

Dollis Hill GPO Research Station
Oral history interview with Cliff Wadsworth by Carolyn Abel

7 February 2002
(11am – 1pm)

Disc 1

Track 1

CA Ok. This is Carolyn Abel interviewing on err Thursday 7th February 2002, err interviewing Cliff Wadsworth for the Dollis Hill GPO exhibition.

CA. Ok if you could start by stating your name, date of birth and place of birth.

CW Er, my name is Cliff Wadsworth, I was born on the 20th January 1937 err in Harlesden.

CA Ok. Did you grow up in Harlesden?

CW. Yes, I stayed in Harlesden all my life

CA Right and you've lived in the whole area, in Brent in particular. Brilliant, okay thank you. I just want to ask a few questions about when you were working at Dollis Hill GPO. So if I could just start by asking when did you actually start working at er the research station?

CW err, 1953, I, after I left school, which was Willesden Technical College.

CA So how old were you?

CW. Sixteen

CA. Okay. So, did you start there as an apprentice as a trainee?

CW. Yes, in those days, errm, there were no job shortages for people who had a couple of O levels. Errm, in fact you were sort of head hunted. Errm I had, I think, six interviews offered, I remember British Thomas Houston at Neasden was one and of course Dollis Hill Research was another, and I went to Dollis Hill for the interview first. (CA hmm hmm) And I thought it was so wonderful, that I, I accepted the job straight away and didn't have any further interviews. But there was no problem getting a job in those days.

CA. So what was it about Dollis Hill that appealed to you?

CW. I think its physical beauty was one thing, urm, and also er, there was this magical word 'research', which to the young mind conjures up wonderful heroic

deeds of inventing hitherto unknown artefacts, you know. There was a magic about the name.

CA So when you started what was the process, I mean, were you taken on to train, were you trained there and did you go onto further training outside?

CW You go to the interview, aah, walk down the drive on a lovely day and sit down in front of these very impressive gentlemen in their suits and they ask you questions about your qualifications and background, what you would like to do. But of course you don't know what you would like to do because you don't really know anything. Err, and they, slot, make an offer if they think you're okay, then they might make an offer for the most suitable slot. I said I wanted to be in research but they convinced me that would not be a good idea and I would be better suited to take a what an effectively an apprenticeship in errm in the Radio branch which was there. Err, course there were two ways in ...into working at Dollis Hill. One was err your ordinary run of the mill person who came up the floor err, and the other way was through err having a degree and coming in higher up the ladder as it were. Err so that's how I started really. I was offered the job and I thought it was wonderful and they said come two months time, have a medical and urm we'll offer you a job. It was easy.

CA. Err, okay. So, I think it's just a point of clarification for me. There was the Radio branch and the Research branch, what was the difference?

CW Now, that's a difficult question. I really don't the er history of it all but erm, generally speaking, in fact, I think they had different, if I remember correctly, the Radio branch had ranks which were erm called Technical officer, err, and such like but the ranks in the research side had scientific officer as a typical name. Er and they had a separate pay structure, even I remember. But I don't really know the historic background of, of, why this developed into two separate departments.

CA. But were they both involved in research?

CW Yes, they were but I would say that most of the work that was done at Dollis Hill was er, although it came under the banner of research, was really development of something, it wasn't sort of like these intellectuals at Oxford pushing back the boundaries of science, it was more taking something which was an idea and devel, devleloping the work into something which could be exploited into something for the benefit of er BT Telecom and Communications.

CA So it practice it was making the reality of the idea?

CW Yes. There, was quite a bit of pure research done at Dollis Hill but it was certainly not err, a majority sport. Most people were on the development or the support side.

CA And so that covered all, radio and research and there was television there as well, is that right?

CW Part of the Radio group, although it was called Radio, yes it didn't, its nothing to do with Radio as switch it on in the front room. It covered transmission, television, urm, aerials erm, well, anything to do with telecommunications really.

CA Okay. Um, so if we can perhaps just go back to when you first started there, do you remember what the title of your job was?

CW Youth in Training

CA And essentially that was an apprenticeship?

CW Yes, two years because you 've got remember in those days you had to go and do your National Service at 18, you became a youth-in-training at 16 and you knew you'd have to go into the forces two years later, so that's how long the apprenticeship was, two years.

CA So after those two years you went and did your National Service.

CW Yes, yes and I believe, I believe that the GPO used to allow you half service while you were away and they guaranteed that you would get a job when you came out which was comforting.

CA And is that what you did, you went back there?

CW Yes

CA. Could you tell a little bit about what your training involved?

CW Yes, it was quite extraordinary, especially for someone who'd come straight from school. Basically you were posted to various groups within the Radio branch for specific lengths of time. The lengths of time varied from sometimes as short as two weeks, erm, sometimes as long as a couple of months, urm, and you went through, er, well, an extraordinary range of activities, including serving time in the stores for instance, giving out materials and bits of er bits of metal with anyone with a docket. Er you spent time in the plant office which was where they kept various items of equipment and leased them out against a signature, you spent time, with the drivers, (cough) going to local out posts like Wembley, erm, some, into the city, sometimes longer trips, err. I remember once I was very lucky that at the time I was with the drivers I had a trip to the Isle of White to deliver some heavy equipment and it did take a long time, we were most of the day getting there in great big lorry but it was quite exciting for a young man. So that was the sort of support side and then you would go into the technical labs

which would er, cover a wide range of activities. I don't know if you want to go into those here (CA nods) oh, sort of things was the transmitting lab which as it suggests was to do with transmitters, radio transmitters, there was a receiving lab which er, I suppose, er, a catchall, because I recall they used to receive mainly standard signals, from Rugby Radio station and compare the standard frequency with er a master transmitter we had in a well just outside. Just outside the laboratory. This well went down, I don't know how many feet, into the hill there at Dollis Hill where you had erm little vibration and constant temperature and we had a state of the art, er, I think it was a quartz crystal driven masters down there and we used to check that the frequencies sent out from Rugby radio station that we agreed with them. Erm, I recall that was one job I did in the receiving block erm, it's a long while ago. Err, there was, there were transmission group which was concerned with all sorts of development of how to take er information from A to B, started, presumably before my time with er telegraph wires and it went through the development of coaxial cables and by the time I got there it was dealing with er, wave guide transmission, and I believe it went on after that time to deal with optical fibre. Err, I'm scratching round to remember (CA. No, no, its ..) to remember other groups I went into. There were a lot.

