Witness Seminar: RAF Bomber Command and the Cuban Missile Crisis, October 1962

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Editor's note: The following transcript of the King's College London Witness Seminar on Bomber Command's role during the Cuban Missile Crisis has kindly been edited for this publication by Dr Michael Kandiah and Dr David Jordan. It is reproduced by permission of the King's College London Witness Seminar Programme, to whom the *Air Power Review* is extremely grateful. In particular, our thanks are extended to Dr Michael Kandiah and Dr Kate Utting for their assistance in allowing us to reproduce this exceptionally important record of the views of those who were intimately involved in the crisis from the UK's and, in particular, the RAF's perspective. Whilst the editors have taken care to remove unnecessary references to contemporary events that took place at the time of the seminar in 2009, it should be emphasised that the opinions of those involved in the seminar have not in any way been altered, and it is accepted that some would dispute some of the views expressed or the absolute historical accuracy of some of the comments made during the course of the seminar. Nevertheless, what is conveyed beyond doubt by the testimonies of the seminar witnesses is the existential crisis that Cuba might have represented the first steps towards, and the concerns, fears and preparedness of those members of the Royal Air Force who would have implemented Bomber Command's role once the Rubicon of deterrence had been crossed. At the end of this article is a timeline of the Cuban Missile Crisis, to which readers may wish to refer.

Disclaimer: The views expressed are those of the authors concerned, not necessarily the MOD.

Participants

Chair:

Dr Richard Moore
Dr Moore is a Visiting Research Fellow in the Centre for Science and Security Studies, King's College London. He is the author of *The Royal Navy and Nuclear Weapons* (Frank Cass, 2001) and *Nuclear Illusion, Nuclear Reality: Britain, the United States and Nuclear Weapons 1958-64* (Palgrave, 2010). At the time of the seminar, Dr Moore was a Visiting Research Fellow at the Mountbatten Centre for International Studies at Southampton University.

Witnesses:

Squadron Leader Roger Atkinson was Mike Robinson's Navigator Radar on 100 Squadron (Victor B2) at RAF Wittering during the crisis. He contributed to the BBC Radio 4 *Document* programme examining the Cuban Missile Crisis in 2008.

Marshal of Royal Air Force Sir Michael Beetham (1923-2015), GCB, CBE, DFC, AFC, DL was commissioned in 1942 then flew with Bomber Command. He commanded 214 Sqn (Valiant), then RAF Marham before a range of senior staff and operational tours including serving as C-in-C Germany and Chief of the Air Staff (1977-82). In October 1962 he was Group Captain (Operations) at HQ Bomber Command serving under Air Marshal Sir Kenneth Cross and AVM Menaul. He also contributed to the RAF Historical Society's 'The RAF and Nuclear Weapons' seminar in 2001, and was another contributor to the BBC *Document* programme.

Air Commodore Norman Bonnor, a specialist navigator was, in 1962, a Navigator Radar on XV Squadron (Victor B1A) at RAF Cottesmore. He now lectures on the MSc in Navigation Technology course at Nottingham University and is President of the 100 Squadron Association

Squadron Leader Jock Connelly flew several tours as a Vulcan pilot and captain. During the crisis he was a co-pilot on 617 Squadron (Vulcan B2, Blue Steel).

Peter J Hudson, CB, was a senior civil servant in the Air Ministry. He attended the Imperial Defence College in 1962, becoming Deputy Under Secretary of State at the MOD 1976-1979. He contributed to the RAF Historical Society's 'Nuclear Weapons Seminar' on 2001.

Air Vice-Marshal Michael Robinson in 1962 commanded No 100 Squadron (Victor B2) at RAF Wittering. During the crisis he captained his crew with Roger Atkinson as his Nav Radar. He contributed to the 2001 RAF Historical Society 'Nuclear Weapons Seminar' and the BBC radio programme in 2008.

Wing Commander Peter West flew Valiants on 214 Squadron under the then Wing Commander Beetham then converted to Vulcans. During the crisis he was the Air

Electronics Officer on the crew of the Commanding Officer of No 12 (B) Squadron (Vulcan B2) at RAF Coningsby.

Organisers:

Dr Michael D. Kandiah, Director, Witness Programme, ICBH co-organised the witness seminar. He continues to organise witness seminars as part of King's College London's Centre for British Politics and Government. His publications include *Cold War Britain* (Macmillan/ Palgrave, 2003).

Squadron Leader Robin Woolven joined 617 Squadron at Scampton (Vulcan B2) as a Navigator Plotter 15 months after the crisis so, although he was not a 'survivor' he does speak the language. His 2002 PhD (War Studies at KCL) followed his retirement from the Security Service and recently he has been a Visiting Fellow at the Mountbatten Centre for International Studies at the University of Southampton. He co-organised the seminar with Michael Kandiah.

Session 1

Dr Richard Moore (Chair): Welcome to this afternoon's witness seminar. I am Richard Moore and will be the Chairman this afternoon. A witness seminar is a bit like a group interview. The testimony that the gentlemen here can provide is absolutely vital to us historians as a supplement to the dry documents that we enjoy delving into, because to have a proper, full rich picture of the past, it is essential to understand the testimony of eye witnesses. I now turn to ex-Squadron Leader Robin Woolven. He will say a little about the subject of this afternoon's session, after which time I shall be asking the other participants to introduce themselves.

Squardron Leader Robin Woolven: Thank you, Richard. Why are we here for a couple of hours? I am speaking for just a couple of minutes merely to introduce the topic as we have the opportunity this afternoon to hear the memories of our spread of distinguished witnesses of what really went on at the front line of Britain's nuclear deterrent during the October 1962 Cuban Missile Crisis. The official papers in The National Archives at Kew have a few references to the crisis, but they lack any real detail, while the monthly Top Secret operations record book for Bomber Command for October 1962 does not mention any crisis! One school of thought maintains that there is little in the records because little actually happened, but nearly 47 years after the event, I am aware that our witnesses who were then in Bomber Command were far more active during that long week in October than the records suggest.

Last year in May 2008, Clive Richards of the Air Historical Branch wrote a full historical account of the official records, which was published in the *Journal of the RAF Historical Society*.[1] Since he was concerned with the official record, he made no mention of the rather different recollections of the survivors—the people who contributed to the same society's 2001 RAF and Nuclear Weapons Seminar, which was published in the society's journal later that year.[2]

When I was researching the Home Front aspects of the Cuban Missile Crisis for the Mountbatten Centre at Southampton, Lord Allen of Abbeydale,[3] later Permanent Secretary at the Home Office, told me, 'The Cuban crisis was treated by the Home Office and Whitehall with complete indifference. The Government's reaction was the very British one of hoping that it would go away, and it did!' I also know that, although not recorded, the Home Office banned its 300,000-strong Civil Defence Corps from taking any action during the crisis, presumably because alerting them could not have been unobtrusive and that would have increased tension across the community.[4]

By way of contrast, and totally unobtrusively, we will hear today about what went on at Bomber Command during what was surely the closest the world came to a nuclear exchange. I also hope that our witnesses with their wide experience of sensitive, nuclear matters and, thus, of the practice of deterrence might suggest why the archives records lack the detail of what went on in that long week in October 1962. I shall now withdraw because, at the time I was the Navigation Leader of a Canberra Squadron in the Near East Air Force in Cyprus[5] where it flowed over the top of us and nothing happened. Back to you, Richard, with our witnesses.

Moore: Thank you, Robin, for the background to the story. Starting with you, Peter, will the rest of you gentlemen introduce yourselves and say a little about what you were doing in 1962?

Wing Commander Peter West: At the time of the Cuban Missile Crisis, I was a junior officer serving on No. 12 Bomber Squadron at RAF Coningsby in Lincolnshire where I was the Air Electronics Officer on the Commanding Officer's crew. He was Wing Commander Philip Largessen, who was a Bomber veteran of World War Two. I was married with three small children. My family were in married quarters on the base.

Air Commodore Norman Bonnor: I retired 19 years ago as an Air Commodore. I started as a Cranwell Cadet, and joined 15 Squadron at RAF Cottesmore in Rutland. I was a Nav Radar[6] on the crew. I had been on the squadron for about 15 months by the time the crisis occurred. I was still single and living in the Officers' Mess.

Squadron Leader Jack Connelly: I was a Vulcan Captain and Vulcan Co-pilot during the crisis in 1962. I was a Co-pilot to Mike Beavis, my skipper. I had been married for eight weeks and was waiting for a house to be built.

Marshal of the Royal Air Force Sir Michael Beetham, GCB CBE DFC AFC DL: At the time of the Cuban Missile Crisis, I was the Group Captain (Operations) at Bomber Command Headquarters, working through the Senior Air Staff Officer to the Commander-in-Chief. I was responsible for Bomber Command, Alert Stage and the targeting if we did have to go to war.

Air Vice-Marshal Michael Robinson: I was Commanding Officer on a Victor B2 Squadron, No. 100 Squadron at RAF Wittering.[7] One of my memories is that of arranging for my wife and

two children to see my parents in Putney, London as, had been planned, I had to give her a cover story about why I was not there. She duly repeated it to my father. He just looked at her and did not believe it.

