History of Modern Biomedicine Research Group
School of History, Queen Mary University of London
Mile End Road, London E1 4NS
website: www.histmodbiomed.org

AUDIO INTERVIEW TRANSCRIPT

Gronow, Jan: transcript of an audio interview (23-Oct-2015)

Interviewer: Lynda Finn

Transcriber: Debra Gee

Editors: Emma M. Jones, Tilli Tansey

Date of publication: 13-Dec-2016

Date and place of interview: 23-Oct-2015; Imperial College London

Publisher: Queen Mary University of London

Collection: History of Modern Biomedicine Interviews (Digital Collection)

Reference: e2016163

Number of pages: 18

DOI: 10.17636/01018229

Acknowledgments: The editorial assistance of Ms Fiona Plowman, the project management of Mr Adam Wilkinson and the technical support of Mr Alan Yabsley are gratefully acknowledged. The History of Modern Biomedicine Research Group is funded by the Wellcome Trust, which is a registered charity (no. 210183). The current interview has been funded by the Wellcome Trust Strategic Award entitled "Makers of modern biomedicine: testimonies and legacy" (2012-2017; awarded to Professor Tilli Tansey).

Citation: Finn L (intvr); Jones E M, Tansey E M (eds) (2016) *Gronow, Jan: transcript of an audio interview (23-Oct-2015)*. History of Modern Biomedicine Interviews (Digital Collection), item e2016163. London: Queen Mary University of London.

Note: Audio interviews are conducted following standard oral history methodology, and have received ethical approval (reference QMREC 0642). Related material has been deposited in the Wellcome Library.

Gronow, Jan: transcript of an audio interview (23-Oct-2015)*

Biography: Professor Jan Gronow PhD BA FMinSoc MCIWEM (b. 1945) was Visiting Professor in Waste Policy at the Centre for Environmental Policy at Imperial College London from 2005. She is a geochemist and joined the Department of the Environment's Waste Technical Division in 1988 and then joined the Environment Agency on its formation in 1996. She managed the Government's waste research programme over a period of 17 years and provided technical advice on waste and resource management to policy colleagues in Defra and its predecessors and in the Environment Agency over that time. She was a member of the UK team that negotiated waste-related legislation in Europe for 15 years. She chaired the EU Technical Advisory Committee that developed the Landfill Directive waste acceptance criteria between 2001 and 2002. Jan has been an independent consultant since 2005. She was a strategic advisor to Defra's Waste Evidence Team from 2006 to 2012. She was co-author of Defra's Waste and Resources Evidence Strategy, 2007-2011, drafted to assist with the implementation of the Waste Strategy for England, 2007. She has been a Member of the Engineering and Physical Sciences Research Council (EPSRC) Peer Review College since 2006.

LF: Lynda Finn

JG: Jan Gronow

LF: Jan, can you tell me your full name?

JG: My full name's Janet Ruth Gronow.

LF: And the year in which you were born?

JG: 1945.

LF: And where you were born?

JG: I was born in Folkestone.

LF: And can you tell me your employment status?

JG: I'm a part-time independent consultant, but retired as well.

LF: And before you retired?

JG: I retired from the Environment Agency ten years ago and until last year was working here at Imperial, on a part-time basis, as a Visiting Professor. I have done the odd lecture here almost since I joined the civil

* Interview conducted by Ms Lynda Finn, for the History of Modern Biomedicine Research Group, 23 October 2015, in Imperial College London. Transcribed by Mrs Debra Gee, and edited by Ms Emma M. Jones and Professor Tilli Tansey.

service in 1988. So it's been rather nice to follow that through, but that's coming to an end now.

LF: And one final introductory question: your parents' occupation?

JG: My father was a farm manager. I haven't asked myself how much that influenced what I do now, but we'll probably follow that through.

LF: Thank you. You say you were born in Folkestone. Tell me a little more about your early childhood.

JG: Well, my parents moved to an estate on the Surrey/Sussex border when, I think, I was six months, and so I was brought up in that village and stayed there, I don't know, until I was 18/19, something like that. So I had an idyllic childhood in a lovely, beautiful little village with a cricket pitch on the village green and all that sort of thing. Lovely cottage, a really old, 17th-century cottage; went to the village school, which was a walk across the green, and then went to grammar school. I should have gone to a grammar school in Dorking, which was co-ed, but my parents wanted me to go to single-sex school, so eventually they got me into Horsham High School for Girls, where the education was fantastic. I was a keen sportsperson, so I played hockey and cricket for the school - was hockey and cricket captain - and ended up head girl. It was a good time until I got to the Upper Sixth when I sort of felt I'd grown out of it a bit. But it was a lovely time and it was all very rural and…

LF: Just tell me, which was the village you lived in?

JG: Ockley.

LF: Ockley?

JG: Yes, which is underneath Leith Hill, beneath the North Downs, so you have this wonderful view of the village, and the village green, and the village pump, and up there on the top of one of the highest points in the North Downs, is Leith Hill Tower. It was beautiful. And my father managed an estate for a lady whose husband had died in the war, and she had a son; so he managed the estate until her son was 21. And then, I think, my dad found it a little more difficult to cope with some of his ideas. So I had the freedom of this estate and spent so much of my spare time in the woods, building dens and doing things. I can't think how we remembered when to come home, but it was a wonderful time, which children don't seem to have now.

LF: Did you have brothers and sisters?

JG: No, I'm an only child.

LF: And you were saying that you grew out of your schooling? Tell me more about that.

JG: Well, you have to look at the staff at a girls' school at that time, and realize that there were a lot of spinsters around who had lost boyfriends and fiancées in the war, and they tended to be people who had been to girls' schools, been to girls' colleges, and come back to teach in a girls' school. And their outlook on life was somewhat limited as a result. And when you ended up in the Sixth Form, you ended up as a prefect, and all of a sudden it didn't matter anymore whether the rest of the school were wearing their hats or not; there were more important things. I was one of the pupils enforcing that sort of requirement from the school, and it was unimportant to me by then. We had an extremely good education up to O level. It was really good and then I did two maths and physics, and I wanted to do two maths, physics and chemistry but they didn't do four A levels. So I started all four, and had to choose, and I dropped chemistry. I always regretted dropping chemistry. And the teaching that we had at A level wasn't as good. I had friends in the boys' school whose teaching of maths was completely different. They did it from first principles, whereas we tended to do, 'You do this problem like this.' So you didn't have the same insight. It was a shame.

I had a place at UCL [University College London] to do psychology, which was the result of my mother's

influence, who wanted me to do that. I didn't get great A-level results, but I got sufficient to get to UCL. My mother and father didn't get on terribly well, and my mother wanted me to stay at home and I didn't see till afterwards quite what she was doing. And I didn't go to university and regretted it always afterwards. So I went to work for CIBA-Geigy in Horsham in their personnel department, and I stuck it for about six months, but I just couldn't stand the routine. You know the tea lady came every day with exactly the same conversation and I don't like routine.

