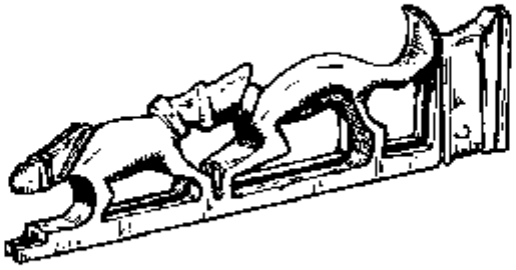
Ampthill & District Archaeological



& Local History Society

“Forewarned is Forearmed”

Royal Observer Corp in Ampthill during the Cold War

1947 – 91

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2021

www.adalhs.org.uk

The Royal Observer Corp in Ampthill During the Cold War. 1947-1991.

The Ampthill Royal Observer Corp carried out valuable work throughout the WW2 hostilities, manning a bleak hilltop in the Firs twenty-four hours a day, seven days a week. They assisted the RAF and the public by identifying and tracking all aircraft as they passed overhead. Collectively, with similar groups throughout the country, they helped to pin point where enemy aircraft were heading in order that they may be intercepted and also notify local ARP units to sound air raid sirens. Towards the end of the war they reported the location of flying bombs (V1's) as they flew over and where they exploded. On the 12th May 1945 the Corp was stood down, they were no longer needed. This did not last however as tension between the East and West grew and conflict became a possibility.

They were revitalised in January 1947.

In the new "Nuclear Age" war was envisaged in terms of survival and retaliation. Missiles, as demonstrated by the V2 rockets in WW2, could not at that time be detected or intercepted.

Foreseeing the worst, it was considered necessary to know the exact location where bombs were falling, the height of the explosion above ground and its strength. No group was better placed than the ROC to collect this information, they had sites all over the country and they had proved themselves to be reliable. Obviously they could not use their posts as before, some of them were on top of buildings and most had been hastily built in 1939, they were all open to the skies. So in 1957, quietly and on a need to know basis, 1560 underground bunkers were built in the UK out of concrete. They were made to house three observers safely during an attack. The necessary information about the blast was to be sent to a local headquarters where the information was triangulated with other nearby sites to establish precise locations which in turn were to be sent to the Air Ministry .

The bunkers were all made to a set pattern and the one at Ampthill was dug on the actual WW11 site. Fortunately they were never tested out, but Observers were trained and ready to spring into action if a genuine alert came, it was all very secret and it was only later that their activities became public knowledge. We have been unable to trace any actual Observers from this time who are prepared to discuss their activities but some photographs taken when the site was destroyed have given us an opportunity to establish what was there comparing them with the published schematic drawing.

The ROC were finally stood down as the cold war ended in 1991 and the order went out for all bunkers to be cleared and stripped of their equipment. In the event some sites were just abandoned and their equipment left in place. This allowed their methodology to be worked out, several museums have examples on show. The Ampthill bunker was closed up in 1993, the photographs taken at the time and included below show enough detail to confirm the bunker was built to the prescribed pattern. We also know that an Ampthill boy, attracted by the sound of a small petrol generator, found the trap door open with cables running through underground. He made himself known and was invited down the ladder where he found two men and a woman working at a desk, he remembers pipes on the wall and space for a pair of bunk beds. They were presumably practicing for an alert. The generator would have been charging a 12 volt battery, which ran the equipment and supplied the lighting, see **Fig.1.** The low power system was designed to last for three weeks as were their rations.

The following is a suggested scenario for the site and the way it worked.