Squadron Leader Roger Atkinson: At the time of the crisis, I was Michael Robinson's Navigator Radar, the navigator who looks after the weapons systems as well as the radar. I would deliver the weapon to the appropriate place. I was living in the mess. I had no wife to worry about, so I was a free agent in my work. I previously had had a V-Bomber tour with the Valiant aircraft and moved directly from that to the Victor aircraft. I had been in the crew flying with the Wing Commander only from 18 September, as the squadron was working up.

Peter J. Hudson, CB: I am the odd man out. I was a civilian member of the Air Staff Secretariat for some time before the Cuban crisis. At the time of the crisis, I was part-time as I was on a course at the Imperial Defence College,[8] although I was in and out of the Air Ministry every day. The operational side was too remote from me.

Moore: Thank you very much, gentlemen. We have an enormous variety of experience from four different Bomber stations, the Air Ministry in Whitehall and HQ Bomber Command, so I hope that we can get several different perspectives of what was going on in October 1962. Before we talk specifically about the Cuban Missile Crisis, will you describe the atmosphere at Bomber Command in 1962? Was it young lads having a whale of a time in big fast aeroplanes or was it a bit more of a sobering experience than that?

Connelly: It was a bit of both, to be honest. I had just come off Canberra B2 in Germany and, in my mid-20s, to get on to such a big white bomber that had lots of power, four engines and that would fly as high as we like was the epitome of a flying career. There were three squadrons at Scampton, three squadrons at RAF Waddington and three squadrons at Coningsby, all flying them [Vulcans]. Quite a lot of the crews had been trained together so there was great macho rivalry between the squadrons. It was a bit like Manchester United and Manchester City: 'We are better than you are; we can fly faster than you', blah, blah. There was great rivalry and fun.

We used to have happy hour on a Friday night, when we would raid their mess and they would smash up our mess the next week. There was young, high-spirited, good-natured banter between the squadrons, but then we went to work on a Monday morning, they clipped on a nuclear weapon and it all began to dawn on us that there was a serious part to all of it. I started Quick Reaction Alert [QRA], which for those who do not understand, was when we put on all our flying kit and lived in it. We never took it off from the minute that we were in QRA until the minute we left it. We ate in it; we slept in it; we did everything in it. It must be remembered that they were rubber suits, so they got quite uncomfortable.

We used to do 12 hours [QRA duties] to begin with, and at the very end we did 48 hours. That aspect was serious, but we had some high spirits, too.

Bonnor: I can give another perspective. I was straight out of training and I was very relieved to leave the training machine, which was where we still had to be careful about how well we cleaned our shoes and polished our buttons. It was therefore good to go to a place that was for the serious business of flying. It was good fun, too but not quite so dogmatic about everyday life in the RAF. It was a great delight for me to go to the squadron. At the time, 15 Squadron had tremendous spirit. In the same way, we had our rival team squadron, and the same sort of events occurred at Cottesmore.

Looking back, my abiding memory is that we were not indoctrinated. We were all young officers who were going through the promotion exam systems—having to study defence White Papers to take promotion exams. It was assumed that we understood why we were there and were the deterrent force of the nation. However, my equivalents in America had definite propaganda lectures and were told why they were doing it and were pumped up. That surprised me when I first came across some Strategic Air Command [SAC] crews. We were never indoctrinated in that way. It was assumed that we knew why we were there: because we read defence White Papers and were serious young men doing a job.

West: I agree completely with what the other two have said. There was an enjoyable atmosphere on the squadrons. We were a group of young men with two things in common: a love of flying and a belief in this country. There is no doubt that we were very patriotic—not xenophobic, patriotic. We believed in the country and we believed passionately in the efficacy of the nuclear deterrent. We really believed that. The more that I talk to veterans like myself, the more I am convinced of that. The rivalry was healthy rivalry between the squadrons. We actually cared about each other even though we would never dare show it. There was a huge *esprit de corps* and tremendous comradeship.

I had come into the V-Force as a sergeant, which was quite unusual in those days. I went to Sir Michael's squadron as a young sergeant and was with him for about six weeks, after which my commission came through and I went away. I was very pleased to be on the V-Force. I had been in Coastal Command before that, when I was one of a very large crew. That was great. We did some very good work, particularly search and rescue, but to be on a V-Bomber crew to me was the ultimate, and I still believe that 47 years later.

When I spent some time later as an instructor and flew with an experienced crew on refresher, the crew were almost totally silent. They did not need to speak because each of them knew what the other wanted to get the job done. When you flew with a new crew, it was like being in an aviary—the chattering that was going on. That closeness and unity that came between the five on a constituted crew meant that we stayed together all the time. It was something

very special and something that I have not forgotten. To illustrate it, I am still in touch with the surviving members of my crew.

Bonnor: We were 'constituted' partly for the reason of getting high-quality teamwork and because of the targets that we had to study. We had no idea on our crew about the targets of other crews on the squadron. We were given certain Accounting Line Numbers. They were our targets. We only ever studied those three or four targets. We never saw the targets of anyone else. That was part of the personal vetting system that we had to go through to reach that level.

Connelly: To add a rider, the reason why we were constituted was that no aircraft flew exactly the same. Some tilted slightly to the left, some tilted slightly to the right while others would corkscrew through the sky. The Nav Radar, the chap who was to drop the bomb, and the Captain basically flew the aeroplane together. I knew exactly how Terry [my Nav Radar] flew the aircraft in terms of the bombing run. He knew exactly how I flew it in terms of keeping it straight and level, so that is why we were constituted. We knew what each other was going to do and, as Peter said, without talking to each other.

Beetham: I was at the Bomber Command Headquarters during the Cuban Missile Crisis, but before then I was commanding a squadron of V-Bombers. Yes, some people had fun, but everyone was conscious that we had the role of Britain's strategic nuclear deterrent and that was very sobering. If we think of the Air Force in general, we were the cream of the Air Force with very high professional standards. There is no question about that. A lot of very experienced people were in the squadrons of Bomber Command at the time.

No doubt we shall get into the alert stage and things that went on, but we were very conscious that we were responsible. We had targets to study, which were not revealed to other crews on the squadron. We had certain readiness states to maintain because, with the nuclear deterrent, the one thing that we did not want to have was part of the force or the whole force knocked out on the ground. We had to be ready to go when the alert stage called. It was a very responsible job and the crew was very conscious of its responsibility.

Robinson: I wish to say something about the informality. There were no great tests of personality. Crews just came together. I arrived at Wittering, having come back to flying. I had done staff college. I was then told that Roger Atkinson was to be my Navigator Radar. I said that I would see how it worked out, but nothing was pre-destined. We were not checked for whether we liked or hated each other; we just gone on with it.

Atkinson: That is right. I take all the points about the fun and the build up of *esprit des corps*, which you get on squadrons. The V-Force was different from the Canberra Force, which I had been on before. The particular squadron that I joined during the crisis was my second V-Bomber squadron. The first had been on Valiants, so I was used to the role. It involved a very

careful preparation—in terms of our war requirement—of the routes to the target, delivery of the weapon and the recovery thereafter. The crew each had a designated role, interwoven to deliver the weapon. That was what it was all about. Picking up earlier points, we realised that we were part of a deterrent force—not only in the United Kingdom but with the Americans umbrella, too. We also felt that we—the British—would do a darned good job.

Moore: Thank you very much. One thing that strikes me coming out of all those comments is the elitist *esprit de corps* of Bomber Command. I am right, am I not, that Bomber Command really was—not only as far as you guys were concerned, as far as the rest of the RAF was concerned—the spearhead of the spearhead?

Atkinson: All the perks were really that plenty of money was spent on our sleeping accommodation and, at one time, we had a marvellous free uniform.

Connelly: You mentioned the accommodation. On QRA, we lived in our flying kit. We had to sleep in it. We had to be in the aircraft in five minutes. A railway carriage would therefore be superb accommodation compared with what we got. We had caravans that were the length of this table, and as broad. We opened the door, went in sideways because the cabins were so small and all that was inside was a bunk. That was our accommodation for 48 hours.

Bonnor: That is unfortunate for the poor Vulcan Force. That was really because there was a main road between it and the Officers' Mess. Fortunately, at Cottesmore and Wittering, the Officers' Mess was on the same side of the main road as the aircraft were on the readiness platform. We lived in the Officers' Mess, I am sorry. It was luxury.

Moore: Peter, as you said, you were a bit of an odd man out, but I would be interested to know what life was like at the Air Ministry in the early 1960s. What kind of place was it and how was the atmosphere there?

Hudson: The predominant theme in the 1960s was being near to the US Air Force. In the early 1960s, we had, for example, a situation in which we had more capability than money. The United States Air Force provided the RAF with an enormous amount of material equipment that enabled us to get with our own thing. For example, there were about 465 Hunter fighters provided on the house by the United States Air Force under plan KA aid. It meant that our resources enabled us to continue with the original concept of the force, envisaged 240 V-bombers, that were intended originally to be Vulcans and Victors. However, the programme was slow—as programmes often are—and the Valiant came in as an interim V-Bomber.