LF: Let's go back a bit. You had an interest in science and from quite an early age.

JG: Yes.

LF: Do you think there was an influence there from your rural background and the farming aspect?

JG: Yes, I think so. My father had been to agricultural college. He's really quite an intelligent man, and I'd been on the farm quite a lot with him. I used to go up and milk the cows and things, and he was always a very sensible man, and there were lots of reasons for why things happened around me, and my cousins always say how much they valued what my father taught them, because they come from an urban environment. I have a cousin who was a woodland officer for Berkshire, I think it was, and he always says it was my father who actually gave him that interest. So, definitely, my father did sciences at school, yes, as they were then, yes.

LF: So your mother encouraged you not to go to university, because she wanted you to stay at home?

JG: Yes. My mother was one of those unfortunate people who was searching for something and didn't find it. And she was, sadly, she was unhappy. I wasn't desperately close to her, but I got an awful lot of tears from her. And she had a sister who was a bundle of fun. Things that her sister said now still make me chuckle. Enormous paragraphs from Isaiah that I never knew came from Isaiah, 'Oh woe is me, alas, I am undone!' used to come from Aunty Jessie, not that she was terribly religious, but this stuff used to flow out. And I used to think, 'Why can't I have a mother, you know, why can't I have this one?' Because I can actually remember my mother's sister and their mother, I can remember my grandmother having to sit down in what's probably John Lewis' now in Reading, because she was laughing so much. You know there used to be chairs by the till? And I used to think, 'Why isn't my mother like these two? Why have I got this one?' And when she died, I tried terribly hard to make her funeral really meaningful, because I wasn't that close to her. And all these dear old ladies got up and said what a bundle of fun my mother was, and I used to think, 'Are we burying the right person?' Like when you go to school and they tell you how good your children are, when you go to open day. And you think, 'Are they talking about the right children here?' It was exactly that same thing. And I suppose I got her, I got her unhappiness and the other people got an outward version. So she didn't have anything like as much influence on me as my father, who is still alive at 95.

LF: And your six months in your first job were not at all happy by the sound of it?

JG: No [laughs]. So then I got a job working in Leatherhead in the Printing, Packaging and Allied Trades Research Association [PATRA]. It was a time when Government funded several research associations with 50 per cent matched funding. WRc used to be funded that way, and in Leatherhead there were four or five such associations; there was electrical, there was food, and there was packaging. And I had a great time there. We were looking at the properties of packaging for their purposes, a lot of testing, a lot of outside work. A lot of science in it, but I felt I was a technician and I could do better, and I eventually got a job at Oxford University.

LF: Let me just take you back just so that we can anchor this. Which year would we be in?

JG: Oh, crumbs. So that would have been two years after leaving school. So that was what? I was 18 when I left school, so I would have been 20, 1965, yes.

LF: And the job, you say you were a technician. What were you actually called?

JG: I think I was probably called a Technician, yes. Research Technician. And it was great fun and the people were great fun but I just wanted to stretch myself more. So I went to the job centre. I don't think you would get a university job going to the job centre now? I don't know. Anyway, I went to Oxford University and worked there for, I don't know how many years; worked in the Geology and Mineralogy Department, on geochronology, dating rocks. And this is where I started. At the same time I went to technical college and did A-level chemistry, so that I had my chemistry. And had a fantastic time. I live relatively close to Oxford and I feel I always want to go back, because I wasn't married; I was at an age where you can enjoy all the social life. It was a wonderful time. All the international sports teams came to play the university so you saw the Pakistanis playing cricket in the Parks, you saw the Australians play rugby at Iffley Road, speakers, music, everything, Jacqueline du Pré I remember going to see. So fantastic opportunities and I loved it, it was wonderful. The work was challenging and it was great. Went to some lectures in the Department. It was good, it was a good time.

LF: And you were doing your A-level chemistry at a further education college?

JG: Yes. And then I did, oh, [I'm] going to forget the name, I can't remember the name, it will come to me, another technical course. But again it wasn't enough for me. You know I wanted to do more. And I met my husband there, and he was a biochemist, and we married and he had a post at Leeds University. So we moved to Leeds University. And very shortly afterwards, I got a job in the Geology Department in Leeds University and after six months I ended up with people that I'd been working with in Oxford, because NERC money moved around, it was in the Oxford labs when I was there.

LF: NERC money?

JG: Natural Environment Research Council. And, by that time, the Leeds lab was getting recognition and they got NERC money. I had to wait about six months for a post in the same work. And I started an OU [Open University] degree when I was in Oxford, and that was a long, but very happy time, great fun, great fun. Did I finish it in Leeds? I'm not sure. Because I had two children while I was in Leeds. Eventually my husband said he had been offered a job, he said down south and it turned out to be Cambridge and Cambridge isn't down south. And I thought, 'Great, I can shop in Sainsbury's again,' because there weren't any Sainsbury's in the North then. But of course Cambridge isn't the south, it's east and you could go everywhere and bypass Cambridge. And while we were moving, I must have finished my degree actually in Leeds.

LF: So we're in the middle of the 1970s now, is that right?

JG: Yes. Oh, I've missed out the fact that we moved to York first. We moved to York and I finished my degree in York. And after my husband had said this and we'd agreed to move to Cambridge, there in the New Scientist was an advert for a PhD vacancy, which had my name on it. And so we moved to Cambridge and I started my PhD in the Departments of Applied Biology and Earth Sciences.

LF: But your OU degree, your first degree, was in what?

JG: Well, I was a second year student so you didn't have an awful lot of choice. I did all the chemistries and I did all the physiology that there was, and I started geology thinking, 'Oh, I'm a geologist, I worked in geology departments for absolutely yonks.' And I remember going out on a mapping expedition and standing in the middle of a quarry and not finding it easy to map it, whereas some of the people around me could, and I thought, 'I'm not a field geologist, this isn't what I thought.' You know I'm not as good at this as I thought I was. And that is the lovely thing about the OU, because you have time to find yourself in the courses that are available. So I moved to chemistry, geochemistry courses, and ended up, doing chemistry final third year courses and oceanography, which was absolutely wonderful. And so I ended up a geochemist. The oceanography was a development of everything I'd learnt before, the chemistry, the geology, the water

chemistry, the biology, so it was absolutely perfect. It was wonderful. And it was a lovely education and it was a wonderful time. People used to meet at summer school somewhere, and you wouldn't see them for another two years and then you'd meet them at summer school two years on. It was a tremendous thing. The only downside really was that being a second year student you sometimes had to take courses in the first year they ran, and there were sometimes some fairly big hiccups with them, but it was a good time.

And then this PhD turned up and, I say, it had my name on it, but actually I went for the interview and the interview was horrendous. There were, I think, five people on the interview board. And it was quite scary, and I didn't get it. But the person who did get it didn't want it in the end, so I must have been next. And then grants were available at the time, but I was too old. And it was an NERC case study, and so I was too old and this was a little difficult.