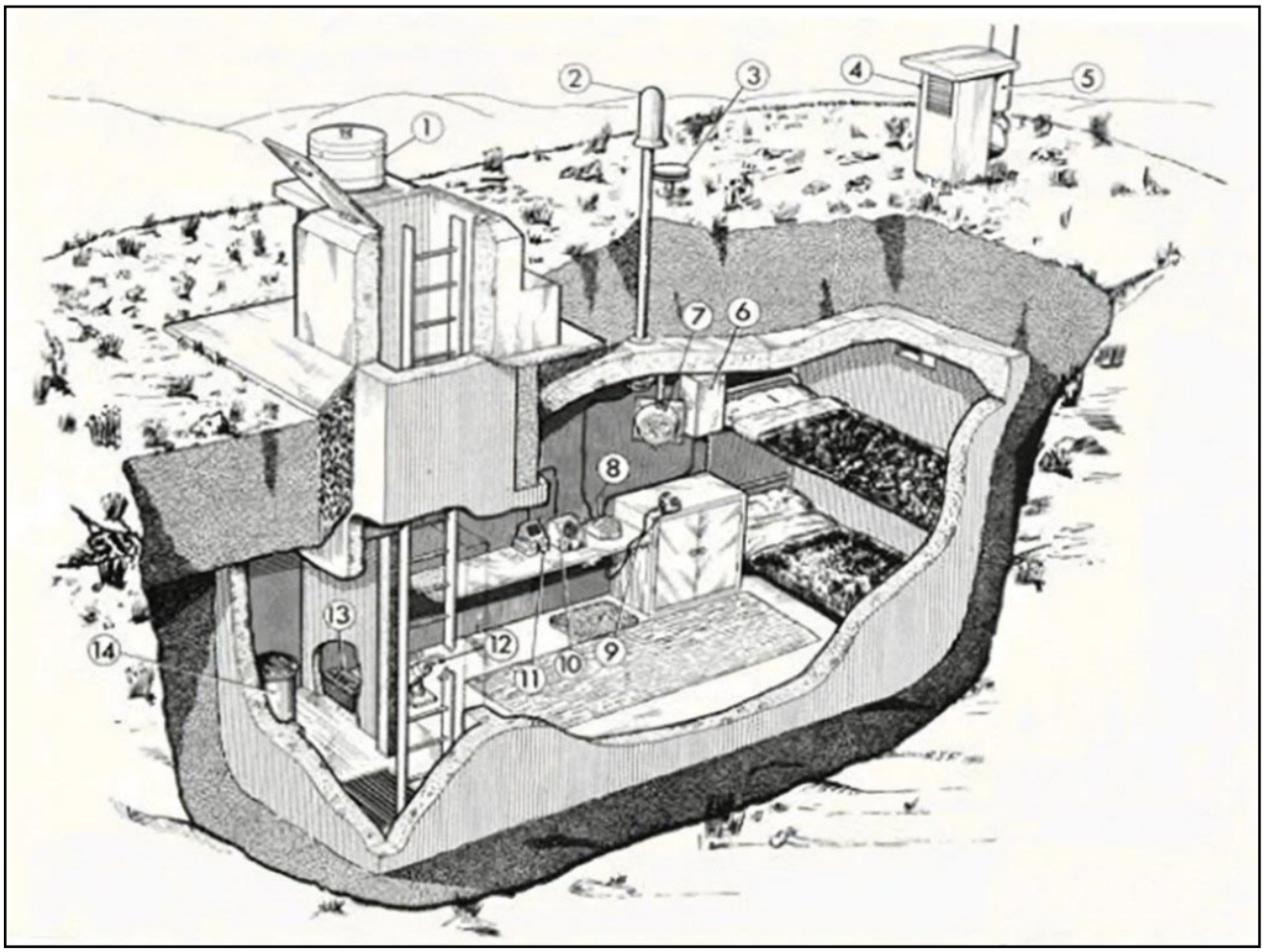
All that can be seen on site today is a slab of concrete with a manhole **Ph. 1**. In 1993 there was a wire enclosure surrounding a small concrete structure, see **Ph. 2.** The photograph was taken prior to the bunker's dismantling. Very few people were aware of what lay beneath. It is now possible with the world wide web to conject what must have been there and to confirm it using photographs taken in 1993.