The other element in that period was the development of the missile early warning system, which I negotiated with the American Air Force in the early part of the 1960s. It was just about able to produce a signal at the time of the Cuban Missile Crisis. It was not fully turned over to the RAF and operational until about 1963, but there was some result well before the

three big golf balls in Yorkshire.[9] As the problem developed, 'how do we cope with the four minutes' warning from the radar at Fylingdales?' became the criteria. The Cuban Missile Crisis anticipated that problem. One thing that I remember about the crisis was that Bomber Command wanted to carry out some dispersals, spreading the aircraft to other airfields in order to increase the number of targets. The political objection to that was that they were not allowed to do it!

Moore: That is an interesting point. Perhaps you could follow that up, Sir Michael. Can you say a little about the process of orders coming down and requests coming up about readiness levels?

Beetham: What we wanted to do when the crisis developed was to use the BBC and recall people that were on leave, to get them back to their stations. We were told that we could not do that. We wanted later to disperse, because we had a dispersal plan when you could put aircraft to some other Bomber Command airfields to help from a security point of view. We did not want all our eggs in one basket. Macmillan[10] as Prime Minister said, 'No.' He made it clear from the start that he did not want any overt measures taken. He did not give us a reason, but I think that he had CND[11] and various protesters round his neck, particularly around the Thor sites[12] and such places. He did not want any measures taken that would exacerbate that sort of problem.

Nevertheless, Macmillan said that he wanted Bomber Command to take all measures without alerting the general public, and that is how we operated. We got our people back to the stations remarkably well, by the use of telephone and doing things quietly. You will hear later from those who were involved at station level, but we got everyone back and to a reasonable state of alert and availability. We were able to put the bombs on the aircraft and prepare, but it all had to be done quietly.

Robinson: I always thought that Macmillan's concern about mobilisation was that he saw it as something *à la* World War One, with Orders in Council and everything, whereas what we practised regularly with our exercises was a form of mobilisation—with a small 'm'. But he saw it with a big 'M'. The instructions that he therefore gave about Bomber Command making arrangements had a marvellous political ring about them because they did not actually say anything. I believe that that left it to the Commander-in-Chief to decide what he could and should do. The political instructions told us nothing. It told me nothing, and I suspect—given that Sir Michael is nodding—it told him nothing.

The area that always intrigued academics is whether our Commander-in-Chief, 'Bing' Cross, exceeded his remit.[13] I think that the answer is no, because he did not disperse the force. The great thing about these things is that you have plans, but then you have to be flexible because you will not carry them out as they are written but do something different on the spot. So we did not disperse.

Beetham: I am quite sure that the Commander-in-Chief did not exceed his authority. He operated within his discretion as to what measures he took. It was not generally known to the British public what was going on.

Moore: One of the things that we, as historians, have an obsessive interest in is when exactly things happened. A particular question that troubles historians about the Cuban Missile Crisis is when did the unobtrusive alert measures in Bomber Command actually start and on whose authority? The documents, such as they are, suggest that Macmillan was not even approached until Saturday 27 October when the political crisis had been going on for a week and there was evidence that some of the stations were already taking unobtrusive measures.

Macmillan's guidance was to take unobtrusive measures so, clearly, that had been understood or anticipated in advance. Can anyone shed any light on at what point guidance came from higher authority and from whom?

Beetham: It fed down to the Commander-in-Chief. I was his staff officer, and it was fed down right from the start. From the 21st, the previous week, we knew that things were going on. I am pretty sure that we knew at that stage—what Macmillan had pushed out in telephone calls, I do not know—that we had to get the force and take all reasonable quiet measures that would not alert the public. That was when it started. The big weekend was the next weekend, the 27th. Macmillan knew from the start that, with the publicity, we could not use the BBC. We could not disperse the force. We had to take measures that could be done from the station quietly.

Bonnor: I can add to that a little in that my log book shows that I flew the last sortie on 16 October—in other words, before the weekend before. I do not think that the station flew again. The following week, we were generating aeroplanes by then.

West: We were the same.

Bonnor: I did not fly again till 7 November. I am pretty sure that we were already generating aircraft at the beginning of that week and the most that would have happened would have been perhaps an air test. I certainly do not remember anybody flying in that week leading up to 27 October.

Woolven: The 540s[14] for stations and squadrons in both Nos. 1 and 3 Groups showed some flying during the week.

Bonnor: That might have been air tests.

Woolven: Absolutely. Not just aeronautical air tests, but system testing, too. There were R[adar] B[omb] S[ite] runs during the week [to calibrate the V-Force weapons systems].

Connolly [referring to his log book]: This is my log book for 1962. I flew on 14 October a Blue Steel[15] trip and there is a gap to 30 October, when I flew again.

Bonnor: Mine is the same.

Atkinson: We were the same. It is worth pointing out that there was always a small proportion of the V-Bomber force on ready state day-in, day-out—minute-in, minute-out[the QRA force, generally one aircraft per squadron]. A certain number of crews were at 15 minutes readiness to take-off. As the exercise—or the war plan—may dictate, so the crews were moved up from 15 minutes to five minutes to take-off and other alerts before the take-off. It was not unusual to be involved in the quick reaction alert force to find that we were ready to go, and that there was an atmosphere of preparedness. That was what we were about. A small number of us were ready to go, and through the week, say, before the Cuban crisis, it would not be unusual for our crew to be on standby on the Monday and another crew to take over on the Tuesday, and us to do Thursday and Friday and so on. We were constantly alerted to the concept of going.

Robinson: What was the difference on that Saturday afternoon on 27 October from the well-practised routine of being a Quick Reaction Alert crew? Those practices were on a 7 day 24-hour basis so that QRA crew, normally just one per squadron, was used to be brought up at any time of the day or night from Readiness 15, which meant that the crew was on the station either doing target study, eating or sleeping together, but we were out of the cockpit. The call would then come. The practice would come to Readiness 05, which meant that, wherever we were together, day or night, we had to get to the aircraft, get in it, check it all out and report that the aircraft was ready and that we were genuinely at 05 [minutes' readiness to take off]. That was the day-in, day-out test. The difference was that on that Saturday afternoon, it was not just one crew or one aeroplane, but all the available aircraft and systems. I use the word 'systems', being the mating between the aircraft and the crew. They were brought up to Readiness 15 and then, for a considerable period, we were at cockpit readiness 05. We were used to hearing a Bomber Controller broadcast changes in readiness state, which we heard either through the public address system when about the station or through our earphones when we were sitting in the cockpit.

There were various forms of alert and readiness exercise, and each had its own code name, which the bomber controller always used as a prefix. I am convinced that on 27 October, the bomber controller used no exercise prefix. It was for real. As we waited in the cockpit, we could not foretell if the next Bomber Command controller change of state would be, 'Start engines' or 'Scramble'. In the event, it was to revert to Readiness 15, so once we were assured that our aircraft remained fully primed or cocked, we left it and returned to the Operations Room or the Mess. In another place, I ended that bit by saying, 'It was quite a long afternoon'!

Bonnor: There was significance in that, because the weapons all had what was called 'a last minute loading requirement'. In other words, they were deliberately designed to be extremely

safe, but to definitely go off when you wanted them to. They therefore had things hanging out underneath that were screwed in when you went to Readiness State 05. I recall doing that on that day. It usually meant that, having done it, there was a lot more testing and fiddling about to be done to put it back again and take it out again to be sure that the weapon was now back in an ultra safe condition. I do not recall that being a major issue on that occasion, so perhaps we did just drop the thermal batteries back out and not go through all the testing process that we would have done on other occasions, because we were still at a high readiness state.

Moore: Is it definitely the case that all four stations had at least one crew go to 05?

Bonnor: There was not just one crew.

West: We always had one crew.

Connelly: We had 24/7, always one crew at 15. We are saying that, on that Saturday, every crew that came in went out [onto cockpit readiness with their armed, combat ready, aircraft].

Bonnor: I think that my squadron had reached seven crews at 15 by that stage. They must have all been called to 05. I just remember doing it, but I do not remember that everyone did. It must have been everyone. It would not be done for an individual crew.

West: Air Vice-Marshal Robinson is absolutely right. The Bomber Controller who normally prefixed our ordinary QRA exercises with something like, 'Exercise Edom'.[16] He would say, 'This is the Bomber Controller for whatever it was' and, 'Exercise Edom for bomb list echo, readiness state 05.' He would repeat that. You would dash into your aircraft and be ready to go.

When such practices were rehearsed, which they were frequently, they would take it right through. It was just with aircraft that were not bombed up. It was done just to exercise the procedure. Remarkable as it may sound, the record was 90 seconds for getting four Vulcans off the ground, which is amazing. That was seen by us as a challenge. We wanted to do it, and do it properly. Time was vital. We knew that, God forbid, if the Soviet Union had launched an attack against us, we literally had minutes to launch our counter strike. As I said at the beginning, we did not want it to happen. That would have been suicide, but we had to be prepared for the possibility.

