→ cf.

10 DOWNING STREET

2

Prime Minister

Nigel Corbally Stourton of IBM passed to me this copy of a recent environment speech by Tom Cleaver head of IBM.

The application of the Quality Circle approach to environment (p 10-11) is an interesting angle; and the examples of what IBM is doing in the environment on pages 13-16 are worth a skim.

DM

Some very good points.

SCOTTISH COUNCIL, DEVELOPMENT AND INDUSTRY - INTERNATIONAL FORUM.

28 SEPTEMBER 1989

ENTERPRISE AND ENVIRONMENT: THE REAL AGENDA.

Good morning ladies and gentlemen... it's a pleasure to be able to join you here in Aviemore for your international forum... thank you for inviting me.

Let me say at once that I'm both flattered and intimidated by the prospect before me. Flattered of course, because it's a great honour to be here... but intimidated by the thought of tackling such a huge subject - two subjects - as Enterprise and Environment in some 30 minutes... it's a bit like trying to boil down the Book of Genesis into a catch-phrase.

Perhaps I should start by telling you just what I will try to cover in the next few minutes. At least then, I shall have the excuse that there are large parts of the issue that I never intended to cover anyway.

First: I'd like to examine why the subject of the environment - however you care to define it - is an issue of such significance today.

Second: I want to touch on what for me are the biggest problems at the global level... and then I want to move on to the question of what we as businessmen might be thinking about, and doing. And in that respect, I want to suggest three things: a philosophy, a method and a policy that could be implemented.

And then I'd like to give you a couple of practical examples of environmental enterprise from my own company - IBM - showing how we are addressing some of the problems which in fact all businessmen are facing.

But before all that: just why did I accept your invitation? I'm neither professional environmentalist nor scientist, neither do I work in an industry particularly associated with pollution - although we do have our share of problems as I shall explain.

So why did I agree to speak, and why did I accept the invitation of the Prince of Wales to chair the Business in the Environment Target Team?

There are three answers.

I'm a concerned citizen, and a parent who increasingly wonders what sort of world my son and his family will have inherited when he reaches my age.

Secondly, I'm Chief Executive of IBM UK, and as a British businessman I know that my company depends on a healthy social and economic climate to continue to thrive, and I recognise that business is becoming increasingly global as barriers to trade continue to come down.

I also see an increasing appreciation that environmental problems, too, recognise no boundaries. And I see that the science of economics, the

art of management of which we are all practitioners, and the sciences of the environment are all moving closer together.

So that as we approach the twenty-first century, we are all coming to realise that damage to the environment means damage also to the social and economic fabric of society - the fabric of society on which my business and all your businesses depend.

And thirdly I'm concerned for reasons of enterprise - I see a business opportunity. The information technology industry has a very special role to play in helping scientists interpret just what is happening to our planet and the natural systems which support its life: remote sensing; geographic and climatic modelling; image processing - these tools and techniques to gather, process and manipulate information are increasingly vital to the task of investigating the way our world works.

Those same techniques will be key to the future management of the world's resources, a task which in the future will demand more investment if there is to be any prospect of peace and harmony in a world of more than 8bn in my son's lifetime.

On three levels therefore, I am concerned: as citizen; as businessman operating under a licence from society; and because of the relevance of my industry to the issues.

But the issues are so big. Where does one start? And just why is the subject of the environment so important today?

Quite simply, it's because we know more: because scientists have experimented and measured and studied, and drawn conclusions. Those conclusions have been reported and commented on as never before: the past year or so has seen quite unprecedented media coverage of environmental issues.

Some has been factual. Just a couple of weeks ago, 'The Economist' magazine carried a 28 page survey of environmental economics called 'Costing the Earth', which included incidentally some 14 pages of advertising by companies claiming varying shades of greenness.

Some has been controversial: 'Nuclear flasks on local railway' was a recent headline reflecting a current concern in Edinburgh and the Lothians.

And predictably of course, some has been entirely dismissive: "Greenhouse Defect - it's good after all say U-turn scientists". That was 'Today' newspaper in August.

The concern isn't just reflected in the headlines or on TV. The European elections demonstrated quite clearly the real concern of the voters. Never mind that many people may not have been fully aware of the real implications of the policies for which they were voting; never mind the politicians who seek to dismiss the trends; never mind the north-south differences: the fact is that 12 months ago a 15 percent green vote in the UK was scarcely imaginable.

There's more: you may have seen the survey in 'The Times' which showed how UK environmental organisations now rival the trades unions in both membership and annual income... membership has grown from 1.8m in 1980 to 3.8 million today; income has grown from £38m to £163m today.

