

# SIREN

*The Newsletter of RSG*

Issue 10 Spring 2002



The Main Door to the former TR1 Avionics and Intelligence Assessment Centre, Building 210, RAF Alconbury AKA "Magic Mountain"



Subterranea Britannica  
[www.subbrit.org.uk](http://www.subbrit.org.uk)

Subterranea Britannica's Research Study Group (RSG) aims to study and record the UK's Cold War defence infrastructure: e.g. radar stations, secret bunkers, communications networks, civil defence plans and propaganda.

Subterranea Britannica is a society devoted to the study of man-made and man-used, underground structures and the archaeology of the Cold War. The main focus of interest is on abandoned and forgotten structures and, in the case of Cold War structures, studies are entirely confined to declassified and decommissioned structures.

The society is open to all and its membership includes all walks of life. Members are invited to contribute to this newsletter even if this just means sending very welcome snippets from newspapers and magazines.

**Editor Dan McKenzie**

**Please send contributions to;**

**Dan McKenzie**

**53 Home Pasture, Werrington, Peterborough PE4 5AY**

**Email: [dan.mckenzie@bunkertours.com](mailto:dan.mckenzie@bunkertours.com)**

**Unless stated the Photos in this Issue are courtesy of Dan McKenzie and Nick Catford**

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## Visiting the Public Record Office

The Public Record Office calls itself “the nation’s archive” and with 8.5 million records, it has something for every researcher from the serious professional to the interested amateur. As someone who has spent (too) much time there in recent years, I would encourage anyone to go there and I hope these notes will guide your first visit.

### Where is it?

The PRO, as regular users always call it, is in Kew quite close to Heathrow Airport. Kew Gardens station is within easy walking distance and it is easy to get to from the North Circular and M4 and. It has a free car park and a good restaurant (unfortunately, not free).

### What is a document?

The PRO calls its individual records “documents” although many people call them “files” and they can be anything from a collection of loose papers to a single bound volume to a file full of maps, etc. They are all numbered according to a hierarchy. First come a few letters that show which government department the file originated from eg ADM tells you it is an Admiralty file. Then there is the class number which groups all files in a particular area eg a general subject or period, but these can be very wide ranging eg HO322 contains files from the Home Office’s Civil Defence Department. Finally, each document has a number (and a class can contain thousands of documents) and a short title which will give you an idea about what is about. The key to your research will be finding documents/files with the right information in.

### How to find that file

Until recently this was a tedious paper chase but now the PRO has its own web site.

This is accessible at the PRO but I would strongly advise looking at it at home – for one thing, it gives the opening times. Perhaps more importantly the PRO has an on-line search facility accessible from the main site. The search engine is not very user friendly but persevere with it. Try putting in a few key words. “Burlington” gets 452 hits but most of these are irrelevant to the Corsham war HQ dealing eg with HMS Burlington and the Burlington Arcade Company Ltd. “Turnstile” produces a file on the “Public Lavatories (Turnstiles) Bill 1963” which I have not yet visited. You can go for obvious words like “Rotor”, “Thor”, etc but the engine only searches the file title so think around the subject. I found a key file on the organisation of Turnstile by luck in an Admiralty file on “command and control in global war”. You will need to note the full reference (eg HO322/113) and I always take several dozen with me on my visits as you never know what, if anything, will be in the file. Once you have a reader’s ticket you can pre-order files from the web site, which is very useful.

Newsletters of Subterranea Britannica are published by the committee of Subterranea Britannica. Original articles, book reviews, press cuttings, extracts from books and journals, letters to the editor etc. are welcome. However the editor reserves the right not to publish material without giving a reason.

The committee of Subterranea Britannica and the editor do not necessarily agree with any views expressed and cannot check the accuracy of any material sent in.

## Visiting the Public Record Office

### **Retained!**

Files are released by the PRO 30 years after closure so you will not get anything after 1971. Some are withheld for longer and others (usually the ones that sound the most interesting) are permanently “retained” meaning “they” do not want the interfering taxpayer to know what is inside. Even a released file can be heavily pruned or censored. But press on. Often heavily censored files have bits of information left in them which gradually add up. I found one sheet of paper that was very interesting but the most interesting words, giving locations, had been cut out and then a photocopy put in the file. By measuring the resulting gap and working out how many letters the word contained I deduced that it referred to the reserve war HQ site.

### **Starting at the PRO**

Once armed with some interesting looking file references you will need to go to the PRO to see them. Firstly, you will need to get a ticket, which also acts as a swipe card to access the computer terminals. You get this from the enquiry desk just inside the main entrance. Membership is free but you need to take some identification with you such as a driving license or passport. While your ticket is being prepared most visitors are now given a tour. Once you have collected your ticket you can go through the turnstiles and up to the reading rooms on the first floor. You can only take pencils (several – sharpeners are available) and paper (lots) through the turnstile. Everything else has to be left in a locker. And expect to have all your papers looked through when you leave.

The next thing you will need is at seat number which you ask one of the incredibly helpful and friendly staff at the counter in the reading room for. With this and your card you find one of the many terminals scattered around, sit down, swipe your card through, tell the machine your seat number (twice – it does not believe you can get it right the first time!) and order your files. You can order up to 3 at a time but I tend to order more every 15 minutes so that I have a constant supply arriving in my pigeon hole. This process is called “document ordering” and there will be announcements throughout the day about when it is available. It can take up to half an hour for your first files to arrive (hence the usefulness of the pre-ordering system) and you can check on progress using small

terminals on the walls. When you are told your file is available, you collect it from the counter by giving your seat number.

### **Reading the file**

A warning – treat the file with care. Turn the pages carefully and do not put your grubby, sweaty fingers on them otherwise you will be told off! Take lots of notes and remember to record the file reference. Always write down the date of the report, etc that you are taking notes from. Also, write legibly. I tend to go into something of a feeding frenzy when I have a good file and the resulting notes are not always readable. When you have finished with the file take it back together with the little slip of paper that came with it. Unless they get this back they think you have still got the file. Photocopying is available – but at 40p a sheet!

### **Why go?**

Even if you do not find anything new, I guarantee you will get a real buzz from handling the original records, seeing who was making decisions, how much bureaucracy was involved, etc. You may even hold something signed by a Prime Minister. And you may find something unique. I still remember the adrenalin rush when I came across the Python scheme for the first time and realised that the Burlington/Turnstile concept had been abandoned in 1965 - and no one else knew.

### **A Health Warning**

Just a little one. The reading room is very comfortable but the air is dry and if you are concentrating for a long time you will get a headache. It is best to take frequent breaks and there is a water dispenser in the restaurant.

So do go along. And if you do find something new let us all know about it.

**Steve Fox**  
**March 2002**

### Internet Website Details

PRO main website: <http://www.pro.gov.uk/>

PRO Search page: <http://catalogue.pro.gov.uk/>

## The West Norfolk Sub County Control

*The West Norfolk Sub County Control and County Standby was located in Grimston Road, South Wootton (TF647223) on the outskirts of Kings Lynn.*

A single storey civil defence training centre was built in the grounds of the Woodlands Nursing Home in 1966 with a purpose built bunker beneath it housing the sub control; there is also a three bay civil defence garage alongside. In 1968 the bunker was put onto care and maintenance following the disbanding of the Civil Defence Corps. It was reactivated and refitted about 1986 when it also took on the role of County Standby remaining operational until at least 1991. Today the basement is largely stripped and abandoned while the training centre above has been converted into the Crossroads Day centre.

The main entrance is through an inconspicuous blue wooden door to the right of the main entrance into the day centre. (Intake ventilation louvres are located to the left of the day centre door) This opens onto a short flight of steps down to a steel blast door. At approximately 1cm thick this is considerably thinner than most bunkers that were modernised in the 1980's. There is a sign on the door which reads 'Joint Norfolk County Standby/West Norfolk District Emergency Centre'. Above the door there is an overpressure valve, added during the 1980s refit.

Once through the door the stairs turn through 180 degrees to a second blast door (forming an airlock) and behind that a wooden door into the Signals Room; there is no decontamination area. The room is irregularly shaped with access to all parts of the bunker emanating from it. There is a small alcove allocated to Telephonist No. 2, a key cabinet on the wall (still full of keys) and several BT junction boxes indicating that they were used in conjunction with a TSX50 ECN unit and a WB1400 carrier receiver. In an alcove within the signals room there are two maps a large UKWMO map of the UK showing posts, clusters, groups and sectors and a smaller map of Norfolk showing ROC posts and clusters. There are numerous notices on the wall one listing all the county emergency centres and another relating to Raynet. There is also a book listing all the Norfolk Rest Centres. Built within the signals room is a small communications or 'CMX' room

with acoustic tiles on the walls; there are two small hatches for passing messages between the adjacent rooms.

Having come in through the main entrance the first room on the right past the telephonists alcove is for 'Works and Internal Transport'. The next room which also has a door into the control room is for 'Staff Officer, Scientific Advisors and Information & Publicity'. Moving round the signals room the next room is the Control Room and passing another alcove, double doors open into a short corridor with a small store room on the left and straight ahead 'Dormitory 1 and Auxiliary Stores'. This room still contains two metal triple bunk beds and a map cabinet. At the back of the dormitory a door leads into the ventilation plant room.

The plant room was refitted in the 1980's with a Swiss 'Andair' system which includes two filter units and associated switchgear. There is a cupboard with further switchgear and fuse boxes. The ventilation plant is capable of being turned by hand in an emergency and when power was applied it was found to be still working.

At the end of the short corridor a door opens into the control room which is rectangular in shape with a support wall jutting into it. Entering the control room from this corridor the first room on the left is 'Dormitory No. 2 and Main Stores'. The dormitory is divided into two rooms each containing two triple metal bunks. One room also houses three metal map cabinets with a number of unused filters stored in the other room. 'Dormitory No 2' is entered from the far corner of the control room, this still has three triple metal bunks.

At the back of the control room is the door into the largest room in the bunker which houses the kitchen, canteen and unisex toilet all in all together. The kitchen and canteen is at one end with the toilet at the other end on top of a raised platform above the sewage tank. The kitchen consists of a long preparation surface with wall mounted cupboards above it and at



## The West Norfolk Sub County Control

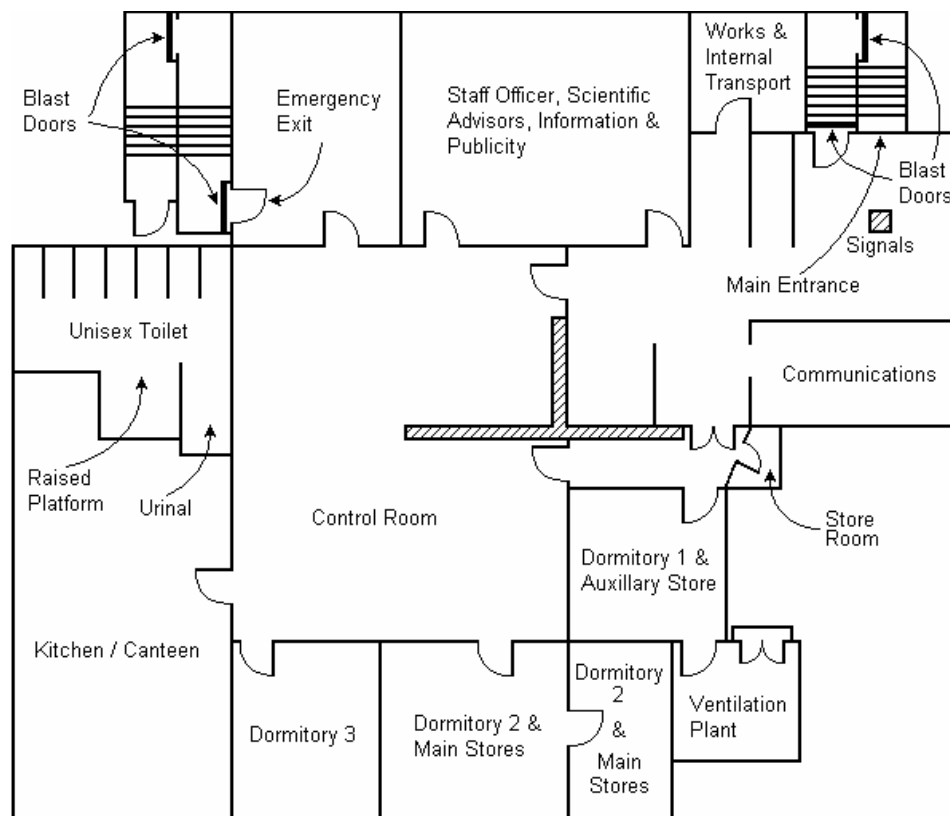
one end a stainless steel sink and draining board with a hand pump. Three metal office cupboards stand against the wall. On top of the platform there are six WC cubicles (one for men only) fitted with Elsan flushing chemical toilets. At the end of the cubicles behind a wall is a stainless steel urinal. There are also three waste incinerators along one wall. There is a large sign on the wall which reads 'use of these toilets, water supply and sink facilities and dumping of waste fluids in the sump, are strictly forbidden at any time preceding a real nuclear attack warning. Mains facilities are available on the ground floor above'. As there are no separate hand basins it appears toilet users had to share the kitchen sink!

The final room in the bunker, also entered from the control room has no name on the door but it contains the emergency exit consisting of a wooden door with an overpressure valve built in to it, behind it are steps to the surface

through a second pair of thin metal blast doors. On the surface there is another wooden door on the back of the building with ventilation exhaust louvres alongside.

The bunker is generally in good condition although the kitchen is damp. There is ventilation trunking through all the rooms and the lights still work in most of the rooms. The bunker has the appearance of not being completed with most of the internal partition walls not quite reaching the ceiling. It is unclear how many people would have been in the bunker when fully manned but there are 27 bunks so assuming the 'hot bed' system was used it could have been double this amount or more. There is no standby generator below ground so this must have been located on the surface.

**Nick Catford**



**Joint Norfolk County Standby & West Norfolk District Emergency Centre**

Surveyed by Nick Catford, drawn by Paul Whippey

## Underground Tales - A Lift Engineer Under Corsham

I first got interested in things underground back in 1996 when the company that I work for, Schindler Lifts, transferred me onto servicing lifts in the South West. One of our large contracts at the time was the Corsham Quarries complex.

At the time we had lifts in Spring Quarry, CDCN, Basil Hill barracks and Monks Park. I had heard all sorts of tales from the blokes at work about this place and was keen to find out more, so one spring day found myself filling yet another security clearance form at the offices of Celtic, the maintenance sub contractor. As the form would take a few weeks to process I was unable to go onto any active sites so had to go to a site that had just been decommissioned, which turned out to be Monks Park!

We arrived at the Copenacre site (decommissioned a few years before) to pick up the keys for Monks Park and headed for the site. We drove in and stopped at the guard hut to pick up yet more keys and headed for the lifts at the top of the site.

We turned the two lifts on, goods and passenger, and descended underground. Rather than both of us getting in the lift, Steve, my workmate, sent me down in the goods lift and said he would see me underground. Before I had time to argue he had shut the door and the lift began its noisy descent in to darkness, coz the lift lights didn't work! The lift stopped with a bang and I opened the door, to

be greeted by a large expanse of blackness. So there I was first time underground and had no lights in the lift car or on the quarry level! Whilst figuring out what to do the lights suddenly turned on and Steve appeared round the corner laughing his head off. We walked across the site and headed for the forklift truck conveyor at the other end of the site. We stood on the platform and I was trying to work out how we were going to get back to daylight when Steve started pressing buttons on the wall. First of all a big iron gate lifted up out of the floor, then when this had reached its limit the platform lurched of towards the tiny dot of light at the top of the shaft. We arrived at the

loading platform and spent the rest of the day doing our paper work. I got bored of this and went for a walk round the surface buildings, not a lot to see but it certainly was better than working. Looking back I can't believe I did not take any photo's, as no one would have seen me and it was unfortunate that the map of the complex did not fit in my van!!

Sadly, I was made redundant soon after this visit and never got to go underground there again. As a company we lost the contract in late 1997/98 to a competitor. We did briefly tender for the service contract on the lift (GL 3) at the Corsham media complex last year but having seen what response time they wanted to callout's (30 Minutes, and our nearest engineer lives in Swindon!!) and the fact that



One of the Forklift Truck Conveyors in RNSD Copenacre

we weren't cheap enough, needless to say we did not get the contract!

I showed one of the blokes at work Nick McCamleys books the other day and all he kept saying when he saw the photographs of Corsham was "been there" "seen that"! He also told me about the time he got lost looking for a toilet underground and opened a door which led onto a road, which had a fast moving lorry on at the time. Turning round he was met by two guards who were most insistent that he should not be in this area and should go away very quickly!

**Dominic Jackson**

## RAF Alconbury Cambridgeshire OS Grid Ref TL 295 795

Land for an airfield at Alconbury was first acquired in 1938 as a satellite landing ground for RAF Upwood, and, when war broke out, it was used by Blenheims from RAF Wyton.

In the beginning facilities were rudimentary comprising a briefing room and bomb stores; in 1941 three runways were laid, and it was subsequently used by Stirlings and Wellingtons to mount raids against Germany. In August 1942 Alconbury became an American base for Liberators flying bombing missions. In December 1942 the Liberators were replaced by B-17s and Alconbury became known as Station 102. As part of the US 8th Air Force it fulfilled a variety of roles until being handed back to the RAF in November 1945.

Phantom IIs in 1965. In 1976, the airfield acquired an additional role as the home of a tactical fighter training squadron flying Northrop F-5E Tigers. Soon after the airfield was substantially remodelled with the construction of twenty-eight hardened aircraft shelters. 'Hush Houses' were also built in the early 1980s to minimise engine noise during static test runs.

In 1983, TR-1s (reconnaissance 'spy' planes) were permanently based at Alconbury. This led to a large remodelling of the northern

section of the airfield to accommodate these aircraft and their specialised mission. Work included the construction of five prefabricated 'Ready Sheds', thirteen extra-wide Hardened Aircraft Shelters, a Squadron Headquarters, a massive Avionics and Photography Interpretation Centre, and new concrete aprons and taxi-ways. In the late 1980s the Phantoms were



Alconbury, Cambridgeshire, view from north. © Crown copyright. NMR 15779/05

On 1 June 1953 the airfield was reactivated as one of the bases for the US 3<sup>rd</sup> Air Force, and by 1954 major reconstruction work was underway to lay a new extended runway and construct other infrastructure, including hangars and bomb stores. The first aircraft arrived in September 1955; B-45s of the 85<sup>th</sup> Bomb Squadron, this squadron remaining until August 1959 by which time it had been re-equipped with B-66Bs. Following this departure Alconbury assumed what was to be its principal Cold War role as the home to various reconnaissance squadrons. The first to arrive were the 1<sup>st</sup> and 10<sup>th</sup> Squadrons of the 10<sup>th</sup> Tactical Reconnaissance Wing, flying at first RB-66s until they were replaced by RF-4C

replaced by thirty-eight A-10A Warthogs, ground attack aircraft. Their deployment, however, had little effect on the physical fabric of the base, although the squadron did produce some distinctive wall art. Flying ceased on 31 March 1995 and the base was subsequently released for disposal.

### 1950s

Few distinctive features of the 1950s airfield survive, and it is proposed that this period will be reflected by the retention of two 'nose docking sheds'. This distinctive building design both signifies the arrival of American forces at Alconbury and the introduction of long range jet

## RAF Alconbury Cambridgeshire

aircraft capable of attacking the Soviet Union with nuclear weapons.

### 1980s

It is proposed that a small section of the airfield be retained in its present form to conserve the setting of a number of the distinctive structures associated with the deployment of TR-1 reconnaissance aircraft during the 1980s. This will both reflect one of the key themes of the Cold War, the world wide surveillance and gathering of intelligence by the superpowers, which was also Alconbury's principal role for most of the Cold War. Such a scheme will also ensure the survival of the unique TR1 Avionics and Intelligence Assessment Centre (Building 210) and a pair or group of the distinctive extra-wide U2/TR1 Hardened Aircraft Shelters as well as their linking concrete aprons, roadways, paths, protective mounds and other associated features.

