

DAVID DREWRY

Edited transcript of a recording of David Drewry interviewed by Chris Eldon Lee on the 17th November 2010 and the 6th January 2011. BAS Archives AD6/24/1/107.
Transcribed by Andy Smith, 9th October 2017.

Part One

[Part 1 0:00:00] Lee: This is David Drewry, recorded at his home in Cottingham, East Yorkshire, by Chris Eldon Lee, on the 17th of November 2010. David Drewry, Part 1.

Drewry: David Drewry, born 22nd of September 1947 in Grimsby, Lincolnshire.

[Part 1 0:00:19] Lee: So you are nearly home again?

Drewry: Ironically, yes. That's a funny thing in life, isn't it? You never know where you are going to end up and I wouldn't have expected to have been so close but then when I was growing up, the Humber Bridge did not exist, and if you went across the Humber, it was like going overseas because anywhere you went by boat was going overseas. So Yorkshire or East Yorkshire was a bit alien.

[Part 1 0:00:44] Lee: And what sort of childhood did you have? Were you privately educated or did you go to a local school?

Drewry: No. I went to a private junior school and then I went to a bog standard secondary school. It was a streamed comprehensive in which they had a grammar part and a comprehensive part and I enjoyed very much my time there.

[Part 1 0:01:05] Lee: What led you into sciences?

Drewry: I just think a natural background interest in what makes the world work. I was always interested in the outdoors and so I think that is what drove me eventually to become interested in natural history as a scientific subject.

[Part 1 0:01:22] Lee: And what was your first brush with the Antarctic? When did the word Antarctic first impinge itself on your mind?

Drewry: Probably not until quite late on in my life, and I suppose the real trigger was as an undergraduate when at the end of my first year / beginning of my second year as an undergraduate, I was studying physical geography and geology. And a tutor, lecturer, that I had, came along and said 'David, you might be interested because there is a colleague of mine in the Department of Engineering who is taking an expedition to Iceland, and you might be interested', knowing that I had an interest in the outdoors. So I was given the name of this person who was called Keith Miller, who became a very important cog in the process of exploration of areas in particularly with regard to the Royal Geographical Society. So I went along to the Department of Engineering and met Keith Miller and, lo and behold, this expedition wasn't going to Iceland; it was going to Greenland, which was even more exciting.

[Part 1 0:02:42] Drewry: So it didn't take much to encourage me to sign up straight away, and my role in the expedition, which was going to be primarily a climbing expedition plus to do some science, and I was going to work up the scientific programme, which I developed some hugely inflated over-ambitious sort of undergraduate type of research programme or scientific observation programme. And we went off the following year, my second year, to Greenland, had an absolutely fantastic time. In fact some of the science worked out quite well and I got my first serious paper from writing up one of those studies that we did. But there was one of those experiences where the magic of a remote icy place like East Greenland ... We were in the Staunings Alps which is a really incredible mountainous glaciated terrain, really challenged me as to what I wanted to do later on in my career and from there on I really wanted to be involved in something similar. And that's when one looked around and saw that the Antarctic was a real possibility.

[Part 1 0:03:58] Lee: So you had a hankering from your student days?

Drewry: Oh very much so. I think that experience in Greenland determined me to follow a further study and research and to be involved in work in the polar regions generally.

[Part 1 0:04:15] Lee: When did you actually make it South?

Drewry: Not long after. When I graduated, I had already applied for, and had been very lucky in getting an NERC PhD studentship, and the only place really to study what I was interested in was glaciology, which was the ice in the polar regions, was in Cambridge at the Scott Polar Research Institute. I had actually been tempted also by a couple of places in the US and in Canada, Ohio State University (the polar research institute there) and also the University of McGill had an Arctic research laboratory up in Labrador and I was toying between these. But when I went up for an interview and was lucky enough to then be accepted for a NERC studentship at the Scott Polar, it was very clear that that's the way things were going to go. I graduated in the summer and by the end of the year, I was in the Antarctic because the project was geared to a geophysics programme, airborne geophysics programme of sounding through the ice, and there I was, and it was just a few months and I was in the Antarctic. And frankly, one would have to say, one never looked back after that.

[Part 1 0:05:40] Lee: So were you there as a member of BAS or not?

Drewry: No, this was a programme generated by the Scott Polar Research Institute, which had a very strong glaciology programme. Probably it was the strongest place to study glaciology in the UK, BAS notwithstanding, at that stage. It was led by the Director called Gordon Robin, who was an outstanding physicist, and it was also being developed by Stan Evans who later went on to the Engineering Department in Cambridge. They had created a new robust method of sounding the ice which was using radio waves, which would be bounced through the ice, transmitted from an aircraft or a moving platform over the ice. A combination of the technique with a programme supported by the Americans who had long range aircraft, gave the capability of being able to sound over large areas of the Antarctic on a scale geographically, and at a level of detail, which had been quite unprecedented. So I went in there as a PhD student. There was a project to do with looking at the bottom

of the ice and the terrain underneath the ice, and what we could determine about the configuration and the evolution of the Antarctic continent underneath the ice. That was my PhD project and so I started off basically as a tea boy, as a raw green PhD student in the Antarctic, and it was just wonderful.

[Part 1 0:07:20] Lee: Whereabouts were you being accommodated? Where were you staying?

Drewry: We were part of the US Antarctic Program, so we travelled across from the UK to the States and those first occasions, we met up with some of the people who would help us: the National Science Foundation in Washington, the US Geological Survey who were going to provide us with maps and other geodetic information that we needed. And we then flew with the American military, the Military Airlift Command (MAC), and we went out of Andrews Air Force Base outside of Washington and then we had to fly to Travis, outside of San Francisco, and then we had to fly across the Pacific first of all to Honolulu. We always had a crew stop in Honolulu.

[Part 1 0:08:07] Drewry: So we would have a day out on the beach in Oahu, and then we would fly on and we might land in Pago Pago (American Samoa) to refuel there, because in those days there would be short hops for even military aeroplanes. And then down to New Zealand, because that was the staging point for the US operations out of Christchurch in South Island New Zealand. And then we might spend two or three weeks in South Island New Zealand at Christchurch configuring the Hercules the C-130 which we were going to be using for our radar sounding activities, fitting equipment in. We went through several generations of aircraft with different sorts of antenna configurations underneath the wings to transmit the radio waves. Then we would fly down to the Antarctic and we would be based out of McMurdo, the big American base in the Ross Sea, and from there we would spend several months flying all over the Continent.

[Part 1 0:09:03] Lee: Was it as good as you hoped it was going to be?

Drewry: Infinitely better, and I have to say that I went down on that programme, which lasted for a ten / twelve year period, and then of course I was down with BAS in the Antarctic, and I have been down subsequently on other trips. I never ever fail not to be uplifted by entering the Antarctic, seeing the Antarctic and just experiencing what it has to offer. I never ever fail to be stimulated by that.

[Part 1 0:09:41] Lee: But just so I get this right, there were subsequent trips to the Antarctic before you became the Director of BAS, before you joined BAS?

Drewry: Yes, I mean I worked on this programme, the radio echo sounding programme, for a ten year period and I had about six trips to the Antarctic on the American side, down to McMurdo. I had started off as being the raw PhD student and I ended up running the programme. That ended in 1979 in terms of the field programme but in that time I had seen a huge amount of the Antarctic. I had visited many bases with the aircraft, been over to Halley, so I had actually seen the very earliest Halley bases including the IGY station which was still accessible by a very deep shaft that you had to go down on a metal ladder. Russian bases, American bases

and others all over the Antarctic. I felt very very privileged to have been able to have seen so much. I flew down every one of the major outlet glaciers of the Trans-Antarctic Mountains. It was absolutely a wonderful time. So that was my Antarctic experience prior to going to BAS in 1987.

[Part 1 0:10:55] Lee: So when the advert appeared in the press, and you saw it, was it an obvious thing to go for? Did you wonder ...?

Drewry: Well the interesting thing was that of course I think we all knew this was coming up because Dick Laws, we knew he was going to retire. I was then at the Scott Polar Research Institute still but in the incarnation of the Director there and I had become the Director about three years before. I was having a wonderful time there in the University, outstanding people I was working with but when Dick's retirement was heralded, there was an obvious opportunity there for me to maybe move just across the other side of Cambridge to BAS. So I discussed this with my wife and I pondered the issues. In fact it was really a no-brainer. It was a logical career step for me. My only regret was that I had not spent as much time leading the Scott Polar as I would have wished to. If I'd had five or six years, that would have been probably about the right amount of time. It came after three and I always felt I just had let down some of my staff there by scooting off a little bit prematurely, but nevertheless I was still in Cambridge. I was still able to work with and interact with people at the Scott Polar and therefore when the official announcement was there, I threw my hat into the ring.

[Part 1 0:12:35] Lee: What do you remember about the interview?

Drewry: It was on the day of the first publication of *The Independent*. I may have this wrong but I think it was the 19th of October¹.

[Part 1 0:12:50] Lee: Did you buy it?

Drewry: Of course I bought it because I thought 'I had better get that in, and look at it and I will have that up my sleeve as an element that I can show my being up to date and with the way in which the media moves.' So it was held in Great Portland Street which was the NERC office suite in London at that time, and I remember there was quite a large interview panel including at that stage the what were called the Super Directors in NERC which was for the Marine and Atmospheric Sciences, Earth Sciences and the Terrestrial Life Sciences. There was the Secretary to NERC Council, John Bowman, the Personnel Officer who was Eileen Buttle at that stage. And I think probably they had a couple of other people in there who I can't recall. But they had a panel, the usual sort of panel of about 5, 6 or 7 people.

[Part 1 0:13:57] Lee: Were you roughed up, or given an easy ride?

Drewry: I would say it was pretty good. There was no dangerous ground, there were no real bear traps in there and you go in and you give your best and hope that it will come out well, which it did.

¹ According to *Wikipedia*, the first issue of *The Independent* was published on 7th October 1986.

[Part 1 0:14:25] Lee: How did you find out you had got the job?

Drewry: I think it was Eileen Buttle who rang me, because she was looking after the interviewing as Director of Personnel. I think it was her. It might have been John Bowman, I can't remember.

[Part 1 0:14:43] Lee: But it was a phone call, anyway?

Drewry: It was a phone call, yes.

[Part 1 0:14:46] Lee: What was your reaction when you put the phone down?

Drewry: Great! That was an excellent feeling and I felt that a new chapter in my life and career was opening and it was going to be exciting and I really felt up for it.

[Part 1 0:15:03] Lee: It was a new chapter for BAS as well, because you were the first occasion they had appointed a Director from outside the organisation.

Drewry: Yes.

[Part 1 0:15:14] Lee: Were you aware of that subtle difference?

Drewry: Oh yes, and of course it wasn't as if BAS was a closed shop to me because having been working in the Antarctic, actively working for ten years, and doing research and publishing for the whole of the period up until that time. I had colleagues and friends in BAS whom I knew well, so BAS existed, in my mind, as something that was integral to Antarctic activities in the UK. And so I was alert to some of the sensitivities that there might be there. But equally well of course, a lot of the people in BAS knew me as well in various guises because I had been around in Cambridge for as long as BAS had moved into Cambridge when they were consolidated out of London and their other venues. So yes, I was aware I was coming in from the outside but I felt that I wasn't an unknown quantity and that people had an idea of my background and what my strengths were and the sort of person that I was.

[Part 1 0:16:44] Lee: You made a point, I gather, of getting to know people on a one-to-one basis and mixing in at lunchtime and that kind of thing. That was a conscious decision on your part to get to know the organisation intimately?

Drewry: Why wouldn't you do it any other way? At the end of the day, the personnel are the key and getting to know them over lunch or other social occasions, and just generally keeping your ear to the ground, allowing people feel comfortable in saying to you about issues and being able to also give people your opinion on matters. Having a good interchange, but also coming in as somebody from outside, it was very important early on to go round and really meet people in the sense of not just a casual meeting but understanding what they wanted to achieve through their activities in BAS.

[Part 1 0:17:56] Lee: So this was perching on desks, looking at computer screens and discussing work with people?

Drewry: Yes, oh yes. Dropping into their offices on a casual basis and just generally wanting to know more about what they were doing because that also excites me, what they are doing. And really my role then, as it had been in many other ways, has been to assist them to achieve what they wanted to achieve on behalf of the organisation overall.

[Part 1 0:18:27] Lee: What kind of state was BAS in when you joined it, I was just wondering? Because presumably you were going in there also to assess the condition of things at BAS and what David Drewry's reign might be able to do to improve things.

Drewry: Yes. It's a funny old business, you know, taking over an organisation, any organisation and I have been through several and they are all different. I'd had some meetings, at least a couple of longish meetings with Dick Laws beforehand and he told me how he saw things and we had some frank exchanges about his view of what some of the pressure points were, some of the issues. Nevertheless, the first day I started, in May 1987, I sat down at my desk and as far as BAS was concerned, business just continued. I had to struggle to OK all these papers coming in. Well what are they? But my PA, Marge Hallett, was absolutely fantastic. She was able to steer me in the first few weeks as to what was important. John Bawden, the Head of Admin, equally very very helpful in that regard. But the issue of where BAS was, despite my rather indeterminate situation at that stage, was I think, a pretty strong position, because (this is 1987) it's only five years after the Falklands War. The Falklands War was an absolute turning point for BAS, and it certainly set the scene for the next couple of decades, certainly over my period as Director.

[Part 1 0:20:30] Drewry: And I remember Dick Laws saying to me 'Whatever NERC wants to throw at you, do remember that BAS as an organisation is extremely strong and robust.' To some extent these were quite prescient words. And so I came into BAS, which had been receiving additional funds for its scientific programme and there were a number of projects that were emerging now from some sort of planning process but mostly were not yet fully funded. The only thing that was fully funded and was underway was the construction of the new headquarters on Madingley Rise – at High Cross rather. So I felt fairly confident about BAS. Indeed of course it had been my view before going into the job, that you didn't want to take over an organisation that was in decline, or ailing. You actually wanted to join something that had a future and it was clear that BAS did and it was going to continue to flourish. So I felt that BAS was an organisation that was going to continue to go somewhere and it was a matter of then how we steered it and how we achieved all of the goals that were emerging. But we had to develop probably a clearer, better articulated and scientifically formulated strategy in order for that to be successful.

[Part 1 0:22:14] Lee: So you weren't there to mind the shop; you were going to impose – not impose, that is the wrong word – going to apply some new thinking, some new direction to BAS?

Drewry: I would have been very dissatisfied if that hadn't been the case. I wanted to understand what BAS did in detail, where people felt its strengths were, where they felt, as members of BAS, it should be going. And drawing those things together,

applying my view in then a corporate way within BAS, to map out a strategic direction which would serve BAS well in the forthcoming years.

[Part 1 0:23:02] Lee: OK. We are going to look at some of the individual issues a little bit later on. Let's leap forward seven years then, when you decided to step down. What do you feel you had done in those seven years which were your major achievements that you were proud of?

Drewry: I think I left BAS in better shape than when I found it, which had always been my objective. Better in what ways? Well I think we had succeeded in moving BAS into the next era of Antarctic science, and whilst the science has to be the overriding goal, it also articulates with BAS's role as being the British presence in the Antarctic, and therefore the international political role that BAS plays. I think when I left, BAS was undoubtedly the major player in Antarctic science after the Americans. Certainly in quality per unit input, it was better than the Americans. For all the Americans' money, the amount of science that was achieved per dollar input, compared with our pound or dollar equivalent, was less and certainly far greater than most of the other nations. So I think we continued what was already an upward trend in that when I came into BAS, and consolidated and really entrenched it as BAS as being a key player, if not the key player scientifically, in the Antarctic, certainly in terms of quality.

[Part 1 0:24:54] Drewry: And also we had by that stage developed the new Council of Managers of National Antarctic Programmes (COMNAP) and BAS had been seen as a very important player in that organisation. Equally well in the scientific community for Antarctic research, BAS had membership or chairmanship of a number of the committees and was in the driving seat to set that overall and overarching scientific plan. And certainly my antennae were that BAS had been in that position. I was very keen and even allowed some of my key staff to spend more time than probably they should have done in roles which allowed them to play this international activity. But the other thing I felt that I left BAS with was the new infrastructure and in there I suppose was a tale because at the end of that period we had rebuilt Halley, so Halley-V on its jackable legs was up and fully operational. We had built the *James Clark Ross* and it was operating in the Antarctic as one of the best scientific platforms around. We had built the runway at Rothera and put in all of the hangars and fuel farms and made that a really excellent facility. We had acquired the Dash-7 aircraft to make the intercontinental links either between the Falklands or South America.

[Part 1 0:26:40] Drewry: The Headquarters had been completed and finished and we had done refurbishment and upgrading to a number of the other bases in the Antarctic. So I felt that we had really achieved what the long term goals were but there had been a cost to that and it was that it put a lot of people under a lot of pressure at the time. Because if I go back then to when I came in, there were a number of these plans that were still embryonic. 'Yes, we would like this new ship' and there were some designs. 'Oh yes, a runway ...' because this had been the list that Dick Laws had been asked to provide in order to consolidate the British presence in the Antarctic as the underbelly of the South Atlantic post Falklands. So Dick and colleagues had come up with a list which was pretty, I suppose, ambitious, wish list, and one that I embraced because I could see that all of these things had been built on a very strong basis of wanting to enhance the science and the presence.

[Part 1 0:28:02] Drewry: But how were we going to achieve all of this? We were already five years down the line from the Falklands and the only thing was the building going up. At some point the curve turns over and I was fully aware that we only had a limited amount of time in order to get the money and achieve these goals, and when you are talking about a £45 million ship and all of these units are costing maybe £10 million/ £20 million for runways whatever, you have to be clearly persuasive in order for that money to continue to flow even if it is promised. And also, if you did them one at a time, so you would start on the ship, and get the ship built and then you would go on the runway, get the runway done, at some point you would run out (a) of money, because people would have seen that BAS had had its fair share, or you would have run out of time because politically the wheel would have turned and other things became the priority.

[Part 1 0:29:11] Drewry: So I was seized very early on that we had to do all of these simultaneously, so we had to do them in parallel because we could not afford to do them in sequence because something, one or two of these projects would fall off the end and they would never get achieved. So it did put a lot of people under pressure, particularly in the logistics and the design and the planning arena. But people stepped up to the plate for that because I think they could see that this was how it had to happen but I do remember reflecting that we had got to do all these and do it now. And we did. We got them all and I think for me, that was hugely satisfying, that we managed to get them all in place.

[Part 1 0:29:58] Lee: Was there any resistance from the Old Guard, shall we say?

Drewry: Who do you refer to as the Old Guard?

[Part 1 0:30:05] Lee: Well I suppose some of the more senior scientists who had been there a long time and couldn't quite see the need to modernise BAS in such a dramatic and speedy way. Were you aware of that? I am not suggesting that ...

Drewry: No no. I would say that I was not aware of any significant negative view about the need to move forward with these developments. I mean there might have been some choke points from time to time but they were mainly to do with mobilising internal human resources rather than impediments by people's attitudes being negative.

[Part 1 0:30:53] Lee: So the kettle was simmering and you had to make it boil, basically?

Drewry: Yes, but the real issue was not to do with any internal issues. The real problem was with the NERC because NERC sat between BAS and the money, through what in those days was the Department for Education and Science. There had been a clear Government signal and it had come all the way from the Prime Minister's Office, that BAS needed to be enhanced. Now of course how a Prime Ministerial diktat like that is translated as it cascades down through various layers of Government in which the message can be modified, mutated somewhat, and intentions can be subverted, I think is legion. And this was a classic case of how, as this went down

through the system, paws were out trying to grab some of the benefits that were destined for BAS or should have been destined for BAS.

