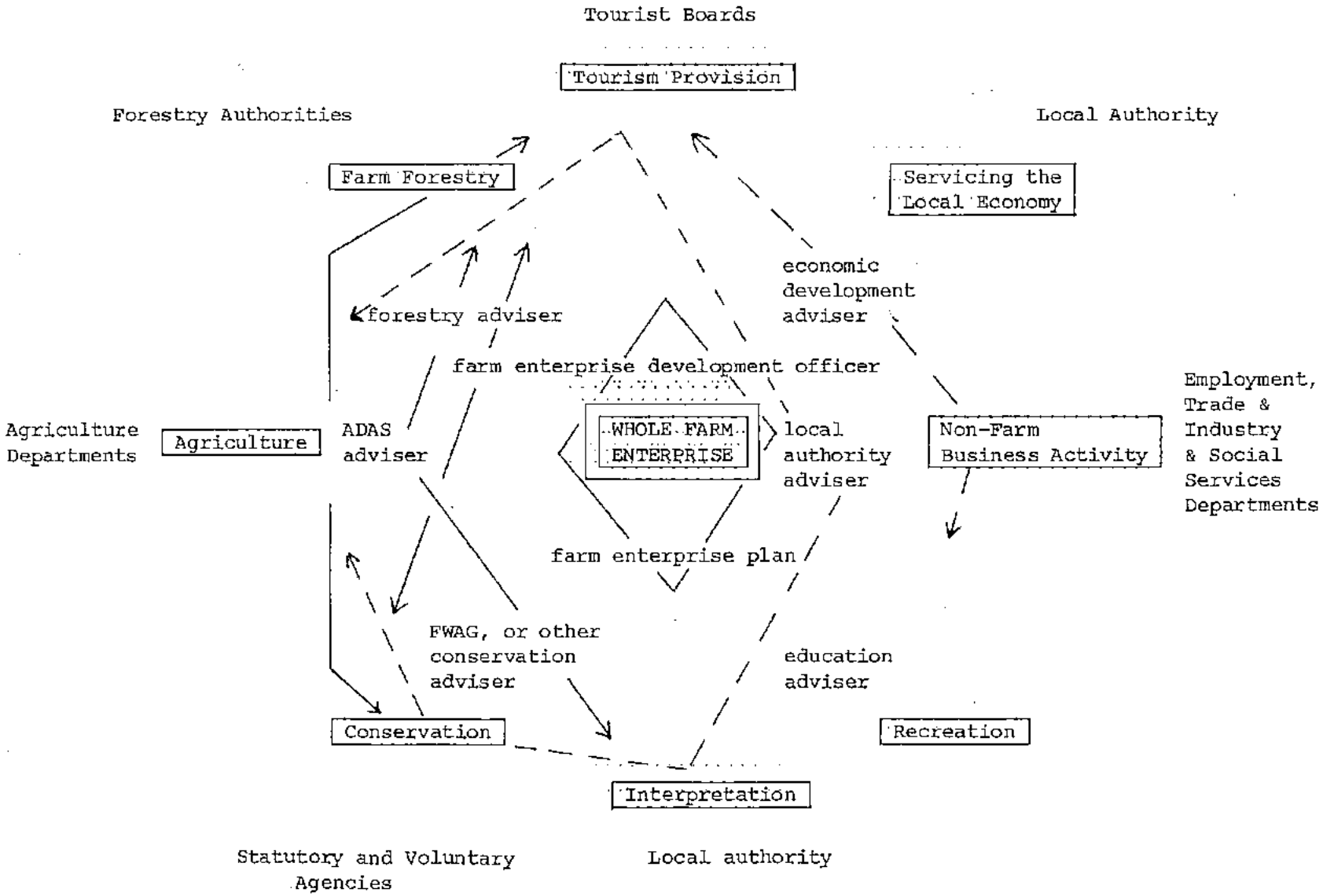
The character of this challenge has been addressed by the Countryside Policy Review Panel whose report, New Opportunities for the Countryside, was published by the Countryside Commission in March 1987. That document indicates how it might be possible to combine land diversion strategies with conservation investment, and suggests how a future farm structure might develop, based on a varied mix of agricultural and non-agricultural income. The relevant figure is reproduced as Figure 3.

FIGURE 3
DIVERSIFYING INCOME OF FARM HOUSEHOLDS IN THE FUTURE



All this needs a link to the advisory services and to money. These matters also exercised the minds of the Review Panel. Figure 4 outlines the kind of thinking that the panel arrived at, though the concept was never illustrated in the report. The idea is to link farm enterprise plans to regional development programmes so as to guide the economic restructuring of communities and farms. Ultimately each farm would be

FIGURE 4
LINKING ADVICE TO A FARM ENTERPRISE



enabled to produce a farm enterprise plan that would be linked to neighbouring farms to allow for benefit of co-operative planning and whole landscape management, through an advisory service that in turn would connect the farmer to the advice/grant aid network. That advising service might be privately run or it could be part of the agricultural or local authorities services.

FUTURE PROSPECTS FOR GOOD ENVIRONMENTAL PRACTICE

So far I have summarised what I regard as the state of play for good environmental practice throughout Britain. The conclusion I reach is that most developments are at a relatively embryonic stage and that the substantive achievements, outside high profile site acquisition and management, are as yet relatively modest. In reaching these conclusions, I am struck by the enormity of the task ahead, the exciting potential for a much more diverse and resilient wildlife, the lack of basic knowledge and management skills amongst those who cry out to be better informed, the growing number of people who are acquiring these skills but who are out of a job, and the lack of resources to enable them, the voluntary sector and the official agencies, to do the work they yearn to tackle.

Everything is incipient, everything is at a critical threshold. We could go one way and succeed, or another and continue to muddle along, losing wildlife and habitats in dribs and drabs. I am an optimist and an enthusiast, so let me chart some ways forward.

A Land Revival Fund

We need money to establish good environmental practice throughout the land, possibly as much as £50-100 million annually. Where can new resources come from? I would like to propose a land revival fund. The income would come from a new, high, capital gains tax levied on the increase in land values when agricultural land is freed by the planners for commercial development, housing and intensive leisure use. In the south and east and around any bustling urban centre, pressures for such developments are unstoppable.

I am not advocating a free-for-all. Far from it. Any policy of relaxing development control must be co-ordinated with an inner city strategy for greening and revitalising derelict areas and improving housing amenities and basic social services. Otherwise the decayed city cores will become unliveable and their cancerous effects in economic depression and social malaise will spread. Likewise, every county should rethink its structure plan on the grounds that some open land is more suitable for development than others. But this sensitive task must be done with careful consultation. This should result in indicative maps suggesting where new developments are appropriate, suitable within certain safeguards, or inappropriate. Ministerial presumptions should follow such guidelines.

We are now in the unusual but fortunate position to make choices over the future of our agricultural land. The scope for incorporating good environmental practice is very great, both in the intensive and extensive sides to the industry. There is undoubtedly spare land upon which such choices can be made. But the transition will have to be very carefully managed.

The present rate of capital gains tax is 30%. For this special class of development, that rate should be quintrupled to 75%, the proceeds going to the land revival fund. Given that, in unique instances, land can escalate in value by over £240,000 per acre, the selling landowner should still receive a profit of £60,000 per acre. Let us assume that 1,000 hectares are converted annually – a relatively modest figure given likely trends. At an average tax take of £10,000 per hectare this should net £10 million annually, enough to finance many of the proposals that follow. I have no qualms about proposing this new tax. The boost in land price rise is mostly a result of 40 years of planning restrictions which have protected choice developable land and which have created a land bottleneck for new development. That money should be spent as much in reviving the city as the countryside. In effect it is public money, because two generations of public policies have created the conditions that cause such land value escalation.

Creating a New Conservation Corps

That flow of income for a land survival fund will probably not be enough in the longer term, but it should release sufficient revenue in the immediate future for the deployment of field trained people into the voluntary and private sectors to assist in the implementation of good environmental practice in all walks of life and all areas of the nation. The fund should also be used to finance new staff for the voluntary agencies, to enable these bodies to devote more time to fee-paying training courses through which they can market their experience in good environmental practice. The income may also be used to pump prime small multi-disciplinary teams of land revival consultancies. Many of these new job holders could be ex-Manpower Services Commission team workers whose practical expertise could be boosted by training courses provided by the voluntary agencies. There would need to be a system of accreditation through which the consultancies became properly qualified.

These teams may work for themselves, or be seconded to public agencies or the voluntary sector via grant aid schemes, or be employed by commercial developers. But for this to be effective and sufficiently lucrative, policies will have to be changed to ensure that good environmental practice becomes ingrained in all aspects of land management and planning. This means that farmers would be required to produce farm plans that show how good environmental practice is being followed in relation to the habitat and wildlife characteristics of their property. Such plans should form the basis for all future official grant aid and European Community subsidy. If the Council of Agricultural Ministers cannot agree politically to lower prices, they should at least ensure that food is produced in an environmentally acceptable manner.

Trading Environmental Assets

Likewise developers should be required to follow good environmental practice when applying for planning permission. This means that the kind of environmental trade-offs discussed earlier need to become more common, but appropriate for the particular circumstances of the development and area. Hopefully the Environmental Impact Assessment Directive of the European Community will ensure this practice for major schemes. But for this to happen effectively planners and developers need to be more ecologically aware.

All this activity needs to be related to a continuing national monitoring of habitat losses and gains and species decline and revival. We must always be able to see the national picture. For what is required is a blend of approaches, making sure that the peculiarities of a locality and its history are not ignored in the rush to create new habitats and landscape features. A delicacy of touch will be required that should form the basis of a widespread conservation ethos ingrained in the land management culture.

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THE WILDLIFE PERSPECTIVE

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INTRODUCTION

There are large numbers of people using the countryside for their recreation. Some simply walk, others exercise their dogs, some ride horses, participate in the local hunt, others ride trail bikes or go sailing, windsurfing, power boating or water skiing. However, the areas that they use almost certainly have some natural history interest and their activities are likely to have some impact on the resource. The decision as to how serious is the impact is usually a question of judgement although conservationists have tried to set down on paper the criteria that they use to evaluate habitats and species (Goldsmith, 1983b; Usher, 1986). Some sites are designated for nature conservation but at the same time have a high potential for informal recreation. It is fascinating how often our best areas of chalk grassland turn out to be the places with the best views and thereby attract large numbers of visitors.

In order to assess the extent of the conflict on sites of high nature conservation value and the measures being taken to ameliorate the problems, I have visited three regions of the Nature Conservancy Council. However, before discussing these surveys I would like briefly to consider the extent of concern for the topic as expressed in the general and scientific literature.

The National Trust, in the Lake District, where they own 140,000 acres of land, have expressed their concern about problems of visitor pressure (National Parks Today 16, winter 1987). At the other end of the country Marianne Carr, who was formerly the Nature Conservancy Council's Notification Officer for the Isle of Wight, has expressed her concern about the effects of trampling due to sail boarding on mudflats. Geoffrey Johnson in 1984 investigated the threat of bait digging on the proposed Marine Nature Reserve in the Menai Straits and the Sunday Times printed an article about grass skiing, especially on chalk grassland. Dick Hornby, Nature Conservancy Council Deputy Regional Officer (South), anticipates that the greatest pressures in his region will arise from an increase in the number of horses and riding schools, leading to erosion of semi-natural grassland and heathland habitats. However, Kevin Roberts has managed to accommodate 15,000 visitors annually on five hectares of the Royal Society for the Protection of Birds reserve at Rye House Meads in the Lea Valley without any negative impact on birds. These more-or-less random observations, and others not presented here, would suggest that the problem occurs over a wide geographical area, and involves a variety of activities, but is capable of resolution.

The subject was discussed by the 1978 CRRAG Conference, incidentally also held in York, and the paper by Sidaway and O'Connor covers similar ground to this one. One of their resolutions was that we should move from worrying about 'can the countryside take it?' to 'how can the countryside take it?'. A plea, which in most circumstances, I

am pleased to endorse. That presumably is to be the focus of this Conference.

The scientific literature up to about 1980 has been reviewed by various people and two summaries appear in Goldsmith (1974) and (1983a). The former deals with damage rather than disturbance, which was much neglected at that time, and the latter deals largely with restoration. Since then there have been papers on the effects of recreation on vegetation such as that by Aspinall and Pye (1987) dealing with limestone grassland and by Cole (1987) who studied forest and grassland in Montana. Bright (1986) investigated hiker impact on trail vegetation in the USA and Watson (1984) studied vehicle tracks in Scotland. Studies on birds have included those by Sage (1980) which dealt with a single reservoir in Hertfordshire and that by Tuite et al (1984) who considered the effect of water-based recreation on wintering wildfowl more generally. In the Netherlands, van der Zande et al (1984) have studied the density of breeding birds in woods adjacent to urban residential areas. Van der Zande's work is extremely carefully executed and it is regrettable that comparable research is not being conducted in this country. Such monitoring is essential to determine the efficacy of recreation management practices.

In the uplands, Colin Bibby's work has shown that low levels of recreation pressure can affect golden eagles. Other studies on larger vertebrates have been mostly American and involve white-tailed deer (Dorrance et al, 1975), mountain goat (Pedevillano and Wright, 1987) and elk (Schultz and Bailey, 1978). A few studies have been of an experimental nature and these include Bayfield and Bathe's (1982) closure of woodland footpaths and Cole's experimental trampling of various communities. Van der Zande and Vos (1984) increased recreation intensities to see what effect it had on breeding birds on a lake shore in the Netherlands.

However, these are isolated studies and do not indicate how widespread the problem is nor what is being done about it. It was therefore decided to carry out an original survey of sites of nature conservation importance (Sites of Special Scientific Interest and National Nature Reserves) in three Nature Conservancy Council regions, all in lowland England. This selection was largely made to avoid overlapping with Roger Sidaway who is based in Scotland and has chosen to cover in his paper some upland areas such as North Wales and the Peak District.

THE FIRST SURVEY: SOUTH-EAST REGION

Six Assistant Regional Officers in the Nature Conservancy Council's South-East Region were asked to list the National Nature Reserves and Sites of Special Scientific Interest with recreational conflicts, the activities involved, and the aspects of the site's interest which were affected. Table 1 shows the 20 terrestrial and 12 aquatic activities and the number of times that each was mentioned. Motorcycle scrambling and horse riding are repeatedly mentioned on land, and sailing and windsurfing on water. Table 2 shows the 21 habitats or target species that were affected. Deciduous woodland is the terrestrial habitat most frequently mentioned, and wildfowl whilst wintering or moulting were the groups of species which caused greatest concern. Table 3 shows that the sites with conflicts were scattered throughout the region but that there

were possibly fewer in the Greater London area, though individual cases there may be very significant (for example, Chingford Reservoirs Site of Special Scientific Interest). Both the large number of activities and range of habitats were surprising but this survey does not indicate the number of people involved nor the costs of correcting any damage.

TABLE 1

LIST OF THE 32 RECREATIONAL AND RELATED ACTIVITIES INDICATED BY NATURE CONSERVANCY COUNCIL STAFF IN SOUTH-EAST REGION. (Brackets indicate activities which could be considered together)

Terrestrial Activity	No.of times	Aquatic Activity	No.of times
(Motorcycle scrambling	11	((Sailing	10
(4 x 4 vehicles	2	((Windsurfing, sailboarding	5
Horse riding	7	(Power boats	4
(Dog walking	6	(Water skiing	1
(Walking/trampling	5	Wildfowling	6
Golf	3	Fishing	9
Burning	2	Swimming, sunbathing	4
Orienteering, marathon	2	Bait digging	2
(Shooting	5	Intensive fish stocking	2
(Pheasant rearing/shooting	3	Cormorant scaring	1
Hunting	2	Bird watching	1
Vandalism	2	Sub-aqua	1
Leisure plots	2		
Climbing/absailing	1		
Sledging/skiing	1		
Grass skiing	1		
Filming	1		
(Hang gliding	1		
(Microlights	1		
(Model aircraft flying	1		

TABLE 2

LIST OF HABITATS AND SPECIES INDICATED BY NATURE CONSERVANCY COUNCIL STAFF IN SOUTH-EAST REGION. (Brackets indicate activities which could be considered together)

	(Deciduous woodland	12
	(rides	4
	(Chalk grassland	5
	(Neutral grassland	2
	Heathland	6
	Gorse, scrub	1
	(Freshwater, macrophytes	5
FW	(Marginal vegetation	2
	(Fen, marsh	1
	(Saltmarsh, mudflats	3
Marine	(Beach, dunes	4
	(Shingle, terns	6
	Rocks	2
	Worrying sheep, horses	5
	Worrying deer	1
	Disturbing badgers	1
	Land birds	7
	Wildfowl wintering	10
	Wildfowl moulting	6
	Disturbance to newts	3
	Introduction of weeds and aliens	1

TABLE 3

BREAKDOWN OF SITES WITH CONFLICTS BETWEEN RECREATION AND NATURE CONSERVATION IN SOUTH-EAST REGION OF THE NATURE CONSERVANCY COUNCIL

National Nature Reserves	10
Sites of Special Scientific Importance:	
West Sussex	9
East Sussex	5
West Kent	10
East Kent	14
Greater London	6
Surrey	10
	64

THE SECOND SURVEY: THREE REGIONS

The Regional Officers representing the South, South-East and East Anglia, or their delegates, were interviewed and they were invited to indicate the sites of principal concern in their areas. I then proceeded to complete a simple proforma for each site (Appendix). Table 4 indicates the range of sites and habitats, the number of people involved, the amount of money spent on them in this regard, the amount needed and when staff involvement was indicated.

Several points emerged which were of interest. Firstly, the large number of people being catered for on what were essentially sites designated primarily for nature conservation. Secondly, the relatively small sums of money being spent on minimising recreational impacts. This indicates that either:

(a) Nature Conservancy Council staff are absolute wizards at this kind of land management, or

(b) there is so little cash for management that everything is being done on a shoestring budget, or

(c) most of their funds are directed towards National Nature Reserves rather than the Sites of Special Scientific Interest which they mentioned.

Thirdly, the management was not so much substantial on-site works as negotiation, compromise and zoning, which require the time of skilled, committed staff rather than major physical works. Fourthly, the amount of money needed is trifling in relation to the number of people being accommodated. In reply to the question "What did it cost?" I often received the answer "Nothing, but staff time was considerable". Fifthly, there were hardly any references to monitoring, which I consider essential if we are to spend money on management. I shall return to these three words: 'management', 'money' and 'monitoring' later.

I received the impression that Nature Conservancy Council staff were reasonable people who were attempting to carry out multiple land-use policies on small budgets. Their reactions indicate that with appropriate research, sympathetic management and modest investment, most recreation/nature conservation conflicts can be resolved. If occasionally Nature Conservancy Council staff reject a request for an extension of use or a new use for a Site of Special Scientific Interest, it is because it would not be possible to cater for it without some fairly catastrophic damage to the resource.

Incidentally, I was asked by one of the Conference organisers to find out how often recreation activities were indicated as Potentially Damaging Operations for Sites of Special Scientific Interest. The answer is that a standard list is used for all Sites of Special Scientific Interest and the last three, 26, 27 and 28, refer to recreational activities. It is usual practice to list them all:

26 Use of vehicles or craft likely to damage or disturb features of interest.

TABLE 4

Number of People	Site	Region	Status	Cost £	Staff Time	£ Needed	Concern
?	Basingstoke Canal	S	proposed SSSI				Aquatic plants and Bats
70 Bikes	Broadmoor to Bagshot Heath/Woods	S	SSSI				Trial bikes
40,000	Old Winchester Hill	S	NNR	3,000pa			Various activities on chalk grass
2,500	Pewsey Down	S	NNR				Hang-gliding on chalk grass
4-5,000	Martin Down	S	NNR	250			Chalk grass
Very few	A Broad	EA	SSSI			2,000	Photography Rare Orchid
Substan-tial	Hickling Broad	EA	NNR	500		500	Boats (various)
4-5,000	Scolt Head	EA	NNR	c300		c1,000	Terns etc.
Growing	Trinity Broads	EA	SSSI				Small boats
3,800	Weeting Heath	EA	CNT	1,000			Birds
?	Hanningfield Reservoir	EA	SSSI			?	Birds
?	Darenth Wood	SE	SSSI			Fencing	Trail bikes, rare plants
?	The Swale	SE	SSSI				Boats and birds
?	Chobham Common	SE	SSSI	1,000xn			Horse riding
?	Sandwich Bay	SE	SSSI				Golf and rare plants
?	Chingford Reservoirs	SE	SSSI			Substan-tial	Birds

27 Recreational or other activities likely to damage or disturb features of interest.

28 Game and waterfowl management and hunting practices/introduction of game and waterfowl management or hunting practices/changes in game and waterfowl management and hunting practices.

This is done to ensure that the Nature Conservancy Council is afforded an opportunity to comment in the event that any change in existing usage is envisaged. It does not mean that they would necessarily veto any such changes.

There is a wealth of information in the results but this is difficult to present here so I shall select three case studies to illustrate some of the sites and problems.

Case Study: The New Forest

In the late 1960s the recreation pressures on the New Forest were such that the area was being ruined. Camper nights had increased from 83,000 in 1956 to 485,000 in 1969 and the forthcoming opening of the M3 and M27 would lead to 10 million people being within one and a half hours of the Forest. At the same time the area was of Grade 1 status with lowland heaths and valley mires of European significance. Something had to be done. Representatives of the various interest groups were brought together to formulate a policy and put it into effect. It restricted the activities of many people, concentrating their cars in about 130 car parks with a total capacity of 5,500 spaces and setting aside most of the Forest as a car-free zone. It worked, although recreation pressure did not grow as originally anticipated and the New Forest has the advantage of being largely Crown land. Today most of the Forest is as beautiful and biologically interesting as it was 30 years ago but this was only achieved by careful planning, unpopular decision making, fairly expensive management and careful monitoring. However, it does indicate the kinds of decisions that we will have to make in the future in order to have good areas for recreation and nature conservation.

Perhaps the last word on the New Forest should go to Colin Tubbs, the Assistant Regional Officer for the area:

> "...the unfettered demands of recreation, however compelling their claims, must sometimes and in some places yield to cultural, aesthetic and nature conservation needs,..."
> (CR Tubbs, 1986).

Case Study: Basingstoke Canal and Greywell Tunnel

The Basingstoke Canal was built in 1792 and was mentioned in 1949 (Command 7122) as being important for aquatic macrophytes and invertebrates. There are three contrasting sections of interest:

(a) the more acidic part used for boating,
(b) the more base-rich part not currently used, and
(c) the tunnel.

Dick Hornby, the Nature Conservancy Council Deputy Regional Officer says,

> "Essentially the problem concerns the impact of powered craft on an extremely rich aquatic flora (the richest of any man-made site in Britain), and associated invertebrate fauna. The dragonfly fauna is very rich, particularly in the more acid part of the canal".

The section of canal at the western end and next to the tunnel is not used by boats and being fed by a chalk stream has developed a beautiful three dimensional plant community in its crystal clear waters.

However, restoration of the canal to date has been expensive and there are proposals to build a series of marinas of which one is for about 1,000 craft, and to reopen the tunnel in order to maximise revenues. As a result of the tunnel roof collapsing the microclimate within it appears to be ideal for bats and it is now said to be the best wintering site in Britain. So far there have been negotiations between the Nature Conservancy Council, two county councils and the Surrey and Hampshire Canal Society. I do not have the solution for this particular site especially as there are several recreational and nature conservation strands interwoven and it would need a long period of deliberation to produce one, but I hope that all parties will moderate their stance and take heed of Colin Tubbs' words above. This is an example of a site where there is still a need for more information about users, the resource, their interaction and a need to formulate a management prescription which will safeguard the site and provide for a reasonable level of recreation. Subsequently, habitats, species, visitor attitudes and levels of disturbance or damage need to be carefully monitored.

Case Study: Hanningfield Reservoir

This 30 year old reservoir is owned by Essex Water Company and has been a Site of Special Scientific Interest since 1966. Its 1,000 acres support wintering gadwall, shoveler and pintail and there are breeding populations of pochard, shoveler, teal, tufted duck and shelduck. There are two peripheral lagoons of botanical as well as ornithological interest but these are not accessible to the public. The reservoir is stocked with trout and the only recreational activities are boat and bank fishing and windsurfing in one corner. One area is retained as a sanctuary with minimal disturbance but pressure is now mounting to use this for recreational purposes at certain times of the year. I understand that the company's policies have recently changed and they they are currently trying to make their recreational activities profitable. At the same time the Nature Conservancy Council has indicated that it is prepared to enter into a management agreement to set limits to recreational activities on the reservoir.

The public are now allowed access to the concrete apron which is very resilient but which the Company says is unsafe. If they do approach they are challenged by a bailiff in a high-powered boat who creates considerable disturbance to the birds. There is a small nature trail restricted to planted woodland, which is more or less irrelevant to the real interpretative needs and opportunities of the site. Here is a site which is ideal for a well designed blend of recreation,

interpretation and nature conservation and which should be a real challenge in this intensively developed corner of England. Again, it needs a careful approach to safeguard the values of the site but it has potential for the development of interpretation and low intensity recreation formulated as suggested at a previous CRRAG meeting by Sidaway and O'Connor (1978). These again would need monitoring and a certain level of subtle management and the expenditure of a relatively small amount of money.

Not so far away is the site of the proposed Southend Island Marina which would occupy part of Benfleet and Southend Marshes Site of Special Scientific Interest which is important for ringed plover, grey plover, knot, dunlin, redshank, turnstone, bar-tailed godwit, oystercatcher and dark-bellied brent goose. I do not have the time to discuss this particular issue but mention it simply because the developers expect to proceed with it as a Private Bill (as we have seen with the Felixstowe Docks extension, the container terminal at Falmouth and the Channel Tunnel). I have been somewhat concerned at the frequency with which this approach, instead of a planning inquiry, has been chosen by developers. It is clear they expect a much easier passage through the House than they would encounter at an inquiry where local people, scientists and environmentalists might choose to object.

EDUCATIONAL USE OF NATURE RESERVES

The Ecology and Conservation Unit at University College London conducted a study on this topic earlier this year. About a dozen people involved in environmental education contributed to seminars on the subject and we visited several reserves in various parts of the country and recommended that further expansion was needed. The impacts are similar to those of recreation but can, on most sites, be accommodated. We have recommended a county-based structure and a procedure for selecting appropriate educational reserves. Our study points out that there is plenty of capacity for increased educational use of reserves so long as sufficient attention is paid to appropriate **management**, **money** and **monitoring**. I believe that the same three 'Ms' apply to recreation management in relation to nature conservation.

DISCUSSION POINTS

If we return to the 1978 CRRAG resolution of 'How can the countryside take it?', which I have already endorsed as a worthwhile objective, the results of these surveys show that more **management** is required of the kind requiring skilled staff and persuasion rather than expensive site works. This requires **money** and in order to determine the effectiveness of any changes it is necessary to **monitor** visitors, damage to site and disturbance to fauna. These are the three 'Ms' again.

The kind of **management** that was indicated by the responses in the regions were: re-routing, screening, attention to drainage, zoning and subtle site and visitor management. The call for more **monitoring** is not an original plea. Several people have asked for more monitoring but still hardly anyone involved in recreation land management is carrying it out.

We must also acknowledge that things have changed since the early 1970s when everyone was predicting continuing increases in recreation pressures. These did not materialise, levels of use levelled off and, instead, habitat loss became the conservationist's nightmare. Nowadays many conservationists realise that it is desirable for more people to enjoy the countryside and that we need more on-site interpretation and more educational use of nature reserves in order to convince the majority of the population of the need to extend protective designations and legislation.

CONCLUSION

The surveys have indicated that in lowland England large numbers of people are using sites designated primarily for nature conservation for informal recreation. The overall level of damage is not too serious and in most cases conflicts are being overcome with modest funding and a considerable amount of staff time. However, there is still considerable concern amongst NCC staff in the South-East, South and East Anglia Regions about the impacts of recreation on wildlife and natural and semi-natural areas and I believe that most of them would be able to manage their resources better with increased funding.

In one Region, the South-East, 64 sites involve 32 recreational activities and 21 habitats or target species.

Some problem areas such as the New Forest and Old Winchester Hill National Nature Reserves appear to be working well as a result of consultation, strict controls, investment and careful management. Good habitat management can do much to alleviate the effects of recreation, as we can see from the quotation below:

> "...it was not recreation that was affecting the scientific interest of the reserve but rather the lack of good habitat management."
>
> Nature Conservancy Council Chief Scientists Team Internal Report (1980) page 53.

Some habitats have been of concern for many years, for example, chalk grassland at Box Hill. Other habitats such as deciduous woodland and aquatic habitats, especially those with waterfowl, appear to be mentioned in these surveys more frequently and remain a challenge to us for the future. It appears that more attention needs to be paid to the three 'Ms' of 'management', 'money' and 'monitoring'.

Opportunities to resolve conflicts at all sites exist but will have to be based on careful investigation of all the options, consultation, the formulation of a sound plan, investment in infrastructure and staff, and subsequent careful management and monitoring. If this is carried out the benefits will be enhanced visitor enjoyment, effective protection of our natural environment and increased employment. We have little choice in the matter, as the need to resolve these conflicts is considerable but failure to take these opportunities would result in a slow but progressive deterioration of our most precious resources.

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APPENDIX

RECREATION AND NATURE CONSERVATION:
CONFLICTS AND CO-OPERATION

REGION: OFFICER: DATE:

NAME OF RESERVE/SITE OF SPECIAL SCIENTIFIC INTEREST:

1. Which recreation activities are involved?

2. What numbers of people?

3. Which season(s) of the year?

4. Which habitats?

5. Are any particular species of concern?

6. What action have you taken to solve the problem?

7. Approximately what did it cost?

8. Approximately what was the result?

9. What further/new action would you propose?

10. What might it cost?

11. Are any recreational activities mentioned on list of PDOs (SSSIs)?

12. Independent field assessment.

DISCUSSION

R Graves (Hereford and Worcester County Council)

How quickly can I have a transcript of Tim O'Riordan's excellent paper? My second question relates to the capital gains issue of creating income from the development value of land. The example you gave was obviously an extreme one and related to the release of land for commuter housing and the situation, of course, relates to the housing costs. One third might be for the bricks and mortar while two thirds relates to the value of the land and the infrastructure. This means it is completely out of the price range of the local people.