CA So essentially the training was the aim to get you to understand the range of work?

CW yes, Yes. Absolutely. It was great fun. Of course when you went in, you were the lowest of the low and most important you had to know how to make a cup of tea and keep what they called the fire bench clean. Fire bench was were the soldering and that type of activity took place and er if you kept the fire bench clean and you could make tea you got a good mark at the end of your stay, leaving aside your technical ability.

CA (laughs) First of all can you explain what you did to keep the fire bench clean?

CW Yes, it was a matter of er, just clearing up the little bits of solder that fell on the floor, and there were lots of solvents used. I remember sometimes you could come over quite faint, there was tetrachloride fumes which were used for, the factories department would be horrified at the things that went on. And methelated spirits of course was used a lot er, and all sorts of compounds were used, sealing compounds er and of course all these used to dribble onto what was called the fire bench. It used to stand there with its little tripod and two or three bunsen burners erm and er, well, it looked like a disaster area at the end of the day and er you had to make sure that that looked reasonable the next morning.

CA Can I ask, so, you've done this qualification, wide ranging training, erm, after that were you , and after your National Service, were you then, expected to specialise and did you specialise?

CW I don't think there was any particular thought during your training of what you would do afterwards, it was a general training. We, in addition to going round the laboratories, we did go on what was called the Youths A and the Youths B course, I think it was. Err um to Stone in Staffordshire, that the GPO ran a big training school there and you er had to go on, as I say, this A and B course, which taught radio theory and you had to pass of course and there were very few failures. Um, bearing in mind that most people that had gone there had quite a good engineering training at their technical school in, well, about to about O level I would think in science and of course you had quite a good practical training. It wasn't only theory, you had workshop training, metal work, um, woodwork, the practical skills as well, so that, um, really, these Youths A and B courses, were really to to take what you already knew and drive it along a radio based way, you know. But other than that, erm, ah yes, of course, I've forgotten the most important thing. One of the conditions was that you should carry on learning because of course the way to get promoted was to um to either take City and Guilds, or Higher Nationals or National Certificate, and you, one had to, one was released one day a week to attend the local technical college to pursue these national technical qualifications. Urm, which was very very helpful, looking back, because you got your qualifications without an awful lot of effort because you'd just come from school and all it meant that instead of working five days a week, you were working four days and back to school for one so it was quite easy to adapt (hmm). That was a very important I forgot, of course, yes, they were very keen on developing everybody and you couldn't, it was very difficult to reach the high echelons unless you were well tech technically qualified.

CA So in fact they were giving lots of people the opportunity

CW Everybody, who was taken in as an engineer or as a scientist, yes. Obviously the catering ladies weren't, or the mill wrights. There were special courses for everybody run by the GPO but technical courses were run outside as a rule, national bodies.

CA So, so you did those courses, which local college did you go back to?

CW I went back to Willesden Technical College from whence I came.

CA Right, Um, would you mind talking just a little bit about your National Service because I think that's quite an interesting aspect because I suspect (state the obvious) that lots of other people would have done it as well?

CW Well a couple of years ago I did actually, write a booklet on it, I haven't published it but it was a most extraordinary time. Whilst I would never have

volunteered to go into the forces, I think it was, urm, a life changing experience I think for most people. And urm, although it was very regimented you so..., you learnt so much from other people being in the same boat as yourself. And I don't think I've ever laughed more than I did in those two years. I suspected I cried a bit as well (laughs) but it was er extremely funny some of it. Well, the general form is just like you see in the Carry On films, you you get taken in there, your clothes are taken away, you get given an itchy uniform erm and then they take you away and try and teach you how to kill people erm, for erm, a passing out parade and then quite often you get people who've got potential brain surgeons who become catering officers and you get erm people go to the sick bay as medical who've been dustmen. It seemed to me there was a deliberate mismatch? Of ones' abilities with jobs in the National Service. But I was lucky because they were very short of technical people at the time so I managed to become what they called was a ground wireless fitter and that involved a very very long course, I think it took urm, about six months, something of that order, so that's a quarter of your National Service just learning something and of course I already knew most of it, it was just a matter of adapting to the particular pieces of equipment that the RAF used. I should have said I went in the RAF not the Army. Err and then er after that I became, they were very very short of instructors, so I volunteered to become an instructor because that guaranteed your promotion eventually to corporal which meant that, there weren't too many National Service men who went to corporal in the RAF. So er that's what I did and I spent all my time on the edge of Salisbury Plain at a place called ~~Karne~~ ^{Karne} ~~Caine~~ ^{Caine} (Chicksall) in Wiltshire. The camp was called RAF Compton Bassett.

CA Yes, I know, my Dad used to live round there. CW. Very beautiful. Very quiet erm, if you get me reminiscing about this you won't get anything else.

CA Ok. So did you go overseas at all.

CW No, I didn't.

CA Okay, move on back to Dollis Hill. Maybe you can tell me about when left National Service and came back, what you did and how you felt about being back as well?