And just a couple of weeks ago in the Dutch general election, voters had to decide a question that others all over the world will soon face: how much are they willing to pay for a cleaner environment?

Even the most shortsighted of ostriches in the stickiest of sand can hardly fail to recognise that environmental concern is here to stay: our actual survival is no longer the preserve of alarmists.

"Time" magazine quoted the Book of Ecclesiastes: "One generation passeth away and another generation cometh: but the earth abideth forever".

Perhaps not...

Until recently we have made the assumption that we - and our descendants - would be able to continue pursuing the goal of steady economic progress, of steadily making our lives more comfortable, without disturbing the equilibrium of the world - without upsetting the balance of nature.

'In a very short time that comfortable assumption has been shattered'. That's what Mrs Thatcher said in her speech to the Ozone Conference in March.

That same technological revolution that produced unprecedented levels of economic growth and prosperity for the developed world has also produced immense and growing costs for the planet as a whole: costs in terms of the degradation of our environment; costs in terms of huge risks to human health.

That is the challenge we face - the challenge your forum faces.

It is brought about of course by a whole host of individual but interrelated problems.

The burning of fossil fuels - coal, gas, oil - is building up carbon-dioxide in the atmosphere, which is thought by many to be bringing about the gradual warming of the planet - the conventional wisdom is that the global mean temperature will rise between 1 and 2 degrees by 2030. If this happens, it will affect the world's agriculture; it could mean the melting of the ice-caps; it could bring about a rise in sea levels. No wonder the people of the Netherlands are concerned - their country is not called the Low Countries for nothing. But they're not alone: one third of humanity lives within 40 miles of the sea.

Ozone depletion is no less serious. Depletion of the ozone layer - which filters potentially harmful solar radiation - was first detected in 1985 over the Antarctic. Earlier this year, a similar effect was found over the Arctic. It's caused mainly by the release of chlorofluorocarbons - CFCs - into the atmosphere from industrial processes, from aerosols and from fridges and freezers. The seriousness of this problem is reflected by the Montreal Protocol and the Helsinki Accord which call for urgent reduction in CFC use, and total elimination by the year 2000.

The scientific evidence on both the greenhouse effect and ozone depletion is still far from complete. There is a time lag between cause and effect: the oceans seem to be slow to warm, and CFC gases seem to be slow to affect the ozone shield. But equally, corrective action will be slow to take effect: it's said that even if CFC release were to end today the ozone layer would not return to normal until the second half of the next century.

I've chosen to discuss only those two global issues because time doesn't allow me to do more. There are many other important environmental problems. In many cases they share the common cause of overpopulation and poverty.

Today we share the world with about 5bn people. It's predicted there'll be 6bn by the year 2000; 8bn by 2025. It's thought that population will stabilise at between 8 and 14 billion during the late 21st century: and most of that growth will happen in the third world. The countries which

will house those teeming millions will face - are already facing - enormous pressures to industrialise. Can they possibly follow our example when, as we've seen, our activities have already damaged the world?

I've deliberately skated over the main problem areas. You know what they are as well as I; it may be that today's papers carry news of more research which might slightly alter the conclusions, and in any case there are many books and magazine articles which describe them better than I can.

But let me make one point about that incomplete list of problems. It's this: that - melodramatic as it may sound - the fate of the world will lie to a very large extent in the hands of that majority of mankind we conveniently term the Third World. We in the UK can talk of global issues: but we need always to remind ourselves that we're just 1 percent of the world's population - just 56m people in the whole of the UK; 5m or so in Scotland.

China alone has 1.2bn people today. As we've so tragically seen this year, that country faces enormous demands for improved living standards - for better homes, for cars, for fridges and fly sprays. China has the means to develop - it has fully one-third of the world's known reserves of coal. But what effect on the world could the burning of that coal have? And will all those fridges and fly-sprays use CFCs?

Our national policies won't save the world. But we can set an example: an example of best practice; an example of leadership. That's of vital importance... because leadership is sorely needed.

These then are some of the key issues... it's at this point you may be forgiven for concluding that they're all too big to be solved in Aviemore on this September day. And you'd be right...

On the other hand you could adopt some extreme views, like the green-fundamentalists who eschew all industry and dream of a return to a tribal and pastoral society.

But we are professional managers, familiar with adopting a rational and objective approach to problems... and so it seems to me there are three things we should be doing.

First, we should determine the philosophy of our approach.

Then we should choose a method to enable us to respond effectively. And third we should establish policies which enable us to use that method.

Philosophy; method; policy... and applicable to problems both global and local.

The philosophy, I would suggest is not hard to find.