However, the vast majority of the land that is going to be released in the rural areas will not be used for commuters but by those people who will come from the cities to live and work in the country. As I see it, if sufficient land is released for industry and for new people, it will make the land economically viable for industry and enable people to move into the countryside whilst allowing existing people in the countryside to buy housing. However, the problem then is that the land itself will be so comparatively cheap, because it will be so comparatively abundant, that it will not yield adequate money for the programme of conservation.

T O'Riordan (University of East Anglia)

The answer to the first question depends upon the speed and efficiency of the organisation of this Conference, in which I have every confidence. I plan to revise my paper to incorporate some new ideas and to clarify certain points.

The answer to the second question is slightly longer. You are quite right, I did emphasise the most dramatic examples of land value escalation. There is not going to be a flood of development applications which will be accepted by the local planning authorities, as some people appear to have been arguing in the press. It will still be a thoroughly controlled process with relatively small amounts of land going into housing and other activities. Therefore land prices may be inflated compared with an 'open door' policy for development.

In high amenity areas (areas which are particularly prized because they have been protected for so long, such as National Parks and Areas of Outstanding Natural Beauty), I suspect, and I have seen figures to show it, that house prices are already remarkably high because of the pressures of people who are moving into such areas and the very tight lid on planning control. However, such prices are nowhere near as great as in the London green belt and the surburban zones of Hampshire, Essex and other peripheries of the green belt. So on both counts I suspect that figures close to those I have offered will be quite typical throughout the country.

I am also arguing that only part of this creaming off process will actually go back into constructive conservation. But even a tenth of the possible new tax take, say £10 million/pa (and I would like to see it twice this figure) would have a remarkable effect. I think Barrie Goldsmith's paper reinforces my view that in only one small part of the

Site of Special Scientific Interest complex does there need to be this kind of funding.

JR Thompson (Essex County Council)

Picking up that point on the possible capital gains tax aspect, you asked the question, "Where is the money going to come from?" and you said it was not going to come from the Government. It seems to me you are saying there is a possibility of taking some tax revenue from this development potential. I can see that going into the Treasury very readily, but I am not too sure I can see it coming out of the Treasury into the sorts of things that you are suggesting.

T O'Riordan

I raised that point in my presentation. I know enough about the Treasury to know that once they get their sticky fingers on some new cash we have to fight for it. Nevertheless, my argument involves both morals and logic. It is moral because we have protected this land for 40 years via development control, so any land price escalation is a reflection of that public policy. We also have to argue politically that this should be the case, because logic dictates that there is a high public appreciation of new nature conservation investment. Ministers are also increasingly concerned about what has been termed the counter industrialisation phenomenon. They are not quite sure how to deal with it. The whole ALURE package is really only part of a longer term political reaction.

Government policy, whether it be urban or countryside oriented, is going increasingly to emphasise job creation and the maintenance of new enterprise, especially in the self-employed sectors. I think that much will depend on the types of training and management advice which will be made available to incipient rural entrepreneurs both on and off the farm.

All of this is beginning to take effect. In ten years' time, should CRRAG have another Conference on this topic, it will be extremely interesting to have another presentation on the record of the intervening ten years.

A Driver (Thames Water Authority)

Within our own Water Authority we have recently started a system whereby developers who purchase land for housing, for business parks or whatever, are asked to contribute to a conservation trust fund which is then utilised for better management of other sites we own, which are good for conservation but have less potential for development. Is it not possible that local authorities might be able manage similar funds in the future?

T O'Riordan

You said they were asked to contribute. Do they actually do so?

A Driver

It has just been established and yes, the people who have been asked have contributed. At the moment they have specific sites towards which their money is going so they can see what they are getting out of it. Obviously they get good publicity as well. Does the money necessarily have to go all the way up to the top or could similar sorts of funds be managed at a local level?

T O'Riordan

In the paper and in my brief comments I talked about environmental packaging. The Shetland Islands started this back in 1968 when they introduced a local tax on every barrel of oil that came onshore. It is geared to what is essentially a Shetland Islands Enterprise Fund. The Shetland Islanders very rightly and shrewdly worked out that the oil industry needed them more than they needed the oil industry. As a consequence they managed to accumulate a very large amount of money. They have maintained many of their cultural activities, which otherwise would have been lost or swamped, and increased the opportunity for job creation in the Shetlands to stabilise a future economy when the oil industry no longer contributes.

I am very pleased to hear what you are doing and I see no reason why initiatives by bodies, such as yourselves, local authorities and other organisations responsible for managing land, could not be done on a voluntary and relatively ad hoc way. Indeed, it may well be that government policy will enable this to become more formalised.

When you look at the really big schemes, such as a possible large tidal power station on the Severn, then the environmental package, if it does come off, could be very substantial indeed. We are talking about 1 or 2% of the total investment. This could be as much as £500 million. I am afraid we have not learned enough from the Channel Tunnel problem to be able to get as much as we should have done from Eurotunnel, though it is not too late to continue the battle. This approach needs to be enshrined in national policy.

M George (Nature Conservancy Council)

Perhaps I could direct three points at Barrie Goldsmith which arose from his very interesting paper. First of all I think we would be deluding ourselves if we felt that a compromise were possible in respect of the Basingstoke Canal and power boating.

The fact is that if we are going to safeguard the nature conservation value of the Basingstoke Canal, it will not be possible to use power boats on such a narrow canal for the obvious reason that the aquatic vegetation will simply get chopped up. That does not necessarily mean that some form of boating should not be possible. It is not within my Region and therefore not within my power to comment. However, it does seem to me that we have to accept that there will be some sites where compromise is not possible.

The second point I would like to make is that both Hanningfield and the Basingstoke Canal illustrate the very real dilemma which faces them in respect of reconciling nature conservation and recreation on

open waters. I think this is very often the real crunch question and probably East Anglia is more concerned with that particular aspect of open water sites than any other type of habitat.

I would like to take up the point that Barrie made about Hanningfield. I would accept it is not a particularly happy situation but we have been battling off and on for something like 20 years, and I do not think we really have achieved a satisfactory conclusion. However, the fact is that there are conflicts not only between nature conservation and recreation but between individual recreational users. The trout fishing people are up in arms at the idea of sailing being allowed on the reservoir. Therefore, we have a situation where different recreational users, or potential users, have a particular interest but we, at the Nature Conservancy Council, have a particular objective we seek to achieve and, last but not least, the owners of the reservoir have a separate set of objectives. The message which comes to me, and Barrie might wish to comment on this, is that the only way of reconciling this sort of conflict is for all users, potential users, owners and nature conservationists to get round the table to try and come to some adequate compromise. Unless and until these various disparate objectives can be reconciled we are not going to make much progress.

FB Goldsmith (University College London)

You said that from the nature conservationist's point of view compromise is impossible in the case of one particular site. You are probably right, but every time we say that, as nature conservationists, we must accept that the recreation lobby will turn round and say that on another site, compromise is impossible.

Your second point is that open water is the real problem. Well yes, I think I said that in my paper. That was also the general consensus last night when we were chatting. The view held was that of all the really controversial issues at the present time, certainly in southern England, one should focus on open water and how it should be managed in the future.

Your third point is the conflict between different recreation users. Of course they are going to disagree with each other. However, I would go one step further and say that there is also conflict between different groups of nature conservationists. I can think of sites in the Lee Valley where one group argues with another group - the botanists disagreeing with the birdwatchers - as to how that particular site ought to be manipulated. This shows the richness and diversity of human society. What most of us try to do is to fight for our own corner, but do it in as diplomatic a manner as possible. Therefore, we will go into discussion saying we are all in favour of compromise but we are going to dig our heels in and try to win the battle for ourselves. That is what you are saying about the Basingstoke Canal. My point, going back to your first one, is the less often we do that the better.

F Perring (formerly of Royal Society for Nature Conservation)

Are you taking the initiative at that reservoir, Martin?

M George

Yes, indeed it was our suggestion in the first place that the sailboarding should be allowed because we became increasingly embarrassed by the fact that there was no sailing even though the reservoir is only 25 miles from Greater London. It seems to me quite anomalous that we did not have any type of sailing in such a potentially very heavily usable area.

FB Goldsmith

But then that becomes the thin end of the wedge and one has to extend geographically and in terms of the number of recreation activities.

M George

Absolutely, and as soon as we offer it to the recreationists they turn round and bite our hand by trying to increase the recreation use on other parts of the reservoir.

J Fladmark (Countryside Commission for Scotland)

I would like to join with the Chairman in congratulating the first two speakers on getting the Conference off to such a good start. They have given us much more material than is instantly digestible and have raised many more issues than we can fully discuss.

I would like to make an observation and ask a question of Tim O'Riordan who referred to the concept of whole enterprise farming which farmers today would call part-time farming, and I think indeed you used that term yourself. In this connection I would like to draw the attention of the Conference to the Scottish crofting system. This is a system which operates on part-time farming, if you like, and in addition to farming, crofters will have other jobs such as fishing, working for local authorities and also, to a large extent, relying on tourism which could be called farm tourism. This is all relevant to conservation, in the sense that a large proportion of people who are attracted to the area as tourists come for the nature conservation interest in the North West Highlands.

The crofters have recently created for themselves a very powerful lobby in the Scottish Crofters' Union. At present they are arguing that the Scottish crofting system based on part-time working represents a very relevant formula and model, in a wider European context, for the changing situation of agriculture. The basis of this is farming as an occupation which can be sustained with a relatively small level of agricultural subsidy. My question is, has Tim O'Riordan looked at this and does he have any relevant comments to make?

T O'Riordan

The answer is yes. If you have read the 'New Opportunities for the Countryside' report published by the Countryside Commission, you will see there is a diagram, (I have reproduced it as Figure 3 in my paper), which shows a typology of farms to the year 2000. The vertical

axis shows agriculturally derived income rising and the horizontal axis shows non-agriculturally derived income which also rises. What you actually have is a matrix of roughly nine farming types. In the bottom right hand are farms which are not farming, from the point of view of actually producing agricultural output. These are either hobby farms or they may be conservation or recreation enterprises. Other farms will continue to produce food, while others emphasise much more diversified products. Others still produce a combination of farm output and non-farm output including educational programmes and local support services.

My point about that diagram, which was developed by the Countryside Commission panel, is that the policy which we have in this country, in relation to agriculture and conservation, does not recognise the very important variations in policy approach which need to be directed to these different groups of farmers. There are roughly 20% of farmers who, in the bottom left hand corner, either have low incomes from agriculture or little income from non-agricultural activities. If any of these farms are in serious financial difficulty they will be the most vulnerable to the changing economic climate. Something like 10% of farms in Britain are now technically bankrupt.

If you wish to keep these farms, and some of them are very important for amenity areas like the Yorkshire Dales and many parts of Scotland, then to talk about investing in a habitat support programme (such as an Environmentally Sensitive Area payment) is not the way out. Nor can these farmers respond to proposals for taxation relief, because there is no income from which they can offset any taxation. The only hope is for a direct payment in the form of a direct income supplement.

We have not encouraged this policy in the agricultural sector although it is often done in the urban sector. Therefore, the Government and, indeed, the whole community, needs to look at the farming types and think of four or five quite different strategies for farm income, some of which is direct income, some taxation relief and some just advice. If you look at the diagram, in the upper right corner are the farmers with good income from farming and good income from non-farming - the ones who are most able to survive the next 20 years. They will benefit most from good advice. They are less critically dependent on income support. An homogenised and centralised form of agricultural support is not reflecting the very subtle differences of needs between one farming or land-owning group and another.

If that is the case, then the sorts of arguments I mentioned in my paper would be much more relevant. These are the sorts of things we need to address in our longer term debates. That is all I will say at the moment. There are further points which follow but that is sufficient at this stage.

D Sayce (Surrey County Council)

I would like to comment on the Basingstoke Canal. Surrey was one of the two county councils mentioned and obviously part of the canal is in Hampshire and I cannot speak for my Hampshire colleagues. However, I would take issue with what Martin George said. There will have to be some form of compromise at the end of the day. We are in discussion,

rather than 'locked in debate', with the Nature Conservancy Council and various other interests. The canal was bought by both county councils in order to restore it for a variety of reasons, one of which is conservation, but primarily as a recreation resource.

There will be a lot of resistance if mechanical boating is restricted to such a degree that it will make the restoration virtually untenable. The Nature Conservancy Council is having some research done and I think it is possible we will have a compromise at the end of the day.

You talked about the use of water areas and conflicts arising. I think it depends on whether you are managing those water areas and trying to raise an income from the water users, or whether you are just using those water users for management purposes, in other words to save management costs. We do this in some of our water areas and any income we raise is subsidiary. We find it is easier to manage the waterway and balance the conservation interest and recreation use in this way.

FB Goldsmith

You purchased the canal in order to develop recreation. The question I would throw back at you is, when you and Hampshire County Council purchased it, did you, or did you not, realise it was a Site of Special Scientific Interest?

D Sayce

Yes, both county councils realised it was a Site of Special Scientific Interest and with the purchase we were going to try and balance both interests. The arguments put forward, especially by the boating interests, is that, through the use of volunteer labour, we have created some of the conservation interest.

You made suggestions that there were going to be several marinas on the canal.

FB Goldsmith

That is my understanding.

D Sayce

We are not having several marinas. We are clearly looking at what level of use will be suitable for the canal.

FB Goldsmith

However, when you purchased it and were aware of the fact that it was a Site of Special Scientific Interest, did you or did you not wish to maintain that scientific interest?

D Sayce

Clearly the county councils wish to maintain the scientific interest but they also have a responsibility for the recreation side. It was

suggested that there will be no compromise, because the conservation interests will be looked after.

FB Goldsmith

That is our common ground. We all know it was and is a Site of Special Scientific Interest and we all want to maintain that scientific interest. What we all have to do is sit down together and decide how we can accommodate the recreation interest.

A Inder (Hampshire County Council)

When Surrey and Hampshire bought the canal it was not a Site of Special Scientific Interest and only parts of it are Sites of Special Scientific Interest at the moment. However, recent evidence by the Nature Conservancy Council shows how important it is. As you say, it is the single most important man-made waterway in the country for aquatic plants and dragonflies. The Nature Conservancy Council clearly intends to designate the whole of the canal as a Site of Special Scientific Interest. They also intend to restrict boating movements. I have sat through quite a long Public Inquiry about a proposed marina on the canal. It was to hold about 100 boats, some of which might be powered. We were involved in quite a lengthy debate and, like Martin George, I can see no possibility of a compromise here. I just wonder where it is going to end if the Surrey and Hampshire Canal Society, on the one hand, insist on the rights of navigation which they say are inviolate, and the Nature Conservancy Council, on the other hand, say the area is a most important Site of Special Scientific Interest and they will not have it spoilt. Where does that argument go?

FB Goldsmith

That is why I took this as one of my case studies because here, in microcosm, we see an example of the conflict between recreation and nature conservation. I do not see the solution at the present time. Who decides? I suppose, at the end of the day, it is the inspector at a Public Inquiry.

A Inder

I do not think so in this instance. Without prolonging the debate much further, I think the inquiry was discussing whether the marina goes into a local plan. Even if it does not go into a local plan there are other ways of pursuing the marina to try and get it built. Whatever arena is used, I cannot see the conflict between the right of navigation and the Site of Special Scientific Interest being resolved. There is no compromise.

F Perring

I do not know this canal but I have always fancied being on a boat that was towed by a horse.

RM Hamilton (Nature Conservancy Council)

I have just a quick point about this rather glib concept of compromise that we keep talking about. It is rather assumed that both

parties gain something from the compromise. This is a fallacy because in the sorts of compromise we are talking about, the recreational interests gain, though less than they might have done, and conservationists lose. It is a one way process. There are very few absolute gains for conservation. A compromise usually consists of reducing the amount of the loss.

T O'Riordan

This interesting case also reflects what I call the asymmetry of legislation. If the Canal Society happened to own the land and were nominally classified as farmers, the Nature Conservancy Council could throw a Potentially Damaging Operation notification at them and buy them out. But it would cost a lot of money. However, the canal users are not in that category, so there is no scope, unless it is by voluntary means, for a compensatory payment. That is why I think the Nature Conservancy Council are increasingly forced into a losing position. Compensatory policy relating to wildlife conservation is not fair for different forms of potential conflict.

R Lee-Warner (Royal Yachting Association)

I would like to say that I am a practising farmer and I derive my income from it. The Basingstoke Canal is not of interest to the Royal Yachting Association but I would like to say that it is in everyone's interest to compromise. I would suggest that one of the compromises should be to limit the boating to electric boats only. If you were to forget about the powerboating the nature conservancy people would be very surprised at how little damage is done.

T Huxley (former CRRAG Chairman)

This is not a comeback on the specific, but in relation to what Martin Davies and David Goode will say tomorrow. Their papers will be very important because they will talk about creative conservation which Tim O'Riordan mentioned. At the bottom of all this is a biological issue. In this particular stretch of water there are different dragonflies. It should be conceptually recognised that alternative habitats for these rare dragonflies should be provided and funded effectively. I think we ought not to be questioning the importance of retaining beautiful dragonflies in Britain, because they are part of our culture. Anyone who still has Lucas' book on dragonflies on his shelf feels a deep affection. Norman Moore's book in the New Naturalist series, also on dragonflies, has become almost part of our culture over the past 40 years.

To put this into a literary and artistic, as well as nature conservation context, dragonflies are quite interesting. If we can see this as being important then we ought to be looking for biological solutions for providing habitats for these species. What I find worrying is that the Nature Conservancy Council is not taking notice of what Tim O'Riordan said. They always freeze the situation instead of trying to create ways of finding alternative habitats for these very important species which we do want to retain for nature conservation and the cultural heritage of Britain.

FB Goldsmith

I think my response to Tom is that both the canal and the tunnel are examples of creative conservation. They are both man made features and it is a great condemnation of us and our ancestors that the best sites left for dragonflies and bats are man made. What this implies is that we have lost a whole series of very important wetland areas and conservationists are now left to fight battles over man made features.

T Huxley

I realise that, but if we made these habitats in the past we ought to be able to make them again in the future. This is what I hope Martin Davies and David Goode will be talking about tomorrow.

FB Goldsmith

The sites might take 100 years to mature.

JR Thompson (Essex County Council)

I would like to move away from watery areas and pick up a point that Barrie Goldsmith mentioned about monitoring. The point that struck me about the sites he showed was how very small the visitor use was. It was so small that I rather wondered whether the figures were accurate. In our Country Parks in Essex we have been extremely surprised at the results of monitoring visitor use of some of our recreational sites. The figures have been extremely high and I suspect that very often, for a given amount of recreational damage, the recreational use is much higher than people realise.

I have in mind Heynock Forest, a 250 acre Site of Special Scientific Interest, which has one million visitors a year. Another example is part of the Langley Hills Country Park which has about 200,000 visitors a year within a quarter of a mile of a grassland Site of Special Scientific Interest.

FB Goldsmith

We all take your point. It is not just the numbers of people but it is what they are doing. As Kevin Roberts has shown at Rye House Meads Reserve, a large number of well-organised children did not cause significant damage or disturbance to his particular Royal Society for the Protection of Birds reserve.

JR Thompson

That is not a large number of people.

FB Goldsmith

It is a very small, concentrated place. However, 70 trail bikes in Darent Wood can do quite a lot of damage. I am not sure that damage is all that significant in terms of impact on the flora, which is one of the reasons why Darent Wood is designated. I think it is really more aesthetic. I think that people often get upset at the effects of trail bikes on sites designated for nature conservation. Roger Sidaway will

touch on the point about the image of some of these activities later this afternoon.

JR Thompson

The point I am making is that sometimes when you ask the warden of a nature reserve how many people have visited his site, he grossly underestimates the number of people using it.

RG Hanbury (British Waterways Board)

We have heard a lot about canals and I am rather loath to come back to the subject, but I think from the way the debate has gone it may be relevant to give you some indication of our experience of putting conservation and canals together. We have a similar problem on Montgomery Canal in mid-Wales where we are proposing to restore the canal with the help of the local authorities. Using the vehicle of a Parliamentary Bill we are seeking to get the powers to re-open the navigation which was closed in the 1940s. However, there is a 25 km stretch notified as a Site of Special Scientific Interest on the grounds of its aquatic botanical interest and, incidentally, its invertebrate interest which includes damselflies and dragonflies.

By negotiation and compromise with the Nature Conservancy Council we have agreed a programme of creative conservation which will allow us to create substantial areas of water alongside the canal for the purposes of conservation alone. I believe the word 'compromise' is the wrong word because we are gaining on both counts. At the moment the canal is maintained at a low level and if we were to abandon all hope of restoration there would be doubt as to how much continuing management would be put into it. The structure would deteriorate and the conservation element could disappear over ten to fifteen years.

Under what is a compromise solution, we are going to have boats back on this waterway. There will be great public interest and public use of a major asset, assuming we can find the managers for it. We are also going to make conservation much more publicly accessible to people who come and use the canal. At the moment they may cross the canal on one of the lower bridges and be unaware it is there. With our reserves, which are 18 in number, we will be able to develop the educational side in a much more intensive way than would have been possible without the restoration. Therefore, in that context I suggest that compromise involves both sides and is not just one-way - against the interests of conservation.

I do believe that the whole question of conservation in this environment has to be tied up with public support. There is very little point in the Nature Conservancy Council, or any other body, seeking to put a ringed fence around an area and saying 'keep out'. Eventually this will resolve in a backlash of public opinion. Perhaps that is the way we ought to view it for the future because we have to bring the public along with us to ensure the money is extracted from the system and is available for land management.

FB Goldsmith

I have listened carefully to what you have said and it sounds very encouraging. Montgomery, as a county, has a Flora which includes several species of plant only found in that canal system. My plea is that you look after them and it sounds as if you are trying to compromise and blend these various uses together. One of the points I made in my paper was that it is absolutely essential for those of us who call ourselves nature conservationists to sell our subject to a wider audience, to get more people involved in these very important sites and to develop environmental education. I endorse what you are saying.

R Burden (Dorset County Council)

I would like to make a comment and address a question to each speaker. Having been involved in negotiations and planning matters for developments within Sites of Special Scientific Interest over the last couple of years, it seems both speakers have been talking about the whole spectrum of planning. Barrie has mentioned the fine detail on the site. I would request that we try to maintain standards of integrity within negotiations, not allowing it to develop into a 'secondhand car' type deal.

With 'across the table negotiations', it is difficult to put over the importance of a wildlife site because it does tend to come down to arguments about 'this' being the most important site in Britain while the other side of the table produces an expert who says somewhere else is the most important site. Therefore, perhaps superlatives are not quite the right points to raise.

The other concern I have is with Tim O'Riordan's paper. He said we may not need structure planning and we may not need forward planning in the sense that we have known it. However, he has argued that the land has been protected by planning for 40 years and that any gain from planning permission ought to be ploughed back. That is great. But the suggestion was made that a developer ought to pay a contribution to a trust fund. I am afraid that this degree of planning gain smacks of buying planning permission. I think it would be exceedingly dangerous for any of us to press for this route.

Tim's point was of trying to get something back somehow. If the developer said he would set up a trust fund, and has not done so, how would Tim replace the land use planning zoning so local authorities are not accused of being corrupt and of being bought off (in other words, planning permission is being bought)?

T O'Riordan

In my paper I spoke about the proposal by Government to end structure planning as we know it. What I worry about is that the Government does not seem to have a clear idea as to what should replace it. Structure planning *per se* needs to be modified because in my view, it is a relatively formal and somewhat inflexible process. Once it has reached its printed form it tends to stay that way for quite some time. In many cases planning authorities do manipulate their structure plan when having to take awkward decisions. One should not see the

structure plan as too much of a commitment, but some form of guidance is necessary.

What I do argue for is indicative planning. Indicative planning is not that well established in the United Kingdom, although it is well developed elsewhere, particularly in Europe and North America. One begins with a full survey of the land quality and the habitat characteristics of the area. This means that the 'Basingstoke Canals' of this world are spotted, as are many other habitats, as being the best or the most representative habitats of their kind.

This idea of typicality, which Tom Huxley spoke about, becomes more important if you have done your surveying properly. It is then easier to direct schemes to more resilient or more appropriate sites. This should be applied to forestry and woodland planting in the next 20 years. If you find that some sites really are important either for naturalness or rarity, you can indicate as such before the planning process starts. You can inform potential developers where it is unsuitable for them to go.

You will find that this gives you a stronger position, as planners, in the bargaining which will have to ensue. Although I detect what you say as a slightly holier than thou cry of, "Oh we can't bargain because we are selling our birthright", planners do bargain. It is a great game that planners play. The Nature Conservancy Council has been bargaining for six months over the Montgomery Canal and would not have achieved as much had it not dug its heels in.

All of this has worked reasonably well because the parties negotiated properly. Therefore, we need to know more about the options for bargaining. Above all, we need to have the information with which to manoeuvre. This is why I believe indicative planning is better than structure planning.

FB Goldsmith

I think Richard Burden was saying that it is not a good idea to refer to some sites as being 'best' because of some particular characteristics. I am not sure about that. The reason why I chose those two phrases in relation to the Basingstoke Canal and Greywell Tunnel, is that it was a very efficient way of communicating to the audience. It saved me giving you long lists of Latin names for dragonflies, which many of you would not have understood. It is the experience of people who have been involved in public inquiries that telling an inspector that this site is the **best** in Britain for dragonflies, and so on, is a very effective form of communication.

JT Butler (Shropshire County Council)

I would like to make a quick comment to round off the subject of the Basingstoke Canal. It was a hard fought battle, as Tim O'Riordan said, and the Nature Conservancy Council did dig their heels in. I would like to think they were ably supported in that battle by the local authorities, who could see the real value of the nature conservation content of that canal, because we in Shropshire certainly feel that is part of its charm and is the last thing we want to lose from this recreational corridor. We therefore put in a lot of effort and I think the

final result will be a good one. It came down to quite a strong policy statement from both parties.

Shropshire is a very rural area and the indicators show that the change in agriculture may well release land. That is one way of looking at it. However, it is very difficult to see how a rural area, such as Shropshire, will find alternative uses for all of that land, especially in the development sense. Equally, I think it will be very difficult to buy our way in to manage them in a formal sense for conservation or other purposes. We do not yet know what the impact of incentives will be for forestry as an alternative use.

I would like to have a reaction from Tim O'Riordan as to what will happen in the event that substantial areas of land will not be positively managed. Or, will they be positively managed in order to avoid them becoming a nuisance to the farm owner and to reduce his costs? Will it simply revert to a natural evolutionary sequence of conservation?

T O'Riordan

I am afraid it depends on the way in which policy is likely to develop in the next 20 years. However, let us assume the policy does not change at all, which is a perfectly good starting point. What you will find is that a number of the farmers in your county will go out of business. The proportion will depend entirely on their asset-to-liability relationship. Maybe 10-15% will be affected. In general, this land will be bought by other farmers, who will be in a slightly higher debt position than they were before. They will be forced to alter that land, either through intensification or by diversifying their farm income, probably from livestock and possibly from other activities.

Therefore, part of the scenic history of your county will disappear. Small farmers, the people often associated with community activities, who give the county a particular flavour, who add to the folklore, the language and the general tourist interest of your land, will also wither away. Taking over will be a new breed of land managers, some of whom may not be local. They will move into diversified agriculture and to more intensive grass production. This will increase pressure in other parts of the country. As a consequence, the effects will be quite considerable both in terms of the local community and the land, and other farming activities elsewhere in Britain. If you multiply that across other parts of rural Britain, such as Shropshire, then the outcome could be very important for landscapes and for people.

What we need is an arrangement through which the land revival fund, of which I spoke, can be deployed to support people whom we would like to see remain on the land as part of the rich rural culture of Britain. There will be changes, sure enough, but we should try to be in a position to guide that through.

F Perring

I will have to bring the discussion to a close. I am absolutely certain that the quality of the discussion we have just had has been generated by two papers of exceptional quality. I am glad to know they will soon be in print because they were so detailed, and such useful

INTRODUCTION

Thomas Huxley

Former CRRAG Chairman

I would very much like to thank CRRAG for inviting me back to this Conference. It is fun to see how an idea which one has helped to move forward as a Conference subject has actually worked out. It is also very satisfactory to meet a lot of old friends, some of whom I have not seen for many years. Thank you CRRAG for having me back.

Just before I introduce Roger Sidaway I want to trail my coat and hope former colleagues in the Nature Conservancy Council will forgive me because it is a pointer in their direction. It arises from something Roger Clarke said in his welcoming speech about funding for various activities, and also from Barrie Goldsmith's list of questions, when he asked about Potentially Damaging Operations regarding the Sites of Special Scientific Interest notification process. At that moment he did not explain what Potentially Damaging Operations were but, happily, later on in his talk, he did so. He mentioned that he asked of Regional Officers the extent to which recreation, as one of the operations that might be potentially damaging, was in fact ticked off as being potentially damaging. As you heard Barrie say, in every case this was done.

For some of us involved in promoting recreation, this has been somewhat worrying. One would be trying to create a recreational opportunity to discover that recreation had been ticked as potentially damaging. In theory this should be fine because if the Nature Conservancy Council, being a science based body, decides to list something as potentially damaging, one must assume that that is based on a scientific appraisal of the situation. Alas, this is not always the case. It may simply be guesswork. I find that less than satisfactory. I put it strongly so that the Nature Conservancy Council, or anyone else representing the wildlife interest, can tell me this is not the situation!