**Structure:** *Building 210, TR1 Avionics and Intelligence Assessment Centre*

**Recommended action:** *Consider for Scheduling*

**Statement of significance:** This unique, massive late 1980s hardened interpretation bunker was constructed to process and interpret data collected by specialised reconnaissance aircraft based at RAF Alconbury. Its massive concrete, earth covered form is characteristic of many structures erected during the Second Cold War of the 1980s, to ensure the operational capability of airfields under conventional, chemical and biological attack. As one of the last Cold War bunkers built in England it represents one of the most sophisticated hardened structures in the country.

It is believed that the structure has a restrictive covenant placed on it, which precludes any civilian reuse.



Building 210 TR1 Avionics and Intelligence Assessment Centre (AA023746). © English Heritage

## RAF Alconbury Cambridgeshire



Alconbury, Cambridgeshire, July 1996, to the right is the TR1 Avionics and Intelligence Assessment Centre (210) and to the top some of the TR1 Hardened Aircraft Shelters. To the bottom left are the late 1950s Nose Docking Sheds (TL2177/3). © Crown copyright.NMR



Building 210 TR1 Avionics and Intelligence Assessment Centre, upper level, doors within decontamination suite (AA023785). © English Heritage



Building 210 TR1 Avionics and Intelligence Assessment Centre, lower level, compressed air bottles used to re-establish over pressure in bunker, they are believed to be a unique feature in the United Kingdom (AA023791). © English Heritage

*This is an excerpt from the report compiled between April and October 2000 as part of English Heritage's Monuments Protection Programme (MPP). The most important source of information for the assessment was the Cold War Field Survey Project, initiated by the Royal Commission on the Historical Monuments of England and continued by English Heritage after the two organisations merged in April 1999.*

*The Full Survey should now be available in your local library. The Author of the report is our very own **Wayne Cocroft***

*Photographs are all by English Heritage*

## The Caves at Maastricht - working at JOC Kanne as a war role

The NATO Joint Operations Centre at Kanne in Belgium was used as the Alternate War HQ for The 2nd Allied Tactical Air Force until about 1990. It was built in a disused stone quarry, and had a permanent staff of about 20 and a wartime establishment of about 200.

I worked underground as a staff officer in "the caves at Maastricht" for 5 months, spread over 3 years when I was in the Air Force. Responding to Dan McKenzie's pressure, here are a few reminiscences. My peacetime job was in the headquarters at Rheindahlen in Germany, near Dusseldorf. This was Headquarters of 2nd Allied Tactical Air Force and Northern Army Group - part of the array of forces facing the Warsaw Pact in the 80s. It was also the national headquarters of the British Army and RAF in Germany - two separate commands that were fully allocated to

We would practice our role for one month every February and two weeks every October, and I did the job for three years so I had six stints underground. I worked the day shift, seven till seven, and it was dark when I went in and dark when I came out. Aside from one day off, I'd never see daylight for a month. OK by me.

In the headquarters at Rheindahlen we all wore badges on a chain round the neck. The badge had a photo and a series of code letters left showing if you were allowed unescorted access to that building or area, and blacked out



**The main entrance**

NATO. My wartime job was in a different place, at the Alternate War Headquarters, which was housed in "the caves" at Maastricht, about 40 miles away in the Netherlands, right on the border with Belgium and just a couple of miles from the Fort at Eben Emael.

if you didn't. (My wife worked in a very secure building that I did not have access to unless I was signed in and escorted. Her badge had a red background to the photo (meaning Army sponsored, and mine had a blue, meaning air force sponsored. Hers had one important letter



## The Caves at Maastricht

on it that mine did not. We used to keep our badges at our flat hanging on a hook by the door, and grab them as we went out. One time I was in my office for a couple of hours before I looked down to see in the center of my chest my wife's badge - wrong colour background, wrong code letters, female face. I called her and we arranged to meet in the car park between the buildings to swap. She had got into her building too without anyone noticing. I went down to the entrance to my building where police manned the entrances and checked the badges of everyone entering. I asked for the police sergeant to come out from the back - he was a good friend because of all the admin for going to the caves. Want a laugh, I said, and pulled my wife's badge up above the level of the counter. "And what time did you come in, he said? I'll need to have a word with some of the staff. Then he had another thought: "and did your wife get into her building with yours?" Physical security at her building was very tight and her team had a little enclave within that - her team of three had an upper corridor, secured by a barred gate and with barred gates on every one of the doors and bars on the windows - not a place to be in a fire (except the buildings were stone with concrete floors and ceilings, so there was not much to burn). But mostly the threat was seen as the IRA, not espionage. The previous year the IRA had exploded a car bomb in the NAAFI car park at the Headquarters, and not long after I left an off duty soldier was shot dead in his car on a weekend shopping trip in Roermond, just over the border in the Netherlands.

Because I had the war role in the caves, I needed a second badge, which was sent to the Dutch police post at the caves. There was a seemingly inexplicable rule that no new badge could be issued until a previous badge holder had returned their badge. I wondered if it was a primitive sort of cost control, to make sure that the number of people assigned did not exceed some magic number. Perhaps it was associated with the capacity of the place, or the air conditioning or the air filtration, or the canteen, or something. When I first visited, the explanation became clear. When you went in you handed in your headquarters badge and were given your underground badge. It was a simple tally system, so that they knew who was inside. And the limit? That was because each badge lived in a slot, and there were only a couple of hundred slots. So one badge had to go before another could be put in its place.

The exercises would start with a planning meeting. We would review our documentation, weapon qualification certificates, etc. Then I would get out the big box - a grey steel box about 18 inches by 18 by 18 with a hinged by a standard government Manifoil combination lock. This box weighed more than one person could carry, and had fold down handles either side. This would be used for our secret material, including the key material for the cryptographic devices. There were log books, telephone lists, war instructions, catalogues, etc - all the paraphernalia for fighting a command and control war. I would go off to the crypto custodian in his little fortress, signing in and out and waiting in the little handover room - bare table and bare walls - for the key material to be brought out, solemnly counted and signed for, seals unbroken. A repeat security briefing, and a cup of coffee - the custodian had two staff and the most unexciting job in the world (as long as he didn't lose any).

Then we would sign out the cars from the MT pool and set off. Germany is a country without roundabouts, and the most stressful part of the trip was on the outskirts of Maastricht just before the turning to Kanne, where there was a roundabout. This followed the very curious Netherlands system of cars joining the roundabout having the right of way. That's fine as you sail onto the roundabout, but not so good when you realise that the car coming on at the next road round the roundabout is not going to stop. More than one journey on these trips had been interrupted, thankfully never mine.

First to the site to go in, check the office, the communications and transfer the contents of the secret box to other storage. My team was known as the UK National Liaison Team, attached to the NATO Headquarters but not part of it. So, though we had access to the NATO Communications Center that handled all teleprinter traffic for the Alternate War Headquarters, we had our own little Comcen staffed by two signallers. They had a tiny Comcen attached to my office, about the size of a bathroom, with Manifoil combination locks on the doors. They would break out the cryptos and I would give them the day's settings, they would do a test and the day shift would break for the night. War started tomorrow for us!

The shift would start with a handover for about twenty minutes. It was a matter of pride as in all military shift systems to turn up early so that

## The Caves at Maastricht

the previous shift could walk out at 7, not start their handover at 7. The leaver would summarise the events of the night (not usually many) and I would sign the log and settle in. We started our shift one hour out of phase with the other teams, because it made for a better handover. So the outgoing night shift in the other departments would be winding down while we were warming up. That meant that we all got to know both shifts. Sometimes the night shift had something busy going, and we would have a chance to get connected with the shift that our people had been working with, and had a good basis for continuing the discussion with their day shift. When it was quiet, we would go for breakfast, usually coming out as the other shifts were going in and out. Our role was liaison, so it was important to know as many people as possible and establish a working relationship. There were about 50 or 60 staff on each shift, plus support staff like the canteen staff, security, fire and the comms people - and the man with the bicycle. All told there were probably 150 underground every day, and maybe 100 at night. It takes a lot of people to fight a war.

So, what did we do? First thing was the morning Ops brief in the briefing area next to the Ops Room. The Ops Room was the largest room in the place, painted all black inside and with very focussed lighting on the desks that were grouped around the outside facing in towards the "Ops tote". The Ops Tote was a series of glass sheets, lit with a light box that shined into the edges. The effect was that very little light showed, but anything written on the glass with a wax pencil would show up brightly - almost glowing. Boxes had been drawn onto the glass so that state information could be added. There were state boards, called "totes" for operations, facilities, war stocks, logistics, attacks, and NBC conditions. You could walk into the Ops Room and size up with a brief study of the boards what was going on and what the state of the whole NATO Central Region was. There were details of perhaps 50 airbases and 100 squadrons, all shown on one set of boards. These states were updated every twelve hours routinely - each base would compose a telex in a very brief format and send it to their national and the NATO Headquarters. The formats were totally aligned to the information that was essential, and the reports could be very brief. For instance, a Logistics report would focus on the number of cubic meters of aviation fuel and the number

of war shot missiles or bombs on hand, with no more than a couple of sentences to comment on the status. Even so, with reports coming in from 50 bases every twelve hours, and extra reports in case of actual attack, there was a flood of signals coming in. All these were tabulated, and the key information was put up on the tote boards. The tote writers worked behind the glass tote boards so that they did not obstruct the view of the ops staff wanting to look at the boards. The tote staff wore headset and wrote in wax pencil on the back of the glass totes, writing backwards so that it would look right from the front. A special skill.

Maybe 20 people worked in the Ops Room as ops officers, tasking operations on the day or the night ops. They would get the overall Commander in Chief's tasking for the day, and interpret that into a Task Order which would be sent out a few hours before. So one set of operations would be under way while the taskers were producing the Task Order for the next wave. The Ops brief would start with the meteorology brief, telling us what the weather would be over the enemy territory. Though the majority of the force was all weather, some operations would be less feasible and the effectiveness of the defences would vary. Then the enemy action and the friendly action would be described. The interesting feature about the briefings was the ops officers giving them to the Deputy Commander would not actually have prepared the briefings they delivered. Their opposite on the previous shift prepared the brief, and they delivered.

Then we would go to the national liaison meetings, to see what requests had been placed and satisfied. Our task was to reallocate resources between the nations, shifting assets to where they would do the most good. Much of the work was done by sending "signals" - encrypted telex messages over our own circuits. The messages would be written out in block capitals on a message pad and signed, then given to the comms people who would convert the addresses into the routing codes and type up the text of the message. The telexes used over NATO were 5-bit Baudot code, which did not have enough variations for upper and lower case letters. Messages would be written with a carbon copy - both handed in with the release time written in by the author. Both copies were stamped and Time of Receipt entered, then one copy handed back. On a normal base the Comcen served the whole base and it might be an hour for a



## The Caves at Maastricht

routine signal being released and actually being handed in at Comcen, which then had service level targets for how long they had to get it typed up and sent. There was a NATO Comcen in the caves that served all of the staff there. But we had our own national means as well. For our little Comcen, working only for us, they had a really easy time and a message, no matter what its' priority would be on its way within a couple of minutes. The cryptos were on line, so plain text was typed in to produce punched paper tape, then the punched tape was fed into a tape reader that was on line to the cryptos and an encrypted stream went up the line to the next center in the chain. In the old days there would be tape relay centers that received the message as punched paper tape output and would then feed it into the next circuit in its journey. By the 80s, the main centers had computerized Tape Automatic Relay Systems. In our Comcen the tapes would be kept for a while until receipt was assumed - there were rules about sending back a service message if the original message was received corrupted. Our signallers had a really easy time. For the first year we were very informal and kept the door open between the office and the comcen, but after an inspection someone got very stuffy and insisted that the door was shut and we used the hatch. But since there was no air-conditioning that rule was not followed for long. It was all a bit silly, really, because I was the custodian for the crypto settings and I and my colleagues wrote all the outgoing messages and read all the incoming ones.

Our national means were not the only sources of signals though. We had our own rather sexy Signal Message Address - let's say it was UK NLT. There was the same sort of kudos that comes today from having a really short url for your website, like david@ferris.com (nice one David). Our message address, UK NLT, was enough to be a deliverable address from any unit in NATO. But we also got messages that came to the Headquarters if they had a Subject Indicator Code relevant to us. Everyone sending a message in NATO would use the same code book for subject indicators, which were three letter codes which the Comcens would use to send a copy to the right departments on the base. Messages might have several SICs, and be copied to several departments. Only rarely was it necessary to actually direct a message to a department or a person at the receiving unit. Imagine a code

FSV - which might mean Operations (F), Air (S) and Tasking (V). The codes were different within each main grouping - TSV might have nothing to do with tasking or air. We were almost unique in having a Subject Indicator Code of our own as well. Rather belt and braces. The signals that came into the main NATO comcen were delivered to the offices by hand. The means was unique to the caves. As one was walking along a corridor, you might hear the ringing of a bicycle bell, and around the corner would come the man who delivered the signals. He was the only person allowed a bike in the caves. He would bang on the door and drop the signals in, a sheaf of flimsy torn off slips marked SECRET or more. Sometimes one would get to the wrong place and I used to take spare moments to go round and drop them off - another way to establish contact. The other set of wheels in the caves was the fire engine, which was a sort of electric cart. That was manned by two firemen, who spent all their time in the fire office reading books and playing cards. Our other communications means was our direct phone line to the peace headquarters. This was a direct line, which came up on a light at the headquarters switchboard. Since it was only used for a couple of months a year and was known to be "important", the operators at the main HQ had a strange idea sometimes about the purpose. More than once at the start of a war I was told off by the operator that I had to get off the line in case anyone wanted to use it. I would explain that the line went to only one place - the phone on my desk, and that the only time it would be used would be if I was calling someone or they were calling me.

I remember being really impressed by the US National Liaison Team that came one time as an experimental assignment. They did not have a permanent office, nor their own comcen, but the US guy had a microcomputer - the sort which was the size of a big briefcase and had a keyboard which stashed on the top. He would compose his signals on the PC, and then print out the 5-bit punched paper tape already encrypted, and take it to the regular comcen with a message form that had only the addresses. Then he could send secure national messages over NATO channels without anyone being able to read them.

So, what were the caves like. The temperature was always very even, sometimes a bit cool, but I rarely needed a sweater. We would wear combat dress in the caves, but I wore short

## The Caves at Maastricht

sleeve shirts all the time. The plan is shown in the web. They were a limestone quarry, not caves at all. The area around Maastricht has a great many such quarries, most disused. The main entrance had a blast door and a police post where you swapped your badge. Then a long concrete lined corridor with inwards sloping walls. I heard that this concreting had been added by the Germans in WW2. After about a hundred yards, there was a dog leg, and shortly after the concreting stopped and the walls were bare limestone. The quarry was pillar-and-stall quarrying, which has a number of distinct features. The corridors were about 12 feet wide, and about 18 feet high. Nothing went on for more than 60 feet or so without a turn. The quarrymen looked for the best stone of course, but they had found that galleries that were much wider, taller or longer were prone to collapse. Just look at the floor plan. Finding ones way could be difficult, because there were a dozen different equally short routes to anywhere. The routes were labeled as streets. My office was on Main and J. So if one had got lost, you would just walk in any direction until your came to a dead end or crossed Main or J. Then just choose whether to turn right or left and either you would get to another dead end or where you wanted to be. The floors were concrete, but the walls were bare. Even in the office, the walls were raw limestone. Our office was the peacetime office of the Senior British Officer in the caves in their peacetime role, as the Joint Operations Center. The peacetime staff were only about a dozen, plus a couple of maintenance people, security and - of course - the firemen and cook. One time I went for a wander with the fireman and they took me out through one of the emergency exits. This led through a steel door into another part of the quarry, outside the boundary of the Operations Center. Here the galleries were similar, but the floor was stone dust rather than concrete. Signs at the corner pointed to the way out. We went all the way - maybe 500 yards, till we came to an opening in the hillside where a farmer had parked a tractor out of the rain. They explained that we had gone in through the normal entrance which was in the Netherlands, and come out in Belgium. **So I claim a first in Sub-Brit - to have crossed a border underground.** As we went back, they took me to a place where there were carvings in the wall, made in the hippy era as I recall. Faces and figures were cut deeply into the wall, as if they were statues standing in a niche. They explained that the caves had been

used as a campsite by hippies, long since left. Another time, I went with the maintenance people to where they were cutting another emergency exit. We went into a part of the NATO caves that was off the beaten track, and showed me where a new gallery had been cut back out towards the surface of the hill. The NATO part was all level, just quarried into the hill. So to do the new emergency exit, they had used a chainsaw to cut the soft limestone. They had got all the way through the rock to where earth showed - the overburden. There was even a chunk of daylight. They said they were waiting to build a secure door before they cut through and removed the earth and built a portal to hold back the earth of the hillside. They joked that if I wanted a shelf in my office, then they would just power up the chain saw and cut one into the stone!

After my tour of duty finished and I returned to the UK, they continued using the caves for a while, but eventually gave them up. I am not sure if it had anything to do with the medical problems suffered by one girl who worked there at the same time as I did. She got some kind of chest infection and was diagnosed as having caught a bacterial infection in her lungs from spores that were in the caves. She was off work for quite a while and eventually given a medical discharge, because what she had had either reduced her lung capacity or could not be eradicated - not sure which. When we met Joep in 2000 on the Maginot Line trip and called by at the entrance to the JOC, he said that NATO had left the place in a bad state, full of asbestos, and that the owner wanted his caves back minus asbestos. Well, it could be that it was the spores problem rather than asbestos. Anyway, it seems quite likely that NATO will keep extending the lease because it is cheaper to do that than to pay for the clean-up.

I had a great time working at the JOC. I'm sure that the atmosphere would have been the same at Burlington. But there would have been fewer Belgians, Dutch, Germans and Americans at Burlington. And the Rose & Crown? Yes, there was a pub in the caves - the "Flintstones Club", which normally served alcohol but was closed during the war exercises.

**Bob Hankinson**

bob.hankinson@bigfoot.com

## Swiss Motorway Jets

Reading a question asked on our Sub Brit e-mail list about aeroplanes using motorways as runways took me back a couple of decades in a flash. In the mid to late 1970s, I began earnestly touring Europe on my motorcycle. As confidence grew, so did the distances travelled. With each Bank Holiday weekend, I probed deeper into Western Europe.

I cannot remember exactly when, but on one trip through Switzerland, on one of their superb uncrowded (and, in those days, free)



Swiss Jet about to take off, after coming out of its mountainside hanger

motorways, I was surprised to be held in a queue of stationary traffic. Not sure whether it was legal to filter through to the head of the queue, I sat and waited, assuming it was an accident. Within a few minutes or so, there was a roar overhead and a military fighter jet flew low over our vehicles, and appeared to land close by. Thinking it was odd to have an airstrip so close to a major road, I started the bike up again and moved off with the traffic. Within a mile or so, I noticed just off to the side of the motorway carriageways, three enormous steel doors in the side of the mountain. Given that the motorway was wide, straight, and – in that section – straight, I began to wonder...

The following year found me visiting Switzerland again. I rode the section a couple of times, and it happened again. This time, I filtered through the line of cars and trucks and got to within sight of the head of the queue. There was an overhead gantry displaying flashing red lights, with an attendant Police car holding up the traffic.

A Hawker Hunter Jet screamed overhead, and landed on the motorway section in front of us. By the time we got to the end of its runway, there was no trace of it. However, there were huge steel doors in the side of the mountain by the side of the road. There was nowhere else

for the aircraft to go, so the doors must have been to its hanger.

At the time, I was just overawed by the whole thing and cannot remember specifics; like – what about the central crash barrier etc? I later read that the Hunter aircraft had been purchased from the RAF, but it was the Swiss pilots who had 'delivered' them. The calibre of the Pilots was impressive I felt – landing their newly acquired jets for the first time without practice on such a small runway.

A few years later, however, I was a bit more on the case. In the early 1980s I found myself making various journeys to and around the former GDR (East Germany). The Soviets used a chunk the eastern E40 motorway from Berlin to Frankfurt/Oder (and then into Poland) as a military runway. Driving eastwards from Berlin, it was obvious: the motorway quality suddenly improved dramatically and the road became very wide indeed. The usual two-lane motorway widened to five lanes each way, and the central crash barrier disappeared making it ten lanes wide. Somewhat over the top for the occasional Trabants asthmatically wheezing their way along the empty road. There were military blockhouses dotted along the section way off in the surrounding deserted countryside. This was, and still is, a pretty bleak part of Germany, with few villages or towns.