CW. Oh how you feel about being out of the forces is something else, you. Inside really you miss it, you miss something the good parts but you're very very relieved to get out, err because I mean you very interested in young ladies which there was a dearth in Compton Bassett. Urm you also realise, you've lost two years of experience in your job and you've lost two years of your ac, your pursuing your academic qualifications. So from that point of view it was a hiccup. I was very pleased to come back to Dollis Hill. Er I looked forward to it. I don't remember being a choice of job. I was posted to erm, to this is er strange, I can't remember the very first posting I had when I came back. I know they gave me a rank of Technician Class 2A.

CA. And what did that mean?

CW Well it meant you'd survived your training period, your apprenticeship and now you were being paid man's money (Right) all though very little man's money.

CA Can you remember how much that was?

CW I can. I've got it somewhere (looking through notes).

CA So while you were training you were known as a Y-I-Training and when gone past that you were given a specific job title which was Technician...

CW. I think I'll look up this information afterwards but the money was very small, we are talking less than £10 per week.

CA How did that compare with other employees?

CW Well, it compared very well with what you were getting in the forces that's for sure. In the forces, as a corporal I was only getting £5 at the end. But of course that includes your keep, you er, you wear the uniform so you don't have to buy many clothes. And you er, and of course all your meals and er heating and somewhere to lay your head, all this was er ..so £5 wasn't as a bad as it sounds but when I came out it probably doubled at least.

CA Were you living locally at the time, where did you live when you came back?

CW In Harlesden again, I wasn't married at the time and I was still at home with my own little pad upstairs urm so er it was, of course mothers tend not to charge you the full going rate for staying there do they so I was quite well off really.

CA Did you walk to work?

CW No I bicycled. This was something that would appear quite strange now, that there were several er bike sheds on the Dollis Hill site. They were, they had corrugated iron roofs which used to make a terrible din when it rained. Er I don't, I suppose they'd take a hundred or so bikes each and they'd be pretty well full, loads of people cycled in those days. Err very, a few, a few had cars, motorbikes were still popular. Many people came by train, walking through Gladstone Park down to Dollis Hill station most of them. But er yes, I joined the cycling contingent. Err that was something, to have your breakfast, it was all uphill for me, well it was all uphill for everybody but that last pull up Brooke Road ensured that no matter how cold the day was, you arrived at your desk sweaty. MMm., yes, I remember it well. (Laughs). In fact a few weeks ago, I tried to cycle up that to repeat the experience but we'll leave that.

CA Urm so you came back as a Technician Class 2A, how long did you then stay there for and..?

CW Well, I carried on with my err, by this time I'd got my Ordinary National Certificate, and I carried on for Higher National Certificate. In fact I think I went on til I was about 26 or 27 because after I got Higher National Certificate I went on taking endorsements, various endorsements to the certificate. Er the rules were that the GPO would pay for your day release providing you didn't fail. If you failed then you had to go and take the course in the evening at evening classes. As I kept passing, just, I was no genius, but I thought I might as well do another year and another year and another year. Erm the objective was to try and get membership of the Institute of Electrical Engineers which is the professional body. But what I found was, as fast as I got a qualification so the goal posts were moved so urm they wanted more qualifications to become a member, it moved two or three times. In the end I realised of course I'd still be doing this when I was 80 so I thought I have enough qualifications now. The important thing was to get the Higher National because that was the really the bottom level to look at the higher grades, to move to the Major staff.

CA So were the Technician class, were the minor ranks and then once you got, what was the highest level on Technician scale within the minor rank.

CW ER, technical officer I suppose.

CA Right and that was minor top scale and then once you got to that and you had enough qualifications you could move onto the major rank?

CW I think you could, if you had the qualifications, you could apply for a promotion board if you were a Tech 2A I think. But of course there were two of ways of getting promoted from the minor staff er, one was er through what they called open competition which meant that if you had the required qualifications you could apply for a competition interview and er providing your appraisals of your work were good enough, you would be, you could get promoted that way. And the other way of being promoted independent of your technical qualifications, in theory, anybody even if you had not technical qualifications could eventually take a promotion board. This worked on a rather archaic system where err you went on to a seniority list, as soon as you became a technical officer you were given a number according to your date of appointment and when er promotion boards, when the GPO decided it wanted to hold promotion boards it used to interview people down to a certain number and if you were above that number then you used to get called for promotion board. Err, um as I say you didn't have to have the technical qualifications for this but of course if you didn't your chances of getting through were not as good as if you did. Erm, there were slight difference, if you, if you, became promoted through a promotion board, it was assumed that you could, I think, do the work of the next rank up immediately with a certain management training courses. But if you

applied for the open competition, you were, it was assumed that er you would need much more adaptation before you could be effective. Um, they were the two routes. And of course there were people who came, who had good degrees who came into major staff straight away, they weren't involved with the minor staff at all, but you wanted a good degree and of course in those days, degrees were rather less common than they are now, especially honors.

CA Did you ever go before a promotion board?

CW Yes

CA what did that involve?

CW well, it was quite traumatic really, particularly if you're not good at, some people are not natural at being, having interview skills. It is quite difficult to sit there in front of learned people being grilled for an hour. Err some of its luck, sometimes you would get the questions you would want and sometimes they, they ask a question you didn't even understand what they were talking about, never mind answering the question. Er it, it was quite, it could be traumatic, I remember the first promotion board I had, I failed with glorious flying colours, I remember, erm but by that time I had the qualifications to take the open. So that's what I did, as soon as I came out and I learned I'd failed I immediately applied for the open competition erm, anyway, I, I, it's getting a bit hazy here but I do remember going for another grilling and eventually passing, only to be whipped off on various management courses and um then you had to wear a suit of course, as against your rather casual clothes as a technician. T, erm and then of course promotion after that, erm, what happened after that? Of yes of course you had to take a promotion board for every change of rank. When you pass your initial promotion into the major staff, we would be come what was called a Assistant Executive Engineers in those days. And you'd do so many at that before you were offered a chance to take a promotion board to Executive Engineer. Um and then on up, senior Executive Engineer and so on right up to Director of Research. It was all done by interviews, promotion boards.