May I just refer back to something else that was said earlier? Mention was made by Peter Hudson about the Strategic Air Command. The Strategic Air Command was the United States Air Force equivalent of Bomber Command. It was more than the equivalent, because it was absolutely huge. We were tiny by comparison. However, it acknowledged our role. I wish that I could remember the date, but it was not long after the Cuban Missile Crisis. We used to get their Strategic Air Command monthly magazine called *Combat Crew*. We quite enjoyed reading

what it was up to, but on one particular occasion one the chaps came into the crew room waving the magazine saying, 'Hey, we have a mention in despatches'.

On the cover of *Combat Crew* was a Vulcan—sorry that it was not a Victor, Norman [Bonnor]! - underneath was the title 'Kissing Cousins'. When we looked at the article, the author had said, 'You guys may think that, if you ever have to go over the Soviet Union and drop your bombs, you will be the first. But you will not, because the Royal Air Force Bomber Command will have been before you.' It was a very timely article because we in this country frequently get the feeling that the Americans are desperately trying to airbrush us out of history. On this occasion, for once, it acknowledged that we were—as the Americans put it—'kissing cousins'. We were working with them for the same purpose.

Bonnor: I think that Sir Michael mentioned that it was not just us. It was 59 out of 60 Thor missiles were at the same alert stage as we were. If you have not been to RAF Cosford[17] and the Cold War Museum: in the booth about the Cuban Missile Crisis, the Royal Air Force [initially] got no mention whatever. You would not know that we had been there.

Beetham: I think that it has changed. It told me that it had. When I saw it, I raised exactly the same point. The museum was using official records and, as we have heard, there is little mention in the documentation about the efforts of Bomber Command. It has seemed to have been ignored. Why, I do not know. I do not know who compiled the operations record.

In my job as Group Captain (Ops), I worked closely with the Strategic Air Command, albeit we did not do much talking during the actual crisis. It has certainly been acknowledged that the Thor missiles were very few and far between. If you were going to attack Europe, the Thor missiles were intermediate range and a potent weapon. The Thors spent their time at 15 minutes readiness and we brought them to two minutes readiness. They were excellent missiles.

Moore: Sir Michael, you mentioned that there was not a lot of contact with Strategic Air Command during the week of the crisis. I have heard that story before. Can you say a little bit more about it and explain why it was?

Beetham: I do not really know. I was surprised to be told that the C-in-C Bomber Command had not spoken to the C-in-C Strategic Air Command,[18] although he was a great friend during that period. When America has a problem—Kennedy[19] was really handling it—it was not diverting its thoughts towards us. We did know that certain squadrons had American weapons and that required clearance. The Thor could not be fired without the Americans, so we did know a little of what was going on.

Moore: Did we know what was happening at Strategic Air Command stations in the United Kingdom that week?

Beetham: It was not so much ones in the United Kingdom, but Airborne Alert was operating from the United States. I am not sure what they have in this country.

Moore: I think that it still had a few B-47 sat at one or two stations in the United Kingdom.[20]

Connelly: We had a ground-based QRA and the Americans had an airborne QRA. They had B-52s[21] in the air night and day, always replaced—a bit like the Trident submarines. When one came in, another went out and replaced it. They had an airborne QRA all the time.

When you say, 'Did you talk to the Americans during the Cuban crisis?', in normal peace time, we used to go to America and fly exercises against the B-52s on a regular basis about every three months. We had a competition to knock them out of the sky, come back and laugh about it. I was trying to get into a competition against a B-52. The Americans loved the B-52 because it is twice the size of a Vulcan and has more engines. [Once] a B-52 was ahead of me on the bombing run, the range called up and said, 'What is your target? What is your height?' The American voice came in and said, 'We are high level at 25,000 ft.' When the range told me to call my height, I said, 'We are at 45,000 ft.' They did not like it terribly much.

Robinson: I think that the Americans are pragmatic, and when you have something to offer, they are very interested. What we had to offer was geography. We were an offshore aircraft carrier. An aircraft launched from the UK would be some hours ahead of the mass of the force coming out of America. That was attractive, and why not? Geography had played its part.

Bonnor: One reason why it is not mentioned in many of the squadron histories, such as the [Form] 540s [operations book] and the station history documents is, first, that completing it is a secondary duty that none of the young folks on the squadron bother to do anyway and, secondly, we were still highly classified and did not talk about anything in those history documents that was in any way classified. We were not allowed cameras on to the base or M[ilitary]P[olice Officer]s would arrest us at the gate. The only time that we had a chance to take pictures of the aircraft was when we went to Omaha, Cyprus or Goose Bay,[22] where we could take pictures of our own aeroplanes. We definitely did not take pictures of panels inside that would give away some details of our capabilities. We all understood and abided by some very strong security rules.

Moore: You gentlemen were all flying officers. Can you explain what it felt on the basis that, to be ground crew, your wives and your loved ones did not have the luxury of flying off if there was trouble?

West: I would not call it a luxury of flying off because, without being melodramatic, young men are always the same about their chances of survival. It would not happen to them, but to someone else. It worried me that the rest of the squadron would be shot down. Statistically, we had a very high chance of being dead within a couple of hours. When I have been confronted

by people from CND, I always ask them whether they really thought that we wanted to die and to, 'come on, be real'. As I said at the outset, we believed passionately that the deterrent was right and that it would work—and it did. What it was like for the ground crew, it is difficult to say. They were not going to escape to anywhere. Our bases were undoubtedly among the primary targets for the Soviet Union.

As for our families, I can only speak for my own wife: one of the things I did that I found very illuminating was when I first got from Robin [Woolven] the tasking about today, I talked to her about it. It is not something that we had ever spoken about. I asked what she remembered, and I was astounded by how much she remembered. One of the first things that my wife said to me was, 'Are they really suggesting that you didn't think that it was real? I knew that it was real.' She remembered that I said to her, 'If you see us take off'—I did not believe that we would take off, because I believed in the deterrent—'take our three little children, put them in the car, put a few things in the car with them, but most importantly get the hell out of there. Drive up to Scotland, but don't go home because that is next to an air base in Scotland. Go to your brother in Skye and if you are to be safe anywhere, you will probably be safe there. The thing is: please survive.'

In the highly improbable idea that we would take off, we knew that if we did get back, there would be nothing to get back to. It was Domesday, Armageddon. Long afterwards, my wife said that she thought to herself at the time, 'What a bloody fool. Where does he think I am going to go? How far does he think I will get? I would be passing all the airfields, all of which would be primary targets, come on!' I was quite amused by her thinking that, but not having told me for 47 years!

Connelly: I had been married for eight weeks. RAF Scampton, RAF Waddington and RAF Coningsby were the three prime targets in the United Kingdom—and I lived in a caravan right in the middle. I was waiting for a house to be built. My wife did not drive; we did not have a telephone. I doubt if we had a radio, but even if we did, as the Air Marshal said, it was not broadcast anyway. I was in bed on Saturday and a knock came on the caravan door. It was the local bobby in helmet saying that I would have to go in to the base. I thought that someone had gone ill and I was wanted to make up a crew for a quick trip. I told my wife that I would see her after lunch, and I disappeared. My wife did not have the vaguest idea where I had gone. She did not know when I would get back. She was not told anything at all. I appeared back on the Monday morning and, to this day, she has no idea where I went because I had been on the base and they had locked the gates. No one had got in or out. No one telephoned. The families suffered more than anyone.

West: On the ground crew side, we had almost got completely rid of National Servicemen by that time.[23] Some were still on deferred National Service jobs, but most of the ground crew were all dedicated, full-time [regular] servicemen. They were very proud of us. In some respects, it was embarrassing. They always supported the squadron events to the nth degree. I do not

remember precisely which day, but it was on the Friday or Saturday at the end of the week that one of them rushed up to tell me, 'They've shot down a U-2', which occurred at some stage during the crisis.[24] They were really paying a lot of attention and were as involved in it as we were.

West: We relied on them totally. We had complete confidence in our ground crew. The technicians were superb and we could not have done anything without them. They know that we acknowledge that.

Woolven: Although we are concerned with Britain's nuclear deterrent, RAF Coastal Command at the time was also involved in a higher state of readiness on Saturday, the 27th. The sort of comments that Peter, in particular, has made about wives and families applied. In the course of preparing for this last year, I was speaking to a retired Air Chief Marshal who was a Flight Lieutenant Pilot at the time on a Shackleton[25] squadron at Ballykelly[26] when he was called in on the Saturday to a fully war-loaded aircraft. All three squadrons at Ballykelly and additional units had their full war-loads on. He shared cars with his co-pilot into the squadron, leaving the other car with the families in married quarters with the instruction, 'If we take off, get in the car and drive south of the border because we might well have to go somewhere.' I know that that sounds terribly melodramatic, but the crisis had a tremendous impact on a lot of people. The retired officer to whom I was referring said that that was the only time in his life that he had a full war-load on his aircraft and he taxied with it. It was not just Bomber Command, although it carried the nuclear deterrent.

Did you say that you were Mike Beavis' co-pilot, Jock?

Connelly: Yes.

