

**NNAS Lecture** 1st February in the Town Close Auditorium, Norwich Castle Museum.  
Dr Richard Maguire, Senior Lecturer in Public History, School of History, University of East Anglia, on the **Cold War Anglia** project.

Once again the projection equipment let us down so Richard had to begin his lecture without illustrations but gallant efforts by Sophie Cabot eventually enabled the pictures to be shown. His theme was the culture of the Cold War and he gave a brief outline of the early UK weapons programme to combat the threat from Soviet Union bombers and to launch retaliatory attacks. He chose four locations to illustrate its effects on the landscape of East Anglia.

- (a) RAF Bawburgh nr. Norwich
- (b) RAF Feltwell
- (c) RAF Barnham nr. Thetford
- (d) RAF Orford Ness in Suffolk

All of these were highly classified in their time, which means accurate details about them are still sketchy.

### **Bawburgh**



This was a virgin site. pristine farmland, before it became part of a radar defence network, imposed by Government without being integrated into the local community. It altered centuries of agricultural use and the surrounding landscape. Whereas Bawburgh pre-WWII was in the middle of nowhere now it is adjacent to the A47 and filled in with development. The original station was part of the 1950s Rotor Radar System to modernise the United Kingdom's radar defences.



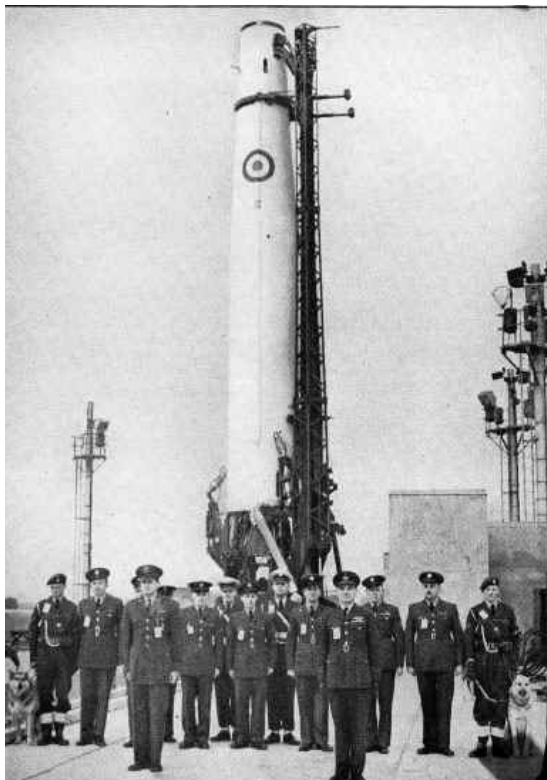
At one time 40 airforce personnel worked there but little is left except an underground bunker with a bungalow built over the top (a similar example exists at Trimmingham).

The main guardhouse bungalow.

## Feltwell



The airfield was part of a network built in the late 1930s with a curved array of hangars, similar in layout to many of the other RAF airfields of the period (for example RAF Marham, RAF Watton and RAF West Raynham). It was home to a number of heavy bomber squadrons of the RAF during the Second World War. Post-war it housed intermediate ballistic missiles to be fired at Russia. These 'Thor' missiles arrived at Feltwell with No. 77 Squadron, on the 19<sup>th</sup> of September 1958. It became one of four main complexes constructed, the other three being North Luffenham, Helmswell and Driffield, each controlling four satellite sites.



A site consisted of three launching pads laid out in a triangular pattern. Each Thor had to be fuelled for up to thirty minutes before it could be fired (during the Cuban missile crisis they sat on their pads fully fuelled). Although the missiles were British owned and carried the RAF roundel, the nuclear warheads were American, which meant that at each site there were American custodial officers who held a second key to free the missile for launch (something new for the British who felt a single officer could be trusted with such a responsibility!). In January 1963 the Thor missile system became redundant and was phased out; missiles and warheads were sent to the USA. The missile pads are now situated under the golf course.

The officers and launch crew standing in front of a Thor intermediate range ballistic missile at RAF Station Feltwell

## Barnham

Barnham was used in WWI for testing the first tanks and during WWII as a chemical weapons store. After 1945 it became a high explosives bomb dump. During the 1950s/60s an area was set aside as a high-security storage facility for nuclear weapons. This part of the site is now a scheduled monument. In the early 1960s, the nuclear weapons storage facility was put up for sale, and now forms the Gorse Industrial Estate. The site was built to store and maintain free-fall nuclear bombs such as Blue Danube – quite old technology requiring high maintenance. The bombs were brought in on trailers,

the nose and tail removed, serviced and stored. Barnham supplied the bomber squadrons at Honnington, Marham, Watton, Wyton, Upwood and Bassingbourn.