[Part 1 0:32:31] Drewry: And the most notable there was NERC who saw themselves as taking some sort of cut or rake off for this benefitting them in some way, as opposed to BAS directly. 'We'll take the money and we'll give BAS what we think is fit.' So certainly for the first few years for me it was doing battle with NERC to ensure the clarity and the deliverability of the programme as we had seen it and to really move them away from seeing themselves as some sort of filter in all of this. In most cases, that was achievable, that was achieved, but also it wasn't just that. We had to have NERC on board to persuade the Department of Education and Science at that stage and the small committee that we had that was looking after the BAS bids into the Public Expenditure Survey (it was called then – the PES) in order that we would get the money. And of course we were talking about large amounts of money, for a new ship etc.

[Part 1 0:33:54] Drewry: We had a lot of meetings in Elizabeth House in Waterloo where DES was located where it was chaired by DES Under Secretary. We had the Treasury represented; we had NERC represented; we had the FCO represented and we had BAS which was basically me and John Bawden at the beginning, at the outset as the Head of Administration. And then in the NERC field we always had the NERC Finance Director. And we had to put up some pretty cogent cases. In fact we had to really completely reformulate the bids each time to justify the science and the political position in order to get the money for all of the projects. The fact was that we had all of the projects on the slate and we kept moving the wheel round so that the money kept coming to the projects as we went through them year by year. But there was quite a lot of friction on that level besides any other level with NERC over the funding, but at the end of the day, we got a very clear determination that the money would go to BAS to achieve all of these in full.

[Part 1 0:35:30] Lee: Who was the judge and jury at those kind of meetings?

Drewry: Well at the end of the day, the Department of Education and Science was in the chair, but our primary ally, that's BAS's primary ally, was the Foreign and Commonwealth Office because they saw it as very much in Britain's wider political interest to ensure a strong Antarctic presence. So at that stage, the Head of the Polar Regions Section, which was the representative that would come and with whom I had a lot of dealings, was John Heap, a personal friend, longstanding Antarctic interest that John had. He was a canny diplomat and essentially he and I would work together to ensure the best possible way of presenting the case – I from the science side and from what we could achieve in the international science arena, and John from the political position of how this would strengthen the UK's position. Doing that together, we were able to persuade a not unpersuadable Department of Education and Science, because they I think were pretty neutral in this. They wanted to deliver what they had been told to deliver, but we were able to neutralise the negative components that might from time to time have emanated from NERC.

[Part 1 0:37:07] Lee: Did you lose any of those arguments or did you win them all?

Drewry: We didn't lose any of the big ones. The life of a BAS Director is littered with skirmishes with organisations like NERC and you can afford a few skirmishes to go the wrong way, but the big battles you have to win, and we won all the big battles.

[Part 1 0:37:40] Lee: You are a scientist though, David, and you are not a politician, you are not an army general, so did this kind of squabbling, for want of a better word, come naturally to you or did it go against the grain?

Drewry: It didn't go against the grain. I actually loved every moment of it. [Both laugh.] And I hope I learned sufficiently quickly. No, I enjoyed it very much. Certainly I enjoyed it in retrospect because at the time you are full of nervous energy. At the time you are extremely anxious. The stress levels are very high because these are big stakes. They are big stakes in the sense that they relate to your staff, your organisation, and in the case of the Antarctic they also relate to Britain as an active and authoritative agent within the Antarctic scene, and you wanted to win on all of those grounds. What frustrated me to begin with was: 'Why couldn't the bloody sods in NERC see that as well?' And of course you then realise that you were playing politics with money and money could be moved in all sorts of directions according to other people's priorities.

[Part 1 0:39:10] Drewry: My priorities were very clear and I guess you learn pretty quickly as to where your friends are and how to mount the campaigns and to hopefully achieve your goals. So I would say that the first year was interesting in having to sharpen your wits but of course I had spent three years as the Director of a Department in the University in Cambridge and you have got to fight for your department's funding, status and activities. And sometimes, as I think it was Henry Kissinger said, there is nothing more ferocious than the battles fought by academics because usually the stakes are so small. So I guess I had honed, to some extent, a little bit of political nous in my time in the University.

[Part 1 0:40:21] Lee: These directorships are men in the right place at the right time if they go well, and you were following in the footsteps of a couple of fairly important guys before you. Looking back at those two chaps – I think it was just the two; it was Fuchs and then Laws, wasn't it? Am I right?

Drewry: Yes.

[Part 1 0:40:38] Lee: How differently were you having to go about the job being Director compared to your two predecessors?

Drewry: I don't think I ever really thought about that matter and I think if I did, it would have been a mistake. I think what you do is you get on and you do your job in your way and you are there to deliver your vision for the organisation to do it with your people in the best way that you can, and to bring people along and for them to also achieve what they want to achieve simultaneously.

[Part 1 0:41:17] Lee: OK, but what achievements of your predecessors did you look ... In your chair in your office you were looking back at what they had done. What did you admire or not admire about your two predecessors and what they achieved?

Drewry: OK. In that respect I ... Well I think that if you go back to Bunny Fuchs, it was a different era, completely different era, and BAS was still fighting the battle against the elements, as opposed to the politicians. And that, I think, was where you needed somebody who had the physical resources and the time to spend, as Bunny did, in the Antarctic, on the bases, on the ships, and really driving the establishment of the programmes. I think during Bunny's time, the science was a much more minor effort than it was having the physical presence, the bases, the ship activities etc.

[Part 1 0:42:27] Drewry: When Dick took over, Dick's avowed purpose was to drive the science forward more than the logistic activities, in other words to change that balance. And Dick did a wonderful job in raising the quality and the volume of the science, and that was his overriding purpose, and of course he moved BAS from being located in separate institutions around Great Britain to Cambridge and established a new headquarters there, integrating the various strands and bringing it together as a truly scientific institute. But Dick went through some difficult times because there was a lack of money during part of his watch and that exercised him very much and I admire very much the way he was able to move the science forward without losing momentum. So my task somehow was to build on the very very strong foundations, at that particular time, that both of those predecessors of mine had achieved. One was strong logistic presence and secondly an overarching and overriding scientific activity in Antarctica.

[Part 1 0:43:52] Lee: So your job really was almost to merge those two things together into one consummate whole.

Drewry: That is true but that was by dint of circumstance and the circumstance was the 1982 war in the Falklands because I think if that had not happened, then I think the longer term prognosis for BAS would have not been too clever without something else happening. Of course the other thing that happened was the discovery of the ozone hole in 1985 and if the Falklands War hadn't happened and the ozone discovery had still happened in the way it did, then that would have been a wake up call too for the science and BAS's activities in a way which might have helped to stem what would have been a difficult and probably something of a funding haemorrhage. But the Falklands War was the transition and really I saw my role then of ensuring that the legacy of the Falkland Islands, which had started under Dick but had not actually come to fruition, to be achieved and for us to really bring BAS even further into the mainstream of science.

[Part 1 0:45:25] Lee: Had there been things on your agenda which you never actually achieved before you left?

Drewry: That's difficult to say. One could be trite and say we never had as much funding as we really needed. I suppose in terms of the infrastructure, I couldn't say that we hadn't got a pretty good deal. On the science side, I think I would have liked to have seen us recruit one or two more real stars, bring them into BAS to be part of the real strength of the science base. And I guess if I had stayed longer, we might have been able to have got round to that because we had a very very sound platform which would have been attractive to people to come in. So I would have liked to have pushed the science even further in ... to have made stronger inroads into that.

[Part 1 0:46:34] Lee: Has that happened since, since your departure? I know you can only look from the outside now but have your successors achieved that for you?

Drewry: Well I think the BAS science has moved on and it certainly delivered a lot of very good, very sound activity that has been well recognised. So I would say yes, I think it has developed further and certainly I think the public perception of Antarctic science, the way in which that science has been articulated and shown to be relevant – all of those things have moved on, which has been very very satisfactory.

[Part 1 0:47:25] Lee: But has the job changed?

Drewry: Jobs always change. Yes, it has changed because now the forces on BAS are very much to do with ensuring collaboration with university groups, supporting university science in the Antarctic, and in a sense being less to do with trying to achieve all of the Antarctic scientific goals themselves. So I think to some extent that is both a weakness and a strength for BAS at the moment. One is that it has weakened the very strong BAS ethic of being able to achieve in the Antarctic through its resources and doing what it is and having a very strong singular focus. On the other hand I think it has strengthened British science related to the polar regions because it has widened the ambit of interaction. There are now many groups in universities in a whole range of disciplines that are active through what BAS does, by BAS providing the logistics and in collaboration with BAS scientists, and I think that has to have been a very very good thing for UK plc. I think the time that Dick was there, the time that I was there, we were entering into a greater collaboration but it was still BAS focussed, BAS-centric. Now BAS is a player and key for the logistics, but a player in a web of scientific programmes and activities involving a lot of other people in Britain and it is generating a much wider cohort of Antarctic oriented scientists for the future.

[Part 1 0:49:30] Lee: Within a couple of years of you starting at BAS you had set out a programme to reorganise the way that science was conducted and managed in the organisation. You wrote a paper in '89. It may well just have been you; it may have been other people working with you, called *Antarctica 2000*. Was it a joint paper or ...?

Drewry: Oh yes, that was a ...

[Part 1 0:49:48] Lee: So you pulled it together from ...

Drewry: That was the new strategy for BAS and it was generated by bringing together the key players in BAS and getting them to work together. We had some workshops and seminars, and interactions and we went through drafts in order to focus in on what we saw internally as being the appropriate objectives, the longer term objectives for BAS. So it was an agreed signed-off corporate document.

[Part 1 0:50:31] Lee: How much of it was you and how much of it was you marshalling other people's ...

Drewry: Oh it was certainly me marshalling other people, but I would have to say that ... It's difficult because you get your Division Heads together and maybe one or two other key players and you start off by saying 'We have got to develop a strategy. We

have got to build on our strengths. We have got to see what the new exciting areas are. We have got to also make sure that they can be supported, they are achievable. They have got to be staged over a period of time. You can't try and achieve them all in one go and we have to have it coherent. It has to be internationally acceptable.' And you start off by setting out the rubric for that and then over time people contribute. I had an enormous amount of help in those early stages from Nigel Bonner who was my deputy at the very outset before he retired during the first year of my directorship. And I basically gave Nigel the task of then working out a lot of the nuts and bolts, with the Division Heads, to bring this together. So I saw myself as sort of setting out the basic objectives and then being able to support and catalyse everybody else. But so many people contributed to that. It is their document probably more than it is mine.

[Part 1 0:52:16] Lee: Was it purely constructed and authored for scientific rationale or was it also, by structuring the science in this way, a better tool for actually prising money out of funders?

Drewry: Oh yes, it had to do two other jobs. Not only was this the scientific objectives, secondly it had to appeal to NERC and the Department of Education and Science on one side and it also had to meet the objectives of the FCO on the other. This would be something that the FCO could say to people 'Look, this is what British science is doing in the Antarctic.' So it had to have a role that underpinned Britain's commitment to high quality, or the highest quality science in the Antarctic.

[Part 1 0:53:06] Lee: And was BAS out on its own doing this or were there other scientific organisations across the world also restructuring and remarshalling their efforts in this ...?

Drewry: Yes the Americans were. They have a different structure altogether because they fund groups through the National Science Foundation as opposed to running an institute or organisation. But they were working on strategic plans. I guess it was the beginning of the era of thinking and developing strategic planning documents where you set out these longer term goals and you worked out what the objectives were and how you were going to achieve it, and phasing it over time. So they were working on it. I think probably at that stage there were not so many. So BAS was doing this; the Americans were doing it.

[Part 1 0:54:00] Lee: It was in the vanguard?

Drewry: Yes. NERC was doing it in their other areas of science. So their marine science was one of the first to generate a strategic plan. It was a very good plan actually, and the Director for NERC Marine and Atmospheric Sciences, John Woods, was a very strong strategic thinker and he produced an excellent marine research strategy. And NERC was in the business of wanting to see strategies right across the piece. So it had developed one for the Earth Sciences and Terrestrial Sciences. But of course BAS was always a bit different in NERC so we produced our own strategy. We needed to do this anyway and it then became part of the NERC strategic plan family.

[Part 1 0:54:55] Lee: A lot of it was to do with merging or filtering disciplines together, so they worked together on common projects. I am not looking for a problems where they don't exist, but was there some fractious times involved in doing that, or did everyone merrily go along with it all?

Drewry: I think by and large ... I can't recall there being any ... There were no showdowns; there were no big battles. There were probably bits of discussion around some of the details at the margins but I had the recollection that by and large everybody was trying to pull in the same direction. I mean we were in a very positive period and it wasn't as if we were trying to develop a strategy in order to meet a threat. We were actually developing this to enhance what was already a positive situation. The only threat on the horizon was the usual NERC gnawing away at the margins and we might talk about the relationship between BAS and NERC and the Super Directors (as they were called), and the dynamic tension that existed. But as far as internally goes, I think it was from my perspective ... I didn't have people beating on my door saying 'We can't do this. It is impossible.'

[Part 1 0:56:30] Lee: Well let's talk a little bit more about NERC and BAS, then. You have already given a fairly good pen portrait of the financial negotiations but it seems to me that successive Directors have regarded NERC as a bit of a pain in the arse really.

Drewry: Yes.

[Part 1 0:56:46] Lee: Even though you went to work for them for a while?

Drewry: Ah but that is a different story.

[Part 1 0:56:51] Lee: OK, we will come to that later, shall we? In what other ways did they get your goat?

Drewry: Yes, well Dick Laws had given me a pretty unflattering picture.

[Part 1 0:57:03] Lee: The witch's warning?

Drewry: Yes, and I guess that didn't come as a surprise but it did come as rather a shock as to how vehement Dick was about it. And over time I judged his vehemence to be correctly placed. My interactions with NERC had been an entirely different set of dynamics because as a NERC grantee, receiving research grants from NERC, I had a very good relationship with different components of NERC. I had been running research programmes and writing research applications. We got a lot of money out of NERC at the Scott Polar for our university work. So I had good relations with a number of people in NERC. So I stepped with some trepidation into this nexus of interactions between BAS and the various components of NERC. But what struck me immediately was that NERC was also torn internally by these three Directors of Science: John Woods for Marine and Atmospheric, Jim Bryden for Earth Sciences, and at that stage Bernard Tinker for the Terrestrial Life Sciences, or Terrestrial Sciences generally.

[Part 1 0:58:43] Drewry: I didn't know John Woods. I knew Jim Bryden because he is a geologist and my wife had actually worked on some research programmes with him. They had written joint papers and so Jim was a known quantity. John Woods was the most difficult person and I am saying this and what I say about our interaction with hindsight because subsequently John Woods and I have become extremely good friends, colleagues, although we don't see each other much. We are very happy to share a beer together and move on discussing the issues of the world. But at that stage John was a very difficult person for me to interact with because each of these three directors felt that they had some sort of call on BAS and that they could call the shots in their area of science. So here was BAS being pulled three ways because each of these areas of science was represented in BAS and each of these directors felt that they had some way in which they could affect the way in which BAS operated. Now in one sense that was a bit of a strength for BAS because you could play the three different ways and try to move your way through that.

[Part 1 1:00:16] Lee: You mean you could play one off against the other?

Drewry: Yes. But I do remember very early on, when each of these directors had a committee: a Marine and Atmospheric Sciences Committee, Earth Sciences Committee etc. in NERC. We also had a Polar Sciences Committee which was a special one for BAS and wider activities that NERC also supported in that field, and I remember receiving a phone call from John because I decided I wasn't going to go to this Marine Sciences Committee. And John's language was hugely inflammatory and he was saying 'You will be at this meeting! You will be at this meeting!' And I thought 'Well obviously the rhetoric is inversely proportional actually probably to what the issues really are.' And so I then took some second soundings from other people in NERC about this but that gives you an idea of the tensions that could be there.

[Part 1 1:01:25] Lee: Was there any option for declaring UDI?

Drewry: Oh around my Director's Committee table there were always cries of UDI from my ... I think we had a very good dynamic around the Director's table and some of my colleagues would say 'It's about time we declared UDI.' My view was: I didn't think we could do that. I think we had to work within the system as it was because the alternatives were going to be far more difficult for us to secure funding and the activity levels that we required. And what did UDI mean anyway in this context? We had to have some buffer between us and the raw edge of Government decision making and in that case, the buffer was NERC / Department of Education and Science, although it was more to do with NERC than it was with anything else, because DES could decide this that and the other. It would hit us directly, but NERC was in the middle and it could act as a buffer. So yes, we talked about UDI but it was never a serious ...

[Part 1 1:02:44] Lee: In a strange way, perhaps, having a common irritant was a binding factor within BAS?

Drewry: Oh undoubtedly yes; it was a common cause and I think it worked very well in that sense.

[Part 1 1:02:55] Lee: And when you reorganised the sciences, as we were talking about a few minutes ago, was that also part of the thinking was to actually strengthen yourself against these individual disciplines within NERC? If you are going interdisciplinary within BAS, then actually it is harder for somebody else to start poking their nose in, isn't it?

Drewry: I don't think that was a conscious decision to do it that way. I think we wanted to generate the plan that was the very best for BAS to deliver against what the problems and scientific questions were that we needed to ask, and they became, by dint of the science, more interdisciplinary. But we could never prevent ourselves being prey to the Marine Directorate over saying 'Well we have got these huge oceanography programmes and BAS has got to be part of this programme and doing its part there.' Yes we could do but of course that would have been a hugely diversionary activity if we had gone wholesale into and we would then have been subject to the machinations of a completely different set of drivers. So we could contribute where we saw it appropriate but we still had to maintain our independence scientifically.

[Part 1 1:04:18] Lee: How well received internationally was BAS science at that time, once you had done the restructuring?

Drewry: When we did the restructuring, I don't think that made a difference straight away because we were publishing in key scientific areas and the structure of how we did it was really not so important on the outside. It was how inside it enabled us to do better science and deliver more papers and more cutting edge research results.

[Part 1 1:05:00] Lee: So was that observed and noticed by the international community, that you were doing more? The quality had improved, shall we say?

Drewry: Well I think there was a steady improvement. We were publishing effectively. It was reflected in the way in which BAS was invited to be part of international collaborations or lead collaborations. But also of course through the Scientific Committee on Antarctic Research, our strategic plan was circulated to all the other countries and we made a point of indicating that we were thinking strategically and this was the way we were shaping the BAS operation, to deliver these sorts of scientific activities. So we in a sense used our strategic plan as a way of demonstrating our ability to rethink the way in which we wanted to achieve our activities. The proof of the pudding, of course, was did it deliver the scientific outputs?

[Part 1 1:06:04] Lee: And?

Drewry: I think it did. Certainly we continued to produce quality papers. We had increasing influence in shaping a number of international programmes by BAS staff and particularly some of the lead players. So I think the strategy overall was a good thing for BAS. I mean you never achieve everything in your strategy, and your strategy becomes out of date very quickly because science moves on. They are a means to an end. They are more to do with getting people to think collectively and to generate new ideas and move on, as they are to be a blueprint.

[Part 1 1:06:49] Lee: Let's move from the overview to more details but let's take a break first.

Drewry: OK.

[Part 1 1:06:55] [End of Part One]

Part Two

[Part 2 0:00:00] Lee: This is David Drewry, recorded at his home in Cottingham, East Yorkshire, by Chris Eldon Lee, on the 17th of November 2010. David Drewry, Part 2.