Woolven: You missed out during this week because Air Chief Marshal Sir Michael Beavis,[27] who now lives in Cyprus, in an email exchange last year looked in his log book and said that he went with Les Leader, one of the other captains on 617 Squadron and they were at the SAC Headquarters at Omaha, Nebraska[28] that week. He detected that things were very different.

When an American complained to him that the Russians were putting missiles within striking distance of their home base, Mike Beavis said, 'Well, we have suffered it for years.' The element of humour was there, but he certainly was not recalled from Omaha. Once again, nothing obtrusive went on. He came back [to Scampton on 27 October] in a record time, but that was due to the tail wind on the day. They got back on the Saturday. The crew obviously fitted in with the arrangements at Scampton. My two boring points were that it was not just Bomber Command, but Bomber Command was the important bit and whatever went on was certainly unobtrusive.

Moore: We have been talking for about an hour, so I wish to give people the opportunity to stretch their legs now. We will resume after 4 pm.

Session 2

Moore: Just to pick up on some of my conversations during the tea break, I wish to ask about Ground Crew again. Roger [Atkinson] and Norman [Bonner] would both like to say a little more about their involvement.

Atkinson: Ground Crew were called in, as the Air Crew were called in, on various exercises. I want to consider the scenario of a state of alert. They would all have a system of being called in to their duties. Those duties were clearly and carefully designated. Yes, there was a degree of high morale when they got the job completed, but they first had to get the aircraft on line and the weapons on them. They worked and worked to achieve that point. I do not know their precise targets in terms of time, but it was pretty tight. They had to have a high morale. One of the key things that their own officers and the squadron commanders aimed for was a high morale among the men. We have heard that they were quite proud of their achievements on behalf of the air crew. Once they had the major job sorted, their own officers and warrant officers would start up a shift system. The cooks would decide when to produce meals. Even the padre would decide when he would visit the squadron. It was a matter of the station coming together—even the medics had duties to which they had to turn in a station exercise. That might give people more of a clue about the total involvement of the station staff when an alert was called.

Bonnor: I wanted to add a little about the person whom we called the Crew Chief. Every aircraft had a dedicated man assigned to it called a Crew Chief, the chief technician. In many cases, he had gone to the factory to collect it [their aircraft] with the crew that delivered the aeroplane. He was therefore very dedicated to the aeroplane and, if you bent it, by God he really got cross. Many of the younger lads obviously aspired to becoming a Crew Chief, so they had their aeroplane and also flew with us on detachment—not on ordinary training sorties around the UK, but if we dispersed on the dispersal plan they flew with us either to St Mawgan[29] or wherever we went. They also came on overseas deployments with us to Omaha, Nebraska; Karachi or Goose Bay. They would not fly the training sorties that we would fly at those bases, but they came with us to be the primary person to help make sure that the aircraft could be turned round properly and serviced, while we were away.

We were all trained to a bare minimum of requirements to be able to turn the aeroplane around. One of my jobs was to help the co-pilot pack the big 46ft [drogue] parachute back into the aeroplane, which is not an easy thing to do. Crew Chiefs were vital from that point of view, so they flew with us quite often and were very dedicated men. They had huge pride in us. It was always daunting to think that those people had such pride in their squadron's air crew. It really stemmed from how Bomber Command was in the Lancaster in the Second World War. Again, the Ground Crew were dedicated to particular aircraft and, in those days, an aircraft was dedicated with a crew. If you look at Second World War flying, you will find that the same crew

flew the same aircraft on missions night after night. The same dedicated Ground Crew would be desperately waiting for them to come back, although on many occasions they did not.

Connelly: As a rider to that, even if the normal squadron at least changed a piece of the aircraft that was vital to flying—an engine or tail plate—I always said to the Crew Chief once he had brought it back on line, 'Get your parachute, you are coming with us', just to make sure that he was doing a good job.

West: Which they always did.

Connelly: Oh yes.

West: I want to illustrate the role of the Crew Chief and the respect with which the crew held him because of his incredible depth of technical knowledge of the aircraft. One of our aircraft's engines had become unserviceable on its way to the Far East where we had an operational commitment. The aircraft was stuck in Bahrain. Our crew were told to take the Crew Chief with them, go on out and take them a spare engine. It was the first time I knew that we could carry a spare engine in a bomb bay, and that was interesting. We hoisted the thing up in the bomb bay and off we went to Bahrain. When we got there, we were told that we were staying there with the lame aircraft and to give our good aircraft to the crew that had been waiting. We were told to stay there and, under the supervision of our Crew Chief, do an engine change. My God, I could not see a British Airways crew doing that—or even Virgin [Airlines]!

We did, and that was all thanks to the Crew Chief who supervised those officers, all of whom were senior to him. We did what we were told and changed the engine. It worked. It had to; we had to fly back.

Robinson: The test of our belief in the Crew Chief was when he handed us the Form 700 before each flight.[30] That gave all the details of the aircraft's condition and fuel state. He had signed it, 'The aircraft is serviceable'. It was serviceable, because we believed what he said. That was the trust that we had in the Crew Chief. He said that the aircraft was serviceable or if odd things wrong with it had been clearly stated, we would know what worked fully. The Crew Chief's signature and quality was such that we believed in what we were told by him.

Moore: That is interesting. It is the first time that I have really grasped that the whole week of the Cuban crisis, when there was a week spent unobtrusively generating aircraft, was a week that the Ground Crew knew better than anyone else and something that historians have not recognised.

Bonnor: No working hours directive!

Moore: No. Let us fast forward through that week of intensive, unobtrusive preparation to the afternoon of Saturday 27th, which was the real calm at the eye of the storm when everyone was at 15 readiness, while some aircraft were at 05. What was going through your minds that afternoon?

Robinson: I have often been asked what I was thinking about during that period of Cockpit Readiness [05 minutes]. I have given an obvious, rather bland answer and said that, having checked the aircraft systems, particularly the navigation and defensive electronics to the nth degree, I would wonder whether it would all work again when I pressed the four-engine [simultaneous] start button as it would be rather disappointing if it did not. There was the moment of whether it would all fire up and would I hear the right noises from the rear crew in the back saying that their radars were coming up and the generators were on line, so it was all go.

A more considered thought was, 'What were we actually deterring?'. At the lower end of the scale, were we simply showing solidarity with the Americans in their response to the threat of nuclear attack on their homeland—something which was peculiar to their experience, as opposed to us who lived in the European land mass who were always aware of the Soviet nuclear capability, a point that was made earlier. Did the nuclear game of chess and later we understood that the Soviet plan to bargain American missiles in Turkey for theirs in Cuba include the status of Berlin? Did our evident state of readiness help to deter any Soviet plans to get the Western allies out of Berlin?

From the Kremlin's viewpoint, 'The dynamic and prosperous Western sector compares so markedly with the poverty and deprivation of East Berlin that to them Berlin must have looked like the Great Wen. As the Army correctly assessed, Berlin was not militarily defensible, but that does not invalidate the concept that the West and nuclear threat could discourage any such Soviet adventure.' When I gave a contribution to a RAF Historical Society seminar in April 2001, I posed the question, 'Was there military intelligence of such a possibility of Soviet adventure against Berlin or was it a question of intelligent, political second-guessing?', but the answer came there none.[31] That is, until we take note of Robin Woolven's selected chronology of occurrences as recorded in official documents:

'The Cabinet meeting of 9th October reported the Foreign Secretary[32] saying that the relationship between increasing Russian activity in Cuba was in order to provoke USA intervention, which they would then use as a pretext for the forcible occupation of West Berlin.' On 23rd October, the Prime Minister briefed the Cabinet on his initial conversation with President Kennedy when the President had acknowledged that action to contain the Cuban situation might have repercussions in Berlin. What was Bomber Command's response? In particular, it was about whether the increased level of the aircraft readiness was just a side show, as some people still held, or whether we contributed to the balance of considerations that the Soviet hierarchy had to weigh up in its chess-like moves about Cuba versus Turkey

missiles. The subject at that time was secret negotiations and Berlin, and any more conclusive understanding may have to wait the availability and scrutiny of Kremlin documents of late 1962, although my Chairman tells me that there is now a book called—

Moore: A book, *'Khrushchev's Cold War'* has come out, which says a little about the political aspects from a Russian point of view based on Russian archives.[33]

Robinson: I would like to think that, in the next year or so before I cease thinking at all, perhaps that Saturday afternoon with our evident readiness might have discouraged a Berlin adventure. The whole of peace and the Cold War would have been entirely different and dramatically changed for the worse, if we had been forced out of Berlin. Because we were not, and because the deterrent worked in that not one single square inch of land of either Warsaw Pact or NATO was exchanged, won or lost, I call it now not the Cold War, but the Cold Peace.

Atkinson: The problem when you review how you felt on the day is that it is conditioned by your present knowledge. We did not know what Macmillan was saying. We did not know what Kennedy was up to. We knew about the U-2 being shot down. We knew that there was a tension, but that did not sink home too much to the crews on QRA because that was our normal job. We were called to the aircraft, expected to be ready to go and that is what we were doing.