It was the Brundtland Report - called 'Our Common Future' - that defined the concept of sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Or, as the economist Professor Pearce put it in his report to the Department of the Environment more recently: "the well-being of today's generation should not be increased at the expense of future generations."

It is a simple aim and a sensible approach: conservation and development must exist side by side... the continuing role of industry in creating wealth, and economic development, are essential if the increasing needs of the world - and the increasing ambitions of its growing population - are to be met.

But if the concept of sustainable development can provide us with a philosophy, just how might we go about ordering our conduct to reflect it?

I believe we can find a model in the standard approaches of the quality movement. No doubt many of you are familiar with these: we have adopted them wholeheartedly within IBM.

In summary, the first requirement is for management commitment. Then the process moves through training and awareness stages to the pivotal stage of measurement - the gathering of accurate data to achieve a proper understanding. In this respect, it's worth noting that the environment

has been poorly served so far: the need for more accurate measurement must be one of the highest priorities for the future.

Having made the appropriate measurements and obtained accurate data, the next stage in the quality programme is to assess failure and concentrate on prevention rather than cure... again, I would argue that this can equally be applied to environmental matters.

Finally, the quality approach requires continuous and rigorous measurement and testing, with results fed back to achieve continuous, incremental improvement.

I have deliberately oversimplified the approach, yet I do believe it is one which could be applied consistently by large and small companies to achieve significant results.

But to achieve any results at all, there is a third prerequisite: the establishment of an environmental policy by every organisation, a policy that is phrased so that it can genuinely be measured over time.

A philosophy; a method; a policy...

I'd like now to spend a few minutes telling you about some of the things we have been doing in IBM.

We have had an environmental policy since 1971, and it can be summarised in these four points:

First, to meet or exceed all applicable government regulations on the environment in all our locations - let me here remind you that we operate in some 130 countries in the world.

Second, to set our own stringent standards if and where no government standards exist.

Third, to use non-polluting and energy-efficient technologies wherever possible in designing products and processes, on the very simple principle that if you don't generate pollution, you don't have to manage it.

And fourth, to help governments and other industries develop solutions to environmental problems wherever our knowledge and experience might be helpful.

Let me show you how this policy is being applied, first at the global level.

I mentioned earlier my conviction that information technology would play an increasingly important part in measuring and managing the environment. It was IBM UK that led the initiative last year to make what is probably the largest-ever corporate donation to an environmental cause. £3.6m worth of data processing equipment and the latest software was donated to the United Nations Environment Programme's Global

Resources Information Database - called GRID. It'll be used in Geneva and Nairobi, with smaller machines in 15 African countries.

This is a complete geographic and environmental information system, which converts data gathered by satellites and other sensors into map form, which is then made freely available.

Data about the geography, geology, vegetation, population and so on, can be assembled and overlaid to give a complete picture. National governments, international bodies, institutions and universities can create an environmental data base to help them understand what is happening in any region or country. And increasingly, GRID is becoming an important tool for economic planning in developing countries.

Reinforcing our commitment to the study of environmental science, in August IBM Europe announced a £10m investment programme for our Scientific Centre in Bergen, making it the international centre for IBM's work in environmental and sustainable development activities.

Now let me give you an example of a specific application of our policy.

Ever since they were first discovered, the electronics industry has been a large user of CFCs. Worldwide we in IBM use about 6000 tons a year, although we do recycle about half.

Since the Montreal Protocol, we have been gradually reducing our use of CFCs with the aim at first of eliminating them completely by the year

2000. I'm pleased to say that we've made good progress: within the last month we've declared our intention to phase out all CFCs in IBM worldwide by 1993.

CFCs are used for many different purposes. Their elimination requires many different approaches.

At IBM Greenock our people have made especially good progress. For instance, we did use CFCs for cleaning machine covers, and replacements for such uses were not too difficult to find - even good old-fashioned soap and water has been found to be effective in some circumstances.

But other uses require great ingenuity - and heavy investment. For instance, one use at Greenock is to clean solder flux from printed circuit boards.

Replacing CFCs with a water-based cleansing process has involved an international effort to develop an appropriate water-soluble flux, and the local development of a multi-stage water-jet washing process and high-speed drying techniques, using a complex arrangement of nozzles to direct warm air between and beneath electronic components.

So it's a matter of great pride for me that I can tell you that from the middle of next year at the latest - apart from use in closed-circuit refrigeration plant - all CFCs will have been eliminated from IBM Greenock.