[Part 2 0:00:12] Lee: Let's talk a bit, then, about your relationship with Margaret Thatcher. I know why Dick Laws went to see Margaret Thatcher, because she called him in after the Falklands War. But then, on your watch, you also had a meeting with the Iron Lady, so why did you go and see her?

Drewry: She, Margaret Thatcher, had a continuing interest in the South Atlantic as one might imagine, but the catalyst for having meetings with her came from the Department of Education and Science under then Secretary of State wanted to get a briefing about BAS.

[Part 2 0:01:00] Lee: Was this Kenneth Baker at that time?

Drewry: He was the Secretary of State and he had one of his junior ministers, I am trying to remember the name.

[Part 2 0:01:12] Lee: It doesn't matter. They are instantly forgettable I'm afraid, junior ministers, aren't they?

Drewry: Robert somebody, and so this was set up to brief him. So we developed a presentation to cover all of the issues with regard to what BAS was doing and we then went off to London and gave this presentation. In those days we didn't have PowerPoint, so we had all these nicely prepared slides with all the text on them, and crafted to get the messages over. So we gave the presentation to Robert Jackson and Secretary of State.

[Part 2 0:02:02] Lee: Well done.

Drewry: And it went down extremely well, and DES said 'I think the Foreign Secretary should hear this', because it was also of course in his bailiwick as opposed to being simply in the science side. So we then went down and gave a presentation to Howe who was then Foreign Secretary and the Geoffrey Howe presentation seemed to go very well. Well Robert Jackson, who was, I guess, the person who was directly involved in having spun all of this up, was then called upon by Baker who said 'We should really take this to the Prime Minister. I'm sure that she would like it.' Of course there were two issues here. One is 'This is a good story and won't the DES look good having supported this activity? But equally well, the Prime Minister is interested in this area and she has made some clear indications as to what should go on. Therefore this will be a very timely way of showing her what has happened.' So

this was arranged, that we would go and give a presentation to Thatcher in Downing Street.

[Part 2 0:03:28] Lee: In what year would this be?

Drewry: This must be 1989 approximately, '88 or '89. I think it was probably '89. And the issue was also that NERC had to be involved and by that stage the Chairman of NERC had moved on from Hugh Fish to John Knill, a robust and difficult person. But he was adamant that he was going to front-end this because BAS was part of NERC. No matter, we went down to Number Ten and we took a van down with all of the kit, because we took the projector and the stand and the screens, as one did in those days. Everything had to be taken down. We had two technical people from BAS drive the van down. We got down to Number Ten and we had an allotted time but we went into one of the state rooms on the first floor and set everything up.

[Part 2 0:04:50] Drewry: We got the projector, carousel in place and I was just checking it out, when Jackson and Baker come in saying 'Is this the projector?' 'Of course it's the bloody projector.' 'Are these the slides?' 'Yes these are the slides.' 'Well let's look at them then.' These two people were like cats on hot tin rooves because they had suggested to the Prime Minister; this had to go down well, otherwise they would be handbagged, in the most polite sort of way I guess. But it was their baby so they were wanting to ensure that we performed as well as they wanted but the tension, as far as they were concerned, that we could sense, was palpable. Actually we never had a chance to show them the slides because no sooner had we got a couple on the screen than the Prime Minister walks in.

[Part 2 0:05:50] Lee: Were you nervous at this point?

Drewry: Yes, you would be nervous. I knew that we had already done this twice and it had to go well. I knew that my colleagues had produced it and I my deputy, Barry Heywood, was with me and great support. So yes, nervous but I felt we were in no way in the same sort of shape that DES was in. The Prime Minister came in. She brought her PPS and a couple of other people with her, swept in and sat down. We had little chairs lined up. John Knill opened, basically by saying NERC etc. etc. and what NERC does, which was all a bit of an irrelevance because the Prime Minister wanted to hear about what was going on in the Antarctic. Then handed over to me for the main presentation. So I started and after about a couple of minutes, I could see, certainly Robert Jackson, leaning back in his chair, because before that he was sitting bolt upright.

[Part 2 0:07:18] Drewry: And I thought 'Mm, it's obvious that he has relaxed a bit' and the Prime Minister seemed to be totally engaged in what was going on. So we got through the presentation and then we had basically a round of questions and answers. We had been allocated an hour. Well once we got into the questions, and we were then sitting in a sort of semicircle of people, by that stage the Prime Minister had kicked off her shoes and was really getting into the flow of the issues, (a) because she had a scientific background in chemistry. She was minded to ask the right sorts of questions. (b) because she had been extremely close to obviously what had happened in the Falklands, become aware of the Antarctic, become aware of what was going on in the Antarctic, had met Dick Laws etc. So we actually started the discussions about

how we were going to achieve the results. because at that stage we were still looking at funding for the remainder of the programme.

[Part 2 0:08:39] Lee: Just one interjection. BAS was very helpful to Thatcher during the early stages of the Falkland War in knowing the area, knowing the territory, being able to help her senior military staff with ...

Drewry: Particularly in South Georgia.

[Part 2 0:08:52] Lee: Yes, with physical descriptions. Were you aware that was standing you in good stead?

Drewry: Oh yes. I knew that there was a very positive background to all of this regardless of what I was saying, that BAS was in good odour from all of those issues related to the Falklands time. But we had a very good discussion and we moved into all sorts of other areas. We moved into climate change and other areas of science, not just the BAS science. It was a fairly wide ranging activities, but I do remember her talking about territoriality in the Antarctic and she said 'Ultimately, at the end of the day, this land down there is British and that is what it is going to remain.' So one could be under no illusions as to where she was coming from on the international political scene. We went on for well over an hour and a half and already her PPS was getting very very anxious because I think she was then off to meet an ambassador or some other international figure and was already running extremely late.

[Part 2 0:10:06] Drewry: So we could have probably gone on for a lot longer but at that point she said 'I really have got to go because it is desperate.' So off she went but the really interesting thing I felt besides the scientific discussion that we had about BAS, and the really positive endorsement that she gave to what we were doing, was when she left, she passed a room which was a small anteroom where the two technicians who had come with us from Cambridge, from BAS, to set everything up had been asked to go and sit with a cup of tea and a biscuit and whatever. She went by the room, she stopped and she went in and she talked to them and said 'Thank you very much for coming. I realise that you have done all this. Thank you very much.' That would have made their day. Consummate politician, saw that as something that (a) she wanted to do, and it was just a human response that was very very positive.

[Part 2 0:11:13] Lee: So when you walked out of Number Ten that afternoon or that evening, what was your understanding of what was going to happen next? What agreement, what level of understanding had been reached?

Drewry: Well we had not agreed, in a sense that there was going to be a slate of things that were going to be ticked off. She was being briefed about what we had done so far, and clearly in my presentation I indicated what the rest of the programme that I saw that we needed to achieve was left and where we were going. That was the direction we were going in.

[Part 2 0:11:48] Lee: The new ship, the new plane, the new wharf?

Drewry: Well by that stage the ship was well under way but we were still trying to finish off the runway and Halley was still being constructed. There was still money

that needed to flow to us. So DES was very clear that they had scored with the Prime Minister, and got a big tick for having introduced a presentation to her on BAS. So we would be able to play with DES's good offices at that stage. NERC of course had had good exposure through John Knill's presence and so he was wagging his tail. So we all came out really feeling that we were able to move on and it should not be too difficult to see the rest of the programme through, which was the case.

[Part 2 0:12:43] Drewry: We continued to plough through all of those activities, but the corollary was that, certainly for me, we did continue to strike a good relationship with the Prime Minister. It was not long afterwards that she held a Climate meeting in Number Ten. Obviously the ozone hole had already made a big impact and that was a BAS triumph and so she was under no illusions that in the Climate arena, BAS was a player and needed to be involved. Secondly, our ambassador at the UN was Crispin Tickell and he had already embraced the climate agenda and written a small book about climate and its political implications and he was very much a person to whom the Prime Minister would listen.

[Part 2 0:12:58] Drewry: And these climate issues, even at this time in 1989/1990, were climbing up the agenda. As far as the Prime Minister was concerned, at that stage, she wanted to be involved so she organised a climate conference at Number Ten to which I was invited and she had brought a mixture of scientists and industrialists to talk about these issues. Several of us, including myself, spoke at the interactive session about these issues and I could speak about the Antarctic component and what we were doing. But lo and behold, we had a lunch for about, I suppose, 60 people who were at this meeting and I found myself at the Prime Minister's table. So we continued our discussions over some of these issues alongside two or three other of the captains of industry around the table. I really felt that BAS was getting the right level of engagement and exposure at that. But we also continued this. We got regular invitations to events that involved the Prime Minister including one where my wife and I were invited to Chequers for lunch with the Prime Minister and few other people, and that was fascinating.

[Part 2 0:15:17] Lee: That was non business?

Drewry: That was non business or only loosely linked to business. I think as much as one can ever say that one built a relationship, then I think I did build a relationship with her that was very positive. And indeed when I moved on to other things, she sent me a note saying 'Congratulations. It's nice to hear that you have got another job.' And of course when she left office we still had not actually had her to BAS. We'd had all of the presentations. We had talked to her and indicated what BAS as doing and she kept up to date and we sent her periodically some briefing documents, not to overfill her basket but every now and again appropriate issues, because she said she would be very happy to receive any information that we would deem as being appropriate for her. But when she had left office, we did arrange a private visit to BAS and she came up with Denis and we spent a very interesting four or so hours.

[Part 2 0:16:31] Drewry: It was at the weekend and I brought my senior staff in and some other players. We took her a tour round the BAS building. We had obviously some display boards on some particular areas of science that we showed her. We had the staff in to do that, even though it was at the weekend. And then we retired to the

lounge / anteroom that I had outside of my office and sat round there with my Heads of Division and we had (as I remember talking to my PA: ‘We need some upmarket biscuits for this.’) some upmarket biscuits and some coffee and tea. That involved getting some good quality biscuits in. So we had this and we just sat around talking science.

[Part 2 0:17:27] Lee: But this was after she was no longer Prime Minister?

Drewry: That was after she was no longer Prime Minister.

[Part 2 0:17:31] Lee: So what was the reason for doing it? Was it purely social then?

Drewry: It was because, one, I felt we had never really showed her what BAS, as a physical structure was like, and she hadn’t met more people, and BAS owed her a huge debt of gratitude.

[Part 2 0:17:55] Lee: So it was a completion really?

Drewry: So she could come up and she came and we showed her a model of the *James Clark Ross* and it was a very satisfactory day and I felt, yes, we had gone as far as we could in giving her satisfaction in the fact that she had taken decisions that had benefited us and the country.

[Part 2 0:18:19] Lee: Was this the time when the Conservatives were formulating their Green Agenda? Were you aware of being influential in them creating their new green policies?

Drewry: To the extent that we were able to contribute in that and maybe one or two other fora. Remember also this was the beginning of the Intergovernmental Panel on Climate Change and the British Government had backed the formation of this UN committee. In fact I sat, as did one or two of my other colleagues, on different panels of the IPCC. So yes, it was a time when Government was trying to look ahead in terms of a green environmental agenda.

[Part 2 0:19:09] Lee: And so were you, on behalf of BAS, influencing that?

Drewry: I would like to think we were. I think we did it more implicitly than explicitly, but clearly the sorts of things that we were doing, and we actually counted in terms of environmental change, global change, climate change, were able to be picked up. And we were asked to send documents and related information in to various parts of Government.

[Part 2 0:19:33] Lee: Did you ever consider Mrs Thatcher meeting Joe Farman?

Drewry: I can’t remember whether actually we had Joe there at the time² but I know that Joe met her, certainly, because another occasion we had at the Foreign Office and it was when we had a large conference that related to climate change, and the Prime

² Julian Paren stood in for Farman during Mrs Thatcher’s visit to BAS, according to his Oral History interview.

Minister came along to a reception in the very large covered atrium in the Foreign Office and we were all standing around. I was standing in a small group and I know that Joe Farman was there. I don't think Joe was in my group but we had Sherry Rowlands who was the American and (I can't remember his Christian name) Molina³. They were the two chemists who had worked out the issues related to how ozone was depleted. They were big movers and shakers in this area of atmospheric chemistry.

[Part 2 0:21:02] Drewry: We were standing together and Denis came along. He was an impeccable supporter to the Prime Minister because he would go round the various groups, doing his bit and spending a few minutes and then moving on, being a very very good co-host. He came along and by that stage I think he had been enjoying himself quite well at this reception and I remember he took his glasses off to make a point and one of the arms of his glasses fell across the lenses and after a few minutes he tried to put the glasses back on but hadn't realised that his inability to put the glasses on was because the arm had gone across. And so he was several times trying to do this and eventually he said 'I'm sorry.' and walked away, and one of the Americans, I think it was Sherry Rowland, said 'Gee, who is that guy?' He hadn't realised that in fact it was Denis.

[Part 2 0:22:08] Lee: Let me ask you a few more questions then about the aftermath of all that, because your funding did improve and the funding was ring-fenced for BAS and BAS alone. How did that improve your relationships with NERC? Or not as the case may be?

Drewry: The BAS ring fence was always the issue with NERC, as to how somehow they could penetrate it.

[Part 2 0:22:34] Lee: Because you had wooed the Prime Minister, as part of NERC, were you then the blue-eyed boy for a while or were you actually a baddie because you were taking even more money out of the national pot?

Drewry: We were never seen as being corporate players with NERC. Indeed we did not play corporate handball with them. NERC at that stage was going through a period in which it was trying to create a corporate identity, and bringing all its components together under a single banner with corporate badging, and they had spent a large amount of money designing new corporate logos and design manuals that we should all follow, all being subsumed underneath the NERC corporate banner. Well I was quite determined that we would not do this because (a) we were ring-fenced and (b) we were BAS and we were not going to kowtow to this. It led to a bit of a fight but I saw the ring-fencing as ensuring that BAS was still distinctive and I felt that we could stand up to NERC on this. And so I hung out with the trivial issue of things like our corporate headed notepaper, which I refused to change. But I do remember vividly, I can't remember exactly what the issue was but it was something that I refused to ... a line I refused to go down with NERC and John Knill, the Chairman, ringing me up and saying 'If you want a bloody bare-knuckle fight, you will get it.' Well I didn't think that endeared him particularly to anyone because I saw him very much as an executive bully and that only made my resolve firmer, not to go

³ Mario Molina.

down this route, and I just believed that if we hung on long enough, we would be sufficiently able to continue to be a distinctive component.

[Part 2 0:25:11] Lee: They would give up, do you mean?

Drewry: Yes, I think we would wear them down, or the fact that all of these other issues that were in the mix supporting BAS would eventually lead us to maintaining our independence, and that was the case. And of course then the wheels continued to turn and eventually there was a new White Paper and NERC got completely reorganised. But my relationship with John Knill was not what you would call anything other than moderately cool but I don't believe that that affected BAS. I think for BAS, it was good because we were able to achieve what we wanted to achieve and my relationships with the Chairmen was just a casualty of that. I mean it wasn't so pleasant for me but at the end of the day, I got the satisfaction of achieving what we wanted to do for BAS. But I had other friends in NERC. It wasn't as if the whole of NERC was against BAS. There were several people in NERC who had been BAS employees, who had gone through the BAS mill. Colin Read, the Finance Director, had been a meteorologist with BAS and been a Fid. And several other people were predisposed towards BAS. They could see that BAS was on a roller and they wanted to be associated with that. So we had a lot of people who were supportive, even though there were tensions in other parts of the hierarchy and certainly the Secretary who took over from John Bowman, whom many of my staff had said was the Prince of Darkness, I just found slight naive in some respects. I got on with him perfectly well.

[Part 2 0:27:30] Lee: Do you want to name him?

Drewry: John Bowman. But then he retired and Eileen Buttle took over and I had an extraordinarily good relationship with Eileen although she was the Secretary and John Knill was the Chairman. But we got on very well and there were a lot of positive outcomes for BAS I think because of the relationship.

[Part 2 0:28:01] Lee: So had things improved by the time you left the Chair?

Drewry: Oh yes, definitely. We had borne the brunt of the confrontations. The tension had eased. BAS had maintained its independence and we were very happy to support NERC as and when it needed to be supported. So yes, I think NERC was the beneficiary of what BAS had achieved, just as much as BAS itself. So yes, when I left I think the worst was behind us.

[Part 2 0:28:45] Lee: So you had this money which was yours and ring-fenced, and you had Margaret Thatcher's nod to roll out your infrastructural improvements. Let's look at one or two of those things that you did. First of all the *RRS James Clark Ross* which happened entirely on your watch I think, didn't it?

Drewry: Yes.

[Part 2 0:29:03] Lee: So you were there on the first meeting with the first drawing board?

Drewry: Yes. Of course it was It happened before then because the whole concept had to be costed – costed and brought through the DES Financing Committee in the Public Expenditure Survey and through that. So there was quite a long lead time in order to secure that money, and of course there were issues about ‘Well can’t you save on this and can’t you save on that?’ etc. etc. But we achieved the funding envelope that we wanted and of course it was set against a nominal design. But that design went through quite an evolution in order to achieve the result that BAS wanted. The size of the ship, what the science fit was going to be on the ship.

[Part 2 0:30:15] Lee: Were you hands on at this point, with these decisions?

Drewry: Oh yes. That’s right, yes. One of the really big issues ... Well there were several issues that were pretty crucial. Were we going to put a big geophysics fit on the ship? And that meant putting very large compressors to fire airguns off the back for marine seismic sounding. If we did that, as well as other activities, we needed a very very quiet ship to listen and to be able to filter out a lot of the ship noises from what we would be seeing from the geophysics and other acoustic sounding maybe for marine biology. So the ship had to be made very very quiet, so a lot of this big machinery, several tons of machinery, had to be put on special pads that would absorb the sound. And a lot of this took space and effort so we had to ... We did decide that we were going to put on these big pieces of kit.

[Part 2 0:31:39] Drewry: But by far and away the biggest decision was about helicopters. Would we or would we not have helicopters on board *James Clark Ross*? And what we did was we put up cases. We looked at the pros and cons very very thoroughly because we could not, within the envelope of cost, get a helicopter deck and a hanger without sacrificing some of the scientific equipment. And all of the ships that were being built at the time, because there were several nations that were looking into building ships for the Antarctic or putting helicopter decks on board. And in the end we decided not to and the reasons were that we saw that we had very very good helicopter assistance from *HMS Endurance* and we were lucky that we were able to call on the *Endurance* and particularly as the *Endurance* was going to be replaced by a much stronger ice-breaking ship. And we could call upon their Lynx helicopters as they were at the time. And also we had developed our air capability in the Antarctic, were developing with our airstrip and our fixed wing aircraft. So at the end of the day the decision was taken not to but I remember that took ... there was a lot of discussion over that and the arguments swung back and forth.

[Part 2 0:33:21] Lee: Did you ever have cause to regret that decision?

Drewry: No. No, I think it would have been ... If we’d had a bit more money we could have probably increased the size of the ship but then we had to think about the operating costs of helicopters. You know there were a lot of things in the discussion on that and I think, at the end of the day, the *James Clark Ross* has proved a very good scientific vessel. And the danger was, of course, that if we had helicopters we would be much more likely to use her in a logistics mode, to put people in and out of places and move the ship elsewhere, rather than her, as we saw it, primary role which was to do marine science. And by taking the helicopters out of the design, we removed her from being just another logistics vessel and that I think did the science a service.

[Part 2 0:34:20] Lee: Tell me about the headaches along the way, of building the *James Clark Ross*.