Roger Clarke also commented on the purpose of CRRAG and drew our attention to the latest compilation of research programmes of CRRAG agencies. If you look at the Nature Conservancy Council's 182 items there appear to be only four dealing with recreation. I may be wrong by a factor of 100% and it may be twice that number, but nevertheless it does seem somewhat surprising that a body which always lists recreation as potentially damaging in notifying a Site of Special Scientific Interest should be spending so little of its research effort in justifying that claim. This ties in with the point I made earlier that we are dealing with biological systems. Just getting round tables and hoping for compromise is not good enough. One needs facts based on research; so why is the Nature Conservancy Council not funding more research on the impact of recreation on wildlife?

The answer frequently given is that because the Countryside Commissions and the Sports Council are funding such research, there is no need for the Nature Conservancy Council so to do. You will have noticed in the summary to Roger Sidaway's paper that the two sponsors

come from the Countryside Commission and the Sports Council and not from the Nature Conservancy Council.

Yet, if the quality of countryside recreation research is to be done well, in wildlife terms, then part of the input must come from the specialist wildlife body. Therefore, I do strongly urge that this is something which the Nature Conservancy Council should look at a little more closely.

Let me now introduce Roger Sidaway and remind you that as well as having been a past Chairman of CRRAG for five years, and having contributed, in one way or another, to every CRRAG Conference that I have ever been to, Roger has also worked for three of the great Commissions, the Forestry Commission, the Countryside Commission and the Manpower Services Commission. Subsequently, he became a Director of the Centre for Leisure Research in Edinburgh and now, perhaps most importantly in terms of his own 'bread', he is a Research Policy Consultant and a very excellent one too if you are looking for someone to solve many of your problems! I do not get a free beer for that, but I mean it most sincerely, having known Roger for many years and the quality of the work that he does.

THE RECREATION PERSPECTIVE

Roger Sidaway

Research and Policy Consultant, Edinburgh

BACKGROUND

I have been asked to base my paper on a review of conflicts and co-operation between sport, recreation and nature conservation that I am undertaking on behalf of the Sports Council and the Countryside Commission (the sponsors).

The brief has the following aims:

(a) The collation and critical evaluation of the literature available in English on the direct impact of active sports and informal recreation on wildlife, and on situations where sport with recreation have helped nature conservation by zoning, by maintaining biological activity, such as in rivers and lakes, and by creating new habitats, as in golf courses and wetlands.

(b) The identification of a series of sites where different examples can be studied of such impacts and co-operative action, and if possible:

  (i) where the management or organised co-operation between users aids multiple use;

  (ii) where management agreements under the 1981 Act directly affect sport and recreation or where sport and recreation are considered to be Potentially Damaging Operations by the Nature Conservancy Council on sites where they have notified landowners of its special scientific interest.

This contract requires interviews to be conducted with Regional Officers of the sponsors and the Nature Conservancy Council, a programme of site visits to be agreed and specific contacts established with the headquarters of the Nature Conservancy Council and the Forestry Commission. The Nature Conservancy Council is also contributing to the study by providing literature searches and access to information. The site visits have been completed and the results of the investigation will be presented in a report to the sponsors during November 1987.

THE SCOPE OF THE STUDY

An internal paper (Sports Council, 1986) reviewed a number of cases submitted by Sports Council Regions and identified areas of conflict and co-operation between sport and nature conservation. A number of concerns were expressed about the procedures and practice of notification of Sites of Special Scientific Interest following the Wildlife and Countryside Act 1981 and examples were given of the current round of re-notifications having an inhibiting, or indeed prohibiting, impact on recreational access. Further information has been provided to me by

Sports Council Regions, the Sports Council for Wales, the Countryside Commission and a variety of other sources.

This material formed the basis of a 'long list' of potential conflicts and co-operation which could be studied (Table 1) which I attempted to match with the available research literature.

Given the wide-ranging terms of reference and the limited resources available for the study, it was essential to focus on a limited number of subject areas. With the agreement of the sponsors, the study concentrated on topics which are relevant to the practice of notifying Sites of Special Scientific Interest and consultations about Potentially Damaging Operations or other areas in which the sponsors have a particular interest.

In practice, this meant a range of currently controversial impacts including disturbance to nesting or overwintering birds, especially from water sports; the designation of statutory Marine Nature Reserves; activities where there is an apparent overlap of recreation/conservation interests among the participants, for example, caving, climbing, sub-aqua and wildfowling; and the restoration of inland waterways for recreational craft which results in an increase in ecological interest, at least temporarily.

Each Sports Council Region has at least one or two interesting cases, but the main pressures appear to be in the south and east of Britain and concern water areas/the coast, reflecting the distribution of population rather than ecological interest. Wales contains issues of particular interest - caving, sub-aqua and mountaineering - and merits special attention.

The fieldwork was concentrated on three sample 'clusters' - Wales, Hampshire and parts of the East Midlands (Leicestershire, Nottinghamshire and the Peak District National Park). The principal topics are set out in Table 2. The fieldwork comprised interviews with Regional Officers of the Nature Conservancy Council and the Sports Council, local planning authorities, county naturalists trusts and governing bodies of sport, together with a limited number of site visits. The list of organisations contacted is given in the annex to this paper.

I do not intend to present detailed case studies here, fascinating as each one can be. My role is not to adjudicate on the merits of each case, indeed at least two are sub-judice in that the Secretary of State for Wales is considering Nature Conservancy Council's proposal to designate Skomer as a Marine Nature Reserve and a planning inquiry has just been held on a possible marina adjoining the Basingstoke Canal. My aim is to draw general lessons for the sponsors and suggest positive steps that can be taken to increase understanding and co-operation between the interested parties. The rest of this paper is concerned with presenting some interim conclusions, which will be revised after discussions with the sponsors in due course.

TABLE 1

RECREATIONAL EFFECTS ON WILDLIFE

BIRDS	
Disturbance to nesting species	
- cliff-breeding e.g. auks, peregrine, chough	climbing, sub-aqua, canoeing, pleasure boats
- moorland e.g. dunlin, grey plover, raptors	public access
- woodland including nightjar	orienteering, public access, scrambling
- coastal beaches e.g. little tern	public access (by boat)
- waterside e.g. wildfowl	windsurfing, angling
- rare species e.g. osprey	collecting, bird watching, public access
Disturbance to moulting wildfowl	windsurfing, angling
Disturbance to overwintering wildfowl	water recreation: notably sailing, windsurfing, water-skiing, angling
Disturbance generally	birdwatching, wildfowling, grouse and rough shooting, clay pigeon shooting
Lead poisoning in swans and wildfowl	angling, wildfowling
MAMMALS	
Disturbance to breeding/hibernating bat colonies	caving, canal boats
Disturbance to breeding seal colonies	sub-aqua, pleasure boats
INSECTS	
Disturbance to dragonflies (aquatic vegetation)	propeller-driven canal boats
INVERTEBRATES	
Marine species	collecting, sub-aqua, bait-digging
DAMAGE TO VEGETATION	
- aquatic macrophytes	propeller-driven canal boats
- canal bank vegetation algal growth	canal management: dredging, use of herbicides
- alpine/arctic flora	climbing, sailing, sightseeing
- moorland	long-distance routes, motor sports
- heath/grassland	sightseeing, motor sports, off-road vehicles, cross country running, orienteering
- dunes	motor sports, beach access

TABLE 1 (cont)

DAMAGE TO GEOLOGICAL FEATURES	
- sandstone cliffs	climbing
- limestone caves e.g. sediments decorations	caving

TABLE 2

CASE STUDIES

TOPIC	
Caves/caving	Wales: Agon Allwedd, Ogof Ffynnon Ddu
Cliffs/climbing	Wales: South Stack, Anglesey; Great Ormes Head; Bosherston, Pembrokeshire Coast National Park: Peak District
Proposed marine reserves/sub aqua	Wales: Skomer, Menai
Aquatic vegetation, bats/ Canal restoration	Hampshire: Basingstoke Canal Wales: Montgomery Canal
Estuaries, waterfowl/water recreation	Hampshire: Langstone Harbour, Lymington/Keyhaven Marshes
Inland water, wildfowl/water recreation	East Midlands: Trent Valley, Rutland Water, Pitsford Water, Upper Derwent Reservoirs
Moorland birds/upland access	Peak District Wales: Snowdonia, Brecon Beacons
Woodlands/orienteering	East Midlands: Martinshaw Wood, Budby Forest

LESSONS FROM THE CASE STUDIES

Given the degree of controversy surrounding many of the case studies, as evidenced by the discussion of the Basingstoke Canal this morning, it is important to make some quite general points to keep things in perspective. The effects of individual sports on habitats and species tend to be more specific and acute than those of informal recreation, which are more general and less contentious. Because the competition for space is intense, the pressures on scarce semi-natural resources, particularly from agriculture, are magnified. As a result, there are frequent conflicts of interest between sporting organisations and local conservation groups. The impacts of sport are usually quite local, based on a specific site which often becomes a cause celebre, creating an image of controversy which is subsequently hard to dislodge. Thus the impact may be quite local, but it may give the impression of a widespread problem.

Put in perspective, the effects on species from loss of habitat due to farming, forestry, to development generally and to various forms of pollution, for example, are almost invariably greater than disturbance or damage from the recreation activities. The possible exceptions are the illegal collection or observation of rarities. So, for example, of 40 breeding bird species whose numbers are considered by the Nature Conservancy Council to have seriously declined since 1950, in only one case (little tern) is recreational disturbance at least partly to blame (Nature Conservancy Council, 1984). Over the same period, two species of flowering plant have seriously declined due to collecting, and perhaps four dragonfly species have declined due to increasing use of waterways by powerboats or 'improvements' due to fishing (ibid).

My intention in setting recreational disturbance in perspective, is not to minimise its consequences which can be undoubtedly serious. It is worth remembering that of the 22 sites and areas included in this review, 19 are Sites of Special Scientific Interest in whole or part. This scientific interest has been known for some time, indeed seven were graded 1* or 1 (of international or national importance) in the Nature Conservation Review (Ratcliffe, 1977). However, while the concern about further loss of habitat and environmental deterioration is understandable and one which most of us share, it does appear that certain expressions of concern about recreation are exaggerated and there are undoubted elements of 'moral panic', as described by Cohen (1980), in many conservationists' claims. Environmental change has been so visibly rapid in our own lifetimes, that it becomes difficult to keep a sense of proportion about the lesser effects of recreation.

Nothing I have seen or discussed during the course of this work has altered my view that, in principle, conflicts between recreation and conservation can be solved by sound management and planning. Like Barrie Goldsmith, I consider the achievements of the Forestry Commission in the New Forest over the last 15 years demonstrate the point.

However, there are notable examples of management and planning apparently not succeeding and it is important to know why this is so. In some cases, the conflicts of interest are deep rooted, based on clashes of ideology, not just people being unreasonable. Seen from their own perspective, each side behaves quite rationally, but that rationality is not evident unless the underlying beliefs and motives have been

identified. Such beliefs are not easily changed. Those of you who are familiar with the Access Study will be aware of this analytical approach (Centre for Leisure Research, 1986). However, in other cases there are deficiencies in management and planning which can be remedied and I will make some suggestions on these lines later. What does seem likely, however, is that such conflicts will probably increase as environmental concerns and standards of protection increase while recreation pressures grow. This places recreational interests in a particularly difficult situation, having to appreciate that as we learn more about the environment our standards of protection rise and will continue to do so. Nevertheless, it is important that both sides understand and respect the legitimate claims of others. The crucial issue becomes which claims will obtain priority in any given location, as it is clear that major territorial battles are being waged.

DISTURBANCE AND DAMAGE

Evidence of environmental effects is relatively easy to amass, but the long term impacts are far more difficult to assess. Recreational disturbance of wildlife commonly occurs but given the adaptability of wildlife, the crucial question is at what level does such disturbance matter? Here is a clear case of 'seeing is believing', with the visible effects of damage to vegetation being recognised by non-specialists more readily than the more problematic effects of disturbance. What does seem to be generally agreed is that the effects of disturbance are extremely difficult to quantify, not least given our scant knowledge of the complex inter-relationships which govern numbers, breeding success or social behaviour of most species. Yet these relationships have to be demonstrated to the satisfaction of scientific audiences and communicated to equally sceptical lay audiences.

Insofar as it is possible for me to provide, from the situations that I have studied, an instant assessment of which types of recreational disturbance and damage really matter, there appears to be a reasonable level of agreement in the following cases. Serious damage has occurred to geological formations in many major cave systems and concern about disturbance to bats has led to voluntary restrictions on caving in newly explored cave systems. Voluntary restrictions have also been agreed on seacliff climbing in Wales to avoid disturbance to nesting peregrine falcons, choughs and auks. There is little argument that trampling of arctic/alpine vegetation on high peaks causes more than aesthetic damage, given the long regeneration cycles in such exposed conditions. However, there may be some argument (as in the Cairngorms) over who causes the damage.

In theory, we should be able to devise a ranking of vegetation types according to their resilience to and powers of recovery from recreational use. At the difficult end of the scale are the arctic/alpine ecosystems; at the more amenable end lies freshwater aquatic vegetation, judging by some results of canal restoration and recolonisation of wet mineral workings. However, we are a long way from quantifying these characteristics, let alone the measured effects of 'doses' of recreational activities on birds or mammals in field conditions.

There is less agreement on the effects of recreational disturbance but mainly because of lack of concrete evidence. Not all aspects of our natural environment are equally well researched. We know more about

birds and terrestrial ecosystems, and less about the marine environment, about the life cycles and life spans of lobsters, sea fans and corals, let alone the effects of repeated collection or careless damage on these species. In these circumstances it seems sensible to err on the side of caution and agree to voluntary restraint.

There is a growing knowledge and environmental sensitivity within some recreational circles which suggest that unlimited access to all moorlands at all times of year may not be desirable for the sake of the ground nesting birds and raptors. This is being recognised in the access agreements currently being negotiated in the Peak District National Park; that reserves should be maintained for moulting and over-wintering wildfowl; and that the natural respite imposed by winter conditions is threatened by the changing technology of water sports equipment. Maybe there should be restrictions on birdwatching or where we take our dogs. As we become better informed, we are more likely to agree the need for further restraint.

IMAGES

If the scientific evidence is sparse, we can only make informed value judgements on these matters at present, but we need to ensure these are not unduly discriminatory. Certain sports have images from which they undoubtedly suffer. The Oxford Polytechnic research has already demonstrated the problems of image which confront motor sports (Elson et al, 1985). A number of sports have a false image, in that all their participants are seen as young, macho, male, noisy, irresponsible and out of control. Add to this the fears of 'novelty' and of threatening groups invading personal property at full throttle, and you can identify for yourself the reasons for opposition to the relatively young and little understood sports of orienteering and wind surfing. The situation is exacerbated by the lack of provision for motor and water sports in general, and water skiing in particular. Whether these sports conform to their images in reality is ignored. Admittedly they do have real problems, not least that conservation has yet to become part of their culture in most cases. But just as these sports lack information on the ecological effects of their activities, conservationists lack knowledge of the sports, rarely recognising the 19 species of motor sports and the 'ecological niches' that each occupies. Orienteering, for all its image of large numbers of runners trampling around a set 'course', is usually very occasional in its timing, dispersed in its impact and meticulous in its planning.

As is so often the case, any sport is judged by its stereotypes, whereas sensitive management needs to recognise the distinct variations and sub-cultures within each sport. The variety is enormous, from the trophy hunters, wreck spotters, naturalists, and sports fishermen among divers; 'munro-baggers', aesthetes and first ascenters among climbers; explorers and conservationists among cavers; while among the rapidly developing sport of windsurfing there are those who want to ride the big wave and those who race as though their board was a conventional dinghy. The specialisations within conservation are almost as great and as notable for their lack of internal communication; for example, between marine biologists and ornithologists. Perhaps the one group of outcasts no one wants to claim are the bird spotters and 'twitchers', whose antics are frowned on by serious conservationists but who also lack a governing sports body!

Just as there are marked antipathies towards muscular/macho performers, anarchic activities or well-meaning muesli eaters in green wellies, there are also important affinites between conservationists and certain sports participants. The dichotomy of recreation versus conservation is unreal in so many cases. Natural history as a recreational activity is only one stage removed from scientific studies - there are even those who would claim bird watching as a sport! We should build on such affinities and examples of co-operation instead of stressing antagonisms. The affinities are closest between cavers and geologists, the latter often depending on the former for any information on underground features. This can be true of climbers and ornithologists, for the two hobbies are not mutually exclusive. Certain alliances may be considered less holy by many purists, for example those between wildfowlers and conservationists.

SOLUTIONS AND THE WAY AHEAD

If relations between recreationists and conservationists are to be less contentious in the next few years than they have been recently, there will need to be a major improvement in communication and understanding and much closer involvement in management and planning.

Improved Communications

Greater understanding presupposes a willingness to listen and learn on both sides and while good links have been established in many parts of the country, they are notably absent in others, each interest group preferring to take sides and make exaggerated claims about the activities of the others. The confrontation engendered in many planning inquiries does not help.

Many conservationists apparently perceive that they are literally losing ground and often feel so beleaguered and pessimistic that they are unwilling to concede any merit in the rival argument. Being understandably concerned that previous legislation has not provided adequate safeguards to thwart major environmental change, recreation is seen as one of many major potential threats about to engulf the last cherished reserve. This is, of course, a stereotype and misrepresents the more realistic stance of those conservationists who take a more pragmatic view of working with and harnessing change. This latter group sees issues 'in perspective' and recognises the value of recruiting others to the cause via increased public access and conservation education.

Recreationists can feel equally beleaguered. Conservation appears to win every planning argument, laying claim to all territory. Conservationists seem unwilling to set realistic priorities or negotiate. This image is not aided by the Nature Conservancy Council appearing, to many of the sporting interests that I have interviewed, to 'go over the top' in its territorial claims via the re-notification of Sites of Special Scientific Interest and the designation of reserves. The subtle differences between notification and designation are lost on outsiders who see the processes as one and the same, as unilateral and arbitrary. Differences in approach and apparent inconsistencies at county boundaries are noticed, not least where in negotiations over Potentially Damaging Operations, Nature Conservancy Council officers are seen to be alternately relaxed or over-zealous. Against this must be set

the more sympathetic views held by many recreationists with strong interests in conservation.

If conservationists wish to communicate more effectively with recreation interests, they need to know more of the strengths and weaknesses of its organisation, notably of the governing bodies of sport and their problems of representing often largely unaffiliated participants. Conservationists need to be less possessive about information and recognise how ignorant but well-intentioned many recreationists may be on conservation matters. For example, many yachtsmen are unaware of the damage they can cause by landing on a beach used by nesting terns. Recent breeding successes of little tern can be attributed to improved local information and sensible wardening to overcome this problem. But the most effective conversion comes from within, from learning the message from the sports magazine or hearing it from the governing body's own conservation officer (preferably a well-known participant in the sport).

Self-regulation

Looking across the governing bodies of sport, it is not difficult to rationalise good practice in the adoption of conservation measures which could be more widely accepted. Starting with the recognition of the importance of conservation at the top of each sport, the possible organisational measures that could be adopted are:

- Committee responsibility for conservation leading to the development of conservation policies (adopted by the British Mountaineering Council, the National Caving Association at regional level, the British Association for Shooting and Conservation).

- Nominated professional or lay conservation officer (British Mountaineering Council, National Caving Association and British Association for Shooting and Conservation).

- Codes of practice (canoeing, climbing, caving, wildfowling, orienteering).

- Voluntary agreements on close seasons (climbing, orienteering, angling, shooting).

- Research (climbing, caving, shooting).

- Controlled access to sites or reserves (caving, wildfowling, angling).

- Disciplinary procedures (wildfowling, orienteering).

- Advance planning and negotiation of events (orienteering).

Involvement in Planning and Management

The form of management that I am advocating is the involvement being shared between the various interest groups. Many of the causes celebres surround the management of a specific site, usually one which is multi-purpose in use. Frequently not all the relevant interests have been represented at the outset, leaving a minority interest (either

recreation or conservation) battling to influence more established interests. Far less contentious are the large new developments in which all interests have been involved in the planning stage, enabling clear understanding to be reached before active management begins. The recent major reservoir schemes, such as Rutland Water, demonstrate the value of their large scale, which provides ample scope for zoning, and of the continuous involvement of all interested parties in their management from the outset.

Let me emphasise the importance of scale and representation. Zoning can only be effective on large sites which allow full segregation of activities. Small areas are more effectively managed as single-purpose schemes dedicated to a primary use. Representation or involvement in management can be equally problematic unless different interests are equitably treated.

Established interests such as commercial inshore fishing may be relatively uncontrolled compared to water sports, leading to discontentment and a reluctance to accept conservation measures that are not applied to others. Local interests may also dominate for 'traditional reasons', for example, gull egg collecting may be licensed on large colonies, as a traditional local activity, without clearly understood criteria governing the 'bag', making acceptance of restrictions on similar activities less likely.

The most obvious deficiency in planning lies at the strategic level – the inability to consider the desirability of development proposals or the necessity of conservation controls in a broader context than the single site or the local plan. Furthermore, the two systems operate on totally different scales. Sites of Special Scientific Interest are selected on the basis of national criteria to provide a network of sites and geographical spread of habitats at a county scale. The Sports Council strategies for sport and recreation operate on a regional scale. Each is a sectoral statement not easily related to the other. Yet the natural scale which covers the needs of overwintering wildfowl from the Trent Valley to the Wash or the needs of water recreation in the Midlands spans many administrative boundaries. Each interest needs to know which sites are to be primarily dedicated to its own activity and thereby to acknowledge and respect the interests of the other. At present, neither faces the issues confronting the other nor has to strive to reach a mutually acceptable solution.

CONCLUSIONS ON THE RECREATION PERSPECTIVE

For many years recreation has not been seen as a conservation problem of real consequence, and vice versa. That perception is rapidly changing as recreation demands become more specific and the constraints of increasing environmental standards become more real. Yet the principle of constraint has not been accepted by all recreation activities – indeed, it may well be in direct opposition to the ideology of some which have hitherto enjoyed unrestricted access. The acceptance of constraints, and their location and timing, depend on the presentation of more convincing evidence of disturbance and damage. This and how constraints should be applied – whether by self-regulation or imposed controls – are likely to be the battlegrounds over the next few years. At best we may see a clearer segregation of interests on a more realistic scale, leading to more sophisticated management of the

respective parts. And yet if we could only step aside from the emotional baggage of these feuds, the future could be very different.

The proper concern of management should be the **enhancement** of both recreation and conservation values – possibilities that have been all too rarely recognised. We need to move on to a phase of recreation and conservation **engineering** to achieve a higher **productivity** of both. I use these alien terms deliberately as they emphasise the shift that is required in our thinking. But in one sense this sentiment is not far removed from Tim O'Riordan's 'good environmental practice'. What gets in the way? Could it be our woeful history of unimaginative development, our preoccupation with the aesthetics of the past, our unwillingness to be creative in our enjoyment of the environment? But that is a field for other speakers at this Conference to explore.

ACKNOWLEDGEMENTS

I would like to thank publically the many individuals and organisations who spared the time to talk to me and kindly provided so much information. The interpretation of events is my own and does not necessarily represent their views.

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APPENDIX

LIST OF CONTACTS

National Agencies*

British Waterways Board
Countryside Commission
Forestry Commission
Nature Conservancy Council
Sports Council

Local Authorities

County Planning Departments: Nottinghamshire, Leicestershire, Hampshire, Gwent
County Recreation Department: Hampshire
Brecon Beacon, Pembrokeshire Coast, Peak District and Snowdonia National Park Authorities

Sport and Recreation Organisations

Cambrian Caving Council
British Mountaineering Council
British Orienteering Federation
British Association for Shooting and Conservation
British Sub-aqua Club
British Water-ski Federation
Royal Yachting Association

Conservation Organisations

Royal Society for the Protection of Birds
Wildfowl Trust
Woodland Trust
Royal Society for Nature Conservation
Marine Conservation Society
Cave Research Group
County Naturalists' Trusts: Brecknock, Derbyshire, Hampshire and Isle of Wight, Leicestershire, Nottinghamshire, North Wales, West Wales

Waterway Restoration Organisations

Montgomery Waterway Restoration Trust
Surrey and Hampshire Canal Society

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* also contacted at regional level

DISCUSSION

L Batten (Nature Conservancy Council)

I would like some clarification on one point. You mentioned orienteering as a sport, but you said bird watching, or twitching, is not a sport. What is it that actually makes an activity a sport?

R Sidaway

Sports Council rules I think! We could tie ourselves in knots over this point. A sport, according to Sports Council definitions, requires some sort of physical activity but whether there is more or less physical activity in pistol shooting or bird watching is debatable. Perhaps it depends on whether the purpose of the question is to try to get grant aid from someone. There is a problem with the current administrative structure whereby some activities fall through the gap between the Nature Conservancy Council, Countryside Commission and the Sports Council. Bird watching should be recognised as a bona fide recreational activity and the agencies should sort out who funds it and who is going to be the governing agency for the twitchers.

R Lee-Warner (Royal Yachting Association)

I was interested in your statement about yachts landing on beaches and disturbing nesting terns. Has anyone taken any steps to publicise the location of these beaches, where the danger areas are and the times of the year the birds are nesting?

R Sidaway

It has happened on a local scale and it certainly should be done. Let me return to my point about conservation interests being more forthcoming with information. The Royal Society for the Protection of Birds, in the management of its reserves and the one at Langstone Harbour in particular, not only engages a team of wardens to make sure there is less disturbance, it also erects signs on the island. I do not know to what extent the Royal Society for the Protection of Birds tries to put information at source, such as referring back to the yacht clubs, the harbour master's office or wherever else, but those are the logical steps to follow. That seems to be part of good management and if we follow those sorts of practices, I am sure we can minimise many of the problems, because most disturbance is quite unintentional.

R Lee-Warner

I think it is ignorance on the part of the yachtsmen and lack of foresight by the conservationists.

RH Hamilton (Nature Conservancy Council)

There are several wardening schemes of the type Roger Sidaway has spoken about and in one or two cases the yachting association has participated by funding them to protect the site. This has worked extremely well. There has not been any reluctance or negligence on the part of the conservationists in making known to the yachting interests

the location of sensitive sites. However, there are a few people, regrettably, who will not respond to notices. One cannot do very much more than inform people. You cannot have effective policing because the warden running up to do something about the situation might cause more disturbance than the yachtsmen.

D Stokoe (Mersey Valley Warden Service)

You mentioned co-operation between different users. What concerns me about certain bodies - I am thinking particularly of anglers - is that they can see when a river is getting cleaner, many years in advance of others, and try to take it over for themselves without any thought for other users who may come in later years. They have scant regard for either recreation or conservation within the area they are using.

T Huxley

When you say anglers, who do you mean? There are many different kinds of anglers: boat anglers, shore anglers, coarse anglers, game fishing.

D Stokoe

They are mainly coarse anglers in the situation I am talking about.

R Sidaway

The point has been made to me that the angling interests have been very well established and very well represented over a long period of time. They have a legitimate claim - after all they buy their rights to fish.

The point I want to make is about the novel recreational and sporting activities, to which it is very difficult to respond. Many remarks have been made to me about hang gliding, hot air ballooning, and microlights which are novel activities and attract a certain image. There are many anecdotal stories of disturbance. Often it is very difficult to respond to a novel activity. We can be slightly facetious at times about the willingness of the Sports Council to take an activity on board and recognise a governing body, but it is very right and proper that they do so. When you come down to the management of specific water resources, most water authorities have a fisheries division and the angling interests are already well established. The issue will be whether the water authorities recognise that they should make provision for other activities. The way in which they are attempting to do that is through recreation and conservation committees which, coincidentally, have been suggested as a very useful forum because they are one of the few fora where both recreation and conservation interests come together.

D Stokoe

It is not necessarily the water authorities who are to blame, but it is the riparian owners who pressure elected members or the landowners to give up or sell the rights to local angling associations

for an eternity. This happened for many years before they were of use to other recreational users.

J Fladmark (Countryside Commission for Scotland)

This point about definitions has raised an interesting question. Surely sports are concerned with the conservation of the human species. Certainly that is how some of us view it. If the Sports Council could look at it that way and identify areas for activities such as angling and sailing, they could then ask the Nature Conservancy Council to designate the areas as Sites of Special Scientific Interest. We would then see that this purpose was part of 'conservation' and would all work to common objectives!

D Campbell (Forestry Commission)

I would like to thank Roger Sidaway for a very stimulating presentation which included much head banging. He stimulated creative thinking in approaching these problems. The words he used were 'engineering' and 'creative conservation' and they are extremely important for any new lateral thinking. However, there is a profession whose main job is to produce lateral and creative thinking for creative conservation in the redevelopment and that is the landscape profession. I would hope they would play a significant role in any new era of creative conservation over the next few years.

P Beale (Seale Hayne College)

The question of privatisation was raised this morning. Do you see privatisation of the water industry actually improving the situation of conflict between uses or might it make it even worse?

R Sidaway

On balance I suspect it might make it worse if it is going to operate through market forces. If we are talking specifically about water, much will depend on the terms of reference given to the water companies and how they will operate, whether they will have financial targets set by government or be a British Telecom type of operation.

P Beale

Leading on from that, certain bodies of users can afford to pay more than others for facilities. Might they do better out of it than groups who are less able, or less willing, to afford to pay for a facility?

R Sidaway

Yes, and certain groups who have a long tradition of not paying will want to extend rights of open access. Therefore, I think you can extend the argument.

CJ Spray (Anglian Water)

Dodging all the issues of privatisation, one of the problems facing us when dealing with anglers is that many of them are not represented

by governing bodies. It is a sport which, by its very nature, involves many individuals 'doing their own thing'. Many of them would not want to be a member of a club. Surely that is a problem through all of this. Where there is an organised body, to which most people actually belong, then there are no problems. However, if one compares the number of anglers throughout the country with the number of clubs, one can see why it is very difficult to get the message across using the clubs to disseminate the information.

