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AUDIO INTERVIEW TRANSCRIPT

# Petts, Judith: transcript of an audio interview (10-Dec-2015)

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**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.

# Petts, Judith: transcript of an audio interview (10-Dec-2015)*

**Biography:** Professor Judith Petts CBE PhD AcSS FRGS FRSA (b. 1954) graduated in Geography from Exeter University in 1975. After a few years in business she became a research fellow in the Institute for Planning Studies, University of Nottingham and then in the Department of Chemical Engineering, Loughborough University on a project on major hazard control. In 1987 she moved into the Centre for Extension Studies taking over a series of post experience short courses, and developing the first postgraduate part-time course, in hazardous waste management. In 1996, she became Director of the renamed Centre for Hazard and Risk Management and was awarded her PhD by publication. In 1999, she moved to the University of Birmingham to become Professor in Environmental Risk Management, then Head of the School of Geography, Earth and Environmental Sciences and in 2007 Pro-Vice-Chancellor (Research and Knowledge Transfer). In 2010 she moved to the University of Southampton as Dean of the Faculty for Social and Human Sciences and then Pro-Vice-Chancellor (Research and Enterprise). She has held multiple advisory appointments including to a House of Commons enquiry on waste management, she was member of NERC Council (2000-6), and of the Royal Commission on Environmental Pollution (2005-11). She was a Member of Defra's Science Advisory Council (until February 2016); Co-Chair of the BIS Sciencewise Steering Group and Chair of the Defra/DECC Social Science Expert Panel. For 10 years she was a Member of Veolia's Advisory Board. She was appointed CBE in 2012 for services to scientific research. Professor Petts moved to take up her appointment as Vice-Chancellor of Plymouth University in February 2016. Currently she is a Member of BBSRC Council, a Trustee of the Sir Alister Hardy Foundation for Ocean Science, and of the RCUK Public Engagement in Research Advisory Panel and of NRFC's Innovation Advisory Board.

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**LF: Lynda Finn**

JP: Judith Petts

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**LF: Judith, thank you very much indeed for being interviewed. Can I ask you first your full name?**

JP: Professor Judith Petts.

**LF: And the year of your birth?**

JP: 1954.

**LF: And where you were born?**

JP: In Kent.

**LF: Your current employment status?**

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* Interview conducted by Ms Lynda Finn, for the History of Modern Biomedicine Research Group, 10 December 2015, in the University of Southampton. Transcribed by Mrs Debra Gee, and edited by Professor Tilli Tansey.

JP: I'm currently the Pro-Vice-Chancellor for Research and Enterprise at the University of Southampton.

**LF: And your parents' occupation?**

JP: My father was in retailing in particularly fabrics, either upholstery and furnishing fabrics or dress fabrics, and very much in store retailing, becoming a manager of a major store in Portsmouth towards the end of his career. My mother was a home mum, but she was a cost accountant by training.

**LF: Thank you. Let's talk a bit about your childhood. Did you have any brothers or sisters?**

JP: Yes, I have an older brother. He's eight years older than me. He's a civil engineer, a very successful civil engineer. And we moved to Portsmouth when I was about three, so I was brought in Portsmouth. Very much a working-class family and we weren't part of the naval component of Portsmouth, although many of our neighbours were. I went to the local infant school and then onto what was the Northern Grammar Girls School, it's now a comprehensive school, Mayfield School.

Very much an ordinary background and probably in those days very little understanding of what I might go on to do, but a very strong family, a loving and supportive background, and in fact I ended up being the first person in my family who went to university.

**LF: I was going to ask you about your subject interests at school.**

JP: Yes, so I think my subject interests were always environmental. At school, geography was my strongest subject always. Like many girls of my age and many people at school at that time, you had to make a real choice between either doing the sciences or doing languages. So I gave up most sciences. I was useless at physics, liked chemistry, did a bit of biology, but gave up the sciences really to study languages. And really the subject of choice was geography with also a bit of history. And so going to university I chose geography, which I can remember was quite a shock to my geography teacher in the Sixth Form because in those days most girls either went into nursing or education, or went on to be a secretary. And so when I said I might like to go to university, she was quite surprised but on the other hand, very, very supportive of going on to university. Similarly in those days girls' schools didn't provide direct routes into Oxford and Cambridge; you would have to stay on for another year to do an entrance exam, so there were very few did this. It wasn't something I ever thought about doing, Oxford or Cambridge, but chose to go to Exeter University, to do geography.

Why geography? I've always, for some reason, had a huge spatial awareness and I can remember as a child the thing we used to do as a family at weekends was go out in the car for a drive in the countryside of Hampshire, and I was always able to remember places. I could always remember where we'd been, I could always locate places on maps, and I can remember for my A level you had to study regional geography, countries of course. I could draw a map of wherever, put all the towns and the rivers and places, and I used to be rather good at that. Couldn't do it now, but that was what geography was very much regional geography in those days. So the concept of places, travel, being very spatially aware has always been strong.

**LF: And how did you find Exeter?**

JP: I think if you weren't going to Oxford or Cambridge in those days, there were a set of universities that were regarded as the next best to go to. Exeter was one, Durham was one, but Durham was a long way away. I did go for interviews at Royal Holloway in London, but Exeter was a good choice because of location: far enough away from home to feel as though you've gone away, beautiful landscape. I still very much love the Devon location and indeed am now going to live there, but it was the sort of route that you went. And a school friend who went with me, Gillian, she also went to Exeter to do a degree, and so there were two of us who chose the same place.

**LF: So this was in 1972?**

JP: 1972, yes.

**LF: And tell me how you found the course. Did it live up to your expectations?**

JP: I can remember in the first year, being almost overwhelmed by the sense of being surrounded by all these amazingly clever academics and professors. And I can remember thinking, 'My goodness, I'm in a place where there's all these clever people,' and what a privilege that was. The course was everything that I expected. I did a subsidiary subject, history again, as I'd done history A level. For geography, you had to do some physical geography and some human geography, you couldn't specialize too quickly. So it was a very rounded geography course, which is a real benefit of having geography as a degree. And I suppose the thing that I noticed was, when we started going on field trips, how from my school days I had not really done geology or the earth science side of the subject. And again, that was something in a girls school you just didn't really do to any extent. So I can remember that both Gillian and I felt that we were slightly at odds with the chaps around us who'd all done the science end of the geography. But the course was hugely enjoyable, very much what I'd expected. Exeter was a great university to be at.