CA Presumably though there were only a limited number of jobs available?

CW Yes, that's true but it was a huge organisation the GPO, I don't know how many thousands worked there, um, I think there were 1,600 people at Dollis Hill so and ... I never really got the impression that you felt you were being held up for promotion you know, there always seemed to be posts coming up. People just accepted that it took about so many years to go from one rank to the next and as long you didn't feel you'd been four times that length then.. People by and large enjoyed their work which that of course makes for a very um content people. Its not you know, people that do jobs that they don't like tend to be more militant and upset about promotion.

CA So did you enjoy your work?

CW Oh yes, absolutely. I would've done it for nothing if I was a millionaire. Yes

CA when you were in the major rank what, was there a main focus to your work or work?

CW Yes the first job I had in the major staff was in a group that I had worked served in the minor staff, years before. Which was to do with microwave transmission. This included not only transmission between A and B on the ground but it, we're talking about the time when er satellite communications were brand new, and I was involved in the early days of the Telestar project. And when Goonhilly, the first aerial was built at Goonhilly, I spent quite a lot of time down in Cornwall. Erm with waveguide feeders and aerial feeders and various microwave components, don't want to get too technical, I suppose, very boring to those...

CA. Actually I was going to ask you, it might be helpful if you could outline what Goonhilly was and what its purpose was and therefore might help with your job and it's contribution.

CW. Yes, um, well I don't, I'm not too good on the actual history of satellites but um, as soon as it was found that satellites could be launched, it was technically obvious that communications would be a great beneficiary if you could send signals up to a satellite and effectively bounce it off the satellite and transmit it to somewhere else on earth. Um this might be a cheaper way of communicating across the globe than erm than say by submarine cable which are, as you probably now, are very very expensive to lay um and also most of the main cables were used, well used and we wanted new capacity anyway. These satellites offered the opportunity of um broad band widths so that we could use have a lot of conversations going on simultaneously, and er, pretty well be able to spray er signals anywhere on earth that you could see from the satellite. The problem with the early satellites were, was that they weren't geo-stationary that is they weren't up high enough to remain, er to go into orbit and remain in a static position as a man sitting on earth is concerned looking up. They were lower down than that and therefore they used to er be like the moon, they used to appear over the horizon move across the sky and disappear over the other side. So that if you wished to use this a communication mechanism err you had to have an aerial that could track the satellite as it came over the horizon and follow it through the sky and then disappear. Then of course you had no communications until the satellite rose up the other side by which time the aerial had gone back. Uh
(Interview interrupted)

Track 2

CA This is the second track, carry on from the last.

CW Yes, I was saying the area used to, we used to have to follow the satellite across the sky erm, another point of interest, so this meant the aerial had to be capable of moving erm quite quickly from one position to another and because the signal levels were fairly low the area, had to be very big, and I don't know how many tons it weighed, but it was very very large and erm, driven by a rather, I remember, a rather peculiar um bicycle chain type mechanism because it had to move in elevation ~~as in mass~~ ^{as in multi} (check spelling!!), in all directions it had to be capable of movement. Er the other thing was that obviously you had to be able to transmit and receive signals from the satellite and to the satellite so the aerials had to to transmit and receive, and both signals arriving at the centre of the focus of the dish er had to be able to separate the incoming from the outgoing and that was part of our responsibility what they called the ?arching filters and so on. These were fitted in a small cabin behind the aerial itself and to sway about up there looking out over wild Cornwall was quite an experience. Um later on there was the second phase, um satellite called Relay, no what was it Telestar called, no er Relay no its gone. And I worked on the second big development but and then following that satellites became so reliable and um geostationary that more and more aerials were built at Goonhilly, I don't know how many there are now, several. But I only went back once to collect some equipment, I never went back to work at Goonhilly.

CA What, what, were there other projects you were working on while you were there?

CW Major projects like that er, memory gets dim, I certainly can't recall anything quite like that afterwards. One, one anecdote I ought perhaps to relate, at the latter, second development the BBC turned up to do some live broadcasting, course as you know most programmes were live and erm everybody given various jobs you had, during this live broadcast and, I don't know how it came about, but I was given the job of what was called 'telecine' and I said I don't know anything about telecine, but it turned out it was a room, quite a small room, er, I had to sit in and in there was an old projector, er through which you could either project slides or bits of film and I was given a headset and a microphone and I was told by my boss that I would be called upon to put the slides up at the beginning of the programme and the end of the programme and one that said um, "Normal Service will be resumed as soon as possible". I remember the opening slide was a picture of Goonhilly with the aerial in the foreground. I had all these slides and he said, the producer will come and take to you and tell you what you've got to do and er the door opened and this chap came in and he was just what you imagined, one of these arty types called you by your first name immediately and sat too close you know and all that sort of thing. And anyway, all I had to do was, he would speak to me on the headphones and count down 5,4,3,2,1, whereupon I was to put the first slide up and then he would warn me about the second slide and I'd put the second slide on and then the third slide

and if there was an emergency he would say card A or something I would have to put this on and these slides would be taken up by some mechanism and broadcast, part of the, into the control box to be broadcast live. And erm, well, to cut a long story short, I, 'Telecine are you ready' and I said 'Yes' and he counted me in and I put these slides up there for an hour so, or however long the programme lasted. I didn't have a monitor, I didn't know what was going on, I was just sitting there in this room, all on my tod with a projector being told every so often to put a slide on and it all went off quite well and I was congratulated and er, and it wasn't until I was walking home that I, thought crumbs what would've happened if I'd put the slides on upside down (laughs) or back to front or something because I, we, I'd've got nervous if I realised what it was going to be. Anyway, that was a little anecdote.