The difference was that, on the Saturday, rather than being called to the aircraft for readiness 15 minutes, then to readiness 05 minutes and then a wait for something further, we were called to the aircraft and stayed in it at readiness 05 for an interminably long time.

Bomber Command had its own routines. We accepted that, but normally we got through them pretty quickly. Often, we were not in the aircraft more than 15 or 20 minutes, but on this particular day the atmosphere was a little different in that there was no flying, a few air tests or a few other sorties. We were asking what was going on and how long would it go on for. We were not as *au fait* in those few minutes as the Air Marshal has carefully explained now. Some people were alert to the fact that something was going on. The more senior you were in the Air Force, the closer you were to it.

Robinson: I will tell you one characteristic: it was very quiet.

Atkinson: It was.

Beetham: From the perspective of being at Bomber Command Headquarters and responsible to the Commander-in-Chief for setting out all the messages and putting them into a high state of readiness, that particular Saturday was [for me] rather traumatic. Khrushchev was just beginning to say that he was prepared to withdraw the missile, but we did not know that at the time. Things looked pretty bleak including the messages that we were getting from the

Air Staff in Whitehall. My Chief and I transmitted the message to put the whole force at a high state of readiness. We had to hold it until later on when it became clear that we did not want to leave the whole force indefinitely, although we would still have people on readiness. It was traumatic at headquarters, but it seemed like, 'Surely, we are not going to launch the force. I can't believe it. Surely the deterrent will work and matters will not run down to the crews.'

I spent the whole week at Bomber Command Underground Headquarters, virtually living there. I had a house only about 400 yards away with a wife and family, and on the Saturday I nipped home and took an hour off. It was unreal because it was Saturday afternoon, a sunny day and all I could pick up on the radio was some football match. The general public did not seem to know anything. My wife asked me what was going on. I could not really tell her, although she knew a bit about it given that I was incarcerated. The situation seemed unreal. It was all part of Macmillan's plan to play it down, play it quietly.

What happened is brought out in your summary: the Home Office did not take any Civil Defence precautions, so it was all left to us in isolation to keep the deterrent operational and working. Berlin, the matter that Mike Robinson just raised, was certainly a possibility and I think that it was in the American minds, too. When America first had the Cuban Missile Crisis, it was going to focus on Cuba—invade it, bomb it or do something else—but it would depend on the Russian reaction. We could get to Europe because of geography a lot quicker with the Thor missile or the V-Bomber force and the crews that were standing on alert. But it was an unreal situation.

I still find it difficult to comprehend the matter to this day. Why it is not recorded in the Operations Record Book, I cannot answer. I do not know. I never had anything to do with the Operations Record Book. Someone was obviously doing it and they had not written it. I never remember seeing any policy saying that we did not record it. If the Commander-in-Chief had sent out a message saying that we were not to record it, I would have known. I cannot explain it. The historians might like to do so.

Hudson: You said that you were surprised that there was nothing in the Whitehall records about moving towards a war footing. The answer is that it did not really work in that way. The Air Force knew how much it wanted to do certain things and the general steer was to be quiet. The only time when you had to consult the Prime Minister was when it was felt, quiet or not, it wanted to do x or y. Apart from the denial of a QRA station, Bomber Command did not want to be constrained and that did not require going to the Cabinet or the Prime Minister. There would not have been a major record of what went on in Whitehall, unless there was a major blow-out, in which the Ministry of Defence would have said that it must do x or y, and the Prime Minister and others would have said, 'No, you can't'. That did not happen.

Bonnor: I may have this confused because only twice did I do the [weapon] last-minute loading. The second occasion was at Wittering when Fylingdales reloaded software and forgot

to put the Moon in. The QRA crew therefore went to 05 last-minute loading until SAC said, 'Well, Thule[34] isn't seeing it nor is any other BMEWS site seeing it, so what are you doing at Fylingdales?' It was finally realised what it was about, so we are not sure whether it was that occasion or the Cuban missile crisis occasion, but I remember looking at the [authorisation] envelopes. In the war bag, we had sealed envelopes with code words that gave us engine start instructions. There was a coasting-out envelope and an 8 East—an irrevocable release code word, too. I remember trying to make sure that I had the envelopes in the right order and wondering if the damn word would agree with what was in the envelope.

Connelly: To add to that, we always had a two-man system in respect of atomic weapons when one person could not do anything on his own. It always had to be a two-man thing. The navigator had a set of envelopes, as did the captain. The code words were different, but they had to match. If both of them matched what they already had, you could turn the key—but not until both agreed.

Moore: One of the things that interests me about the envelopes is the fact that round about 1962 there were two possible targeting plans: a UK national targeting plan and an Anglo-American targeting plan. Was it apparent to you guys on the aircraft which you had on board? Did you have both plans on board?

Bonnor: No. On QRA, we were on the NATO plan. There was no question. The bag that we had was the Accounting Line Number [i.e. the targets] for the NATO plan and the code words were separated. If we were called in to a national plan, we would have been issued with a different bag.

Moore: What happened that afternoon?

Bonnor: I am pretty sure that we were on a NATO bag.

Robinson: We were.

Moore: Peter, you have not said what you remember about the afternoon of the 27th.

West [at RAF Coningsby]: I think that it was the 26th! Sorry, it was 47 years ago … I am sure that we were called in on the 26th. I am sure that the Corporal RAF Policeman knocked on my front door about breakfast time on Friday, the 26th. I may have got that wrong.

Bonnor: It was much earlier in the week [at RAF Cottesmore]. It would have been the previous week.

Connolly: It was definitely the Saturday morning [at RAF Scampton]. I know, because I was going to go shopping.

Bonnor: It took two or three days for us to get all the aircraft generated and to the point at which our squadron was at 15 minutes readiness with seven crews. I am pretty sure because our other crews were not yet Combat Ready.[35] We could only mount seven crews, and of the eight aircraft we could only get seven aircraft—one was in major servicing and would take two weeks to put together again. We were at maximum state by Wednesday or Thursday of that week. The Saturday was the day when it boiled, but I think that we were called in the weekend before.

Moore: Peter, can you remember what happened at Air Ministry in Whitehall over the 26th, 27th and 29th?

Hudson: I was a detached member of the outfit at the time. Apart from the tension, I do not have a firm incident in mind except to say that they were to-ing and fro-ing on QRA. Some people thought that we should have persuaded the Secretary of State to go to Cabinet on that, possibly after discussion with the C-in-C, and they decided not to. The link with Berlin meant that no doubt there was an element in the appreciation that Ministers were making here too. After all, Berlin was the first instance of our nuclear cover being provided for a mature conventional operation. If we had not strengthened our airfields in order to take B-29s[36] in 1948, there would have been a lot less confidence in the outcome of the Berlin airlift. Deterrence is deterrence and has a wide-ranging effect.

Moore: We have about 25 minutes left. Can I open the discussion to questions from the floor?[37]

Alex McFie: The whole point of the programme that you were engaged in was that the Russians should know exactly what you were doing. How far were you aware of how far the Russians actually knew what they were threatened with, if they did engage in some act of war? Deterrence depended on the Russians being thoroughly aware and you are speaking as if it were highly secret. The whole thing depended on Russians knowing exactly what you were doing.

West: You are absolutely right, sir. When I finished my flying time in the Air Force, we were called General Duty Officers, which meant that we did anything else as well. I went into the world of intelligence and it was manifestly obvious to me then that it was important that we leaked information that we wanted the Russians to have. There was no doubt that we were being very closely watched by people who were just strolling past the airfield or taking photographs of the aeroplanes from the perimeter, which a lot of people liked to do anyway. I later learned from references made by a Soviet KGB officer who defected to us, Oleg Gordievsky,[38] that they were fully aware of what was going on, which was exactly what we wanted. It is vitally important that knowledge of what we were up to, what we were capable of and what we were prepared to do was part of the deterrent.

Bonnor: I have read it since, rather than knowing about it at the time, that when SAC changed from DEFCON[39] 3 to DEFCON 2, it deliberately did not encrypt the message, Possibly Bomber Command did the same, I do not know.

Beetham: In 1956, Khrushchev and Bulganin[40] visited RAF Marham where there were [eventually] three V-Bomber squadrons.[41] They were given a good look at the station and a reasonable enough briefing of why the bombers were there. It was an attempt. I do not know the length of their visit or where else they went, but I know that they went to Marham in 1956. That was an attempt to show them Britain's determination and resolve.

Professor Peter Hennessy: Given the tension, was there any attempt on that Saturday to seek people who were lurking on the A1 looking for Wittering or on the A15 because there is a British genius for not concealing ourselves? On that Saturday when the bases were closed and Macmillan had insisted on unobtrusiveness, was there any attempt by security people on the bases to move people on the A15 or the A1, or was it part of the deterrence that you did not do that in case Soviet Union disguised, as heaven knows what, …

Robinson: As far as I know, there was no attempt and, if there had been, it might have come into the category of being rather obtrusive. We occasionally received messages to the effect that there was a Russian [Embassy] car coming out of London and the reaction was to limit the testing of our electronic equipment in the electronic bay. However, I do not think that there was any such attempt on that day, which is why I have always used the words 'evident ability'. We produced evidence of what we were doing and that was a paradox. On the one hand, we were told to be unobtrusive while, on the other hand, it was very obvious to anyone who wanted to see and hear what was going on that they could.