**LF: And did you have a career plan in doing your degree, or did that come later?**

JP: No, I would say that I've never had a career plan in my life. Actually at the time I also thought I'd get a 2:2, a pretty standard degree. I didn't think I'd get a good degree. I got a 2:1. And I thought that I wanted to go into what I saw as the real world, so I thought I'd go out, and in fact went out into retailing very much as dad. I went as a management trainee to John Lewis. But within about eight or nine months, I realized this probably wasn't the career for me. But I didn't have any sense of going on in university or academic life at that time whatsoever. Then an opportunity came up in something called "The Unit for Retail Planning Information". And as part of my human geography I'd done a lot of urban planning and indeed quite a bit of retail planning, so this seemed like a good move, it was sort of harping back to what I'd done in my degree. It was at a new Unit, it was at the time of growth of hypermarkets and superstores, the very first ones being built. So there was a lot of work being done on analysing where they were, why they were there, what effect that were having on ordinary high streets.

Indeed the one at Chandler's Ford was the very first hypermarket (opened as Carrefour in 1974), and we did some analysis on high street changes around these. It was a small Unit, I can't remember how many of us, no more than ten people. Very much early days, and my role was to log and follow the development of these new retail activities.

**LF: You mentioned Chandler's Ford. Were you then living in Southampton?**

JP: No, that was in Reading. However, my fiancé, who I'd met at university, was very much an academic, and we were due to get married in 1977; got his first academic job in what was the Dorset Institute of Higher Education (now Bournemouth University), and so I needed to move, find another job. In those days you wouldn't think of commuting from Reading to Bournemouth, although you probably would now. So I had to find another job, what could I do? I saw an advert for Barclays International Economist Intelligence Unit; they had just moved to Poole. And I applied, it was a macroeconomics job, advising bank customers on countries of operation, regions of the world, so that's a sort of geography. The Unit was made up predominantly of economists, many with PhDs in the subject.

**LF: What was your job title?**

JP: I was an Economics Assistant, I think, I can't remember entirely. And I was given the Middle East to monitor, and the movement of the US dollar. Great fun. I suppose because I knew I wasn't going to stay in the bank and that we probably wouldn't live in that part of the world for a long time, I didn't become so embedded, plus I wasn't an economist by training, so there were probably different options you would have

gone into. Working in a bank in those days was really an employment opportunity primarily for men, particularly in international banks; there was a lot of movement potentially you could do, go and work in other countries *etc*. So it wasn't a place I was going to stay at, but it was hugely enjoyable, indeed, one of my oldest friends I met at the bank and we've been friends ever since. So it was hugely enjoyable. I found that I could do something that I didn't think that I would be able to do, and it was challenging, it was immediate, it was the real world, things were happening. In covering the Middle East, it was the time of the fall of the Shah, and so you were advising bank customers or writing advice on whether customers or corporate customers should stay in countries or get out, things like that. And the movement of the dollar I worked out was not too difficult to monitor, and we used to give reports on the potential movement over say one month, six months, a year, things like that.

**LF: So you were there, 1979 was the fall of the Shah, so you were there late 70s? For how long?**

JP: Literally for about two and a bit years. And then my husband got another academic post at the University of Loughborough, and we were on the move to the Midlands. And so there was another job to find. I seem to remember I was unemployed for a few months, but got a job at Nottingham University at the Institute of Planning Studies. So here we are going back now to a bit of geography, a Research Assistant on a project to look at environmental impact assessment, which was just starting to take off. There was no legislative requirements in those days, but with the development of the oil industry in particular there was beginning to be environmental impact assessment work done. I had a project to monitor what environmental assessments were being done, again looking at their development, what was driving them, gaining experience of conducting EIAs [Environmental Impact Assessments]. The Institute of Planning Studies was a postgraduate institute, training the planners for Royal Town Planning Institute accreditation. It was a smallish unit, but again hugely enjoyable, and I was very much back to feeling as though this was something I was trained to do. But, as with all fixed-term research posts, the job was to come to an end. We got a couple of publications out, including the first list of EIAs. And a couple of journal papers, and again met people who have been friends for life. But then it was time to find another job.

There was an advert from the Department of Chemical Engineering at Loughborough University. We lived in Loughborough, so this seemed appealing. They had one of the very, very early interdisciplinary projects. I don't expect that that word was actually used in those days but this was the old Social Science Research Council, the SSRC, and the Science Research Council, coming together to fund a very big project on major hazard installations, led by Professor Frank Lees who was the PI [Principal Investigator]. I think, all he really knew was that he needed a social scientist of some description to look at the offsite implications of major hazard installations.

The chemical engineering team was: Frank, Trevor Kletz, who had retired from ICI, and John Withers. They were the engineers doing the modelling of gas releases, explosions, *etc.* and I was looking at the off-site implications from the land use planning point of view, but also doing very early work on perceptions of risk. New legislation arising from a new set of major hazard controls, particularly following the Flixborough disaster in the UK [in 1974], had led to the setting up of a Major Hazards Assessment Unit in the Health and Safety Executive [HSE] and they used to provide (still do) advice to local authorities on the planning of new installations, or planning around, new installations. The work from our project at Loughborough attracted their attention, and they asked if I could be seconded to the Major Hazards Assessment Unit for a year. So I'd remain a member of staff at Loughborough, but be seconded to Health and Safety Executive Major Hazards Assessment Unit, MHAU. Fine, I thought, however, they had just moved to Bootle. So this meant going to Bootle during the week, staying in some digs in a typical Liverpudlian landlady's house, along with a number of other Health and Safety Executive inspectors, who all had their main homes elsewhere in the country. I spent a year, absolutely fascinating, working with eminent chemical engineers, most of the staff again PhD in chemical engineering or science subject, and I used to look at the advice that they were generating, and then really challenge them about how they think it might be heard and accepted among local authority planners. And I also did some work on risk tolerability and acceptability, looking at some early work then on the criteria of what is an acceptable or tolerable risk, which is where concept of "one in a million", "lifetime" or "annual risk", has evolved from.