LF: What was the upper age limit, and how old were you?

JG: I can't remember the upper age limit. All I can remember was the Head of Department happened to be Chair of NERC or something at the time, and so I got in. And I had two terribly different supervisors. I had one in Applied Biology and one in Earth Sciences, who was a mineral physicist. And, I think, he thought in a reciprocal space. He did a lot of electron microscopy and I couldn't relate to him in any way, shape, or form unless he'd been to College and had a sherry or two. That was the only time I ever related to him. And the other chap was a son of the astronomer and mathematician James Jeans. And he was a sedimentary geologist, a very good one. But because his father was part of the establishment, he rebelled entirely against the establishment: wouldn't take a lectureship, and so he ran a consultancy and lectured to pay for his lab space, and gave me two small leaflets that were related to what I was going to do and told me to go away and do them because that's what he had had to do. He said he would always be there to help me get facilities and meet people. And actually it was a wonderful experience. He was a lovely guy, and taught me so much, and looked after me. He probably was roughly about the same age as me.

And his alternative lifestyle was interesting, but now it wouldn't be half so interesting. Although he came from that background, a titled background, he lived a very, very simple lifestyle. And it teaches you a lot now.

LF: Tell me about that lifestyle.

JG: I never saw him wear a tie. I never saw him wear any clothes that were actually ironed. Eventually he had quite a large house in Cambridge, and you never knew when you were invited to dinner whether you were going to be round the table with Knights of the realm or whether you'd be cooking it. So you always wore a little black dress and some cardigans over it because heating wasn't something that seemed to happen in the house. It was always freezing cold and they always ate in the kitchen. And the only rugs were on the wall, they were special. I mean there was nothing to keep your feet warm. And the one thing I remember was that we always ate in the kitchen: there was the most wonderful, handmade circular table in the kitchen. I think it had 12 chairs around it, which were also handmade. And that was about the only luxury present. And he grew a lot of vegetables, he had a mulberry tree in his garden, I remember. He grew a lot of vegetables, but he walked home through the market and he used to buy cheap vegetables in the market. And if you went for lunch you always had the remains of yesterday's dinner made into soup. It was exemplary really, but it was considered to be a little odd, then.

LF: Can you tell me the person's name?

JG: Yes, his name was Christopher Jeans. And his wife was an opera singer, so she was either dressed a little casually like Chris or else she was in a long velvet dress with her hair up and used to sing arias for us. It was strange. If they used to serve chard, it would be served as two vegetables, the leaf and the stalk. And I also remember going to a Christmas party when he had made sloe gin and the sloes from making the sloe gin were handed round like nuts. And I must have had quite a few of them, as I had the most dreadful headache the next day [laughs]. So nothing was wasted, nothing was wasted.

LF: He clearly made a great impression.

JG: Yes, yes. My studentship was a case studentship and he introduced me to all sorts of people, and was very patient with me and yes, it was, again it was a good time. It was a good time. I was the first student in the Department to write my Thesis on a computer, which belonged to the Prof and we weren't allowed to change the dictionary. So there were an awful lot of geological words that it didn't like, and I wasn't allowed to change. And it was quite scary [laughs].

LF: So which year are we in?

JG: I got my PhD in 1984, I think.

LF: And you lived in Cambridge?

JG: I lived outside Cambridge, and of course I had young children, so I didn't take much part in College life.

LF: So just so that we've got the years on record, which year did you move to Cambridge?

JG: Well, if I got my PhD in 1984 it took me over three years, so we're talking something like 1980. Does that make sense?

LF: Yes. And you lived just outside Cambridge?

JG: Yes, we lived in Duxford at first, which was fascinating, because the airfield was just fantastic. And I don't know whether we go into that. I should remember that the airfield used to have two air displays. It used to have old aircraft and brand new aircraft, and the displays were completely different. Villagers actually got to the display for free for putting up with the noise, and one year the delta wing bomber came in, the Vulcan; the Vulcan came in, and once it was in it wouldn't be able to leave again, because the runways weren't long enough. And the pilot flew in and took off five times, and the power when it took off was absolutely wonderful. I loved aircraft at the time. I used to be able to recognize them all. And that was just lovely to see the Vulcan land and there were five airmen in it and it was going to stay there. And I always remember that, that was a bit special.

And then we moved in closer to Cambridge, but still in a village. And one of my children moved school and the other one stayed at Duxford School, which was a fantastic little school, it really was very, very good. Education in Cambridge for children was outstanding. Well, where we were it was outstanding.

LF: And you were working on your PhD till 1984, and your husband was employed by the University?

JG: He was working at the University, but he was actually working for one of the cancer charities. He'd been working on cancer all that time, yes.

LF: While you were working on your PhD, did you do any part-time teaching or do any other paid work for the University?

JG: I did do a bit of teaching. I did teach. What did I teach? I must have taught geology or geochemistry probably, two sets of students, one after the other. One lot were mainly mathematicians and one lot must have been some other sort. And the questions they asked were stunningly different, I always remember that. It was actually quite hard being home for the children and this sort of thing. It was quite difficult to find room for it all.

LF: Were there any issues for you around this time, of gender? Were you somewhat unusual being a woman in that sphere, or had things changed at that point?

JG: I've always found myself, well that's not true to say 'always,' I always seem to have found myself in a man's environment, and I have to say I actually prefer working in a man's environment. I have trouble with women who get into management and think behaving like a man is the way to manage things. I actually find it easier to work with men. I have tried to analyse it and haven't got very far with it, but I didn't suffer from it, I definitely didn't suffer from it.

LF: Say a bit more about women who think it's appropriate to behave like a man in management. What do you mean?

JG: Well, I think it might get a little delicate, but in the Environment Agency we had a Senior Manager who used to behave like a man, and we called her JFDI because she used to say, 'Just fucking do it.' And that was horrid. Although she had women lieutenants, her lieutenants tended to be of a similar sort. And I actually got made redundant from the Environment Agency because I didn't get on with my boss, who was a woman, who actually did not meet her job specification. I think I said to you earlier, I had trouble with HR [Human Resources] in the Environment Agency when she started, and when she applied for the job, we all said, 'She doesn't have the qualifications.' And so I did very badly there and was made redundant, but she actually left a few weeks before my redundancy was up, and then someone else offered me my job back and I took it, and perhaps I shouldn't have done.

LF: I want to come on to the Environment Agency shortly, but for now, you're in Cambridge, 1984 or thereabouts, you've got your PhD, your children were still quite young?