I drove along this section of the E40 many, many, times and noted various likely buildings, but saw no hardened hangers. It was not possible to investigate further as there were no roads off this motorway that one could 'mistakenly' take and later claim to be lost. The motorway, basically, went to Poland and nowhere else. If one should stop, within minutes a Police car would pull up behind. Those using the motorway had to have Transit Visas, *and* a visa for Poland. The GDR Police used West German cars (with false West German number plates) to prowl this (and other) motorway. There was a blanket 100 kph (62 mph) speed limit, which was rigidly enforced. I even saw Police hiding in the branches of trees with speed detectors. Fines were payable in West German Marks,

## Swiss Motorway Jets

valuable Hard Currency. despite the high infestation level of motivated Cops, I managed to avoid getting caught for speeding – or anything else...

I never actually saw any Russian jets there, but did see refuelling vehicles and starter units. Also noted was a large vehicle which was later identified as a runway de-icing unit. I also saw evidence of planes having landed, in the form of tyre marks on the motorway.

**Tony Page**



Refuelling on the Motorway in Switzerland

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## The Musings of a Bunker Nut

It all began a long time ago when I was in short trousers, about 30 years ago in fact, I know to some of our members reading this article who are in their 'twilight years' that might not seem to far in the past, but just to set the record straight it doesn't seem that long ago to me either. I was the usual adventurous 5 year old with scrapes on my knees and face covered in jam or peanut butter, looking a right state. But I was my mother's little angel.

The house I grew up in was an imposing monstrosity of a building built in the corner of an old First World War airfield. At the road frontage was my parent's shop, which was an Off License. Out in the rear garden was a garage with attached laundry room, the whole building seemed to be full of old junk piled up to the roof. Various sheds adorned the property. These held crates and bottles of various shapes and colours all returns for the brewery (10p deposit for the old lemonade bottles) I seem to remember.

The local hooligans used to come into the garden and try to steal these bottles, and then have the cheek to take them round the front and try to redeem them in the shop. Dad tried to secure the sheds with big locks and barbed wire giving the end of the garden a claustrophobic feel not unlike Colditz Castle.

Life was good I had lots of friends to get into

mischief with and a massive playground to do it in. We had fields out back full of bulrushes and places to hide. Rivers and drainage ditches criss-crossed the fields providing water to fall and drown in. A huge old hanger stood in the corner of the plot. This was full up with old army vehicles and other interesting old tat. To top it all the sun always shone and it never rained. I know that's rubbish but that's the way it was, well as I remember it from the eyes of a child.

### **MY FIRST SIGHT OF A BUNKER WAS THE NEARBY WARTLING ROTOR SITE**

My first sight of a bunker was the nearby Wartling ROTOR site, my uncle ran a civil engineering company and was undertaking some work at the station during the period when it was still being stripped. I must have been around six at the time. I only remember walking down the entrance corridor hanging on to my father's hand. I was frightened and not wanting to go any further had to be taken back out again. Sitting in the car outside the guardhouse my mind was running wild with the endless possibilities of what could lay below the ground, this was defiantly the start of an obsession that still survives to this day.

It was about 7 years later when I got another look at Wartling, I was fairly mobile and in the possession of a bicycle. Off I went with a friend and a torch to find the radar station that I had wondered about for so many years. After wasting a lot of time and effort looking at what we now know to be the position of the old

## The Musings of a Bunker Nut

Wartling Happidrome, we ventured up the hill to be confronted with the ROTOR site. The place was totally derelict by then and heavily vandalised. The door to the emergency exit was open and hanging off the hinges. I remember peering down into the gloom below and getting my first smell of a damp bunker. I was not happy, neither was my friend; It was like looking down into the unknown.

After a while of trying to pluck up some courage we ventured down the stairs into a cold clammy atmosphere that was such a contrast to the bright sunny day above. We got as far as the first set of doors into the bunker before our nerve and pitiful torch failed us and we had to return to the surface. After a week had passed, curiosity got the better of us again and we returned with improved torches and explored the whole bunker except the wet bottom floor. That was it, I was hooked I had to find out more. Looking back, at that stage of life entering the bunker was a dangerous thing to do due to the general condition of the place. The bunker is now in worse condition and is deteriorating rapidly; it is now securely locked with a substantial steel door.



Jason and Robin—Bunker Nuts ! ?

At this time I knew nothing about why this station existed. I started to ask questions, after a bit of digging around I found out to my complete surprise that another station existed at Beachy Head. I could not believe that there would be another, so off we went on our bicycles to find it.

We arrived at Beachy Head worn out due to the 8-mile ride up and down some great big hills. We sat down next to the ice cream van by the hotel, whilst eating a choc ice I found myself looking at something familiar, something that I remembered looking at through the window of

the car, all those years ago at Wartling. I was off across the road like a shot peering through the windows of the guardhouse.

After walking around the building for a minute or two I realised that there was no way into the bunker. There was no evidence of any other surface structures nearby so it seemed that we had come to a dead end. The arrival of one of the coastguards that occupied the building changed all this. He seemed amused that I was interested in such a place. He told me that access was possible if you knew someone that had a key, and of course he was the man with the key. Two weeks later I went back one Saturday and was given a tour by the coastguard. I wish I could remember his name now.

My father knew of another bunker at Fairlight, so I nagged him one Saturday to take me over there, I think he realised that he would not get any peace until he had taken me. We walked down the Coastguard lane only to find the guardhouse gone; the local council had demolished it about a week earlier, no trace that I could see apart from shapes in the ground. I was horrified at this.

Truleigh hill came next, I was told about it by a friend of my fathers, so at the ripe old age of 14 I packed a map and sandwiches and set off at 6.30am on a sixty mile round trip to find the place. My mother and father were not too worried about me going off across the countryside for the day, as I was very rarely at home during the summer holidays. I spent all my time cycling around. My father knew I went bunker hunting, I think my mother did not want to know. It seemed what she did not know about she would not worry about. That was fine by me and it gave my dad a quite time.

I reached Truleigh Hill about midday and found the place instantly. I could see the guardhouse and aials from quite distance, I felt quite the expert. Cycling up the drive I could not believe my luck, the gate was open. I found someone sitting in a car at the side of the guardhouse. After explaining what I was doing he told me that under no circumstances would I be allowed to look at the bunker.

I must have looked mortified "But I have come all the way from Eastbourne to see this site" I squeaked. The old boy's gaze shifted from my face to a point behind me where my bicycle was leaned against the wall of the guardhouse.

## The Musings of a Bunker Nut

"What on that old bike, you must be mad," he said. I think I just shrugged. He must have felt sorry for me standing there with a big long face. "Ok then I will show you, providing you do not tell anybody".

I think it will be OK to tell you all now, as he must have been around 85 at the time. The bunker was used for storage, it was full of boxes and papers filing cabinets and other associated junk, I had a good tour around and shown all the nooks and crannies. It was great; I even got a cup of tea before I left. I arrived home at about 9pm tired and hungry but with a big grin on my face.

By the time I was 15 I had seen an R1 an R2 and a R3, I did not realise this until about 2 years later when I finally found out what they actually were. My interest waned around this time when I found out that girls were much more interesting than bunkers. My interest had a revival when I was about 22. I started to find out a lot more about ROTOR, I met some interesting people and visited some more sites.

A question that I have pondered and discussed on many occasions is why bunkers? Mankind has always a need to discover, a need to find out more. Bunkers and underground structures bring out this need, a need to explore to find out something new. History fits with this, we are all at this moment in time in an ideal position to

discover new pieces of the jigsaw. We are not that far away from the point in history that was the end of the cold war. This gives us an ideal "historic playground" with plenty of new pieces of information to discover along the way.

I could never replace those feelings back when I was a young explorer, on entering a bunker, the feeling of total discovery, the feeling of not knowing what is round the corner. I believe this will never happen again, I know I am not going to discover the hidden tunnel, the secret trapdoor leading to the hidden room that I convinced myself existed when my mind was more impressionable to the rumours put my way.

There was a certain excitement back then, it existed only in the pit of the stomach. This feeling has been replaced with time and knowledge; I have come to accept that history is akin to a slowly dripping tap filling a sink. Information is valueless to an individual without the work that it takes to acquire it. This is where the excitement comes from now, a different angle I know, but to me just a satisfying.

**Jason Blackiston**

### **A Self Confessed Bunker Nut**

Jason's ROTOR Web site can be found at  
[www.rotorplan.co.uk](http://www.rotorplan.co.uk)

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## Anti Aircraft Operations Rooms

Anti-Aircraft Operations Rooms (AAOR's) or Gun Operations Rooms (GOR's) as they were known during the second world war owe their origin to the Air Defence of Great Britain (ADGB) organisation of the late 1930's. (The name change occurred during the 1942 re-organisation of AA Command with both titles being in common usage).

With the advent of radar, means had to be included: found to utilise the early warning given, to the best advantage of the defenders.

Experience had shown that raw data from the radar stations, which frequently overlapped that of an adjacent station, when merged with that of the Observer Corps (not yet Royal), needed filtering to produce the latest, clearest information for display on Fighter Command's HQ Operations table and the four (later 6) fighter Group tables.

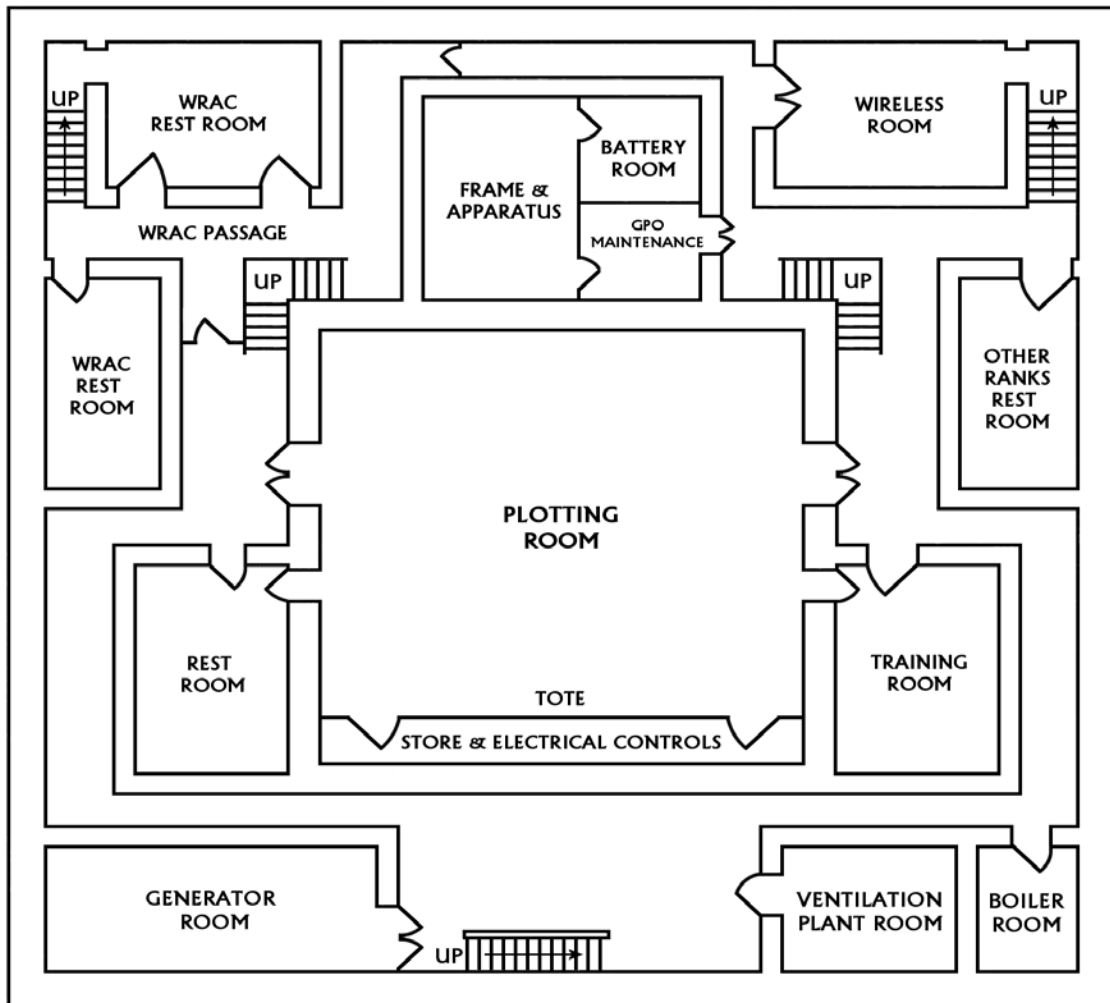
The lead service in the ADGB was the RAF's Fighter Command who had put up the aircraft to combat the attackers. The defences also

1: RAF Balloon Command based at RAF Stanmore, whose balloons were flown to force an increase in height of the incoming raid and thus become less accurate.

2: Army Anti-Aircraft Command, whose HQ (Glenthorne House) was co-located with Fighter Command's at Bentley Priory in Stanmore and whose guns were required to shoot down enemy aircraft.

3: Army searchlight units to illuminate targets to permit gun and/or aircraft to engage.

## Anti Aircraft Operations Rooms



Anti Aircraft Operations Room Lower Floor

It was immediately apparent that guns, balloons and aircraft were not compatible in the same piece of air space so some form of control had to be evolved.

Fighter Command's chain of command went from Command HQ through first four, later six, Fighter Groups, each of between three to seven Sectors.

At each relevant RAF Sector Operations Centre (SOC) was the AA Brigade Commander (a Brigadier, who sat beside the Sector Controller).

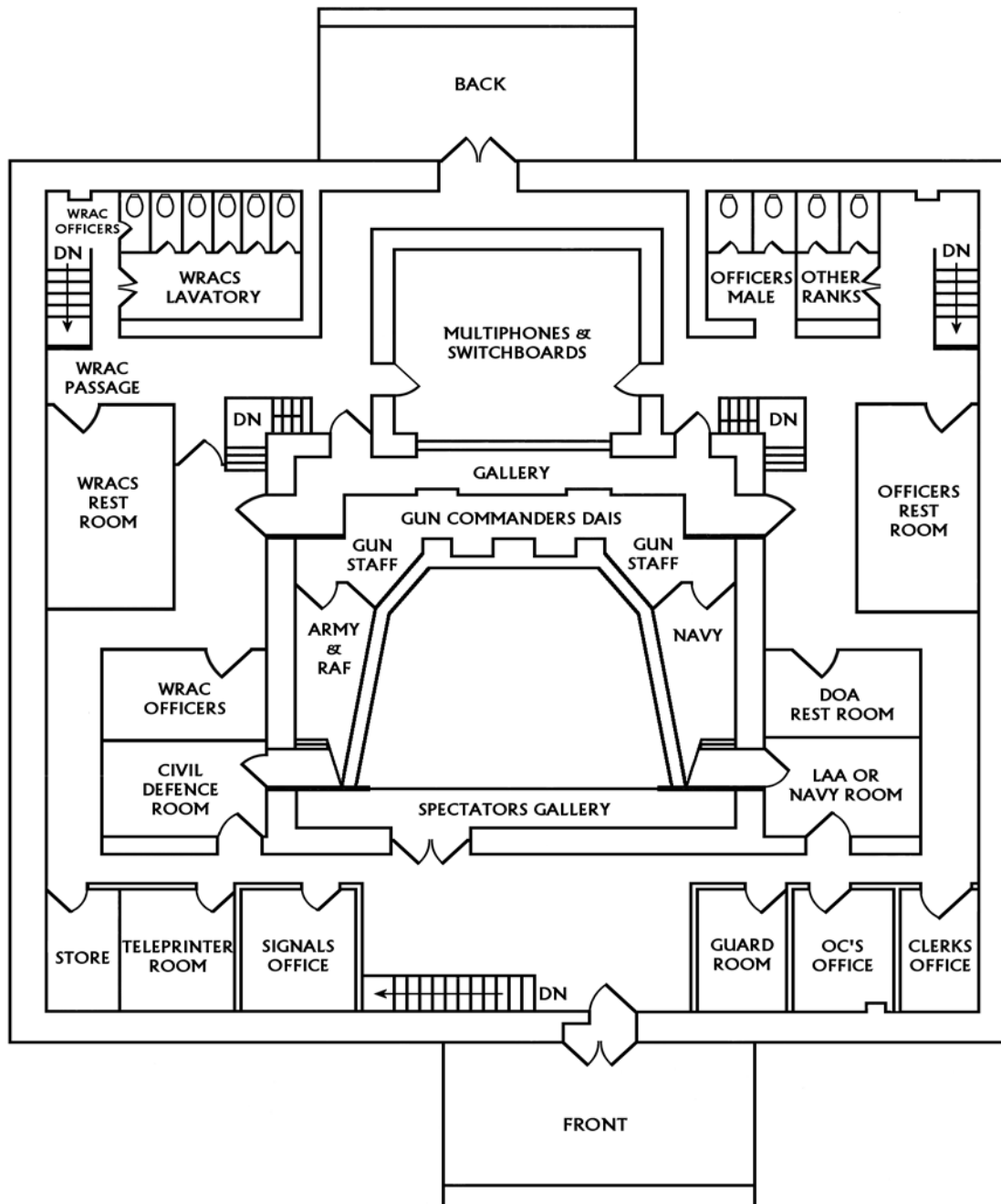
On being allocated a threat (by Fighter Command) they assessed the threat and decided what response to make, i.e. whether to engage with aircraft or guns. If the latter, the Brigadier ordered the subordinate GOR to engage and gave permission to open fire.

The GOR's themselves were rarely purpose built, more usually large country house adapted for the purpose. Two relevant examples being Craigiehall in Edinburgh and Torrance House in East Kilbride, both subsequently to be AAOR's in the Rotor era.

Here a large map table with the same area and co-ordinates as that of the SOC was kept up to date with the same data.

The GOR was in telephone contact with all subordinate gun sites, ammunitions depot and transport companies etc. and was responsible for the operational administration of the GOR's as well as exercising operational control. This situation pertained until the end of the war, when a huge stand down and general demobilisation occurred. The AA defences were then reduced to a nucleus commensurate with the perceived threat.

## Anti Aircraft Operations Rooms



Anti Aircraft Operations Room Upper Floor

The ADGB in 1947 envisaged the deployment (AAOD's) to be deployed when required. of 25 regular and 78 territorial HAA Regts. RA in (between 6 – 24 weeks were needed to 47 Brigades split into 5 AA Groups. 54 key gun reinstate everything). Finally, several new gun sites were designated as 'IGLOO' sites had sites were built, but not equipped, to fill the gaps guns and equipment in situ and were required to in the new GDA's. be manned and operational within 36 hours.

The heavy 5.25" guns were in the main left in Numerous experiments were in progress during their WW2 locations and formed the nucleus of this period to improve the performance of the new GDA's where relevant. Of the 3.7" guns existing apparatus and introduce new which formed the remainder of the armament, equipment and radar was available at all gun many were retained in AA Ordnance Depots sites.