That was quite interesting work. For a year I'd go up on a Monday, often come back on a Thursday. And very much, suddenly was learning how to take an academic way of thinking and turning it into advice to a Government Department. And I can remember being mortified when the Head of the Unit at the time had seen my report, which I'd written as an academic at Loughborough, which I think was about 70 pages long, and said, 'Could you get it down to two pages at most?' and being really quite hurt that I might be asked to do this. So it was quite a learning exercise. And without a doubt that period of interdisciplinary working with the engineers, and then that year with HSE has really carved out what I have become as an academic and how I've always valued doing work in the real world with policy implications and providing advice to policy-makers and decision-makers. That's probably where most of my work has focused over the years.

**LF: Which was that year?**

JP: So that must have been I think about 1985/1986, or maybe 1984/1985, 1985/1986, I think.

**LF: That's very interesting that that area of work has influenced your current work.**

JP: Yes.

**LF: Say a little bit more about the requirement to turn academic report into policy guidance.**

JP: Yes, I think it's that learning to write from the perspective of the reader and what they need to know as opposed to an academic world where you're wanting to tell the reader your story, or your science, your finding. So it's learning how to turn around what you know into what the reader and the consumer of the information actually needs. I think also learning that you have to be robust in what you're saying. Not robust in the sense that you've got to be right, but having clarity about what you're saying and being sure that what you're saying is actually what's being found or observed. And, again, perhaps as academics we sometimes have the luxury to muse upon our thoughts but you can't do that in policy world. I think the other thing I learnt was the importance and the ability to challenge other eminent experts on their findings and just to ask the 'Why?' and the 'How?' questions of people, which was partly my role but also to assist them turning very, very important advice into usable advice. So again learning from the perspective of the reader, thinking about what the reader would need, what a decision-maker and a local planning authority might need, and looking at how that advice might be read or construed or interpreted or misinterpreted, and making sure that what, in this case, the HSE needed to get across, would be effective. Because although they were statutory consultees, they gave advice and guidance, it was left with the planners to make the planning decision and either following the advice or not. Ultimately, there might be a right of appeal to a Secretary of State, but that very rarely happened. So it was really important for HSE to get its advice across as it felt it needed to be heard.

**LF: What happened at the end of that year, after the secondment?**

JP: Okay, so the secondment comes to the end, I've risen from being a Research Assistant to being a Senior Research Fellow, and the job's coming to an end again. Another classic of the academic world. At Loughborough, we had something called the "Centre for Extension Studies" [CES], which ran postgraduate part-time and continuing professional development courses. Sonia Withers (John's wife) had been leading in CES a programme of waste management courses, but she was due to retire. And so the opportunity came for me to take over the job from Sonia of running, in those days, hazardous waste management courses, an introductory course and an advanced course. There was a whole set of other types of courses run in CES, some in health and safety areas, some also in the security area. So it was a small unit, but very much focused on continuing professional development. There wasn't a postgraduate qualification as such. So I got the job to take over from Sonia, a very influential lady in waste management in those days, and particularly in training and development work for the industry and local authorities.

This was at the time when the industry was beginning to find its feet in terms of professional status. And I also became an Education and Training Advisor to the Institute of Waste Management, simply because there were very few of us doing training in this field. The Institute was developing its membership routes that might eventually lead it to getting chartered status, but that was thought to be some way off. But also a sense in which waste management needed to professionalize. So I developed the courses into a postgraduate diploma in hazardous waste management, and we started to recruit the first set of students. And indeed some of those people who came on the first course, I've been in contact, and kept in contact, over all these years. These were people in a whole range of industries. Of course doing a part-time, postgraduate course, we weren't going to necessarily find people with academic qualifications, so we were in modern language "accrediting prior learning". I can remember one of the early participants was a very senior manager of one of the landfill companies. I went to visit every potential student, that we recruited onto the first programme, and I can remember him saying to me, as we say in the portakabin on a landfill on Merseyside, 'So what qualifications do you have?' And he said, 'The only piece of paper I have is my HGV licence.'

Here we had a very senior manager in the industry keen to come and get a qualification. So I had people from the waste sector, the chemical waste treatment sector, people from the local authorities, and also environment and safety managers from the big chemical and pharmaceutical companies. There was a classic mix of students who took those early courses. The courses were run very much using external lecturers coming from within the industry, particularly on the legal and transport sides. They were modular, one week courses, very intensive teaching over a week with lots of site visits and project work. And an absolute classic where the people in the room knew more about the subject than many of us who were there organizing the courses. Our role was really to energize their knowledge, bring it into the room alongside the expert lecturers that we had. And I used to lecture on the risk side - risk assessment, environmental assessment, the things that could be brought in from my own expertise.

These were hugely enjoyable, but also hugely exhausting courses. But complete serendipity that I was now working with the waste sector.

**LF: Just to say a bit more about these courses. They were one-week blocks?**

JP: One-week blocks and with five modules over a year. And there was a project, sort of dissertation, that they did at the end, which was nearly always related strongly to a piece of work that their company or local authority were interested in. Students would stay on campus for the week, and as I say, we would travel, we would go for site visits, we would do project work, we'd have evening lectures, we'd always have a dinner on the last night. So you really got to know people very well, they got to know one another very well, and of course benefited hugely from being able to sit next to perhaps a customer or a regulator actually. Someone from a chemical company, for example, sitting next to one of the landfill managers. So very intense working, hugely enjoyable, and I can remember the first diploma ceremony we had and the Vice-Chancellor came and gave out the diplomas and people came with their families, and it was just brilliant to see what universities can really do for professionals who've come back to learning, often coming back with teenage children who were just thinking of going to university, and here's dad or mum getting their first qualification. And that great sense of pride and enjoyment you get when you see people being successful.