CA So you didn't get a chance to practice ...

CW Well, I expect there was a certain amount of time to set up, yes I suppose I must have checked. I often think of me beginning the chap who put the slides on upside down. (laughter interrupting)

CA Talked about your work, actually one thing for the tape, I can't remember when you said you stopped working at Dollis Hill.

CW Aah stopped working at Dollis Hill. Well you probably know that you space was the main reason for Dollis Hill closing down. There were so many projects that err going on, many of which required large, large amount of space er so the British Telecom, I think it was by then was looking elsewhere and found a disused aerodrome at Martlesham an ideal site for a new research station. And of course that, Dollis Hill was run down as Martlesham was run up as it were. The move took over ten years for completion. Err my group which was, I say on the micro wave side, was one of the first to move and um I didn't wish to go so I got a transfer into submarine cables from all the way up there in the sky to down there in the sea. Eh, doing similar work in that, although there was no microwave transmission under the sea at those times, and I was dealing with filters, which I had worked upon before, erm. So I did that for a few years, not many, about four or five. Then I applied for a job up in the city, when, about 1977 and I spent the rest of my career up in the city working largely on the development of System X which was the elec, the digital exchanges that we enjoy now, telephones, and it was good bye Dollis Hill

CA So you left there in 77?

CW Yes.

CA Okay, that's fine. And then you worked in the city until ...

CW until I retired in er ... 1990 something, 1996.

CA so you were there a long time up in the city?

CW Oh yeah. I wasn't at the same place. I started off at Lambeth Road which is just off a little building, just opposite the Imperial War Museum. I was there a few years. We moved from there toum, Red Lion Square at Holborn, I think and then to Williams National House which was above Holborn viaduct station. And then right at the end to City Road basin on Grand Union Canal, a building close to that. And that's where I retired from, that place, I was at the City quite a long time.

CA I wondered, sort of, can I ask you more about the social side of working at Dollis Hill. Because I'm aware that there were quite a few clubs and groups, did you participate in any of those?

CW Yes, it was quite extraordinary. I think you'll find most people you interview and talk about Dollis Hill will probably mention at sometime that it really was like a family and that there was an element of this family atmosphere and I don't think I've ever come across a work place offering more diverse extra curricular activities than Dollis Hill. There were all sorts of societies, they had a sailing club of course, the Welsh Harp down there, there was the gardening club which managed to sell everything you could imagine at very cheap rates, there was a running club, football of course, cricket, um, there was an orchestra, a drama club, chess club, you name it pretty well and there was one over the years. I was involved with the athletic club for many, many years there. There was also a weight lifting club I remember, er, I also sang with, there was a music group there who used to sing at the Christmas dos. I suppose you could call it a madrigal group it was run by one of the senior engineers, called Cyril Floyd who incidentally only died recently, aged about 90 I suppose. Um, it was extraordinary, and in addition this, you used to get in those days, a Dollis Hill, Gladstone Park swimming pool and some people used to go swimming in their lunch hour. Erm others used to play bowls in the park and putting, so that sort of activity outside. In the winter when the pond froze over, people used to bring their skates and skate on the, it was, we were pretty well covered for activities.

CA Why do you think there was such a thriving social life, was that something that was particular to that time and happened in other big organisations or was it the feature of?

CW Yes. I think it was more a function of its time. I think if you'd gone to Heinz or McVities probably it would have been the same but there might have been a bit of difference because if you consider the average academic level of the people at Dollis Hill it was very high, um, probably well above Heinz or McVities, probably the interests might have been slightly different. Football would have been common to both, there might have been some activities which Dollis Hill offered which McVities wouldn't and vice-versa. But generally I think it was all a

big companies tried to keep, encourage their employees to take part in other, non-technical activities.

CA. Change tape over.

Tape 2

Track 1

CA Okay, Right, would you be able to say a little more about when you were in the athletics club, I mean was it a club that competed with other clubs or was it simply a training thing and more local?

CW Yes, well, it started off from one laboratory that we worked in. A few of us decided that we needed to get fit, so we decided to go training. And we got changed and jogged round the park, gasping and er, this developed over a while into forming an athletic club. So we managed to get a grant to buy some vests which were interestingly designed – white vests with maroon, two maroon bands and er a printed badge with 'Post Office Research Athletic Club' printed on it. We really looked the works, and the next thing was to go into some competition and I remember we, we entered the civil service championships, and er, I think it was held at Wimbledon, yes it was held at Wimbledon, and we march, and we went down there, it was a filthy day and I think it was January. And well, we certainly learned that we weren't very fit (laughing) we were all in the last 20 (laughs). We did get a whacking that day. Um, some retired immediately on the spot, but we looked so wonderful in our wonderful kit, brand new kit, um, they must have said, who are those plonkers coming down (laughs) but after that some retired and um, two or three of us joined athletic clubs, non Post Office athletics clubs. I joined Finchley Harriers who later became Hillingdon Athletic Club and I ran until I was 54, and I never got it right. But, yes that was the Athletic Club at Dollis Hill, it lasted probably five years, five, six years and then it gradually disappeared.

CA What were the years for that?