To give you an example, 181 letters were sent out with stamped addressed envelopes asking for information. This could not have been construed as us jumping down their throats wanting to tax anything. We received 30 responses after a second attempt. That lack of response does not help anyone who is trying to organise an event.

I would agree about the value of user groups, whether they be for reservoirs or general recreation. I have one which covers the whole of the Great Ouse. It includes almost any recreation and conservation interest and meets twice yearly. They do have a great deal of value. However, it only represents groups and it does not cover the unrepresented individuals.

R Sidaway

I think that is a classic problem. It varies a great deal from sport to sport because with some sports there is a major incentive, for reasons of safety or insurance as in skydiving or parachuting, to be a member of an organisation and not to 'do your own thing'.

There may well be good reasons for clubs to affiliate. However, the governing bodies are very much loose federations, and clubs are not legally bound to affiliate. Some of them are very 'anti' affiliation. It means that managers and educators have a long road ahead and we have to face up to that fact.

What I am suggesting has not been tackled so far by many of the governing bodies, that is, for all of them to face up to the conservation issues. I think that has both a practical and symbolic significance in relation to the conservation side.

CJ Spray

If a governing body is actually only speaking for about 40% of a sport's participants, then however much you get involved with that governing body you still have a massive block of people to whom you are not actually getting through. They will present you with a long term problem. Anyone can angle, all they need is a rod licence, and they are then anglers out on the river.

R Sidaway

Yes, and some of those individuals are quite anarchistic in their approach to the chosen sport - the 'twitchers' probably most of all.

T Huxley

In my innocence I thought it was increasingly difficult to put a fishing rod into anybody's water without, in some way, having to gain access to the water. Even if you are not in a club you have to gain access. Is that not so?

CJ Spray

There are areas that are still free fishing and you can buy tickets on many waters.

T Huxley

Even the process of buying a day ticket means you have to do something to gain access.

CJ Spray

No, you can sit and wait for the bailiff to turn up and pay him. If he does not turn up you do not pay!

R Sidaway

That is a contact point. If you want to try and get the conservation message across you must use the point of contact.

CJ Spray

You could use the press.

T Huxley

The point I was making is that if you have to buy a ticket then you can put a conservation message onto the ticket. You may think it is a rather thin idea but it can be done. East Lothian District Council does it in relation to the use of their access areas.

CJ Spray

We put 'do not use lead' on all our licences.

M Davies (Royal Society for the Protection of Birds)

You talked glibly about 'twitching' and I understand why you might focus on it, but one could put forward the same argument as about the 19 species of motor sports. It seems a great pity that we are making this distinction in our minds between conservation and recreation. I am sure we all accept that wildlife is a recreational resource and we would wish to conserve it as a recreational resource.

Distinctions have been drawn between sport, informal recreation and nature conservation. Three great organisations have been set up to adjudicate and see over them. I wonder if you would like to comment on ways in which we can overcome the divisions between these agencies, which seem to be part of the reason why we are having such a lot of conflict. If some of the wildlife resource uses of the countryside could

be more widely recognised, not just by Sports Council grants but in the whole planning process, we might have a better mechanism for resolving some of what need not necessarily be conflicts.

R Sidaway

That question has several different layers. If we were all sitting down with a plain sheet of paper trying to work out a structure for environmental organisations in Britain either in the 1940s, when it was first attempted, or subsequently, we would not necessarily come up with the structure that we have now. Many of us would like to see some changes but we have to live with the organisations that we were given. We must ensure that they do liaise more than they have been doing.

Rather than knocking any particular body for not doing this, that or the other, one should point out the constructive things they should be doing. I think they should table the strategic planning issue and try to resolve what the real priorities are for sports and wildfowl respectively. This would produce a clearer understanding of what is important and who should keep off which particular patches. This would be a worthwhile exercise firstly for the wildfowl and the recreationists, and secondly to increase the understanding between the agencies. Therefore, I am very much in sympathy with the sentiments you are expressing.

JS Wilkinson (BBC)

The previous answer covered some of my question. Sitting here and not being a conservationist nor a recreationist, it seems strange how we treat the two as distinct entities. We talk about sailors and fishermen as though they are not conservationists nor have any concern for the environment. Equally, there are environmentalists who have no interests in recreation. I realise the duty of a Conference like this is to polarise the issue so as to encourage people talk to each other. However, there is more middle ground within the continuum than we are suggesting. We should concern ourselves more with this middle ground. No one group has the monopoly on concern for the environment. It would be very unfair on many recreationists, whether they be bird watchers or fishermen, to suggest that the monopoly of concern is with the non-recreationists.

R Sidaway

I think we all wear several hats. I do not know whether Jeremy Worth has any data from the Countryside Commission surveys on what the dual membership is. However, there must be considerable overlap in the membership of organisations between the so-called conservation organisations and sporting interests.

JS Wilkinson

In the discussion earlier we were talking about the survival of two species, in other words the conservationist and the recreationist, if they could not survive in harmony. When it comes to the kingfishers, the minnows are not too particular about the other species surviving.

J Worth (Countryside Commission)

The in-depth research we carried out for our policy review revealed very strongly that things held dear by conservationists are the very reasons why people visit a site for recreation. So, that supports what you are saying. Indeed, there is a fair degree of overlap between the Royal Society for the Protection of Birds, the National Trust, the Ramblers' Association etc. At one stage we discovered that more members of the Royal Society for the Protection of Birds appeared to go on long walks than members of the Ramblers' Association! I hasten to add that this was only a very small sample.

I would like to move on slightly because I was very worried this morning when the discussion moved from 'trying to resolve issues' to 'compromise' as if these were synonymous. We kept using the word 'compromise' very ill-advisedly as a portmanteau word to encompass all sorts of things.

I think Roger has rather tantalisingly talked about using a broader geographical scale when trying to resolve issues. He talked about the discontinuity between the Sports Council's regional strategies, which might apply to other recreation organisations, and management plans for Sites of Special Scientific Interest. I am very much attracted to the idea of solutions at a regional level, but I am not certain how we move from our current negotiations on sites, where we can get the owners of rights together, to begin to talk about resolving conflicts at a regional level, thereby bringing into play all sorts of different owners of rights and lands. How are we going to manage that?

R Sidaway

I would like to know other people's reactions to the proposition I was putting forward. It seems realistic to me. We are talking about inter-agency issues and I think there has to be a very broad look across Nature Conservancy Council regions because the birds do not respect the boundaries and they move around. Apart from coming in and out of Britain all the time they are also moving between the estuaries and the inland water. So, I think that is a problem which has to be taken on board and thought through by the Sports Council and the Nature Conservancy Council.

R Clarke (Countryside Commission)

It seems to me that the answer is to expand the number of sites. I refer back to what Tim O'Riordan was saying about changes within the countryside. At the moment the position seems to be that both conservation and recreational uses of land have increasingly been confined to a limited number of sites. Obviously a small surviving piece of chalk grassland is of particular interest to nature conservationists, but it has much the same value for recreationists, and for the same sorts of reasons, apart from the fact that it may be a 'high' point for archaeological interest as well.

There would be less pressure on such areas if there were more chalk grassland. It seems that we now have the opportunity to expand the number of sites, be they woods, moors or downs, which can serve multiple objectives. Perhaps that opportunity has not existed in the

same way until now. Tim O'Riordan's global scenario showed what is likely to happen in the countryside and how our future land use is going to give a higher priority to some of our interests. This is where the opportunity will arise, rather than trying to cram everything onto what are, in the public contexts, small 'islands', whether you call them islands from a conservation point of view or a recreation point of view.

R Lee-Warner

I was going to make roughly the same point as Roger Clarke has just made but I would like to add to it. Many of us with sporting interests have problems. For example, in the Birmingham area there is an acute shortage of water suitable for sailboarding. We have heard from the nature conservancy agencies that there are areas where dragonflies need encouraging. With land prices dropping considerably, surely we now have a golden opportunity over the next year or so to do something about it. I would love someone to give us 300 acre blocks of farmland in wetlands so they could be turned into sailboarding areas.

M Collins (Sports Council)

I think we need to talk much more about specific mechanisms and opportunities for conflict resolution. I wart to end with a question for Roger Sidaway and I give him notice of it now. Does he have the same views as Barrie Goldsmith developed this morning regarding situations in which ideologies are so set, opportunities so limited, or where scarcities for more than one activity coincide to the point such that one really does have to do a Solomon's judgement instead of resolving it with compromise and it being of some benefit to various parties?

I think there is a very severe issue of scale, and in discussions about nature conservation if one has a scale of scarcity and representativeness, then once you get below the top really rare international site there ought to be a willingness to give up some sites for other purposes, such as recreation or tourism. This is what sports have had to do in the past and had to live with.

There is no proper meeting of minds at the regional level between the Sports Councils, the Countryside Commissions and the Nature Conservancy Council in any continuous and coherent fashion. I have heard it said recently that the regional councils for sport and recreation no longer have conservation interests. They may not have the formal structure that they used to have but they do still have conservation interests. I believe that much of their business is too boring and couched in sporting terms for the conservation interests to sit through. That is something they need to talk about. But there is no equivalent reciprocal regional arrangement for sportsmen to be bored by conservation discussions.

The other issue, I think, is one of culture. Both activities are interested in enjoying our marvellously varied countryside. On the sports side it is perfectly true that the cultures of sport do not always appreciate the limitations, dangers and difficulties particular sports can create for particular habitats. This very day the Royal Society for Nature Conservation is launching a report on motor vehicles. I will accept that, whether two wheeled or four wheeled, the motor sports do not have a code of practice regarding conservation as some other sports

do. Our research on motor sports did not carry through to that point. I would like to sit down with the Nature Conservancy Council, the Royal Society for Nature Conservation and the Land Rights Association and devise such a code. This is an excellent example because some sports have to be very tightly controlled and people have to affiliate to them. At present, some motor sports and particularly light, two wheeled motor bikes which can be ridden on and off roads, are undertaken in an entirely uncontrolled situation and create a great nuisance.

You will only influence these participants through the most diverse means of information and education, namely television and the press. You are going to be working very hard at this for a long time. It is important when we are talking about recreation, whether informal or formal, and conservation, that you recognise those cultures and the issue of affiliation.

I would say that the Sports Council has been criticised for being concerned more with urban sport and I think justifiably so. We are proposing to form a staff and officers' group to deal specifically with countryside issues. I am convinced that whatever economic scenario we arrive at for land and the countryside, the pressures from the sports point of view are going to continue to grow and the standards required for conservation of the countryside will also grow. This will mean more points of pressure and more points of resolution.

I come back to my question, are there points of resolution that Roger feels are really intransigent and intractable?

R Sidaway

You have given us a complicated statement. I think it is possible to look at several sports from the top down and particularly in relation to governing bodies. You have to recognise that there is a range of views held by the people working within conservation or within sport, including people who are holding posts within the organisations. I think that there is scope for co-operation within that spectrum. It is the so-called 'cowboys' and anarchistic elements who are much more difficult to influence.

The other restriction which will apply to any top-down solution, agreed between the Nature Conservancy Council and the Sports Council, concerns those many small local areas which are prized by local communities whether it be for recreation or sport. We may well get some grand horse-trading at a national scale, but it may not be accepted by someone who campaigns for the local pond because he or she is very concerned about the ducks and does not want water skiing there. Whatever the agreement at the top, it has to be worked out and lived with at local level.

T Huxley

Thank you Roger for an excellent paper. I would like to use the Chairman's privilege of expressing surprise because there has not been a little more biological information. Perhaps people are expecting this to be discussed in the workshops. Perhaps it is shyness on the part of the wildlife interest here that we are prepared to be talking about lists of specific sports but we are not mentioning some of the particular

organisms about which we are concerned. Maybe it is too complicated to do this but I am mentally dredging my mind to think of the sorts of things that might be found in the mud of a canal. For example, Planorbis cristata is only a few millimetres big. Some of you know what it is. When you look at it under the microscope it has the most beautiful whirled shell. It fills the viewer with excitement and interest. Although it is buried in the mud, when it forms part of a list, it occupies the same space on that list as any other organism.

The biologist, who is interested in protecting these communities, has to convey the importance of these hidden forms which he can see but the rest of us cannot, although we can readily see the sailboarder. This has not been discussed because, unless one can convey the importance of the biological organisms which one is wishing to conserve, then one will have difficulties trying to convey the importance of why this dialogue has to be resolved. I hope that is going to come out a little more strongly in the workshops.

COUNTRY PARKS FOR RECREATION AND NATURE CONSERVATION

John Baxter

Country Park Ranger, Wakefield Metropolitan District Council

INTRODUCTION

Bretton Country Park is a 38 hectare (96 acre) park which is owned and managed by Wakefield Metropolitan District Council and opened to the public in 1979. The Country Park is set in established parkland with easy access from Wakefield and from the M1 motorway. The parkland was once the deer park to the Bretton Hall Estate and forms the boundary of the present Country Park. The 18th century hall is now used as a teacher training college. Bretton Country Park lies adjacent to a Sculpture Park to the north and to Bretton Lakes Nature Reserve which is managed by the college and the Yorkshire Wildlife Trust. The latter controls access, with entry only available to permit holders or arranged parties escorted by the ranger.

The Country Park was established to maintain and enhance an area of high landscape quality which has both historical and ecological interest, and to allow the public to gain access and enjoy the countryside setting. The main objective of Bretton Country Park is wildlife interpretation. At the outset, to establish the role and management of the Country Park, the local public were asked what they wanted at Bretton. The majority opinion was to manage the park for wildlife and maintain an unspoilt countryside atmosphere. People wanted to feel as if they were in the countryside and as such wanted to avoid any commercialisation in the Country Park.

A visitor information centre was constructed as a focus for the interpretation of the Country Park at a cost of £45,000. A car park and picnic facilities are also provided. A ranger and assistant are available to talk to visitors and escort guided tours around the park and to undertake appropriate management. A system of specially devised trails was developed to enable the public either to view interesting features of the park from a wildlife aspect or simply to enjoy a walk in a rural setting in pleasant surroundings. In devising the trails and anticipating high visitor pressure, the park was designed to minimise disturbance to wildlife. Trails were constructed sympathetically around the lakes of the nature reserve without going into the reserve itself. Although the reserve acts as a focus from the wildlife point of view, the adjacent Country Park can take advantage of the overflow of wildlife from the reserve. Sensitive habitat management (tree planting and footpath maintenance) has helped to avoid undue disturbance to important wildlife features on the reserve.

People visiting the park do so either for informal family walks and picnicking or more importantly to learn about the countryside. Displays in the information centre provide a useful educational role, but experience in the Country Park has demonstrated that personal contact between the ranger and the public (face to face interpretation) is far more effective in generating interest and putting over information about the park and its wildlife. Guided walks and illustrated talks on a

particular theme have proven very popular and well attended. Some are so popular that there is a danger of overcrowding the park. It is more appropriate to encourage interest with general information and 'folk-lore' than giving a dry technical approach. Clearly, in marketing wildlife for people, quality of the visit is very important and it may be necessary to limit numbers of visitors by booking walks and talks in advance. At present the car park for 150 cars 'limits' the number of visitors at any one time.

Active participation in the field appears to be what people want when visiting parks rather than the classroom image of the information centre. Instilling awareness of wildlife issues in an urban audience is particularly important.

Work with schools is an important role of the Country Park especially as urban children have less exposure to the countryside than previous generations. Walks, talks, projects and work-experience have proven popular. Taking the countryside into schools is also a valuable educative process which often pre-empts a visit to the park. The Country Park also acts as a focus for the WATCH group monthly meetings. Talks by the ranger staff to other local groups (for example, Women's Institute) is another important link with the community.

Problems that one would expect with different types of visitors in a confined area do occur. Policing the park is therefore an important role of the ranger staff. Youngsters swim illegally in the reserve lakes from time to time, but diplomatic persuasion/education is more effective than heavy-handed policing. Where potential recreational activities are not sympathetic to the interests of the Country Park (swimming, sailing, horse-riding, and so on) people can be directed to other Country Parks in the area where such interests are catered for. Recreational activities and wildlife at Bretton are otherwise complementarily and inextricably linked.

An area of potential conflict has recently arisen between the interests of the country and the adjacent Sculpture Park. The Sculpture Park wants to expand by creating larger car parks and larger access roads. This is unlikely to be conducive to the Country Park interest.

SUMMARY OF DISCUSSION

It was accepted in discussion that some recreational activities occurring in Country Parks were incompatible with one another but could either be effectively zoned within the same park or if necessary be practised elsewhere. Zoning has been achieved at Bretton Country Park through restricting access and sympathetic management by routing trails away from the sensitive reserve area and by offering walks escorted by ranger staff. People wishing to pursue other recreational activities could be directed to other country parks with specialised facilities.

Discussion continued as to why people visit parks. One aspect is to get away from the urban scene and to experience the countryside. It was considered an easier option for people to walk in a formalised Country Park and to follow labelled trails than to plan where to visit in the wider countryside and to work out appropriate routes to follow. It was argued that a visit to a Country Park was unlikely to provide peace and solitude if it is shared with enormous urban populations at the same

time. Country Park management and layout could help to resolve this problem, but people were perhaps more interested in green space for picnics and exercising their dogs than in the solitude and absolute isolation of a Scottish loch.

Country Parks organised for wildlife interpretation were the main feature of discussion. In this context, it was difficult to distinguish the difference between Country Parks and nature reserves. Although the distinction was rather artificial, this was perhaps of little significance except as a means of deriving support grants from government. Do people always want to be educated about wildlife and the environment as well as merely enjoying the Country Park as a pleasant place? Most delegates considered it was important to have the option available, but it was up to individuals whether or not to take up the offer.

Rangers considered in discussion that it would be better to employ more field assistants for personal interpretation rather than have expensive interpretative facilities. The role of volunteer help in interpretation and park maintenance was emphasised as vital to undertake necessary work and maintain good local public relations. Face to face interpretation with the public was the most effective means of communication. Escorted walks with film/talk support were considered effective provided that the information was stimulating and packaged correctly. The classroom approach was considered counterproductive in most cases. The take-up rate of visitors participating in guided walks varied from Country Park to Country Park from little interest to oversubscribing in others. The subject and how it is presented is critical and it was argued not to be related to the type of local audience (in other words, social class and economic background). The educative value of Country Parks was stressed particularly in developing the interest, knowledge and awareness of urban children toward responsibilities for the countryside.

Formal management plans and aims for each Country Park were considered vital by most workshop participants. Such plans should reflect what local interests actually wanted. The enthusiasm of a Ranger at the time may ensure a sensitive wildlife/recreation strategy. It was considered important that local government is formally persuaded to support long term management plans and thereby guarantee appropriate funding.

Chaired by Roger Clarke, Countryside Commission

Report back by Martin Nugent, Nature Conservancy Council

FOREST RECREATION - ORIENTEERING IN WOODLANDS AND FORESTS

Richard Broadhurst

Recreation Officer, Forestry Commission

INTRODUCTION

Orienteering is used here as an example to explore the issues relating to recreation in woodland or forest, whether publicly or privately owned, in remote uplands, close to or within our towns and cities. In the discussion, delegates may wish to share their views and experiences on the many other forms of recreation in the forest.

The forest environment is well suited to a wide range of recreational activities: from walking to rallying, cross-country skiing to barbecueing and, for that matter, orienteering to watching wildlife. The special screening and enclosure qualities of the forest which are attractive to recreationists enable large numbers of visitors pursuing different recreational activities to be more easily absorbed. Recent surveys suggest that on a summer Sunday there may be anything up to five million visitors in woodlands and forests.

The sport of orienteering is often defined as 'competitive navigation on foot' and is usually carried out within forests or woodlands. With the aid of a map and compass, competitors find their way as accurately and quickly as they can between control points on the ground using their skills to choose the best route. The sport is governed by the British Orienteering Federation, a federation of the Regional Orienteering Associations which themselves consist of clubs. Imported from Scandinavia in the early 1960s, the sport continues to grow steadily and now comprises a family of activities, including: wayfaring, essentially a non-competitive version for family use in the forest; leisure orienteering, a more recent development principally in towns and cities; competitive orienteering, including such specialities as ski-orienteering. The name of the sport and the difficulty which non-participants have in conceptualising just what is involved has perhaps been a major obstacle to growth.

With the development of leisure orienteering the sport is becoming much more accessible and is no longer quite so restricted to car owners. There can be few sports with such a wide age range taking part, from say five year olds on 'string' courses to people of 65 plus - there is one competitor of over 80.

Being a map-based sport, a long lead time is required to prepare the detailed maps. Events are planned well in advance, to obtain all the necessary agreements before the costly process of mapping begins. Unfamiliarity with the terrain is a basic requirement. Normal practice is therefore to use a site for a major event only once in a five to ten year period, after which lesser events may be staged, followed by a fallow period.

Woodlands and forests are chosen for preference but moorland, open hill, city parks and spaces are also used. The crucial requirement for competition is for plenty of detailed contouring with a variety of vegetation and tree cover. This means that control points can be secreted, and that the possible speed is varied, so adding to the interest.

Orienteering has the following benefits:

(a) social benefits – as with all forms of countryside recreation;

(b) economic benefits – particularly in respect of the encouragment of tourism in remote areas, for example 3,000 plus entrants in the six day event, as well as family, friends and spectators.

The main impacts of orienteering are:

(a) social – on other forms of recreation including wildlife watching;

(b) physical/economic – directly by trampling of vegetation and soil, and disturbance of wildlife or indirectly by the creation of paths.

Sweden's equivalent to the Nature Conservancy Council sponsored studies in the 1970s which in part investigated the impact of orienteering on wildlife. Lars Kardell studied three areas before, after and one year later following events which attracted 2,900, 9,300 and 1,300 participants. The studies recommended that upper limits for numbers using control points in certain habitats might be deployed. The problem was, however, considered minor and only in exceptional circumstances was action advised. Bo Sennstam considered the effects on wildlife, carrying out a before and after study in four areas. Large mammals such as moose and roe deer were disturbed. The moose returned after a day or two, and roe were less disturbed. The effects on breeding of some species of birds was acknowledged to be serious. The Swedish Orienteering Federation has produced guidelines particularly concerned with the reduction of disturbance to mammals.

Within the UK no major surveys have been published or apparently carried out. However, in 1982 a survey was made by a Nature Conservancy Council Officer in Galloway a year after the Jan Kjellstrom event. The report recommended that negotiations should begin early to provide a focus on non-Sites of Special Scientific Interest where possible, that zoning could be used in space and time (the latter to avoid nesting periods), that it be accepted that Sites of Special Scientific Interest offer some of the best orienteering conditions and that large events may be compatible with conservation interests on some sites. It is understood that surveys or site visits carried out in 1987 at Budby, Loch Ard and Cawdor have tended to support for the most part the notion that there is no significant problem although in the case of Cawdor another survey has yet to be completed. From the limited research readings obtained it would appear that either this subject area is ripe for research in the UK or else that the problem may not be so pressing.

What are the solutions? Difficulties have to be resolved through recreation planning at different levels and scales of operation. The British Orienteering Federation working with the Regional Orienteering Associations and the Sports Councils have produced a development plan

which is being implemented through a series of regional strategies. The Forestry Commission has in its recreation (and conservation) planning identified the constraints and opportunities and recognises the growing demand. As the sport has demonstrated, not all the demand need be focused on the forest or indeed the countryside. Zoning - the distribution of activity through space and time - is an essential tool. The choice of course and location of control points represents the fine tuning, to determine the routes taken thereby further minimising impacts.

Looking to the future, better planning will require better information. Research to underpin the concern over impact may be required if either the wildlife or the recreational activity is perceived to be at risk. Who might sponsor such research? Would it be for the Forestry Commission/Nature Conservancy Council/Sports Council/Game Conservancy/Royal Society for the Protection of Birds/Royal Society for Nature Conservation and so on? Better guidelines might be agreed between Forestry Commission/Nature Conservancy Council/Sports Council/British Orienteering Federation et al to aid decisions on planning for orienteering and its related activities. Ultimately better understanding is required too. The orienteers wish to safeguard conservation interests. It may also be to the advantage of conservationists to seek to safeguard recreation interests and thereby widen the scope for the advancement of the theme of 'working in partnership' and the wise use of resources. Given goodwill by all interests, a reasonable balance between recreation and wildlife should be attained.

SUMMARY OF DISCUSSION

It seems that there need to be three main considerations in the planning of orienteering to safeguard conservation interests - the scale of the activity, frequency of use, and season. Zoning - the distribution of activity in space and time - is essential in reducing any possible harmful impact.

Because of the very nature of orienteering, participants are dispersed for most of the time. Therefore, it is thought that trampling is a minor problem compared to informal use by walkers. However, the start and finish sites and control points will be most heavily used and so particular consideration should be given to the choice of location. For example, control points should be placed away from areas which are particularly valuable in terms of conservation interest. Sensitive areas can generally be avoided by roping off specific areas or marking them as 'no go' areas. The extensive mapping process which takes place before an area is used for orienteering, should identify sensitive patches which can then be avoided.

It was suggested that general use of a forest area can be more detrimental than if a wayfaring course is provided which disperses people. One main area for concern was that once paths are created by orienteers, those paths may become a more permanent feature as they are adopted by walkers. However, as there is no single route within a mapped area, the number of temporary paths created by orienteering will be minimal.

Some instances where orienteering had been damaging to the environment were identified. In one case damage was caused by the large number of parked cars, whilst in another a particular area was being overused. However, it appeared that these problems could be solved by further negotiation between those concerned.

The point was raised as to how private foresters reacted to orienteering needs. Approximately one third of orienteering events are on Forestry Commission land with the remainder on private land. It seems that opposition to orienteering is minimal once clarification and negotiation takes place.

The concept of combining orienteering with other interests was discussed. Some wayfaring courses provide a description of the area and so become an educational tool as well as a guide. It is thought that wayfaring helps people to gain confidence to explore woodland and encourages them to become more interested in, and observant of, their surroundings. The use of orienteering courses by people with disabilities was discussed. Every effort is made to ensure that facilities and access are available for those with disabilities.

It was generally agreed that further research into the possible effects of orienteering on the flora and fauna would be useful and that monitoring of, for example, wayfaring courses would be useful.

Chaired by Alan Inder, Hampshire County Council

Report back by Sarah Blackledge, British Waterways Board

GOLF COURSES – MAXIMISING ECOLOGICAL INTEREST

Mike Schofield

Assistant Director (North and East) England, Nature Conservancy Council

INTRODUCTION

Some form of golf was played as long ago as the 14th century in Britain and probably started in the coastal dune systems which were common around the Scottish coast. These provided a variety of maritime habitats and were often adjacent to common land which was rough grassland or heathland and used primarily for grazing.

In England golf was known to have been played by James I in the early part of the 17th century in the Blackheath area of London. By the middle of the 19th century the game was being played throughout the country but it was still not very popular. Away from the coast golf was concentrated on heaths and commons which did not receive much in the way of intensive management. Towards the end of the 19th century specific golf courses were created out of parkland, low quality farmland or heathlands; they often attempted to copy the features characteristic of the coast with their sandy bunkers and introduced plants.

There are approximately 2,100 golf courses in Britain of which over 200 are publicly owned, with the majority in private ownership. There is a third category of more commercially-managed courses which are increasing, often in association with other sporting facilities linked to the clubhouse. It has been estimated that in all, golf courses occupy about 100,000 hectares of land. The proportion of the intensively treated part of the golf course (the greens, tees and fairways) compared with the semi-rough or rough is approximately two to one. There is thus a great deal of wildlife potential within the golf courses of this country. This can be compared to 160,000 hectares of land managed as National Nature Reserves in Britain.

As more and more land is taken and developed for industry, motorways, residential areas and (in the past?) for intensive agriculture there is an ever increasing threat to those habitats which encroach on native wildlife.

Historically, on golf courses which were derived from the semi-natural plant and animal communities, the fertility of the soil was generally low and the only irrigation was from rainfall. Generally the land had been cleared of trees although it may have been forest in its earlier history. The management since early clearances was usually by grazing and burning alone. Such a low intensity of management provided conditions conducive to the establishment of habitats where often the rare or unusual species were to be found. However, the traditional forms of horticultural training of greenkeepers gave rise to a more intensive form of management for these areas and this has been to the detriment of the wildlife present. There are gradual changes of approach taking place to course management. These are partly due to the increasing costs of fertilisers, herbicides, cutting regimes and laying on of water supplies and partly to articles in the influential golf magazines advocating a

golfers and to the general public. For golf courses in private ownership it was considered that the Club Secretary should be the first point of contact.

As a longer-term objective it was suggested that by influencing golf course architects, new courses could be designed to maximise wildlife benefit. This may be particularly pertinent if, as expected, urban fringe land opting out of agricultural production is converted in some instances into new courses.

Concern was expressed as to whether it would be possible to include wildlife objectives in future maintenance regimes for publicly-owned courses. Where maintenance of a course is put out for commercial tendering, much will depend on whether ecological factors are included within the contractor's brief. While county councils often employ an ecologist or equivalent, the local authorities responsible for golf course management (district councils) rarely have these skills. Wildlife factors are therefore likely to be ignored. Even where such factors are included, contractors may not have the skills to comply with the requirements of the brief. It is also extremely difficult to include ecological considerations within any worker's bonus system.

These latter points apart, the general feeling of participants in both sessions was that much could be done to influence golf course managers to take greater account of the wildlife interest in the rough and semi-rough of their courses. On the evidence of the presentation an impressive start had already been made to this task.

Chaired by Jeremy Worth, Countryside Commission

Report back by Iain Rennick, Countryside Commission for Scotland

lower input system and a return to the more traditional links-type of course. This change is in parallel with an increasing awareness by many greenkeepers and golf clubs that the enjoyment which people derive from golf is in part due to the setting in which it is played. Course managers are now beginning to recognise the wildlife value of the semi-roughs and roughs and are taking steps to encourage this particular feature.

