



# KLAXON

August 2024

## Newsletter of the International Research Group Orford Ness

IRGON is now officially “International”! Much of the research carried out on Orford Ness went beyond the boundaries of the United Kingdom, whether collaborating with allies or evaluating enemy technology. The multinational IRGON team recently uncovered relevant equipment as far away as New Mexico (see article below). So it was time to reflect this international dimension in our slightly modified logo and title.

We have also moved our web content from the .uk address to [www.irgon.org](http://www.irgon.org) and took the opportunity to clean up the look. Please update your bookmark and tell us what you think!

**Olaf Kirchner, Chairman**

**Orford Ness Trials Aircraft** – From 1945 to 1957, most bombing and rocket firing trials on the Ness were carried out by aircraft of the Bomb Ballistics Unit, based at Martlesham Heath. Through the good offices of aviation author Dave Forster, we recently acquired the detailed official MH Operations Records that now allow us to connect bombing trials with the individual aircraft. The BBU operated an eclectic mix of aircraft, including rarities such as the Short Sperrin and no less than four Avro Lincolns previously used as engine testbeds. With the two outboard R-R Merlin engines replaced by Python or Theseus turboprops or R-R Avon turbojets, these aircraft could climb to operational altitude above Orford Ness in record time! Find out more at the IRGON stand at the MHAS Open Day and in a future article on our website [www.irgon.org](http://www.irgon.org).



*The famous Martlesham Heath  
control tower museum*



*Sperrin VX.161, which flew out of  
Martlesham Heath*

**Martlesham Heath Aviation Society Open Day - 8th September** - Mark your diaries with this year's exciting event Planes, Flames & Automobiles! ([mhas.org.uk](http://mhas.org.uk)) at the famous Control Tower Museum. Meet the IRGON researchers at our special gazebo and find out what we've been up to.

## Trip to the United States

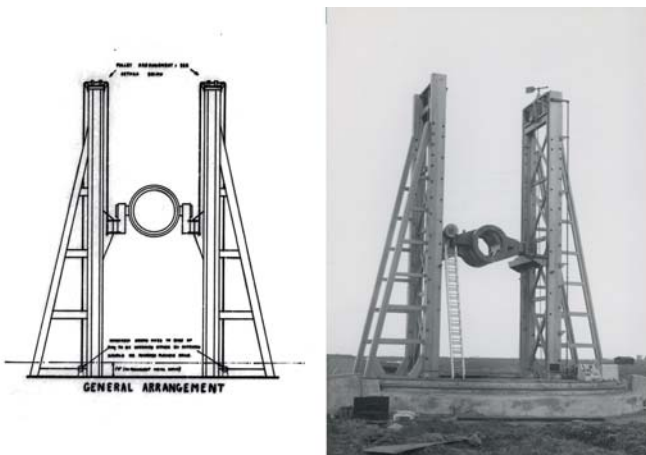
Our researchers managed to fit in a trip to the Walker Aviation Museum ([www.wafbmuseum.org](http://www.wafbmuseum.org)) at Roswell, New Mexico. This museum is dedicated to preserving the memory of Walker Air Force Base. Decommissioned in 1967, this base had many outlying missile sites. One of these, Nike Hercules Site WA-10, has a concrete ring identical to the one on Orford Ness. This was the site of one of the AFTAC "R" over the horizon radars, used for nuclear treaty verification in the 1960s. IRGON is still working on a history of the "R" system on Orford Ness.



*Worlds apart: identical concrete rings in the New Mexico desert and on the shingle at Orford Ness.*

### Frazer Nash

In June this year, IRGON researchers paid a visit to the Frazer Nash archive in Henley on Thames. Well known for their distinctive motor cars, Frazer Nash were a very innovative engineering company. We knew from AWE documents that Frazer Nash had supplied some of the vibration test equipment to Orford Ness in the 1950s. Unexpectedly, we came across valuable information on the Blue Streak test rig erected on the Ness in 1959. We are improving our Blue Streak website article in the light of this new information.