CW Ooh, I would think it would be about 1960

CA 'Sorry and what year was the Wimbledon Championship?

CW Oh, that would've been early '60s, '61, '62, I should think. I could actually find out I've got it recorded somewhere.

CA Um, you talked about the family atmosphere of working there, and enjoying being there and enjoying the work as well, was there anything that you didn't enjoy or didn't like?

CW Do you know, I find that very hard to answer. I mean obviously you had disagreements or you fall over and hurt your leg. But I can't think of disliking the place at all, ever.

CA That's fine. It's just that sometimes people have different perspectives. You mentioned that you were living locally and talked about people cycling, um do you, how many of your colleagues do you think lived locally and where did they live?

CW It is difficult to estimate. Obviously the people right at the top, the very wealthy people tended to live in the houses like North Wood Hills and Harrow and places like that, but it was extraordinary how far some people would travel to work at Dollis Hill. I mean in my room alone there were chap, a chap who came from Caterham that's quite a journey to Dollis Hill (interrupt – where is it?).. in Kent. We had at least two who came from Southend. One chap I believe came from Clacton, I don't know how on earth he would have managed that, there were several who came say, more than, more than 10 miles um, several. I didn't answer your question but if I had to estimate how many people who lived in Willesden who worked there, it would be less than a third of the staff, probably much less than that.

CA Would that be amongst the scientific staff, the technical staff, what about the auxiliary staff, like catering and ground staff

CW they would be local, the reason being that their pay would be so low that it wouldn't justify them spending an awful lot of time and money travelling. Oh yes, the support staff would be local.

CA. Did you have much to do with those, that group?

CW what with the support staff? Well one had to, very close relations with like the stores, stores officers who, you probably went to the stores nearly every day and so used to get to know them very very well and the plant office which gave, and the clerical staff of course when you went up and collected your, because we of course used to be paid in money in those days, in your hand. The training staff and of course the lunch time and there was a bit of chat that went on there. Mmm. And of course in the morning and in the afternoon you had a break at 10 o'clock and 3 o'clock in the afternoon. And you used to rush across to the where they used to deliver you with a cheese rolls and the like in the morning and buns in the afternoon. So you used to meet the clerical, um catering staff then as well. Everyone seemed to know everyone else. It was, it was er, er a time of social change I observed. When I went there in 53 there were just one or two of the bosses who still would call you by your surname only. But that was really dying out, by the, ooh, within 10 years I think most people were addressed by their first names, even quite high up the ladder. Um, it, once you got to know

them, I mean, and except in formal discussions you would use someones full name.

CA. Did the support staff take part in the social side as well?

CW Oh yes, that's the great thing, if the lowest of the low in terms of pay wanted to join the sailing club, it was no problem, they joined the sailing club.

CA So actually there was a lot more interaction

CW Yes, I don't think most of the lowest of the low wanted to join the sailing club, but certainly there were examples, for instance in the drama club where from some of the top bosses fancied their chances dressed up as a lady right down to the storeman who would occasionally come and act.... There wasn't any sort of apartheid.

CA And the other thing sort of thing linked to that, which you know I would ask about was women working at the research station, would you be able to tell me a little more about the time that you were there, the women you came across, where they worked?

CW Yes, when I first went the catering staff were of course mainly ladies but on the technical side there were a few on the scientific side at middle management level I would say. But very few and gradually whilst I was there, the ladies were better represented and also, we started, right towards the end even recruiting ladies to become technicians. Ladies used to be recruited at one time, they tended to come into management straight away, into the major staffs with a degree that's the way they came in. But as I say, towards the end, the 70s the GPO started taking Lady Technicians in the same that they'd always taking the gentlemen technicians in. We had one in our lab, I remember, Pauline, I can't remember her second name. And they seemed to, there didn't seem to be any problem er joining in. I suppose one was a little more careful about what one said, but generally I don't remember any problems ever. But having said that, looking at the Technical side, when I left, the number of ladies working there, was less than 10% I would say.

CA Ok. Cause it does have a feel of quite a male workforce apart from the support staff..

CW Oh yes, but there were an awful lot of ladies who did very well, got high up the ladder.

CA Can you remember any in particular?

CW I can see them in my mind, I'd have to have the telephone directory here to pick there names out. I never had a lady boss. So, they were mainly on what

was the old research side. Of course what happened, as I said earlier there was the research side and the radio side and they mixed together socially but there was this feeling of a barrier there. Well all that went, all that changed, I don't know, probably about 1970 when all the old job names were done away with, Executive Engineer, Assistant Engineer, Scientific Officer and all these, they were all thrown out and everyone's job was evaluated and put on a new scale. And you had people then called, were just given professional status, various degrees of professional status. Um, you became a sort of professional, managerial grade, something, er, so there wasn't this distinction between the the research people and radio people that all disappeared.

CA Was there a barrier, friendly rivalry or competition between the areas. I think, as I said earlier I don't know the real background to how the things evolved but I have a feeling that the research people did think they were a little bit better because the engineering people were the people who went up, down manholes and up telegraph poles but the radio people had come from that, that was their um parentage, digging holes and climbing up poles, that sort of thing. Whereas the scientific people might have thought their , they'd come from a more university background research. Possibly that might've been the reason. This is conjecture.

CA But I'm curious, curious between the distinctions because I wasn't quite clear about who worked there etc

CW Also bear in mind the geographic separation that some buildings, the main research block was entirely the scientific type people. And the back of it was the chemi lab and the top floor was the maths group and the, so the main block was pretty all research and the radio people used to have their own radio block later built building the other side of the pond. That was another thing that used to separate us, by and large, the pond. You don't want to play this up too much because generally people regard us as all the same family.