### Anti Aircraft Operations Rooms

Group	Gun Defended Area	Anti Aircraft Operations Room	Ordnance Survey Grid Reference	Present Status
One	Harwich	Mistley Heath	TM122313	Museum (Closing 2002)
One	Thames North	Vange	TQ719864	Derelict
One	Thames South	Fort Bridgewoods	TQ739652	Demolished
One	London North	Lippetts Hill	TQ397970	Police Training Centre
One	London South	Pendall Camp	TQ309524	Sold 2002 Empty
One	Dover	Dover Castle	TR328416	Museum
Two	Portsmouth & Southampton	Fort Fareham	SU573049	For Sale 2001 Empty
Two	Bristol	Lansdown	ST715702	Avon Fire Brigade Conference and training
Two	Brockworth	Ullenwood	SO936174	For Sale 2002
Two	Plymouth	Crownhill Fort	SX487592	Museum
Two	Portland	Ridgeway Hill	SY679857	Warehouse
Three	Lock Ewe	Gairloch	NG807762	Road Dept. Depot
Three	Glasgow & Clyde	East Kilbride	NS653526	Parks Dept. Depot
Three	Clyde Anchorage	Inverkip	NS216720	Derelict
Three	Forth & Rosyth	Craigiehall	NT168758	Extant Use Unknown
Three	Belfast	Lisburn	IJ263658	Storage
Three	Londonderry	Campsie	IC510207	Derelict
Four	Birmingham	Wylde Green	SP121948	Demolished
Four	Mersey	Frodsham	SJ520766	Conference and Training Suite
Four	Coventry & Rugby	Stoneleigh Park	SP341720	Demolished
Four	Cardiff	Wenalt	ST153835	Empty
Four	Barrow	Abbottswood	SD220722	Demolished
Four	Swansea	West Cross	SN405198	Emergency Planning Dept. Training
Four	Milford Haven	Llanion Barracks	SM972043	Derelict
Four	Manchester	Worsley	SD741007	Empty
Five	Tyne	Gosforth	NZ345704	Northumberland County Records Office
Five	Tees	Kirklevington Hall	NZ429107	Private Residence
Five	Hull	Wawne	TA091370	Planned Museum
Five	Leeds	Birkenshaw	SE 202279	West Yorkshire Fire Brigade HQ
Five	Sheffield	Conisborough	SK491971	Private Resudence
Five	Derby	Elvaston	SK413326	Empty

## Anti Aircraft Operations Rooms

With the RAF's review of air defence radar and control culminating in the Cherry report, the whole issue of defence resulted in the Rotor Plan, a scheme to protect the control facilities of Britain's defences which, from wartime experience, had proved to be vulnerable to disruption from enemy attacks.



Gosforth AAOR—Now Northumberland County Records Office  
Picture By Nick Catford

The Rotor programme, which was constantly upgraded and changed and was eventually superseded by progress and technology, never reached a final conclusion. It called for the design and building of underground protected accommodation for Sector Operations Centres (SOC's), GCI, CHEL and CEW radar stations on the east and south coasts while heavily protected surface buildings sufficed on the west coast (See Rotor).

As part of the same programme, the Army AA Command had 31 AAOR's designed and built to service the new, fewer GDA's of the cold war.

With the exception of three AAOR's which were converted from existing WW2 AAOR's (Dover Castle, Fort Fareham, Crownhill Fort) and

Llanion Barracks (a converted Victorian magazine), all were based on an identical two storey concrete structure with a central operations well and sufficient accommodation to fulfil their admin. and ops. function.

This structure could be surface built or semi-sunk with one storey below ground level or set into a slope or hill. The design was flexible enough to allow the two entrances to vary from both on the lower level, both on the upper level, to one up one down or even one down one up.

The demise of AA Command with the AAOR's and gun sites was both sudden and complete. With the advent of guided missiles and the H bomb, the Command was abolished in 1956 and the gun sites and AAOR's became redundant. Some were abandoned while others found a new

role within the armed forces whilst yet more entered the field of Civil Defence. Some have found a third life in the leisure industry and others converted into homes. Four, Fort Bridgewoods, Wylde Green, Stoneleigh Park and Abbottswood have been demolished. The structures of the rest remain in differing conditions of current usage ranging from homes to dereliction.

Thirty-one AAOR's have been found, visited, photographed or otherwise accounted for by Subterranea Britannica, the last one being Campsie in Londonderry, Northern Ireland. This was built but not finished, (i.e. not fitted with doors, windows or electrics) construction probably being halted in March 1955 on the announcement of the demise of AA Command

## Anti Aircraft Operations Rooms



**Frodsham AAOR—The Former plotting Room now a Conference and Training Suite**  
Picture By Nick Catford

by December of that year. An AAOR is alleged i.e. Vange, Lippetts Hill, Pendel Camp, East to have been located at RAF Uxbridge. This has Kilbride, Craigiehall, Stoneleigh Park and been mentioned in various documents and Elvaston while others required entirely new accounts but, to date, no conclusive evidence locations.

has been found to show that it ever existed.

Aerial imagery of the area both pre and post the Rotor period supports this opinion. Similarly, War Plan UK identifies Scapa Flow in the Orkneys, Falmouth, Leighton Buzzard and Norwich as further sites of AAOR's but again, no evidence has been found to substantiate this.

Several AAOR's were located on existing WW2 military/gun sites,



**Inverkip AAOR—Now derelict** Picture by Nick Catford

Apart from several sequences of photographs at the Imperial War Museum, GOR's/AAOR's seem to be a dead or lost subject with little or nothing recorded or documented about them. The above is an effort to remedy this.

**Bob Jenner**  
**July 2002**

## Never Again!

or

*"How to mean what you say, and say what you mean"*

### Saturday, 27 July

Dear Diary,

Today I met a group of nutty Englishmen and, thanks to them, had a full frontal of a German waitress's left breast. But first things first.

I do sincerely believe that my final words at the end of last year's East Germany tour were: **N e v e r a g a i n !** However, due to old age creeping on with its attendant loss of memory, I gather that at some time this year I said "Yes, OK" to someone, and here we were again! This time there were only eleven of them, and the meeting place was the same — t h e Bundeswehr barracks at Magdeburg. The sergeant-major had prepared everything as always, and the group turned up in the early evening. Once again we had

the whole barracks to ourselves and the front gate had been left open for us — very accommodating, the new Bundeswehr.

One of the conditions for this trip was that my admin was to be kept to a minimum, so there was no meal arranged for the evening, no pizzas to be delivered, menus to be translated beforehand, etc. Instead, we piled into the Mercedes bus and guided by Dan McKenzie's firm hand we drove in to Magdeburg to find the first decent looking nosh hole. We decided on

an Italian with a terrace where we could enjoy the 35° that the weathermen had thoughtfully provided for us after weeks of rain and a cool 18°. A very pleasant waitress brought out the menus, and the ordered drinks were placed around the table. This necessitated that she

bend forward to lean over the table, whereupon it became immediately obvious to several pairs or staring eyes that she had a very nice tattoo of some size over her left breast. A certain member of the group sitting opposite me, who shall remain nameless (Andrew Smith), opined that I would not be able to get her to show me the full tattoo, the lower part being hidden by her blouse. When she next came out, I told her (in German) that the immature



Fred Lenin and the Gang !

juvenile opposite me would like to see her tattoo, whereupon she very coolly unbuttoned her blouse, pulled it open and revealed the secrets of the complete tattoo, together with the "canvas" beneath it. Two advantages: one - we saw the tattoo, two - Mr Smith was obliged to pay for my drinks the next evening!

### Sunday, 28 July

An early start for a long journey to reach a small location called Gadow. Fortunately, we were able to use the Berlin ring autobahn to make

## Never Again!

good speed and, being the weekend, there were no trucks on the road. At Gadow we linked up with Peter Rentsch from my (German) bunker group, who accompanied us on several days last year. Also from last year there was Andre Rotter, who runs the former Stasi bunker at Machern, near Leipzig, where we had also called in and had been given an excellent tour. Andre had got in touch with me only days before this year's tour was due to start on another matter, discovered that there was a tour, that he knew none of the sites / sights, dropped everything, including his (well) pregnant wife, and drove up to join a good cause.

Gadow was ex-Soviet, but what made it really interesting was the fact that the huge complex had never been completed, was uncovered, so that we were able to look at a naked Soviet bunker complex from all angles, including walking along the roof of the domed chambers: two very high (15 m) long "hangars", and four lower hangers, all interconnected. We had to



**Unfinished Bunker at Gadow**

climb up rickety construction ladders, avoid rebars sticking out of the concrete walls, but were able to admire a bunker in a state that is not normally available for public view.

Back to the bus and on to Badingen, actually Osterne, picking up a former NVA colonel on the way, who was to be our next guide. Osterne had been the (extensive) site of an NVA air-defence missile facility, in this case armed with VEGA missiles. Our guide had prepared a substantial amount of material, as had Peter Rentsch, and he took us through the various stages in the camp that the missiles would have passed, from the moment that they would have been checked in at the gate through to their installation on the launching platforms, including warhead inspection and storage, fuelling of the missiles, testing and finally the run-out on rails

from the twin missile shelters at each of the twelve firing positions to the launch pit. An



**Vega Missile Launch Area and Bunker at Osterne**

excellent site and an excellent guide.

At the end of a long, hot day we drove up further north to Fürstenberg to find our night's accommodation, where we relaxed over a good meal, well washed down with German liquids – a routine that we unfortunately had to follow at each of the subsequent stables that we slept in. A slight, but interesting digression started us off the next morning in Fürstenberg on

### **Monday, 29 July**

when we drove round to a rail ferry, which the Soviets had used to ship their munitions over the River Havel from / to their nearby barracks. The small rail section mounted in true Sov construction style on a powered barge caused the cameras to start clicking, as did the very picturesque part of the Havel and river bank. The crossing was only a matter of a few yards, but nevertheless a useful way to move the munitions by rail.

Our next port of call also involved munitions, but



**Rail Ferry over the River Havel**

## Never Again!

of a larger denomination: the site of a Soviet nuclear missile and warhead store at Neuthymen. This was one of the original sites that the Sovs had used before it clicked with them that having missile, warhead and firing position in one location was not necessarily advisable if one-ski wanted to remain operational. Subsequently, the three elements were to be found at dispersed locations. Here, though, the launcher bunker, an impressively reinforced long shelter (access from both ends, i.e. for two TELs), and the warhead store just round the corner were both opened up for us. Once again, Colonel Heuschkel lead us through the sequence of missile handling at the site so that we were able to appreciate yet again the extent of his military research (he himself is an ex-tankie, so this was all new to him many years ago). While we had been waiting previously at the main entrance he had unrolled two very



**Nuclear Missile and Warhead Store at Neuthymen**

large maps of the Fürstenberg area with details of Soviet units locations marked in. Since this had been the home of the Soviet 2<sup>nd</sup> Guards Tank Army, there was little space left for the locals! Fürstenberg also housed the Ravensbrück concentration camp on its outskirts, an area that the Soviets had also subsequently taken over for their purposes.

As mentioned above, warheads and missiles were later stored separately, something that we were able to appreciate at our next stop, Lychen, aka Himmelpfort, which had been a Soviet nuclear warheads store. Since we had visited the sister-site at Stolzenhain last year, most of this year's participants were able to compare the two locations: and Lychen won. The site was in an even better condition, both inside and out, as we also made an extensive tour of the grounds before visiting both of the warhead bunkers, including the vehicle park and



**Soviet Nuclear Warheads Store at Lychen**

technical area. Immediately in front of the "business" area we were able to take a look at the terminal station for the incoming underground cable to the site. The active part of the site is divided into several zones of protection, some of them being surrounded by as many as three rows of barbed wire and movement sensors, plus an optional HV system (reaching 10,000 volts at full power). The KGB were responsible for guarding the first zone inside the barracks. The entrance here was a sliding gate, which was only opened when warheads were actually moved in or out of the site. Security was so tight that opening of the gate automatically sent a signal to Moscow that a change of state had occurred. The guardroom behind the gate has a concealed tunnel, with the entrance inside one of its rooms, leading out to the rear of the security zone so that troops could deploy immediately around the area of the bunkers and armouries without being seen.

A Y-shaped tunnel was the normal method of access for military personnel who had to work in the security area. The entrances in this case



**Soviet Nuclear Warheads Store at Lychen**



## Never Again!

were in the cellar of the HQ building located just in front of the sliding gate. One of the arms of the "Y" provided a normal entrance, while the other had a series of decontamination rooms on each side. The exit came out some 100 yards into the security zone.

The inner zones housed technical workshops for missile head inspections, armouries and numerous pillboxes around the actual bunker sites. Once again, Mr Heuschkel provided a detailed description of the facility, as well as providing additional documentation. Incidentally, a major thanks is also due to Peter Rentsch, who had provided us with a thick booklet of descriptions of numerous facilities and background information that he had compiled, based on my tour programme, which he had earlier received from me.

We only had a short drive to our hotel in Templin, where I discovered that my reservation for the group had not been passed on by the previous owner, a young lady, who had also run off with all the contents of the safe. Fortunately, the hotel was empty so the new landlord was extremely grateful for our sudden appearance. The two feet of water from the previous week's floods had also disappeared, for which we were also very grateful. Dinner that evening was enjoyed at a lakeside terrace with the evening entertainment being provided by a member of the group, who managed to prove experimentally that the legs of a plastic chair can only bend so far when a substantial weight is exerted on it vertically before they are required to break off.

### Tuesday, 30 July

As usual, an early start, but this time only a short trip to our next destination: Vogelsang. This was the former home to the WGF 25<sup>th</sup> Armoured Division, a munitions depot and our point of scenic interest: a communications bunker that had been in the hands of a battalion from the 6<sup>th</sup> Signals Brigade stationed at Frankfurt / Oder. The brigade was not part of WGF, but had been directly subordinate to the Warsaw Pact, i.e. the Russians, and Moscow. We had visited another comms bunker of this merry band the previous year at Altengrabow, so it was a pleasant opportunity to meet up with old friends. However, ..... After our 25 minute approach run to the site, we came to a gentle halt just over the railway line on the hard-standing that had previously served as the loading ramps for 25 Armoured. We were in good time, so the gang started a brew-up (please bear in mind, dear Reader, we had just

finished a huge buffet breakfast only some 30 minutes earlier). By this time, certain members of the group, who will remain nameless, were gradually reaching heights of sexual arousal at the site / sight of the railway track. Since the surface of the rails was already glittering in the rays of the morning sun, our experts informed us that the line was in use – information, for which we mere mortals were eternally grateful. The level crossing barriers were inspected, photographed, etc., but you know the story. The first local train that passed by heightened the state of arousal to practically uncontrollable levels, and I feared for the miserable offerings that I had up my sleeve for the day. Evidence of a moving train had been clearly documented on a camcorder that had been positioned by the side of the track. Strengthened by this experience, the duty camera man decided that the next train was to be filmed from the centre of the track. Within minutes our Noddy Town express came thundering along the line, stopped right in front of us, the driver got out of his cab, walked to the middle of the train, bent down and acquired a very sexy camcorder for his wife, climbed back into the train via a middle door, which he had previously opened to facilitate his escape, and continued his shift, totally ignoring the comments from his surrounding admirers.\*

We subsequently had ample opportunity to discuss the SOPs for this kind of operation as the duty bunker owner arrived some 35 minutes late – full of apologies and less all bunker keys. He remained very cool, we drove in to the area along familiar bumpety-bump concrete slabs to arrive at the bunker site. The surrounding buildings have all been razed, but Mr Satori intends to retain the bunker. At this point he produced the duplicate keys in the form of a portable generator that he happened to have lying around for such moments, and an angle grinder, and set to in a very enclosed space to carve off slices from the bunker door until he could access the padlock in its secure housing with a pair of bolt cutters. In response to this stirring attitude, the group had a quick whip-round to help him replace the discs that he had ground to a new shape. He graciously passed the money on to his assistant who had been holding the bolt cutters, left us the padlocks to the barriers on the approach road and cleared off.

The comms bunker was very similar to the other sites belonging to 6 Sig Bde: the main entrance corridor of the Y-fork being crossed by two

## Never Again!

further corridors, once in the middle, once at the end. Various staff rooms, equipment rooms, comms gear produced suitable motifs for the avid photographers. We also managed to liberate numerous cable tags in Russian, which give me an insight into the type of equipment in use, the next comms facilities along the line, and other such useful info that finds its way into my databases.

The delay brought about by the owner's late arrival had thrown my tight programme out (as well as giving one of our numbers the opportunity to donate his camcorder to a deserving cause), thus suggesting that Vogelsang should be avoided at all cost – last year the owner had smashed the wing of my Volvo during a bunker visit when he reversed into it at very high speed. He apologised profusely, saying that he didn't normally have



**East German Border Guards bunker**

strangers on his grounds so he had totally forgotten our cars that were parked behind him! Initially, I had intended going on to an NVA site with at least 127 bunkers (yes! one hundred and twenty seven: that was when we stopped counting!). The site was intended for rear services, so each rear service, i.e. logistics and the like, had its own set of bunker complexes, plus some comms bunkers thrown in to add a bit of class. However, there were more important facilities to visit so we burnt rubber to do a sharp right turn and moved off towards the East German Border Guards bunker.

On the way (there is always something "on the way" - you just have to find it), we stopped off at a Soviet cable repeater station which was opened up relatively recently and which is still fitted out with its original equipment (well, almost all of it!). It's in the form of a semi-submerged bunker. The entrance door (with the inevitable sensor) leads you into a large

standing cylinder some two metres in diameter. A large manhole-type cover in the floor provides access to the business part below. Unfortunately, the ladder had been removed, but from a previous visit with the aid of a DIY rope ladder I was able to point out the various cubicles and racks located some 3 metres below us.

One of the advantages of having a sensible hobby such as bunker research is that you get lots of fresh air and exercise. After the repeater station and a short drive, including passing the surface HQ of the Border Guards and a Soviet helicopter, we convoyed into a forest south of Berlin, debussed, kitted up and marched off with flanking patrols to our next objective (please excuse the terminology, dear Reader, but they are military bunkers after all, even if most of the motley bunch from England (and they were very motley) had never seen the inside of a khaki uniform - for which, I hasten to add, the Army was very grateful). We had a long, hot haul to the Border Guards cubby hole, but fortunately Peter Rentsch had come down specially from Berlin to guide us to the hole in the ground. As is often the case, the local authorities had blocked up main entrances with earth, concrete slabs or by welding the doors - all of which can be rectified (and is), but it takes time. It must also be borne in mind that some 13 - 15 years have passed since a lot of the bunkers saw active service. Consequently, trees and shrubbery have grown accordingly.

The entrance was indeed a hole in the ground, and small at that, but everyone, including we know who, got through (just). And what a sight! A main corridor, some 100 m long, with numerous side corridors crossing it at intervals, each of these having their own sets of mini-bunkers "clipped on" or sub-sub-corridors, leading to further bunkers. The telephone exchange still stands, but bears the traces of GBH inflicted by the mindless poltroons that claim an interest in bunkers. There were other items of equipment in the numerous rooms as well, but the interesting aspect here is that the main staff rooms all have the designations of the various commanders who worked there painted in red over the lintels of the white painted entrance areas, so the bunker is slightly less anonymous than many other complexes. And then the long walk back, but we split it up by going to a nearby site where the comms vehicles for a communications facility in the area were stored in high reinforced shelters. As we dripped gallons (or litres) at the vehicle



## Never Again!

point, Dan McKenzie very kindly drove the bus through the trees around the barrier to do a minor casevac for a tired bunker hunter who was slowing down, but who refused to give up. Fortunately, Peter R's bunker nose was better than his short cuts to the autobahn, but we nevertheless did find it, and subsequently also the exit to the former Stasi regimental HQ that was now a hotel, and a good'un at that.

### Wednesday, 31 July

By this stage of the tour there were obvious signs of boredom creeping in (cries of "Not another bunker?!"), so I went for something completely different in Baruth. We first drove off to a Soviet military cemetery which was guarded by two T-34 tanks, walked the grounds and went inside the chapel.

A short distance away we then came across a



**A "T34" Stands Guard at the Russian Cemetery Baruth**

metal tower some 6 or 8 metres high with a large "8" cut into a metal plate, originally on all four sides, at the top. These were used as guides for the Sov tankies as they belted through the forests along tank routes that ran E - W from the Polish border practically to the IGB, and N - S as links between the horizontal routes and to the numerous training areas that bespattered East Germany. As a result, Ivan on tour was able to move major forces around without having access to the (ab)normal roads ("Thumping Sov tanks over cobbled roads at speed and over long distances is not something that should be recommended" - Extract from the Soviet Army's guide - 2<sup>nd</sup> Edition, Moscow, 1944 - to their tankies in East Germany).

Round the corner (no long driving today) and we found a Soviet barracks with yet another bunker tucked away in its grounds, this time at Lynow, one of the comms facility for HQ WGF, just up to the north at Zossen-Wünsdorf. Not large, but



**Soviet Tank Route Marker Route 8**

different and necessitating access via a ladder in an emergency exit. Several cables and other comms equipment were still in evidence, including some air cables with their filler points. Not too far away in the same barracks was a rather nice sauna with tiled images of Neptune and his girls on the walls to cheer up tired Sov officers after duty. Incidentally, this is always a good indicator that senior officers were present permanently, thus confirming the importance of the site.