The Wildlife and Countryside Act legislation enables the more important wildlife sites to be protected by law. These are the Sites of Special Scientific Interest and it is interesting to note that they include many of the internationally famous golf courses such as the Royal St. Georges in Kent, Lindrick near Sheffield, Woodhall Spa in Lincolnshire and Royal Birkdale in Lancashire. The Nature Conservancy Council, the government body charged, among other responsibilities, with administering the Sites of Special Scientific Interest system, proposes to undertake a survey to determine the extent of the overlap between Sites of Special Scientific Interest and golf courses, the habitats which are present and the form of management which they are receiving. It is believed that this information could form the basis for provision of advice over aspects of golf course management which affect the wildlife.

However, the Site of Special Scientific Interest system only safeguards the more important areas and it is considered highly desirable to ensure that proper management for wildlife on golf courses throughout the country is fully taken into account by the course managers. With the increase in courses being established on land that was formerly of little or no wildlife interest, such as arable areas and former mineral workings, there are real opportunities to create suitable habitats for wildlife. These can include the use of native plant seed mixes, use of indigenous species in tree planting schemes and the creation of lakes and marshy areas.

The ways of influencing opinion which are being considered to ensure that wildlife is encouraged include writing of leaflets, publication of articles in the press, technical manuals giving advice on habitat management, talks to associations of the greenkeepers and other golf course managers, attendance at professional conferences, and involvement in training courses for those charged with the responsibility for managing golf courses generally.

SUMMARY OF DISCUSSION

There was general agreement among those attending this case study that golf courses were of ecological importance, and that their role as recreational spaces in, or close to, urban areas had been underestimated. Courses often provide a landscape setting for towns and cities, and act as a barrier to development - as 'green lungs' within the urban environment.

While the prime management objective on golf courses will, of course, always be to provide maximum enjoyment and challenge to the golfers, more could be done to influence those involved to undertake wildlife management consistent with this objective. At local level, conservation organisations should try to get the message across to local authority staff within leisure and recreation departments (for publicly owned courses), to green committees, to greenkeepers, to individual

MARINE NATURE RESERVES

Roger Mitchell

Head of Marine Science Branch, Nature Conservancy Council

INTRODUCTION

The Wildlife and Countryside Act of 1981 made it possible for the first time to establish statutory Marine Nature Reserves over areas covered by tidal waters out to British territorial limits. The Nature Conservancy Council has responsibility for the management of Marine Nature Reserves. Before designation can take place, the Nature Conservancy Council is required to undertake detailed consultations with a wide range of interested bodies and individuals at both local and national levels who may be affected by the establishment of a Marine Nature Reserve. Following the consultations the Nature Conservancy Council formally submits its proposal to the Secretary of State for approval.

The first Marine Nature Reserve has now been established around Lundy Island, with proposed sites including Isles of Scilly, Skomer, the Menai Strait, Bardsey and part of the Lleyn peninsula, Loch Sween, and St. Abb's Head.

When the Nature Conservancy Council makes an application to the Secretary of State for Marine Nature Reserve designation, it is accompanied by proposed byelaws. These might, for example, restrict or prohibit entry, or the killing, taking or disturbing of animals or plants. The application of these byelaws clearly requires considerable negotiation with a variety of groups, for example, commercial fishermen. The Nature Conservancy Council is responsible for the management of a Marine Nature Reserve, but may delegate this power, as has happened in the case of Lundy Island, where the Landmark Trust has management responsibility. For ease of management, a few large sites are preferred to numerous small ones.

The selection of sites for designation involves three phases. The first two phases cover a survey of existing information, an assessment of what knowledge is missing (including field surveys and recordings), comparison of like-sites and preparation of an inventory of significant sites. The third phase identifies potential categories for sites, for example, Sites of Special Scientific Interest, Marine Nature Reserves, and establishes very detailed site boundaries. A management plan would be drawn up at this stage. The criteria for the selection of Marine Nature Reserves have been adopted and adapted from terrestrial site criteria. There were two groups – ecological/scientific and practical/pragmatic.

Examples of activities that might potentially cause damage, particularly in more sensitive habitats, included the exploitation of both living and non-living resources and many recreational activities, for example, sailing, fishing and diving. Although something as innocent as 'rock-pooling' by children could cause damage, this was nothing compared to the large scale impact of commercial activities such as

trawling. In some instances, recreation could be a positive asset to conservation, for example through the information provided by recreational divers.

To contain damage from recreational activity, and to educate the public on why it was necessary, people should be directed towards benign activities such as snorkelling and viewing from glass-bottomed boats in the clear waters of the West. Viewing walkways could be constructed in salt-marshes and shallows. Lagoons were a neglected marine habitat which had potential for greater recreational and conservation use.

Innovative management options for Marine Nature Reserves were well demonstrated in the USA and Australia. Conditions were different from those here in that their marine parks had formal responsibility for recreation as well as conservation. Marine parks were usually zoned with permitted activities appropriate to each zone ranging from general use to a totally preserved zone. A similar system was to be adopted in the UK.

SUMMARY OF DISCUSSION

The delegates attending this case study included ten representatives of county councils, two of district councils, five from government departments and agencies, two from voluntary bodies, and one from the BBC. The local government officers were involved with the proposed Marine Nature Reserve at Loch Sween, the voluntary Marine Nature Reserve at Kimmeridge, a potential Marine Nature Reserve at Ramsar Convention Site in Essex, and a potential Marine Nature Reserve site on the north Yorkshire coast. The point was made that 'pollution' could produce long-term beneficial results for marine conservation, for example, oil rigs had become sea reefs rich in fish. The intensity of marine life on and around old wrecks made them ideal for recreational diving.

On the question of management responsibility it was agreed that this might be delegated to county councils or community trusts. The representative associations for recreational interests were always consulted and they should also be included on management committees. On consultation, the point was made that locals can be difficult to identify and some have no group allegiance.

The described management options were welcomed but an appeal was made for more education in what Marine Nature Reserves were about. In particular it was felt that there was a popular misconception that a Marine Nature Reserve designation automatically meant a total 'no go' area for recreation. Fear was expressed that the designation and management of certain areas as Marine Nature Reserves might lead to a fall in the quality of marine life outside those areas. Roger Mitchell said that this was being monitored. It was suggested that the approach should also encompass the general conservation of marine areas, as well as being site specific.

Chaired by Michael Collins, Sports Council

Report back by Ros Ashman, Department of the Environment

POSITIVE APPROACHES TO MANAGEMENT OF THE UPLANDS

Neil Bayfield

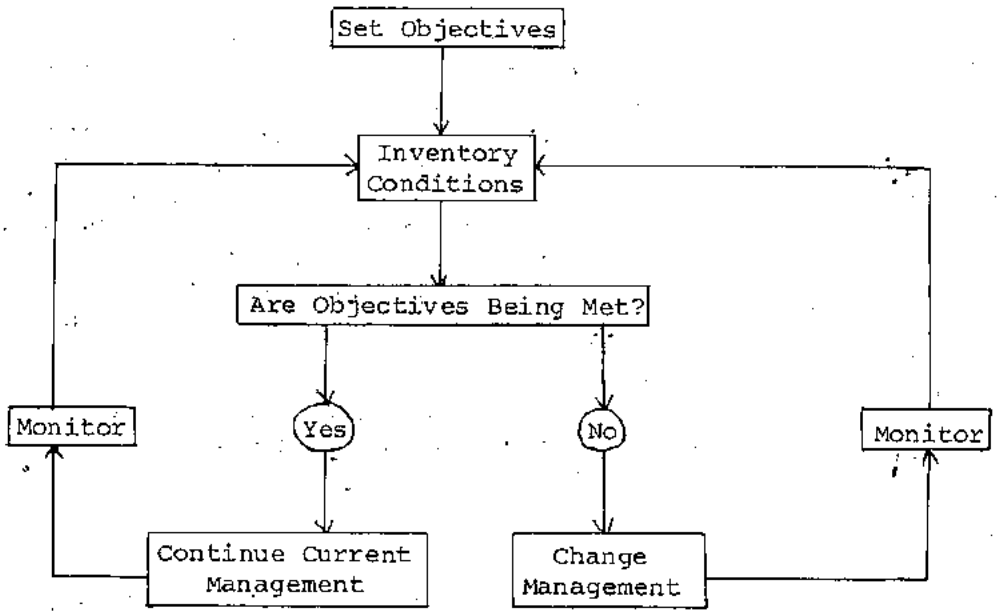
Institute of Terrestrial Ecology

INTRODUCTION

Most upland recreation areas are also used for other purposes, and conflicts of interest are common. To manage them effectively it is necessary to reconcile these conflicts whenever possible, to have clearly defined objectives, and a management information system that both identifies problems, and evaluates the effectiveness of management actions. Such management systems are poorly developed in this country, but evolving rapidly.

FIGURE 1

A SIMPLE PLANNING FRAMEWORK



DN Cole

Why do we need new approaches to management? The last decade has seen a dramatic increase in the impact of recreation on the countryside and the emergence of significant conflicts between recreation and other land uses, particularly nature conservation. This presentation illustrates how a more positive approach can work, with two ongoing examples.

The first is the Three Peaks project, a moorland footpath management exercise being undertaken by the Yorkshire Dales National Park. Here the problem is the serious deterioration of the Ingleborough/ Whernside/Pen-y-Ghent footpath network. The objectives are to devise and implement techniques for reinstating path surfaces, and damaged native vegetation. The project has involved a detailed inventory of path conditions, and trials of engineering and revegetation techniques. The management information system involves evaluation of the various trials, continuing monitoring of path condition, and surveys of user numbers and attitudes. The project team, led by a Project Officer, includes a Manpower Services Commission team, an Interpretive Officer and specialist ecological advice from the Institute of Terrestrial Ecology. There is broad consultation through the Three Peaks Working Group, which represents other interested statutory and voluntary bodies and individuals.

The second example is a proposed mountain ski-development on Aonach Mor, near Fort William. It illustrates the implementation of a management information system, from conception of the project to its development on the ground. The objective of development is to provide downhill skiing facilities without causing unacceptable damage to other interests. The other interests are forestry (on the lower ground), water extraction (for aluminium smelting), and nature conservation (the top of the hill is a Site of Special Scientific Interest).

Consideration of possible impacts has played a major role in the design and siting of the development. An Environmental Impact Assessment compared a number of possible sitings to select a preferred location, and made recommendations for design and management actions to minimise possible impacts. An important feature, included as a planning condition, is the implementation of a monitoring scheme. This involves a working group of interested parties agreeing objectives and methods and setting Limits of Acceptable Change for key parameters that will act as triggers to management action. Thus management responses can result from previously agreed objectives and standards instead of being retrospective reactions to change.

Broad consultation, clear objectives and effective management information systems can make a major contribution to positive management of upland areas for recreation.

SUMMARY OF DISCUSSION

Considerable interest was expressed in the methodology adopted to evaluate the effectiveness of the management systems used in both the Three Peaks and Aonach Mor projects. It is use of this methodology in combination with the range of restoration techniques that makes the Three Peaks project significantly different from other similar projects.

Three Peaks Moorland Footpath Management Project, Yorkshire Dales National Park

The value of commencing monitoring of wildlife habitats, especially for birds, well in advance of any development, was stressed; this would enable trends of ecological change, based on objective data, to be properly assessed by the client.

It was felt important to include bird species as a key parameter for setting Limits of Acceptable Change. However, it was acknowledged that additional resources would be required for any extension of present levels of ecological monitoring.

Neil Bayfield emphasised the successful rate of establishment of native grasses and other flora obtained locally by using novel techniques, such as mulching treatment areas with adjoining field litter, which contain high quantities of native seeds. Native species were specified by the Nature Conservancy Council and, in any event, there was no advantage to be gained in using agricultural grasses.

Concern was expressed over landscape impact issues, for example the visual effects of footpath erosion, location of footpaths on sensitive areas both visually and ecologically, as well as alignments, which did not reflect landform. Formal diversions of some Rights of Way footpaths to avoid the most sensitive areas were desirable, but the process is both time consuming and costly; the suggestion of using alternative routes was not favoured by Neil Bayfield as it could spread erosion over a wider area.

The number of users were counted by automatic counters and their views on the varying methods of path reinstatement will be assessed by questionnaires; motor cyclists were making more impact on bridleways than footpaths, where the effect was minimal.

Neil Bayfield stressed the extent of consultation about the project with interested parties and felt that the consultees represented a reasonable cross-section of society. It was agreed that the results of this work should be disseminated as widely as possible.

Mountain Ski Development on Aonach Mor, near Fort William

The Environmental Impact Assessment for this project, which is based on the Countryside Commission for Scotland's guidelines for ski development, includes a visual and ecological statement about the area prior to any development.

A number of development options were generated during the Environmental Impact Assessment; consultation was extensive and was instrumental in enabling useful discussions to be held about the issues presented and in identifying others, for example litter, fire risk to forests, visitor safety.

Although planning permission is based on the Countryside Commission for Scotland's ski development guidelines, it appears that these are not a compulsory requirement for consent. Participants expressed disappointment about this, suggesting that it could mean that adequate standards would be difficult to enforce. As the degree of change on the mountain is likely to be extensive a key question for participants was whether the area should be developed at all.

Chaired by Jan Fladmark, Countryside Commission for Scotland

Report back by Duncan Campbell, Forestry Commission

WATER-BASED RECREATION – THE IMPACT ON WATERBIRDS OF RECREATION ON LOWLAND WETLANDS

Myrfyn Owen

Research Director, Wildfowl Trust

INTRODUCTION

Britain is a very important wintering area for wildfowl, being at the end of the migration route of most species. It holds, at peak, more than a third of the north-west European population of seven species and the whole of several goose populations in winter. We therefore have an international responsibility to conserve these birds and their habitats. Many birds winter on the coast, but about half, on average, are inland and 40% on enclosed waters (lakes, reservoirs and gravel pits).

The aim of the work carried out between 1979 and 1982 was to undertake an extensive review using available data and by organising special surveys.

Winter Inventory and Wildfowl Counts

This was an extensive survey of enclosed inland waters in England and Wales. An inventory was made of 1,455 sites and as much morphological, limnological and recreation data as possible was recorded about them. Of these, 639 had wildfowl counts from the last ten years and these were generally the low altitude, more productive alkaline waters, also having a higher incidence of recreation than those without counts.

A multiple regression analysis was run using the geographical, morphological and limnological variables, and this was used, together with the wildfowl counts, to provide an expected number of wildfowl at individual sites. The actual numbers of birds on sites where different recreational activities took place were compared with expected numbers to provide an index of recreational impact.

The Field Study in South Wales

This study was carried out during the winter of 1980/81 on Llangorse Lake, a site with intensive and uncontrolled recreation, and on Talybont Reservoir, with negligible activity, both in the Brecon Beacons National Park.

Llangorse is a shallow eutrophic 153 hectare lake with marginal reedbeds and marshy areas around the perimeter, whereas Talybont is smaller (131 hectares), much deeper, at higher altitude and has less suitable wildfowl habitat around the margins. All these differences would suggest that Talybont should support many fewer wintering wildfowl than Llangorse. The opposite was in fact the case, both in 1980/81 and over the previous ten years, with Talybont holding higher numbers of all species except those for which there was very little suitable habitat on the reservoir. This suggests that some other factor is reducing the number of birds able to use Llangorse as a wintering area.

Both sites were divided into zones and two recording methods were used:

(a) twice weekly bird counts in each zone;
(b) at Llangorse, all-day watches.

Twice weekly counts were carried out from September to March and all-day watches were kept on 63 days, spread evenly through the seasons and approximately equally between week days and weekends.

Both wildfowl and recreation showed a pronounced and opposite seasonal pattern, with ducks increasing in mid-winter, whereas recreational intensity declined rapidly after September and October and rose again in March. There was a pronounced pattern of recreation through the day, with activity increasing through the morning and staying at a high level through the afternoon.

The pattern of recreation over the lake was very dispersed, with participants spread out over the whole lake area rather than clumped together. This was the expected dispersal, but was the worst pattern as far as waterfowl were concerned, since it tended to leave smaller undisturbed areas for roosting or feeding birds.

If recreational intensity were limiting the use of Llangorse by waterfowl, then the effect would be greatest in autumn when recreation was highest. This indeed was the case, with five out of eight species showing delayed arrival at Llangorse as opposed to Talybont. The amount of fluctuation in numbers from day to day was higher at Llangorse, suggesting a higher level of disturbance.

Comparison of diurnal patterns of bird numbers showed that, when there was no or very low levels of recreation, numbers of birds remained stable or increased slightly towards mid-day. At high recreation levels the number of birds in the afternoon, when recreation intensity was highest, was only 70% of that in the morning.

The use of zones by birds under 11 recreational intensity levels was compared by testing for significant differences between intensity classes. Differences between the intensity classes were found to be highly significant in statistical terms. This did not necessarily show a damaging effect, only that the birds were caused to move zones by recreation.

The use of the preferred zone (that used by each species when there was no recreation) was examined for the 11 intensity classes. There was a significant effect on seven of the eight and for four species high levels of recreation kept them out of their preferred zones altogether.

Deleterious effects of recreation were demonstrated both temporally and spatially at Llangorse. Bearing in mind that only those species which did tolerate the current levels of recreation could be investigated, it is very likely that the numbers of waterfowl using Llangorse as a wintering area is markedly limited by recreation. Nearly four fifths of the birds were found on two zones, comprising between a quarter and a third of the lake area. It was suggested that exclusion of recreation from these zones from mid-October to March, the most important waterfowl season and when recreational intensity is low, would accommodate the birds without having a marked effect on the quality of recreation.

The following general conclusions can be made on the basis of this study:

(a) where recreation is uncontrolled and at high intensity, it can have a serious impact on wildfowl numbers at individual sites;

(b) nationally the picture is much more optimistic, with wildfowl numbers increasing and with little overall impact of recreation;

(c) this situation is due to a number of factors which tend to mitigate the potentially damaging effects:
  (i) the available habitat inland has markedly increased over the last two decades;
  (ii) there were no severe winters between 1962/63 and 1981/82;
  (iii) many organisations have taken the needs of the waterfowl into account by zoning of activities on the larger sites;

(d) the potential conflict is not only between recreation and conservation, but also between different forms of recreation. Bird watching is an active form of recreation and this survey showed that it was the most common single activity on enclosed inland waters in Britain.

SUMMARY OF DISCUSSION

Discussion centred upon three principal topics: practical solutions to managing recreation to accommodate wildlife interests; topics for further research; and the philosophy of charging for wildlife observation.

Practical Solutions to Wetland Management

A range of techniques for managing wetland sites in order to protect the waterbird interest was described and discussed. Central to all problems was the continuing and increasing demand for water-based recreation, particularly in the winter with growing use of wetsuits and deregulation of controls over fishing. Practical solutions which are used with varying degrees of success include different types of zoning:

(a) temporal, including total winter bans on water-based sports, and bans on regattas and so on at critical times;

(b) spatial, either by zoning by user group, or use of 'no-go' areas or reserves.

Generally reserve areas were thought to be most successful - on Rutland Water 75% of the wildfowl are usually located on 4% of the water area. However, zoning of any water activities is dependent on adequate control, and the education of water-users in the needs of wildlife. The most effective mechanism for achieving better control and education was by means of liaison groups, a forum in which all interests could discuss their requirements and produce management plans. Future problems were anticipated with the privatisation of the water industries, and the increasing demands of recreation on wildlife.

Research

It was clear from the discussion on wetland management that insufficient was still known about the exact relationship between wildfowl and recreation. Topics requiring further research include:

(a) better data on wildfowl behaviour including feeding habits;

(b) better data on the precise impact of recreation on wildfowl, including maximum tolerance levels for each activity, and the extent to which some wildfowl are actually prevented from overwintering in the UK because of high levels of recreation;

(c) linking national trends in wildfowl populations with non-recreation factors.

The Philosophy of Charging for Wildlife Observation

A range of views was expressed on this topic. At one end of the spectrum there were those who believed that charging for wildlife observation had the dual benefit of ensuring that revenue was available to spend on protection and enhancement of habitats, while teaching the public about the value of wildlife and the cost of protecting it. In this context it was shown that bird watching on Rutland Water generated an income of £30,000 per annum. However, others felt that in principle it was wrong that the public should be charged to observe wildlife, and that charging had the effect of introducing an artificial distinction between the public and wildlife as well as undermining the pure value of wildlife. It was generally accepted that wildlife protection would never be financially self-supporting and this raised the question of how its subsidisation should be financed. It was agreed that bird watching was a valid and very popular form of recreation and that this should be considered, as well as the conservation value of wildlife, when planning the creation and management of water areas.

Chaired by Leo Batten, Nature Conservancy Council

Report back by Lindsay Cornish, Ministry of Agriculture, Fisheries and Food

THE INTERDEPENDENCE

INTRODUCTION

Brian O'Connor

Director England, Nature Conservancy Council

I am Brian O'Connor, Director for England in the Nature Conservancy Council. My role this morning is to introduce and Chair the final session of this Conference.

This session is about interdependence between wildlife and recreational activity. We have three speakers and I propose to modify the timetable to allow for a discussion period following the first two of these talks.

The first talk will be on 'Wildlife as a Visitor Attraction'. Ian Prestt, the Director of the Royal Society for the Protection of Birds, was to have given this talk. Unfortunately, he is unable to be with us and sends his sincere apologies. However, much of the material he was going to use was produced by Martin Davies, the Royal Society for the Protection of Birds' Regional Officer in Lincoln, and so we shall have the benefit of his first hand experience. He will describe to us the Royal Society for the Protection of Birds' work on presenting wildlife to the public.

Our second speaker, David Goode, will talk about 'Creative Conservation for Public Enjoyment'. He was the Nature Conservancy Council's Assistant Chief Scientist for several years and, in the early 1980s, moved to the Greater London Council where he was the founding father of the Greater London Ecology Unit. Happily, despite the disappearance of the Greater London Council, the Greater London Ecology Unit survives under David's guidance where he is still very much in charge and continues to influence ecological development within a very important area of the country. London, of course, has a great concentration of people, and perhaps more than in any other part of the country it is where the opportunities for creative conservation lie. David Goode's talk about 'Creative Conservation for Public Enjoyment' will complement Martin Davies' talk about the use of existing wildlife assets.

Our final speaker at this Conference is Anthony Smith. He is going to synthesise and bring together some thoughts from the discussions over the last couple of days. He is well suited to do so as a freelance writer and broadcaster with a good many books to his credit. He has been broadcasting for some 30 years and for the last ten years has had his own regular radio series called 'A Sideways Look'. Therefore, we have a writer, journalist, and broadcaster in one - clearly a person well suited to offer some reflections on the proceedings of the past few days.

WILDLIFE AS A VISITOR ATTRACTION

Martin Davies

East Midlands Regional Officer,
Royal Society for the Protection of Birds

I would echo what Brian O'Connor has said in conveying Ian Prestt's apologies to you. He very much wishes that he could have been here this morning. What I have come to say to you today is partly what Ian would have said combined with a few elements of my own.

'Wildlife', in terms of the British tourist industry, is clearly nothing to do with the wild, if the British Tourist Authority is anything to go by when it lists as the top ten 'wildlife attractions' nine zoos and one centre for breeding shire horses. Conservationists have to act now if wildlife is not to become associated in the public mind with captive animal collections. While zoos may have a legitimate part to play in the captive breeding of endangered species, their role in conservation would be minimal if the species' habitat were not conserved. Personally I feel that much the same argument can be applied to collections of pinioned wildfowl.

As far as the recreational side of wildlife is concerned, I would put it to you that we have a long way to go, in Britain particularly, in making the most of our wildlife as a recreational and tourist resource. However, this is not just a luxury; it is essential. If we are going to carry the people with us, if we are going to get financial support for conservation, then it must be something that is popular with the people. If we are to succeed there must be people who care about Britain's wildlife, who must also be prepared to put their hands in their pockets for cash, or who are prepared to vote in the government that will do something similar.

It is, therefore, a duty for conservationists to show the people the wildlife and the places where it lives. You can marvel at the beauty of a shelduck's plumage in a wildfowl collection, but it is in the field that you experience the real excitement of families of shelducks and their young against a British estuary. The views you get of the birds themselves might not be so good as in a zoo, but you do have atmosphere.

I will never forget the first time I saw a wild parrot. It was sitting on a branch and actually looked round the branch at me as if it was as curious about me as I was about it. That was a real thrill that I have never felt while standing in a pet shop looking at a parrot in a cage. You cannot compare the two things.

It is not only birdwatchers who take pleasure in the sight of birds - ask any yachtsman sailing out of Chichester Harbour if they have noticed the shelducks or the herons fishing at the water's edge and the answer will almost certainly be "yes". Every angler I meet who learns that I am a birdwatcher will tell me of the time he saw a kingfisher at point blank range. People who use the countryside for recreation generally want to enjoy and know about the wildlife that they

see, and much of the conservation ethic in this country is based on the concept that people are more likely to take a positive view of wildlife if they know something about it.

In the discussion yesterday, I tried to draw attention to the false distinction between conservationists and those involved in recreation. Birdwatching is itself a recreation; I occasionally go windsurfing; I have been fishing at various times and quite a lot of fishermen enjoy watching birds, and so on. There are not two camps. We are all people, and we have to try and find some way to accommodate all the different uses of the countryside.

It is easy to assume that we in Britain do not have any major wildlife attractions, that the spectacular in wildlife is found in the Serengeti, the Everglades, Bharatpur or the Camargue. But that would be wrong. Britain and Ireland have seabird colonies that are unrivalled in Europe. Cliffs with noisy, active communities of puffins, razorbills, kittiwakes, guillemots and gannets, have huge visitor potential.

Consider the thrill of a child seeing a pelican for the first time. Pelicans are rather unbelievable and exciting creatures. All right, we do not have any pelicans in Britain but we do have other wonderful species. You might ask what is so exciting about robins? Well, the Royal Society for the Protection of Birds believes in robins. British people like robins, and robins have brought the Royal Society for the Protection of Birds a lot of money over the years and so we have a vested interest in them. People sometimes tell us that we do not do anything for robins, but we do not need to. Garden birds are doing all right.

We use the money we raise to conserve species that are perhaps not part of everyone's everyday experience because they are scarce. However, as I have mentioned, we do have some wonderful wildlife spectacles in Britain and we still grossly underestimate them. Our seabird colonies, such as the one at Bempton Cliffs, are absolutely marvellous. It would be facile to say that they do not have too many of these in Switzerland, but they do not have too many of them anywhere else in Europe. The vast majority of all seabirds which nest in Europe do so in this country. In fact, we have two-thirds of the world's population of all razorbills nesting in Britain and we do not 'sell' that as a resource which people would want to come and see.

Puffins are an absolute winner with the public. They sell themselves. You take people to see a puffin and you have cracked it! A huge gannet colony, such as the one at Grassholm, off the Pembrokeshire coast, is a marvellous spectacle and just as good as a flock of flamingoes. However, how many brochures have you seen advertising the wonders of Britain's seabirds? I was in a hotel in East Anglia the other day which had supplied an East Anglia Tourist Board booklet collecting together all the brochures for attractions to visit in the area. It was quite a thick booklet but it did not feature a single nature reserve - and this was right up on the north Norfolk coast which is littered with nature reserves. Why? Thousands of people go to Norfolk to see the wildlife and many more would, if only we told them about it.

I suppose the Royal Society for the Protection of Birds has a reputation for being up front and telling people things and attracting large numbers of people to some of their sites. Not all nature conservationists are very happy with that kind of concept. Minsmere is a fantastic visitor attraction (although the car park leaves a lot to be desired). The site features reedbeds, woods and heathland. Many people visit the centre and enjoy it. We see it as a vital part of the management of the properties that we own. We do not only manage them for the wildlife, but we 'manage' the visitors. We try to do it in such a way that we ensure people can enjoy the wildlife whilst not destroying the very thing they have come to see. By managing the site, and by making sure you fit all the things together, we believe it can be done. At the moment we are only 'scratching the surface' at most of our properties. We still believe there is an enormous potential for this.

As an educational resource, wildlife is a winner for organisations such as the Young Ornithologists' Club and particularly on their field trips to reserves. The success of the 'Watch' movement and the Young Ornithologists' Club speaks volumes. It obviously works.

One of the things that we have been trying to do over the years is gradually to improve the way in which we get the message over to the visitor and give them a better experience. I would be the first to admit that we have a long way to go. For too long we have relied on leaflets and displays. However, in the last few years we have begun to appoint information officers on our properties. It struck us that the way in which interpretation seems to work best is on a personal basis - the one to one or one to sixteen ratio. People have a 'real' person to whom they can talk, address questions and share the experience of seeing their first puffin. This seems to work extremely well.

We put something similar to a beach hut as an information centre on the beach at Minsmere and this has proved very successful in introducing the public, who have actually just come to lie on the beach and sunbathe, to this wonderful bird reserve which is just behind them. Well, whether you can call it a beach hut on top of a 400 ft high chalk cliff is a different matter, but it worked very well at Bempton. We have in excess of 60,000 visitors per year with a grossly inadequate car park big enough only for 30 cars. Bempton is a place that we actually have to avoid telling anyone else about because we do not yet have the car park and other resources to cope with the visitors.

It is a wonderful place as you could actually have people lining the cliff top from Filey to Flamborough and it would not make any difference to the birds because they are down a 400 ft chalk cliff. We are not suggesting we will do this or even that we should, but it is the sort of place where you could absorb huge numbers of people without any detriment to the wildlife itself.

I will have to admit that birds are on a slightly stronger wicket when trying to popularise wildlife than if I was speaking on behalf of, for example, spiders. However, we still have to get the story over. It may not be possible for spiders but I am sure it could be done for plants. Everyone knows what a daffodil is but not everyone has seen a wood full of wild daffodils such as the Devon Trust Reserve at Dunsford. It is a marvellous place and now a major tourist attraction. Thousands and thousands of people visit the reserve to see the wild daffodils.