CA Ok. Um, just going through the work of the GPO. ... The bunker, otherwise as the bunker etc did you know when you started and when did you become aware of its presence?

CW No. Well, it's very hard to recall that. Er certainly it must have been someone in the lab saying have you been down the bunker and saying what bunker, and certainly for the first ten years I didn't know it existed. I recall going across there once, now there was a specific reason that we went across there. I think it was used for storage because it wasn't wet then, it was dry because the um the lighting and the air equipment was in working order then. I've got a feeling I went down there to collect some stuff which was stored and gradually it was used for all sorts of things, I know the weightlifting club used to use one of the rooms down there. I think that's all I can recall about it. And then the story revealed itself gradually over the years, all I was aware of initially that it was a

hole in the ground, and I immediately thought oh they must have built this in case of nuclear war or something. I thought it was built as something as part of the original defences but no.. So the full story I didn't appreciate until Ken Valentine wrote his book um yes because there were, as you probably know, there were other secret work done at Dollis Hill in a building which is still there now. Which is on the ground floor, has no windows and huge basements, bomb proof walls. The most extraordinary thing about this is one of the people who worked in this ultra secret place used to be in our running club and the strange thing is, we never asked what, what he did down in, and he never told us what he did down there. It was just sort of unwritten law, that it was known that it was secret and therefore you didn't ask. I think most people suspected that it was something to do with bomb guidance systems and something of the sort. But it must have been a strange place to work because I remember going down once to deliver something and you had to go down the steps and there was this great door and you had to press a bell and eventually somebody would open this great door and give them the equipment. And of course they had to spend all their day down there, no natural light, nothing. I thought I don't want to work there. So there was that secret activity going on. As far as I know there was no secret activity down in the bunker, it's just that you didn't ask questions. You signed the Official Secrets Act and didn't ask questions.

CA Did you sign?

CW Everyone signed. Everyone was vetted as well, at a fairly soft level. But I do remember people who worked in even more secret areas. I, I, there was a chap who worked in the, one of lads, applied for a job and I got strange people who came and stood in dark corridors and interviewed me about this chap. All sorts of strange questions, this vetting process. I think the people who worked in the secret side were extremely well vetted. They were extremely good at keeping secrets because I never heard anybody who got any information out of that, not that they tried, but I never heard of any leakage.

CA I get the impression that a lot hasn't come out etc.

CW My conjecture, guided missiles, is not because anybody has told me that, you imagine what and that's the only thing I could come up with. I'm probably totally wrong and it might be viral or ...

CA Partly because you know the skills of the workforce.

CW When you were talking a little while back about the club activities, there was one sort of activity, not activity, there was an awful lot of leg pulling and chaping it really was extraordinary. I remember, there was a um, a new engineer, assistant engineer, I think his name was Dawkins, and he used to drive a little, one of those baby Austin cars, it was his pride and joy this little Austin 7, I think it was. And when he was made up to, into Major staff, and one of the jobs of the

major staff is to take away the book in the morning which minor staff had to sign in, at 7.45 minor staff had to sign in and then the major staff man would come along and put a line underneath the last name at 7.45 and then sign his name. And of course, there was, most of the major staff were a little bit charitable, their hand would slip down and sometimes leave a space so that anyone that came in a little late could get their name in above the line. But this chap came in his Austin 7 and put the line in the right place every single time and I do remember, it nearly broke his heart, he came out one evening after work and his car wasn't there. These people, there'd been some activity in there and there'd been a crane on the roof, they'd only gone and put his car on the roof (laughs). Some of them had got together and taken his car upon to the roof. He, I mean there was no damage done in the end, but you'd've thought the bloke had lost a child. I could tell you lots of anecdotes

CA Well please do

CW Well, I remember one, there was a pay dispute one Christmas just before one christmas we weren't given the rise we were hoping for. Somebody, this was on the radio side, pure and undefiled, somebody organised a Christmas is dead campaign and several of the labs were decorated with black crepe paper and they made a coffin and they paraded this coffin around, around one lunchtime and launched it on the pond, this black coffin with all its drapes. This didn't happen very often but it did happen.

CA What year was that, roughly?

CW I would have to guess, I would guess this was in the 60s, er and the most outrageous things they'd get up to. There was one person who was reprimanded very severely for um, making a cannon out of some hollow steel tube, I'm not sure how it worked, it was a gas cannon and used to fire ball-bearings out of the window. They used to go for miles across the allotments, it could of killed someone. And this same fellow who should be nameless, not that I've forgotten his name, but he shall be nameless, he also had a liking for getting a coco tin, making a little hole in the top, fill the cocq, er fill the coco tin with gas, put the lid on then light the gas on top of the, you had two holes I think. You lit the gas on one hole, above one hole, which drew air in the other hole and of course, once, as you know, you get the right mixture of gas and air that it's explosive and the whole can goes up with a tremendous whallop. And he used to do this occasionally, and there'd be this amazing bang and noone could ever find anything... all the doors would open, 'where did that come from' and nobody knew anything. And I remember he did this once and and my big boss came along the corridor, and he came into the lab to see if I was there and I I was standing there in the corridor and saw this can and it had a flame on the top and it was ready to go and he looked at this, and I didn't know what to do. And anyway, he went out of the office, and he'd only gone up the corridor and there was this almighty bang and he wanted to know about it.

CA Did you get reprimanded.

CW No, I, I, he didn't know I was there. In fact I think I was, there were two labs connected by a serving hatch. I think I was observing through the serving hatch. But um, there was mischief like that but I don't want to give the wrong impression that this was the main activity. And these were, I remember them because they were exceptional but you did get people who were cards who got up to all sorts of games.

CA Would you be able to describe the labs and the office space because I...