Drewry: [Sighs] Well from my point of view, the project was managed by Brian Hinde who was in NERC, and of course the people who were on the spot, standing by: Nick Beer and the Chief Engineer Chris Donnelly I think, who were up in Newcastle. We had regular reports and we had of course had to report to DES on the progress of the build. It was quite clear that Swan Hunter had bitten off more than they could chew. Bitten off more than they could chew in the sense that they had priced the ship as a loss leader, thinking that they would get maybe other countries to have their Antarctic vessels built on the Tyne. And so they had under-priced the job. This did not become apparent until later on in the build. And also we were building a ship which technically was at a high level of specification and this was not the design which was replicated in much of what Swan Hunter had built to date. So it was technologically advanced, they had under-priced it and that led to slippage in terms of time and also led to quite a lot of difficulties in fitting some of the kit on board. Those headaches were met by the people standing by the ship which was very very difficult. It was John Donnelly and Nick Beer that bore the brunt of that.

[Part 2 0:36:30] Drewry: But we had meetings on a regular basis with Swan Hunter and it was quite clear that things were not as happy with the management. And of course what we needed was the ship to be delivered, to go for trials and be then available for a full Antarctic season. If we slipped, all of our logistic activity would be put back by one year. It was a very large incremental delay that would arise and penalty that we would pay if it slipped a season. So we were very anxious to keep the pressure on them. Well it did slip and I forget how many weeks; in my mind twelve weeks at least, rings in my mind as to how long the slippage was. But we had put in penalty clauses in the contract. I was very very keen that we should do this and NERC were absolutely behind the fact that penalty clauses had to be built in. We never assumed for one moment that we would actually invoke these penalty clauses but they were in. They were a safeguard and it was due diligence and it was prudent to do it. David Jones, who was the NERC project liaison person, was very assiduous in making sure that this happened.

[Part 2 0:38:06] Drewry: Well of course we invoked the clauses at the end of the day and I forget how much we clawed back from Swan Hunter but it was several million pounds and later it was quite clear, and I and BAS were accused of breaking Swan Hunter's back over the building of the *James Clark Ross* because it was then, shortly after, that they went into liquidation and they folded on the Tyne, because, (1) they had seriously under-priced so they had lost most of their profit. Secondly they had to pay out additionally, which would be cash, the penalty clauses and it was an unhappy ending. We got, I think, at the end of the day, a very good ship but it came at a very high cost, certainly to Swan Hunters and there was certainly over the last six to nine months a lot of tension which I didn't personally have to fend off or feel or deal with, as much as the people on the ground.

[Part 2 0:39:32] Lee: Looking back on that now, because it is almost twenty years later, was BAS in any way ... did BAS in any way do things which perhaps in

retrospect you would not have done now you know that Swan Hunter went under as a result of the whole process. Could you have helped save Swan Hunter?

Drewry: Let's put it this way: when we were looking to build, we had tenders from a range of companies, both in the UK and overseas. We had them from Finland; we had them from Italy (Fincantieri); we had them from the Far East. And in the UK. Part of the unwritten negotiating activity was that if we were able to reasonably deliver a tender, sign a tender, with a British shipyard, this was going to be a good thing. In other words, if all other things being approximately equal, which they never of course are, we would go with a British builder, and Swan Hunters had put in the best bid as a British builder. That's not to say that we went for a lesser tender from them than from other companies outside. It was as good but we definitely decided that we would build it in the UK.

[Part 2 0:41:13] Lee: Did it look too cheap, that tender?

Drewry: Not at the time. Our eyes blinked at the cost of it anyway.

[Part 2 0:41:20] Lee: You thought it was expensive?

Drewry: We thought that this was a good price for what we were asking for and we had got separate evaluations and of course we had the tenders from other companies to look at.

[Part 2 0:41:38] Lee: So it wasn't way down below the rest?

Drewry: No. I mean there were some that were very very much higher but there were also ones that were less. So Swan Hunters' was neither the cheapest nor the most expensive, so we felt that there was a reasonable capacity here to deliver. Plus they were going to get expertise, particularly on the icebreaking bow, from Finland, and we had made agreements with what became Masa-Yards to design the bow. And they did their tests in their ice tanks in Finland, primarily in Helsinki and elsewhere. In fact I went over and met the people and saw what they were doing. This was the old Wärtsilä company that then became Masa, and talked to them, and we were very happy that we were getting expertise on the ice strengthened and the ice bow components from the people who really knew all about it. Therefore Swan Hunters sub-contracted that element. We were very clear that they had to do that. So it wasn't as if we were not able or had the capacity to bring in expertise from elsewhere.

[Part 2 0:43:03] Lee: You are scientist not a shipbuilder, so again were you actually as an individual, as the Director, were you influencing design decisions? Or were you not?

Drewry: No. My role was to make sure that we had all the bases covered, that we asked the right questions, and that overall the project reached a satisfactory point at each of the stages as far as BAS was concerned. I did take an interest in the ice because I am interested in ice as a substance. It was very interesting to see the icebreaking capabilities and issues but I saw that as a learning curve for me, not as anything I could actually contribute scientifically or in any engineering way. My role was very much to keep the momentum on this and all of the other projects to make

sure they didn't fall behind. To make people alert to the continuing pressure from the BAS schedule for delivery of the ship, that the scientific fit was going to be right, to haul some of my people, particularly those who had been involved in specifying some of the kit, from crawling all over the details as it was being built and creating variations in the design. What we didn't want was to escalate the cost by ... Somebody would say 'Oh we just need this extra bit of add-on.' That was a great danger because people saw the ship emerging. 'Oh we didn't quite put that in the spec but wouldn't it be nice to have?' So it was a matter of keeping everybody under control because these were exciting energetic active times. You are building this ship. It's going to be a real star vessel. It's going to have all this latest technology on board. It's going to accomplish some really outstanding science and you want to make it the best but at the end of the day there is a cost envelope and you have to be realistic etc. etc.

[Part 2 0:45:16] Lee: Was there any kind of post mortem afterwards about what happened?

Drewry: Oh yes. I mean naturally because of the overrun, that led to ... clearly there had to be an arbitration over that, and that involved the Department of Education and Science, NERC and ourselves, etc. But I guess the really interesting thing was not about just solely the *James Clark Ross*; but it was the BAS programme including the other infrastructural developments which surfaced in the National Audit Office, because it was an interesting ... It was not large in terms of total cost compared with some of the mega projects that the Government was engaged in, but it was sufficiently distinctive and of a reasonable chunk of public money for the National Audit Office to latch its eye onto this. So we were approached by Sir John Bourn's office with the intention of providing a pretty much post-hoc evaluation as to whether money had been spent well because this was a value for money exercise. So we had a first visit from people from the National Audit Office and a team of people came along. It would be unfair, but true, to say that one or two saw a trip to the Antarctic in the offing, just to go and check on what was being done. Indeed actually I say that with a slight wry smile on my lips because we were also of a clear view that only when people saw what you had to do in the Antarctic would you appreciate actually some of the logistic engineering challenges that were presented. So we were quite keen that at least one or two people would go down from the National Audit Office and see.

[Part 2 0:47:54] Drewry: So we prepared, as one does, copious information about the projects, how they developed, how they were delivered, how they were costed, who was involved. They took all of this away and we took, I think it was two people, down to the Antarctic to see some of what we had been doing. They went to Rothera; they saw that. I'm not sure they went to Halley but they saw a lot of things. They got a feel for the Antarctic. Unfortunately what happened was that the people that went to the Antarctic were then hauled off by the National Audit Office and put onto other projects and we got what we called the B-team came in. And the B-team hadn't really got a feel for what was happening and so they drew up a report and by and large it was pretty anodyne. There were small issues that they raised about certain pieces of kit that we had purchased and put on the *JCR*, and things that we had done at Rothera with building the airstrip – various activities. But these were second order issues. However it did not stop them getting up my nose because I felt that if the B-team had seen what was going on in the Antarctic, then they would have understood this better.

[Part 2 0:49:22] Drewry: And I remember we had at least two meetings at the National Audit Office with the people who has produced the draft of the report and we were going to put this right, and it was a bit scratchy but nothing untoward came of that except that ultimately these National Audit Office investigations can end up before the Public Accounts Committee. And BAS – this is the other side of the high profile – because of BAS’s high profile it did attract a view that the Public Accounts Committee should see the National Audit Office evaluation in a public hearing. So eventually we went before the Public Accounts Committee. The people who were there were John Knill, as Chairman of NERC, myself. I am trying to remember if there was anybody else that went with me. I think Frank Curry by that stage was the Head of Administration in BAS.

[Part 2 0:50:35] Drewry: Anyway we went up to the Public Accounts Committee which was a fairly daunting situation, sitting at that table, faced by this horseshoe of MPs on the PAC, and with other people behind you. There was public and Press and whatever there, because all these things are announced in advance and people can take up and come if they want to, to hear what was going on. But actually, although it was a fairly daunting experience in the beginning, it was quite clear that there were no big issues in the National Audit Office report and the Public Accounts Committee really was very benign with us. It was factual. We were able to describe how this had augmented science and how Britain was getting a positive feed from this, and that in fact we had delivered value for money. And particularly as we described the fact that we had put all of this in place in a pretty short time and got it up and running and had delivered it, so in retrospect, I look back on the PAC activity, that PAC meeting, as initially quite a disturbing meeting to have to go to, although I knew that we hadn’t got anything dire to defend, only good news really. But nevertheless, and then afterwards yes, it had been all right.

[Part 2 0:52:30] Lee: Let’s just look now at one or two of the other things that were happening at that time which were in that bundle of achievements that the Public Audit Committee was asking questions about. One was the creation of Halley V and the decision not to build it so it would sink under the ground. Do you remember how that came about, the decision to put Halley V on stilts? Was that before your time or were you there?

Drewry: There were several designs when I came in about how Halley should be built, one of which was to have it raised up. Should it go on the surface? Should it be buried? Should it be made stronger than the existing Halley IV building that was built in this Armco tube⁴ but was still being crushed. But very soon the idea of building it on stilts took over, but the details of how that would be achieved and whether it would actually be a sustainable engineering structure had to be worked out. Of course the whole thing could have fallen to pieces and it could have been shown that it would not work. So it was a situation where we then invited bids for people to design a structure that would sit above the ground and of course it had to be backed up by a lot of also scientific information about how the structure would operate in an area where you have a lot of snowfall, well over half a metre a year, how that snow would behave.

⁴ Halley III was built in Armco; IV was in plywood tubes.

[Part 2 0:54:28] Drewry: Would the structure allow the wind to blow the snow away? Would it accumulate underneath? Would it produce a scoop that would actually undermine the legs? Would it produce berms of snow in other places that would eventually compromise the overall circulation of the wind and the snow, and create problems? Where would the three buildings be located so that we would be able to not see any interference between the three, but on the other hand people had to get between them. There were lots of really quite challenging issues that were related to building Halley V. I remember we had endless meetings in which designs were put forward. We saw results of various wind tunnel experiments that were being done on structures to see how things would work out. But eventually it was clear that we could do this and that we should go forward and then go with a company that would be able to deliver it.

[Part 2 0:55:44] Lee: So was it a risk free process by that time and you knew exactly what was going to happen? Nothing could possibly go wrong? Or was there still an element of uncertainty?

Drewry: Nothing in the Antarctic is risk free.

[Part 2 0:55:57] Lee: Relatively risk free? Or was it a gamble? Or had all the doubts been eradicated by that time, by the time the work started?

Drewry: There was an element of gamble in it because you can't tie everything down. We had done as much as we could to justify the design and modelling the environment, but we weren't really to know. I think we had narrowed everything down, but as far as the design was concerned, some of the issues were also how much strain would there be in the ice which would give rise to the legs splaying, by ice flow which would be divergent even in only the distance of the longest accommodation building? We had done some measurements but we really couldn't tell, and as a glaciologist I knew that you can have instabilities in the flow and that could actually vary the strain rates that you would see, and that could affect the ... you would get a torque on the building on a big structure. That would not be good. But we decided that this was the way to go. The upside, the balance of risks were weighed up and on the upside was of course that we would build a building that would not get crushed. That for certain was something that we knew would happen if we had put it on the ground and it got buried again. And the amount of strengthening you would need to withstand that was such that maybe that was no longer really something that we wanted to go into for a long life of the new Halley station.

[Part 2 0:57:46] Drewry: And in any case, building it above the surface would make sure that the environment for the scientists and for the support personnel there was going to be that much better. It had windows. They could look out onto the ice shelf. OK, it might be extremely flat and very white, but at least they could see it, whereas once a building was buried, then there was no chance that in their everyday lives except when they went outside. But some of the other risks of course were: we had a huge amount of material. We had the building contractors, a large number of those people, and they all had to be brought in by ship, and the docking facilities at Halley are precarious to say the least. It depends on a ramp in a fracture in the shelf about 50 kilometres away being available to bring Sno-cats down to the ship and to offload all of the equipment. The Antarctic weather, the sea ice, getting the ship in, which was

the *Bransfield* which did not have the greatest of power to get through the ice, getting it in at the right time in the season, offloading the equipment, getting it transported to the site. All of those were risks and of course we would have crew of people from a commercial company who had to set up and operate in that environment. As much as we would be able to help them, there were still some unknowns there.

[Part 2 0:59:21] [End of Part Two]

Part Three

[Part 3 0:00:00] Lee: This is David Drewry, recorded at his home in Cottingham, East Yorkshire, by Chris Eldon Lee, on the 17th of November 2010. David Drewry, Part 3.

[Part 3 0:00:12] Lee: Let's just also, before we finish for today, look at the new aeroplanes you ordered: a fourth Twin Otter . I suppose you were getting another Twin Otter so the parts were interchangeable, but it was one of the last ones ever made, wasn't it?

Drewry: Yes. We bought what was called a green hull, which was one of the last ones on the de Havilland construction line and then it was configured to our design. Yes, we were very keen that we should get one of those, to make sure the fleet was of the same sort of capability.

[Part 3 0:00:48] Lee: Interchangeable?

Drewry: Absolutely, and maintenance was standard.

[Part 3 0:00:52] Lee: But what about the Dash-7, because that was another leap of faith really, that you were going to fly ... change the way the Antarctic worked, or people worked in the Antarctic, by flying them in directly from the Falklands or even further afield?

Drewry: Yes, because I had operated with the Americans for ten years, flying C-130s and helicopters in the Antarctic, so I knew very much the capability that a trans-continental aircraft could give you. And we had to have this in order to obviate the need to get people down by ship every year. We had a precarious and I would say not hugely safe operation which was taking people down from South America to a place called Damoy, which was a staging post on an ice piedmont, and then flying them down to Rothera from there. Weather dependent, not a good runway. You were limited by weight because you were on skis in Twin Otters doing the runs. We couldn't operate a professional season, year by year, on that basis.

[Part 3 0:02:25] Drewry: We had to move to a much more soundly based aircraft operation and that meant being able to fly aircraft in from let's say Stanley in the Falkland Islands to Rothera, and start people off in a proper way. So we looked around at what sort of aircraft we needed and this went hand in glove with the runway because when I arrived there was an idea about what sort of runway we would have, and it was going to be at Rothera. It was going to be right next to Rothera. It was going to project out into the two bays and it could be less than a thousand metres long. So the first thing I did was, I said 'We need to look somewhere else' and we looked

around. I said 'We need it to be longer because we can't get larger aircraft down than let us say something like a Dash-7.'

[Part 3 0:03:28] Drewry: It would be touch and go whether we would get a C-130 onto it and certainly we couldn't get any other jet type aircraft on. 'Let's look at somewhere else.' So we looked around Rothera and the nearest place was a place called Anchorage Island which is just a few miles away. We looked at that and thought it might be possible to carve part of the island off and get a pretty decent runway. So I was down that season and I went over to Anchorage Island. We looked at it and we walked over it with BAS air personnel and we got the Canadian company, we had two Canadian companies, one which eventually built the runway but one that also developed the design, which was based in Winnipeg, to undertake a further design study looking at Anchorage Island, which they did. The net result was that we could get a longer runway but it was going to require a lot more blasting of rock to clear it, to get the runway we wanted. And also because it was not adjacent ... it was a journey to Rothera.

[Part 3 0:05:07] Lee: Which may be interrupted by weather?

Drewry: So we were also faced with an issue of do we move Rothera? And this was a serious consideration. Do we move Rothera to Anchorage Island? There will be a cost of course in that. If we don't, we have got to create a link. Would it be by boat? Well you can't do that when there is ice. We would have to do it by helicopter, so that would mean we would have to buy helicopters to do the shuttle. So the whole thing became an interesting exercise, but I was very glad we did it because at the end of the day we did it actually rule out going to Anchorage Island, but I felt that we had due diligence. I felt that the first snap at that which was 'Oh we will just put it here at Rothera. It's rather short' had not really been fully explored in terms of alternatives. So I felt that we had looked at the only other possible alternative and we rejected it and so we went for the runway on Rothera. And then of course we had the business of getting the company that we eventually had the successful tender from, based up in White Horse in the Yukon, to do the construction.

[Part 3 0:06:33] Drewry: There's quite a lot of stories about that because it wasn't just simply that we were going to build a runway, we were going to blast and we were going to change the area and this came head on heels of the French development at Dumont d'Urville where the French were building a runway. And they just blasted a couple of penguin rookeries away including lots of flying Adelie penguins when they set the charges off. And of course we were in the teeth, at that stage, of a very aggressive green movement with regard to environmental circumstances around Antarctica. So we were really building up to quite a lot of interesting dynamics between what we wanted to achieve for BAS in terms of logistics, what we could materially do as quickly as possible on the ground, and the growing interest of environmentalists which led us to do a comprehensive Environmental Impact Assessment for Rothera.

[Part 3 0:07:47] Lee: Did anybody try and stop you from building the runway?

Drewry: Yes.

[Part 3 0:07:51] Lee: The environmentalists or ...?

Drewry: Yes, Greenpeace and Friends of the Earth and the amalgam of people were very anti us doing this.

[Part 3 0:08:03] Lee: Did the environmentalists actually voice their objections?

Drewry: Oh yes, we had a lot of expressions of displeasure from the Green lobby over the fact that we were going to be building this runway. The French had had a lot of run-ins with the Green movement over that. Of course the French were in bad odour because of *Rainbow Warrior*. That was all up in the air at that time. There were moves on the Antarctic Treaty front with regard to building a Treaty regime for the exploitation of mineral resources in the Antarctic. So this was a very very hot time environmentally and we had quite lot of run-ins in the Press and indeed a number of politicians started rattling their sabres with regard to what we were doing. So it was quite clear we had to pull something out of the bag on this.

[Part 3 0:09:01] Lee: Did you meet environmentalists face to face?

Drewry: Yes, oh yes.

[Part 3 0:09:05] Lee: How was that?

Drewry: Challenging at times but at the end of the day, I think we were lucky that we were building a runway which was going to help science and the fact that we had discovered the ozone hole, the fact that we had also in BAS demonstrated a very very high level of important science that we were doing, that a lot of people were already what you might call environmentally aware in BAS and therefore we weren't just rushing in to decimate the Antarctic, and the fact that at Rothera we did not have any unique colonies or even representatives of significant numbers of species that were going to get hammered as we put the runway in.

[Part 3 0:10:02] Lee: Did you actually invite any environmentalists down to Rothera to see?

Drewry: I'll cover that in a moment.

[Part 3 0:10:08] Lee: OK.

Drewry: So we undertook an Environmental Impact Assessment and this was one of the very first EIAs for a major piece of Antarctic infrastructure, and it turned out to be a very well done exercise. It was done very very thoroughly. We did a lot of modelling and I think we demonstrated that we were going to minimise the impacts. We looked at how we would remediate the area; we looked at how we would monitor the activities to see if things were going all right. We needed to build bunds round the fuel farms in case any of that fuel escaped; how we were going to deal with that. It was very very comprehensive and I think it did actually win us quite a lot of unsung plaudits. It stemmed the criticism although the criticism still continued because in a sense how could you possibly build a runway even if you had done the EIA? It was an issue of principle but that was assuaged by the fact that we had done the EIA. So part

of the deal with the environmentalists was that we would take somebody down to see the site before we started and we would take them down to see how it was going, and we would have somebody come at the end.