At the other end of the spectrum, we are sometimes forced to have wildlife restrictions. I am sure many conservationists regret certain steps that have to be taken. A particular Suffolk Trust Reserve protects rare orchids. The site, which is only about 100 yards across, is surrounded by a very high fence and is open to visitors about once or twice a year. However, this is the only area of decidious woodland for quite some distance around and it was saved from being covered in conifers. I do not decry what the Suffolk Trust did because it was the only option open to them, but this is what some of our wildlife conservation will come to unless we are careful. I would suggest we are getting not so very far removed from the zoo situation but perhaps this is the only way you can manage the visitor pressure where you have a very vulnerable and fragile habitat.

Promoting rare things is quite difficult because people have never heard of them. There are probably relatively few people in the audience who know what a wartbiter is. In fact it is a very rare bush cricket and there is a wonderful story to tell about it. However, it would be very difficult to show wartbiters to 10,000 people. Having said that, some people would not be terribly thrilled by it even if you did manage to show it to them and would get more satisfaction out of seeing a small tortoiseshell butterfly. They might appreciate it more **because** they are more familiar with it.

In the same way, they might appreciate a field full of poppies. It has been a joy to me this year to see fields full of poppies. With all the wet weather we have had this year the spraying regimes have gone to pot and for the first time in ages we have had fields full of poppies. However, this sort of thing used to be commonplace and many people would like to see more of it in the countryside. This may be possible with the Environmentally Sensitive Area mechanisms which are going to be introduced.

What I want to talk to you about today is some of the work that I have been involved in over the last five or six years together with other Royal Society for the Protection of Birds staff. We have been doing what the Royal Society for the Protection of Birds now calls 'showing people birds'. It is not a brand new idea but we have come to realise that it is actually quite important and we ought to be better organised at doing it. It is not something that we have only just started doing; I am sure all of you know about Operation Osprey at Loch Garten.

When ospreys first returned to breed in the 1950s after almost half a century's absence they attracted the attention of egg collectors and the Royal Society for the Protection of Birds had to set up a protection scheme. After successfully breeding in 1954, they failed for the next four seasons. In one year the eggs were taken (and dropped) by an egg collector. In 1959 breeding was successful and the protection scheme had become comparatively sophisticated. However, on a hot day in June, a big fire threatened to engulf the osprey nest, which was only saved by the efforts of the team of wardens and volunteers, and a last minute change of wind direction. The fire was big enough to hit the national news on the radio, or wireless as it was then known. George Waterston, the Royal Society for the Protection of Birds' Scottish representative in charge of Operation Osprey, had the apparently hare-brained scheme of publicising the ospreys and allowing visitors to see them. After all, he argued, the attention that the fire had drawn to the area would attract

rubber-neckers who would probably learn about the ospreys. To his eternal credit, Philip Brown, then Secretary of the Royal Society for the Protection of Birds, agreed to this, because he trusted George Waterson's judgement even though he had personal misgivings about the wisdom of publicising these rare birds. The scheme worked. Instead of hundreds of visitors, the Royal Society for the Protection of Birds played host to thousands. The ospreys have become a major tourist attraction on Speyside, the Royal Society for the Protection of Birds recruited a number of members as a result, and the press gave a lot of space to the story.

Today, well over a million people have visited the osprey observation point, and ospreys have become firmly re-established as breeding birds in Scotland. But, they are still not easy to show to the public. Even without lunatics trying to chop down the trees or take the eggs, we have the vagaries of the birds themselves to contend with. Even if the birds return to Loch Garten, and there are plenty of hazards on the way north from Africa and south again in the autumn, they do not always breed. This year, for example, the female at the Loch Garten eyrie became unsettled by the presence of several males and failed to lay eggs. It is this unpredictability that has persuaded us to maintain a low-key, somewhat temporary-seeming presence at Loch Garten. Although now we actually own the reserve and have come to realise that tourists can become excited by red squirrels, roe deer, crested tits and crossbills, we are looking again at our Loch Garten operation.

Drawing public attention to a rare breeding species does have conservation pay-offs, but it must have appeal for the public. I do not believe that it would be very easy to excite interest in breeding twite, but we certainly can in peregrines. It had long been our wish to show people peregrines, but suitable eyries were difficult to find. The site had to be clearly visible, able to accommodate large numbers of visitors and of course be in an area where there were likely to be large numbers of visitors. These criteria were not easy to meet, but a site did come to our notice in the early 1980s. It was at Symond's Yat, overlooking a beautiful stretch of the River Wye, and clearly visible from a public viewing point, set up by the landowners - the Forestry Commission. We came to an agreement with the Commission to warden the site with information wardens using telescopes through which the public could have clear views of the birds at the nest. A disadvantage with the site is the lack of space available for interpretative material, membership promotion or fund-raising.

While peregrines have the singular advantage of a long breeding season and a tendency to stay at the nest, there is still the risk that they may not return to the area, or if they do that they will choose an actual nest-site out of view from the observation point. At Rishworth Moor in West Yorkshire, the site of the peregrine eyrie where we had a 'showing people birds' project this summer, the birds chose to nest behind a jutting rock, so that visitors saw them only as the birds flew to and from the nest. Use of a video camera might have overcome this problem. More of that later.

Peregrines, as I have said, are good birds to show to people because they have a long breeding season, but birds with a short breeding cycle can be used as we, through our East Midlands office,

have shown at Clumber Park. We were not convinced that the public only wanted to see rare birds. While the British public probably has a higher public awareness of birds than most countries, the number of species that the average member of the public is likely to be able to identify are few. Therefore, the rarity of a species is probably immaterial, unless that rarity, as in the case of the osprey, has a romantic value. Thus, most members of the public are probably not aware of ever having seen a woodpecker, but if they were shown a woodpecker they would respond.

Discussions with the National Trust at Clumber Park took place, and with their agreement suitable woodpecker nest-sites were investigated. This was in 1986 and sponsorship came from Bulmers, capitalising on their woodpecker cider connection. The symbol of this brand is actually the green woodpecker, but this species' habit of returning to feed its young at half-hourly intervals made it less suitable for showing to the public. Instead, the great spotted woodpecker was chosen. It is common, brightly coloured and, above all, it pays frequent visits to the nest, its bill loaded with caterpillars. The disadvantage is that the young are in the nest for no more than three weeks after hatching, giving a short but intensive public viewing season. Our summer information wardens found a nest near a bridlepath, fifty yards from a car park. A hide was moved in and a portable building installed beside the path with a small interpretative display and table for recruitment, plus accommodation for the wardens.

The accommodation was vital because they had to guard several thousand pounds worth of video equipment. We had the idea of using video relayed from the nest to the display area, and inside the hide, so that as many people as possible could have a chance to see what was happening. The Clumber exercise last year attracted 10,000 visitors and considerable media interest over three weeks and the wardens and their volunteer helpers from nearby local members' groups also recruited many new Royal Society for the Protection of Birds members. Thanks to sponsorship, the cost to the Society was minimal.

Staff involved in this got it right first go, but they felt that several aspects could be improved when they repeated the exercise this year. Among them was the use of video cameras. Last year several visitors had asked what was happening in the nest. This year they found out because, thanks to help from Sony UK, Midlands Video Systems Ltd and the BBC Natural History Unit, a camera was introduced into the back of the nest hole. Visitors could watch the adult fly to the nest, and then on the screen could see just how the five young responded inside the tree. When the parents were not there, they could watch the behaviour of the young in the nest. They knew that what they were seeing on the screen was happening there and then, a few yards away.

This year the woodpeckers took us by surprise and laid their eggs earlier, which meant that they hatched earlier, indeed, before we were ready to admit the public. As a result, we had little more than two weeks, but during that time we managed to show the birds to 15,500 visitors. Any more would have been virtually impossible. Once again, we had very good media coverage, including a five minute piece on BBC1's 'Wild Britain' and 5.5 million people saw the birds live on television. (It would have been two five minute pieces, had it not been for the

outside broadcasting facilities being needed for the General Election. So, not only did we have to cope with the unpredictability of the birds, but also the politicians).

The success of Operation Woodpecker lies in imagination, good planning and excellent wardens. The enthusiasm that the wardens showed was infectious. Visitors were thrilled by the way in which the wardens talked to them as if they were the only people who were being told the whole story as they pointed out a blackcap going into its nest, or related something that had happened to the woodpeckers the day before. We did not carry out any research into the attitudes of the visitors, but from comments we received, a large number seemed to enjoy the experience of being shown wild birds in their natural habitat.

This year we had a similar set-up for a kestrel's nest right at the top of one of the high towers on Peterborough Cathedral. You could not go right to the top of the spire and look down on the nest yourself, so we relayed events by video down to the chancel of the Cathedral.

These sorts of projects can be very successful and very popular with people and they help us to reach a totally new public who have not come across the conservation story before. We have been trying other projects as well. The Royal Society for the Protection of Birds launched a 'Bird Bus' this year. It has travelled all over the country attending events. Inside it is like a mobile countryside classroom with many things people, particularly children, can get involved in. There is a huge 'nest' children can climb inside and the bus is proving very popular.

Another project I was involved in when I was down in Devon was boat trips to see birds. We started birdwatching cruises on the Exe estuary. In the first year we had one boat which could hold 150 passengers. This has grown and this winter there are about a dozen cruises on the estuary and throughout the winter over 2,000 people will travel by boat to see the avocets and other estuary birds.

This summer we have been taking people by boat from Bridlington to show them the breeding seabirds on the Bempton Cliffs. We are getting close up views of the puffins as they swim around the boat. This autumn we are taking birdwatchers from Flamborough Head to see the migrant skuas and shearwaters. This is really good birdwatching for people who are already committed and keen birdwatchers. We can provide these additional facilities, giving them additional birdwatching thrills in a different way. Therefore, there are many possibilities for showing people birds and creating a public interest.

Probably the two occasions that have emphasised to us the public interest in birds particularly in the last few years have been 'Birdwatch UK' and 'Birdwatch Europe'. Birdwatch UK was just one day in January 1986 when tens of thousands of people came out birdwatching for the first time. Encouraged by that we went to the EEC for some money and they gave us about £60,000 to organise Birdwatch Europe. This took place in May 1987 and during that time 250,000 people across Europe went birdwatching. There were events in the middle of Athens; there were over 250 birdwatching events spread across France and numerous others throughout the entire European Community. Of course, it is not just for fun. It does have a very important point as well. In the

Mediterranean we used this idea as a vehicle to point out the conservation problems which still exist, such as the mass slaughter of migrant birds.

There is a campaign in Cyprus at the moment. The thing which really has the potential for hitting the Cypriot government more than anything is the thought that lots and lots of people, who would otherwise have been tourists and spent their holidays in Cyprus, will not go there because they dislike the bird killing which is happening. Conservation is having a hard economic impact and the government is having to listen.

A good example of this in recent years has been the saving of the Albufera Marsh in Majorca. It was destined to be destroyed and covered over with holiday developments. Now the Spanish government has realised what a wonderful asset it is to the island and has seen how many people visit the island specifically to see the birds and the wildlife that it has to offer.

We are not selling the wildlife as such, but we are selling the story and it is the conservation ethic that we are getting over. We have not done this in Britain in the way that many other countries have done. We denigrate France, but just look at how they have sold the Camargue with its wonderful wild horses and flamingoes. These are very obvious points but everywhere in that part of the country there are reminders of these assets (though whether they have done enough to conserve them is another matter).

I would put it to you that we do not do this in Britain in anything like the way we could. Once you have got over the easier messages (our equivalents of the flamingoes), you can move on to other species.

Going abroad further still, I have been lucky enough to spend some time in recent years in Ethiopia leading wildlife holidays. The Ethiopian government is very keen to develop their wildlife tourist industry because they recognise it as an important way of bringing in foreign currency. The National Tourist Organisation provides buses and shows the tourists the wildlife of their country and they are very proud of it. However, we in Britain also have some fantastic wildlife.

The Seychelles government makes great play of the wildlife of their islands. It is unique; but I wonder how many of you know how many endemic bird or plant species there are in this country or, for that matter, how many endemic moths we have.

The Israeli government, through its tourist agencies, has made great play of the wildlife they have to offer. Many people now go to Eilat for the summer and winter sun but many also go there to see the wonderful migration of birds that takes place through that part of the world every spring and autumn.

We grossly underestimate ourselves. We have a heritage of wildlife that we can also make the most of and use to the ends that we are trying to achieve. Our estuaries are amongst the best anywhere in Europe. They are internationally important. Huge flocks of waders use our estuaries during the winter months and they are very special and

we could do ourselves a big favour, when fighting domestic conservation battles, if we could convince the people who are in the decision making positions that that mud is very important. It is not a wasteland but it is a vital place for the nation and important to our national economy.

We have a heritage; places like Sherwood Forest are important in our history, important to our culture and important to our wildlife. We do ourselves a disservice by not getting that story over.

Conservationists have yet to realise fully the potential of properly run, well conceived programmes which show wildlife, both for public enjoyment and to make the conservation of wildlife more acceptable by creating positive thoughts in the public mind about it. We hear horrifying stories of so-called twitchers despoiling the countryside, creating mayhem in search of rare birds, upsetting local people, because these are good 'silly season' stories for news editors short of copy. But how much truth is there in this picture? The wealth of birds on the north Norfolk coast attracts birdwatchers from all over the country, with consequent trade for cafe owners, publicans and owners of accommodation. The best times for birds are out of season, so that the holiday season is stretched far into late September and October. Try to book a bed on Scilly in October and you will find it very difficult. Thanks to the growth in birdwatching, the Scilly season is now at least a month longer than it used to be.

Proximity to some Royal Society for the Protection of Birds reserves has improved the takings of quite a number of hotels and pubs. At the Eel's Foot Inn at Leiston on the edge of Minsmere, the landlord does a thriving trade in snack lunches for visitors to Minsmere. At Bempton, the Flaneburg Hotel runs birdwatching weekends to stretch the summer season back into late spring when the seabirds are nesting. You only have to look at the many pages of holiday accommodation advertised in the latest issue of 'Birds' to realise just how many people have already realised the tourist attraction of wildlife.

Therefore, it is not just something that we could do if we wanted to. I would put it to you that we have got to do this because we are investing in the future. By showing people our wildlife we are doing ourselves a good turn and we will probably make our job as conservationists easier. The wildlife itself is partly a recreational resource and that needs to be recognised by those who govern such things as access to the countryside and by those who govern the financing of sport and recreation in this country. It is not being recognised or promoted as such at the moment.

Wildlife can be undeniably attractive, but do we make enough of it? How best should we go about selling it? Should we concentrate on telling visitors what they want to know or what we think they should know? How much is it worth spending on enhancing people's experience of wildlife? How do we find and train enough good communicators? Do we know if we are achieving our aims? I do not pretend that the Royal Society for the Protection of Birds has the answers to any of these questions, and maybe some are unanswerable, but I am sure that there are people here today who will have opinions about some of them.

I will leave you with a story of what might at first sight seem to be a side issue, but actually illustrates an important concept.

DISCUSSION

B O'Connor (Nature Conservancy Council)

Thank you very much indeed. That was an absolutely fascinating talk and while we are sorry to have missed Ian Prestt I think you have certainly done us proud, especially as you only had very short notice.

I think you have thrown out a number of very challenging ideas and concepts and we now have a little time for discussion. I would like to pick out a few points before I open it up to the floor. The thesis you have advanced is that wildlife conservation is an asset which we, in this country, have tended to underestimate. Not all of us have been taking advantage of the opportunities available for bringing wildlife to a much wider public. I think you have shown us a lot of very interesting examples and some fascinating techniques illustrating the way in which wildlife can be shown to a much wider public than we ever thought possible before.

No longer can we regard conservation as the pursuit of the elitist few but increasingly as some kind of public service with the client very much in mind.

R Sidaway (Research and Policy Consultant)

I would like to congratulate Martin on his presentation. Many of the points he raised were very positive. At the outset he pointed out that we make unnecessary distinctions between recreation and conservation. He followed that up with his final point when he spoke about the heritage park which will include wildlife instead of splitting it off from other parts of our culture.

One of the things that fascinated me, and must have fascinated other people, was his activities in Clumber Park. He appeared to be taking the tops off trees, erecting scaffolding towers, and so on. This seemed to me to constitute some slight disturbance which I would have thought would have been quite an important factor and a reason why recreationists should be kept away from wildlife. He then went on to talk about the various trips out to the seabird colonies on cliff faces. He told us how fascinating it was to have the public surrounded by puffins, and yet we have been told elsewhere how seriously damaging it is to have divers and their support craft going anywhere near nesting birds. I would like his comments on this. Is this whole question of disturbance really a smoke screen put up by ornithological interests to keep other people away, or are the birds adapting and beginning to recognise Royal Society for the Protection of Birds badges?

M Davies

I only wish we could get the birds to recognise our badges! Obviously, that was something which concerned us as responsible conservationists. I would not have wished to do anything had I thought it would prejudice the likely breeding success of the birds. I will readily admit that there was a risk it might. However, with the kind of techniques that are available to us, and because we understand the

Perhaps gravel pits offer one of the best opportunities in lowland Britain of re-creating some of the wetlands that have disappeared. We have managed to develop a project with Northamptonshire County Council and the gravel company ARC to produce a brand new, purpose built nature reserve on a green field site in the Nene Valley.

What Northamptonshire County Council have done is to take a strategic look at the after-use of all the gravel workings along the Nene Valley. They looked at which areas lent themselves best to intensive water skiing, sailing, angling and so on, and designated areas to suit. One area was set aside because it offered the opportunity to create a new nature reserve. But this will not be a nature reserve with a big fence around it, but a place where people can visit and appreciate the wildlife around them. It happens that this particular site also has the remains of a Roman Villa on it, two medieval villages, iron age barrows and quite a lot of prehistoric remains as well. The archaeologists, through English Heritage and the County Council are excavating these sites and will be developing it into a 'heritage park' which will tell the story of that part of the Nene Valley over the last two thousand years.

What we will be doing is putting the most recent chapter onto the end of that story. We will tell how gravel extraction came to the valley and then show how we used this to create something new and worthwhile. We can also help interpret the history of the site as it was in previous times. We will create a reedbed, but we know from the pollen record that parts of the valley would have been fens and swamp in medieval times and the reed would have been used to thatch the houses in the village. Some of the old houses will be reconstructed and we will be able to blend the history of the valley with the wildlife story. We can tell the visitors that originally the area was a reedbed and the reeds were used as thatch but there are also reed warblers and other birds living amongst the reeds today, as they might have done during medieval times.

Therefore, we can blend the two things together. I put it to you that this is important for conservation. We should not be seen as a separate entity. We should be part of the evolving landscape; another land use which is blending in with lots of others.

I think a photograph I have of a Gulf Fritillary butterfly supping on a crumpled up Budweiser can epitomises the way in which we have all got to work together. If wildlife can bleed a little money out of the commercial interest at the same time then we will do ourselves a good turn.

biology of the birds quite well, it did enable us to construct quite a dramatic set-up. But we did it gradually and we monitored the birds' activity at each stage.

To give you an example, when we were setting up the video equipment to record the woodpecker nest, we would work on cutting out the back of the tree for a maximum of ten to twenty minutes while the bird was off the nest. We would leave the nest for about six hours and then do five or ten minutes' work. Over a period of about seven days we made the hole in the back of the tree.

These are the kinds of techniques that we never hear about, but film cameramen, who produce those wonderful wildlife films for television, use them all the time. You may well say that it is just that you never **hear** about the instances where the kingfisher deserted the nest. I would like to think that because we have some idea of what we are doing, we can make sure we are not prejudicing the future of the birds.

The problem occurs where you have people going into a situation with all the best motives but not necessarily understanding what it is they are doing or seeing. For instance, some years ago pleasure boats would leave Bridlington to show the public the birds on Bempton cliffs. That was all right. We do not have a patent on doing everything like that. However, one of the boats used to go in under the cliffs and bang the hooter on the boat so the birds would fly off the cliffs producing a much 'better' spectacle. What they did not realise was that half the guillimots were kicking their eggs off the ledges at the same time.

Therefore, there are ways of showing people birds. I take your point that disturbance would be a risk but providing you know what you are doing, and providing you manage it properly, you will be able to make sure it is not an unacceptable risk.

R Sidaway

It is very easy not to appreciate the sort of precautions and procedures that one group, in other words a special interest group, are following. It is difficult to convey a message to people who see themselves as being excluded from particular territories. It is a very important and subtle communication point to be made if you are going to persuade divers to observe a voluntary code, or whatever.

M Davies

Indeed, I agree with you wholeheartedly. However, surely the way to get those people to understand what it is you are talking about is to take them out and show them. Show them the birds you are worried about and get them to understand in the same way that you do. You should also listen to their views of what they are trying to do.

R Burden (Dorset County Council)

Martin, you have been bringing wildlife to people. In one of our Parks we have conservation for public enjoyment as our basic philosophy. However, it would be rather difficult to try and take up some of the ideas you have been putting forward as we are a relatively

impoverished local authority. Can you give some idea as to what sort of income we could expect from these activities because we would be putting in 'high tech' equipment and staff time.

M Davies

I should have emphasised the costs. The first year we did the woodpecker project it cost us about £5,000 but we did not cut too many corners because Bulmers were paying the bill. The next year we decided we would finance it ourselves and did it for about £3,500 but this included all the video equipment being supplied free. Had we had to hire it, it would have cost us about £6,000-£7,000. Therefore, our set-up would have cost about £10,000 for a 2-3 week project, including staff time.

B O'Connor

What about potential returns from an exercise of that kind? Have you any way of assessing what the potential returns would be?

M Davies

It is extremely difficult. Presumably, the purpose of such a project would be to change people's attitudes. To examine this in a thorough way you would have to do a survey beforehand and a second one afterwards to find out whether you had succeeded.

If you want to measure it in terms of direct financial return, then during that fortnight we recruited 120 new members to the Royal Society for the Protection of Birds at £12 per person and 15,500 people went through. We chose not to charge. I suspect that had we charged everyone 50p it would not have made the slightest difference and would have covered the entire cost of the project.

B O'Connor

If you had charged £1 you would have made a profit!

R Burden

Have you any experience of actually charging people to see wildlife? We just charge them for the car park but not for the experience of what is in the Park.

M Davies

In effect, people were being charged for the woodpecker project because Clumber Park is a National Trust property. If you were not a National Trust member you had to pay £1.50 to get into Clumber Park, which was another reason why we decided not to charge. Therefore, those people were paying for it but not to us.

B O'Connor

Has anyone in the audience got direct experience of charging?

TP Appleton (Leicestershire/Rutland Trust for Nature Conservation)

We have about 20,000 visitors to the reserve at Rutland Water annually and they can go to two reserves. The first has been designed for the general public and they can use birdwatching hides, walk round nature trails and visit an interpretive centre. The cost is 50p for adults and 25p for children.

In the specialist birdwatching area the charge is £1.50 for adults and 40p for children. We have no problems at all and we charge school parties as well.

M Owen (Wildfowl Trust)

In case anyone has the wrong impression of the Wildfowl Trust, from the slides that Martin showed, we have been showing wild birds to the public for 40 years and charging for it. At the moment we have something like 600,000-700,000 people visiting Wildfowl Trust reserves. All those people, despite the fact that they also see captive birds, do see wild birds of one sort or another. They are exposed to exactly the same messages and I could not agree more with the sentiments you have expressed. This is what it is all about and in our situation we convey the value of wetlands in relation to whatever we can lay our hands on, whether it be butterflies, frogs, or whatever. That message is getting across.

M Davies

I apologise if I misrepresented you. We all understand the wild bird ethic, and I do appreciate that what you are looking at is simply a different way of putting that message across. I think we agree that the important point is getting people to understand the countryside around them in a better way.

T Huxley (Former CRRAG Chairman)

Perhaps this is the right moment to say that when we first thought of this slot we did not know how it was going to work out. However, we did wonder how much somebody could review, rather more widely, the money making opportunities that are occurring now.

I would agree with Brian O'Connor and Roger Sidaway, we have had an absolutely marvellous introduction to the work of the Royal Society for the Protection of Birds. We are learning from the audience. However, I think there is still some more general knowledge to be acquired about the width of work that is being done in this area. There is a varied array of different kinds of people. This is certainly the case in Scotland where a number of private estates and farms are beginning to do this sort of thing. Their rangers may get grants from one or other body. Therefore, these people are also selling nature.

Brian, could your own body, the Nature Conservancy Council, look at serving more broadly the kinds of people who are now trying not only to help you with nature conservation in Britain but also making money from it? To a certain extent, this will be a vital step for this continuing process.

B O'Connor

That is a very important point. As you say, Martin Davies has given us one particular and very enlightening example, and I think it is true that many other people are beginning to think in terms of how to use wildlife as an asset. Martin mentioned the opportunities created by changes in the agricultural sphere with the possibility of land being less intensively used or even being left unused by agriculture. All this does create opportunities and I think it places a considerable premium on this question of whether you can raise a decent living or revenue directly from exposing the wildlife asset, or indirectly through the associated activities.

I think Tom is suggesting that we have a much broader review over this whole area of activity and quite soon.

M Davies

I agree wholeheartedly. There are a number of areas which we do not know enough about yet. We tend to think that just telling people about wildlife is a good thing, but should we tell them what they want to know or what we think they ought to know? How do you do it? Is a display, a leaflet, or an Information Officer the best way of getting it over?

We heard recently that a large estate in Scotland is seriously considering opening up the estate to visitors next year, on a commercial basis, and charging them to see nesting ospreys.

T Huxley

If such a review were to be done it would be up to the sponsors to decide where the parameters were set. I would hope they would not be set too closely but allowed to extend into the safari park type concept because I believe that any kind of showing animals is part of a spectrum from the totally wild to the less wild.

D Goode (Greater London Ecology Unit)

I was interested to hear your comments about the Scilly Islanders and their appreciation of the tourist trade that comes in from birdwatchers and others who appreciate natural history. What went wrong with Islay in Scotland where confrontational conservation politics have resulted in very considerable antagonisms? Would the situation have been eased if you had made a similar presentation to the one you gave us this morning to the islanders in their local village hall? Would it have helped to put over the values that we are talking about?

I would like to ask Martin Davies what he thinks can be done to further this sort of situation so the local people can appreciate the value as well as the visitors.

M Davies

Islay is a very sad story and I think conservationists should learn from it. We should learn the same sort of lessons that we learnt from going along to public inquiries and reciting lots of Latin names at inspectors who were not in the least bit interested.

You have got to talk the language of the people you are with. Strangely enough we have come full circle now in Islay. Things have quietened down a great deal and people have come to realise that having a Royal Society for the Protection of Birds reserve on their doorstep is an asset. Many local people are involved in the bed and breakfast trade. It is bringing in extra income and it is bringing it in in a different form from the one they previously imagined. They thought we were going to run a dairy farming enterprise on the island and if we had not run it in the way they wanted, it would have been the end of the dairy industry in Islay. Although with milk quotas and so on we were forced to look at other types of farming enterprise in terms of our contribution to the island economy, things are working out a lot better than many people expected and in a quite different way.

R Clarke (CRRAG Chairman, Countryside Commission)

I found the presentation very interesting. I was mulling over a couple of issues as the discussion unfolded. If a large number of private entrepreneurs are going to enter this field of work, doing your kind of thing and taking money at the gate, then that probably points to a different sort of role for the nature conservation organisations in advising and cajoling the private entrepreneur as opposed to running sites yourselves.

You made a number of comments indicating that the tourist industry had not woken up to the tourist potential of wildlife and that set me thinking. What sorts of discussions are taking place? Were anybody here from the tourism agencies what would they say to that challenge?

T Huxley

It is not altogether true, as certainly the Highlands and Islands Development Board, which is a tourism body, does use the wildlife of the Highlands as part of the specification for drawing tourists to the area.

M Davies

That is very true but the other important point that we must always keep emphasising, and which the private entrepreneur may well overlook, is the need to conserve the wildlife resource. If you are simply making a living out of 'selling' the wildlife that is there, without doing anything to ensure that it remains, then I would suggest you are exploiting the wildlife. What I am suggesting is that we, as conservationists, will be missing an opportunity if we do not get our message across to that wide public and stimulate more support for the conservation movement in this country. It will happen privately but I think we are a jump ahead at the moment and we can do it in a better way.

B O'Connor

I think that is the right answer. It has to be a balanced approach and I do not think anything that Martin Davies or anyone else has said actually detracts from the site-based, somewhat protectionist kind of nature conservation activity which I think is the essential backcloth against which these more entrepreneurial developments can take place.

F Perring (Peterborough)

Just for information, I said yesterday that the Royal Society for Nature Conservation was going to promote wildlife weekends and weeks. We worked out that you can actually charge an extra £5 per person per day on top of the hotel fee. Out of that you can raise enough money to give the Trust, which is offering the reserve and the resource for the day, £100. We think this is quite a useful income which goes towards the management of the reserve.

B O'Connor

It now falls to me to bring this session to a conclusion by thanking Martin, very sincerely, for an elegant and excellent presentation which has given us a great deal of food for thought. Perhaps it will stimulate us to take these concepts forward and maybe to another CRRAG Conference in the future. Thank you very much.

CREATIVE CONSERVATION FOR PUBLIC ENJOYMENT

David Goode

Director, Greater London Ecology Unit

It is a great pleasure to be here at a CRRAG Conference. Whilst working for the Nature Conservancy Council, I was its representative on CRRAG for a number of years and became acutely aware of the need for research into the effects of recreational activities on wildlife populations. I would echo some of the points made by Tom Huxley advocating the need for detailed research in this area. No doubt this meeting will in itself suggest topics which need to be addressed.

May I also pick up on another point made earlier today. Roger Sidaway identified various ways of looking at conservation, picking out differences in the philosophy involved. I can speak from my own experience as it is of direct relevance to what I have to say today. Looking back over 20 years in nature conservation I know that my views have changed considerably. Having been an 'expert' on bog ecology, defending vigorously the best areas that now remain, I know that the role of such a conservationist can lead to a rather pessimistic view of life. Those working in conservation are facing enormous odds with a massive and continuing encroachment on habitats that are highly valued for wildlife. Conservation arguments may be winning far more now than they have in the past, but the fundamental psychology is still much the same. Those concerned are still fighting hard to defend what they can, and one must realise that success in that scenario is only achieved when something is saved. There is no question of reversing the trends and the maximum one can do is ensure that the best places survive.