That's a success story I'm proud of. But I must add a word of caution. As I said, CFCs are used for many different purposes and their total elimination will not happen overnight. The development of new products which don't require CFC cleansing, the design of new processes and replacement cleaners, all this will inevitably take time and will require heavy investment. But it can and must be done.

Having now mentioned our Greenock plant, let me give you another example of concern at the local level.

Many of you will know that the Spango Burn runs through our Greenock site, and that we have taken great care to protect it through all the development which has taken place.

Our Corporate policy requires that environmental impact assessments are carried out before we acquire or dispose of a site. Such surveys result in, for example, all chemical storage tanks having secondary containment facilities, capable of holding one and a half times the tank capacity in the event of leakage. Similarly, all chemical stores and processes are designed to segregate chemicals into small batches to minimise hazards from spills.

And all our chemical stores must conform to three rules: they must be accessible; they must be inspectable; and they must be testable.

Simple rules... though they do of course cost money to implement. But what is the eventual cost of, say, a spillage, compared with the cost of making a tank accessible... of inspection... and of testing?

Allow me one more example, this time concerned with energy conservation.

Our energy conservation policy was established in 1975, and it's now used to set overall targets. The most recent target for us in the UK was set in 1985, and was to reduce our energy requirement by 20 percent by the end of this year.

Our programme to achieve this has been broken down into roughly two parts: the easy things, and the difficult things.

The easy things really are easy: switching-off lights and air conditioning when they're not needed; installing relatively simple energy management systems. For instance at our head office in Portsmouth, the office lights are all switched off at 6pm every evening: this isn't to encourage people to go home! Anyone still working can turn them back on, but in areas that aren't occupied they stay off till the next day.

The more difficult things are those which tend to be more expensive, so they have a longer pay-back period: for example, the installation of high-frequency lighting, increased insulation, building management systems, and so on.

But the combination of measures we've taken has enabled us to beat the Corporate target: by the end of '88 our compound savings amounted to 22 percent, and that'll add up this year to £2.6m.

I hope those examples of the working of our policy serve to demonstrate how environmental concern can be converted into environmental action. It seems to me that the adoption of similar responsible and thoughtful policies shouldn't be too difficult for any business, large or small.

Let me now turn very briefly to the Business in the Environment Target Team that I mentioned earlier. Our first meeting isn't until October, and I don't wish to pre-empt that. But I believe one of the areas we must examine closely is how we might help to develop a pattern of responsible environmental behaviour that businesses could adopt, building on examples of best practice that we can already see emerging. Clearly, there are many possibilities to be examined: the assignment of environmental responsibility at board level; environmental statements in annual reports; the publication of policy; involvement of employees; obligatory environmental assessments prior to land development and so on.

But I hope the Target Team will also want to examine carefully the whole area of environmental economics: when we use man-made assets or equipment or buildings we're careful to write-off that use as depreciation. But we have always made use of our natural resources - coal, fish, the rain-forests, the rivers, the atmosphere - as if they

were free, when in fact they serve the most basic of economic functions: they enable us to live.

However much the Target Team does achieve, I am sure it will help to raise awareness of the issues facing us all at every level in industry.

A philosophy; a method; a policy...

Ladies and gentlemen, you have many eminent speakers to hear: specialists in their respective areas, and with insights of great value on many aspects of the subject. I hope I have been able to provide a backcloth for their contributions.

In all this there is a single certainty: that our continued survival will require us to accept immense changes, and we shall need to look with fresh eyes and with new insight at many of the aspects of life we have always taken for granted as unchanging.

This change in attitude provides huge opportunities for enterprise, because the new form of economic growth - sustainable growth - will demand new products, new methods of production, new services, new means of monitoring... in fact an entirely changed approach to business.

Many companies are already exploring ways to benefit from the new environmental enthusiasm. Some have seen a marketing opportunity for environment-friendly products. Others have realised that they have skills and techniques and expertise which can be sold to companies which

desperately need them. Yet others are realising that they cannot afford to do nothing: Tom Burke, Director of the Green Alliance is talking good business sense when he says that 'Good people don't like working for a company with a bad environmental image.'

The great challenge for the businessman is that these matters transcend the boundaries we are most familiar with... the national boundaries - does industrial development here lead to industrial pollution there?... the economic boundaries - does GNP growth here mean a reduction in total non-renewable resources everywhere?... and the time boundaries - does this quarter's growth shorten mankind's existence on earth?

This, ladies and gentlemen, is the real agenda... it is not enterprise and the Scottish environment... it is not enterprise and the European environment... it is enterprise and the global environment.

We have only one world. It is not disposable.

Nothing could be more apt than your title today... we must have enterprise and environment... or we shall surely have neither...

Thank you.