CW Yeah, Yes. The labs, by and large were, course they did vary in size. They were about the size of a library area here (Cricklewood), and then usually round, around the walls was a desk, were, sorry, were benches that were covered by green linoleum, linol, lino. Um and they benches were, as far as I can remember, were very high quality stuff, they were hard wood. And below the benches there were space, spaces to put your knees under, interspersed with desk draws, all the way round there, cupboards, um, there was strip lighting and cupboards also, high up above the benches. Um, there was stools to sit on, not chairs by and large, er, yes, in all the labs, I think there was this work area where you did your soldering and you had to clean up the work bench. That, that of course didn't have lino on it, it had asbestos, and that's another activity, we only learnt long after we'd been breathing in this asbestos for years that it was dangerous. Um, also in one area in the lab there would've been um, racks of, er, er, of things like nuts and bolts, er sticky tape, there'd be a cupboard with solvents in meths, carbontet, stuff like that. Then there'd be your components cupboard. In there you'd have resistors of all values, um, you'd probably have a view valves of various types, um you have, somewhere in the room, you'd have reels of wire of various colours and sizes, er and coaxial cable, all wound onto drums er so you used quite a lot of wire as you can imagine. Mm, then there was another cupboard in which had the stationary in it so you could write reports and it had graph paper so you could draw graphs. And then the other cupboards in the office contain you're measuring equipment, test equipment of various sorts and then every person also had a locker to keep your personal bits and pieces in, your tool kit, dust coat and so on.

CA What, okay so, what did your personal tool kit consist of, you talked about the dustcoat?

CW Yes. When you first, when I first turned up in 1953, you went through this procedure of being issued with your various bits and pieces. As far as I recall, there was a linen handtowel in white with two green bars down it, and it must have GPO written on it I suppose. And you had a piece of foul smelling soap which was rock hard, it used to have a sour sour smell, and it was white, or off-white. So that was part of your equipment. Then you'd be measured for your

dustcoat, er, the research people had nice white dustcoats, but the minor staff on the radio side had brown dustcoats.... And the joke was that somehow the figures used to get mixed up and when you dustcoat arrives, you could sometimes get three people in it it. Or a little bloke would get one that would trail along the ground (laughs), or a big fat one who couldn't do the buttons up, or this was typical. Juvenile sense of humour but it was funny (laughs) you never got the right dustcoat first off. These would then have to be sent back, you hoped eventually you'd get one about the right size. I think you got two dustcoats, you got one so you could put it in the wash. Now, um, also you got a tool kit I think as routine. This was um contained in, I think was a rather nice leather pouch with a zip round the outside side and then there was a things like pliers of different sorts, wiring pliers and screw drivers, cutters, um, various bits and pieces anyway. Beyond that what they issued to you tended to depend on the sort of work that you did. For instance, if you were involved in fieldwork you'd probably get a duffle coat and a pair of well, Wellington boots. Um, people that worked in the stores, or anything like that would have um, millwrights, would have boots with toe protectors that type of thing. But I think all those, that type of thing was not issued as general equipment.

CA Did you have to pay for that?

CW No.

CA If it wore out you'd get some more?

CW Yes, provided you didn't come and have a new pair of boots each week. The funny thing was the way you did, to avoid? such corruption, you always had to trade in your old for your new if you wanted a new dustcoat you had to put your old one. And this extended to quite ridiculous lengths. Um, for instance, a twist drill, if you put in a machine drill, you had to find the bits, if you wanted a new drill because you'd broken it, you had to take the bits of broken drill back. You couldn't get a drill out of them, issued without taking back the bits, the same with cutters, anything you had to take back the old. That was just the rule. It was the same in the forces. That was probably where it came from, civil service (coughs)

CA I don't suppose you've still got your er pouch.

CW No, no. You had to hand that in. When you left you had, in theory to give them back the bit of soap, the little hand towel and your tool kits. Yes, I don't know about the dustcoats. I've got mine anyway, u

CA Well, if we can borrow that, that'd be wonderful.

CW Yeah, yeah. Brought it back for old times sake.

CA You haven't got any photos of you wearing it have you?

CW No, no. I'll have to see what I can find.

CA That's lovely. There's just a couple of things extra that I want to ask you, in your report there was a quote in there, I wonder if you could just explain what the term is, 'the college on the hill with the green dome' came from?

CW Sighs. Oh dear. It may have come from the Willesden Monthly Illustrated Magazine in the Archive. I can not remember where that's come from, but that's most likely. Um, Willesden Monthly Illustrated only lasted a year but they have copies next door here and I think there was a copy in there on Dollis Hill Research Station where that was quoted from, I think that's where it was quoted from. If it didn't it's come from some other book, I didn't make it up.

CA No I was wondering if it was something, if it was a term associated with

CW No,

CA It's quite apt isn't it?

CW Hmm. The look of the place, it looks like a school. Because the quality of the building absolutely first class, just as good schools were then.

CA No definitely. Okay, um, I think I've covered. Yep that's fine. Perhaps one things, I'll just ask you, because you lived locally, for example your family and friends, how did they perceive the research station?

CW Ooh, you had prestige if you worked there. It was regarded as um, quite a posh place, not posh, not posh, um, um, you were envied if you worked there because of it's prestige and I think it's title, great imposing title, Dollis Hill Research Station.

CA So your friends were ...

CW And it's up on the Hill

CA Well it's quite a dominating....edifice.... So your friends would've thought it was quite an amazing place to work?

CW Hmm, hmm. Yes.

CA That's good. Have you got anything else you want to tell me before I switch off the tape?

CW No, I shall just go on and on.

CA Okay, well thank you very much.

CW Yes.

CA That's great I shall stop it now.