More recently I have become involved in nature conservation within London where the philosophy and psychology are quite different. Here one is dealing with opportunities for wildlife. It is a positive subject involving imagination and creativity. It is certainly good to be involved in enhancement of the environment, to see new habitats being created and bad trends being reversed. We have seen completely new criteria for conservation established and accepted as part of the planning system; criteria which include social factors and an acceptance that ordinary wildlife matters as much as the special places which deserve protection as Sites of Special Scientific Interest. We have seen acceptance that artificial habitats matter too. Traditionally, nature conservation has been concerned with identifying the best examples of semi-natural habitats using criteria such as naturalness, diversity and rarity. If you refer to the Nature Conservation Review of 1977 or the earlier reviews of the 1940s, such as Command 7122, you will find scant references to habitats of artificial origin. Yet we all know that wildlife thrives in many totally man-made habitats and the value of such places has become firmly accepted during recent years in the context of urban nature conservation.

One of the fundamental differences in dealing with nature conservation in towns and cities is that the value of wildlife to people is fully accepted as a major part of the argument for conservation. We are not confined to the traditional criteria based on intrinsic biological

features of sites, but are concerned to develop criteria based on social values.

Emphasis on 'ordinary' wildlife and its value to people in places where they live or work is a fundamental part of the philosophy of urban nature conservation and I hope that in demonstrating the approach adopted in London it will become apparent that there are lessons which can be applied in the wider countryside. No doubt you will identify similar examples elsewhere and I make no apology for dwelling particularly on London.

Taking 'habitats' as the basic resource for nature conservation, one can recognise two broad categories in London - those which are vestiges of the original countryside now caught within the urban sprawl and those which are artificial habitats that have 'gone wild'. The first category includes woods and heaths, and even fragments of countryside with meadows and hedgerows. There are ancient woodlands full of bluebells in Croydon and equally fine examples near Greenwich where wild daffodils grow in profusion in Lesnes Abbey Woods on the edge of Thamesmead. Ancient woods of hornbeam abound around the north side of the capital, where some of the best examples of meadowland also remain. All these are now well documented.

The range of man-made habitats is perhaps less well known. They include railwaysides, disused waterworks, old cemeteries, bomb sites, derelict docklands, reservoirs, not to mention the occasional canal too. Some provide a dramatic demonstration of the way in which nature can re-establish itself remarkably quickly. In Hackney a set of filterbeds of the local waterworks went out of use in 1968. Since then they have been colonised by a variety of marsh and fen plants, no doubt assisted by waterfowl transporting the seeds, and now this place contains a remarkable mixture of wetland habitats. Had it been designed as a nature reserve it would have been difficult to improve on the variety of conditions created entirely by natural succession over about 15 years. Kingfishers, herons and many varieties of waterfowl use the area which is now much appreciated by local people because of its 'natural' features.

Similarly, some of the railway embankments are now highly valued especially in those parts of London where there are few other habitats available. The Borough of Lewisham has several railwayside nature reserves which are used intensively by local schools as their nature patch. Examples at Devonshire Road and Hither Green clearly demonstrate the value of such reserves.

Disused Victorian cemeteries are another example. In the 1830s, because of the sudden and rapid growth of London's population, a series of cemeteries was created around the edge of London. These were developed by cemetery companies who were in competition with each other to produce the most attractive landscape. Landscape architects vied with each other to create the most 'pleasing sense of melancholia'! Some of these cemeteries were planted with many exotic trees. Abney Park Cemetery was known as a fine arboretum.

When the cemeteries were full the companies started removing the lovely specimen trees that had been planted and reduced the width of the paths to put in more graves. Eventually, they ran out of space and

money. They laid off the gardeners who had been employed to keep up the lovely landscapes and the areas became overgrown. So, we have this string of Victorian cemeteries, originally outside London but now engulfed by it, and again they are much valued as nature reserves by local people.

All these examples demonstrate not only that a variety of natural conditions can exist in close proximity to people, but also that people are becoming concerned to protect such places. One example which has highlighted these changing attitudes to nature in London is a tiny woodland in Chiswick called Gunnersbury Triangle. It was the subject of a planning application in 1983 by British Rail and a firm of developers who wanted to build warehousing on the triangle. Local residents argued strongly that the place was of value to wildlife and the Borough turned down the application. British Rail appealed and the matter went to a public inquiry where 200 people turned up to let the inspector know the strength of their feelings. The developers demonstrated that the wood was less than 40 years old, having grown on what was previously allotment gardens. They argued that it had no value for nature conservation. It was too small, had no rarities to speak of, had no significant diversity, and failed to qualify on any of the well-tested criteria used by the Nature Conservancy Council for site assessment. However, the most significant factor was its value to local people, which was well demonstrated.

The inquiry inspector decided in favour of nature conservation largely because of this strength of feeling - people clearly wanted to enjoy nature in the place where they lived. This decision was an important precedent for nature conservation in London and has been used persuasively in several other public inquiries since. The woodland is now designated as a Local Nature Reserve run by the London Wildlife Trust.

We can learn two things from this. Firstly, sites which would not normally qualify for conservation if judged by traditional nature conservation criteria may be of considerable value in urban areas. In such circumstances one has to make do with the best sites that are available. These sites will include a range of entirely artificial habitats as well as the more usually acceptable semi-natural habitats. Secondly, the strength of feeling of local people may have as much weight as the intrinsic biological qualities of the site. Indeed, the local feeling may well carry the day.

It is not unusual to find a high value being placed on artificial habitats. There are many examples in Europe and North America where artificially created habitats are now highly regarded. We have heard much about this already, with regard to canals. It is clear that there are many opportunities for capitalising on places which have 'gone wild'.

For example, a totally artificial 'spit' of land was created in Lake Ontario just outside Toronto. Originally, it was simply to get rid of all the rubbish and landfill. After a period of years it has become a magnificent spit which is developing its own geomorphology. Now it is used by a great variety of wildlife. In winter there are snowy owls hunting over it and hundreds of geese and ducks congregate in the bays and lagoons. It is an astonishing contrast to the city of Toronto, yet it

is only a few minutes drive from the city centre. The future of this spit is far from clear. Some people would like to see it developed as a recreation area. The boating lobby want to develop a large marina for power boats in the sheltered bay which has been created. The 'friends of the spit' on the other hand are fighting to preserve it as it is, together with the wildlife that has developed there. The potential of this area for nature conservation is enormous, especially if opportunities are taken to enhance the existing range of conditions. It makes one realise what is possible elsewhere.

Coming back to London, I would emphasise that any programme of nature conservation requires an adequate database from which to make decisions on individual cases. In 1983 the Greater London Council commissioned a comprehensive survey of wildlife habitats in the capital, examining 2,000 sites representing 20% of the land area. We can now provide objective descriptions and assess the relative merits of all these sites, a very large number of which fall into the 'artificial' category, especially within the inner Boroughs.

In developing a nature conservation strategy we have identified all the most significant sites right down to the local level. The next step is to identify areas where there is a deficiency of natural vegetation. I first used this phrase at a public inquiry in 1982 and it has now become accepted. Such areas are defined as land which has no accessible examples of natural habitats within a given distance of various local sites. The implication is that such areas should be given priority for the creation of new habitats for people to enjoy.

Creating new habitats may seem novel but it is not new. The Dutch have been doing it for most of this century and are very good at it. Some of their earliest examples are in Amsterdam where the woodland known as the Amsterdam Bos was created during the 1930s. The Dutch have also created many small parks of natural character, recreating heathland or bog habitats as a demonstration of the range of plant communities which once formed the natural landscapes of the Netherlands. Some of these so-called 'Heem Parks' have a wonderfully natural feel about them, despite the fact that they are so tiny. Such approaches are now well established within the Dutch landscape profession. They may even go so far as to design a factory that will accommodate wildlife within its grounds. I have seen examples where herons feed at ponds within courtyards of a factory. But here, at York University, we have a fine example of a similar aquatic habitat now populated by ducks and moorhens in amongst the students' rooms. There is much to say in favour of having nature all around you in this way.

The Dutch philosophy has been applied to some residential areas in Britain. Warrington New Town is the best example. Native tree species were planted to create belts of woodland and the houses were built within open areas surrounded by woodland. So the environment was created first and it is now turning into an extremely attractive residential area because of this approach. This is described by Ruff and Tregay in 'An Ecological Approach to Urban Landscape Design' in 1982. However, there has been a whole series of publications since then on the subject of habitat creation. 'A Guide to Habitat Creation' by Chris Baines and Jane Smart is really a practitioner's guide on how to create new habitats for everyone from park managers to gardeners. It gives details of how to go about it and uses simple language and plenty

of illustrations. Other publications include 'Ecology and Design in Landscape', published in 1986, the result of a joint Conference between the British Ecological Society and the Landscape Institute. There is an example in this publication of a small nature centre in London which I will use to illustrate the point that one can design for nature within a town environment. Most landscape designers do not think about things like birds. They think about plants and vegetation but they do not necessarily know the design criteria for dealing with birds in particular situations, whilst taking into account public pressure and disturbance. At this particular site, a reed bed has been planted to one side and the area is a very effective nature reserve. Little grebes nest in amongst the reed bed in very close proximity to high density housing. Reed buntings and sedgewarblers nest on the site and this has only happened as a result of very careful design. The moat cuts off access to certain areas which then form a sanctuary. It is extremely popular with local people and is used for field studies by schools. One particular section is also used by anglers (Goode and Smart, 1986).

There is a great deal of knowledge now available to enable us to create a host of different communities. A garden for foraging bees has been created at the Centre for Urban Ecology in Birmingham using lists of plants known by beekeepers to be of value to bees. This could be done on a smaller scale as a roof garden and be of great value to inner city beekeepers. It may not be directly relevant to the wider countryside but it shows what can be done. We are not lacking the horticultural and ecological knowledge. It is a matter of using it to best advantage.

We could take a new look at many areas of grassland within an urban environment. There is a lot that could be done to improve them and I am sure many of you are familar with the arguments. Parkland often appears rather sterile for wildlife and the same is true of so many areas of close-mown grass along roads and within new 'landscaping' schemes. There are all kinds of opportunities which we walk past every day. One example is a piece of grass outside Buckingham Palace which is unused but gets mown all the time. Why not make it more attractive to butterflies by allowing the vetches to grow? There are many such possibilities that could be applied. It does not have to be in a town. It could be anywhere, such as on the fringe of a village. People in villages need nature as much as townspeople.

I would like to describe two examples of sites that have been created. The first became quite well-known. It was the William Curtis Ecological Park at Tower Bridge. It was created by the Ecological Parks Trust in 1978. When Max Nicholson suggested that there should be an ecology park at the end of the Silver Jubilee Walk, nobody really knew what an ecology park was, but they decided to go ahead with it. The developers allowed the Trust to have the site for five years and so the William Curtis Park came into being.

Originally, the site was a lorry park with a concrete surface. The surface was removed and subsoil brought in. It was an inner city subsoil dump for about a week. Anyone who had subsoil could dump it there free which saved them a lot of money and meant the Park was created very cheaply. Volunteers carried out the various stages of spreading the soil and planting up the site. The whole scheme was done for a ridiculously small sum of money, about £2,000. A small pond, with

a liner and about 15 different types of habitat, was created, including spinneys of birch trees, and open areas covered in vetches.

It was an extremely successful scheme as a pioneer venture and clearly demonstrated what could be done. From 1978-85 there were 120,000 visitors in the Park, mostly school parties on a very regular basis. It was an inspiration to the children who had never seen anything of nature before. Many of them had no contact whatsoever with nature. Some of them had never seen a worm and they were thrilled to see one in the Park. You might not believe it but that is the state of affairs in the middle of the big city. The children were able to appreciate the natural world at first hand rather than on television.

An interesting feature of this site is simply the way in which it developed over a number of years. From 1977-84 the number of butterfly species recorded rose from 0 to 23. As a hard surface site you would have been lucky to see any butterflies at all; they would merely have been passing through. By 1980 there were several species which one would not necessarily expect to see in central London. For the last few years 17 species were recorded annually.

Sadly, the Park was closed in 1985 and the site has now been developed. It was a very successful pioneer venture in some respects but I think it was the wrong thing to do. I do not believe such places should be temporary. The Park generated a lot of emotional commitment from local people. Just before its closure children would come along and ask what was going to happen to 'their' trees and 'their' minibeasts? They saved what they could, taking buckets of frogs to other ponds. There was a very strong attachment to the site, and I have no doubt that such places should be permanent.

One such place is Camley Street Nature Park near King's Cross. This was developed over the period 1983-85 by the Greater London Council on a derelict coal yard between a breaker's yard and the Regent's Canal. It was carefully designed to include a sizeable pond with fringing marsh grading into spinneys of birch and alder. The Park was opened in May 1985 and now has a remarkably natural feel about it. It is fully booked at term time by school groups and is a very popular place with local people.

The children from local schools take their parents and grandparents to the Park to show them what they have learnt on their school trips. They call in at the site office and ask the warden for a net and a tray and soon three generations are involved in pond dipping and looking at dragonflies and so on. The whole family is absorbed in nature in a way that has never happened before.

The clue to its success lay in ensuring that local people knew all about the Park right from the start. A warden was appointed by the London Wildlife Trust even during the construction phase and many of the local children enjoyed poking about for Victorian bottles in the rubbish tip unearthed when the pond was dug out. At a meeting in the local community centre one lady said, "This is the first beautiful thing that has ever happened to us here". Community involvement was crucial and it has paid off. Camley Street Park has suffered virtually no vandalism.

Community involvement is crucial in other projects too. A group of residents near Vauxhall wanted to create a Community Garden on a piece of derelict land. They had advice from a landscape designer. They told her what they wanted to do and she helped by explaining which things would work best. After they decided what they wanted in detail she drew up a plan and the community group carried out the work. The inspiration and enthusiasm of local people is crucial to any such schemes. We are not talking about something imposed from above. It is actually happening because of people who want something. They say what they want and many of them get on and do it.

There are many publications for local people and community groups which deal with this subject. A pack produced by Manchester City Council and the Think Green Campaign called 'Community Landscapes' shows what can be done locally. This does not necessarily need to be applied only to urban areas. The ideas can be applied in villages and many places where people wish to improve the local environment. There is also a document produced by Groundwork called 'Community Involvement in Greening' which identifies the problems and strategies for success. The Ecological Parks Trust compendium called 'Promoting Nature in Cities and Towns' (1986) brings together almost everything that has been written in this field. Again, that book is equally applicable to the countryside as it is to towns in many of the examples that are described. When it comes to creating habitats I suggest that the philosophy developed in towns and cities, especially the need for nature in areas of deficiency, can apply equally to the more intensively farmed landscapes which have lost much of the wildlife which once existed.

The other point that I would like to make is that we are dealing with attitudes and not with the more scientific criteria in nature conservation. We are really talking about what people want. There have been a number of studies of what people feel they need in the way of open space and the values of wildlife conservation projects. Barbara Mostyn wrote one report for the Nature Conservancy Council in 1979, entitled 'Personal Benefits and Satisfactions Derived from Participation in Urban Wildlife Projects', which was a starter in this direction. She has just published another report on urban fringe countryside.

Caroline Harrison is another contributor to this field with very detailed studies published in the 'Journal of Environmental Management'. Her paper deals with 'Nature in the city: popular values for a living world'. She and her co-workers have analysed people's views of open spaces within cities and what they want. Alison Millward and Barbara Mostyn have also undertaken a study for the Trust for Urban Ecology, looking at a series of nature areas in towns and asking what people want and watching what they actually do. This objective analysis will be a great benefit at future public inquiries when published shortly.

So, we are gaining a picture of what people want. Many people are saying they want more contact with nature and that they feel 'dispossessed' of nature in cities. I would claim that many dwellers on the fringes of countryside are also dispossessed of nature because the agricultural areas are not actually accessible to them. This is where schemes like the Parish Map Scheme, promoted by Common Ground, and the Pocket Parks Scheme, developed by Northamptonshire County Council, are extremely important. The Pocket Parks Scheme is particularly

relevant as it aims to provide sites for wildlife and for people to go and enjoy wildlife in close proximity to the places where they live, whether it be in a village or small town, or on the urban fringe or wherever.

The common theme running through this whole approach is enjoyment of nature, whether it be in town or country. My favourite Pocket Park is St James's Park in London which illustrates very clearly how people can gain great pleasure from wildlife. In his book about London, David Gentleman describes it as an outdoor aviary. That is a good description. It is always full of birds which are remarkably tame. Even the sparrows come and eat out of your hand. But it is the spectacular assemblages of waterfowl that are the most attractive, especially in winter when many wild birds use the Park. There is a very close relationship between birds and people here which could provide a model for many other places. The Park happens to have a very good design which allows for thousands of visitors to walk around the lake without encroaching on the territory of the birds. In effect, it is a well designed nature reserve. There are only two points where you can get to the water's edge. The rest of the lake has a narrow border of grass protected by fencing, which provides an ideal place for the waterfowl to loaf on the banks. Everything is easily visible from the paths, yet nothing is disturbed (Goode, 1986).

To me the winter scene in St James's Park is as good as going to one of the famous bird reserves such as Minsmere. I could sit and watch the ducks and geese for hours. Many people do exactly that. I suspect that many of those who go there enjoy this contact with nature. It provides an experience of wilderness in the city - a kind of spiritual refreshment.

If we look closely at the wildlife which thrives unintentionally in cities we may well be able to design for greater contact between people and wildlife in many other situations. The time is ripe for extending the philosophy developed in urban nature conservation to more creative approaches in the wider countryside, to everyone's benefit.

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DISCUSSION

B O'Connor (Nature Conservancy Council)

Thank you David, for a fascinating presentation. It has extended what Martin Davies said about utilising the natural or semi-natural, through to 'opportunistic' conservation within urban areas. There was also the concept of creating something if you have not got it. Perhaps the two phrases that stick in my mind are that these areas are 'deficient in natural space' and the people are 'dispossessed of nature'. Putting those two together gives us a kind of thesis which we can explore in our discussion.

You raised the point about land tenure and the problem of creating something to which the community becomes attached and then, at some stage, the developer wanting the land back and the asset being lost. What is the defence against this kind of thing? It would be a pity to lose the opportunity of having the asset, even if it is only for five years. On the other hand, one can well understand the problems this creates.

D Goode

I am in something of a dilemma on this point. My own view is that, wherever possible, we should avoid encouraging too much direct commitment on the part of people in the running of these temporary sites and letting them get the feeling that a site is 'theirs'. This is a real difficulty, as one does not want to miss the opportunity of having nature on sites for short periods of time.

The Town Trees Trust uses derelict or vacant sites for growing trees while the land is available. Then those trees are moved to other sites. This is one very productive use of these sites. People know it is going to stop and they are prepared to move onto another site to continue their tree nursery activities.

I do feel that there is a problem with other sites where emotional commitment has been encouraged. I would like to see local authorities being more positive in the provision of small sites dotted around which will meet this need in the long term rather than trying to rely on the vacant sites that happen to be there because, inevitably, it does pose problems.

M Collins (The Sports Council)

Whatever the arguments for or against planning gain, there are all sorts of community provisions which have been made through that mechanism, when new developments occur. It seems to me that with the growth of out of town shopping centres one is in danger of getting ecologically barren surrounds to those developments. This provides an out of town opportunity but I do not see why there is not more inner urban development. I was involved in a town centre development which provided very pleasant private patios, six floors off the ground. I cannot see why this is not possible in a planning negotiation. Has anyone in the audience any experience of doing that?

A Inder (Hampshire County Council)

Marks and Spencer have put forward an application for a superstore on the edge of Southampton which includes a seven acre ecology park as part of the public benefit.

B O'Connor

This is an interesting point and relates to the question of public versus private provision. Do we have examples of situations where private provision has been made for this kind of asset?

D Goode

I would like to mention one example in Chicago. Within a design specification for a multi-storey car park was a woodland which they have actually completed. They have included four feet of soil and trees forming a woodland on the top of the car park. It is quite an astonishing engineering achievement but it does show that opportunities are there for many buildings.

A scheme I failed to mention is in Covent Garden, opposite the entrance to the Ecology Centre. A fascinating building called Odham's Walk was designed as housing and shops with courtyards. It contains 'naturalised' vegetation in small gardens all designed within the building. As soon as you walk in you feel as if you are in an area of greenery which is in contrast to the rest of Covent Garden. The people who live in those houses now value them far more than the equivalent surrounding buildings, so the house prices are going up as a direct result of that kind of environmental improvement.

B O'Connor

There is a direct commercial benefit.

F Perring (formerly Royal Society for Nature Conservation)

I would like to take up David Goode's point about people in the countryside being deprived of wildlife. I think this is the reason why the Pocket Parks project has taken off in Northamptonshire. There are six or eight already and there are another 30 in the pipeline. The county of Northamptonshire has no National Parks, no Areas of Outstanding Natural Beauty, no coastline; it is highly agricultural and much of the land belongs to very large estates. There are no greens and no commons. It is a 'deprived' county. The response has been enormous and it has arisen from the people who clearly want what they have been deprived of.

One of the things I have been thinking about recently is that if we can get communities to be involved in the setting up of a park, what sort of 'knock-on' effect might this have? Is it possible they are going to change their attitude generally? Could we expect them now to look more sympathetically at the churchyard, the roadside verge, and so on? Could we begin to get the community to look at what they are getting and what they would like from their rates and persuade the Council to take a different attitude to public land generally?

B O'Connor

That is a very good point. We are into this whole area of attitudes and whether the existence of the asset starts the change in attitudes or whether the attitudes are there beforehand.

D Goode

I have heard of the Parish Map Scheme in Dorset which has been implemented for over a year now. Basically, the idea is to get people together in the parish hall to discuss the features of their parish that are of value to them. Anything they feel is important is put on the map which is then mounted in the parish hall. It will depict their cherished heritage. Within the map they are identifying the features of the natural world that are important to them. In some cases they are actually identifying features of the Pocket Park kind.

The information I have is that in some cases, as a result of making the map, people are now going forward, being creative and actually wanting the Parish Council to take an initiative in doing more. Some of the landowners are asking what they can do and perhaps donating land to the parish. The stimulus is there and I think we are getting responses already.

CJ Spray (Anglian Water)

I wonder to what extent there is already a mechanism by which planning and local authorities can suggest areas which should be utilised for wildlife in urban areas. I am thinking of a situation recently where an industrial development was planned in Biggleswade, alongside a main road, and the planning application came through to Anglian Water for consent for its drainage pattern. Our planners said they needed a storage reservoir - a dry area which would fill up. The initial plan was to grass around the square reservoir, but luckily an alternative was suggested.

The area is going to be the first you pass through as you enter the Business Park and it will be open space. It is still going to be a square reservoir, but beautifully planted up, with a pond and other features. That request for permission to a Water Authority has to come through for every single development. There must be many other situations where, if someone saw it going across their desk they could say, "Wait, here is an opportunity to do something positive". The people on the industrial estate have now realised that the reservoir is a fantastic asset; all the photographs of the Business Park will feature it.

D Goode

I am sure you are quite right, and this is happening much more than it would have done five or ten years ago. People within planning departments and others, either in the Nature Conservancy Council or other organisations dealing with planning applications, are making suggestions for individual cases as planning proposals go through. We certainly do this now. We make suggestions regarding particular developments, adding appropriate ecological features. The policies we have proposed for local plans include that kind of provision. So, there

are mechanisms within various aspects of the planning process, not necessarily through planning gain or to do with drainage requirements. There could be many other instances too where opportunities are presented alongside engineering works.

It does not always have to happen on a small scale. There was a suggestion that the area of gravel extraction which was mentioned this morning could become a major nature reserve. In London there is a proposal for a very large aquatic area at the disused Beddington Sewage Farm. It is more than a mile across and the proposal is to make it into a huge watersports centre, but associated with it will be an area for nature conservation which will be specifically designed as a major wetland nature reserve. This will be right in the heart of Croydon and Sutton, which is a remarkable prospect. This proposal is on a very large scale and can only be paid for through the gravel development itself.

B O'Connor

Very sadly, we have to bring this discussion to a premature conclusion. With so many people wanting to ask questions, it highlights the interest in what has been said. Not only are public attitudes changing, but also attitudes amongst the decision makers. Increasingly, we begin to get a match between what people want and what others provide; what the providers are able to put up for people's enjoyment. Perhaps there is a convergence of nature conservation provision both for wildlife and human need. This has been seen most strikingly in the urban areas, as David Goode has just described, and is very relevant to the countryside as a whole.

A POSITIVE VIEW

Anthony Smith

Freelance Writer and Broadcaster

I am very pleased to be back here again. I last came to a CRRAG Conference about ten years ago when I was invited to stand up and comment on what I had heard. There seemed to be a lot of criticism from me and I thought I would never see CRRAG again! Fortunately, memories are short and people have forgotten what I said, so here I am again!

Alas, I have no slides, but I am glad that Brian O'Connor said I was going to do the impossible. I have written down here the words 'random utterances'. Just to digress at the very outset, I will tell you where the words 'random utterances' came from. Once upon a time I was a reporter on a paper then called the 'Manchester Guardian'. A lady came in one day with a spaniel and asked if she could borrow a typewriter. Being a benevolent organisation we agreed. After a short time the dog was showing very positive signs of acute hunger and so I thought I would go to the canteen and asked for something 'fit for a dog'! When I eventually sorted it all out and told the canteen staff that there was actually a dog in the reporters' room, they found some unbelievable steak.

I took this back, offered it to the lady who then promptly ate it! When she handed all her pieces of paper to me they were headed 'random utterances'. Indeed, they were just that and, alas, there was no room for them in the paper. I have written 'random utterances' and I suspect they will be very like hers. To her this particular talk is dedicated. Alas, I do not have some nice project to talk about. There is no order. They are just thoughts which came into my head as a response to the comments that were made here. This is not so much a follow-on but more a response, sometimes a knee jerk reaction going the other way.

First, I would like to recap on that Conference ten years ago. My general feeling after that particular CRRAG Conference, and the reason why I hurried away afterwards without meeting anyone, was that I had felt that the whole meeting had been a bit smug. The reason, coming as an outsider, was that forestry (and I will not name names) seemed to say that it was being very nice by letting a few people into their forests, "Isn't that good of us?! How exciting! What an advance!"

The Royal Society for the Protection of Birds seemed to be praising its osprey. Very laudable - they were **allowing** people to see one of the wild birds which lives in Britain. The water people continued with the same, slightly smug attitude. They intimated that they were doing rather well because they were actually letting people float about on their lovely tracts of water/reservoirs. It did not hinder the water and "Aren't we doing well?"!

The National Trust, as far as I can remember from their contribution, said, "Oh dear, we are doing so well. We are getting so

many people round our places of historic interest and natural beauty, that they are doing great damage. Oh dear, I wish we weren't being quite so successful".

Nobody seemed to be looking ahead.

To move forward rapidly to this Conference, I have been greatly comforted by the thought that people have used the words 'the future'. What comes next? What comes ahead? This has been spoken about much more.

Before I start being nice about the last couple of days, and particularly today, which I thought was terrific, I would like to talk about a personal beef, a knee jerk reaction if ever there was one. I do not belong to any organisation and I have never done so. I do wish you would not use the word 'public' the whole time. What is the public? If you go out of here do you see 'public' getting on the bus? When you get to the railway station do you see a lot of 'public' on the platform (you may even see 'public' driving the train)?

I was very pleased that the last speaker used the word 'people'. Isn't that what we are? As soon as you start talking about the public there is a kind of 'them' and 'us' – they are aliens out there. OK, you are not public, you are born of the purple and, to push the word back, the 'plebs' are the public.

'How can public interest be harnessed?', 'Developing greater public awareness'. What is going on? Aren't we just making people interested? I liked the speaker's final comment which stated that unless they feel involved and it is theirs, they will lose interest. It is awful if it becomes, as it were, 'yours'. If you cause a 'them' and 'us' feeling I think an 'us' and 'them' feeling follows.

On a nature reserve, if you are told, "Here we have some plants, trees, birds and mammals to show you" then somehow they have taken possession of them. There was one extreme bird reserve which I went round where not even the warden was allowed to go into the reserve but only one local policeman. It was felt that the birds only knew him. That local policeman was doing a very good job and he was going out to Africa to see where the birds originally came from. However, they were absolutely 'his' birds. If you had suggested that they were God's birds, nature's birds or even British birds, he would have been the first to disagree with you! Therefore, please, before you use the word 'public', do think about it.

Once you use the word 'public' it moves on to other things. It is not just that you are using the wrong word, but a sort of belligerent attitude sets in. "Oh God, the public are coming today". I remember once being very offended at a bird reserve where it said 'Keep out, birds nesting'. Well, I do not go round speaking like that and I am sure you do not. However, as soon as you get onto a noticeboard you start speaking like that. What was even more irritating was that the birds were not only not nesting but they had all gone back to Africa. The argument for keeping the notices was that it was an expensive operation to remove them.

This attitude is a very easy way of making 'the public', in other words, me, rather belligerent. Way back the National Trust acorn signs used to say 'It is forbidden to light fires, leave litter, do damage'. Well, one might have thought that up for one's self! Sure, some of the individuals who visit the antique properties do occasionally leave litter, light fires and do damage, but they will not take any notice of the noticeboard. At least the National Trust now says 'Please do not light fires or do damage'!

There is nothing like the word 'welcome' around many of 'your' nature reserves and 'your' forests. Maybe you can think of examples where you 'welcome' visitors but my general feeling is that it is not there.