**LF: What challenges do you think the students faced having not had formal education?**

JP: Some of them had actually got degrees, so again in the room you had some with degrees, some with just their HGV licence, you know. You'd have quite a variety. And I think the challenge was with returning to learning. And certainly for those who had relatively little formal background, perhaps left school with O levels or whatever, that's the challenge of not writing a business report, but writing an essay for the first time.

**LF: And how did the course accommodate that, and nurture those students so that they did learn?**

JP: The course was a very small group, we were about 20 students each time, so you were able to spend time with people working with them individually. And we always set aside time to talk to people, give back their work and go through what was in it and bringing people on to develop their style of writing *etc*. But also not being soft, being very clear what was needed, but helping people to make those steps. For those, of course, who had come from a far more academic background, perhaps already had a degree, then it was much easier, and you could often help those people to really challenge themselves to a different level of writing and thinking. So there was an opportunity to develop individuals as well as cover the fundamental subject matter. And I remember, we always used to set essay questions that enabled the breadth of background and knowledge and interest to be brought into people's essays. So one of the first students, in fact, was Jeff Cooper.

**LF: It sounds like a very fascinating and highly rewarding piece of work at the academic end?**

JP: Yes. I think so. And I was writing a lot in those days on environmental assessment for hazardous waste facilities; my first book, with one of the consultants, Gev Eduljee was on EIA for waste. Gev Eduljee is a director of SITA now. SITA is a French-owned waste management company, one of the largest. We wrote a book entitled *Environment Impact Assessment for Waste Treatment and Disposal Facilities*. What a long title. And it just didn't exist then. There was no literature in those days on that topic. I was also working on risk perception and risk communication work as well. So those two strands came out of the work and then, at the same time, we used to run in-house training courses for companies. And I also developed a suite of contaminated land courses, because that was starting to rise in awareness and legislation and regulatory control, very much focused, particularly for the consultancy industry, on short courses. And again also ran courses in-house for companies, for water companies, land owners of contaminated land *etc*. And one project we had was to go and run a training course in Hong Kong for the landfill operators as part of a regulatory requirement for training. So a colleague, John Hinchcliff and I went out to Hong Kong for a week to train the landfill operators in waste management. And of course in those days they were keen to have the UK guidance and regulations translated directly into Hong Kong practice, which was slightly odd, because these were huge landfill sites reclaimed of course from the sea, with very different geology and also wastes.

So we would take, say, Waste Management Paper 27 on landfill and try and stand and see how that, what it meant in the Hong Kong situation. So all the courses really did develop around regulatory development in particular. They also developed, in terms of practice and experience. So it was very early days, in terms of skills development in the industry. And of course the early days particularly of European directives, bringing a lot of regulatory control into the UK.

**LF: Did Loughborough have any obvious competitors? Were there other higher education institutions developing similar work or was Loughborough ahead of the game?**

JP: Loughborough was slightly ahead of the game. There were colleagues at Sheffield, such as Chris Coggins, who were developing courses also, and there was a very strong waste management research group at Imperial College. So they did occasionally do some courses, but they were far more in the science and research area of waste management. And so, there were relatively few, which is quite interesting to reflect on, and I suppose that slight tension of universities operating very near to practice. In fact, I hadn't taught an undergraduate student until I went to Birmingham University in 1999. So, you know, it was very much professional training and, I think, still for many universities, that is not the dominant part of their business.

**LF: And to what extent did you find that earlier learning about how to write for the reader, how to write for the consumer rather than the producer, helpful in your work?**

JP: Oh, hugely helpful, because I also learnt the skill and the ability to listen to what people are saying is an issue or a problem, and being able to turn it round to provide information, but also to turn back questions to them. So again, taking the reader's or the knowledge-user perspective and turning it around. I'd also started to do sets of public engagement work around controversial issues. In that work, over my career, I've

spent hours and hours and hours in public groups, focus groups, public advisory groups *etc.*, listening to what people are worried about and bringing the conversation around that. So I think it was part of a similar skill set. The research actually took off when, in 1994, Hampshire had just had difficulty with a planning application for a municipal waste incinerator, which was to be sited at Portsmouth. Hampshire was under extreme pressure, being a county of chalk geology and very little landfill, while it did have incinerators already, there was an urgent need to have a waste strategy which would lead to the long-term and strategic development of facilities.

And I was watching this with interest and could see an opportunity to suggest that we might evaluate the public engagement exercise, which they commenced. So having failed to get planning permission for Portsmouth, they realized they needed to go back to step one almost, which was to ask the public what they thought should happen to waste in Hampshire. And Hampshire was hugely ahead of the game in those days in bringing in an American consultant, experienced in public engagement in North America, but who ran a small company in London, to run their public engagement process. A very, very innovative process setting up advisory groups and working through from basic principles: what is waste, why have we got it, how have we got it, how much have we got, what could we do with it, what do you think we should do with it in Hampshire and then where should we put the facilities? A very long engagement process, absolutely unique in its day. So I wrote to Hampshire, who were actually using the advice of the Energy Technology Support Unit, who offered to jointly fund an evaluation. So I got my first research grant and it all took off from there really. So real serendipity, in the right place at the right time, and knew sufficient about waste at this time to be able to talk relatively knowledgeably.

**LF: And this was which year?**

JP: 1994.

**LF: And when did you leave Loughborough?**

JP: Not until 1999. So this was a research project, the first paper was published in '95, very much an evaluation process, and I remained engaged with the Hampshire process. There were advantages because the family home was in Portsmouth; if I came down to Hampshire I could go and stay at home with mum. And so it was a good project to do, absolutely innovative, Hampshire was a really inspirational authority to be working with, and also the consultants. It's where I learnt all about public engagement exercises and in-depth deliberative processes.

**LF: And who were the people who inspired you in that field of public engagement?**

JP: So the key people in the Hampshire project were firstly Robert Lisney, who was the Manager for the whole project of waste management, strategy development, and very much the person behind the force of bringing the district authorities together for public engagement. The company was Pat Delbridge Associates. Pat was an American, experienced consultant, and it was her company who bought the public engagement exercise into being. Amanda J. Grey was the key person, who organised and delivered.