*Comparison of a 1957 AWRE preliminary drawing with the gantry as installed in 1959*



*The German R4M aircraft rocket*

### Evaluating enemy weapons

Besides supporting research and development of British weapons and military equipment, the facilities on Orford Ness were also used to evaluate enemy weapons.

Especially during WW2, a number of trials were made of captured German equipment. One example of this was an elaborate trial to test German incendiary bombs. Enough intact bombs were captured, plus an intact bomb holder, to carry out a full test over the Ness, using a captured Ju88.

In the closing months of the war, the Allies began to feel the effects of new technologies being used by the Germans, the V-weapons, jet aircraft, and air-launched missiles.

The unguided R4M aircraft rocket, although not a sophisticated device in isolation, became a devastating weapons system when used in conjunction with the jet propelled Me 262 and the Ez42 gyroscopic gunsight. The rocket itself was designed by Fräulein Doktor E. Schwarz of Deutsche Waffen und Munitionen (DWM) at Lübeck and the Ez42 was the brainchild of Professor Fuchs of the Askania-Werke in Berlin.

The few sorties carried out against USAAF daylight bomber formations showed how lethal this weapon system could be. Luckily, the Third Reich collapsed before deployment was possible in any numbers.

After the war, captured examples were evaluated at the Projectile Research Establishment at Aberporth, and lethality tests against British bomber airframes were carried out on Orford Ness.

This is the subject of ongoing IRGON research.

## The Last Bomb Ballistic Experiment on Orford Ness

One of the most evocative spectacles of the 50th anniversary of D-Day was the dropping of 37000 paper poppies from a Lancaster bomber on the approaches to the beaches as remembrance for those who fell during the landings. This proved so emotive that it was repeated over Buckingham Palace during the VE Day celebrations the following year.

What was not widely known is that the method of dropping the poppies was tested and refined on Orford Ness under the leadership of Brig. (ret) Tom Longland of the Royal Anglian Regiment. It was from a chance meeting with Brigadier Longland on top of the bomb ballistics building that I learnt the story of the last bomb ballistics experiment.

Brigadier Longland had a long and illustrious career with the British Army and, in 1992, was appointed by the MoD to co-ordinate their commemoration plans in collaboration with the wishes of the Royal British Legion (RBL) and the Normandy Veterans Association (NVA). It is unclear where the notion of dropping 37000 poppies onto the sea on the approaches to the Normandy beaches arose, but it was obvious that a foolproof method had to be found to ensure that a carpet of poppies was laid. Nor is it quite clear why Orford Ness was chosen as the experimental site

The first flight was a failure. The poppies were packed into paper parcels with the expectation that when released from the bomb bay wind sheer would rip open the parcel. This did not happen. An emergency order for poppies was placed with the Royal British Legion Poppy Factory with the instruction that the parcels should have slits cut in them to ensure that wind shear ripped open the packages.

The modified packages were quickly delivered to RAF Coningsby and packed into the Lancaster's bomb bay ready for the flight over Orford Ness. Unfortunately, the ground crew, unaware that the bomb bay was packed with poppies decided to the pre-flight checks should include ensuring the bomb bay doors were fully functional, which they were, so spilling all the poppies over the hanger floor. Another order was placed.

The third attempt to drop poppies over Orford Ness was a complete success. The parcels burst open on release producing the desired carpet of poppies effect. A reliable method of producing a carpet of poppies had been found and has been used ever since. The last use of the range at Orford Ness had been to produce a method of honouring the fallen on the World Wars. Sadly, it appears that there are no photographs of the last bomb ballistics experiment on Orford Ness.



**Want to know more or join us?** – If you have an interest in military history, if you have a personal or family connection to the work carried out on Orford Ness or access to information that may help us further document this history, you will find our contact details on [www.IRGON.org](http://www.IRGON.org).

Thank you!

**Website** – Our updated website now has new articles, visit us to find the most up-to-date information and discoveries made by IRGON.



[www.IRGON.org](http://www.IRGON.org)