JG: Yes, they were getting older, but - yes - my mother lived with us by then, and so actually we had a fairly decent-sized house to accommodate us all, and so I got a job in civil engineering. The first job was funded by the US Army Corps of Engineers. They'd been dumping waste wherever they'd been, in various parts of the world, and had suddenly woken up to their liability for what they had done. I also think the chap who was in charge wanted a fellowship at one of the Cambridge colleges, and so was throwing money around quite liberally. Anyway, I started working on - well I suppose I should say that before that - I was actually offered a job working with people that I had worked with in Oxford in geochronology, and I thought, 'Have I done all this work, all this OU and a PhD, to go back into geochronology?' And I decided not to. By then, the NERC money had moved to Cambridge, so I said 'No' to that job and then went into the Civil Engineering Department, and worked on the migration of pollution from sites. And we had a lovely facility, which was a huge centrifuge, underground centrifuge, in which you could build scale models and fly them. And when you flew them at the right speed, or rather *g* force, the liquid in your models would actually match the parameters of your model, the size of your model, and therefore the whole thing sort of worked hydraulically.

And so I worked on that project and one of the things the chap from the US Army Corps of Engineers proposed, was to have a conference, which they would fund. So people who came to the conference came for free. And, so, I organized this conference, and I didn't know many of the players in the field at the time, but I took advice and it was very good advice, and it was through no action of mine, or not due to me, it was an extremely successful conference. And there are people that I invited there that I'm still friends with now. It was really good advice. And one of those people ended up being a chap I worked for in the Department of the Environment [DoE], and I feel quite sure that I got that job because that conference was successful. And had it fallen apart the next bit might not have happened because I fell out, (this seems to recur) I fell out with my Prof in Cambridge. There were one or two pieces of work I refused to put my name to, because I didn't think they were, well, that they stood up. And so I thought I had to leave, and the job in the DoE came up, and I was informed about it, and I went to an interview, proper civil service interview and all that, and just managed to get it.

LF: Let me take you back, though, to this piece of work that you refused to put your name to? What were the issues? For the non-specialist, what were the issues that made you reluctant to sign up to it? And what happened?

JG: It was a piece of work that flew in the centrifuge and was to do with spud anchors, whatever they are. And the spud anchors in the model were made, I believe, of kit-e-kat, cat food tins, and I just thought the whole premise of the work was fragile. And I just didn't want to be associated with that fragility. I didn't think, well I just don't think that sort of thing is right. And, of course, I was only a Research Associate, so it didn't do me any good at all.

LF: And you were leaned on presumably to sign up to it?

JG: I wasn't actually leaned on, but I was just sort of ignored a bit after that. In Oxbridge there is a dual status, and if you haven't had, if you don't have an Oxbridge first degree, it's much, much more difficult to get a fellowship in a college. And if you've done an OU degree… I mean people used to say to me, 'Oh, you're the OU student.' So I knew I was going to get my PhD degree, because I was absolutely determined to show them. And at that time, if you looked at people who were teaching in the OU, they weren't Oxbridge ever. They were just beneath Oxbridge. All the other universities were using OU material, they were partaking, they were fantastic lecturers. I remember going to summer school and just being wiped out by the wonderful lecturing and the communication. And I thought, 'How do they choose these people?' And of course they don't choose them, they choose themselves, because they enjoy teaching people who want to learn. They're self-selecting. Because I used to go to lectures in, I think, probably both, certainly Oxford and Cambridge, and used to come out thinking that only about 30 per cent of them were really any good.

LF: And of course the OU was relatively new when you were doing your degree?

JG: Yes.

LF: It developed in the 1960s. You were a very new student, but interesting that your Cambridge or Oxbridge colleagues rather looked down on other universities and then the OU…

JG: Was the bottom of the pile. There was no doubt about it. So I failed to get a fellowship and realized that it was probably, I was never going to get a fellowship. I mean I'm not the brightest person on two legs either, so I mean there were, you know, my colleagues were really bright, and it was lovely working with them. I'm quite sort of slow on the uptake. So perhaps it was valid but I was always going to be second class in Cambridge anyway, and probably Oxford too. So I thought, 'Time to go, time to go.' But I've got, I have friends who were PhD-students there and I'm still in touch with them. Again, it was a great time and a wonderful, wonderful time for laboratory technicians. We had laboratory technicians in both Oxford and Cambridge who could make anything. I would say I really need a thing like this. It's about this big and does this, that and the other.' And one of them would say, 'And what do you want it made in? Plastic, brass, or steel?' They were just fantastic. And I don't think that happens anymore because those chaps had done all the engineering training they needed to do in the workshops. And it was a wonderful facility and it enabled you to get on with your work and if it didn't quite work they'd muck about with it for you until it did work. It was a tremendous facility. I don't think it exists anymore.

LF: Why not?

JG: Because youngsters (a) don't get that sort of training in the workshops, and (b) don't stay because they're not valued. You see youngsters start, but they'd only do two or three years and then they moved on. These chaps had been there for an awful long time. It's just different now. Very valuable. In Oxford, our lab technicians actually made one of our mass spectrometers. It was just incredible.

LF: So you decided it was time to move on, and tell me what you did.

JG: So I answered an advert for someone to run the waste research programme in the DoE. And was sort of informed about it by one of the attendees at our conference, and got that job. It was supposed to be with the relatively new Her Majesty's Inspectorate of Pollution [HMIP; transferred to the DoE in 1987]. But

when I got there, I found it was actually to be a full civil servant, to work with HMIP. HMIP was the waste regulator at the time. And again, a wonderful time. The civil service at the time looked after you, you didn't go to the Union to moan, you went to HR and they sorted it out. Your boss used to get letters saying you hadn't claimed for this and that. It was a fantastic time, again, I don't think it exists anywhere now. And tremendously invigorating doing the work. I took on a £4 million research programme that actually was carried out by really four organizations: the Water Research Centre, AEA [Atomic Energy Authority] at Harwell that had two different contracts, and BGS [British Geological Survey]. And quite soon I had to nurse them off just getting money to tendering for grants. And that was quite interesting.

There had been 18 months when no one had done the work, so I turned up to quite a mess, and one of the things I was asked to do was to invigorate landfill gas research, because in 1986 a bungalow in Loscoe [Derbyshire] blew up as a result of migrating gas from a landfill site, and that had caused a big stir, and the Chief Inspector had written round to all the local authorities and asked them to inspect their landfills and to check on gas migration. Gas migration was the only issue then (no global warming) and we really hadn't done much, there hadn't been much research on landfill gas. So I picked this up, I was in a room about this size, I had to myself, and all round the walls were the results, the reports of research going back into the 1960s, most of it starting in the 1970s. I had this to look after, so everywhere I moved, this came with me. And a wonderful group of people who worked on these programmes, again very good friends still now, so all sorts of people who were working on these projects, and such a really interesting area. There was a lot of nuclear waste research going on at the time - the last piece of work I'd done in Cambridge was on nuclear waste. But actually general waste, household waste, is much more interesting than nuclear waste, because you don't know the half-lives of the waste, you don't have anything like the money to encapsulate it.