**LF: But clearly these people inspired you? This approach.**

JP: Oh yes, the approach inspired me. The person who ran the company actually used to come over from the US about every fortnight to the UK. She had a reputation for being able to sleep all the way on the flight and then come straight into a public engagement meeting and facilitate a deliberative process. And hugely, hugely impressive. And my role as an evaluator was to sit at the back and see what was going on, and then, of course, do surveys of the participants. That process led to a decision by Hampshire as to how to strategically go forward with its waste strategy. The public decision and guidance was very much to have three small facilities, three new energy-for-waste plants, rather than one large one, which was what had sort of failed with the Portsmouth agenda. So the three plants have indeed been built, but actually we then went on to the actual siting process, because they let the contract to a waste management company to deliver

these facilities, for them. That was Onyx as was, Veolia as it became. And they then went on to another second public engagement exercise around the actual EIA and the planning process for each site. One at Chineham in north Hampshire, one at Marchwood near Southampton, and one at Portsmouth.

**LF: And you say you found Hampshire County inspirational as a local authority?**

JP: Yes. I think because they were able to go with something very innovative. People have often said that Hampshire as a county is relatively wealthy and may have the resources (that may or may not be true). But they were able to think outside the box, they were willing to invest in something new having got it wrong, basically, by the normal process. So they were willing to think outside the box, very capable staff inside the county to lead that, and also they were able to get the buy-in to the process from all of the districts within the county, which again can't always be achieved. But they had an end game, they had to have a solution to the problem and getting it by way of a public debate and discussion was the best way to go. So we then took the Hampshire experience and did a lot of work with other local authorities: Essex went a similar route, Lancashire also I remember. Often local authorities would come to discuss experience and whether they should choose to do something similar, but these were expensive processes, a much more expensive way of doing things than going through a normal planning application and consultation period.

And this was prior to regulatory requirements for a waste management strategy as well. So these were early days for that work to be done.

**LF: And we're talking about the middle 1990s?**

JP: Yes, middle 1990s, yes. As we came through 1996 with the formation of the Environment Agency, of course, the courses then developed. We had a training course for the new Environment Agency, who of course had suddenly taken in these local authority planning waste regulator officers, they'd taken in Her Majesty's Inspectorate of Pollution inspectors, and they'd taken in staff from the National Rivers Authority. So we won a contract at Loughborough to run a waste management licensing programme of training for all of the staff coming into the Agency. I think we had a couple of hundred staff came through at that time on short courses.

**LF: And were you still running the courses that you'd founded?**

JP: Yes. Colleagues had taken over. Ken Westlake, who joined me, he took over running of the introductory and hazardous waste management courses, but we were still running the diploma course as well, and were thinking about making it into a Masters course, an MSc as well.

**LF: And tell me about the new course that you developed, once the Environment Agency had been born.**

JP: Yes, so that was very much developed with the Agency and it was very much around, in the first instance, just providing basic understanding of what the law said about waste management licensing, but then also about the practice of licensing inspection, how licences should be written *etc.* But I think the challenge for us was that as a university, we wanted to be able to challenge the staff from the Agency to think about what the guidance said and why or why not a particular approach should be taken. I think for the Agency, that was probably challenging because they just wanted their staff trained in what the law said, but we were quite clear that if they wanted that done, it was probably best not to use a university. Our role was really to challenge, experienced people but coming from different authorities, different backgrounds, to develop waste management licensing skills sets.

**LF: And how long was the period of providing these courses?**

JP: I can't really remember now, but certainly over a year. They were relatively short, sort of three-day courses, something like that. So where have we got to in the timeframe? So by this time I knew quite a lot of people

in the waste sector, also in the land contamination sector, and of course there was quite a bit of overlap between those two. I had developed quite a lot of work around incineration, dioxins, health risk assessment, public perceptions on incineration, which of course was always potentially problematic in terms of people's fears of new plants and proposals for them. So had developed quite a lot of work looking at how people responded, what they needed to know, developed skills in understanding how health risk assessments were done, again working with many of the environmental consultants. And started to be able to lecture on that as well. And learning also from people who were health epidemiologists, health specialists, chemists. Learning the background of the pollutants but then learning how to translate that knowledge again into things that people could understand as to the risks to them.

So I think that's probably where the academic work started really to take off, but in this quite rapidly changing waste field. Legislation was developing, new practice was developing, European directives were flowing out and needing to be, it was a time of course of extremely low recycling, landfill was the dominant option. I think in those days we used to lecture on recycling targets and ideas of 30-40 per cent recycling. And I think, to be honest, I couldn't believe that that would really ever happen. So it was a very, you know, vastly changing industry, huge professionalization in the industry, very visible now. The rise of the very big companies as well and with the taking over of smaller, local companies, because of course the more legislation you have to be able to work to, the more controls you need, the more likely it is that the larger companies will survive. It was the days of the debates about the price, the cost of waste management, and whether landfill was too cheap. It was the growth of landfill engineering, liner systems, learning from European and international, particularly North American, experience. New systems for methane collection and control, leachate management, all of these were rapidly developing areas of practice.

**LF: Can I just ask you about the liner systems?**

JP: Liner systems for landfills, in terms of what we used to refer to as artificial liners, instead of clay liners, but the use of membrane systems, for example, to line landfills, which of course, all bore a cost, which meant again the larger companies were more likely to be able to work in the business. So it was a really changing world from a period perhaps in the 1970s of pretty basic practice in terms of waste management to huge engineering practice, as we went through the 90s and of course onwards, and very much driven by European requirements. We also, however, did start to see the discussion of new technologies, gasification for destruction particularly of certain wastes, particularly hazardous and clinical wastes, not many gasifiers built because it was such new technology, anaerobic digestion, learning from experience in Europe in particular, energy-from-waste plant now rather than just incinerators. Still in those days we weren't able to get combined heat and power links to energy and waste plants, we were just providing electricity, not heat, on the whole. And interesting to reflect upon how all of that had happened. I think that reflection is also in individuals who came on the courses, reflecting themselves about how they had come through the industry, for example, and bringing again that experience of how that whole industry was changing during that period.