Ph. 1. The site in 2021, a concrete capping with a secure manhole cover



Ph. 2. The site in 1993 prior to destruction. Note small structure above ground



1. Ground Zero Indicator. 2. Survey Meter Probe Unit Cover. 3. Bomb Power Indicator Baffle Plate. 4. Air Ventilator. 5. Pneumatic Aerial for Radio Set. 6. Radio Set. 7. Bomb Power Indicator. 8. ROC Fixed Survey Meter. 9. Radio Head Set. 10. Loud Speaker Telephone. 11. Carrier Receiver. 12. Pump for Pneumatic Aerial. 13. 12 Volt Battery. 14. Toilet.

Fig. 1. 1950s schematic drawing of the equipment held in ROC Post

Fig. 1. was taken from the web (see acknowledgements) and shows a schematic drawing of an Observer post with its equipment. The small concrete structure as shown on **Ph.2.** would have held the access ladder but it would also have formed a platform for the Ground Zero Indicator No 1. on sketch.



Ph. 3 . Looking up the access shaft showing the ladder.



Ph. 4. Bottom of access shaft with rubble from concrete structure.



Ph. 5. Two bunk beds, note airduct outlet on wall

The bunk beds in **Ph. 5.** fit the examples in the sketch, the airduct outlet is inline with the illustration. Picture **Ph. 6.** shows evidence that the important equipment had been stripped from the Ampthill bunker when it was decommissioned.



Ph.6. The fixture in the ceiling would have been the sleeve to allow the survey motor probe to revolve, see No. 5 on sketch

It is now possible with the aid of photographs and reports on the web to establish what was required of the Ampthill Observers. The equipment removed when they were finally stood down would have included a Bomb Power Indicator, the white dial on **Ph. 9. ,** Ground Zero Indicator (GZI) **Ph. 7.,** and **Ph. 8.,** and a Fixed Survey Meter **Ph. 10.**

When an attack was expected the Observers would prepare the GZI by placing photo sensitive paper around the inner part of the GZI **Ph. 8.** and placing it in what was effectively a pot with four small holes in the side **Ph.7.** and firmly screwing down the lid. The GZI assembly would then be mounted on its platform, which was at a known height above sea level, and had slots to ensure the holes in the side of the GZI always faced the main cardinal points.

After a bomb had detonated, it's power could be read on the white dial in the bunker, this was a pressure gauge which measured the air pressure exerted by the explosion on a baffle plate at the top of a vertical pipe above ground **Fig.1.** no. 3.

To find the height of the explosion above ground and it's direction from the Observer post, required the Observer to climb the ladder, open the hatch and remove the Ground Zero Indicator from its platform and take it back underground to decipher the results. A very hazardous but necessary procedure.

This basically very simple, but effective, GZI system worked when light from a very bright flash shone through one of the four holes and instantaneously marked the photographic paper like a pin hole camera. It's general direction would be clear from which hole received the flash, and it's height could be worked out from the vertical position of the image on the paper, the higher the detonation the lower the mark and vice-versa. It's precise lateral direction would be ascertained from the angle the light struck the photographic paper. This was made possible by the four concave faces of the GZI inner, each facing a pinhole. The photographic paper would have fitted snugly on the curves allowing the light a clear path within the