LF: Just let me take you back to some of those interesting colleagues you worked with. Can you give me the names of some of them?

JG: Yes, well David Mills wasn't Chief Inspector of HMIP then, but he became Chief Inspector, and was a lovely guy, and Terry Coleman was seconded at the time from Essex where he had been a regulator. Roy Watkinson started the same day as I did at HMIP, and they were in the Department with me. And then people like Kathy Lewin who is still at WRc and people at AEAT [AEA Technology] and of course there was…

LF: AEAT?

JG: Harwell, well, at Harwell and associated groups. And of course then there was Warren Spring Laboratory in Hertfordshire, which one of the ministers closed down while we were working. Michael Heseltine, who was Industry Secretary at the time, was involved in the decision to close it down. Anyway, there were a wonderful group of people there: John Barton and his team, who were doing very valuable stuff there, and it was a huge blow when Warren Spring was closed down. So both people I worked in the Department with, and people who worked with me on the projects.

LF: Sounds like a very good, productive period for you.

JG: Yes, it was great. It was a lovely organization to work for and they took care of their staff. We worked for Jack Bentley who was not a typical civil servant, terribly interested in waste and methods of dealing with it. Jack didn't get on terribly well in the civil service, he wasn't sufficiently conventional, but he certainly looked after us and ran a great team, and was a great inspiration to us.

LF: And you worked there for how long?

JG: Until 1996; it was when the Environment Agency was formed and so we were a group, Waste Technical Division, was it? I think it was Division. How many of us? Six, nine, something like that, providing technical services to the policy people. And there were quite a few policy people who were quite well informed and didn't need much help. So I started going to Brussels with Jack and negotiating on Directives. I went, I

think, with Jack first to do the Hazardous Waste Directive, and carried on from then, really. And the nice thing about civil service is you'd always train, as you should do whatever you did, so you did courses on how Brussels worked and where the influences were and things like that, and you were prepared for the work you did, and became competent to do it as a result. And going to Brussels was wonderful, and I worked the whole of the way through the Landfill Directive, right from beginning to end, which was 12 years, providing technical advice to policy people. But the way it worked was we used to have technical meetings where a lot of the stuff was sorted out, and then went to policy. And that was very interesting, and I made long lasting friendships there. And there were four of us who survived the whole of the Landfill Directive. It was a German, a Dutchman, a Dane, and myself. We survived all the 12 years [laughs]. And it is ridiculous that it took all those people all that long to provide a Directive that I'm not very proud of now.

LF: Why not?

JG: Oh, there are a lot of things. There are a lot of concepts that are wrong. The European Parliament - it sounds wrong - but the European Parliament gained more power, and towards the end had quite a say in what was produced and I go back a bit, giving evidence, or Ministers giving evidence to Select Committees used, when I first started working in the civil service, to be quite a nerve-racking business that was prepared for in great detail. You used to go with your Minister to help him make the cases or give the evidence. And they used to be quite nervous about it, particularly House of Lords Select Committees who were very well informed. And that has waned, and the last time I gave evidence to a Select Committee was probably, must be five years ago, and I'm not sure that there was anyone round the table who really understood what we were talking about. And it's very upsetting. And, I think, perhaps House of Lords Select Committees are slightly more informed, but when you get to the European Parliament you seem to be even one step further away from information. So when you produce a Directive you have, I can't remember what the proper term is, but you have a load of 'where-ases' in the front, and these are sort of the reasons why it's happening. They didn't mean anything legally. And these, more and more, came from [the European] Parliament.

And things like the banning or the reduction of biodegradable waste to landfill, because of landfill gas emissions, when actually in about 2003, I think, was the time when landfill gas was actually producing more renewable energy than any other source at all in this country, seemed to me to be somewhat uninformed. I know landfill gas is potentially polluting, but the premise that actually all waste management policy must be related to reduction of carbon, greenhouse gas emissions, is absolutely stupid, it's only responsible for 4-5 per cent of greenhouse gas emissions totally in the world, and 4 per cent at the moment in the UK. And there are places where you could be making much more significant changes. And the way you make significant changes in waste management is to not produce the waste in the first place, and worry about the materials that are being used, their scarcity. And if you do things up the supply chain, you can have a significant influence on the greenhouse gas emissions. So there was no depth of information from the policy side.

And, of course, I think, when I started there were 11 of us in the EU and we had a really strong alliance in northern Europe with Denmark and the Netherlands and Germany, and a lot of technical work done outside in these groups. But you're negotiating with people who come from such different points of view, and you have to make compromises. So we have a landfill Directive that is actually dry entombment, which is not good for the long-term pollution potential of landfills, comes quite a bit from the Germans and Austrians, who have those sort of requirements and have the legislation to put it in place. And, actually, you watch European civil servants who are responsible for making a piece of legislation, and you turn up at meetings and the Germans say, 'Ah, well we've got this piece of legislation and that piece of legislation and the other piece of legislation,' and you as a European civil servant will think, 'This might not take us as long as we thought.' And what we actually found very often with the Germans is they had the legislation, but they hadn't got the reasoning behind it, and particularly very close alliance with the Danish partners and the Nordic partners about, 'Well, where did these numbers come from?' 'We're not quite sure.' 'Well, we can't accept them if we don't know why they're there.'

But there was quite a strength to that, whereas you see more southern European partners are a lot more

casual, and are not going to have defined numbers. And you have to have compromise between all of this. And you get members of southern European states who appreciate the numbers and think, 'We can go home and make a difference, because we're going to say 'you've got to meet this standard!',' when they don't have anything at home at all and they vote for it, because they think it'll make a difference at home, but they don't actually reason what the numbers mean. So it's always difficult to negotiate and come up with something that is anything like perfect.

LF: So do you think all these Directives, all these outcomes, are the result of lots of compromises?

JG: Yes, I think so. Yes, they have to be. But I was talking with an ex-colleague from the Environment Agency on Wednesday at a meeting in Birmingham and saying, 'But it would be an absolute travesty if we came out of Europe, because Europe pushes us to do these environmental things.' They may not be perfect, but they're better than nothing, very often.

LF: And how did the negotiations go with the Nordic countries and Germany when you were struggling to find reasons, or they were struggling to find reasons, for their data? They had the figures, but no real explanation.

JG: Well, eventually we won. I have to say that the Danes are absolutely fantastic in EU negotiations. They're quiet, they're unassuming, but they're very, very sound, and when the Danes have the Chairmanship of the Commission, they produce one or two really wonderful people who make the most wonderful Chairmen, and bring people together beautifully. So we were technically good together, because, again, I say that in northern Europe there's been more thought given to these things than in southern Europe. So we moved from 11 of us to what's 28 now, so I can't remember how many there were when I stopped working in Europe, but it was growing and becoming more difficult to reach an agreement. God knows how they reach an agreement in the United Nations. I just can't imagine. It was a tremendous time.