I continued to work with the Institute of Waste Management on the education and training side. They did develop whole new pathways and training programmes for membership, and eventually of course the Institute did get chartered status. So it was good to be involved in something that was really developing.

**LF: Were there other countries so clearly in the lead that Britain could take guidance from them or Britain could learn from them?**

JP: Yes, I think certainly Germany, certainly Scandinavian countries, but of course Austria, Denmark, in terms of recycling. In Denmark, combined heat and power, the idea that you can build an infrastructure, with small plants supporting a small local community, taking waste, providing heat and power back to the community. And that they were able to put infrastructure in place to do that, pipework connections *etc.*, and invest centrally; something that was very difficult in Britain to do.

**LF: So why do you think it was easier for Scandinavian countries?**

JP: Far more centralized planning process. In Britain you had to be able to bring together your waste management processes and your separate land use planning processes, and so that made it very difficult to drive to some of these newer technologies. On the landfill side, I think the German experience of landfill, the development of engineered landfill systems, we learnt a lot from, and the same coming from the United States as well. So there was a lot of learning internationally and it's interesting of course that some of the biggest companies who work in this sector are the multinationals who operate across Europe and North America, Australia *etc.* So you saw the growth of the big companies with that multinational experience, bringing this into UK operations.

**LF: You left Loughborough and moved to Birmingham. Tell me when you left and what you did at Birmingham.**

JP: Okay, so that was 1999 and I was appointed to a Chair at Birmingham in Environmental Risk Management. And this was particularly to work in the Centre for Environmental Research and Training [CERT] which was a cross-university initiative, very much an interdisciplinary initiative, to bring together environmental research and training across Birmingham University. Based in the School of Geography, Earth and Environmental Science, but very much energizing interdisciplinary large-scale projects across the University, bringing opportunities in for research, running seminars and events. Then for the first time, I'm now lecturing to first years on the environmental management programme, which were relatively new degrees. We had an environmental science degree and an environmental management degree. So now I was lecturing to undergraduates on environmental impact assessment, on risk assessment, on public engagement.

**LF: How did that compare with the first courses you worked on at Loughborough?**

JP: Oh, totally different because you're working with people who don't know anything so you're starting from a different place. All I would say is for students doing an environmental management degree or environmental science degree, on the whole they have a huge level of personal interest in the environment, and so almost like sponges in what they could get as information, but totally different to the professional. So I had to write my first set of lecture notes, in those days acetate PowerPoint, nothing like we would use now. I was a module leader for some second and third year courses. I then became Head of Geography and Environmental Science in 2001, and within a year was asked by the University if Earth Science could join us as well, so we formed a large geography, earth and environmental science activity. So again, hugely interdisciplinary. Interestingly, among the environmental science team, an immensely strong air pollution, atmospheric chemistry team, led by Professor Roy Harrison, and interesting overlaps because they also did work on incineration and dioxins. So the background was still there, although I wasn't teaching waste management. Still doing work for Government Departments in terms of contract research work, particularly on public engagement, for Department of the Environment, DoE, that then became DETR, and then became DEFRA.

But, I think, I had nearly ten years of funding from the Environmental Agency for different pieces of work on public engagement and communication from 1996. So very much working with Government Departments, worked on the development of the land contamination, a new system of regulation and very much still working actually with some of the Pat Delbridge team, Amanda Jane Grey in particular, on running public engagement exercises. I was moving now in other areas, so we ran for example one project, the SMURF project, which was Sustainable Management of Urban Rivers and Floodplains. And this was a European Life project. The distinctive characteristic of those was that you actually deliver a project, which in this case was an urban river restoration in Birmingham. And so we were working again with the Environment Agency engineers, with consultants, but myself and colleagues ran the public engagement exercise around what people wanted in their urban rivers, how they perceived them, how they thought they should be restored and managed etc. We did a very interesting project, the development of a real project on the River Thame in Birmingham, and that was then translated into learning and guidance in a European context.

So again, very applied research. Also, however, because of the risk perception, risk understanding, I got engaged in some projects for Department of Health to look at perception and communication of risk around environmental health issues, air pollution being one, radon being a second. And we also looked at mobile phones and risks to health. I did some work for the Department at the height of the MMR [measles-mumps-rubella] vaccination issue with children, and for the Department they needed to understand the communication that was being given about vaccination and why they were not achieving the immunisation rates that they needed.

**LF: And was this for the Department of Health?**

JP: That was for the Department of Health, yes. And so again using the skills of running public engagement exercises, I worked with regional child immunisation specialists to run these discussion workshops with a range, particularly of mothers, different ages, different experience with young children, different socio-economic backgrounds, to try and understand what it was about the story, which was, of course, very much being run in the media, that they were concerned about, that they didn't understand, that they needed information on, *etc.* And we developed advice for the Department on how to develop the guidance and the leaflets *etc.* that were being used by GPs practices in particular.

**LF: Can you give me a quick summary of that? What did you find about the influences on those parents?**

JP: Well, the story of course was picked up particularly in the media as a result of a piece of science research reported in *The Lancet* journal by Andrew Wakefield. And it was a very small study, as I remember it, 12 children that he looked at, who were considered to possibly have signs of autism. And although *The Lancet* was absolutely correct in the way it talked about the size of the sample *etc.*, it was picked up particularly in the media when the author was unable to say that there was no link between the vaccination and autism. Autism begins to be seen in children at a very similar age, 18 months *etc.*, just when you're giving the vaccination as well. So there was this correlation of seeing evidence of autism when children were also just having the vaccination for the first time. And particular papers, *The Daily Mail* in particular, picked this up, and so it became a very frightening experience for parents who were having to take a decision as to whether to take their child to be vaccinated as the letters came in from the GPs surgery saying, 'It's time for your child to come for vaccination.'