Some 15 minutes later and we were moving off-road through the same forest, but this time from the south, heading north at Merzdorf. In addition to the teddy bears with their picnics, it was obvious that the Ivans were also up to things deep down in the woods. After a longish drive we arrived at a lot of trees and grass, but ..... all you have to do is to look around and you start to trip over entrances to bunkers that have been left lying around in the grass. On the way in we had passed numerous vehicle hides, some simply excavations, others with rows of concrete posts to support cam nets, so this again was an important location. We were spied on briefly by someone from some distance away, but when we moved over towards the wooden barracks where he had been standing, he decided to withdraw. We, in turn, went into the wooden

## Never Again!

barracks, which lacked a floor, but nevertheless, had a large bunker under it with the entrance hidden under the floorboards in the last room.

And in the same training area just a little way down the road two more bunkers. Both required some walking, but their individual design, i.e. camouflage, made them really different. The first was in the form of a sauna, a log cabin, but once we went down the stairs into the bunker itself a completely different picture presented itself - numerous smaller bunkers all linked by corridors and / or adjoining sections. After



**Bunker Entrance - Sauna Style**

returning briefly to the vehicles we went along to the next camouflaged bunker, this time an air defence bunker hidden under a pile of logs, one end of which opened up and revealed the entrance to a facility that was some 80 m long and with two double-storey high map rooms in the middle, overlooked by the staff officers' rooms which were accessible via flights of stairs. The remaining rooms were for communications, AC and support.



**Bunker Entrance - Log Pile Style**



**Double Storey Map Room - Air Defence Bunker**



**Staff Officers Rooms - Air Defence Bunker**

### Thursday, 1 August

After spending the night in an extremely nice hotel in Jüterbog and dining in the courtyard until fairly late at a very warm temperature we had a quieter day (so we thought) with only a long drive down to some surprise bunkers in Lossa, a very important Soviet location. I already knew of two large bunkers there, but had discovered that there were four further bunkers only hours before leaving for the tour! Some rapid emailing provided a little bit more

## Never Again!



**Entrance to Large Bunker at Lossa**

information and the chance that my informant would be able to meet us there. Fortunately, he was able to do so as the sites were extremely well hidden and the mass of trees prevented any accurate use of GPS devices. There were bunkers buried under houses, hidden deep in the woods, high up on the side of a steep hill with a dead dog in it (fortunately, there was a second entrance). This site housed comms equipment that I had never seen before together with numerous references to two Soviet encryption systems.



**Soviet Comms Equipment In Lossa Bunker**  
Photo Nick Catford

In between visits to the new bunker sites we had called in at the refuelling line for the tanks stationed opposite the main barracks. This was in the form of a "dual carriageway" over 100 m in length, the centre lane being the metal fuel pipes, hoses, hose rests. We also found an inscription in the road surface indicating the Soviet unit which had built it together with the date. In the centre at one side stood a control tower and, joy of joy (since we hadn't seen

enough) yet another bunker! Our thanks are due here to "Beppo", who left work early to come to the site to help us even though one of his daughters was celebrating her birthday. As a reward, we gave him several packets of English biscuits that the gang had brought over at my request - they (Hobnobs, with and without) always go down well as "thank you presents".

Relief, relief: two nights now in the same hotel near to Jena, and a very nice one at that. A fairly early start the next morning, but only a short trip down the road to the Bundeswehr and



**Control Tower - Tank Refuelling Line**

a trip into the mountains. After the boss man had got over the shock of seeing some 24 people - he'd been expecting 12, but by the end some German bunker friends of mine wanted to get into Rothenstein, plus six guys from the MDR media channel (press, radio and TV), the group seemed to have grown a bit - we were off on our last walkaround. The caves had been started early in the 1900's by the local population scrapping the surface away to get the sand from the sandstone. By the time the NVA came along after the war, the caves presented an ideal location for munitions. The site lies alongside the main road, and the caves go back on three main routes. The site is due to be closed in the near future and it is now used as a storage facility for weapons, tents, chains, etc. for service with the Bundeswehr abroad. We were given the run of the place and a guided tour through all of the various areas, together with a demonstration of one of the three 23-ton doors that was raised hydraulically for us out of the floor, rather like a ship's bow section, to close off the entrance and to keep people like us out. After a relaxing afternoon we returned to our hotel for a farewell dinner.

Although I say it myself, a great tour, we saw an

## Never Again!



Personnel Entrance - Rothenstein

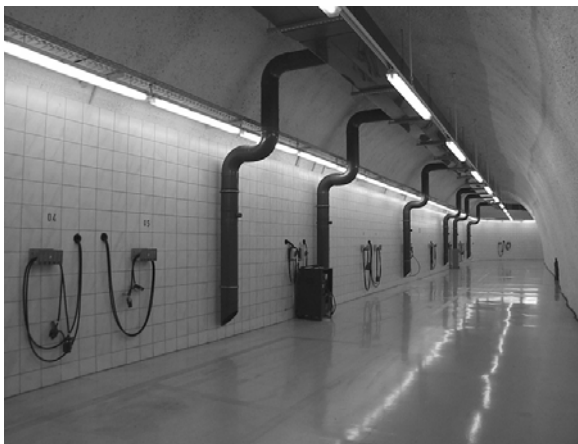


23 Tonne Blast Door - Rothenstein

**Mike Barton  
August 2002**

### Abbreviations:

- 1.NVA Nationale Volksarmee (East German armed forces, i.e. not just the Land Forces)
- 2.TEL Transporter, erector, launcher (for missiles)
- 3.KGB Komitet Gosudarstvennoj Bezopasnosti (the Soviet para-military, state security police who were responsible for guarding nuclear warheads. They purely military side was organised just like any other armed forces, i.e. with tanks, aircraft, naval vessels, etc.)
- 4.WGF West Group of Forces (the Soviet armed forces in East Germany), aka GSFG (Group of Soviet Forces in Germany) at an earlier stage of their existence
5. \* Although not always efficient by any means, the German police (here in the guise of the Bundesgrenzschutz - the Border Police, and also responsible for railway security) had discovered my identity by the time I returned home at the end of the tour and requested clarification of the incident. After a very pleasant chat with the officer concerned, who was fascinated by these strange people, and the submission of a statement, he promised that the kit would soon be on its way home to England. The reason why "they" were particularly concerned was the fact that this stretch of track is used to transport the Castor containers with the German nuclear waste!
- 6.SOP Standard operating procedure, i.e the drills, action, etc. to be taken at particular times
- 7.Casevac Casualty evacuation
- 8.Stasi Staatssicherheit (East German secret police)
- 9.IGB Inner-German Border
- 10.GPS Global Positioning System (a satellite-based system for producing, amongst other things, extremely accurate coordinates for map reading purposes)



Battery Charging Area - Rothenstein



Munitions Storage Area's - Rothenstein

awful lot packed into a very short period of time, but also lots of fun and hard work, sweating our way to the various sites. My thanks to everyone involved and their patience in putting up with my military attitude to time-keeping. It was good to see the RSG visitors, but it was even better to see them go!

Notice from the Management: There will be **NO** (spelt "definitely not") further tours.

All Photos By Dan McKenzie unless  
stated otherwise

## Nottingham Regional War Room & RSG 3

Nottingham's War Room was built during the early 1950's to the standard design, consisting of two levels, one below ground and one above with the main control room spanning both levels. The network of 13 Regional War Rooms was quickly redundant being replaced in the early 1960's by the Regional Seats of Government (RSG).

Most of the war rooms did not fit into this scheme and were put to other uses, three however were retained and enlarged, those at Kirknewton and Cambridge were extend by adding another larger block at one end of the building.

That at Nottingham was enlarged in a bizarre manner as there was insufficient land available on the tightly packed government estate for a large extension on one end. A three level extension was built with two short storeys (the lower slightly sunken below ground) butting on to the southern end of the war room and a longer third storey across the top of the new extension and the existing war room. This floor was cantilevered, jutting out at one end and the two sides. This overlapping floor is supported along the sides on concrete stilts and the two side stairwells and at the northern end by an emergency staircase from the top floor directly down to ground level. This stairway has been added onto the outside of the north face of the war room.

The building was redesignated RSG3 and remained in use until 1965 when the RSG network was abolished. It was probably used as an SRHQ until 1969 (telephone directories found date from that year). It's unclear why it did not continue as the East Midlands SRHQ or SRC, as no replacement site was found until Loughborough in 1984. Skendleby became a subordinate SRC to Nottingham about 1966. There is some evidence that it may have been an RSG until 1969 as there was an overlap in decision making in the mid 60's, nobody

seemed sure what to call Regional Controls although RSG's and area /sub area controls were officially abolished in 1965. The issue of dates is further confused by a document in PRO about the use of Brancepeth Castle (Region 1) as a dispersal location for RSG staff in 1967!

Since 1969 it has been used by MAFF (now DEFRA), in part, for furniture storage although



most of the rooms are now empty and unused. Mains water has been disconnected although the power is still on and most of the rooms are lit. The building has been surrounded by a high fence as it contains asbestos and is considered a health hazard. The future of the building is unclear although following a survey by English Heritage in May 2002 it is now under consideration for listing.

Entry into the building is through a door into a new lobby area that juts out on the east face of the building, to the left into the war room and to the right down a short flight of stairs to the bottom level of the extension with its floor



## Nottingham Regional War Room & RSG 3

approximately four feet below ground level. The war room still retains its original internal steel blast door and beyond it the male toilets (female on the other side) at one corner of the upper ring corridor. On the south side of the corridor is the original plant room divided into two sections with an interlinking doorway. All the original ventilation and filtration plant remains in place on one side of the room.

The original intake and exhaust stacks on the roof of the war room have gone and the trunking now enters a new vertical shaft between the old building and the extension. The other side of the ventilation plant room was originally an engineers area with tables and cupboards. These have been removed and replaced with a large cupboard containing two pumps for the 'Lamson Tube System', a pneumatic message handling system that was installed during the buildings conversion to an RSG. The two Lamson pumps (one suck, one blow) are still in good order and were found to be working when power was applied. The operating instructions for 'Motor' and 'Turbine' are also there. The equipment was manufactured by Lamson Engineering Company Ltd, Hythe Road, London, NW10.

Through the door into the other half of the plant room there have been no alterations since the 1950's. The standby generator is still enclosed within its own room and appears to be in good condition. Outside the room is a large panel of electrical switchgear and fuse boxes and a floor standing cabinet with the control equipment for the generator. There is a rack of lead acid batteries for use as a back up power supply and a large floor standing battery charger with a separate rectifier unit.

On the opposite side of the corridor from the plant room two doors open into rooms that had curved Perspex windows that overlooked the

two level control room. A floor has now been added and the Perspex windows have been removed and the holes blocked up. The smaller of the two rooms was locked while the larger room, allocated to the 'Principal Officer' during RSG days was open and empty.

Back at the entrance turning left into the ring corridor, one of two stairways down to the lower level is immediately on the left. The first room on the left contains the 10 pairs (suck and blow) Lamson Tube terminal with tubes



**Nottingham RSG - Lamson Tube System**

fanning out in different directions. There is also a wire basket and a system of ropes and pulleys for lowering the basket to the lower corridor. The basket locks in position in the upper room but can be released by pulling on the rope from below. The system is also manufactured by Lamson and is an original feature still found in some other war rooms. The original kitchen and canteen on the opposite side of the building to the plant room has been partitioned into two rooms. The kitchen still retains a Butler sink, water heater and a Viscount cooker. Most of the other rooms on the upper floor were locked and are used by DEFRA for storage.

The bottom level of the war room appears to

### Nottingham Regional War Room & RSG 3

have been used for communications for the RSG and some alterations have been made to the internal walls and corridors. The two stairways open onto opposite sides of the ring corridor. Descending the stairs from the main entrance (previously described), the first room on the left is a tank room and beyond that there is a dog leg in the corridor and in a recess the bottom station of the Lamson message basket system. Although jammed we were able to free the ropes and the basket can be raised and lowered.



**Nottingham RSG - Kitchen**

Beyond the message basket is the 'Counter Room' with a half height door with a small counter across the corridor. The counter room has the only Lamson Tube terminal in the old building. From the 'Counter Room' there was originally a curved Perspex window looking into the well of the control room. The control room has now been partitioned into two rooms and the window has been replaced by a door into what is now the 'Voice Procedure Room' with 6 acoustic booths still in place. Alongside the 'Counter Room' is the 'Teleprinter Room' which has low tables around three walls. Turning through 90 degrees out of the 'Teleprinter Room' is a large room with three floor standing wooden unit numbered 1, 2 & 3 and a very large peg board on one wall with hooks on it.

This may have been the tape relay room, the hooks being for the tapes. There are message passing windows into the control room, teleprinter room and the equipment room. There is still a large sign on the wall that reads 'Take care when disposing of smoking material'.

Passing through 90 degrees back into the ring corridor, the first room on the left is the 'Equipment Room' which still retains its GPO Main Distribution Frame (MDF). Beyond this is the 'Telephone Exchange' with a panel of lights indicating problems in various parts of the building. There is a second tank room on this side of the building and beyond that the other stairway back up to the upper level.

On the inner side of the ring corridor there is a door into the other half of the now partitioned control room and along another side three rooms that originally had Perspex windows looking into the control room. All the windows have been removed and blocked up and the rooms are empty.

Back at the main entrance into the building a short flight of steps leads down into the

bottom floor of the three level extension. At the bottom of the stairs is the main stairway for the new building. There is still a sign at the bottom of the stairs pointing to 'Canteen' and 'Plant Room' on the ground floor or upstairs to '1st Floor Ladies toilets and dormitories J - M' and '2nd Floor Rooms No. 1 - 54'

Passing along the corridor the first room on the left is the new plant room which contains ventilation and filtration plant, fans and ventilation trunking with the air intake and exhaust trunking utilising a 30' wide shaft that runs the full height of the building from a further filter room on the roof. There are four rooms within the plant room, one in each corner these are 'Engineering Store', 'Battery Room',

## Nottingham Regional War Room & RSG 3

'Generator Room' and 'Boiler Room'. The Generator Room can also be accessed from the corridor on the opposite side of the building. The battery room still contains a number of lead acid batteries and a large battery charger. The boiler room still has its locally made Beeston Robin Hood oil fired boiler, heat exchanger, pumps and a control cabinet. The boilers flue enters the main air intake shaft running the full height of the building. The standby generator has been removed through a large hole in the outer wall which is now covered by a thick steel plate. This feature for the installation and removal of heavy plant is seen at other RSG's. Only the concrete plinth where the generator stood remains.

Back in the entrance corridor on the right, steps lead down into two large rooms that originally contained water and diesel tanks, the buried tanks for the war room were probably re-used. At the end of the corridor is the large canteen which is now stacked with rows of Dexion shelves. At the far side of the canteen is a door into the kitchen and alongside it a large roller shutter above the serving counter and a third door into another corridor.

The spacious kitchen still retains all its appliances including 3 hot plates, hot food cabinets, hot water dispenser and a large freezer. There are sinks along one wall and a long food preparation surface along the opposite wall. A door at the back of the kitchen opens into a corridor that leads back into the canteen in one direction and turns through 90 degrees to the rear stairs and exit lobby. Along this corridor is a small 'Sick Bay' a large store room and the other entrance into the generator room and plant room. This corridor ends at the other staircase and entrance lobby, a mirror image of that on the west side.

The middle floor consists entirely of dormitories and toilets. There are two long corridors one with dormitories on both sides and the other with dormitories on one side and toilets on the other side. At the landing on the east stairs there is a sign that reads 'Male Dormitories N - U' and an arrow pointing upwards to 'Top Floor'. Close to the stairs are the male toilets and then dormitories left and right of the spine corridor. There are thin partition walls which don't reach the ceiling between the corridor and the dormitories. Some of the rooms have all their twin bunks intact while others have dismantled bed parts. Along the other spine

corridor are female dormitories on the inside and female toilets on the outside.

At the top landing of the western stairs are further male dormitories A - H (all empty apart from some bed frames) to the left and corridors H, J & K to the right. On this level there are two parallel north - south corridors with a room linking them together at the south end and an east - west corridor (H) linking them at the other end. In the middle of this east - west corridor is another north - south corridor (J) and at the end of it a 'T' junction with another short east - west corridor. At the end of the eastern of the parallel north - south corridors there is a small 'Committee Room' and through it a large room allocated to the 'Ministry of Power'. This large room has a number of small partitions within it with rooms allocated to ministries of Power, Transport, Labour & Aviation, Board of Trade, Treasury & Banks, Treasury, Finance (2 rooms), Pensions & National Insurance and Social Services. The large room is stacked with old furniture but it's unclear whether it's from the RSG or elsewhere.

The east - west corridor has a number of store rooms. One room contains a junction where four pairs of Lamson tubes converge and plunge down through the floor. There is also another male toilet. Just inside the door there is a ladder to a trapdoor in the ceiling. This leads into the roof filter room. This is where the main filters are located along with the ventilation and exhaust trunking. There were doorways onto the roof but these have been bricked up. There is a door into the 30 foot wide shaft that runs the full height of the building this is filled by the intake and exhaust trunking and the boiler flue.

The other parallel corridor (K) has rooms allocated to MAFF, Secretariat and more female toilets. From the middle of the east - west corridor (H) the north - south corridor (J) has rooms on either side. Many of these rooms are partitioned with numerous smaller rooms. There are rooms allocated to Chief Clerk, Principal Medical Officer, Illustrators, Scientists, Regional Scientific Advisor, Home Office Committee Room, Home Office Assistant Secretary, Regional Director of Civil Defence, Regional Police Commander, Regional Fire Commander, Ministry of Housing and Local Government, Regional Director of Housing and Local Government. One room is allocated to military staff with partitioned rooms



## Nottingham Regional War Room & RSG 3

within it for the General Officer Commanding (GOC), NRM (Navy), Air Officer Commanding (AOC). At the end of the main corridor is a 'T' junction. At the right hand end of the 'T' there are rooms for the GPO and the Central Office of Information (COI) and a wireless room with sections of a mast on the floor. At the middle of the 'T' is the emergency stairway directly down to ground level. To the left of the 'T' is the 'BBC Corridor' with a BBC office accessed from a door on the right and at the end a door into the BBC control room which is lined with acoustic panels. At the far end is a glass panel and a door into the BBC studio. The studio is also lined with acoustic panels one of which is hinged and forms a low door into the adjoining room.

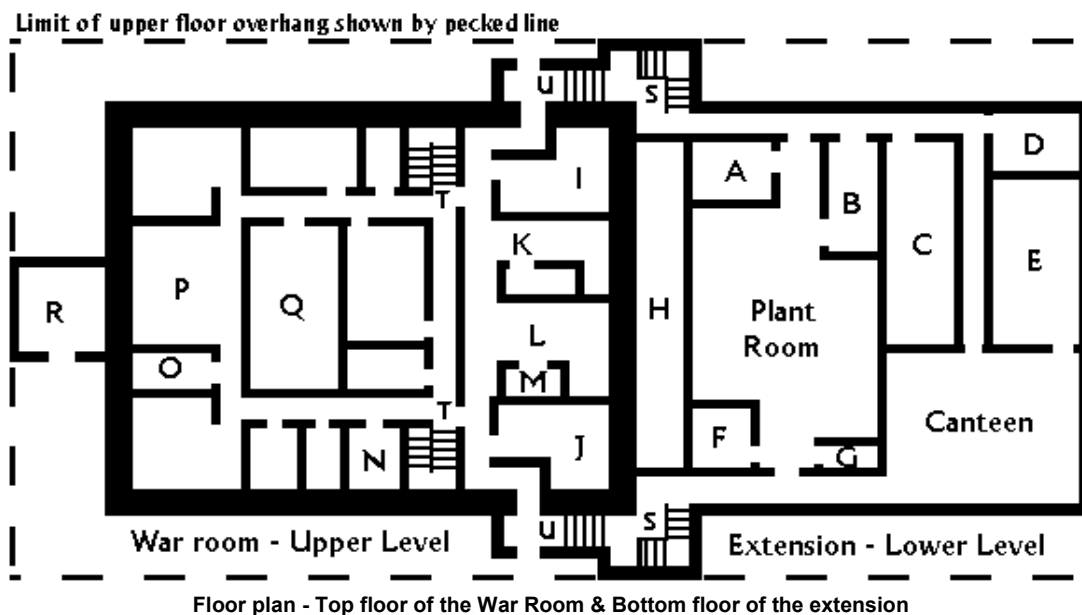
who was allocated to the room.

