CONTACT!

The Newsletter of the former RAF Defford Reunion Association, now merged with the

DEFFORD AIRFIELD HERITAGE GROUP

in partnership with THE NATIONAL TRUST, CROOME

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METEOR RETURNS TO DEFFORD

Meteor WD686, complete and fully restored to display standard at the workshops of the Boscombe Down Aviation Collection at Old Sarum – ready for the journey to Croome, arriving 2nd October 2019 – 61 years after flying out of Defford Airfield.

EDITOR GROUNDED

By the time you read this, your Editor will be in hospital for a major overhaul. For this edition of 'Contact!' he is indebted to Dennis Williams who finished editing and preparing your newsletter, including news and photographs of the arrival of Meteor WD686 at Croome. Dennis and Bob are also indebted to Phil Butler and other DAHG members for additional material and photographs.

METEOR WD686 READY TO TRAVEL

A few weeks ago, Geoff Shaw made a visit to the Boscombe Down Aviation Collection at Old Sarum.

Geoff found Meteor WD686 outside the BDAC hangar, finished, restored - and looking magnificent! It was seen ready to be dismantled for its journey to the RAF Defford Sick Quarters Site at Croome.

As the Meteor stands, it offers a very good preview of how it will look when on display at Croome.

METEOR ARRIVES AT CROOME - Wednesday 2nd October 2019

David Vernon, Meteor Project Team Leader for DAHG, tells us that by the time everyone reads this newsletter Armstrong Whitworth Meteor WD686 will be standing fully assembled in the Croome car park adjacent to the Ambulance Garage. As we know, the reason this aircraft is so important historically to Croome because it is thought to be the last aircraft to fly out of RRE Defford, on 28th March 1958. It now looks as it did then, down to the correct nose radome and paintwork. It must be said that the team at the Boscombe Down Aviation Collection (BDAC), led by Sqn Ldr John Sharpe MBE and Ron Fulton, have done a fantastic job of restoration. Particular thanks are due to Mr Vernon Hill who funded the whole project.

The Meteor was scheduled to arrive at Croome on the afternoon of Tuesday, 1st October with assembly work by the BDAC team starting on the 2nd at the rear of the Ambulance Garage. On the morning of Thursday the 3rd WD686 will be rolled forward into its display position which is between the Ambulance Garage and the Latrine Block. Here the outer wing panels are to be fitted, and the aircraft handed over when BDAC engineers leave site. The Meteor is due to stay with us until the end of June 2020.

There is quite a lot to be done before the Meteor can be rolled forward into position. The buggy tent impedes progress, so has to be temporarily dismantled and the hedge to the side of the Latrines cut down so that there is room to finish assembling the Meteor. Fortunately the site is level as the Meteor has no brakes and because it weighs several tons the wheels have to remain chocked at all times.

A fence similar to the wooden one that runs between the Ambulance Garage and the Museum will be constructed around the aircraft, which will mean that all visitors to it will first have to pass through Reception. BDAC have promised us a platform which will enable people and especially children to look into and perhaps even (under supervision) get into the cockpit. But at the same time, there is extensive construction work going on in the car park in the next few weeks, which will allow the Latrine Block to be commissioned and the new Learning Centre fully opened. It is expected that the Meteor will be ready for visitors at the same time that this work is completed in early November.

Dennis Williams has produced updated information boards suitable for this display. BDAC have promised that they will provide an explanation of the cockpit layout.

Finally, all navigation and cockpit lamps work and can be switched on. They are all LED-powered so the electrical load is minimal. We imagine that on a gloomy winter's evening as staff, volunteers and visitors are starting for home, their hearts will be lifted by the sight of a complete Meteor jet aircraft parked in the Croome car park and all lit up.

Credit and thanks from DAHG are due to Mr Vernon Hill; to BDAC who have done a marvellous job in restoring the Meteor to the highest ground-display standard; and to the National Trust at Croome who have worked with the DAHG volunteers to bring the project to fruition.

STOP PRESS – A BUSY WEEK AT THE RAF DEFFORD MUSEUM!

The BDAC engineers, led by John Sharpe and Ron Fulton, arrived during the evening of Tuesday 1st October but the two lorries carrying the main components of the Meteor were delayed until Wednesday morning. Once the centre section had been unloaded re-assembly was soon under way.

With the forward fuselage and nosewheel in place, the aircraft was stable on its undercarriage and the rear fuselage could be fitted. The aircraft was then moved into its final position between the Ambulance Garage and Latrines before the mainplanes were attached.

Armstrong Whitworth Meteor WD686, restored and complete, 61 years after its departure from RRE Defford. The aircraft is painted in its original dark green and medium sea grey camouflage scheme. The pilot's front cockpit has had all instruments and controls refitted, while the navigator's rear cockpit now contains replica displays for the AI radar, Gee navigation system and Radio Compass.