We learnt a lot about where people were getting their information from, and, of course, for mothers, particularly young mothers, maybe with their first child, their own mother or family is a very important source of information. The uncertainty, I think, was difficult and particularly as we found for mothers in more professional socioeconomic groups, who were perhaps able to find more sources of often conflicting information because the advice of the Department was that there is no risk. They were the ones more likely to decide not to vaccinate, or to be able to spend money to get the single vaccinations for measles, mumps and rubella, rather than the combined vaccination. So there was definitely a socioeconomic difference. There was a very strong, powerful influence of mothers and their own mothers, and there was a strong influence also if it was a first child versus say a second or third child that had had the vaccinations. Interestingly, of course, childhood immunisation is absolutely understood by all mothers to be really important. Absolutely understood as something that you do, and really this bolt of information, which was really questioning this, was quite frightening and quite disturbing for many. So in the groups we ran several sessions, the first really just finding out how people were thinking, and then giving them the information to take away, it was in the format of some leaflets. There were also some videos produced. Interestingly, videos produced for nurses and immunisation specialists, and videos produced for parents.

Well we gave the parents both sets of videos to look at and they interestingly came back and said they learnt a lot from the nurses' own professional video. But we then got them back the second time around and a regional specialist would be with me to answer their questions and unpack what lay behind some of their fears. We also had an opportunity to explain the science that was behind this particular journal paper, and the fact that this particular story had all come from a piece of research involving just 12 children. And certainly, I can remember some people being quite shocked, in fact one young girl, very young already with

two children, in Birmingham, when we explained the science basically said, 'You're telling me that this man, this scientist, it's a bit like washing powder adverts when you see them. You see one set of washing done in one and you'd see another set of washing done in another. This man really needed the other set, didn't he?' So here was a young girl who obviously had stopped her education quite early because she had some children by the age of 16, and who probably had not had much science in her education background. But when she had an opportunity to sit down and discuss it, that maybe there was another part to this story that she needed to unpack, she immediately understood the issue.

And I can remember her just sitting there saying, 'I'm going to go and get this vaccination done tomorrow. This isn't a problem, is it?' And we said to the Department, 'Do you think your information should be more engaging around the nature of the science that is driving the story instead of entirely focusing on your view of the science?' And I think that's quite difficult for Government Departments i.e. to be seen to be saying things about a particularly scientific study. So there was a lot of learning in there about how science is communicated, the role of individual expert scientists, the power of families and how information gets spread among networks of young mothers and young families. And a lot in there to learn, but a fascinating piece of work.

**LF: How did you then take that learning for you and develop it? How did that inform the next stage of your career?**

JP: So I've gone on to look at public engagement around innovative technologies, to be involved in large deliberative exercises on energy, on nanotechnologies, on synthetic biology, none of these areas I'm an expert in, knowing how to work with people who are experts, bring them to a public discussion about the science and learning, knowing how to tease out what lies behind people's concerns, and where they get their information from. I'm also involved and have been for over ten years in the Government's Sciencewise programme, now funded by Department for Business, Industries and Skills, BIS, which has really seen the growth and encouragement of deliberate processes around science and around controversial facilities. I currently chair the Steering Group of Sciencewise and I've been involved in it since day one, in very much seeing how Government can use these other mechanisms of engaging, not merely to get the message across for Government or for science, but actually to understand what lies behind, why people are worried about things.

**LF: When did you come to Southampton?**

JP: I came to Southampton in 2010. I was at Birmingham for 12 years, I became Pro-Vice-Chancellor for Research and Enterprise at Birmingham. But then the lure of moving back to the south was very strong. Elderly mother in Portsmouth, who unfortunately then died, driving up and down between the Midlands and Portsmouth when she was poorly. We'd been in the Midlands for 30 years, but we'd started our life, our married life, in Hampshire and Dorset. So I came as an inaugural Dean of one of the new Faculties of the University, Social and Human Sciences, interestingly it also has mathematics in it so we've now changed the title to the Faculty of Social, Human and Mathematical Sciences. And my role was as the new Dean to set up the new Faculty, a very large Faculty. So that's when the research starts to plummet when you take on university administrative roles, but I've still very much been involved in Government work. From 2000 to 2006 I was a Member of the Natural Environment Research Council, interestingly as a social scientist, very much on a science council. From 2005 to 2011, I was a Member of the Royal Commission on Environmental Pollution. And again, working in a highly interdisciplinary mode of interdisciplinary deliberation, as one of the Members has called it, around highly complex issues. We did work on novel materials, particular nanotechnologies, on the urban environment and demographic change, hugely, immensely enjoyable, very valuable work. But again that skillset, as a group of people of turning knowledge into readable material for decision-makers and coming up with recommendations that could be exercised.

The Commission was closed by the Government in 2011 when a number of quangos went, and after that I became a Member of DEFRA's Science Advisory Council. In fact three of us who were on the Commission became Members of DEFRA's Science Advisory Council. So all the way through I've continued with this

sort of Government advisory work. In 2012 I was honoured in the New Year's Honours with a CBE for 'services to scientific research,' which was wonderful, and I think very much reflects that background of the type of research and engagement that I've had. So having been Dean, I then became again Pro-Vice-Chancellor for Research and Enterprise here at Southampton, and indeed I'm about to become Vice-Chancellor of Plymouth University in about eight weeks' time [laughs].

**LF: What's the draw? What's the attraction of going to Plymouth?**

JP: So it's a new challenge, it's a final challenge. I've been at two hugely research intensive institutions. Someone asked me what I would miss at Southampton, it is the world leading scientists that I work with. I've been hugely embedded in that research world. But to go to a different type of university, still with huge strengths, actually interestingly in my own areas, environmental science and marine science, very strong like we are at Southampton. A newer university, but still with a long history, a very large university: 28,000 students. Very much a regional university in its role in the south-west, which is very interesting. And of course Plymouth, a bit like Portsmouth, being a naval and dockyard town. So a new challenge for a final part of my career. I don't do so much research now, but still have a life in advisory work and that won't stop. I'm on BBSRC Council at the moment, I also still do work for the NERC Innovation Board; so still connected strongly to the research councils. So that won't go, but an opportunity now to take on a final challenge.