[Part 3 0:11:41] Drewry: We said 'We have got nothing to hide. You can come and see it.' So we put out a call for somebody to come to represent the environmental interests and we had a lady called Cassandra Phillips come. She was there on behalf of Greenpeace, and Friends of the Earth and all these other organisations. Now we took her down initially to see the site and what was going on. I didn't accompany her on that first visit; Barry Heywood I think did. And so we felt that that first part had gone well. In fact there was nothing that could really be reported except that they had been in and seen that there weren't penguin colonies there and that there weren't great nesting colonies of blue-eyed shags or whatever at the site. So the construction started and it was then time to have another visit. Well that lady was not terribly keen. [REDACTED] But I said that the deal is: we want the same person to go back so that you can reference it. We are doing due diligence; you have got to do due diligence.

[Part 3 0:13:08] Drewry: We went down on the maiden voyage of the *James Clark Ross* which was excellent in its own right, and Cassandra Phillips said 'Well I will come but I am tight on time.' She was going to the Antarctic! [REDACTED] [REDACTED] [REDACTED] So we took her down. As we came down the west coast of the Peninsula, we encountered some very very tough multi-year ice and even with the *James Clark Ross*, we were not able to push through this quickly. So as our journey slowed and we were several days in the ice, not making much progress, Cassandra got more and more uptight about this because the time was ... We actually took, I think an extra ten days to get down. By the time we arrived at Rothera, [REDACTED] I kept saying to her 'This is the Antarctic. This is what happens.'

[Part 3 0:14:26] Drewry: Cheekily, and it was a bit of a wind-up by me, when we arrived at Rothera, I asked Cassandra to come into my cabin and I said 'Look Cassandra, we are now just about to dock, moor at our new facility, the wharf at Rothera. I will hold this ship at Rothera for however long it takes for you to do a thorough survey. If you need extra days here to do your job, I will hold the ship here, so just be absolutely sure you have as much time here as you need.' [REDACTED]

[REDACTED] Anyway the net result of it was that the continued evaluation of the Rothera EIA and the situation on the ground, was fine. There wasn't a further visit to Rothera that I can recall anyway and the Rothera airstrip then went ahead and was finished. It was a very impressive operation because the construction company, Pelly, were crushing gravel. They had these huge Volvo trailers moving the gravel up and down pro-grading into the bays on both ends. They were putting the wharf in. They had a tug there. They brought down this huge cargo ship to Rothera and unloaded all of their kit: a full crushing plant. They brought all the construction material to build the hangar, to put the fuel farms in. It was a major operation and it came in on time and on budget.

[Part 3 0:16:23] Lee: And all the crushed gravel had been brought into the Antarctic or were they using local stone?

Drewry: Local. Yes. That was part of the survey originally, that we actually had the material available. We had this really quite nice igneous and some metamorphic rock on the site which could be crushed and used. When I went down and saw the operation it was very impressive. And of course at the same time, we were acquiring the Dash-7.

[Part 3 0:16:57] Lee: So the length of the runway was part of the criteria for choosing the aeroplane to use it, I guess.

Drewry: Absolutely. We could not have anything other than something that had short take-off and landing capability.

[Part 3 0:17:11] Lee: How did the introduction of the Dash-7 ... ? I can see how it would improve getting people to and from the Antarctic. Did it have any impact on the way the science was carried out?

Drewry: Well it allowed us to get the scientists into the field quicker because we could bring them down early in the season from the Falklands or from Punta Arenas in Chile, fly them directly to Rothera, get them in and then they could be flown into the field by ski-equipped Twin Otter.

[Part 3 0:17:40] Lee: So they had more time?

Drewry: They had more time and greater flexibility, and of course what we were then exploring was the use of the Dash-7 to land on wheels on some of the blue ice areas further into the Antarctic to really increase the range yet again and that has now become a standard operation.

[Part 3 0:17:56] Lee: And the other element was, and we will finish on this point if we may, of this bundle of things you were trying to achieve with the money you managed to get from Margaret Thatcher, was the development of the biological research at Rothera, because you put up a specialist laboratory, the Bonner Building, the Bonner Lab. Tell me a bit about that.

Drewry: Well that was coming in towards the end of my time, but it was very clear that Rothera had been developed primarily as a logistics hub and the amount of science going on at Rothera was really quite small. Some meteorology – that was an adjunct to weather information for air operations, but it was really an entrepot. People came in, people came out from the field, for glaciology, for some terrestrial biology, for geology or surface geophysics. We had no upper atmospheric science going on there and we really felt that given the capability now of bringing scientists in, and taking surveys which were an integral part of the Environmental Impact Assessment of the inshore marine biology around Rothera, that actually Rothera would be quite a good place to develop some inshore marine biological work. At the same time, we would enter another set of discussions over this.

[Part 3 0:19:35] Drewry: Part of our strategy was to reorganise the BAS science in the Antarctic. Did we need all of the stations that we were running at that time? What sort of science should we be doing and was the fit to the bases appropriate? So at the same time we were looking at reducing Signy Island in the South Orkneys to a summer-only operation. Faraday was going to be closed, which was an upper atmospheric research station, and we were going to concentrate therefore on utilising Rothera and Halley as our main continental bases and at Bird Island off South Georgia for our very very active and very high quality programmes on birds, albatross and related Southern Ocean food web studies. So the move to build the marine sciences laboratory was part of the way we were going to reorganise the scientific fit of BAS in the Antarctic.

[Part 3 0:20:53] [End of Part Three]

Part Four

[Part 4 0:00:00] Lee: This is David Drewry, recorded at his home in Cottingham, East Yorkshire, by Chris Eldon Lee, on the 6th of January 2011. David Drewry, Part 4.

[Part 4 0:00:11] Lee: We are reconvening, David, on the 6th of January 2011. We were talking about the development of Rothera, both as a transportation hub, and the effect that had upon getting scientists into the field faster, and also the development of a biological research building at Rothera, which had some implications for the other bases in that part of the world, didn't it?

Drewry: Yes. Like all of these circumstances, it was not quite a zero-sum game. But it had to be in a context of what was affordable, and if we were to build Rothera up, which clearly with its logistic facilities was going to be the case in the years ahead, then what did this really imply for the other bases? Our other commitment of course was already to Halley, so Halley and Rothera were going to be clear mainstays of the BAS operation, with very clearly different sorts of activities from them. The build-up of marine biology had not been initially thought of as a major development at Rothera, but once we undertook a number of the surveys, that were related to the building of the runway, which were marine offshore surveys, the marine biologists discovered that in fact Rothera and its surroundings around Adelaide Island, was really quite rich biologically, so that there was certainly a basis for expanding much further south than some of the other stations, that particular sort of capability. And in any case we needed to monitor the whole area, given that it was part of our Environmental Impact Assessment.

[Part 4 0:02:01] Drewry: That threw into contrast the other major marine biological station for coastal and near-shore work, which was Signy, and of course Signy had been running since the very very earliest days of FIDS. And there was a view that maybe besides some long term monitoring which could be done, the capacity of Signy to provide new insightful research had probably been to some extent worked out. Also the station was clearly going to require further investment if it was going to be maintained as a wintering station. It had been through several levels of recycling and the decision was that what we should do would be to reduce Signy to a summer-only operation. Not close it entirely. It was an important place in the South Orkneys to look at that part of the Southern Ocean but it could go down to a summer-only programme for terrestrial biology for which it had been proven to be a very good site, and for any

inshore marine biology. So that was what we planned to bring in, once the rearrangement of all the bases had taken place.

[Part 4 0:03:31] Drewry: Now in the equation we also had the circumstances of Bird Island off the west coast of South Georgia, and that was a primary research facility for looking at marine mammals and of course birds and its extraordinarily rich fauna and the work that had been done there, meant that there was a very little likelihood that we would see Bird Island being compromised in terms of its research activity. Small but, in those famous words, beautifully formed. So we had a very active research operation at Bird Island. We would then have a summer-only terrestrial biology and some inshore marine biology at Signy, and then a major facility opening up at Rothera and we felt that was the right sort of balance to cover that area of science, and it was affordable.

[Part 4 0:04:33] Drewry: The next issue was in regard to Faraday station. To some extent the rebuilding of Halley and of Rothera had demonstrated that you had to invest on a regular basis to maintain bases to a standard which would make them internationally competitive in terms of research. Faraday would need, if it were to be maintained in that sort of situation, considerable investment and we had to look at what the science was that was being undertaken at Faraday. The early origins of Faraday, which was to support upper atmospheric science – it was working on the ionosphere, ozone measurements and some other chemistry It did not support glaciology because it was separated from the mainland and the small ice around there was not of any real significance. It didn't support geophysics or geology because again, it was a small island; you would have to have operated from there, and it was not very favourable from the marine biologists' perspective of operating to do work on the biological front.

[Part 4 0:06:03] Drewry: So there was a real question mark over the long-term operation of Faraday and the only significant activity that was going on there was the upper atmospheric work. The upper atmospheric scientists were given the task of evaluating what the long-term value of Faraday was for their work and it turned out that essentially with other stations operated by other countries, there was no uniqueness from Faraday except for the ozone measurements. And of course Faraday had been part of the work that had led, particularly from Halley's research, to the discovery of the ozone hole, and that meant that if we were to close Faraday, and we were to shut down the monitoring programme on ozone, there could be putatively quite a hue and cry around the way in which we were shutting down science that had been so instrumental in developing environmental policies internationally.

[Part 4 0:07:21] Drewry: However that did not affect the overall decision but it was a consideration that we had to bear in mind and so we engaged in our plan which was to build Rothera up, to maintain with new station active research at Halley. Of course that covered ozone, upper atmospheric sciences, glaciology etc. Maintaining Bird Island and a summer-only station at Signy with the Foreign Office, because at the end of the day, these bases represented British presence in British Antarctic Territory and was part of the negotiating portfolio that the Foreign Office had in terms of Antarctic Treaty activities, demonstrating our presence.

[Part 4 0:08:14] Lee: So they were relaxed about Signy being only staffed half the year, or were they nervous about that, because the Argentinians could attack in winter, couldn't they?

Drewry: Well they had the base Orcadas which is just across the road on Coronation Island⁵, at Signy. However the proposition that we were going to get an invasion from the Argentines south of 60° in the Antarctic Treaty area was so remote. It was mainly to do, I think, with the Foreign Office's concern was whether our presence was being diminished or whether it was the same or whether it was being enhanced. In other words what the quantum of the British operation was, and we kept in regular touch with the FCO on this matter. I had a number of liaisons with John Heap who was the Head of the Polar Regions Section at that time, and we went through our logic and what we proposed to do and the Foreign Office was entirely content with this particular development, because they saw what we were actually doing was shifting further south the essential locus of operations. We were giving greater capacity and certainly with the developments that we were putting in: the *James Clark Ross* initiative with the ship, the rebuild of Halley station, the air operations at Rothera, with an aircraft and the hangar and the runway, and the new biological facilities. All of these indicated a very vety strong, active and enhanced programme for the UK. So they were quite content that we should withdraw from Faraday and reduce Signy.

[Part 4 0:10:09] Lee: Did you at any time consider closing Signy completely?

Drewry: Yes we did. We had a number of 'what if ...?' propositions, as one would do. Keep it the same; close it completely; go to a summer operation; share it with another country. We had a number of different scenarios that we ran through and looked at the pros and cons of these very carefully, and it seemed that the summer-only operation would satisfy BAS scientists, satisfy the FCO and reduce our commitment, which we could then use the resources that were released from that to other parts of the system.

[Part 4 0:10:55] Lee: So did the Foreign and Commonwealth Office have any influence on that decision? Would they have been upset or nervous if you had closed it down completely? Was that one of the reasons why you didn't close it down completely?

Drewry: I think to be totally fair and honest, the FCO was not ... I think they were fairly sanguine about Signy, as to whether we closed it fully or had a summer operation because I think the view there was that the enhancement of the overall BAS operation was more than sufficient to offset any political loss of presence at Signy. But the real issue was then around what we do about Faraday and that was a more interesting story because we were determined that at the end of the day, that would have to close. We couldn't really see any justification to maintain it. It was in a difficult place. As I have indicated, the science was relatively limited, and we felt that our resources could be better deployed elsewhere. So disposal of Faraday became an issue. So what do you do with a base? Well under the Antarctic Treaty, at that stage, we were in the early phases of the need to, if you shut something, take it down and take it away. The prospect of having to completely dismantle and almost renovate the

⁵ Orcadas is actually located on Laurie Island.

land where Faraday was, was a big issue. One of the alternatives was: could some other country make use of the station? So that really became an avenue that we actively pursued. We would have had to have thought of other things if that has not proved positive. So who would want to take on a rather ageing base in the Antarctic?

[Part 4 0:13:00] Drewry: Well this just so happened to be at the time, in the late '80s and early '90s, when the Soviet Union had collapsed. And the Soviets had run a very successful and very extensive programme, Soviet Antarctic Expeditions, ever since IGY. When the Soviet Union broke up, the question was what would happen to the Soviet Antarctic Expeditions, now albeit Russian Antarctic Expeditions. And the Russians, and by that I mean the Russian part of the broken up state, basically grabbed the old Soviet Antarctic Expeditions to run that operation. But a large part of the technology and the manning and quite a few of the laboratories that supported the Soviet Antarctic Expeditions, were based in the Ukraine, and the Ukrainians becoming independent, as part of the Commonwealth of former Soviet States at that stage, felt extremely aggrieved because you might say it that was an 80:20 relationship that had gone the wrong way round. And they were left with nothing. So although it was a difficult time, in trying to find their own way and introducing market economics, and the political situation was not necessarily stable, there was a feeling in the Ukraine that there should be an Antarctic activity that was Ukrainian.

[Part 4 0:14:53] Drewry: And when we announced, BAS, that we were looking for a country that might like to take on Faraday station. The Ukrainians stepped to the mark pretty quickly and I had meetings with the people who were at that stage leading the Ukrainian Antarctic activity who wanted (a) to join SCAR as a member, associate maybe to begin with and then a full member. They certainly wanted to become Antarctic Treaty members as well and of course to do that and have a real presence, they needed a base, needed a station. So we started to have discussions. Now at that point there was a proviso that we had put in and that was that if they took over the station from us at nil cost, we would seek for them to continue to maintain the routine and monitoring observations of some of the upper atmospheric work, particularly the ozone, and this was the *quid pro quo*. That satisfied the long term maintenance of the records. It meant that that science was essentially ring-fenced and the Ukrainians could then ...

[Part 4 0:16:29] Drewry: We would leave them the equipment, the protocols and get on with it. So they agreed to do that but before we could really sign that off, we decided that we needed to go and visit the Ukraine and to talk to their people and to see their facilities and their capacity to be able to do this, so that we felt confident that handing it over, the science was going to get done and it was going to be an active research station. So we organised for three people to go. I went. Frank Curry, Head of Administration at BAS at that time, and Mike Richardson from the Foreign and Commonwealth Office. We three went off to Ukraine, to Kiev, to meet with the people. We had said that what we would like to do, would be to meet the scientists, to visit the laboratories, to see the sort of work that they would do and to be able to get a feel for the genuine veracity of their intent with Faraday. I said specifically 'We don't want to be locked in smoke-filled rooms just chatting about particular points of activity', having experienced smoke-filled rooms in parts of the Soviet Union on other things before.

[Part 4 0:18:08] Drewry: So we arrived, we were welcomed. They looked after us absolutely fantastically and entertained us. The first day of meetings we were in smoke-filled rooms, bottles of vodka, slices of salami, strong coffee and I looked at my colleagues and I thought 'Well we will see how this goes.' Of course there had to be an introductory meeting. And we were then told that we were going to have a programme. We were going to visit some other people at the next place we went to we were in smoke-filled rooms. We had salami and I just said 'Look, we did say we didn't want to do this. We wanted to visit laboratories.' And so one of the Ukrainians said 'Well where would you like to go?' which rather put me on the spot. So purely off the top of my head, I said 'We would like to visit the Institute for the Ionosphere that is based in Kharkov.' There was a bit of a stony silence and they said 'OK. You will have to give us a day to organise this.' We said 'That's fine.' And I said 'There is one more proviso.' 'Yes, what's that?' 'We are not flying.' I was not particularly comfortable with flying on old Soviet aircraft.

[Part 4 0:19:44] Lee: Aeroflot?

Drewry: Aeroflop, as we always used to call it. And so they said 'OK, we will go by train.' Well in the intervening day, before we went to Kharkov, we did visit a couple of laboratories, a hydro- meteorological place ... We met some very good scientists, very enthusiastic, very knowledgeable, entirely happy with the level and state of their science, what they were proposing to do, and also charming people.

[Part 4 0:20:18] Lee: And you were talking directly in English, or through an interpreter?

Drewry: Mostly in English. These people were internationally involved in their science. Some of the labs were a bit 19th century. They hadn't had a lot of investment but they were doing incredible science even under difficult circumstances. The next day we were told that we were going to catch the night train from Kiev to Kharkov.

[Part 4 0:20:48] Lee: Did you know where Kharkov was?

Drewry: Well we knew it was east.

[Part 4 0:20:53] Lee: Do you know how far east?

Drewry: I guess we knew it was a reasonable distance but nobody could say that it was ... We had a rather crude mental map of where we were going. But of course Kharkov was a closed city under former Soviet times. It's where they made tanks; a lot of their military equipment was constructed there and certainly as a Westerner you would not be able to go to Kharkov. It would be like Minsk and some of these other places. So we got on the train and that was an experience in its own right. We had a six-berthed couchette. We had our three Ukrainian colleagues; we had we three and we all packed in and we had the equivalent of a *dezhurnaya* which is the lady who looks after blocks of flats, a concierge type, who was in charge of each coach. Formidable women, formidable, agriculturally built and not somebody you would ask casually a favour of.

[Part 4 0:22:12] Lee: Substantial?

Drewry: Yes, and we rolled on into the night and on board there were people with compartments with chickens, and bags with muslin over (agricultural produce in them), and off we went. It was a very uncomfortable journey. The train kept stopping and jerking and carrying on.

[Part 4 0:22:40] Lee: What time of year?

Drewry: It was the summer; I think it was June. But we went before it got dark, through some interesting countryside, very flat and steppe-like. The next morning we arrived in Kharkov, very impressive railway station and we were met there by the colleagues of our Ukrainian friends and taken off to the Institute of the Ionosphere, a very modern, very acceptable building. We went in and on the ground floor, they had a large exhibition area full of glass cases with pieces of electronic instrumentation, devices that they had built, albeit I think a number of them may have been cloned from the West.

[Part 4 0:23:42] Drewry: We were met by the Director who showed us some of these things and it was quite clear that this was one of those establishments that actually was involved in making the former Soviet military and aerospace machine work. I mean you don't put men into space, you don't have high tech military equipment, without there being the technological underpinning and this was one of the places where a lot of that happened. Although it was to do with the ionosphere, they were clearly into a lot of instrumentation development. The Director then took us on a tour. We went up a couple of floors and he said to us 'First of all, you are only the second Westerners ever to be in this building.' The Americans had got there I think a few months before us, but that was by the bye. He said 'First of all, you would never have got into Kharkov. You would never have got into this building. Every one of these floors has an armed guard and it's all keypad entry.' So we went in and we met some of the scientists and they were again delightful people and they were working, obviously, on the ionosphere for military radio signal communication and the like. And then the Director said 'We would like to take you out to our field research station.'