LF: At times it would have been very, very frustrating for you.

JG: Yes. But also such great fun. I remember when we were doing the Hazardous Waste list, we were putting together the waste list as a whole and we all had our own particular lists, and so, we all took them to Brussels and the person in charge realized we weren't going to get anywhere, because we were all going to stick to our own teddy bears. And so, I think, did we use a Swiss list in the end? I think we did. And the next issue arose as to whether we would have a separate hazardous waste list. And the German representative was absolutely adamant that we were having a separate list, and it sounds a dreadful thing to say, he was not an English speaker. We usually did all our work in English, because everyone spoke English. And there was a wonderful time when we were negotiating this and we were always at the end of a table being UK, well it was circular, but we were on one side the translators were behind the table on the other side.

The German representative was in front of me across the table with his translator behind him and he did a Khrushchev, I mean he nearly got his shoe off and hit the table with it - he was so animated - and he was absolutely wrapped up in it. And the translator behind him was doing all the arm movements as well, and I didn't know where to put myself, it was so amusing. And, yet, the translator was doing such a wonderful job. I had to go to the translator afterwards and say, 'Thank you very much, that was absolutely fantastic.' And, actually, he won the day with his passion. We started off with a separate list. And I also remember, it probably was the same person, we used to have meetings in the various EU countries, technical meetings to sort out the issues. And we went to Germany to do this hazardous waste work, and because he wasn't an English speaker, he got us a translator, and the translator was Glaswegian, and I could actually understand more of the German than I did the Glaswegian [laughs]. That was lovely.

There were lots of friends and a tremendous time working in Brussels. You just feel so lucky to actually have a say in these things, to work with people that you really appreciated for their skills and their knowledge, and others that were almost a joke. We used to have a joke about whenever the Italians got up; they would speak for ages and ages and everyone went to the loo when the Italians got up to speak. Not to say that

there weren't any competent people in Italy, because when they started to produce the Italian Environment Agency, competent people did come. Backwards and forwards to Brussels from Stansted Airport, which was a tiny little airport at the time; used to turn up, park near the shed, go in, show them your passport, and nobody took you out to the aircraft and there were seven aircrafts going to Europe at seven o'clock in the morning. And you'd just have to go to the bottom of the stairs and shout up, 'Are you going to Brussels?' And they used to say, 'No, this is Paris' you know? It was just so easy to do it then. Now you've got the great big terminal and monorail down to where the shed was.

LF: Did you ever find yourself in the wrong city?

JG: No, I didn't. But I did find myself in Brussels thinking, 'Oh goodness knows, I don't actually know where I'm supposed to be meeting.' And once I'd left my purse on the plane, but was able to borrow money from civil servants who were doing other things in Brussels at the same time, and then that evening turn up at the shed and say, 'I left my purse on the plane.' 'Is it this, Madam?' 'Yes, fine.' You know, it was just so casual and made life actually quite a bit easier, because you could actually go for the day.

LF: Where were you living at the time?

JG: I was living in Cambridge for a lot of that time.

LF: Tell me about later on.

JG: Later on, well the Environment Agency worked out of London for quite a long time. We actually worked out of the DoE for some time and then got moved to a separate building, but the chairman of the Environment Agency at the time was something big in the West Country so headquarters were going to be Bristol.

LF: Who was the Chairman?

JG: I can't remember. Lord somebody, can't remember, sorry. So, eventually, [we] needed to move to the Bristol office and they would move you, you could move to an hour's drive from the office, so that's why I ended up in Cirencester. It was just an hour's drive, I didn't want to go any further down to the west. Fantastic place to be, an old Roman town, all the roads meet at Cirencester so great choice.

LF: When was it that you moved to Cirencester?

JG: 1998.

LF: And that was around the time the Environment Agency moved?

JG: 1996 the Environment Agency. We had two years, well we had two years in London, the agency had already formed down in Bristol. So from then on working in government offices in Westbury on Trym, 1950s-style buildings, lovely buildings to work in, because you couldn't do open plan. It was lovely. A sort of complex of square metal-windowed buildings, very unattractive, but so much nicer to work in than an open place. Again, quite a good time, although tough times, I think we'd been through the worst of the tough times in those two years with the Environment Agency, where some people got treated extremely badly.

LF: And how was it for you moving to Bristol?

JG: Well, it was a long way from Cambridge to London and I used to go by coach. So actually you know, that was a long drive, so it was good not to have to do that. So things were easier. I have to say, I never really enjoyed working for the Environment Agency. We were promised all sorts of things. In Government we had our own budget. A "Sir Humphrey" lookalike used to give you a letter saying you were personally responsible. So you used to come into the penny, because you were personally responsible. We were

promised this personal responsibility for our budgets in the Environment Agency, but it never happened, and so much red tape in place, it was almost impossible to spend the budget, which was just upsetting. And slowly, slowly, the budget was whittled away, whittled away, whittled away.

LF: Impossible to spend it because there was so much red tape in order to release funds?

JG: Yes. Yes, because people thought that was the way you controlled budgets rather than giving people personal responsibility. And that was tough to take. Always justifying, justifying, justifying. More and more rules.

LF: Let me just check on your job title at that point. What were you called officially?

JG: Well I was, by that time I was probably Landfill Policy Manager. I always retained management of the budget, which slowly got whittled away, and eventually Defra [Department for Environment, Food & Rural Affairs] set up a Unit as we used to have before, a Research Unit, which Nick Blakey took responsibility for. Nick had been working at WRc when I started running the research programme, so I knew Nick very well and when I retired I was able to help advise him, because I'd had the residual budget in the Environment Agency and pool all the work so you can pull it all together and say, 'Right, here's the work from 1970-whatever it is, until now. Here it all is.' Because we were desk-sharing in the Environment Agency so all this stuff that I'd had, all the research, had had to go and it had been looked after in AEAT for a while, but it went to Northampton University and one worried about them having anyone in Northampton who knew what was there. But, actually, working with Southampton University recently, we've had cause to ask for a document we didn't seem to be able to get anywhere else, and they were absolutely excellent, it was very reassuring. So that was good. So a very frustrating time. And I continued going to Brussels for a while in the Environment Agency providing technical help to the people in Defra, and I actually chaired the technical committee that produced the waste acceptance criteria for the Landfill Directive, which was a very interesting time, and I had fantastic help from David Hall from Golders and from Steve Gibbs who worked for a variety of consultancies in the north-east, had been a regulator and had this gift of writing guidance documents in a sparse and spare way that was really, really special. And so he helped me with putting together the work. Also, he used to come to help in Brussels, and also to help with the guidance documents that we were producing as a result of the research we'd done. So I was able, with Steve's help, and with David's help, to actually put together a suite - not that I wrote them, there were lots of other people involved and lots of other research involved - a suite of guidance documents on landfill gas management, which took me all the time since I was appointed in '88 to produce, but these were eventually produced before I left. So a sort of completion, even though it took rather a long time.