On the outside of the building there is a ladder surrounded by a steel cage up to the roof. The bottom ten feet has been removed but we were able to find a wooden ladder to reach the bottom rung. The filter room sits in the middle of the flat roof with intake and exhaust louvres. There are several heavy steel blast doors but these are badly rusted and cannot be opened. In total we spent 5 hours at the site photographing and exploring the building and by the time we left most of the office staff on the estate had gone home and left us to it. There are numerous items of redundant electrical and electronic equipment around the bunker, none of this appears to have any connection with the RSG.

Many of the large rooms on the top level have Lamson tube terminals and nearly all the rooms have a printed sheet on the wall listing

**Historical information - Keith Ward**

**Photos & Text - Nick Catford**



- A Boiler Room
- B Generator Room
- C Store
- D Sick Bay
- E Kitchen
- F Engineering Store
- G Battery Room
- H Shaft
- I Female Toilet
- J Male Toilet
- K Generator Room
- L Ventilation Plant Room
- M Lamson Pumps
- N Lamson Tube Terminals
- O Old Kitchen
- P Old Canteen
- Q Floored over old Control Room
- R Emergency Exit from RSG Top Level
- S Stairs up in extension
- T Stairs down to War Room lower floor
- U Stairs down to extension lower level

## Campsie AAOR serving the Londonderry GDA

In Northern Ireland there was a single AAOR at Lisburn serving the Belfast and Londonderry GDA but, according to the PRO, Belfast and Londonderry were originally separate GDA's and while Lisburn AAOR was built and commissioned there is no further record of an AAOR for Londonderry and no record of the brigade that would have manned it.

The Londonderry AAOR has now been found a few miles to the east of the city, 150 yards south of the A2 at Campsie. (IC50982067) The building is set into a small quarry but the top with its distinctive 'chimney' is visible from the road. It is a two storey concrete blockhouse of the standard design with both floors above ground. There are two entrances, one on either side accessed through a covered porch. The steel blast doors are still in place and open. Once inside it is clear that although the concrete shell of the building has been completed, it has never been fitted out and finished. Apart from the two outer doors there are no internal doors or door frames, no electrical wiring of any kind

anywhere and all the internal walls are bare concrete and have never been painted. The steel beams to support the wooden gallery are in place but the gallery has never been installed. The unpainted steel columns for supporting the gallery are all lying on the floor next to their recessed hole in the floor but have never stood upright.

All the rooms on the lower level are in place and follow the standard layout with solid walls. On the upper level the room layout is formed by installing thin partition walls, these have not been fitted and the upper level consists of three long rooms and a smaller room at the back that would have become the 'Multiphonne & Switchboard Room' with windows

overlooking the gallery and gun commanders dais. The open doorways onto where the gallery should be are all in place presenting a danger to the unwary explorer. The front stairway has been blocked as have the two inner rear stairways while the two outer



**The Unfinished Control Room at Campsie AAOR**

stairways are accessible giving access to the upper floor. There are numerous holes in the outer wall of the building where vents and other fittings have never been installed.

The building is currently used as an animal shelter and has numerous straw bales on the floor on the upper level. Animals are able to get in to the building through one of the large holes in the wall.

The Campsie site was visited on Thursday 13th June 2002 by Sub Brit members Nick Catford, Keith Ward, Wayne Davies and Roy Coulter

**Nick Catford**

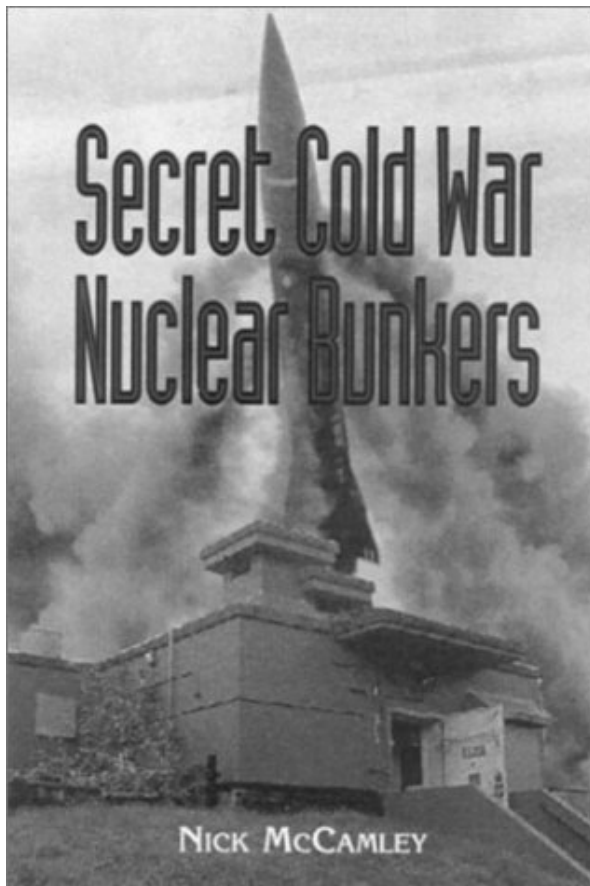
## Book Reviews

### Secret Cold War Nuclear Bunkers by Nick McCamley.

Hardcover - 292 pages (April 2002)  
Pen & Sword Books / Leo Cooper; ISBN: 0850527465

"Cold War Secret Nuclear Bunkers" is a survey of the huge range of underground command bunkers and secret (and not-so-secret) radar stations built by the North Atlantic Allies (Canada, America and Great Britain) to keep the 'Evil Empire' of the USSR at bay throughout the fifty cold-war years.

Although this is essentially a book of cold-war archaeology, describing the steel and concrete evidence of a fifty-year war-that-never-was, it



has at its core a central political premise. That is that all the bunkers, from the great US central government bunkers at Raven Rock and Mount Weather to the thousand or more tiny, five-man ROC posts that litter the British countryside, served one ultimate purpose, which was the protection of the paranoid United States Administration from nuclear attack, and by extension the preservation of the concept of democratic capitalism and the American Way.

This myriad defensive bunkers - a child of the US policy of 'forward defence' (though the British government would have it that her own bunkers were solely for the protection of her own Establishment) - ripples out from the United States' heartland through Canada, Greenland and the United Kingdom, to ensure that America's next war would be fought far from home, on the distant sovereign territory of her erstwhile allies. These bunkers are thickest on the ground (or rather under the ground) at the most vulnerable, furthest extremity of America's shield, where east meets west - on the eastern seaboard of the British Isles.

#### Contents of the book:

#### INTRODUCTION

#### CHAPTER ONE: THE AMERICAN 'BIG BUNKERS'

Deals with Raven Rock, Mount Weather, the Greenbrier bunker, Mount Pony, the FEMA regional bunkers, together with the flying and floating emergency war rooms and a brief history of the Strategic Air Command control bunkers.

#### CHAPTER 2: NORTH AMERICAN RADAR

Deals with the DEW Line, Mid-Canada Line, North Warning System, Pinetree Line, SAGE & BUICC (and their respective Group and Sector control bunkers), together with the various communication systems including NARS, WHITE ALICE, etc. The chapter ends with an account of the Texas Towers saga.

#### CHAPTER 3: NORAD & THE CHEYENNE MOUNTAIN COMPLEX

A complete account of the vast underground nerve-centre of America's Early Warning systems.

#### CHAPTER 4: THE BALLISTIC MISSILE EARLY WARNING SYSTEM

Subjects covered include the BMEWS sites at Clear, Thule, and Fylingdales. The planning, construction and public misconceptions of the Fylingdales site is recounted in some detail, up to and including the current phased-array system.

## **CHAPTER 5: COLD WAR BUNKERS IN CANADA**

Explains the construction, operation and eventual demise of the Diefenbunker and the various Provincial government bunkers, and the convoluted story of Emergency Planning Canada.

## **CHAPTER 6: THE ROTOR RADAR SYSTEM**

Complete and detailed history of ROTOR, the 1958 Plan, LINESMAN/MEDIATOR, etc, with a complete gazetteer of sites. Also explains the history of the 1950s Anti-Aircraft Operations Rooms and lists the current status of the AAOR bunkers.

## **CHAPTER 7: ROC and UKWMO**

A detailed, post-war history of the Royal Observer Corps and UKWMO and its Observation Posts, Group, Sector and National control bunkers.

## **CHAPTER 8: CIVIL DEFENCE IN THE UNITED KINGDOM**

The rationales behind the various bunker building programmes from 1947 until the mid 1990s.

## **CHAPTER 9: UK EMERGENCY REGIONAL GOVERNMENT**

Covers the 1950s Regional War Rooms, the Regional Seats of Government of the early 1960s, the s-RCs and the RGHQs. This chapter includes the full text of the 1963 'Spies for Peace' pamphlet.

## **CHAPTER 10: LOCAL AUTHORITY BUNKERS**

Includes a brief post-war history of the Civil Defence Corps, and details ever structure from

the 1950s Civil Defence Controls to the Thatcher period County and District Council super-bunkers. (Includes an extensive gazetteer of some 400 local authority bunkers)

## **CHAPTER 11: GPO UNDERGROUND TELEPHONE EXCHANGES and THE ESSENTIAL SERVICES BUNKERS**

Describes the huge London 'KINGSWAY', Manchester 'GUARDIAN' and Birmingham 'ANCHOR' underground exchanges and the semi-underground, bomb-proof 'PR' repater stations that supported them. The chapter also covers the National Grid emergency control centres, Water Board bunkers, the BBC emergency centre, and the abortive plans for atom bomb proof regional railway control bunkers.

## **CHAPTER 12: UK CENTRAL GOVERNMENT EMERGENCY WAR HEADQUARTERS**

Includes complete histories of PADDOCK and the other wartime London bunkers together with the deep-level tube shelters, and explains the evolution of their cold-war roles. The chapter then goes on to describe in detail the development and construction of the Central Government bunker at Corsham (BURLINGTON), the Permanent Joint Headquarters at Northwood, and the underground PINDAR complex below Whitehall. The evolution of various other cold-war communications facilities in the Corsham quarries is also covered in this chapter.

The book is illustrated with approximately eighty photographs and thirty maps, plans and line drawings.

*Excerpted from Secret Cold War Nuclear Bunkers by Nick McCamley. Copyright © 2001. All rights reserved.*

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## **The Secret State By Peter Hennessy**

Hardcover - 256 pages (7 March 2002)  
Allen Lane The Penguin Press; ISBN: 0713996269

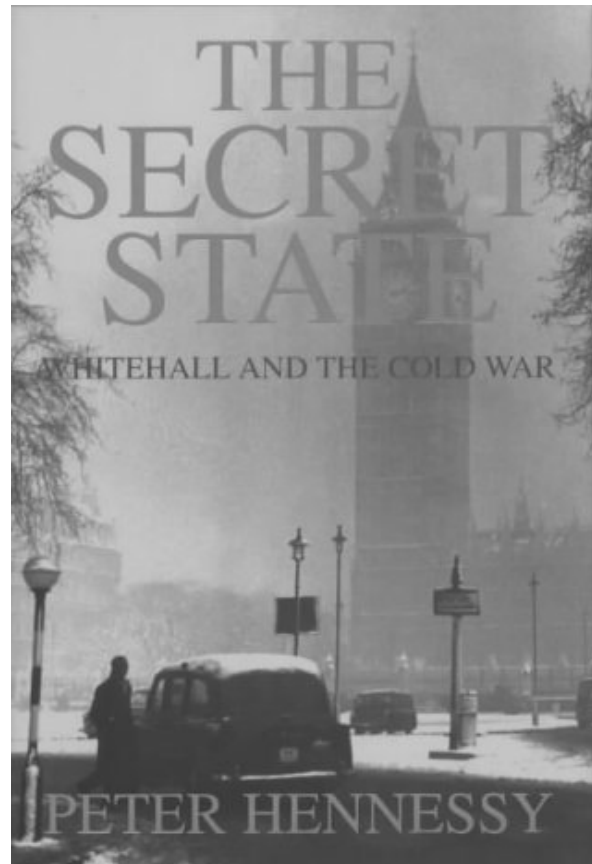
History is often best understood as a series of errors and misjudgements with profound, if not disastrous, consequences, but *The Secret State* reverses the trend as it is the story of a group of people who, with a bit of luck and a lot of skill, actually got it right. Had you asked many politicians or military personnel back in 1952, very few would have put money on the world remaining free of nuclear war for the next 50 years, especially given the history of the

first half of the 20th century. But, with a few narrow squeaks along the way, peace prevailed and *The Secret State* goes some way to explaining Britain's part in that achievement.

With the domino-like collapse of the Eastern Bloc communist regimes in the late 1980s and early 1990s, the Cold War effectively ended

## Book Reviews

and with it the need for many documents relating to that period to remain secret. In 1992, as part of the Waldegrave Initiative, the Conservative government, under pressure from historians such as Hennessy, began to drip-feed previously classified documents into the public domain, and to date more than 100,000 items have been released. From these, Hennessy has been able to piece together all the retaliation procedures had a nuclear strike been launched against Britain. The picture that emerges is surprisingly reassuring; many of the documents are couched in the formal stiff-upper-lip of both the military and Whitehall of the 50s and 60s, but there is a humanity and pacifism, too. Far from being the hawks of popular imagination, the military clearly went to great lengths to keep us out of a nuclear war, both by their actions at home and abroad. Britain may have been a smallish player compared to the US and the USSR in the global nuclear game, but it did its fair share of keeping the peace by curbing some of its more aggressive American counterparts. Hennessy is a past master at bringing dusty archives to life and *The Secret State* is one of those rare books that reflects credit not only on the author but on its subjects, too. This is a must read for anyone who has ever wondered just how lucky they are to still be alive.



*John Crace For Amazon.co.uk*

### Spies Beneath Berlin by David Stafford

Hardcover - 222 pages (18 April, 2002)

John Murray; ISBN: 0719563232

**Synopsis** Operation Stopwatch/Gold, said CIA chief Alan Dulles, was "one of the most valuable and daring projects ever undertaken". In 1955 it ran a tunnel 800 metres under the Russian sector of Cold War Berlin, and for more than a year tuned into Red Army intelligence. This was an almost impossible trick: apart from the technical wizardry needed, any noise or vibration could have given the game away. When snow fell panic measures were suddenly needed to prevent it thawing in a tell-tale line leading to the target building. That the operation succeeded is even more surprising than it looks. Trust, even between allies, was dangerous. Despite the Burgess and Maclean affair, the Americans had decided that co-operation was safe once more, and Stopwatch/Gold was a joint CIA/MI6 project using British expertise from a prototype in Vienna. This was



a mistake: there was another mole in the British secret services, and the KGB knew about the tunnel even before it was built. If the Red Army trusted the KGB, though, it too was mistaken. Why the KGB kept the secret to itself is one of the puzzles explored in this book. Was it inter-service rivalry? Was the British mole so valuable that the KGB sacrificed Red Army secrets rather than blow his cover? Or, since the Russians in fact had no plans to attack the West, did the KGB want that information leaked, to reduce the risk of surprise strikes the other way? This book tells the story. David Stafford draws on eyewitness interviews and the full range of sources. Ironically, it was the Russians who supplied the minutes of the meeting that "OK'd" the tunnel. They had been taken by George Blake (who was of course the mole).

## Fairlight R2 CHEL Rotor Station

The Fairlight Chain Home Low (CHL) Radar Station (05A in 75 Wing) was operational by September 1940. It was located on the north side of Fairlight Road to the west of Hastings, the 'A' site centred on TQ845117 and the 'B' site centred on TQ849117. It was equipped with Type 4, Type 11 Mk1, Type 31, Type 52 and Type 53 radars

A week after D Day (6th June 1944) the Doodlebug or 'Diver' campaign started and Fairlight was immediately upgraded to a reporting GCI station with the addition of Type 14, Type 24, Type 26 and an American MEW radar. A special tracking console was installed in it's own building and extra accommodation was built for the new personnel which included

to participate in the Rotor project as a Chain Home Extra Low (CHEL), but the station was resited closer to the coast with the single level R2 bunker and its Type 14 radar coming on line on 30th August 1952. The original CHL to the north remained in use for a short period after this date and the domestic site was retained for the new rotor station.



Air conditioning plant room

a photographic section, 'Y' watch (technical analysis of radio signals), controllers, filterers, CME's (Civilian Mechanical Engineers), operators and clerks. The whole site was surrounded by light and heavy anti-aircraft guns which were not conducive with quiet operational radar practices.

The Diver campaign was short lived and by the end of the year it had lost its impact on the South Coast. Fairlight reverted back to a CHL although some of the new radars were retained. The early 1950's Fairlight was chosen

By 1956 the station was redundant remaining on care and maintenance until the early 1960's when it closed. In 1962 the bunker was surveyed by Hastings Borough Council as a possible site for the Hastings Area Civil Defence Control. When area controls were abandoned in 1964 the survey had not been completed and no funding had been agreed so this idea was abandoned. The bunker was sealed and all buildings on the site was demolished by Hastings Borough Council in 1973 and the area

landscaped as part of the Hastings Country Park. It is now a Site of Special Scientific Interest (SSSI)

With little or no evidence of the rotor station visible above ground other than a low mound, the chances of ever gaining access to the underground bunker seemed slim at best, however the impossible has been achieved and a small party from Subterranea Britannica were able to explore the abandoned R2 site on 25th July 2002.

## Fairlight R2 CHEL Rotor Station

Sub Brit's Jason Blackiston masterminded a plan to briefly re-open the bunker and make a photographic survey. With the aid of detailed surveys of the site he was able to pinpoint the position of one of the ventilations shafts and he produced a plan to excavate the shaft together with a risk assessment which was submitted to the Country Park for approval. After much consideration they agreed to the proposal on the strict understanding that there should be no advance publicity, minimal damage to the surroundings, a prescribed route to the site should be established so as not to trample unnecessarily on plants and shrubs and the excavated shaft should immediately be infilled and resealed with reinforced concrete and the soil and grass re-instated. This was agreed and excavation at the site started in the late afternoon of 24th July 2002

After digging through 12" of soil, concrete was reached, this was broken up using a Kango and found to be 8" thick. Beneath with was a metal sheet which was cut away to reveal the original tanked roof of the bunker. This proved somewhat more resistant to the Kango than the first concrete layer but eventually a small hole was made through a further 10" of concrete confirming Jason's initial ground survey, we had found the ventilation shaft. The hole was enlarged the following morning giving access to a small chamber from which it was possible to drop down 10 feet into the bunker. There had originally been a ladder at this point but this has now gone.

The guardhouse was located on the east side of the footpath running south past the coast guard lookout. It was not possible to reach the stairwell of the guardhouse underground as a concrete block wall has been built across the sloping entrance passage near the guardhouse. The passage from the new wall runs south for about 40 feet and then turns

sharply to the east for a further 200 feet, it is dry and in good condition. At the end of the slope the back filled cable shaft is on the right and the recess for the electrical sub-station is on the left. The transformer has been removed as has the wire cage that surrounded the front of it. At this point there were teak floorboards which have gone revealing several feet of water in the cableway below. All the teak floorboards have been removed throughout the bunker but it is possible to walk across the supporting beams where necessary.



View from the emergency exit stairs

Beyond the sub station there is a dog leg into the main east – west spine corridor. On the outward side were heavy steel blast doors and on the inward side wooden swing doors, both sets of doors have been removed. Above the wooden doors an original grey Rotor sign is still in place (now removed) indicating 'To Main Exit'

It was not possible to enter any of the rooms on the left as, with the floorboards missing and the floor below is under two feet of water and



## Fairlight R2 CHEL Rotor Station

strewn with rubble, wiring and metal trunking. The water is clean and clear. There is one small electrical rack below the water level. All the partition walls between the four rooms been removed revealing one long room. The four rooms from west to east were the track telling room, radar office, a small workshop and the air conditioning plant room. The first three rooms have been completely stripped apart from ventilation trunking on the walls and ceiling and now give the impression of being one long room. This AC plant room has also been largely stripped apart from the skeletons of three large floor standing control cabinets on the left hand side, two compressor plinths and more trunking. There is a small sign on one wall that reads 'No 2 Plant Thermostat'. At the back of the room the partition walls and doorways in to the dehumidifier area are still in place. This room never had a teak floor with concrete steps down from the corridor to floor level.