RETURN OF THE METEOR – HOW IT HAPPENED: A PERSONAL PERSPECTIVE

There are very few surviving aircraft which flew at Defford. In 2015, Dennis Williams pointed out to me (I was Chairman of DAHG at the time) that Meteor WD686 was still in existence and complete but deteriorating and at risk. It was owned by the Imperial War Museum at Duxford but loaned to a private museum, the Muckleburgh Military Vehicle Collection at Weybourne on the Norfolk coast. Dennis obtained a comprehensive and frank technical condition report from IWM. He visited the site in Norfolk and confirmed the basically sound but deteriorating condition of the Meteor. It appeared the owners of the Muckleburgh Collection no longer wanted the Meteor, so had chosen to park it on a location at the edge of their land close to the sea and exposed to the elements. We made the decision to secure the Meteor for display at Croome on the former RAF Station Sick Quarters Site, adjacent to the RAF Defford Museum. We negotiated with IWM to release the Meteor to DAHG. Plans were made with tacit encouragement from the National Trust Croome management to erect a combined hangar, workshop and indoor display area on the far side of the car park.

I was particularly involved in fund raising to achieve this objective. I secured £120,000 which met the budget target for work to save, restore and display the Meteor. I started with our good friends Severn Waste Services who offered £50,000 through the Landfill Tax Credit Scheme. Another good friend of Croome and DAHG, Lord Flight, suggested I contact Vernon Hill, the Chairman of Metrobank. I made an appointment and went to see Mr Hill in his penthouse office on the top floor of the Metrobank head office building in Holborn, and came away with a cheque for £50,000 – this was Mr Hill's own money and a personal gift to DAHG so eligible for Gift Aid, which increased the value of the donation to £62,500.

So far, so good, but then a bomb shell burst. The National Trust decided, for understandable policy and planning reasons, not to allow the proposal. We would not be able to do the restoration work at Croome. We sought alternatives. After several false starts, we decided to ask the Boscombe Down Aviation Collection (BDAC) to do the work in their workshops at Old Sarum. BDAC had an excellent reputation for restoring post-war miitary aircraft. We visited Old Sarum and were encouraged by what we saw. In the end the enforced decision to hand over the Meteor (which was still at Muckleburgh) to BDAC for restoration proved prudent - a silver lining indeed. Again I had to go to Mr. Hill and seek his agreement to release his funding to BDAC. I had the pleasure of collecting the cheque (now made out to BDAC) and presented it to Sqn Ldr John Sharpe, the Chairman of BDAC, and Ron Fulton, the Technical Director of BDAC. Anyone seeing the completely restored Meteor today will agree BDAC have done an outstanding job. I am now fully retired from Croome, but have looked forward to seeing the Meteor (reduced to smaller sections for transport) on a procession of vehicles, rumble through the gates at Croome RAF site. Job done I will feel, well done all involved.

Bob Shaw, October 2019

AVRO LINCOLNS AT DEFFORD

The Avro Lincoln was developed from the Lancaster in 1943, featuring an increased wingspan and uprated Rolls-Royce Merlin 85 engines which yielded a significantly higher service ceiling than that of its predecessor. The Lincoln joined the fleet of aircraft carrying out radar trials for the Telecommunications Research Establishment (TRE) at Defford in 1945, though the type was too late to see action in World War Two. Twenty-four Lincolns are known to have been used at Defford, where they replaced the Lancaster as the main four-engine bomber type on the station. Some Lincolns at Defford were short-term residents, only there for installations work, so this account focusses on the aircraft used in the experimental programmes conducted by TRE, and the Radar Research Establishment (RRE) from 1953 onwards.

Avro Lincoln prototype PW932 flying from Defford.

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The third Lincoln prototype, PW932, was allocated to Defford in 1945 for trials of the 3cm wavelength H2S Mk IV bombing radar intended for 'Tiger Force' long-range operations against Japan, had the American atom bombs not brought an end to the war. These trials were followed by testing of H2S Mk IVA, destined to become the RAF's standard bombing radar in the immediate post-war years. Other early work involving the Lincoln at Defford included installation of the AGLT Mk 1B radar used in conjunction with the FN 121 gun turret.