LF: And when did you leave?

JG: I left in 2005, on my birthday or around my birthday, because being a civil servant I was allowed to retire at 60. So I could escape. And I have to say I couldn't wait to escape. Frustration had built up so significantly that it was good to go, although I worked for some lovely people. I worked for Steve Lee for a while, and he was a fantastic manager, and that was really good. He protected us from a lot of rubbish. And then I worked for Bob Harris, a hydrogeologist who'd run the National Groundwater Centre, who'd set up and run the National Groundwater Centre in Birmingham, for the Environment Agency. But the Agency didn't like centres of excellence; they were rather scary for people who wanted total control and so it was closed down despite being a really valuable part of the Agency. I worked for Bob until I left.

LF: Just thinking back to the period before you left, is there anything you think you would have done differently?

JG: Yes, I would have behaved better. I should have behaved better so that I wouldn't have been made redundant, although I didn't get made redundant in the end. Although I did have a lot of expert advice on running your own consultancy before I was made redundant, and that was extremely valuable. I do remember going to the chap who was providing the training and advice and he was saying, 'Now you have this problem of actually deciding how much you're going to charge for your services.' And I said, 'That isn't

a problem for me; I know how much nearly every waste management consultant in the country charges, because I've been running the Government's research programme.' But I did get a lot of useful help from that, so it wasn't all bad. And, I think, I should have left the Agency then. But Steve Lee rang me up and said, 'Do you want your job back?' And I said, 'Ooh, yes please!', and I think it's a pride thing.

LF: This was how long after you left? Just that we can now…

JG: How long has Steve been out? I should think Steve left two years after that. I'm not, I'm no good at dates but…

LF: But you left in 2005?

JG: Yes, I would be able to, I can't tell you now, but I would be able to tell you later, because I do remember that various people had applied for the job of the Head of our Unit in the Environment Agency, one of them being, now I can't even remember her name, but she became President of CIWM [Chartered Institution of Wastes Management] and no one had told her that she hadn't got the job, and on camera, down at the Torbay Waste Management Conference that used to happen even year, she was introduced to the new Head of Waste in the Environment Agency. So that's how she knew she hadn't got the job. And that was the sort of awful thing that used to happen in HR so we all know, I can date it from the time that she actually took over as President of CIWM. She coped with it very well.

LF: It is quite an horrendous thing to happen. So let's go back to you. You said a moment ago you would have behaved differently. What might you have done differently?

JG: Well, I was just sullen, and I'm afraid when I fall out with people, I'm not very good. I go quiet and sullen and you can read all over my face what I think. I find it quite difficult to hide it. So I was just uncooperative. My colleague, Terry Coleman wouldn't go to a meeting that she chaired, he dealt with it differently. I guess neither of us really succeeded in the Agency. Not that I feel we wanted to - well I certainly didn't. I loved the job I had all the way through from the civil service right till I left. The job I was supposed to be doing was the perfect job, as far as I was concerned, except for that I'm not a manager and I used to sort of resent the time that I needed to spend managing people, but the Environment Agency didn't make that easy. I had someone who worked with me in Bristol, I had a couple of people in Reading, I had someone in Warrington, someone in Newcastle and team meetings were an absolute nightmare. So they gave you a car, but then they disapproved of you using it. So I fought the system all the way, because some awful things happened. Waste regulation was really quite good when the local authorities did it. There were some very good people around. They came into the Agency, but they weren't valued. Very few of them. Steve was an exception.

That expertise was undervalued. It was the same as the expertise that was in Her Majesty's Inspectorate of Pollution. They were paid more than average civil servants because they had come out of industry. They understood industry, they had worked at ICI and they could go into ICI and say, 'Sort that out by Wednesday, or I'll close you down.' Now what do we have? They were too expensive. We have graduates straight out of university with a tick box form. Are they going to have the guts to go into a big company, understand that that's not right and then say, 'I'm closing you down on Wednesday if you don't sort it out'? All that's gone. And I mean we joke about it, but one of the things that happened was the Regular Inspection of Waste Management Facilities, which at one time, and I think it's got worse - not better; became drive-by inspections. You drove by the front gate and if the front gate was tidy presumably what was going on inside was okay. And you can't, from a technical point of view, you just cannot cope with this. It's laughable, and we still joke about it, because we couldn't accept it as being something that was really happening.

You know standards have dropped, not very often because of people who are there - because there are still some very good people there - but they can't get on properly with what they're supposed to be doing. And now, there aren't enough of them to do the job. So it was frustration all the time. So I behaved badly.

LF: And in 2005, you left?

JG: Yes. I had been teaching here at Imperial, on and off, since Jack Bentley was around. When I first joined the DoE, Jack used to come here and teach waste management, and he started bringing me and then getting me to do it. And so I've had this long once-a-year type connection. And I was also working at Cranfield University, I was a Visiting Professor for Cranfield. And so I started, just started doing more work here, and then sort of gradually becoming involved with the waste management bit of the course, and I have been a member of staff twice. I was a member of staff and then my accountant told me it would be much better if I wasn't a member of staff, and that was all fine. And then, of course, as regimes tightened up, I had to become a member of staff again, and I was on a zero hours contract and so it was difficult to do other work. And I was doing other work. It was very easy to become a consultant when I left the Agency, because everybody knew me. I'd been involved in negotiations in Brussels, I was right at the centre of policy formation, which was carried out very closely between the Environment Agency and the Department.

And it's quite natural now that I've come back into consultancy that I'm not well known and not as valuable. So that has dropped off. I worked quite closely with Nick Blakey when he was running the programme in Defra, and helped him and advised him and project managed for him, and that was like being back and doing the same thing again. So it's been a slow transition, I'm still not totally retired, but that's what's happening, and that's how it should happen. So now I'm in a little partnership with quite a lot of people, some of whom I knew when I first joined the Department, who were actually part of the programme that I was running, and now we have this little partnership, we're not doing much work, but it's great fun to still be involved and to be working with people I've known and enjoyed the company of for so long. It couldn't be better.

LF: How do you see the future in this field? You've talked about the political constraints on the Agency and on your work, changes in the inspection regime. How do you see things over let's say the next ten years?

JG: Well, I think things are extremely bad at the moment. The year before last we had a letter from the Under-Secretary of State saying that the Department was insufficiently resourced to carry on with its policy work in the whole area of waste management. And they thought it was okay to leave it to industry. And you think, 'the waste management, industry?' I don't know how much the "Essex Mafia" still exists. We used to joke about the "Essex Mafia", but it wasn't a joke. There was a very dubious group of people working in waste management, and when the waste and the money travel in the same direction, there is always a temptation for there to be some unpleasant characters involved, and to feel you can leave it to the industry now when we have the Big Five who are over-regulated, because they can be got at and have a reputation to maintain, while the rest of the industry, which ranges from the excellent to the dubious. So I'm very unsure of the short-term, because I can't see anyone in the Department who knows anything about what they're doing, and getting any advice on what they're doing.