I have recently passed that bit of the A1 and the trees have all grown up. Oddly enough, it is not a bomber station any more, but there would not be such an uninterrupted view of the aircraft. The aircraft were concentrated at the downwind end of the runway, so it must have been fairly evident to anyone who was not watching a football match.

Moore: It is important to be obtrusively unobtrusive.

Connelly: On a normal Vulcan, the bomb bay closed underneath it and nothing could be seen. At Scampton, we were a Blue Steel Squadron. Blue Steel was a stand-off weapon, which weighed 15,000 lbs, which we fired from a distance away from the target. You can see from photographs that that cannot be disguised in any way underneath the aeroplane, especially when the fin is put down. Anyone walking or cycling past the airfield could see immediately what weapon was underneath the aircraft.

Woolven: Last year, I spoke to Squadron Leader Ken Hayes who, during the crisis, commanded a Thor squadron at RAF Feltwell.[42] That Saturday afternoon he was called in and the first thing that he did on his own initiative was to double the RAF Police patrolling the boundary and he issued them with live ammunition. When his Wing Commander heard what he had done, he rescinded the order because, as the Wing Commander said, they might shoot somebody.

Atkinson: And miss!

Connelly: Before I went into Vulcans, I was on a squadron in Germany on Canberras. It started off as a jolly nice flying club, but half way through the tour it became serious. You had to put a chinagraph mark on the wall saying how many bombs had been dropped and how many times the aircraft had been flown. After we had done that for a few months, the Americans came in and we had to load American tactical nuclear weapons. Although the weapons belonged to the Americans, the aircraft belonged to us. We had on the squadron an American officer with a key round his neck and a revolver. He had the key to the weapon, as did the pilot because if you were to take off on a mission, you both had to turn the key.

We had to change the weapons every 30 days because they were out in the rain. People were frightened that they would get wet. Because I had a key, as did the American officer, we both had to go out together and turn it so that the thing could be downloaded. It was just wheeled to the side of the revetment. It was like a pit, which the aircraft sat in, so it could not be harmed from outside. It was just wheeled to the side while we sat on it and they wheeled the new one in and clipped it on. A big American chap of about 6ft 5in was standing at the entrance with a carbine. I was sitting on the bomb and said jokingly to him one day, 'What would you do if I came out, climbed into the aeroplane, started the engines and took off?' He pulled back the bolt of his carbine and said, 'Look up the chamber, you wouldn't make it.' I could tell by the look in his eyes that I certainly would not have made it.

Bonnor: We were the same. We had very high security on the QRA plane and, whenever a nuclear weapon was loaded on any aircraft on the airfield, each had a dog and giant police handler with it. That is why the Air Force had such a huge number of dogs at that time. They had to work shifts. They were not allowed to work, as we were—24 hours a day. Although they were good enough with their handlers, they were one-man dogs. On occasions, my colleagues had rushed out on an exercise QRA alert to find the dog sitting at the bottom of the stops and no handler in sight so that they could not get into the aeroplane until he came back. He was probably round the back having a smoke or something and had not heard the hooter. However, I assure everyone that they [the armed aircraft] were very well guarded.

West: We were more frightened of the dogs than we were of the Russians!

Alison Appleby: You have made various references to CND. I wondered how you had experienced it. Did you see it as anything more than a nuisance or an irritant, or did you think that it had any chance of changing the public policy? How did it impinge on you? I was interested that you seemed quite annoyed by CND activities.

West: I do not remember CND being particularly active around our airfields. Occasionally it was, but seemed to prefer annoying the Americans [more] than us. I remember on one

occasion when we had to do our crew drills at the OCU at Finningley,[43] so that meant a drive up the A1 to get there from our place. I picked up two hitch-hikers who were from Newcastle University. They saw my kit on the back shelf and both announced themselves as passionate supporters of CND. I felt like saying, 'Get out and march then', but I carried on. It really was terribly irritating.

We were not allowed to talk about what we were doing at all. It was very much top secret, but they were coming out frankly with fatuous comments, clearly terribly ill-informed—politically rather than practically informed—and I had to sit there and take it by being a good Samaritan and giving them a lift. I must admit that I was relieved when I reached my destination and said that that was as far as I went. After that, I knew that I would look carefully at any hitch-hikers. We regarded supporters of CND as an ill-informed nuisance, but to be fair they were certainly sincere and well meaning, just ill informed.

Woolven: Sir Michael, Mike Robinson and Roger appeared on a radio programme last year.[44] On being interviewed on her reaction to the Cuban missile crisis, Pat Arrowsmith said that it was to go to Dublin with her partner then hitch hike to the West Coast of Ireland.[45] From my time at Scampton, which was from 1964 to 1966, the only manifestation of CND that I remember was that someone inscribed on the bus station outside the main gate, 'Those who live by the sword, die by the sword', which made the *Look North* local television programme. That is all I remember of the CND.

Connelly: If you are in the V-Force, you go to Finningley to learn to fly the aircraft. You are then probably posted to Waddington—I was there for a day—and then probably to Scampton. You go to Coningsby to do simulator training and back to Finningley to pick up your crew. You basically live inside Lincolnshire. I was there for six years and never came across CND at any of the bases.

Beetham: That is right. We were not bothered at all really in Bomber Command by CND. Although Macmillan, as Prime Minister, was worried about marches and noises in London, they were a fringe activity. They were a nuisance activity, but I do not think that they had any influence on the general population, except for being nuisances.

Daniel Sharfe: Was there any capacity to recall you once you had taken off?

Bonnor: Yes, we had a series of code-worded, sealed envelopes. The last one was 8 East. If that code word agreed, it was irrevocable. It almost certainly meant that there was the odd mushroom cloud around south-east England by then, so we could not be recalled. But 8 East is quite a long way over.

Connelly: I am not a navigator, but each degree is 60 miles, so 8 East is 60 x 8 = 480 minutes [of longitude].

Woolven: Times the secant of the latitude.[46]

Connelly: I never could find my way around!

Moore: It is the navigators' union at this end.

Robinson: If we had been launched, it would have been under what was called 'positive control' and you did not go just beyond the 'no go' line, somewhere off the Norwegian coast. You did not go further if you had a coded message that you could read as 'do not proceed', but you could also get the one, 'continue going', but you had to get that second message to go further. You cannot do that with a submarine.

Atkinson: The dilemma would be if you did not get a message at all. That would be the problem because, as you realise, there would be a degree of holocaust. Fortunately, the hope that, by the Norwegian coast, we would have a 'go' message or a 'recovery' message, and I think that we might have got it.

Connelly: I'm not an AEO [Air Electronics Officer] either. There is an AEO somewhere around, the radio operator. We had VHF and HF radio and, if one did not work, the chances were that the other would.

Woolven: The BBC Light Programme?[47] [i.e. on the medium of the long wave broadcasts.]

Connelly: Yes, we could tune into the Light Programme.

West [a former Air Electronics Office]: Radio 2 for the uninitiated.

Professor Lord Hennessy Of Nympsfield: As for Radio 2, could the code word just come up in the middle of *Educating Archie*[48] or would a newsreader speak? I obviously wondered what the code word was and whether it would just happen in the middle of a normal programme.

Connolly: If my memory serves me right, it was not a code word, as such. It was a bit like internet passwords. It was a series of six [letters]. They had to match.

Hennessy: Six words?

Connolly: Not words, no. It would have been phonetically spelt out, yes.

Hennessy: Otherwise, the scriptwriters of *Educating Archie* included it accidentally.

We were so naïve that we had Peter Brough[49] as a *radio* ventriloquist!

Atkinson: We also had the Morse key, which is virtually unstoppable. People could not only get it on those frequencies. We had UHF, VHF, *Educating Archie* and all sorts of other things, but basically the aircraft systems were sound. We needed it to come to one of those systems.

West: The reason why we stuck with Morse, which already in 1962 was rather dated, was because it could break through jamming, which would have been very much in evidence.

Beetham: But it was not ever put to the test.

Moore: Well, what an excellent note to finish on. I am sure that the guys will hang around for a few minutes if anyone else has questions for them but, for now, I wish to conclude by saying that we historians are conditioned to think of the Cold War as a cultural phenomenon, but those around the table today were on the front line of the Cold War in the sense that Charlie Chaplin or Alf Ramsey certainly were not.[50] I would like us all to show our appreciation.