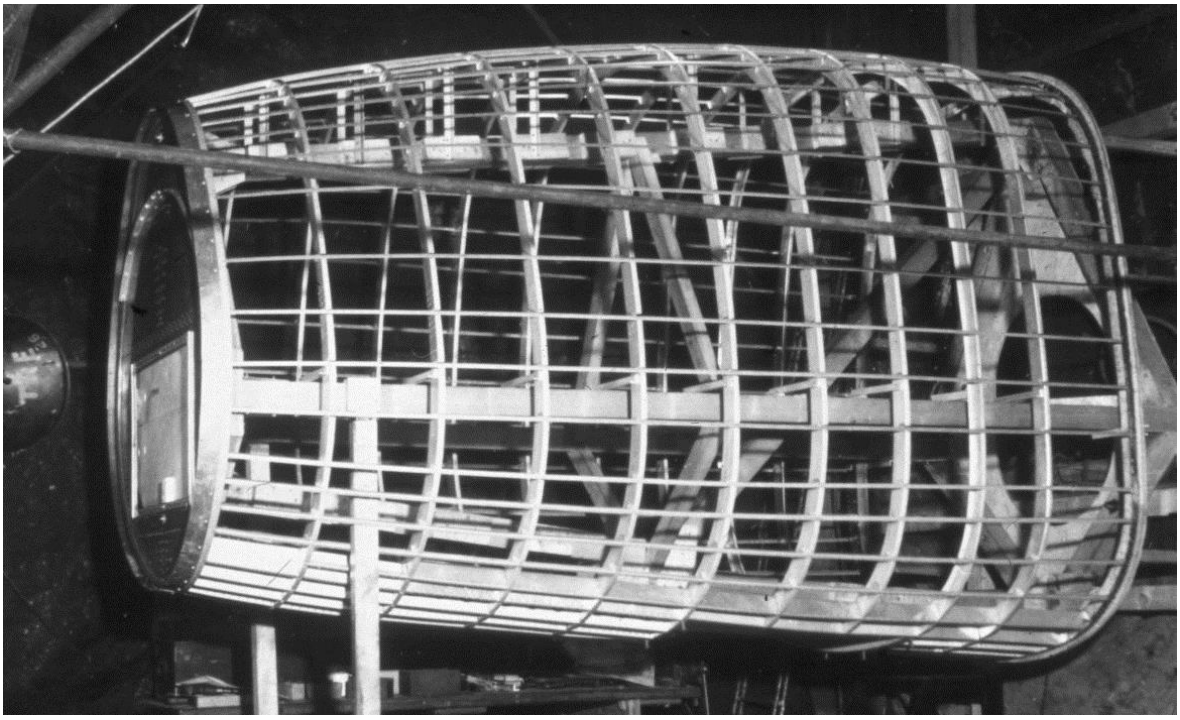
Lincoln RE229 used for H2S Mk IVA trials. This aircraft was replaced by Lincoln SX930 in November 1947.

H2S Mk IVA scanner on the underside of Lincoln RE229.

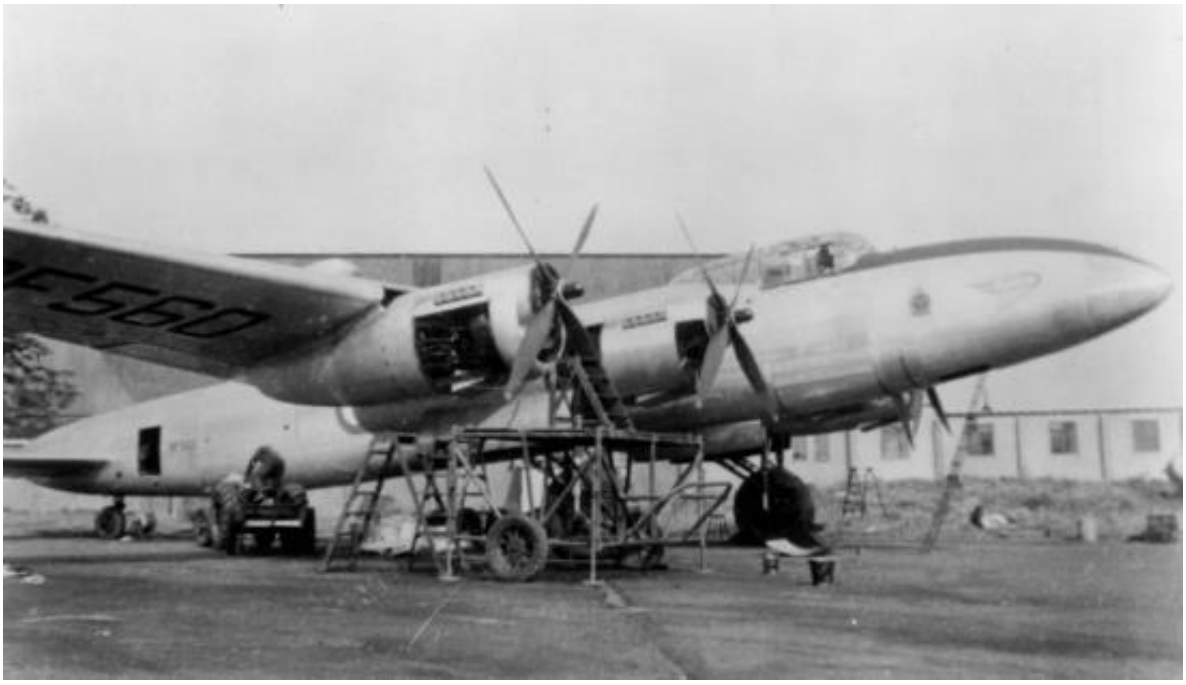
During 1947 installation work started on two Lincolns, RF560 and RF561, to be used for flight trials of H2S Mk IX, the Navigation and Bombing Computer (NBC) Mk II and the Orange Putter tail-warning radar, which were expected to be fitted to the twin-engine, high-altitude jet bomber being designed to specification B3/45. However, this bomber, in the form of the Canberra, went on to be equipped for visual rather than radar bomb aiming. In any case, by 1948 it had been decided that work on radar for a four-engine jet bomber to specification B.14/46 (which materialised as the Short Sperrin, effectively an insurance policy during the development of the V-bombers) should take priority over that for the B.3/45 bomber. This meant that equipment size and weight constraints were relaxed considerably.