[Part 4 0:24:59] Drewry: So we went out there. It was about 60 km outside of Kharkov in the countryside and when we arrived there we arrived at what was basically like a busted down farm. It was old farm buildings. One of the roofs was caved in slightly. Everything was overgrown with trees; it was like a large orchard, with trees growing all higgledy piggledy and amongst all of this overgrown tree and shrub area were huge pieces of radio equipment. By that I mean several metres in diameter, dishes; also a huge heater for radiating the ionosphere, as an artificial radiator to look at what was going on. And inside this broken down farmhouse, they had all the electronic gadgetry to operate it. I turned round to Frank and Mike Richardson I remember and saying 'This is incredible. You would have thought this would be clear. It is just overgrown,' and I suddenly twigged.

[Part 4 0:26:15] Drewry: Of course from space it was camouflaged. It looked like it was a busted down farm and these were bits of old farm machinery maybe, just casually if you looked. So that was interesting in its own right. So then we came back from there and from Kharkov. We went back to Kiev. We had satisfied ourselves (1)

that the Ukrainians were really incredibly interested in the Antarctic. They had mobilised a lot of different groups that we met and they were all on message. They were undertaking quality science. They were internationally working in appropriate fields and they gave us a commitment to maintaining the upper atmosphere and particularly the ozone measurements. So we came back; we wrote a report and we essentially said, with the FCO blessing, that we would make the transfer. And of course what happened was: it then became Vernadsky station and has been operating there successfully ever since.

[Part 4 0:27:20] Lee: Great. Thank you. That is a lovely story, thank you.

Drewry: Yes, it's a good yarn.

[Part 4 0:27:27] Lee: Now we are talking globally, let's look if we can at your other international work, your other international connections. I am thinking particularly that you got involved in SCAR and in COMNAP but there must have been other international relationships that you were involved in establishing or furthering?

Drewry: Well we certainly worked in BAS with different groups of other countries, depending on what the programmes were. First and foremost, SCAR developed a number of overarching programmes, increasingly ones to do with global change, and through those, all the Antarctic's contribution to an international programme, which would be coordinated through a SCAR activity, began to become quite prominent. So oceanographic programmes, ocean flux studies, biological programmes that had a large scale international activity, maybe working in the oceans of the whole of the planet. But there was an Antarctic segment to do the Southern Ocean. Then BAS would be involved in working with other partners in that way. And that was something that was very clear, that we needed to support. We couldn't be focussed only on the Antarctic; we had to make the connections of the Antarctic out to and into the rest of what was happening intellectually but also where the scientific problems were.

[Part 4 0:29:16] Drewry: So things like JGOFS (the Joint Global Ocean Flux Study) which was a global programme, a very specific component of that from the Antarctic which BAS was heavily involved in. And quite a few of the BAS scientists took leadership roles in that Antarctic contribution and would be maybe the spokesperson for the Antarctic segment in these wider international fora. So we worked in that regard. Internationally as well we started also to develop relations with a number of other countries for specific activities. It may be because we were operating in the same theatre of the Antarctic. So we had very strong relationships with the Scandinavians, Sweden and the Norwegians and the Finns, because their operations were to the east of Halley station and there were thought to be ways in which we might cooperate with some logistics, and certainly there were periodic flights between some of those stations, and we did look at whether shipboard activity could assist with that. We maintained strong relations with some other countries for particular logistic operations. Certainly in my time we had good relations with Chile and we worked with their logistics people to help maybe with operations through their station on King George Island. So there was a bit of mixing and matching.

[Part 4 0:30:58] Lee: Of those nations you worked with, how do they match to BAS? Were some more organised and more efficient than BAS and some perhaps you found a bit 'Mickey Mouse', for want of a better phrase? Who were you impressed with and who were you not impressed with, is perhaps a better way of putting the question?

Drewry: That is an interesting question, nicely charged. The Antarctic operators that we worked with did cover a wide spectrum and I think you could put them into different categories. There were what we called the new entrants, countries that had come in in those days on the back first of all of the potential minerals exploration until that was shut down with the Madrid Protocol. There were those who felt that they wanted to be involved as their nation enhanced its own stature internationally in a successful international forum like the Antarctic Treaty which meant that they had to have an Antarctic station, an Antarctic operation. There were those that felt that the science was very interesting and they needed to get into and work on the global scale with an Antarctic component. So you could see a variety of different ways in which you would get combinations.

[Part 4 0:32:23] Drewry: Those countries that ... I had worked for ten /twelve years in the US programme, albeit based in Cambridge but working every year in the American National Science Foundation programme, and I would say that the American programme which was certainly the largest operation barring let us say what was happening with the Soviet programme, pre 1989. The Soviet programme was very big but it was difficult always to really get a measure of it. But the Americans were the largest operation. They had certainly the greatest logistic capacity, but I wouldn't call them the most efficient. I think if you looked at 'bangs for your buck' and the bangs would be the scientific output, then no, they didn't really score particularly highly. Their volume of output was certainly the greatest but I don't think it was as efficient as a number of other countries, certainly not as far as BAS was concerned. We did do an analysis of BAS scientific output in refereed journals per unit input for a number of countries and BAS was pretty much the most efficient operation in the Antarctic at that time.

[Part 4 0:33:49] Drewry: But the Americans, I was always impressed by their willingness to cooperate, their ability to mobilise and get things done pretty effectively, and their ability to move around the Antarctic was second to none. So collaborations with the Americans were always very fruitful. We did that particularly in Earth Sciences: airborne geophysics and geology worked very well with the Americans. Also in upper atmospheric sciences where looking at different places in the Antarctic to do with upper atmospheric sounding enabled a continental picture to emerge. It was a very strong interaction between atmospheric scientists and the US groups. So the Americans had a lot of very good research capacity and logistic excellence. Other countries that came into the Antarctic more latterly: the Germans were very good because they operated *Polar Star* (*Polarstern*) which for many years was probably the best Antarctic research vessel, or polar research vessel around. And they shared that very much with international scientists on board and BAS did a lot of work in marine biology with the Alfred Wegener Institute, the Rampolaschter [phonetic] and also the commitment for instance of the Italians who came in with a very strong Southern Europe attitude towards the Antarctic.

[Part 4 0:35:36] Drewry: But under the leadership of Mario Zucchelli they cut out a real niche for themselves in the Ross Sea, and one was always impressed by the fact that of all of the Antarctic stations, the Antarctic station now called Zucchelli Station, had by far and away the best cuisine: fine wine, excellent Italian food, and they mobilised a very very good programme of research, both marine and onshore there. So BAS worked with and had contact with a whole range of countries. There were some that came in that had very little scientific capacity, but wanted to be there, A political reason; maybe also to generate science that would stimulate work in their own country. But I don't think any of these countries, even though they may have not have been doing very much, could honestly be said to have anything other than a real interest in being in the Antarctic. And so you had to match their level and capacity with the way you would handle them.

[Part 4 0:36:55] Lee: And when the international community got together, around a table, were those harmonious gatherings or was there a strict pecking order? How were those international conferences?

Drewry: Well my recollection of those meetings was that they were pretty harmonious. The Antarctic community does pull together a great deal and whilst there might be some scientific debate over issues, there is a very clear view that by and large no country can do everything in the Antarctic on its own and you have to collaborate and therefore you need to understand how other countries operate, what their motives are and how best to work with them and their scientists and their logistics and administrative people. So if you think about it in the SCAR context primarily, and the various working groups and other ad hoc groups that were developed, by and large people were aiming for common objectives. You might have a bit of cut and thrust over details but that seemed to work fine.

[Part 4 0:38:16] Drewry: In the Antarctic Treaty arena, that was a different arena altogether and you would really be trying to develop as scientists ways which would aid the politicians in coming to realistic measures to deal with Antarctic international issues. And I think the great benefit in the United Kingdom was first of all the Polar Regions Section in the FCO had consistently at its head, starting off with Brian Roberts and then John Heap and then Mike Richardson, people who had actually undertaken research in the Antarctic. They knew the Antarctic; they had been there; they had studied it and they could speak from personal experience. But that also gave them a very clear view as to where to then draw in the best expertise. So they didn't have any inhibitions about interacting with BAS or the Scott Polar Research Institute or whoever it was, to get the best evidence, the best advice that would feed in. And also these people maintained their positions for quite a long period of time.

[Part 4 0:39:44] Drewry: It was a sort of a career post as opposed to in other countries people carrying those Antarctic portfolios or Polar portfolios, maybe changing every two or three years. So you had continuity, expertise and BAS was very very clear as to how it would feed in to support the Treaty activities and that meant that actually BAS aided the Foreign Office which was to a large extent very influential in the Treaty environment. Then we had COMNAP of course, and we have talked about how COMNAP developed and there was some scratchiness around the early years particularly from those like the Americans and the Australians who had seen COMNAP as a foil to SCAR because as the senior operators, they didn't seem to have

a locus in SCAR but they could have a locus in COMNAP. But once COMNAP got going, then it began to focus in on the key issues and by and large there were no more stand-up fights and things settled down. As personalities changed it became very much more a – how would one describe it? – a positive community.

[Part 4 0:41:22] Lee: Did you enjoy going or were you nervous?

Drewry: Oh I thoroughly enjoyed it. As far as I was concerned, the international dimension was something that I really enjoyed and found some of the most satisfying, and that is I think because when I started my research career, within a few weeks of starting my PhD programme, I was in the Antarctic working in an American programme with a lot of international activities going on around me, and my Director of the Institute, as my supervisor, had grown up himself being a major force in international science in the Antarctic. He was Secretary ...

[Part 4 0:42:08] Lee: This is ...?

Drewry: This is Gordon Robin. He had been the Secretary of SCAR. He had been on the Norwegian British Swedish Expedition and he was immersed in international science. And for me, I just absorbed this and for ever afterwards I have always seen international scientific relations as being some of the most important. So we had all of these meetings. That's really why I got involved in ultimately being the Chairman of COMNAP. I didn't shrink from that because although it was tough at the beginning, it was something I really felt was important and dedicated a lot of time to making that work. Equally well in SCAR, the international side was something in terms of the scientific programmes absolutely fundamental. So in all of these things I really enjoyed and loved participating in but you can't over-egg these things and you have to sort of ... Because (1) all the activities were conducted in English, as an English speaker you have a responsibility to all your other colleagues round the table to maybe take on some extra duties because they are speaking in your language. What can you do as a bit of reciprocity? Well maybe you can do things like help write some of the draft recommendations and work through some of the language issues or you could take on some other roles. As far as I was concerned, it was very fulfilling.

[Part 4 0:43:56] Lee: Let's go back to BAS then, back to base in Cambridge and I am particularly interested in the advent of women in BAS because during your period of time, there was quite a lot of infiltration, shall we say, of the female sex, including at Divisional Head level. But under Dick Laws, there was a resistance, it seems to me, to women becoming involved in BAS and whilst you were there, that changed. What was the process?

Drewry: Different person, somewhat maybe slightly different generation, different experiences, and just a realisation from my part, having ... I had worked with the Americans in the Antarctic and in 1969 the Americans sent their first group of five women to the Antarctic to work, as part of the National Science Program, led by Lois Jones, a very formidable geologist. And thereafter, in my ten years of working with the Americans I had seen progressively more and more women working in the Antarctic. I would liaise with them. I had been with them in the Antarctic. Even the US military started bringing women down as part of VXE-6, the Antarctic air support wing of the Navy. So I didn't have, when I went to BAS, any presuppositions about

women's ability and capacity to work in the field, on stations, in support roles, in the Antarctic. As a scientist, I had worked with females as high quality scientists, equal to anybody, and if we didn't employ those people, we were certainly missing a major trick. And all of the issues about how would they fit into a base, would there be nefarious sexual liaisons, how were we going to look at the ablution facilities ...? I mean all these are details and things that we could cope with.

[Part 4 0:46:27] Lee: Was this a dam waiting to burst, when you got there? Was it something that was bound to happen? Or did you actually have to work it in? Did you have to power it through?

Drewry: It was a mixture of both because there were clearly people who were still, as one might call, of the old school and needed to be brought along and the arguments had to be worked through and they had to be persuaded. But by and large, of course, BAS is on average a relatively youthful organisation by dint of a lot of the younger people, scientists and logistics people who go out. And there was very little resistance there. Once you had got the Base Commanders on side, because they were the people who were going to have to deal with the circumstances and in that respect people like John Hall were fantastic because they just saw that this was ... we had to do this. And also the other people in BAS had been exposed to women in the Antarctic on other bases particularly the Americans, where we'd had joint programmes and on ships. So in a sense the ball was rolling.

[Part 4 0:47:43] Lee: There was legislation wasn't there? You were actually in danger of ... BAS was in danger of breaking the law, wasn't it?

Drewry: Yes. I would like to feel that we didn't need the law to be a sledgehammer on us but that at the background we had to see ourselves as complying with the law and not trying to argue some sort of exceptional set of circumstances. So for me this wasn't something that was going to be a *cause celebre*. In fact it was a natural part of how a scientific organisation was going to operate.

[Part 4 0:48:19] Lee: Nevertheless you started quite subtly, didn't you, with just appointing female summer-only scientists at Signy? Was this part of the thinking, part of the plot?

Drewry: Yes and we mapped out ... we would say we will do this in stages because I think we needed to have the reassurance that this would not go pear-shaped, and that we needed to take the BAS community with us. And by doing it in stages, it really enabled people to see that there weren't problems, and we went one at a time. But nevertheless, it was going to be a fairly relentless push of these stages to where we had women over-wintering.

[Part 4 0:49:04] Lee: Within five or six years?

Drewry: Absolutely. Yes, as soon as we could get there.

[Part 4 0:49:09] Lee: Were there any problems with women on bases, in the field, on ships?

Drewry: I am hesitating to answer because of two things. One is failing memory and to be quite honest I cannot recall anything of major significance. My second reason for being hesitant is maybe not everything got up to the Director's office. In an organisation like BAS, then by and large you do have a feel for everything that goes on but you can never be sure that some things ever surface in certain places.

[Part 4 0:50:09] Lee: Of course it wasn't just in the Antarctic this happened. You had the first and I think the only female member of the Senior Management Team at BAS at Cambridge?

Drewry: Oh yes, I mean when we were reorganising the Divisions, so that we would have better mapping onto this first major strategic plan of the Survey's, we had some shuffling around. One or two people moved out of the organisation on, and we had the opportunity to make some new appointments, and Liz Morris, who I had known for many years because she was a fellow glaciologist so professionally I had known her for a long time and she was working as a hydrologist at one of the other NERC research institutes, the Institute of Hydrology at Wallingford. She put her hand up for this particular post and as far as I was concerned, when we did all the interviews, she was the best qualified person. She had been working on snow; she was an excellent scientist; she had management experience and she wanted to go to the Antarctic and work with BAS. And so she joined my senior team and as far as I could see, fitted in very well.

[Part 4 0:51:35] Drewry: She ran the Ice and Climate Division and there was no issue about that. Now with any Head of a Division, any senior manager in an organisation, how they run their Division maybe has idiosyncratic components to it. How they operate in the Senior Management Group, in the Director's Committee, can be very different. My perspective on all of the Heads of Divisions I had was that in the Director's Committee, they all operated very much in the overall interests of the Survey. There was always very good collegial environment in which we knew what our agendas were; we knew what our objectives were. Schedule science, how we were going to pursue this long term funding, and people pulled their weight and did their share and in overall terms it worked very well. And the fact that we had somebody who was female and therefore new in terms of gender in that group made not one jot of difference.

[Part 4 0:53:15] Lee: Who were the key characters round that table then, that you remember distinctively?

Drewry: Well they changed a bit over time but first of all my deputy who I appointed after Nigel Bonner who was my deputy to begin with ... But he was there for only a year before he retired, who was a wonderful chap and I owe him also a great debt because he took me to the Antarctic on my first trip as BAS Director and really showed me a lot of what was going on, particularly in South Georgia where we visited the old whaling stations etc. and his knowledge was very very comprehensive. But after Nigel, Barry Heywood took over and of course he became Director later, but Barry was a hugely supportive Deputy Director and he and I gelled extremely well and I think that was very very important. So much so that we were professionally extremely close but we were also close as personal friends and we would go off on weekends together. We would go walking, we would do other things at a personal

level, but professionally Barry was a huge amount of support. He took on a lot of duties, a lot of activity and I could not have wanted for a better person doing that role, and I think it was the chemistry between the two of us that ensured that a lot of the things in BAS generally were successfully achieved.

[Part 4 0:55:03] Drewry: But I had other ... To begin with I had the Head of the Upper Atmospheric Sciences Division as Michael Rycroft who then left and went on to the European University in Strasbourg. I had David Walton who was Head of Terrestrial Life Sciences at that stage, and he's very very good as a terrestrial biologist, but probably even better as a communicator of the science that we were doing, and he increasingly took on the role of overseeing the BAS publicity, PR and related activities, and was very successful in doing that. Again very good knowledge of the Antarctic. And John Dudeney who I appointed after Michael Rycroft left, as the Head of Upper Atmospheric Sciences.

[Part 4 0:56:06] Drewry: The marine biology and related activities, which was one of the big Divisions, Marine Life Sciences in BAS, was headed by Andy Clarke, a very very fine scientist and somebody who was able to combine being a top-rate scientist, because he was an Individual Merit Promotion scientist (IMP), with being able to manage a quite diverse and complex Division. So I had those people, and then I had successively John Bawden who was Head of Administration and Logistics, and then Frank Curry who joined after John Bawden retired, both of them outstanding individuals. Frank came from an MOD background and brought a different set of skills and I worked with him for a number of years, very impressed at his grasp, particularly both John and Frank, in our dealings with the FCO and the Treasury and what was then the Department of Education and Science for the budgets. So they were very helpful because they had a good background in Government funding.

[Part 4 0:57:25] Lee: Were these meetings formal, stuffy, or 'beer and sandwiches'?

Drewry: No, we had formal Director's Committee meetings, so that would be tea, coffee and biscuits, and we would meet in a neutral territory, so to speak, usually in one of the larger BAS meeting rooms, and we would just sit round the table and have a formal agenda and we would have my PA who would be taking a record of the meeting. It would be a formal meeting. My view is that you have to have that sort of formality to do the business. You might have other ad-hoc meetings in which you might want to do things in a more informal way, but by and large, ... That didn't mean to say they were stuffy. There would be good discussion. We would try to get down through the agenda briskly. We would cover the issues, not wanting meetings to be endless, paperwork to a minimum; get the decisions out, people to agree them and everybody have their own action points and then get off and do that. And of course throughout the year, these meetings would vary because you would have people who in the Antarctic season would be away, so we did have also representatives if they were needed, to come from Divisions if the Head of the Division was absent. But no, those meetings were absolutely central to organising and working through the activities.

[Part 4 0:59:05] Lee: Was there anything which ever split the management team, any issue which ...

Drewry: Now you are asking me to really trawl the depths of the back of ...

[Part 4 0:59:13] Lee: ... that were difficult to resolve. Anything which strikes you? Maybe there wasn't but ... You haven't got to find something special. If something comes to mind straightaway then it is worth having. If you have to really trawl ...

Drewry: I can't honestly think of anything that we had a major disagreement that caused ructions around. It was a pretty consensual group. I think you have to remember in this context that BAS at that point was riding very high. We had a lot of money coming in; we were doing all these developments. Everybody had a lot on their plates but it was all very positive. Things were moving in the right direction. BAS was extremely active internationally. The issues that were difficult was actually how we were actually going to do everything in the amount of time that was available before ultimately, as we talked about before, the funding would roll down the other side of the money cycle.