**LF: Judith, you're going to tell me a bit about the advisory roles that you've held.**

JP: Yes, and there's two roles. As a specialist advisor first to the House of Commons enquiry into sustainable waste management, which was 1998. And then secondly in 1999 for the House of Lords, which was a European committee enquiry into the incineration directive. So, I think, the interesting thing about the House of Commons report, which was one of the first waste management reports that the Commons Committee had done, it's gone on to do others since, was at this peak time, 1998, of this discussion between landfill and other options. And certainly peak at the time about questioning about incineration and dioxins. So the role, of course, of the specialist advisor is to help the Committee ask questions of those who are giving evidence to it, provide background information, put them in touch with other people and also help to provide sources of background information. And, I think, the thing that you learn in the Commons *versus* the Lords, is that the House of Commons tends to be a more political view on a Committee than you would see in the House of Lords.

So the House of Lords one was on the incineration directive, which was going to require significant upgrade and change to incinerators across Europe in terms of emission control in particular, and for that enquiry it was perhaps more technical, because very much one of the questions that the Committee was very keen to look at was where did the numbers come for the new guideline values for various pollutants? And where was the background science to them? And in particular 0.1 $ng/m^3$ was the new guideline value for dioxin; where did that come from? And also for nitrogen dioxide actually, also quite new stringent guideline values. So it was a different enquiry to this broader question about how should we manage waste in the Commons enquiry. The role of a specialist advisor, because there's often only one, is interesting, but it again brings you into that role of trying to understand what the questioner is interested in, whether it's an MP [Member of Parliament] or a Member of the Lords, and how best to help them get the information they need to come to an enquiry, a decision and a report.

And of course you're helped considerably by the secretarial and office teams that sit behind the Committees and do a huge amount of the writing and drafting of the report. But I think those were peak times really of this waste management development, but also for me a real learning curve in being a specialist advisor in the political world of the House of Commons, where you can have Members of Committees who have their own particular views, perhaps that they are reflecting the questions of their own constituents of course, and so bringing those to the table to unpick and understand in the enquiry. Whereas the House of Lords was a far more technical enquiry about what was proposed in the incineration directive, how it had come about and, of course, its impact particularly in Britain. The other advisory role, absolutely different, was in 1999

under Onyx Waste Management. The Company decided to set up an Advisory Board to bring a set of specialists, legal, industrial, academic, political, around the table to help them as a company.

I was actually on that board all the way through to 2013 and the company changed from being called Onyx to Veolia. Interesting of course, as one of the largest of our companies in the waste sector and of course French-owned, so the whole culture of the company and how they operated outside of France were very interesting. We visited sites owned by the company across Europe. I went to Norway, I went to France, to look at landfill, to look at the incineration plant etc. they operated elsewhere, as well as looking at facilities around the UK, and of course they were the company with the contract in Hampshire; so I'd seen them bring the whole Hampshire contract through. But very interesting working inside a company on an Advisory Board, a sort of luxury position, because you have no non-executive responsibilities only being advisors, helping them in strategy development in particular.

**LF: So looking back at your career overall, very rich, very fruitful career, anything you'd have done differently?**

JP: Probably would have done some science at school, because I've spent my life working with scientists in science areas and always having to learn from scratch. The advantage is I don't have to explain the science to people, but I have to understand the implications of the science. So I think I probably would have insisted on doing a bit more science at school than having to give up these subjects.

**LF: And again, that's an interesting point, and again reflecting back on your career, let me just ask you about the best and the worst times overall. Start with the worst and then we can move onto the positive.**

JP: I think it's really difficult to pull up. I can remember times of sitting up at one o'clock in the morning trying to finish a report for a Government Department, completely worn out and against some timetable of when they needed the report, not feeling it was going as well as I wanted it to. Really working immensely long hours, they are down times without a doubt. But, I think, actually as you grow in a career, particularly to take on more senior management roles, the more difficult times tend to be the people issues as opposed to the science issues. So, I think it's like any job where you take on a senior management role, some of the more troubling things that you lie awake thinking about at night are something to do with an individual where there's problem at work. So, I think, those are the down times, but I think down is the wrong word because in a sense you get through it. By the next day things have brightened up. So I think the best times are when you know that you're working on something, and you've got absolute engagement with your audience and you get amazing feedback. Whether it's students in a class, whether it's an individual student who you're working as a PhD supervisor with, or it's a conference of people or it's a government committee. Whatever it is, that sense of being valuable in whatever is going on, is the best time.

**LF: Can you think of any in particular, one or two very concrete examples?**

JP: I've had some great PhD-students and, interestingly, because I've always had students who have come because they're working on quite interdisciplinary projects, students who themselves have found it difficult, at times found it very difficult to work through, and I think it's those times, the "eureka" moments that they have, when everything suddenly goes right, when you feel that it's the best times. Because PhDs are difficult and I think every PhD-student has a downtime, usually in about year two, or close to the end when they're writing up and they don't feel the writing is going as well as they would have liked, yet time is pressuring on them. So I think it's working with individuals, I think, that have been some of the best times.

**LF: What have you enjoyed most about being Pro-Vice-Chancellor at Southampton?**

JP: I think it is working with absolutely brilliant scientists where my role is to facilitate them getting funding, getting the resources they need, getting the equipment, that sort of major challenge that they face, and just helping things come together for them. And it almost goes back to that very early days of being a student

at Exeter and working with brilliant professors, who were my tutors *etc.* As a Pro-Vice-Chancellor, it's often said that you have no resource, but you have to negotiate and facilitate and be an advocate for your university and for your sciences. It's very easy to do that. It's very easy, you know, in all universities to be an advocate for what you're doing, and it's very easy when you see world-class people and also rapidly rising youngsters who are going to be truly successful.

**LF: Thank you very much.**

[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.
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8. 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.
9. Petts J, Eduljee G (1994) *Environment Impact Assessment for Waste Treatment and Disposal Facilities*. Chichester: Wiley.