On the right hand side of the spine corridor the first two radar rooms (technical officer and intercept room) are in a similar state with their partition wall removed. The remaining rooms on the right have solid floors and can all be entered. The next room on the right is the RAF (male) toilet which still retains its WC's, beyond this is a storage area where there was originally a ladder up to the technical store above the rest rooms, the ladder has gone. The next room is the WRAF (female) rest room with access from that top the WRAF toilet which again has its WC's and wash basin intact. There is a small serving hatch from the small kitchen. The kitchen has been completely stripped apart from the extractor hood above the cooker and a Butler sink lying on the floor. The RAF rest room next door is also empty, this too has a serving hatch into the kitchen. The final two rooms on the right hand side of the corridor are the GPO room and the low voltage switchgear room, again both empty.

At the end of the corridor there is another original rotor sign (now removed) which says 'To Emergency Exit Only'. There is another dog leg passage with both the wooden swing doors and the steel blast doors removed and then the final section of corridor towards the emergency exit stairs. There are two recesses on the left one for the air coolers where the casing for a small fan remains and the other for gas filtration plant where the filters and trunking remain in place. There is a small room at the end of the short corridor are the emergency stairs with a small concrete plinth behind the stairs, it's unclear what was mounted here. There are two flights of stairs up to a short landing. At the back of the landing there is a concrete block wall and presumably the remaining section of the emergency exit has been back filled behind it. The stairs are still in reasonable condition although now badly rusted.

Having photographed the bunker thoroughly the ventilation shaft was backfilled with half a ton of rubble and sealed with 15" of reinforced concrete, finally a foot of soil removed the previous day was put back into the hole and the turf reinstated, a week later there was no evidence the excavation had taken place.

The majority of the excavation work was carried out by Jason Blackiston, Robin Ware and Richard Challis.

Those taking part in the visit were Jason Blackiston, Nick Catford, Mark Bennett, Richard Challis, Robin Ware and David Heyes.

Sources:  
Keith Ward  
PRO File AVIA  
PRO File AVIA 7/451 Operational report 40



SUBTERRANEA  
BRITANNICA

# Sub Brit Needs You!

**We need articles for all of the Societies Journals, Siren, The Secretaries newsletter and The Bulletin. Could you write something on an underground topic ?  
What are you waiting for !**



## **Another Roadside Attraction** or, On Tour With the Dangerous Brothers in Poland...

The mission was to visit 36 sites in 30 days. All in Poland. June was selected as the most suitable month for this gig; avoidance of the World Cup and the Queen's Jubilee being of paramount importance...

The adventure could be broken down (as we surely would be after 30 consecutive days living out of the back of a Citroen Xantia) into four distinct facets. The two of interest here being Owl Mountain and the Eastwall. Oh, and Mr Hitler's bunker.

I managed (worryingly easily) to talk Robin Ware and John Gurney into accompanying me on this ludicrous odyssey. I needed Robin's car (as I didn't own one!) and John is our farthest-flung Sub Brit member, living in Auckland, New Zealand so I thought British Airways could do with his money.

I had it all planned, and considered it just about manageable in the time allowed. John flew in from NZ and we were all set.

Robin's car was loaded with reference books, maps, exploration equipment for both above and below ground missions, mobile phones, laptops, food, tents, and all the stuff essential for the modern long-haul Sub Brit traveller. We then realised that there was no room for John, so my clothing just got left on the pavement. Oh well...

We left Cobham at 0330hrs June 1st, and promptly missed our Eurotunnel train. Pretty good start. Inauspicious in fact. No real drama, we just got the next one. It appeared that most of the country was fleeing too.

We hammered across France, Belgium, Holland and Germany in a flash. We spent the night in Dresden with a friend of mine, and amused ourselves (and her) eating ice creams at midnight. Whilst quaffing the raspberry ripple, I was somewhat perturbed by the fact that, under interrogation, John had confessed to not actually having a visa for Poland - something NZ citizens are required to have in order to enter the country. John, in true NZ tradition, considered this an irrelevant detail and not one that should cause worry. Oh well, fair enough...

Inevitably, John only made it 10ft into Poland before they threw him back out. So we drove all the way back to Leipzig and left him

ensconced in the nearest hotel to the Polish embassy with instructions on how to obtain the necessary visa the next morning...

Robin and I then retraced our steps, blazing a trail back to Poland in order to meet our first arranged contact, which we had absolutely no hope of getting to on time. We were ten hours late, but it mattered not.

The next morning, John arrived by train, visa'd-up and apparently none the worse for his baffling experience in the Polish embassy. Game On.

After a week of specialist research... we moved on to the next phase of the trip. Owl Mountain, or - in Polish - Gory Sowie. An enormous complex of underground tunnel systems built by the Nazis in WW2 and known by the codename RIESE (albeit unfinished, as the Master Race were 'interrupted' by a large quantity of fearsomely motivated Red Army soldiers which created quite a bit of local difficulty).

This 2002 trip to Owl Mountain was a long time in the planning. It all began back in the mid 1980s, when I stumbled across evidence of a vast underground tunnel complex whilst researching aspects of the Oskar Schindler story (some ten years before the film came out).

This research took me to Gross Rosen Concentration Camp where I watched a film depicting the camp's terrible history. On the film, I saw images of what appeared to be a vast SS underground secret weapons facility in Lower Silesia, Poland, built by thousands of luckless Gross Rosen inmates.

The aim, apparently, was the construction of a vast inter-connected system of underground tunnel complexes including over-ground structures too, covering virtually the entire Owl Mountain. The installation was never completed, but there were apparently many tell-tale signs still to be seen.

I visited the area when it was still firmly part of

## Another Roadside Attraction

the Eastern Bloc, and searched for the tunnels and anything else I'd seen on the video film. Despite asking local kids, nobody knew anything about it. No interest - most odd. You'd have thought that kids would have known all the dangerous places to play, wouldn't you? I returned home, having run out of time.

By the mid-1990s, by badgering Polish friends, contacts and 'sources' including various pamphlets and booklets obtained at Gross Rosen (in German), I had managed to put together a rough story of what was going on at Gory Sowie during the war years. Of course by this time, the Iron Curtain had rusted away and as time progressed more and more information emerged. The crumbling Socialist Dream had passed into history, so I got on the case...

So, suddenly it was 2002 and a Polish contact - Joanna Lamparska, Editor of the Polish 'Explorer' Magazine - put us in touch with a local Owl Mountain expert and guide, whose house (and life) we promptly took over. Our guide's name was Henry (well, actually, it wasn't - but we hadn't a hope of pronouncing his Polish name, so he became 'Henry'. He didn't seem to mind.)

We needed Henry's specialist local knowledge, acquired by spending the whole of his life living in the Owl Mountain area. An excellent catch, thanks to Joanna. His interest rivalled my own, and he was totally switched on. Obsessed even.

We all got on extremely well, although communication was occasionally a problem as Henry doesn't speak a word of English, and we no Polish, so it all had to be done in German. The problem was that although we both spoke some German, it didn't tend to be the same words!

Holed-up in Henry's B&B The Plan revolved around us visiting each of the individual underground tunnel complexes which made up the RIESE system. Accordingly we told Henry that we needed to see everything, and he dutifully took us around the whole area pointing out stuff that we, quite frankly, would never have stumbled across. Of the eight tunnel complexes, only two are open for tourists. The others are, most definitely, closed. However, even the two 'open' complexes had areas closed to the punters - but Henry smoothed the way (informing the custodians that we were

from, ahem, the BBC...) In order to reach the entrances to the various tunnels, we had no option but to subject Robin's poor Citroen to a severe off-road experience that would have given most 4X4s a challenge. Henry seemed impressed, but then he did own a clapped-out Polski Fiat 126P. Robin attempted a test drive of this awful motor car, and upon completing his inaugural - and sole - journey, was reduced to hysterics, convinced that buying a Trabant for the going rate of a hundred quid would be an infinitely better deal.

The following week was spent thoroughly exploring the entire area, and we got into all of the tunnel systems, most of which - having been sealed up by severe blasting over fifty years ago - required either squeezing through grilles or down tiny excavated openings. Luckily, the words 'Health' and 'Safety' never tend to appear in the same sentence in Poland... Access to these abandoned, vast, tunnel systems ranged from 'difficult' to 'downright lethal'. Claustrophobics need not apply. Nor over-fed types.

Our arranged regime was briefly interrupted by the offer of a party. Never ones to dismiss the opportunity of a free lunch, we immediately agreed to attend. What swung it was that it adhered to our edict - it was underground! All those invited had, apparently, got an underground connection. In fact, some actually owned mines! The party was held in a gloomy smoke filled semi-sunken den, accessed by a stone-lined tunnel, owned by a strange old fat guy who was confined to a wheel-chair. He seemed to be some kind of 'leader' or maybe Guru of this crowd of people, and looked like he'd just escaped from an early Star Wars film, (Jabba the Hutt). Luckily, our contact Joanna was in there (somewhere) and, somewhat worryingly, they seemed to be expecting us. Normally I'd have run away, but it was too late - we were sucked in by fanatical vodka swilling Polish madmen, intent upon forcing extraordinary quantities of booze and food into us. Well, it certainly beats working for a living.

The scene which greeted us upon entering was really bizarre. Given that we'd had to walk a considerable distance up a woodland track in order to find the joint, we arrived soaked in sweat - which did not matter, as we appeared to have blundered into a witches' coven in Hades. Joanna was there dressed up in an odd red hooded cloak, as most were. Maybe it was

## Another Roadside Attraction

a Little Red Riding Hood deal? The 'music' consisted of three or four guys bashing drums and bongos, occasionally 'assisted' by members of the audience. This weird scene went on for hours, with us willing victims being plied with seemingly endless quantities of food and drink. There was a central open fire over which was roasting (presumably) some unfortunate beast. We ate most of it. Huge amounts of Old Polish Wine was consumed by everyone, so many



**Unlined and Crumbling Tunnel Section in Wlodarz**

were very drunk. Robin and I remained sober. John succumbed and spent most of the time trying to get to know people; all of whom happened to be female. He failed. We laughed.

We made a tactical withdrawal at around 2330hrs, despite offers of rooms to sleep in. This concept seemed a bad idea, given that none of us fancied waking up being roasted on the spit. John wanted to stay (ha ha) but Robin and I insisted we run away. We needed to get back to the safety of Henry's B&B and arrived back at 0100. No easy task as decent road signs and streetlighting are optional as is the Polish version of the highway code.

By the time we got back, we were all completely ruined, and wondered whether it had all been some horrible dream. Maybe it was. Anyway, who cares - it's over, and we don't appear to be too badly affected.

Each Owl Mountain day was a full-on, hard yakka experience. Certainly not for the faint hearted or unfit. The opportunist nature of our adventure was brought home to us as, whilst deep inside the biggest of the systems - Wlodarz - which was flooded, in places up to six feet deep, our two man dingy (carrying four!) began to hiss ominously. It has been punctured. Our guide Henry merely shrugged, and said 'Keine Problem' and carried on

paddling. Given that we'd left the oars elsewhere, and were up until this point using our hands to propel ourselves along anyway, we thought that 'no problem' was somewhat of an understatement! Unfortunately, and for no discernible reason, I began laughing - quickly rendering myself totally incapable of doing anything other than weeping mercilessly

Due to the importance of the V-weapon concept and the disastrous way the war was going for the Germans, the control of all secret weapon installations passed to the SS. As did RIESE. The man in control of RIESE was Kammler. This name will be familiar to all of those that have read Nick Cook's book, 'The Hunt for Zero Point'. Suffice to say Kammler disappeared totally after the war and has never been heard of since. Not even in Argentina.

In Nick Cook's book, he suggests that the Nazis were on the trail of zero gravity. He includes photos of a strange, Henge-like construction which, as we were in the neighbourhood, we just had to see. The Henge, he claims, was a possible particle accelerator constructed by the SS in the doomed last stages of the war. Or, perhaps, a test rig for anti-gravity devices (His words, not mine). He talks too of flying saucers and, errr, time travel. We were assured by Henry that it had been just the base of a yet-to-be-

## Another Roadside Attraction



**The Henge. Particle Accelerator or Cooling Tower?**

constructed cooling tower for the nearby power station. He was right, as we later saw photos proving it. Henry - 1; Nick Cook - nil. So, unhappily for the Master Race (but luckily for us) the Nazis never broke into the Time Travel business. Ummm. Sounds a weird scene to me.

The mountains hid several military complexes, all of which are found at 600 metres above sea level. This is relevant. That every tunnel complex, of which there are at least eight, is at the same altitude gives rise to the conclusion that they were to be linked within this mountain. Having been inside every tunnel complex, this is my conclusion too.

The separate tunnel systems are in various stages of completion. It is obvious that the workers, plus their overseers, opted to leave in one hell of a hurry. One of the systems has only recently been rediscovered (in May 2002) and its entrance is still very well disguised. It was pretty obvious that very few people had been in since it was sealed in 1945. In fact, the dynamite for blasting the tunnel was still in the drilled holes. We refused to leave, thereby living up to our 'Dangerous Bothers' tag.

Some systems are in the obviously early stages of construction, whereas others have sections which are all but finished. Littered both above

and below ground is the evidence of the wartime activity: huge drill bits still stuck in the tunnel sides, cabling and the overhead power line mounting fixtures; wooden chocks to mount lighting and fixtures; railway lines, points, sleepers (both wooden and metal); wooden mining supports (now dangerously rotting away in the total darkness) supports for air drills, oil drums, lamps, nuclear reactor foundations, a stack of petrified cement bags over a mile long, houses built out of bunkers, massive unfinished

buildings their purpose a mystery, mass graves, bones...the usual scene where the Nazis have been in town.

All the tunnel systems are similar to each other, only differing in size. Whether any of them were to be substantially extended, nobody knows, as there were virtually no survivors. But within most of the separate tunnel systems we saw plenty of evidence of further boring and tunnelling. Generally, a main spine tunnel would be bored straight into the mountain, with side passages extending from it, usually perpendicular. The chambers, some vast, were rectangular. Some systems have two, three or even four parallel entry tunnels with cross tunnels linking them. Two of the systems are massive, Osowka and Wlodarz. Osowka has 1,700 metres of tunnels with three tunnels to the outside, over an area of 6,200 square metres with 26,000 cubic metres capacity. Wlodarz has 3,000 metres of tunnels with four tunnels to the outside, an area of 8,700 square metres with a capacity of 31,000 cubic metres. These figures may seem bland and hard to visualise - well, take it from me, they are absolutely massive. As well as being extensive tunnel systems, these two systems contain huge galleries, (as do the Rzeczkza tunnels) some of which rise to 12 metres high, 10 metres wide and 50 metres long with two levels of corridors, one on top of the other. Some of the

## Another Roadside Attraction

rooms inside these vast caverns are three storeys high. The largest hall in the Osowka complex is an incredible 100 metres long, 12 metres wide and 15 metres high. Within the tunnels, all of which are unfinished, there are reinforced concrete-clad sections, beautifully finished, of the usual high-quality seen in German fortifications. The tunnelling was achieved by typical mining methods with holes



**Tools Left Behind By The Nazis At Rzeczk**

being bored into the rock and then widened with dynamite. The spoil was transported out using narrow-gauge railways.

Indicating its importance within the Nazi war machine, it is worth mentioning that more concrete was allocated to RIESE than was used for all the air raid shelters for the civil population of Germany.

It is also worth noting that there were nearby deposits of uranium and that in one of the Walbrzych mines (25km north) the Nazis tried to activate an atomic pile...

Owl Mountain having been explored, our journey travelling in search of the past continued. Gierloz in the far north was our next major site of interest. Mr Hitler had his Eastern and main HQ here, the FhQ Wolfsschanze.

We drove off eastwards from Owl Mountain in the direction of the Ukraine, as I had various other places of interest to visit en route. We took the (foolhardy) opportunity to select a tiny road which headed upto the border between Poland and Ukraine to make an unscheduled stop. Well, the car had to stop, but we three didn't...

Espying the unfenced frontier, we couldn't

resist scampering over and running round the border markers like the pathetic children that we are now recognised as. It's a Boy Thing...

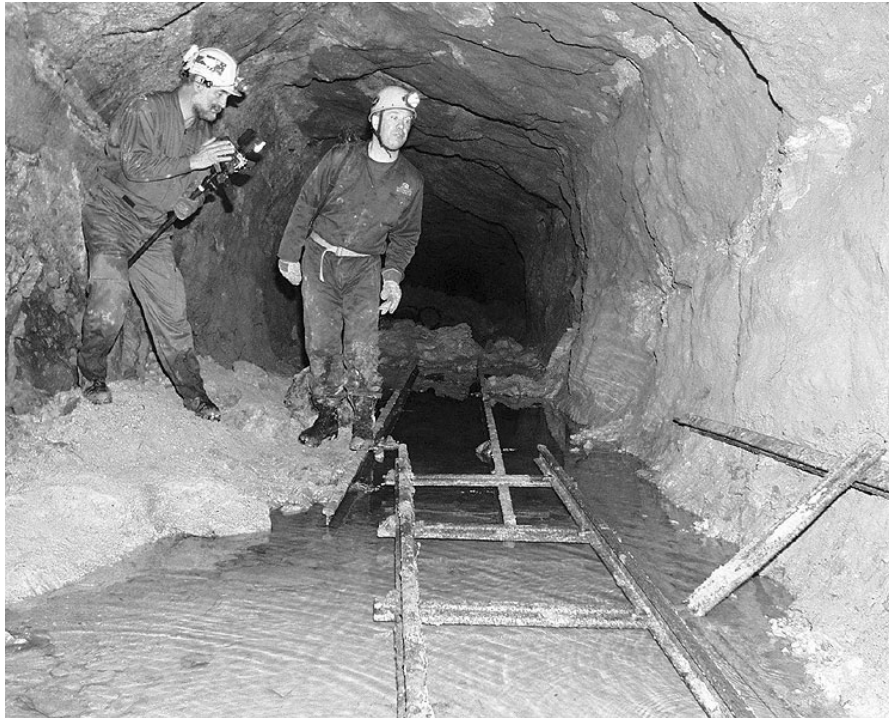
The deed having been done, we drove north skirting the border with Ukraine and then Belorussia. When it was time to stop for the night and find a suitable place to pitch our tents, we avoided camping on the eastward side of the road (i.e. close to the frontier) and headed westwards about a mile. We found an ideal secluded spot up a forestry track, and - after disciplining upwards of 200,000 mosquitoes - basha'd down for the night.

Well, next morning it all began pretty early - 0415 actually, when we were abruptly awoken by heavily armed Border Policemen in a Landrover demanding 'papers'.

John and I emerged bleary eyed, naked apart from our Marks & Spencer's smalls, and asked them what the hell they wanted. Looking somewhat surprised, they repeated 'Papers', to which John snorted "not until we've had a pot of tea mate". They were, quite honestly, stunned by our totally dismissive attitude.

While John brewed-up, given that we were camping about a mile inside the border, I suggested that - if we were illegal immigrants, we would hardly have only made it 1500meters

## Another Roadside Attraction



**Rusting Trackway Deep Within The Reize Complex**

inside Poland before camping! Also, with 'GB' on the back of a three-year old Citroen, we hardly fitted the bill as low-life's. Luckily (for me) they spoke no English, so I just glared at them and generally waited aggressively (...as usual, John said). They radioed in our details and, as they awaited instructions [presumably], we made the tea. I resisted the urge to begin laughing at them. Eventually, they gave us back our passports, presumably satisfied that we weren't Ukrainians who'd stolen a British car / drug smugglers / pimps / gun runners / etc. It was only as they drove off that we saw a fourth guy lurking in the bushes, having checked the entire tree line for 'more of us', although where they imagined we'd have stashed them in a car already bursting at the seams is beyond me. Someone must have tipped them off, as we were well hidden, about 500m up a dirt track (on the other side of the road AWAY from the border). Maybe our antics at the unmanned Ukrainian frontier line had caught up with us?