Notes

[1] Clive Richards, 'RAF Bomber Command and the Cuban Missile Crisis, Oct. 1962, *RAF Historical Society Journal*, No. 42 (2008), pp.26-39.
[2] Proceedings of the RAFHS Seminar, 'The RAF and Nuclear Weapons, 1960-1998', RAF Historical Society Journal, No. 26 (2001), pp. 10-104. See: **http://www.rafmuseum.org.uk/research/journals.cfm.**
[3] Lord Allen of Abbeydale (Philip Allen, 1912-2007), civil servant. Deputy Under-Secretary of State, Home Office 1960-2; Permanent Under-Secretary of State, Home Office 1966-72.
[4] Robin Woolven interview with Eric Alley, Civil Defence Officer for Norwich in 1962, on 20 Dec. 2006. Alley again recalled these events in the BBC Radio 4 programme broadcast on 25 Sept. 2008.
[5] No. 249 Squadron, one of four Canberra light bomber squadrons station at RAF Akrotiri, Cyprus, as part of the UK contribution to the Central Treaty Organisation [CENTO].
[6] Navigator/Radar – the navigator operating the aircraft Navigation Bombing System, which included the H2S radar.
[7] In Cambridgeshire. **http://www.raf.mod.uk/rafwittering/.**
[8] Now the Royal College for Defence Studies, Belgrave Square, London.
[9] The Ballistic Missile Early Warning System site at Fylingdales in North Yorkshire was visible to the public as three large 'golf ball' geodesic radar domes. The 'golf balls' were demolished and replaced by a Solid State Phased Array in the early 1990s.
[10] Harold Macmillan (1st Earl of Stockton, 1894-1986) Prime Minister (Conservative Party), 1957-63.
[11] The Campaign for Nuclear Disarmament (CND). Formed in 1957, advocating unilateral UK nuclear disarmament.
[12] American ballistic missiles deployed in the UK between 1959 and 1963.
[13] Air Chief Marshal Sir Kenneth ('Bing') Cross (1911-2003). Air Officer Commander-in-Chief, Bomber Command, 1959-63.

[14] The RAF Form 540, the Operations Record Book, is completed monthly by all RAF Commands, Groups, Stations and Squadrons to record operational and administrative occurrences.
[15] British nuclear stand-off missile operational between 1962 and 1970. At the time of the Cuban Missile crisis, the weapon was still being introduced into RAF service.
[16] Exercise Edom was a no-notice readiness exercise called by the Bomber Controller to exercise the QRA crews. Called at roughly 36-hour intervals at any hour of the day or night, the crews responded by driving rapidly to their loaded aircraft and to further respond to the Exercise instructions (cockpit readiness, start engines, taxi or scramble) before the exercise was terminated when the crews reverted to 15 minutes' readiness.
[17] The RAF Museum (formerly The Aerospace Museum) Cosford, adjacent to the Defence College of Aeronautical Training Cosford, and home to the National Cold War Exhibition.
[18] General Thomas S. Powers (1905–70 ; Commander-in-Chief, Strategic Air Command, 1957–64). Hosted by AVM Stewart Menaul (1915-87), General Powers witnessed a four Vulcan Scramble demonstration at RAF Scampton on 9 Oct. 1962. 5 days earlier, and hosted by AM Cross, General Curtis LeMay (1906-90; Chief of Staff, USAF, 1961-5), had seen a similar four Vulcan demonstration at Scampton.
[19] John F. Kennedy (1917–63), 35th US President, 1961–3.
[20] The Boeing B-47 Stratojet was a medium range USAF strategic bomber during the 1950s and 1960s. From 1958, the USAF conducted 21-day deployments of B-47s known as 'Reflex' deployments, with the aircraft operating from RAF Fairford, RAF Brize Norton, RAF Greenham Common, RAF Mildenhall and RAF Upper Heyford.
[21] The Boeing B-52 Stratofortress was a long-range USAF strategic heavy bomber from the mid-1950s onwards.
[22] V-Force crews regularly flew to Omaha, Nebraska, on 'Western Ranger' liaison flights to visit the nearby SAC headquarters and they routinely detached to Cyprus and Goose Bay, Labrador, Canada, to train on low level flights over, respectively, the Libyan Desert and the Canadian tundra.
[23] The RAF Scampton ORB for the month records that the last National Service officer (an Education Officer) to serve at the station was photographed planting a tree commemorating the end of National Service.
[24] The U-2 piloted by Major Rudolfh Anderson (who posthumously became the first recipient of the US Air Force Cross) was shot down over Cuba by an SA-2 surface-to-air missile on 28 Oct. 1962.
[25] Avro Shackleton aircraft were used by the RAF for maritime patrols.
[26] RAF Ballykelly (operational 1941-72), County Londonderry, Northern Ireland.
[27] Air Chief Marshal Sir Michael Beavis. Flew Vulcan aircraft, Bomber Command, 1958–62.
[28] The United States Air Force's Strategic Air Command (SAC) HQ was located at Offutt Air Force Base near Omaha, Nebraska.
[29] RAF St Mawgan in Cornwall was one of the 36 'dispersal airfields' across the UK regularly used by Bomber Command to disperse two, three or four aircraft on the 'Operational Readiness Platforms' during readiness exercises.
[30] The RAF Form 700 was (and remains) the extensive aircraft servicing log in which technicians

signed that they had completed their servicing, weapon loading and refuelling tasks. The 700 was then signed by the Crew Chief and the aircraft captain, who thus accepted the aircraft until signed over again after the flight.

[31] See the RAFHS seminar proceeding mentioned in footnote 2 above.

[32] The 14th Earl of Home (Sir Alec Douglas-Home (disclaimed peerage, 1963; later Lord Home of the Hirsel) 1903-95), Conservative Foreign Secretary, 1960-3.

[33] Aleksandr Fursenko and Timothy Naftali, *Khrushchev's Cold War: The Inside Story of an American Adversary* (New York: Norton, 2006).

[34] A Ballistic Missile Early Warning Site [BMEWS] was constructed near Thule in 1961.

[35] Crews were first trained to 'Combat' classification before progressing through the classification system of 'Combat Star', and 'Select'; and, for a very few crews, on to 'Select Star'.

[36] Boeing B-29 Superfortress bombers, flown by the USAF, were deployed in the UK during the 1948 Berlin Crisis. They were again deployed to the UK at the time of the Korean War (1950) and some were armed with atomic weapons.

[37] Participants from the audience here named and quoted completed appropriate documentation to give consent to their questions and remarks being included in this transcript.

[38] Oleg Gordievsky defected to the West in 1985. Participant in the 1997 Moscow Embassy witness seminar. KGB: *Komitet Gosudarstvennoy Bezopapnosti*, Committee of State Security.

[39] Defence Readiness Condition – the increase to DEFCON 2 across SAC was broadcast openly and reported worldwide. The increase in Bomber Command Readiness to 15 minutes at 1300 on 27 Oct. was recorded in Nos. 1 and 3 Group Forms 540, but the further increases to Cockpit Readiness (05 minutes) was not.

[40] Nikolai Bulganin (1895-1971), Soviet Premier, 1955-8.

[41] RAF Marham in Norfolk was home to 207 and 214 Squadrons (Valiants) and 35 and 115 Squadrons (Canberras) when the Soviet leaders visited the UK in April 1956. A third Valiant unit (148 Squadron) formed later in the year, replacing 35 and 115 Squadrons.

[42] Squadron Leader Hayes commanded No. 77 (Strategic Missile) Squadron. Closed for RAF use in 1963, Feltwell was subsequently employed by the US Air Force for accommodating personnel based at RAF Mildenhall.

[43] OCU - Operational Conversion Unit. RAF Finningley, near Doncaster, ceased to be used by the RAF in 1996, and after redevelopment became Robin Hood Doncaster Sheffield Airport (now Doncaster Sheffield Airport).

[44] The BBC Radio 4 *Document* Programme, produced by Neil George, was broadcast on 25 Sept. 2008. On Robin Woolven's suggestion the document selected as an introduction to the Cuban Missile Crisis was the report by the Chief of the Air Staff made to his fellow chiefs of staff at 14.30 on Saturday, 27 Oct. 1962 [The National Archives , DEFE 32/7, Secretary's Standard File, 1962]. The programme contributors included Sir Michael Beetham, Mr Hudson, AVM Robinson, Wg Cdr West and Sqn Ldrs Atkinson and Woolven from today's seminar as well as Eric Alley, OBE (former Civil Defence Officer at Norwich) and the CND activist, Pat Arrowsmith.

[45] Pat Arrowsmith, an anti-war activist, was a founder member of CND.

[46] The distance between degrees of longitude decreases with increasing latitude. Thus the distance between the longitude of the Lincolnshire bomber bases (roughly around the

Greenwich meridian around latitude 53 North) and longitude 08 East is: 8 x 60 minutes at 53 North = 290 nautical miles.

[47] The BBC's *Light Programme* broadcast what was called 'light' or mainstream radio programmes between 1945 and 1967, when it evolved into BBC Radio 2.

[48] *Educating Archie* was a series broadcast on the *Light Programme*, featuring the ventriloquist Peter Brough and his dummy 'Archie Andrews'.

[49] Peter Brough (1916-99). His obituary in *The Guardian* observed: '[he] became nationally famous for proving that a ventriloquist could be highly successful on radio - the one medium in which a ventriloquist's skill would seem to be totally unsuitable.' Mr Brough's brief transition to television was not a success.

[50] Charlie Chaplin (Sir Charles Chaplin, 1889-1977), comedian and film-maker.
Alf Ramsey (Sir Alfred Ramsey, 1920-99), footballer and football manager.