The dreaded word 'entrepreneur' was used this morning when the ospreys were mentioned and a chill spread throughout the room. I bet any entrepreneur is going to put 'welcome' at his site because he is even keener on raising money than the Royal Society for the Protection of Birds. If this happens then many of the other organisations are going to have to start thinking in those terms. The entrepreneur does not use the word public, he uses words like 'payers'. Jimmy Chipperfield once said to me that of all the things he cannot stand it is people actually queuing to give him money, so he always makes certain there are enough people on the ticket desk. I think entrepreneurs have a lot to teach us.

My second beef is about speakers and chairpeople speaking to their papers and not reading them. Today, for example, the speakers did not read their papers and I felt that they were all the better in consequence. I agree you have to give your papers but I think it is always nicer at a meeting such as this if people will speak what they have to say. Surely they know what they have to say and later the same message can be put down in prose. I think it is wrong to speak prose and I think it is just as wrong to read speech.

This year's Conference has been much more positive. I am not going to talk about wildlife because I see wildlife as being part of it. It seems to me that if you make things nice for people and manage and encourage it (in other words covering an area of hardcore with earth and greenery) then everything will benefit.

I loved yesterday's talk where all the myths were put forward about British agriculture. I think the speaker should have added one more myth and that is that we are going to have another world war where food will be of consequence. I once gave a talk where I said how nice it would be to have much more space for ourselves. The audience got very angry and asked what would we do when the next war came because we would not have enough food. I said I agreed with the first part (what on earth are we going to do when the next war comes) but British food seems absolutely irrelevant. If it is a war where shells are being fired by people at each other then you have to get your fuel and everything else from everywhere else. We do not grow enough food for ourselves. We could if we became vegetarian. In time, when a lot of these myths have disappeared and people are given power to work in the countryside, there will be a sort of revolution.

For the first time in my life I have written down 'workers of the world unite'! You may feel that, with cars driving out to our beauty spots and thousands of feet damaging the land, it is very difficult to contain 55 million people within these tight little islands, but I do not think pressure has yet been exerted by the people asking for more of the land for themselves. About 80% of the land in England and Wales is used for agriculture. Staggeringly, agriculture produces only 2% of the gross domestic product. Factories produce 25% of the Gross Domestic Product and it comes from less than 1% of the land. I think people will start to express the view that, as we are quite good at making money from insurance and making goods, there ought not to be so much agriculture. Should there not be more room for the people? Why shouldn't cows live in 18 storey buildings? What is such a big deal about agriculture? If that were to happen - workers of Britain unite, you have nothing to lose but your confinement - then I think there would be a 'revolution' about the countryside.

I once advocated, and I still advocate, that the words 'green belt' should be properly applied. The argument for this relates to somewhere like Hyde Park which is very precious. During the war sheep grazed on its grass because there was a feeling that as much as possible should be grown to help the war effort. Today it would be, in Londoners' opinions, quite monstrous if areas of London's parks were fenced off to allow sheep to graze. It would be quite wrong if all our lovely bits of green space were handed over to agriculture.

However, as soon as you get beyond the city walls, for example on your way to Heathrow, then suddenly agriculture becomes sacrosanct. 'Don't forget the next world war', 'Isn't it nice to see farmland'. I do not think it is particularly nice to see farmland when I think of the other things it could be.

For example, I rang up the planning people and, lying through my teeth, said I was a farmer from just outside London who wanted to change the use of my land. I said I wanted to turn it into a skating rink. I then put forward the idea, which I still think is a very good idea, that if you had something like a 20 acre field where nothing was grown but it did have a slight ridge around the edge, then when the cold weather came it could be flooded with water. It would not freeze over every year but it would freeze over sometimes because it would only be about six inches deep. I can remember from my childhood large areas of land being flooded and it was terrific for skating. Now that the water people are better organised, flooding does not happen in quite the same way.

Anyway, I thought that with 20 acres of ice just outside London the few acres adjacent to it would be for parking. Therefore, there would have to be some form of substrate under the cars to give a firm base. "Oh no", said Planning, "nothing like that could happen". I was told it would be a change of use, a change from agriculture and their policy was for the green belt. I then argued that this area would remain very green. Having a tap did not exactly spoil the land. They argued I would need toilets and other facilities and they would not agree to the idea. Speaking as a Londoner, I would like that very much. I would almost advocate that every town has a space equal to itself around itself.

At the moment everything we have, in other words our towns, our houses, garages, roads, schools, football fields, airports, motorways and so on, adds up to about 9% of England and Wales. We cram ourselves into a very small area. Supposing this was spread over 18%, wouldn't that be lovely? It does not all have to become built up. Motor sports and horse riding could be spread around and it would not be awful. I think it could be just as nice.

Even if you were doubling the area you could still have real reserves - not reserves that scientists look upon as their own - but areas that are kept completely natural, where **nobody** goes. This point has been emphasised by the papers we have heard but I have yet to hear the word 'space'. Yes, people are doing very clever things and I was heartened by the projects in London and thought it good that people could actually see the greater spotted woodpecker in woodland with the use of video.

However, supposing you suddenly gave these people double the space they were utilising. As far as I can see, this is what is going to happen. We hear we are growing too much food and we should not be doing it. One wonders why we produce mile upon mile of sugar beet when we ought to be handing our sugar requirements over to the West Indies who need the money. Would it not be fantastic if we just doubled the space? It does not all have to be put under concrete but the areas would be wonderful lungs outside our towns and would be greatly appreciated just as we appreciate the little bits of green, the 'mini-lungs' that do exist.

What would we do with the extra space? In my opinion, many of the sports have organised themselves so that they have become some sort of a force. If you were to go along, as an individual, and ask to swim in a reservoir you would not have any power behind you and would be stopped from doing so. However, if you were to organise yourself and turn yourself into the 'British Sub-aqua Club' or the 'British Reservoir Swimming Association' then all of a sudden you would have some clout.

I know about this from my own experience because my own sport is ballooning. Ballooning, by rights, should not exist because it has a declared intention to trespass from the very take-off. There is no other way in which it can happen. We arrive in a field, with our code of conduct, and we think we are all responsible. We land in an area where we are not doing any harm and we always make a point of seeing the farmer to apologise! In general they do not mind and we gear ourselves to make sure there is something in it for the farmer. If there is a big balloon gathering we give them a ticket, when we land, and there is a poll and he receives a good prize, such as a television, and we even have farmers asking us to land!

Ballooning is a wonderful way of restoring your faith in this country because very little is built on (about 10%); 10% is covered with woodland and 80% is for agriculture. The nice thing about ballooning is that not only do you see gorgeous English countryside, which you do not normally see from the road, but suddenly you are in a grassy paddock and your team arrives to pick you up and you feel involved with the country. If you are a picnicker, who basically wants to do the same thing, it is very difficult to park your car at the edge of the road and walk into the field and sit having your picnic in the very middle of the

field, which is where the balloonist will land. We do not do that, we sit rather nervously on the edge.

Or we sit in a lay-by and if our children actually let go of our hands for a moment then a juggernaut passes by only two feet away. 'Lay-byers' of the world ought to unite to make those things just a little bit bigger and push themselves into the countryside just a litle bit more. There ought to be a green area before you get to the road that you have just left because you wish to be refreshed, as they do in Germany. It is very difficult for lay-byers to have a say but it would be lovely if they could.

How many of you have walked along coastal paths where you have to walk in single file? If you do not like heights then you may get nervous and fall down. There may be only four feet of space between the cliff and where the farmer has pushed his field. The chances are that if you do not walk along the path this year then he will push it a little bit further.

For heaven's sake, our coast is one of our major attributes and presents a great opportunity to use more of this space. Footpaths tend to be single file. Wouldn't it be nice to have the sort of place which you would design yourself where you could walk along with your children or hand-in-hand with your beloved? In time, it will not be just me making this particular plea but all 50 million of us asking for more space.

Changing the subject, and another thought which came to me on this whole subject of people management, was that I do not think that we, in this country, are particularly good at the management of people. People in America are a lot more belligerent. They complain if they cannot see what they have driven miles to see. British people are rather polite. I do not know what they say if the greater spotted woodpecker is not doing its thing that day, but I would imagine they would say, "Oh, what a shame" and go away. The Americans would complain and ask if you had another nest lined up. They would expect something to be on show the whole time. The American wardens have had to respond to this.

An example which came to my mind repeatedly because I thought it was very well managed, is a swamp in Georgia. Most people do not know anything about what it is they are coming to see but they want to see it, having driven out of their way to get there. About 1% of this particular swamp is dedicated to those 95% of the people who want to see an alligator, a swamp deer and the stills where the old settlers used to make their whisky illegally.

The people are put into tourist boats and taken around and 'shown' the swamp. Young, amiable guides tell them, "With luck you will be able to see an alligator, the largest reptile that we have on the American continent. My, what luck!" Just around the corner there is an alligator who has been there for a long time. He has been there because there is a piece of invisible green chain link fencing around the back and underneath him so he cannot go anywhere else.

As the tour travels on, the people are told, "Well, if your luck is really in you might see a swamp deer, but I doubt it... What luck

again!" It is all very well arranged and you have got rid of 95% of the people. They have seen an alligator, a swamp deer, a still and everything else that is there. They then go to the tourist shop, collect all their pencils, rubbers in the shape of alligators, and are very happy to move on.

The park managers also appreciate that there are other people who want to follow this through and do a little more. They are allowed to, and the area has been arranged for them. They follow some sort of propeller device that churns up paths in the vegetation. Therefore, if you wish to hire a boat (and there are laws about the size of boat allowed, in other words no more than 5 horsepower) you can travel along; and, because it has been arranged for you, you follow the routes that have been made for you. These take you past everything you wish to see. They also admit that people often want to visit a loo after they have been sitting in a boat for a few hours and these have been beautifully arranged. Very often, in this country, we have an attitude towards lavatories which is akin to 'please take your litter back home'!

Therefore, at this particular swamp, 50% of the area caters for all of the people. So, you have got rid of the people who do not know much, people who want to know more and the people who really want to see birds and other animals, and they are cunningly taken past them so they are satisfied customers. An unsatisfied customer is much more likely to do damage, perhaps carving his name on the tree or shooting anything that moves. He is going to be infuriated if the place has infuriated him. Therefore, give him what he is looking for.

I am happy to say that no-one goes into the remaining 50% of the swamp, not even scientists, and it is left in its natural state. We are so used to calling our farmland 'natural' that I think we have forgotten what natural is all about. Natural is being natural, in other words, nothing to do with man. It gets on and does its own thing. They do fly helicopters over the swamp but they fly them at a height and only to see that no-one has set up home. I thought that was a very good example.

Also going through my head today were comments about the Basingstoke Canal. It is very nice that we do care about such things and that dragonflies live there, as do lots of plants, and it is a shame if people in boats damage it. However, it is such small scale relative to what is going on in other parts of the world. I want to tell you about one particular example in another part of the world which might make you wonder why we are wasting our time with it - but I want to show you we are not wasting our time.

The Amazon River is joined by the Tocantins River which itself branches into two - the other river being called the Araguaia River. This may seem a very far cry from everything you have been talking about but it is very much in my mind because next April I intend to travel 1,500 miles down the Araguaia River and on into the Tocantins. The Araguaia is a big river and one of the 20 major tributaries going into the Amazon. At one point you meet the Tucurui Dam. This generates 8,000 megawatts which makes it four times the size of either Kariba or the Aswan high dam.

The Tucurui Dam is 14 km across and it has to be this size not only to cater for the river but for the flooding of the reservoir. No ecologist of any kind was asked for any opinion of any sort before the building of the dam began. There is no fish ladder, which would have cost a mere £10,000 in this billion pound project. Therefore, fish which do migrate in these rivers are unable to go any further. They did ask one or two ecologists, when the dam was one year from completion. It is now complete.

The point of my particular 1,500 mile journey is not only to give me a nice time but is to say that the current intention of the Brazilian electrical company is to dam the entire river. If the entire river is dammed then it will yield 27,000 megawatts - about half of what this country uses.

Every dam will have a huge reservoir behind it and this will flood an area many times the size of England. Therefore, while I was hearing about the Basingstoke Canal, I kept thinking about this example and thinking this is where it's at. At least the dragonflies that you are worrying about are known about. Practically nothing is known about the Amazon. Isn't that where all our concerns should be? Yes, in a way, except that the country belongs to someone else.

However, I think there is a positive side and I think that it is right that we should worry about our canals. The Basingstoke Canal is only a minute piece of country but we should worry about it because if we do not get it right then no-one else is going to get it right. One in 100,000 people visiting that canal may be Brazilian. The message will get over there and something will be done about all the other dams being built and something will be done about the immense destruction of species which have never been identified. Vast quantities of trees are going to go and the Amazon rivers have a hydro-electric potential of 100,000 megawatts - excluding the Amazon itself. This is all going ahead and we, to a large extent, are financing it.

What I would like, coming back to the main subject and another thought, is that there could be some sort of unit for measurement, for human enlightenment. Just as the National Trust man said "Oh Lord, it's August Bank Holiday morning, how awful. We are going to have 5,000 visitors, just think what that will do to the grassland and so on". It is very difficult to measure the other side. We heard that of the 40 birds in difficulty in this country only the little tern has actually suffered from man's increasing encroachment on the countryside.

What about this other unit? I wrote down the word 'pleasies' - a rather hopeless attempt to quantify what pleasure it does give the people, in other words the feeling people get having seen a greater spotted woodpecker. Maybe many of them will say it was nothing, it was just a silly bird living in a hole. However, every now and again there will be somebody for whom there has been some kind of explosion and you have created a naturalist.

I often ask people when I interview them what 'turned them on' to being a naturalist. Did they keep awful things in their wardrobe? I have become very unhappy with recent developments because I think we are stopping many of those proto-naturalists from happening by the introduction of such things as the Dangerous Wild Animals Act. This is

another beef of mine. For example, we only have three types of snake in this country and, inevitably, the one which is of major interest is the slightly venomous adder. You cannot keep an adder in this country until you are 18 years old. Well, I bet all those 'David Bellamys' and 'Peter Scotts' were trying to keep adders in their wardrobes. The adder probably did die and probably died in terrible misery because it had been fed cornflakes, but at least you had manufactured naturalists. I think that is very important. It does not matter to most people. They have found something to do to fill a morning, then they move on to hamburgers at lunch time and a castle in the afternoon.

However, for some people it really matters and it is those people whom you are wishing to convert because they are the people who will really worry about it and will be sitting at CRRAG in 30 years time. They are the naturalists of the future.

Therefore, one can see that maybe a fence has been knocked down, maybe ten Budweiser cans have been left lying about, maybe some cattle did get into the wrong field and should not have done, but on the positive side, which is so impossible to calculate, there has been always good done. If they have gone to Blakeney, or somewhere like that, good has been done despite the tin cans and the rubbish and despite the fact that they wore down a bit of the marram grass.

I thought back to when I was a lad. I was brought up on a farm and we did things because we wished to do them. For example, it was a bit boring searching for peewits' nests in a field which was about to be harrowed, but as children we were always sent out to stick in stakes where we found a nest and the harrower would harrow round the nest and we were glad to see peewits. We liked a certain brambly area on the farm where we could take people to hear nightingales.

Now, as we heard yesterday, there has been far greater encouragement for productivity but I think there is a much more insidious thing happening. Just as conservation organisations make themselves more efficient and have bigger memberships, a feeling starts that you do not have to do it yourself. If you are out in the wilds somewhere and someone is injured you do something about it. In this country you assume an ambulance will be along. Similarly, there is a feeling that you do not have to bother about peewits because it is done by some organisation. We do care but we pass it over. People must realise that all this previous care is less likely to happen now because they feel it has been taken over by somebody else.

I am delighted that people talked here about the future, about creating new things and where we are going to go in the 1990s. I am less delighted when reading some of the material put out. The Chairman of the Countryside Commission for Scotland, in an article called 'Towards the Nineties' (so it should be something sensational), says, "To achieve these aims the Commission is adopting a new approach based on generating action through its professional advice and its financial support". What does that mean? "We intend to promote increased public awareness and to take a positive stand on issues of national importance. We plan to work towards developing and improving....", well I was yawning by this time. There should be much more positive thoughts towards the nineties.

We are going to have less agriculture. We are going to have this great big revolution. I think we should be worrying about the 1990s a lot more now than we are doing. The complacency that was at CRRAG ten years ago has gone but we should be worrying a whole lot more.

Similarly, in the information given by Ian Prestt who was unable to attend this conference, it says "The failure is due to some extent to the nature conservationists." (He is commenting on the failure between wildlife and the people.) "We allow our own specialisation to push overwhelming and sometimes irrelevant detail on an uncomprehending public whose knowledge we overestimate." The Natural History Unit of the BBC, for whom I sometimes work, never says this. Once you have the people hooked on a programme, even though they have never heard of a particular animal before, they can be given unbelievable detail. They will even come back asking for more detail. Yes, a lot of them out there do not know one end of a bird from the other but I do not think you have to think that way.

To go back to the Manchester Guardian, the great CP Scott said, when he was editor, "We must educate our readers up to our own level". That may sound a little snobbish but it is much better than turning it the other way around and saying these people do not understand a blind thing, so let's say, "Watch the pretty birds".

I was very happy to see pictures of St. James's Park, but I do wish some of the people who clip the birds in London would not use garden shears to do the job, leaving feathers sticking out. For my money, everything about nature is good. I like seeing a picture of a bird in a book; I like seeing a stuffed bird in a museum where I can really look at it; I like seeing it clipped in London; I like seeing it semi-tame at Slimbridge and I like seeing it wild where you just catch a fleeting glimpse of it. I like all these stages of nature and I think they should all be catered for.

I do hope you will invite me back in ten years' time. I would love to come back to see how you are getting on, but I quite understand that I will not be here next year!

CLOSING REMARKS

B O'Connor (Nature Conservancy Council)

It is difficult to have a discussion on such a profound and wide ranging talk such as yours. I am minded to ask whether you had the steak beforehand, and that led to the random utterances, or whether you are looking forward to having it as a reward, like your lady with the dog. Is there a direct causal link between the consumption of steak and these utterances?

Well what were they? Space -- let us have more space available for enjoyment, pleasure and recreation in a wildlife context. Let us manage within that not 'the public' but the people, and manage the place in relation to a spectrum of interest and enthusiasm from the very general to the very particular.

Have we a problem of scale in this country? Yes, of course we have. We have to deal with relatively minute areas in comparison with the Amazon, but nonetheless, because they are small it does not make them any less real and immediate to the people who live in an over-used country like ours. Let us hope that the message and the understanding does begin to extend into larger areas and bigger problems.

The measurement of the pleasure that people get from these kinds of experiences, the pleasure unit, is an interesting concept. I do think it is a very important one. Do we know to what extent we succeed in providing what it is that people want? Is it condescending and patronising of us to assume that what we provide is actually what people want? I suspect there is an element of condescension and patronage in the kind of attitude that we, as conservationists, put over. I think we need to take that message quite seriously.

Anthony Smith's final point was one of dramatic change. It is taking place all around us and perhaps most importantly in the 80% of land surface currently occupied by agricultural use. What is going to happen to it? I think there is a huge challenge before us as the people with an interest in wildlife and with an interest in the provision of enjoyment through wildlife. I think it was very helpful to end on that forward looking note which was to think how we are to meet these tremendous opportunities for the future. I am optimistic. I believe that much of the work we have heard about does give us an elegant, well found base from which we can move forward. It is a well understood situation, there are imperfections, but our understanding of how to do things is quite good, being based on a great deal of experience. Maybe there is a need to put a lot of that experience together and make it more readily available and perhaps this Conference has served a purpose in that respect.

I believe we are well placed to meet the challenge of the future and I think it is encouraging that our last speaker should address us so positively towards these new challenges. Thank you very much indeed.

It now remains for me to vacate the Chair and invite Roger Clarke, the CRRAG Chairman, to bring these proceedings to a close.

R Clarke (CRRAG Chairman and Countryside Commission)

Tempted as I am to comment on all the things that we have already commented on several times, I will not! I will turn our attention to more organisational matters rather than the substance of the Conference but I will say that I have come away with lots of ideas and I hope you have found it as stimulating as I have.

Firstly, we should thank the many people who have contributed to the Conference but have not, as yet, received any thanks. We should thank the three Chairmen, Frank Perring, Tom Huxley and Brian O'Connor, for conducting the main business of the Conference. Our thanks go to those who presented the case studies, those who Chaired the case study sessions and those who perhaps had the thankless task of acting as Rapporteurs. Thank you all very much for contributing in those different ways.

Thanks also to Hilary Talbot-Ponsonby, the CRRAG Secretary who, with her small team, has had the pretty substantial task of putting on this Conference, often left on her own to do that job. I am very grateful to her, on behalf of CRRAG and on behalf of all of us, for making it all happen very smoothly and providing us with a very stimulating and interesting occasion. Thank you very much Hilary for all your work.

CRRAG will shortly be running a number of workshop events on a variety of subjects. If you have ideas about things which you would like to talk about in more detail than is possible at this kind of more general occasion, please do give us your suggestions because the workshop programme is an important part of the life and activity of CRRAG.

The report of this Conference will be available by the New Year and will include the formal, as opposed to the informal, versions of the papers and discussions.

Next week some of us meet to plan next year's Conference. I am reliably informed that it will be held in Bristol on 21 and 22 September 1988. If anyone has any ideas about the themes which we might look at another year, those of us with responsibility for CRRAG would be very interested in hearing from you.

Just in passing, I am amazed at the longevity of CRRAG. As a relative newcomer, it is amazing that it has continued as a semi-endangered species all these years and it continues to survive and people can remember what it was like ten or more years ago.

Therefore, your suggestions about the future will be very welcome. I hope you all have a safe journey home.

CRRAG Conference 1987: Attendance

D Allison, Development Officer, Scottish Orienteering Association

T Appleton, Warden, Leicestershire/Rutland Trust for Nature Conservation

R Ashman, Directorate Rural Affairs, Department of the Environment

P Asquith, Senior Planning Officer, Boothferry Borough Council

M Banham, Training Manager, British Trust for Conservation Volunteers

J Bateson, Nature Conservancy Council

L Batten, Ornithological Adviser, Nature Conservancy Council

J Baxter (Speaker), Country Park Ranger,
Wakefield Metropolitan District Council

N Bayfield (Speaker), Institute of Terrestrial Ecology

P Beale, Head of Environmental Studies, Seale Hayne College

L Bee, Ranger, Nottinghamshire County Council

A Beech, Principal, Ministry of Agriculture, Fisheries and Food

P Bennett-Lloyd, Countryside Assistant, Norfolk County Council

S Blackledge, Leisure Research Officer, British Waterways Board

R Broadhurst (Speaker), Forestry Commission

T Brock, Area Leisure Officer, British Waterways Board

A Browne, Principal Planning Officer, Lancashire County Council

R Burden, Group Leader (Countryside Recreation), Dorset County Council

J Butler, Country Parks and Countryside Manager, Wokingham District Council

J Butler, Group Leader (Planning Department), Shropshire County Council

D Campbell, Forestry Commission

D Carpenter, Senior Officer Sport Development, Sports Council

J Clark, Project Officer, British Waterways Board

R Clarke, (CRRAG Chairman), Assistant Director (Policy),
Countryside Commission

J Clegg, Wakefield Metropolitan District Council

M Collins, Principal Officer Research and Planning, Sports Council

R Cook, Chief Warden, Nature Conservancy Council

L Cornish, Principal Research Officer,
Ministry of Agriculture, Fisheries and Food

G Culley, Nature Conservancy Council

R Cumming, Senior Lecturer, Sheffield City Polytechnic

C Cuthbert, Conservation Officer, Hampshire County Council

S Danes, Transcription Servicer, Janssen Services

J Davies, Chairman Planning Committee, Mid Glamorgan County Council

M Davies (Speaker), Regional Officer, East Midlands, Royal Society
for the Protection of Birds

A Driver, Conservation Officer, Thames Water

A Dyer, Countryside Officer, Highland Regional Council

A Fay, Regional Planning Officer, Countryside Commission for Scotland

J Fladmark, Assistant Director (Research and Development),
Countryside Commission for Scotland

M Flynn, Planning Officer, Mid Glamorgan County Council

J Gallacher, Senior Countryside Ranger,
Kilmarnock and Loudoun District Council

R Garner, Planning and Research Officer, National Trust for Scotland

M George, Regional Officer, Nature Conservancy Council

B Goldsmith (Speaker), Ecology and Conservation Unit
Director, University College London

D Goode (Speaker), Head of the Greater London Ecology Unit

R Graves, Countryside Officer, Hereford and Worcester County Council

I Gray, London Planning and Research, Airfields Environment Federation

N Guthrie, Project Officer, Suffolk County Council

B Hall, Senior Assistant Planning Officer, Suffolk County Council

P Hamilton, Warden, The National Trust, Wales

R Hamilton, Senior Assistant Regional Officer, Nature Conservancy Council

A Hams, Principal Assistant - Countryside, Derbyshire County Council

R Hanbury, Environmental Scientist, British Waterways Board

C Harrison, Lecturer, University College London

S Hawtin, Conference Aide, British Waterways Board

J Heap, Senior Officer, Nature Conservancy Council

P Holms, Warden, Nature Conservancy Council

S Hopkinson, Wildlife Division, Department of the Environment

R Howell, Conservation Officer, Welsh Water Authority

G Hughes, Regional Officer, Sports Council (Northern Region)

T Huxley (Chairman), Former CRRAG Chairman

V Hyland, Senior Park Officer, Gillingham Borough Council

A Inder, Planning Officer, Hampshire County Council

M Ingham, Valuation and Access Officer, Peak Park Joint Planning Board

A Jackson, Estate Steward, Cumbria County Council

P Jepson, Countryside Warden, Mersey Valley Warden Service

P JohnLewis, CRRAG Assistant, School for Advanced Urban Studies

P Johnson, Countryside Officer, Countryside Commission

J Jones, Deputy to the Director, Greater Manchester Countryside Unit

A Kind, Land Access and Rights Association

C Kirk, Assistant Countryside Officer, Lancashire County Council

D Kite, Assistant Regional Officer, Nature Conservancy Council

R Lee-Warner, Member of Council, Royal Yachting Association

W Lutley, Field Officer, Ramblers' Association/Open Spaces Society

Cllr MacKinlay, Leisure Services Department,
Oldham Metropolitan Borough Council

G MacQuarrie, Chief Warden, Oldham Metropolitan Borough Council

J Marshall, Senior Planning Officer, Cleveland County Council

N Marshall, Principal Landscape Architect, East Sussex County Council

R Mason, General Secretary, British Orienteering Federation

W McDermott, Assistant National Park Officer, Peak Park Joint Planning Board

A McNab, Partner, Cobham Resource Consultants

R Mitchell (Speaker), Head of Marine Science Branch,
Nature Conservancy Council

R Mitchell, Member of Council, Wakefield Metropolitan District Council

S Morris-Eyton, Land Use Adviser, National Farmers' Union

S Murtagh, Division Planning Officer, Avon County Council

P Newell, Principal Lecturer, Sheffield City Polytechnic

M Nowacki, Countryside Liaison Officer, Doncaster Metropolitan Borough Council

M Nugent, Ornithologist, Nature Conservancy Council

B O'Connor (Chairman), Director England, Nature Conservancy Council

T O'Riordan (Speaker), Professor of Environmental Sciences,
University of East Anglia

M Orrom, Environmental Officer, Forestry Commission

M Owen (Speaker), Assistant Director - Research, Wildfowl Trust

F Perring (Chairman), former General Secretary,
Royal Society for Nature Conservation

G Phillips, Chairman - Leisure Services Committee, Swansea City Council

J Phillips, Park Ranger, Milton Keynes Development Corporation

N Powrie, Member of Council, Dundee District Council

R Prescott, Project Leader, Hampshire County Council

G Reid, Conservation Officer, Dundee District Council

I Rennick, Countryside Commission for Scotland

M Robins, Transcription Servicer, Janssen Services

P Robinson, Project Officer, Cheshire County Council

C Roome, Area Superintendent - Leisure Department,
London Borough of Hillingdon

J Rose, Pocket Parks Advisory Officer, Northamptonshire County Council

D Sayce, Recreation Land Manager, Surrey County Council

M Schofield (Speaker), Assistant Director England, Nature Conservancy Council

L Scudder, Ranger, Nottinghamshire County Council

R Sidaway (Speaker), Research and Policy Consultant, Edinburgh

J Smart, Habitat Management Ecologist, Greater London Ecology Unit

A Smith (Speaker), Freelance Writer and Broadcaster, London

D Smith, Head Ranger, Surrey County Council

M Smith, Cumbria County Council

C Spray, Recreation and Conservation Officer, Anglian Water

N Stedman, Landscape Conservation Officer, Yorkshire Dales National Park

D Stokoe, Chief Warden, Mersey Valley Warden Service

J Sugden, Access and Rights of Way Executive Officer, British Horse Society

G Swiss, Planning Assistant, South Hams District Council

H Talbot-Ponsonby, CRRAG Secretary, School for Advanced Urban Studies

J Tallentire, Senior Regional Officer, Sports Council

G Tatman, Rural Development Adviser,
Ministry of Agriculture Fisheries and Food

R Taylor, Project Officer, Cheshire County Council

J Thompson, Recreational Land Management Officer, Essex County Council

A Thorpe, Member of Council, Wakefield Metropolitan District Council

A Turner, Temporary Project Officer, Bedfordshire County Council

S Ward, Development Officer, Nature Conservancy Council

K Watt, Head Ranger, Cheshire County Council

J Watts, Senior Assistant - Policy, North Yorkshire Moors National Park

T Weston, Conservation Officer, Gateshead Metropolitan Borough Council

J Wilkinson, Education Officer, BBC

G Wills, Countryside Conservation Officer, Devon County Council

D Wilson, Assistant Director, Swansea City Council

J Worth, Head of Recreation and Access Branch, Countryside Commission

B Wright, Access and Conservation Officer, British Mountaineering Council

R Wright, Senior Conservation Assistant, Durham County Council