So, we simply packed up our tents and left early! That day's minor destination was not far away, and quickly reached. Job done, it was off to check out Mr Hitler's hang out in the far north. Again, it was another day of dazzling sunshine and 35C. It was getting ridiculous. Having been wandering around fields all morning, my hay fever had rendered me a

complete mess, and John had to map read as I couldn't see properly as my eyes were streaming. I gobbled down two more hay fever tablets and promptly passed out.

After many hours we breezed into Gierloz, noting the increase in German tourist traffic. Strange that.

Hitler's Eastern HQ (where, in fact, he actually spent the vast majority of the war) comprised of 80 bunkers. Hitler had, in fact, two bunkers (well, he would, wouldn't he) and - like

99% of the place - both were completely blown to bits. Incidentally, the Germans themselves demolished the complex as the Red Army were just about onto it. The Master Race didn't fancy the Commies benefiting from their investment...

Walking around the HUGE area, it is hard to find any bunkers which have not been blown up. There are immense piles of absolutely massive chunks of reinforced concrete lying around - some of the walls were 16 metres thick. These bunkers were the largest in the world in 1945. Goering's bunker is the most complete - but it too is blown up.

We especially asked whether any of the 80 bunkers in the HQ complex were linked via underground tunnels. Definitely not. However, we did find various comms ducts and channels. Robin and I got down into them, braving the horrendous swarms of mozzies, but there was little to see. There are undoubtedly a lot more to find in the undergrowth. Being mid-summer, the vegetation is thick - it is hard to see through it. Our expert personal guide (who was the author of 'The' guide-book on the complex) didn't seem too fazed when we produced serious lighting and were obviously kitted-up for 'further exploration'. In fact, he really got into it and scrambled down with us into the ruins through narrow gaps to investigate areas underneath the massive collapsed slabs. Apparently, ours wasn't his 'usual' tour. He



## Another Roadside Attraction

entered in the spirit of things and there were reports of him being seen g o o s e - stepping around in the company of three English-speaking suspicious looking bods in blue boiler suits. He did point out that once we left the main track, any injuries we sustained were down to us, but to be honest, it wasn't at all dangerous - until we



**A Huge Bunker At Gierloz**

climbed UP onto the tops of the remains of the demolished bunkers. These are still absolutely massive - 40ft up a series of rungs! It is hard to convey the size and thickness of these bunkers. There was a lot of the wood lining from within the bunkers still lying about inside. Also metal cabinets and various brackets from, we assumed, radiators.

For me, the most interesting place on site (in my quest to 'stand where they stood', but only reference heroes) was undoubtedly the ruins of the 'Situation Rooms Meeting Area' within the barracks. This was where [Colonel] Claus Shenk Earl von Stauffenberg attempted to assassinate Hitler on 20th July 1944. The building is totally flattened and demolished. The three sons of von Stauffenberg visited the site on 20 July 1992. There is a plaque to commemorate this. Incidentally, von Stauffenberg was caught the same night of the attempted assassination attempt, and shot - and 5000 others were 'arrested' in connection with the event, many being executed later. Von Stauffenberg's wife was arrested and sent to a concentration camp, and his three kids sent off to an orphanage. Somehow, against all the odds, she survived the camp and, even more incredibly, found her sons - a really incredible feat considering, all they still retained were their forenames.

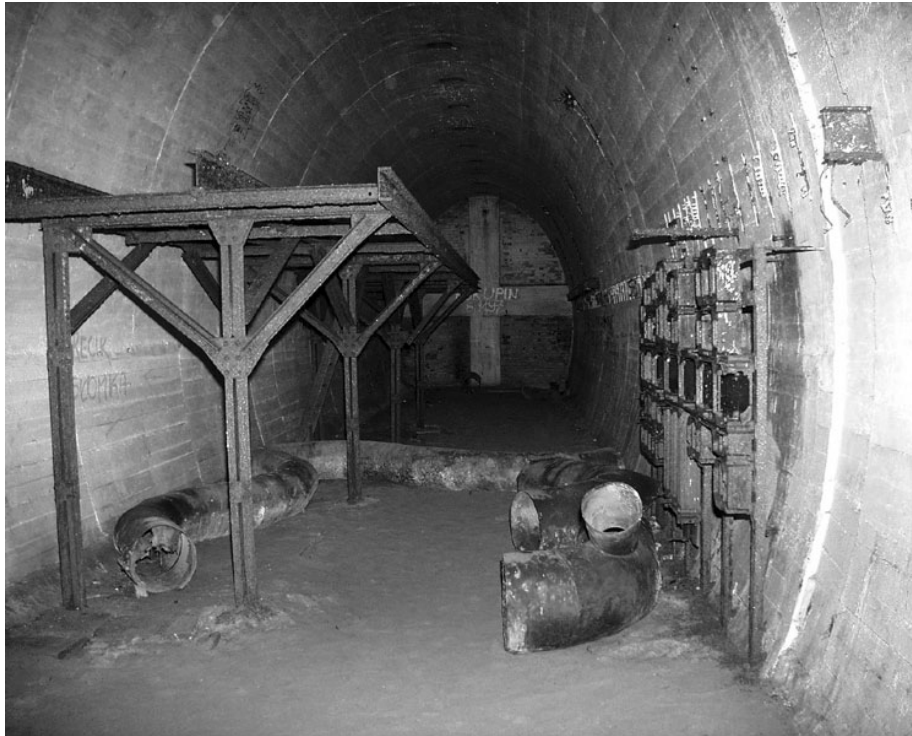
The HQ sported 2000 staff, 1200 soldiers; 150 of the SS and RSD, covered two and a half square kilometres, was built by 3000 workers (all Germans - paid by Organisation Todt, as opposed to concentration camp or PoW victims), had two airfields, various power stations, a main line railway station, room to store two trains out of view from the air and was totally camouflaged with netting which was changed as per the relevant season (this can still be seen stuck in the trees) The construction began in 1940, and there were three phases of building 'work' - 1940-41; 42-43; 44. Hitler actually spent 800 days there (i.e. he was rarely in Berlin) as he apparently only felt safe there. It was blown up on 24.01.45. The Red Army arrived on the 27th.

The whole area was 'off limits' until 1956, as there were 54,000 mines and 200,000 rounds of ammunition buried there. It took the Polish mine clearance teams eleven years of non-stop work to clear the mines as no plans were made by Adolph's mob.

We spent over three hours there crawling through the wreckage, and were all somewhat over-awed by the sheer size of the place.

The final phase of the Dangerous Brothers Tour was the Eastwall, the famous German

## Another Roadside Attraction



**Remnants Of The Ventilation System In The East Wall**

defensive line built in the 1930s against the perceived threat from Poland. The trusty Citroen therefore was pointed south- southwest towards Boryszyn, home of my friend Robert Jurga, famous military fortification expert who fortunately lives right on top of (!) the Eastwall.

By this stage of the tour, we were overnight camping. We were fighting a losing battle with the mozzies, and fled every morning nursing our weals. They even savaged John who, for reasons known only to him, persisted in wearing shorts. This gave the locals no end of amusement as we bought groceries in the little local shops. We still could not pronounce the Polish word for 'bread' so we resorted to shouting and waving our arms around and gesticulating towards the rolls. Eventually, they would cotton on and offer us bread - possibly to get rid of us as we tended to frighten the children.

We arrived in the area very early the next morning and checked out the tourist infrastructure around the Miedzyrzecz fortified front (The Eastwall to us Brits). We then drove to Nietoperek to investigate one of the tourist-friendly walk in 'tours'. We paid our 2 quid and did the one and a half hour tour, our lights being easily a hundred times better than theirs. Afterwards, we turned up at Robert Jurga's

where we stayed for four days. Both he and his wife Anna were incredibly gracious with their time and as a result we explored miles of tunnels. This was my second visit to the Eastwall, and we were given huge amounts of information regarding the Oder-Warthe-Bogen Festungsfront (Eastwall). The fortified line is, basically, in three sections. Natural topographic features combine with serious man-

made obstacles to create a very long defensive line. We saw numerous cupolas, bunkers, sections of dragons teeth (concrete and wood) dams, swing bridges etc. The three sections are separate and are not interconnected (by tunnels or otherwise). We concentrated on the central section (section 2) which comprises of literally miles and miles of tunnels and galleries. The system is not open for tourists - except for in a couple of places. The whole complex is dangerous and there are incidences of serious accident and/or death. The complex was used by the Russians after WW2; that is anything that was not facing East, for everything facing East was destroyed on the orders of uncle Joe Stalin (to prevent any of the fortifications being used against Russia, the then controlling power). The tunnels are around 100' deep and are extensive. In the central section there are over 20 miles of tunnels - all walkable. We proved it! There is some water ingress and the tunnels are in excellent condition. They are rarely explored. There is still quite a bit of ironwork down there plus plenty of original painted wording. Whilst exploring one of the fortifications connected to the system we found a skeleton left there from WW2. Actually we found 2 in separate rooms. When I first visited this system 2 years ago, I was horrified to be stumbling over skeletons of German soldiers. When I questioned Robert



## Another Roadside Attraction

about this he just shrugged and told me that nobody cared. The German ambassador in Warsaw has been repeatedly told of these remains but nothing had ever happened. Visiting the tunnels is only possible with an organised tour guide (a bit basic and sanitised) or with somebody who has expert knowledge; it would be dead easy to come a cropper down there. It is home to a huge colony of bats who should not be disturbed in their breeding season.



**'Mr Team-Delta' (foreground) Trying, And Failing, to Stay Dry**

there. It is home to a huge colony of bats who should not be disturbed in their breeding season.

Our time with Robert was spent mostly underground, but we did visit many surface features (flame throwers, mortar turrets etc., etc.). Robert is as fit as a butcher's dog, and always has an umbrella in his hand while exploring. It was a full-on day every day with Mr Jurga. Lunch is for the weak. To be taken round such as impressive fortification system with THE recognised expert is a real privilege.

Whilst deep underground, we were dumbstruck when, coming across two young guys also wandering around the tunnel system at eleven o'clock at night, we saw they had one feeble torch and a candle swinging in a jam jar on a piece of string...with no map. Plucky maybe - foolhardy certainly (am I getting too old?)

Staying with Robert and his wife Anna at their house was really neat, and it was sometimes difficult to believe that it was happening. We were languishing within the confines of a former palace (which must have been absolutely magnificent in its day, but is now gracefully crumbling away) having been granted unrestricted access to Robert's

fantastic archive. We came armed with the requisite quantity of material which stood us in good stead. Living there was quite a bizarre experience - the outfit is guarded by three enormous dogs who resemble curtains! Robert speaks no English so the whole thing had to be done in German (we spoke no Polish save for 'Uwaga' [danger] and 'brot' [brother]!)

One evening (and most of the night) was spent walking the main chunk of the Holgang system I had not previously seen. A friend of Robert and Anna's (the guy whose website is [www.team-delta.de](http://www.team-delta.de)) accompanied us on the visit. Robert warned us that much of the system was going to be wet, sometimes up to nearly waist height. Luckily at Hitler's HQ we'd availed ourselves of a stash of ex-Polish army NBC suits, the leggings of which we immediately realised were ideal for our nefarious Sub Brit activities. The top half - cape - was amount to useless, and I rendered myself totally helpless with laughter imagining the hapless Warsaw Pact squaddies fighting to put on the cape amid the drone of the approaching B52s.

So suitably equipped we set off with Anna and entered the system at 18.30hrs. We walked for miles. And miles. At least 10....We waded

## Another Roadside Attraction



**One Of The Railway Stations Located Within The East Wall System**

through the not very deep water and decided to walk to the very end first and then retrace our steps exploring the numerous side tunnels. At the end of some of the tunnels were unfinished installations, comprising of multi room units which must have consumed thousands of tons of concrete.

Robert was right, in places the water was nearly waist deep and John and I insisted on wading around apparently 'testing' the leggings. Mr Team Delta viewed the spectacle with barely concealed mirth, but at least he has now heard of Sub Brit.

The tunnel complex and underground installations are in pretty good condition. In places they are in perfect condition resplendent with original signing and narrow gauge tracks. John inspected the points and cross-overs, and found some which actually still worked. After we had passed the section which was flooded, the modern graffiti ended. The building and construction of the system was rudely interrupted by the onslaught of the Red Army, and despite archived plans indicating that the whole deal was to have taken until 1951 to complete, for some reason local difficulties encountered in January 1945 put paid to the realisation of Mr Hitler's dream.

We observed that the heights of the various tunnel sections differed. From 6 feet high, to

15ft. This could be explained by the fact that original lignite mines were incorporated into the Eastwall tunnel system.

The galleries and railway stations were very high - around 30ft and higher were reckoned. It was interesting to see that the original drains were still working well - except for where debris had been lobbed into the access pits and sumps. This had, in our opinion, caused the flooding. We

noted plenty more 'new' tunnels which left the main spine, but only went a few metres and were bricked up - presumably awaiting their turn for extension. Treasure hunters had removed bricks in some of these cases, and literally tons of fine sand had poured through - sometimes through the gap of one single brick!

After Adolph's mob were evicted, the new owners used the tunnel system. The Russians did not do much with them, and only constructed a very few buildings down there, but did renovate some of the system. These later Russian constructions are easy to spot due to their appalling build quality. The Russians then left it to the Polish Army, and they didn't use it for long either. When the Russians went home in 1990-ish, the Polish Army again briefly used the system for, apparently, NBC training and Nuke simulations. The Polish military soon lost interest though, and now they are abandoned.

The system we walked was around 100ft under the ground. The shafts are massive, and there are unfinished examples of Russian and German handywork to be seen. The lifts have all been removed, and the replacement steps are a Russian (i.e. post 1945) addition. We think that the Germans used spiral staircases (because we've seen them by the wrecked still-in-place lifts). We found lots of emergency

## Another Roadside Attraction

exits, plus various water/sewer outlets. These are shown on the plans too. As previously stated, all the gun/mortar emplacements facing east were completely destroyed on the orders of Stalin. Various bunkers do however survive.

In conclusion, the Polish Trip was totally successful. In 30 days, we visited three major underground sites, 36 other sites of personal interest, travelled 5500 miles door to door, spent an absolute total of £585 each, ran up

crippling mobile phone bills, discovered that 'Ice Cream' in Polish was 'lody' and that six lody's plus three bottles of 7-Up and some bread rolls cost under two quid. Bargain.

This was not a trip for armchair adventurers, but it was something everybody *could* do. But most quite definitely wouldn't...

**Tony Page August 2002**

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## Zeljava air base - Bihac

During June I had the opportunity to visit an interesting underground air base, situated on the Bosnia/Croatia Border. The following notes are based on my own observations and also the understanding of a UN policeman who showed us round. The facts have not been researched or validated.

The air base is situated to the west of Bihac, a town in the north west of Bosnia. The complex straddles the border, offering the novelty of entering by a Bosnian border post at Entrance 4 and exiting at Entrance 1 by the Croatian border post. It was built by the Yugoslavians during the period 1962-1968 to house 60 reconnaissance aircraft, and is located at the foot of a wooded hillside which rises steeply from a flat plain to provide several hundred feet of rock cover. There are extensive runways on the flat area but the underground component would be effectively invisible to overhead surveillance, with no obvious surface structures. Manned by between 1,200 and 1,500 staff, it was a high security area of which little was known by either the locals, and to some extent, by those who worked there. It is difficult to gain an idea of size but I would imagine that the distance from Entrance 1 to Entrance 4 is probably about 400m.

The air base was used for many years, but came under threat when the war in Croatia and Bosnia approached. The Yugoslav Air Force flew the resident aircraft off to other bases, removed the air base equipment and then in May 1992 blew up the structure. Most of the damage has been done to the bombproof entrance doors but subsequently, locals have

been daily visitors, stripping out anything of value that was left. This includes pulling down ventilation pipes and lifting floor panels to remove wiring. The structure is now totally derelict. The base consists of a network of tunnels accessed by 4 entrances, each of which leads directly onto a runway. The entrances are interesting in that whilst the tunnels have a height of about 20m, the door profile is reduced to about 5m high (consistent with an aircraft wing) with a central cut-out to accommodate the fuselage and tail.

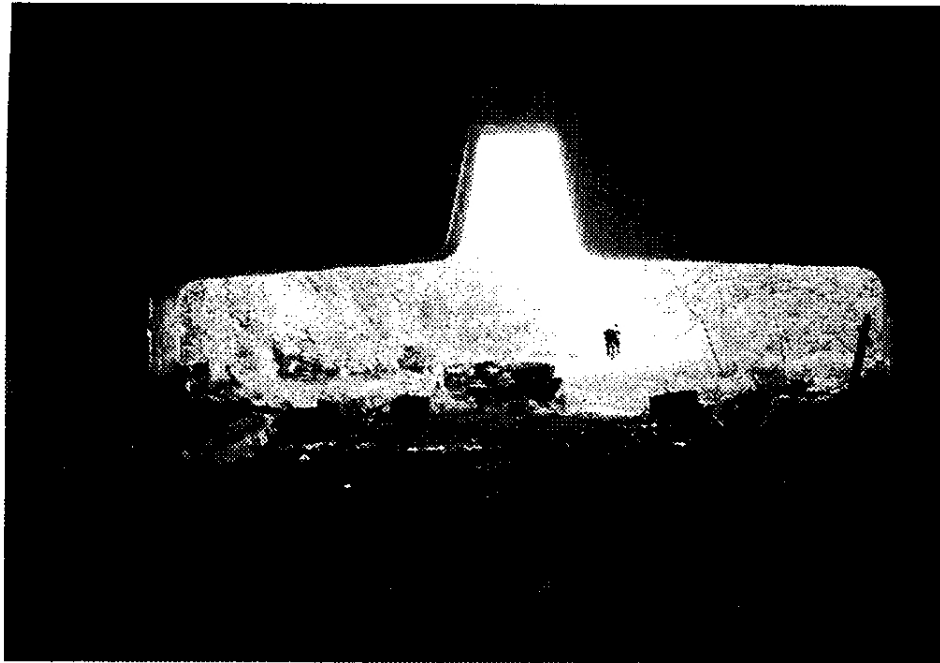
Within this profile a very thick blast door moved laterally into a chamber in the wall. Most of the sliding doors were blown outwards and the damage to their massively thick structure is testimony to the amount of explosive used in their destruction. One door remains in place in the closed position, at entrance 3. We were only aware of one level of tunnels, and this would be consistent with a structure intended for housing and maintaining aircraft. The tunnels vary in height but are mainly about 25m wide and between 15m and 20m high, the biggest tunnel being Gallery C. They are straight sided for about 3m with a curved roof above.

All tunnels are concrete lined with concrete floors and some show evidence of a mezzanine level. Services run in channels and it is probable that ventilation infrastructure was attached to the roof or in a service tunnel above the roof. There are a number of rooms which housed the support functions within the air base. The main complex featured an access corridor with rooms either side, leading

## Zeljjava air base - Bihac

to a circular room containing ventilation equipment from which further rooms radiated. Within this complex were situated classrooms, mess facilities, an operations centre, parachute section, photo section and communications, pilots' room and the medical room. There are a number of remnants still remaining including spools of reconnaissance film, and in the classroom, manuals for the MiG 21 aircraft.

The magazine facilities are by Entrance 2, with what we were told were the fuse and rocket storage, connected by a long curving tunnel. Lighting fixtures remain in place, as do overhead cranes. Next to Entrance 1 is a complex which appears to have provided power by means of a diesel generator. Another interesting feature shown to us were inset rubber pads at wing height on corners in the tunnels to restrict damage should an aircraft accidentally contact the wall. We entered by Entrance 4 and followed Gallery D to the Operations Complex and Gallery C to look at



**A View looking Through one of the Exits (Photo By Author)**

the closed bombproof doors, and then retraced our steps to enter Gallery B. There we inspected the magazines and then exited by Gallery A and Entrance 1. Interesting features outside Entrance 1 are a number of practice bombs, runway cleaning equipment and a jet engine on a maintenance stand. In conclusion it is difficult not to be impressed by the size of this structure. It was frustrating to be unable to learn more about the facility but an idea of the days when it was home to Yugoslavian aircraft was not difficult to imagine.

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**Andrew Law**