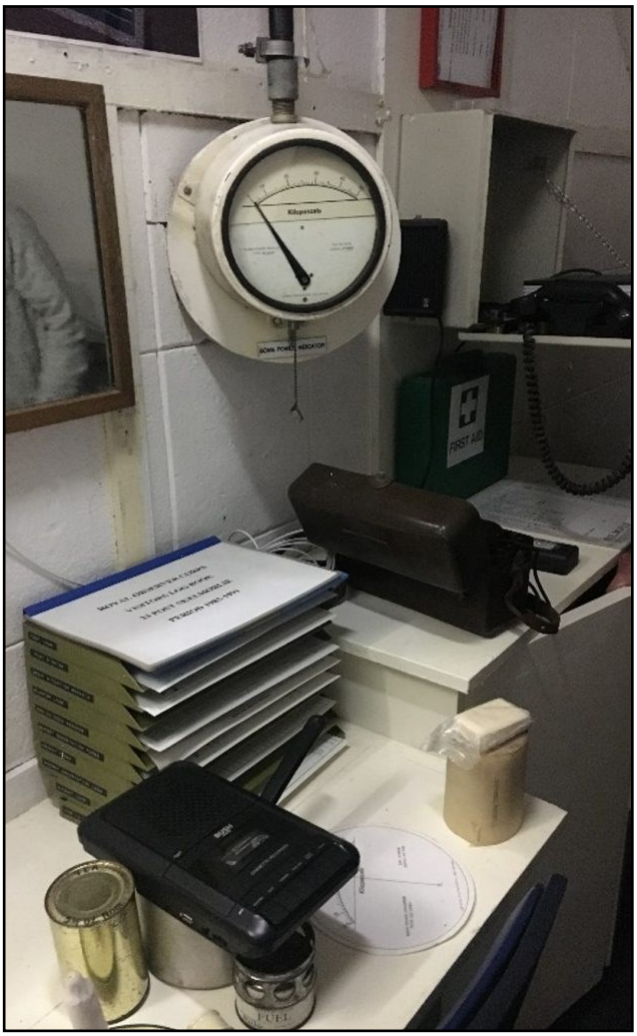


Ph. 7. Ground Zero Indicator, note small hole between the two rings



Ph. 8. Ground Zero Indicator inner, marked N for North.

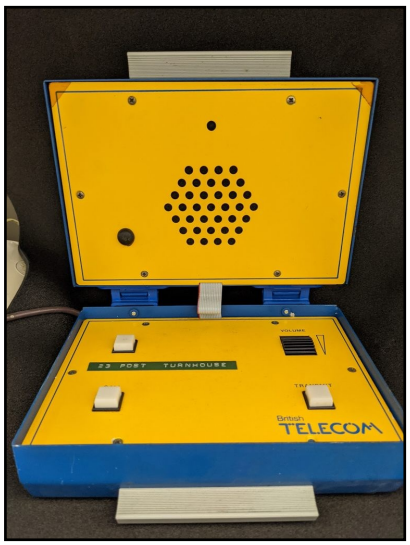
GZI. When removed from the GZI inner the paper would have been fed into the Fixed Survey Meter **Ph.10.** and the results accurately recorded. This equipment allowed the Observer to ascertain real time information of the power and location of the bomb, relative to the Ampthill post, which was then transmitted via a BT Tele-talk intercom unit shown in **Ph. 11.** to the Group 7 Headquarters at Biddenham, near Bedford through a telephone cable. The Tele-talk was in direct contact with an operator without going through an exchange as was the case with a normal phone. The GHQ would receive similar reports from other posts, like Sandy and Arrington in Cambridgeshire, which enabled them, by triangulation, to pin point where the bomb had fallen, it's height above ground, and it's power. This information was in turn passed to Sector Operations Centres where scientists would forecast which areas would be in danger



Ph. 9. Inside of Skelmorlie Post (Scotland), showing the white Bomb Power Indicator



Ph. 10. Fixed Survey Meter. (orange) mounted on desk at Skelmorlie



Ph. 11. BT Tele-talk in direct contact with Group Headquarters

from nuclear fall-out allowing civilian and military authorities to decide what services (ports, rail, airfields etc.) could remain operational.



Ph. 12. The surface remains of a bunker conserved in Scotland, the Ground Zero Indicator shows up white

Acknowledgements.

Photographs :- 1. The author, 2,3,4,5,6. Paul & Lissie Roberts. 7,8,9,10,11,12.The National Museum Scotland.

Figure 1 The National Museum Scotland.

Local information from Mr. John Winfield for boyhood memories and Mr. John Mayhead who confirmed that the bunker was closed by the Ampthill Urban Council to avoid vandalism, the structure above ground was destroyed and rest was capped with concrete.

Background information. David Skillen.

Web page searches including *Royal Observer Corps Subterranea Britannica,* and *Forewarned is Forearmed: inside the hidden world of the Royal Observer Corps.* By Sarah Harper.

Cold War UK Civilian Communications (www.ringbell.co.uk)