[Part 4 1:00:20] Lee: What you have just described is a perfect recipe for a pressure cooker, isn't it, where you are very very aware of the responsibility of that management team and the amount of money they do have to spend, and the amount of expectation from them. Did that ever become ... did the valve ever lift off, the pressure valve ever lift off?

Drewry: Well let me put it this way. There were one or two people who left the Senior Management Team and I think it was for the reasons that we needed a little bit more – how would one describe it? We needed to get the delivery far more tuned to the pressure that the organisation was under, and so I think if people couldn't really match that, then we decided that there were other things that they might want to do.

[Part 4 1:01:26] Lee: So there were some casualties?

Drewry: Yes, but that is inevitable I think. Time and circumstances change and not everybody necessarily adapts perfectly. And also I think people's career expectations and opportunities also change and emerge and sometimes it is time to move on. In fact I would say one of the issues that I always encouraged people in BAS to consider, because BAS could be seen almost as a lifetime career organisation, was at some stage to leave BAS and go and work in some other environment and absorb its culture and see what was going on, get a perspective on BAS, and then you could come back in a more senior position but you would have that experience. And I think there were one or two occasions in my later roles, particularly in NERC, when I was chairing, particularly chairing but on appointments committees, then there were circumstances where a BAS person would have got the top job or the really interesting job, if they'd had a spell outside of BAS to really enrich and make their career path a bit more eclectic. And so there was a danger that BAS could be – I won't say inward looking – but that extra dimension might be lacking. So I didn't see it as anything other than part of the career opportunities that somebody might want to go off and pursue their life and research and related activities somewhere else.

[Part 4 1:03:25] Lee: Would you describe the mood at BAS at that time as being high octane? That things were really really buzzing?

Drewry: Yes, I think I would. I mean there was a lot of pressure, a lot of excitement at all the things that were going on. Well it was a fantastic time. It's difficult for me to judge how that was different from other periods, because I hadn't been in the organisation before, but talking with colleagues, there were periods ten or more years ago when things were really difficult and BAS funding was very very tight, and whilst the science, by and large, was maintained at high quality, there was a lot of pressure round the edges that caused concern. And there were individuals in senior positions as well who I think were not as easy to get on with as certainly I found my senior team, who I think were another generation on and who were able to cope much more with the administration, the science and the multi-tasking that was necessary at that time. But yes, it was; I think people were very buoyant.

[Part 4 1:04:44] [End of Part Four]

Part Five

[Part 5 0:00:00] Lee: This is David Drewry, recorded at his home in Cottingham, East Yorkshire, by Chris Eldon Lee, on the 6th of January 2011. David Drewry, Part 5.

[Part 5 0:00:11] Lee: Tell me, David, about the thinking behind opening, throwing open the doors of BAS to the public and going on tour.

Drewry: I think the idea of BAS exposing its science to the general public, the public being able to see what is going on in its laboratories, seeing its equipment, some of that equipment is very tactile, very large – Sno-cats and equipment used in the Antarctic, tents and the like – had come about in part because there was a move in science generally towards what we call the public understanding of science – engagement rather than ivory tower activity. So there had been, before I joined BAS, certainly there had been at least one exhibition of BAS work on the *Bransfield*, which had been moored at Tower Bridge. I remember going there because at that time I was the Director of the Scott Polar Research Institute. I got an invitation, I went and it was very good and it was a way of engaging people, and particularly on a ship which was very good.

[Part 5 0:01:25] Drewry: But a combination of experience doing that and the general way in which science was being opened to the public, led to a whole series of Open Days and we did this on a regular basis as things developed and I have to say that the PR people and all the Science Divisions really stood up to the mark to do that. But it was something which we did both in Cambridge and we did some of that in other places as well, so parts of those exhibitions did go to other locations to show what BAS was doing. I would say that the reaction of the public was excellent and whilst, if you are doing something in Cambridge, you only have the catchment of say fifty miles around ... People would come 80 kilometres. But it was very satisfying and it also made the scientists and the people who run administration activities and logistics a lot more aware of the interest that the public had in the Antarctic. Secondly it made them have to think about how to get over, in non-technical language, what they were doing and their enthusiasm for what they were doing. So I think overall they were very very positive events and long may they continue in various guises.

[Part 5 0:02:56] Lee: And that led to the touring exhibition, did it, the *Antarctic – a Continent for Science* exhibition?

Drewry: Down the line, yes. I had already left at that stage as Director but BAS had got a lot of experience and momentum behind doing that sort of operation.

[Part 5 0:03:11] Lee: And what about taking journalists to the Antarctic? Was that something which happened on your watch?

Drewry: Yes, we had a number of journalists who went down, both written media and TV. My view was that we did need to expose much more widely and engage with the media, whether it be the print media or whether it be TV, radio, and to get what we were doing in the Antarctic getting a lot more real for people who back home might have had a vague interest in the Antarctic. They might have heard of British Antarctic Survey. They didn't know really what they wanted to do and people who said 'Why are we spending all this money in the Antarctic?' So this was part of just the general enhancement of knowledge and understanding about what we were doing, and to give rise to a sharing of that excitement of this very very remote part of the world. So there were series; I remember Daniel Snowman who we took down and he did a series travelling around. Also we gave support not just to people who were going to do programmes on BAS but who were doing programmes about the Antarctic, like *Life in the Freezer* and I remember vividly being in the Antarctic in I think it would be '91/'92 season.

[Part 5 0:04:50] Drewry: I think it was then, and we had the TV team that was doing *Life in the Freezer* aboard *HMS Endurance* and I was on *Endurance* travelling around to BAS bases at that stage linking up with our ships and aircraft for three weeks and that was fascinating talking to all of those people. Alastair Fothergill was the producer and he was on board the *Endurance* for a while and I got to know him and how things were doing and was very deeply impressed by that *Life in the Freezer*, so much so that when I moved on later to become the Vice Chancellor at the University of Hull, I got Alastair to come up to give us a talk, not about *Life in the Freezer* but one of the other programmes that he had been directing and eventually we gave him an honorary degree as well because he was an outstanding individual in that genre and having known him from those early days, it was a way of consolidating and maintaining the interaction between research and public understanding of science.

[Part 5 0:06:03] Lee: All of which was enhancing the profile of the Antarctic to people that wouldn't necessarily have known about the place very much beforehand. One of the side effects of getting people excited about somewhere is they want to go, and in your annual report in '88/'89 you were getting a bit concerned about the growth of tourism in the Antarctic.

Drewry: Yes. I think that was certainly an issue at that point because there was little if any regulation of tourist activity. Ships were going down; they were entering areas that we now have definitely as areas of Special Scientific Interest and there was the potential for that to really start to burgeon in a way which might have damage to the environment. But also if any of the ships that were operating these tourist visits got into some sort of trouble then it was going to be the National Operators that were going to have to take action and that would compromise research ships. It might even

put third party life in danger and so I think we were very worried that at that stage we weren't quite certain as to how things were moving.

[Part 5 0:07:34] Drewry: I would have to say absolutely that later on, both when I was at BAS and certainly a view I hold now, is that regulated tourism in the Antarctic is something that I think we should support. I would like to see more of it. I always took the view that those of us who worked in government science in the Antarctic were extremely privileged and why should we be the only people who would have the right to visit and see the extraordinary environment and activities and wildlife in the Antarctic. And also rolling on the back of the issue of public understanding, the more people that go to the Antarctic the more people are struck by, overwhelmed indeed, by the Antarctic environment and they become the Antarctic's best ambassadors. I found no-one that I have ever spoken to who has been to the Antarctic as a tourist who has ever failed to be moved by, and has had a huge and overwhelming desire to tell other people about their experiences there, which have all been positive.

[Part 5 0:08:57] Lee: So were you in any way, or was BAS in any way influential in drawing parameters up for Antarctic tourism? I know there were organisations eventually were developed to control: the Association of Antarctic Tourist Operators or whatever it is called. Was BAS and you as Director putting pressure upon that to happen, the formation of that organisation, or something to control ...?

Drewry: Yes. It resulted in a much greater awareness of third party interests in the Antarctic, and through COMNAP and particularly its logistics arm, there was an engagement with the increasing numbers of tour operators in the Antarctic to really enable them to minimise the threats to the environment and to their own vessels. And this of course was folded into and eventually became part of the regulations under the Antarctic Treaty, although some things were already covered by things like the London Dumping Convention, MARPOL and whatever, for operations in Antarctic waters. But BAS personnel certainly were ... played a role, maybe quite a significant role in engaging with the tour operators and eventually to the way in which IAATO operates.

[Part 5 0:10:28] Drewry: One of the other things I should say at this stage was that – I forget exactly what the dates were but we had one particular expedition that was going to the Antarctic, not as a tourist but it was a group of non-governmental people who wanted to cross the Antarctic. It was the Trans Antarctic Expedition led by Will Steger, an American, and he had gone out with five people of different nationalities including a Brit, Geoff Summers, and they were going to cross the Antarctic at its widest point from the Weddell Sea right across to the area south of Australia near Mirny along the 90 East – 90 West line of longitude. I remember Will Steger coming to see me in BAS because he wanted to get BAS support for what he wanted to do and I suppose at that point that rather gelled my views on these things because I felt that provided an organisation or a group of people were totally professional, had the experience and had got their backup and their emergency systems organised, why wouldn't we want to see them go there and be successful and do things. Just as legitimate for them to go and experience and do what they were doing as it was for BAS or Alfred Wegener Institute or National Science Foundation in the States to go there and do their science.

[Part 5 0:11:56] Drewry: We did not see the Antarctic as the sole preserve of scientists and in fact they had a very successful expedition. They had a lot of publicity and they had some of the first Internet discussions with schools and people in the United States and I think it did a great deal for exposing and bringing the Antarctic to a wider range of people.

[Part 5 0:12:18] Lee: But if things had gone wrong, would you have had to have stepped in and helped.

Drewry: Well we had ... At the end of the day, the bottom line would be probably, but they had got a lot of their backup. They had gone through what they would do if they had an emergency. They had got a bond to be able to fly aeroplanes in and pick them up and do all of these things. And that's really why I think if they are as self-sufficient as you can get, then it doesn't impact on national operators, and national operators don't have to divert their resources to that. But ultimately, you might have any situation where ...

[Part 5 0:12:59] Lee: The SOS situation?

Drewry: And of course other countries have helped nations when they have been in trouble. And BAS had had emergency airlifts out even in winter time, out of Halley, by courtesy of the Americans who have flown ski-equipped planes down from the States to McMurdo and then on to the South Pole and then on to Halley to take people out. And that is a pretty demanding activity. So there is a lot of international support for emergency operations in the Antarctic.

[Part 5 0:13:32] Lee: Would they bill you in those circumstances?

Drewry: Not in my day.

[Part 5 0:13:38] Lee: OK. We talked about the construction of the *James Clark Ross*, and it was quite an interesting process but what about the day of the launch? I guess you were there in your best tie and suit?

Drewry: Yes, it was a quite exciting and remarkable day and if I remember I think it was ... Was it the 1st of December 1990?

[Part 5 0:14:00] Lee: '91.

Drewry: '91?

[Part 5 0:14:01] Lee: According to this.

Drewry: I think it was 1990⁶ but we could check on that. Yes it was a wonderful day. It obviously took place on the Tyne and the ship had been made ready. A lot of us went up the day before and we stayed overnight at a very nice place just to the north of Newcastle. We had a dinner particularly with the Vaughans, the directors of Swan Hunter. It was a very special occasion. We had, for our informal dinner the night

⁶ It was 1990 according to the BAS website.

before, John Knill who was then the Chairman of NERC, Eileen Buttle who was the Secretary, and wives accordingly, myself as Director of BAS. We had Brian Hind who had been the director of the ship activities at NERC and his wife, and a number of other people. Obviously the Vaughans and other Swan Hunter folk.

[Part 5 0:15:15] Drewry: Very very good. Next day the launch was going to be by the Queen. We were absolutely over the moon when we heard that she had accepted to launch the vessel, and that meant that everything was ratcheted up a level in terms of security and protocol etc. We left the hotel, I remember, and headed into Newcastle and at some point we then had a gathering where we then transferred to the cars that were going to take us down to the docks. And this was then going to be in a motorcade. They had blocked off roads; they had got motorcycle outriders with the Queen in her car, and several other cars; we swept through Newcastle like one has never done before and never likely to do again.

[Part 5 0:16:24] Lee: It sounds like Bobby Robson treatment.

Drewry: It was fantastic. We got down to the dock and to the shipyard and of course there were large numbers of all the people who had worked on the ship and they were all foregathered with their families. It was a great family and company occasion of course. And we then had some time when we were introduced to the Queen, were able to talk about the *James Clark Ross*, about BAS and about anything else that came along. Indeed at that time I think the Queen was very interested in what Prince Charles was doing in terms of his emerging, at that time, interest in green and environmental issues. And so we had a bit of a chat about that I recall. And then we had the formal occasion. Although it was early winter, it was nevertheless dry. We were able to walk down through the dockyard in line with the Queen ahead and then a number of us down to a dais in front of the bow of the *James Clark Ross* with all the usual paraphernalia.

[Part 5 0:17:45] Drewry: The shipyard crowds and other people were lining this route. We walked down, up onto the elevated dais and then the Queen did her stuff and pulled the lever and named the vessel the *James Clark Ross* and fortunately the bottle of champagne smashed on the first occasion, and down she slid into the Tyne. It was a very very emotional occasion. And so we watched all of that, and congratulations, and then we retired back and we went then to Newcastle Town Hall where there was a full civic lunch. I think it was lunch; I can't quite remember the exact timing of this. But it was a big function to celebrate both the launch of the *James Clark Ross* but also the Queen who was there on an official visit to Newcastle and then she was going to go off and do something later in the day. So I am sure it was at lunchtime that we did that. It was a wonderful, memorable occasion.

[Part 5 0:18:54] Lee: Jolly good. Did you know at that time that Swan Hunter were going to go bust? I was wondering how a celebration sat against the inevitable unemployment.

Drewry: I suspect we didn't. We knew that they had over-extended themselves in terms of the build and the ship was being developed against a schedule which was slipping. And we had written in ...

[Part 5 0:19:29] Lee: All right. But that didn't mar the day , the fact that ...?

Drewry: No.

[Part 5 0:29:35] Lee: What happened subsequently didn't undermine the day?

Drewry: No no. It was truly a really celebratory occasion.

[Part 5 0:19:45] Lee: Let's look at some of the repercussions, if we may, of the Madrid Protocol of I think this was October 1991 – I hope am right – and the new requirements under the Antarctic Treaty for environmental protection. I guess you were partly involved in this, in drawing up some of the guidelines for this?

Drewry: The way that this worked was that the Madrid Protocol emerged from the Treaty's reformulation of the Minerals negotiations that had gone on. We were a long way on in getting a Minerals regime developed. The environmental concerns over that hijacked the whole of the Minerals regime and led eventually to an Environmental Protocol to safeguard the Antarctic, which was the Madrid Protocol. The various countries of the Antarctic Treaty that led to the formulation of the Madrid Protocol, drew on expertise from their various scientific organisations and of course the very strong NGO input to all of that.

[Part 5 0:21:07] Drewry: And so for the British input, through the FCO, BAS was of course giving all the advice that was sought and more than that if necessary, and certainly the UK was a significant player in the formulation of the recommendations that formed the Madrid Protocol. So yes, BAS scientists, and at that stage we had got an environmental scientist as part of an environmental unit on board in BAS. We'd had to have that when we took undertook for instance, the Environmental Impact Assessment for the Rothera airstrip. It became increasingly clear that you had to have an environmental advisor, somebody who looked after all of those impact issues to do with Antarctica, but equally well to look at compliance with the increasing raft of Antarctic Treaty regulations that applied to environmental matters.

[Part 5 0:22:17] Lee: All this had some repercussions for BAS itself, didn't it? You had to employ and then enforce some of the decisions that that treaty, that protocol made, perhaps the most famous of which is the removal of huskies. Talking to lots of Fids over the years, there are some who don't see quite why that was necessary. Dog turds are very small compared to the Antarctic as a whole.

Drewry: Yes, and I absolutely agreed with that perspective. The dogs were a sacrifice to the growing ambitions and perception of power that the environmental lobbyists had, the NGOs. And all along, the issue of the dogs was in the background of thinking when the clauses about the introduction and removal of alien species were put in. And I think the only reason that we went along with that in BAS, and we were not happy but we were not against, when chips were down, the inclusion of a clause that meant that huskies had to go, because at the end of the day, they were recreational. They were no longer of scientific value in terms of taking people around the Antarctic. They were used in the winter. People at Rothera and at Halley earlier, had used them to go on trips to relive some of what it was like to sledge with dogs in the past.

[Part 5 0:24:06] Drewry: I wrote an article – it must have been after that time or during this period – in which I likened the removal of huskies from the Antarctic like the destruction of heritage buildings in Britain, because dogs were part of the heritage of the Antarctic. They had been introduced in early stages. They had carried people to the Pole; they had been part of how the Antarctic had opened up, exploration and science. They had been a fundamental part of the not long but very important history of the Antarctic, and therefore removing them was like destroying part of the heritage and I felt very strongly about that. As I say I went into press and made some really quite clear statements about it. But if I could maybe just backtrack slightly on this issue, during this whole forment around the Madrid Protocol before and at that time, there were a number of meetings that were being organised by bodies that involved people from BAS, and certainly involved me. There was the Tinker Foundation that organised at least two meetings in the United States, one at Wingspread which is a Frank Lloyd Wright building used for conferences, north of Chicago on the west bank of Lake Michigan.

[Part 5 0:25:37] Drewry: We had meetings in Paris and elsewhere bringing together maybe twenty or thirty people from around the world but strong NGO presence from Greenpeace, from Friends of the Earth, from the Southern Ocean Coalition – let me get it right. I think that's it. I am trying to remember all these acronyms from years ago now. And we had some very strong, very engaged debates over a number of these issues and I am sure that those – and they were published as reports – had quite an input to shaping some of the ways in which thinking would go because we had people who had Antarctic Treaty responsibilities at these meetings as well. So that was quite a productive and informative and influential time, this penumbra of meetings that was going on that were not formal but nevertheless were shaping thinking, were I think very clear. I got very much involved in this and I wrote a lot of pieces that related to science and how science would operate in these new types of environments, as part of the contributions to these discussions. It was exciting.

[Part 5 0:27:17] Lee: You are quite clear though that the dogs went for political expediency rather than because of environmental concerns?

Drewry: Absolutely yes. There was a whole issue about distemper being transmitted from dogs to seals. Yes maybe but when you talk about maybe less than 50 dogs left in the Antarctic, in a place the size one and a half times the United States, and then you are talking about seal populations of Weddell seals at that time were estimated to be 30 million seals around the Antarctic. You have to get some sense of proportionality and I think that was lacking.

[Part 5 0:27:57] Lee: So were you in fact responding to Green guerrillas who were attacking you? Was this a way of stopping the Green movement from picking holes in you in your operation?

Drewry: No I don't think the story was that. I think we accepted it as this sacrifice on the altar of environmental concerns which were running very very high at the time.

[Part 5 0:28:23] Lee: It was also a financial sacrifice because some of the measures you had to put in place for expediency were jolly expensive, particularly having to deal with old bases.

Drewry: Yes. All of this came with a financial penalty and we had to deal with that, but also we sought new money for this. We started to put a line in the BAS budget for these environmental matters.

[Part 5 0:28:57] Lee: In 1990 you said that you might have to cancel scientific projects in order to comply with the new environmental restrictions unless you got more money.