BLUE DANUBE was the first operational British nuclear weapon. The RAF V-bomber force was meant to use it at a time when the first hydrogen bomb had not yet been detonated, and British military planners still believed that an atomic war could be fought and won using atomic bombs of a similar yield to the Hiroshima bomb dropped by the US to end the Second World War. For that reason the stockpile originally planned was for up to 800 bombs with yields of

approximately 10-12 kilotons.

The British nuclear bomb BLUE DANUBE © Crown Copyright



Barnham was one of two such sites built in England, the other being Faldingworth in Lincolnshire which has the same types of building and is almost identical in plan form. The site was roughly pentagonal in shape, consisting of three large non-nuclear component stores to hold the High explosive part of the bomb and its outer casing. They were arranged in an arrowhead formation and accessed by the internal loop road and are surrounded by 4.5m high earth traverses, revetted by a reinforced concrete retaining wall with watch towers around the perimeter. Much of this remains.



A number of smaller storage buildings (known as "Hutches") held the fissile cores in stainless steel containers sunk into the ground. These hutches were further divided into type 'A' and 'B'. The 'A' type hutches having a single borehole for the storage of Plutonium cores and the 'B' type hutches having a double borehole for storing Cobalt cores. In total, there were 55 hutches giving enough capacity to store 64 fissile cores.

Unfortunately the stainless steel containers have been removed leaving only the holes. The doors to the stores are made of wood covered in steel and secured with a combination lock. The door has a large spring loaded electrical door contact,

The operational life of Barnham was short. By the early 1960s free-fall nuclear bombs were superseded by the Blue Steel stand-off missile.



The facility became obsolete; storage and maintenance of nuclear weapons moved to the V bomber airfields

## Orford Ness

During the First World War the Royal Flying Corps established a flying field on the marshes. It was principally used for experimental work into aerial machine guns, bombs, navigation, and photography. In 1935, a small experimental radar team conducted experiments to prove the value of this technology and help construct the network of radar-directed air defences so critical during WWII. In 1950, the Atomic Weapons Research Establishment was created to coordinate Britain's efforts in nuclear warfare and took control of the Orford Ness site which was a safe, secure island. Its primary task was environmental testing to simulate the conditions that nuclear weapons and their components might experience during trials and in service use. This was crucial to the credibility of the United Kingdom's nuclear deterrent forces, and the cornerstone of Cold War defence policy, the majority of work at the site being conducted on the 'Blue Danube' nuclear bomb. Officially, no fissile nuclear material was ever detonated at the site, but explosive tests were certainly carried out to test the functional performance of distinctive 'pagoda' shaped buildings – a few of which remain standing to this day.



This is a controversial site now looked after by the National Trust. For a long time it was allowed to decay and much of the infrastructure has fallen apart. Some preservation is taking place plus virtual modelling of what it used to look like. English Heritage did a map of the area, took a series of photos and is searching for old photos of the site to demonstrate a century of military involvement.

Dr Maguire ended with a review of the Cold War situation. Thankfully the nuclear holocaust never happened; it was an imagined conflict which never took place. Nevertheless it had a profound impact on the local environment and the population. He showed a picture of the impact of a Hiroshima-type bomb on Bawburgh which would hardly have affected Norwich nearby. Whereas a hydrogen fusion bomb on Norwich would have destroyed most of Norfolk. The 1955 Strath Report (only available to the public since 2002), assessed the country's ability to survive a nuclear attack and concluded that thermo-nuclear weapons would have killed 20 million people. This scared the British Government which gave up any thoughts of defending people by shelters despite all the advice given out to the public (although most people realised that they stood no chance of survival). The focus shifted to deterrence. Despite no plans for saving people, particularly in rural areas like Norfolk, secret underground facilities were constructed for Government employees essential to the administration and one still exists beneath the car park behind Norwich City Hall and possibly another under the old Library site –evidence of how the Cold War affected the architecture of cities.

Roger Bellinger thanked Richard for an interesting and thought-provoking presentation. An extended session of questions from the audience led to an interesting discussion about aspects of the Cold War scenario.

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