Lincolns RF560 and RF561 were stripped of all unnecessary equipment and fitted with more powerful Merlin engines for flight trials above 35,000 feet, much higher than the type's normal service ceiling. The incorporation of a nose-mounted H2S scanner in these aircraft required the design and manufacture at Defford of a curved forward fuselage structure, with the rear of the fuselage being streamlined similarly for the Orange Putter scanner. While these extensive airframe modifications were being implemented, installation of H2S Mk VIII (the experimental version of H2S Mk IX) with a conventional ventral scanner went ahead in Lincolns RF329 and RF533 (which were also equipped with NBC Mk I), while flight trials of H2S Mk IVA continued with other Lincolns at Defford.

RF560 would have been fitted with H2S Mk IX and NBC Mk 2 after completing handling trials with A & AEE Boscombe Down in June 1948. Named 'Zephon', RF560 performed well on these flights, reaching a height of 37,000 feet, but tragedy struck when the aircraft crashed in Wiltshire while carrying out an asymmetric test on two engines. All four crew members were killed. Work on RF561, modified to a similar standard, continued and this aircraft was sent for handling trials at Boscombe Down early in 1949, before returning to Defford for installation work. RF561 also reached 37,000 feet but installation of its H2S-NBC combination was stopped and it was then used for testing aerials for the Rebecca navigational system instead.



Lincoln forward fuselage structure for H2S Mk IX scanner installation.



Lincoln RF560, bearing the name 'Zephon' on the modified nose.

During 1949 Lincoln RF533's radar installation had been converted from H2S Mk VIII to Mk IX. RF329 was carrying out trials of the Blue Sapphire auto astronavigation system as well as Orange Putter. RE346 had recently arrived at Defford and acted as a high-altitude target for the Radar Research and Development Establishment (RRDE) at Malvern. It had been intended to use RE346 for H2S Mk IX and NBC Mk II trials but this plan was cancelled in 1950 as the task was to be transferred to Hastings and Ashton aircraft. By 1951 RF533 was flying on trials for the Fighter Identification System, and RF329 for the Q-band (millimetre wave) Red Flannel reconnaissance radar, as well as acting as a target for the Orange Poodle ground radar.

Lincoln RF561, flying high on 4th February 1950.

Lincoln RF329, used for a wide range of trials at Defford.

Lincoln RE346 carrying out an air display practice at Defford in September 1950.

Lincoln RE346 went on to conduct trials of PbSe and PbTe infrared detectors as part of the Violet Banner project, succeeding Avro Tudor VX199 in this role. RE346 was also employed on other duties, including Window dropping and as a target for AI Mk 19 radar.

The nose of Lincoln RE346 was modified in 1953 for infrared trials, though the ventral H2S radome was retained. This is the only known colour photograph of an aircraft at Defford. (H Badger)

The last Lincoln to be used at Defford (and for a short while after the move to Pershore in 1957) was RF505. From 1956, this aircraft carried out trials of Indigo Bracket, a centimetric radar jamming device, until this task was transferred to a Hastings aircraft in 1958. RF505 then returned to the RAF and was one of the last Lincolns being operated by 151 Squadron on countermeasures duties at RAF Watton when the type was retired from service in 1963.

Lincoln RF505 flying from RRE Pershore in 1958.

The sole 'survivor' of the Lincolns used by TRE and RRE is RF342, which was used for trials of the Green Willow millimetre wave radiometer during 1952-55. While at Defford its nose section was replaced with that from Lancaster TW911. In 1958 RF342 was sold and put on the civil register as G-APRJ. It remained airworthy, mainly on icing trials, but since its grounding in 1967 this aircraft's history has been a chequered one, with its remains (minus the Lancaster nose) now being stored in Australia.

Lincoln RF342, north of the Malvern Hills, 20th April 1955.