I'm working with Southampton University at the moment on what we feel is an underfunding of landfill aftercare, and however many times we try and contact the people in Defra, they do not seem to understand what it is we're getting at. And that makes you very sad that the stuff that's coming out of Defra at the moment is so disappointing. I belong to CIWEM (Chartered Institute of Water and Environmental Management) and we were looking at the consultation on the Waste Crime Bill. And I was sitting with Kathy Lewin, who I've known ever since 1988, going through it so we could actually talk sensibly at the meeting. And we kept on saying, 'Well, we've got that already, we've got that already, we don't need that.' And of course we hadn't caught up sufficiently to know that all that's been taken away, all these things have been taken away with the red tape initiative, and what the Waste Crime Bill is doing is putting back some of the things that were in place initially, which is a good thing.

LF: The red tape initiative? Was that after the 2010 election?

JG: Well, there had been some initiatives of the same sort before to get rid of some of the red tape, and some of it was a good idea. The red tape I would get rid of is the waste/non-waste issue. There are masses of

people working on waste/non-waste and I'm not sure we need waste as a separate entity anymore; let's just have hazardous or nasty stuff to deal with, and let's have the same legislation as the legislation there is to deal with that now. Now that we've got waste under some sort of control. But of course this is a Brussels thing, and I don't think it's going to change. Some of the regulatory stuff that was taken away from the Environment Agency was not a good idea, and I just got cross that actually we were putting stuff back that had been there when I'd been around.

LF: And would you say that's politically driven or financially driven?

JG: A little of both, but again, it just demonstrates how little thought there is and how little understanding there is. And that's very, very sad. I don't see that it can continue. Lack of funding is really chronic in Defra, but it's chronic in a lot of Departments to such an extent that I think - although we're looking for efficiency savings and we're looking for efficiency and we're looking for productivity - it's not possible to be productive, because there aren't enough people around to do the job, and they don't understand it. Therefore you're going to get a lot of waiting around for decisions and the decisions that are made are not necessarily informed decisions. The legislation on the plastic bags makes me have steam coming out of my ears. We did research on plastic bags and what you should do with them, and demonstrated that charging for them like this doesn't work. We had the research work that had been done in Ireland on it demonstrated it wasn't going to meet our needs. But, then, I've spent a good proportion of my life producing the evidence base for waste policy, and it's not even being looked at. We're having policy made on the hoof, this might not be a good idea, when there's work to demonstrate that it's not a good idea or probably not a good idea.

That's very frustrating, but I don't think it can go on. There's going to be one or two - you can always say that in waste - there'll be one or two really nasty things happening, and it will shake the country up, and we'll have to have appropriate legislation advised by people who know what they're doing. I expect everybody my age feels that way.

LF: I just want to take you back to one comment you made a moment ago. You talked about the Big Five. Can you just name them so we have that on record?

JG: Veolia, Viridor, does Biffa still exist? I'm dreadful at this. SITA, is SITA now SUEZ, I'm not sure. I know that's only four, isn't it, there's another one. [Top six waste management companies in the UK 2013/14 based on revenue: Veolia, Biffa Group, Viridor, SITA UK (SUEZ), FCC Environment, Cory Environmental]. And because they're high profile, they have reputations to lose, and the Environment Agency find them much, much easier to regulate as a result of that than the smaller companies, who are much more difficult to regulate.

LF: That really is fascinating, thank you very much. Looking forward it sounds as if you're saying there has to be some horrendous event, before Departments take this seriously again; a loss of historical memory really and a loss of technical expertise.

JG: Well, all the technical work I've been involved in is there, is available. Before I left the Environment Agency, the library had a little spurt of being helpful when it actually offered to make PDFs of things that we wanted more accessible, because everything was in archives, because we were sharing desks and had no room. And a colleague and I got everything out of the archives, and went through it all as to what really isn't of value anymore and what would be, and the library PDF'd it all and I gave it to Nick Blakey at Defra, so it's still around. We have it all. And I acknowledge perhaps only 25 per cent of it is of value, but there's still quite a lot of people around who have a much better knowledge of the industry than I do, because I have it from a policy perspective and a research and academic perspective, which isn't as valuable as having emptied the bins, and worked in the industry, and actually dealt with incinerators and landfills and things like that.

LF: But of immense value. Thank you so much, it's been fascinating. You're a wonderful interviewee. Thank you very much, Jan.

[END OF TRANSCRIPT]

Further related resources:

1. Finn L, Yabsley A (intvrs); Yabsley A, Tansey E M (eds) (2016) *Ruddock, Joan & Cooper, Jeff: transcript of a video interview (07-Jun-2016)*. History of Modern Biomedicine Interviews (Digital Collection), item e2016137. London: Queen Mary University of London.
2. Finn L (intvr); Jones E M, Tansey E M (eds) (2016) *Coggins, Chris: transcript of an audio interview (23-Jun-2014)*. History of Modern Biomedicine Interviews (Digital Collection), item e2016106. London: Queen Mary University of London.
3. Finn L (intvr); Jones E M, Tansey E M (eds) (2016) *Cooper, Jeff: transcript of an audio interview (19-Jun-2014)*. History of Modern Biomedicine Interviews (Digital Collection), item e2016107. London: Queen Mary University of London.
4. Finn L (intvr); Jones E M, Tansey E M (eds) (2016) *Dennis, Barry: transcript of an audio interview (30-May-2014)*. History of Modern Biomedicine Interviews (Digital Collection), item e2016108. London: Queen Mary University of London.
5. Finn L (intvr); Jones E M, Tansey E M (eds) (2016) *Ferguson, John: transcript of an audio interview (04-Jun-2014)*. History of Modern Biomedicine Interviews (Digital Collection), item e2016109. London: Queen Mary University of London.
6. Finn L (intvr); Jones E M, Tansey E M (eds) (2016) *Sharp, Ernie: transcript of an audio interview (30-May- and 25-Jun-2014)*. History of Modern Biomedicine Interviews (Digital Collection), item e2016124. London: Queen Mary University of London.
7. Finn L (intvr); Jones E M, Tansey E M (eds) (2016) *Wright, Mick: transcript of an audio interview (08-Jul-2014)*. History of Modern Biomedicine Interviews (Digital Collection), item e2016125. London: Queen Mary University of London.
8. Finn L (intvr); Tansey E M (ed) (2016) *Petts, Judith: transcript of an audio interview (10-Dec-2015)*. History of Modern Biomedicine Interviews (Digital Collection), item e2016162. London: Queen Mary University of London.
9. Jones E M, Tansey E M (eds) (2015) *The Development of Waste Management in the UK c.1960-c.2000*. Wellcome Witnesses to Contemporary Medicine, vol. 56. London: Queen Mary University of London.