Drewry: Yes. We would say that, wouldn't we? This is part of the political game of operating an organisation like BAS. Yes there were additional costs and we did not want to divert core science money to clean-up operations for compliance with regulations which we felt were at best not making a huge impression and at worst were simply bureaucratic, without new money. And so we increasingly saw a line in the BAS budget for environmental clean-up, new equipment, waste management, etc., as a way of protecting the science budget and being able to make BAS as compliant as possible. But it was a way, also, of being able, I won't say to hold a gun at the Head of NERC or at the Department of Education and Science and to our political masters, but it did work and we were given some additional funds to be able to deal with those issues. But of course as time went on, the burden of that activity has grown considerably and removal of bases is a tricky issue and of course we did a big survey. We had all the old bases surveyed, looked at. We decided which ones might be preserved as heritage, which ones would be simply sealed, and which ones would be removed and that wasn't a trivial exercise. I think it was at least a couple of thick volumes of reports that went right through the whole gamut of FIDS bases that were scattered around the Peninsula.

[Part 5 0:31:27] Lee: Reading between the lines, one got the impression that you felt some of this regulation was faintly ridiculous. I don't want to put words into your mouth but for example BAS could no longer tip waste into the sea, fair enough, but it seemed that there were certain exceptions to that such as kitchen waste which could still be dealt with locally rather than sealed up and sent home again. So were you kind of frustrated by the minutiae of all this?

Drewry: Yes. I also think you have to do two things: you have blend or marry your responsibilities for a genuine concern for the environment with a balanced and a reasonable view about (a) what is scientifically reasonable, administratively possible and financially you are capable of achieving it. And I always took the advice, for instance, or the view that was given to me from the biologists who said 'Pumping a bit of raw human sewage into the sea has a very small impact compared with the huge amount of sewage that is ... or faeces that are put into the sea by local seal populations for instance.' And that the impact one was making was likely to be pretty small. Now OK, you could say that a continuous expelling of sewage in one place over a period of time might have an impact but you monitor it, see what's going on. You suddenly don't stop and say 'Everything has to be taken out.'

[Part 5 0:33:28] Drewry: We tend, in my view, to take a position at one extreme end of the spectrum and it is the tail wagging the dog. So you legislate for the worst possible case and then, rather than getting everything in perspective, and saying 'That's what we mustn't do. So let's edge back from it', you actually use the worst

case to drive everything and it becomes an over burdensome and in some cases a highly contentious set of circumstances you are dealing with. So I think you have to have a degree of pragmatism as well as clearly being aware that you have to comply with the legislation and the legislation is there for a good purpose.

[Part 5 0:34:16] Lee: OK. I guess also behind all this was that the Antarctic Treaty must be sacrosanct, that it should not be undermined by any one nation. So therefore there was an obligation to go along with what had been decided. I just wondered, in your view, with those minor details to one side, how vital, how important the survival of the Antarctic Treaty was to you?

Drewry: Oh fundamental. I think it has been an amazingly robust, flexible treaty that has continued to maintain about 9% of the planet's surface without the acts of terrorism, acts of war, confrontation, and kept it free for science and exchange since 1960 and that is really a remarkable achievement, and anything that might compromise the continuation of that needed to be stamped on very quickly. And so I think there was a genuine view that maybe we don't like some of the things that have been happening, but we have got to maintain them and maintain the integrity of the Treaty. The best thing to do in the future is to make sure that the provisions of the Treaty are as carefully formulated in accordance with science or a reasonable understanding of the Antarctic, than just necessarily a gut reaction to what is happening in other parts of the world.

[Part 5 0:35:53] Lee: How do you feel about the future of the Antarctic Treaty? Are you relaxed about it or are you nervous that at some point something of value will be found underneath the Antarctic and will be accessible and the whole thing gets blown apart by commercial interest?

Drewry: That is always a danger. I don't think one has a wish to be complacent about that, and certainly not ostrich-like about it.. My feeling however is that so far the Antarctic Treaty has survived a number of challenges to the hegemony that is exerted over the Antarctic through the Antarctic Treaty. The environmental issue is one; that could have blown the Antarctic Treaty apart. When we were hell-bent on developing a minerals regime, but that morphed into the Madrid Protocol and actually has moved things in a direction which resonates with the political climate around the world at the time. I am sure that if other things happen, then it will flex in another direction to be able to take on some of the developments and political machinations that are going on.

[Part 5 0:37:06] Lee: So are you confident it will be robust enough to deal with that marvellous find.

Drewry: Well first of all ... Well let me put it in general terms. I would say that you can never be 100 percent certain but I would like to think it is a very robust treaty but you have to ask yourself: when you are not in a position to explore for minerals, the chances of you finding a mineral deposit which can be assessed as being of a size that is internationally important, is pretty small at the moment. So we have got another 40-ish years to run before the Protocol has to be renewed and I would feel pretty confident up until that time that things would be going in the right direction. But who

can say what is going to happen in thirty years' time when we will have to start thinking about this seriously.

[Part 5 0:38:04] Lee: Let me take you back then, if I may, to an incident at Halley which you have agreed to talk about. You think it was in 1991⁷ when there was a serious discipline problem at Halley, and both yourself and your Deputy Director had to make a visit to Halley and I know nothing more than that, so tell me the story if you wouldn't mind.

Drewry: Yes. I can't guarantee that exactly the sequencing is going to be right but during the Antarctic winter, which would be let's say in '91 (summer of '91 in BAS) we were increasingly concerned over the tenor of some of the messages that were coming back from Halley. And these tended to indicate that some of the scientific activities were slipping in terms of reporting back observations and undertaking particular experiments. [REDACTED]

[REDACTED] This developed to a situation whereby conversations that were taking place with Halley led to an even greater concern over the fact that some of the discipline was breaking down at Halley over the winter, and that a lot of the Fids there were not responding to what would normally be the activities there. We decided that therefore there was sufficient concern that as early as possible, the winter base commander, we would have to pull him out and really find out what was going on, [REDACTED]

[Part 5 0:40:14] Lee: Were these telexes you were getting, or radio communications?

Drewry: These were – primarily they were coming through what we would call internet email messages, plus we were able to have through Inmarsat telephone conversations with the base commander and other people. The situation was such that we decided that we were going to have to go into Halley as early as possible. So I got, at that point, John Dudeney, who was the Head of the Upper Atmospheric Sciences Division, [REDACTED], to go with me down to the Antarctic. We went from Cape Town, the first time we had actually sailed from Cape Town prior to that, because of the issues of apartheid and the ban on operating out of South African ports had been in force. The first time we then sailed from Cape Town down to Halley. It took us quite a long time because we were in the sea ice trapped for quite a while near the Stancomb Wills Ice Tongue. We got into Halley but what I should say is that we had managed to get the winter base commander out of Halley by air. We had flown him out and back to the UK and we had then flown him down to Cape Town so that he would be able to meet and talk to us. And I remember having in my cabin in the *Bransfield* in Cape Town a discussion and also a résumé of what was going on.

[Part 5 0:42:08] Lee: Do you want to name this person?

Drewry: To be quite honest I can't remember his name⁸.

⁷ It was actually 1993 (BAS Annual Report 1993/94).

⁸ The 1993 winter base commander was Rob Weight (Database of winterers on BAS Club website).

[Part 5 0:42:13] Lee: OK, I believe you. And this was all happening in the Antarctic winter?

Drewry: Yes, well this was the beginning of the summer, when we were going down to open up the station.

[Part 5 0:42:24] Lee: You met him on the *Bransfield*?

Drewry: On the *Bransfield*. John Dudeney and I decided that things had gone badly wrong, [REDACTED]

[REDACTED]. Things had really gone badly wrong and this had led to tensions on the base. [REDACTED]

[REDACTED] So we then sailed down and we got to Halley and we had worked out a protocol whereby we would go straight onto the base. We would then interview everybody on the base. That would be John Dudeney and myself. We would interview everybody and I think John King who was meteorologist at BAS, Senior Meteorologist. We would interview everybody and on the basis of that, we would then take decisions as to what would happen.

[Part 5 0:43:30] Drewry: We got onto the base and I have to say I was shocked. The base was in a terrible state. It was clear that people had just gone ape over the winter. You could feel the sort of lack of discipline and almost a tension. Also of course people knew that we were coming and this was going to be sort-out time. So there was a lot of tension in the air. We immediately got everybody together. I talked to everybody about the fact that we were very concerned. However we would want to be very supportive. We had to get the base back onto its feet again. The base commander that had been in Cambridge was there and he was going to take over⁹. We had jobs to do but we were going to need to talk to everybody and as a result of that we would then take actions as necessary. Firm, fair, but extremely straight down the line in terms of talking to people.

[Part 5 0:44:32] Lee: The decision to go yourself, was that taken purely by you or was that the Board of Management decision?

Drewry: I was going to go to Halley anyway.

[Part 5 0:44:43] Lee: Right, so you just went earlier?

Drewry: So we went the earliest opportunity we could.

[Part 5 0:44:48] Lee: Right, but the fact that you went, indicated to the Halley personnel the severity of the situation.

Drewry: Yes. If I hadn't been planning to go, I would have done.

[Part 5 0:44:58] Lee: Right. So it was a hands-on for you?

⁹ Brian Mallon (Database of winterers on BAS Club website).

Drewry: Yes. We started interviewing everybody about what had gone on in the winter. It was not a happy story. There were clearly people who were somehow agitated. They couldn't get on with other people. Tempers had boiled over. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]. That night I think was one of the most uncomfortable nights I have spent because we were given rooms to sleep in. At about three o'clock in the morning all the fire alarms went off. They had been put on. This was not a fire; they had been rung to disturb us all and I actually felt at that stage that I might be physically assaulted during the night.

[Part 5 0:46:30] Lee: How many people were on base?

Drewry: There would be about a dozen.

[Part 5 0:46:34] Lee: OK.

Drewry: Anyway the next day we continued talking to people in smaller groups. We organised that the people on the ship would come now, start coming in and mixing, diluting the issues, getting the discipline back, getting the base scrubbed out, getting people onto jobs, doing things. And I think over the next couple of weeks, which was the time that I spent at Halley, things got back into a routine and settled down, and I left when I felt that the base commander who had come in with us had now got a grip. And he felt confident that a new regime was introduced. [REDACTED]
[REDACTED] and that the new people had come in and things were on an even keel. But I have to say it was a difficult situation and it was a lot of tension, a lot of stress. I was magnificently backed up by John Dudeney and John King and other people who were there. But it had the potency to get really very difficult.

[Part 5 0:47:48] Lee: I mentioned this in the last interview we did. You are a scientist not a shipbuilder. You are a scientist not a psychologist. So there you were as a scientist being thrown into this human conflict, this human situation?

Drewry: I am also a person and also I think that you don't take on these jobs without knowing that you have to have some sort of skills in terms of liaising and working with people. And if you started your career working in teams as I did – I was very lucky to be in a team from very earliest days, and if you work in the polar regions, you are in small groups – you understand the dynamic and the chemistry and the interactions that go on between people. So you have an innate understanding of that and over the years in management and senior management roles you see what you have to do, and you get training and other things like that. So whilst that may not make you absolutely prepared for every eventuality, there you are; you are in that situation. You are in charge. It's your call. You have to do it; you have to go and sort it out, and that's what we did.

[Part 5 0:49:04] Lee: Did you ever get to the root cause of it all?

Drewry: Yes. [REDACTED]
[REDACTED]
[REDACTED].

[Part 5 0:49:31] Lee: Could it have been avoided at some point?

Drewry: Probably. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[Part 5 0:50:13] Lee: BAS prides itself historically on its ability to select the right men to go in to the right situation, so this sounds like it was a rare incidence, and there were one or two others, where it didn't quite work.

Drewry: You can't be 100 percent all the time.

[Part 5 0:50:30] Lee: Were there any changes in procedure as a result of this? Any revisions to the way you did things?

Drewry: Yes, I think we carefully looked over [REDACTED] how the base was left before the beginning of the winter. Communication with Cambridge because there was very much a 'them and us' issue developing between the base that thought it knew what it was doing and how it wanted to do it, and Cambridge headquarters that could see a different sort of way of operating or expected a particular sort of response. So a breakdown in communications of that sort could be avoided by a different sort of handling. It was a challenging time.

[Part 5 0:51:15] Lee: If you think about it, the circumstances in which these things happen, it is perhaps remarkable it only happens so rarely, that things went wrong.

Drewry: I think that is a tribute to the fact that the right people do get down to the Antarctic to do the right jobs at the right time, and the way they are trained and the way they operate, but we have to remember: here are people, very isolated communities, cut off in a difficult extreme environment, and by and large they all stand up to that and stand up to the mark. Only very very rarely is there an incident like we had in Halley.

[Part 5 0:51:52] Lee: Let's talk about your leaving BAS, finally, if we may David. What brought that about? You were there for seven years. Was that regarded to be the term?

Drewry: No. I could have been there until retirement. I think it was seven and a half years, that period. My leaving was precipitated by the Government's White Paper on science: *Realising our Potential* in 1993. And that White Paper led to the reorganisation of the Research Councils. In NERC the reorganisation led to a new structure with a Chief Executive, a Deputy Chief Executive. And the "Super

Directors” that we’d had and which in the early days of my time, and certainly in the latter days of Dick Laws, had been a thorn in the side of BAS – the three Super Directors’ positions were abolished. They were subsumed in the Deputy Chief Executive’s role as Director of Science, and there was going to be a new operation. So when this was all announced, I was wondering what was going to happen in this reorganisation as far as BAS was concerned. I thought well BAS by and large – this is not going to be too bad a situation for BAS but who know? But then of course then there was an interesting issue. What happened was that John Krebs was appointed the Chief Executive and then they were looking around for the Director of Science and Technology (Deputy Chief Executive). I said to myself ‘If anybody is going to do that job, and tell BAS what to do or have an influence on BAS, it had better be me. I would rather be there than elsewhere.’ So I threw my hat into the ring and I was appointed as the Deputy Chief Executive.

[Part 5 0:54:11] Lee: Now did NERC change or did your perception of NERC change once you got inside?

Drewry: I would be completely false if I said ‘No’. My attitudes did change because you are on the other side of the fence. You have a different set of responsibilities, albeit the organisation was changing dramatically at that time because of the White Paper and the way we had reorganised NERC. But my relations with BAS, I felt it was quite important that where I was in NERC, I was a voice that could actually comment about what the BAS perspective was, and therefore whilst I couldn’t protect BAS, necessarily, from everything that was going on, because my duty, my responsibility was to the Research Council, I felt that I could understand how BAS would react. I could give them a warning about things. I could advise them which they might not have got if somebody else had been in that position, but I also had to be absolutely fair because we had a whole load of other research organisations: the British Geological Survey, Hydrology, Freshwater, Marine Biology, all of these other institutes around. And certainly in my position I couldn’t show any favouritism, but I could make sure that the BAS voice was heard as it would be appropriate.

[Part 5 0:55:54] Lee: And did NERC become more user friendly to people like BAS?

Drewry: Yes, I think it probably did because the Super Directors, and the power that they thought that they should exert over BAS, disappeared. And whilst we still had committees that oversaw the various areas of science, they were more benign by virtue of the fact that there was no individual careerist scientist trying to drive a particular pathway. There was me, because I now took on the role of all of these and sat on all the committees, so I could see what was going on. And of course I couldn’t be everywhere and we shared visiting universities and other places, myself and the Chief Executive, and I think that dilution actually benefited all the institutes. They were left very much to have more freedom to develop their agendas and that certainly suited BAS.

[Part 5 0:56:59] Lee: Did NERC fit like a glove to you, or was it ...?

Drewry: I felt very happy there, yes. I already knew how NERC worked because I had been part of the NERC family since I joined BAS and of course I’d had a lot of work with NERC before as a grantee at the university.

[Part 5 0:57:21] Lee: So what were your key achievements in your period at NERC, would you say? I know nothing about your time at NERC at all, sadly.

Drewry: I was there for four years, which I would say four to five years would be about the going term for that sort of job. It is a career step, not a career objective for everybody.

[Part 5 0:57:45] Lee: Were you able to imprint something on the organisation in your time there?

Drewry: Yes, I think my role was to smarten up the grant awarding system to universities, to certainly shape up the logistics area because NERC ran its own ships, aircraft, to smarten that up. We also entered into the whole area of technology transfer, and engaging with commercial business and industry, as part of the White Paper, to look at Foresight, to actually get ideas into innovation and creativity. So we started winding that area up. So when I left NERC, I felt yes, we had actually moved the organisation on. I think we had become a bit more user friendly and a bit more focussed on the science. We had developed new strategies for the overall NERC portfolio, and we certainly got a greater engagement with our universities and with business and commerce.

[Part 5 0:58:50] Lee: My final question, which we kind of discussed off the tape last time, was whether or not you feel you might be a Fid by now? Do you qualify to be a Fid?

Drewry: I don't know. I think that is for other people.

[Part 5 0:59:04] Lee: Do you feel like a Fid?

Drewry: Yes, I have a great empathy with what Fids do and it would be no small measure to say that when I heard your programme at Christmas time¹⁰, I felt a very strong tug to the people, their circumstances, the bases and what they were doing, a great affinity for that. And certainly my time at BAS was a great joy. I would have loved to have done it longer. I could have done it longer but also I have to remember in my own way that I started my career as an Antarctic scientist, albeit on the other side of the Continent, with a different organisation, a different way of operating, and I immersed myself in the polar regions in the Arctic, running Arctic programmes for a number of years, being at the Scott Polar Research Institute. So whether or not I am or am not a Fid, I am certainly an Antarctician.

[Part 5 1:00:18] Lee: I have never heard that word before. It's a good one. It's been a fascinating pleasure, David. Thank you very much.

Drewry: Thank you indeed.

[Part 5 1:00:24] [End of Part Five]
ENDS

¹⁰ *Penguins and Plumbers*. BBC Radio 4, broadcast 27 December 2020.

Possible extracts:

- [Part 1 0:32:31] Battles with NERC over money
- [Part 1 0:35:30] The FCO - BAS's ally
- [Part 1 0:58:43] Difficulties with NERC Directors
- [Part 2 0:00:12] Relationship with Margaret Thatcher
- [Part 2 0:03:28] A presentation at No 10 Downing Street
- [Part 2 0:16:31] Upmarket biscuits - a weekend visit to BAS
- [Part 2 0:21:02] Denis Thatcher and his glasses
- [Part 2 0:22:34] Prospect of a bloody bare-knuckle fight
- [Part 2 0:30:15] Designing the James Clark Ross
- [Part 2 0:36:30] Slippage in building the ship
- [Part 2 0:50:35] Facing the Public Accounts Committee
- [Part 2 0:54:28] Designing Halley V
- [Part 3 0:00:12] Choosing new aircraft
- [Part 3 0:05:07] Airstrip at Rothera or Anchorage Island?
- [Part 3 0:11:41] Cassandra Phillips anxious at Rothera
- [Part 4 0:10:09] Options for the future of Signy
- [Part 4 0:13:00] Transfer of Faraday to Ukraine
- [Part 4 0:18:08] An interesting visit to Ukraine
- [Part 4 0:20:53] Overnight train to Kharkov
- [Part 4 0:24:59] Camouflaged field station
- [Part 4 0:43:56] Women on the bases
- [Part 5 0:06:03] The growth of Antarctic tourism
- [Part 5 0:10:28] Will Steger's expedition
- [Part 5 0:14:01] JCR launch day on the Tyne
- [Part 5 0:22:17] Removal of the dogs a 'sacrifice'
- [Part 5 0:38:04] A breakdown of discipline at Halley
- [Part 5 0:59:04] 'Feel like a Fid?'