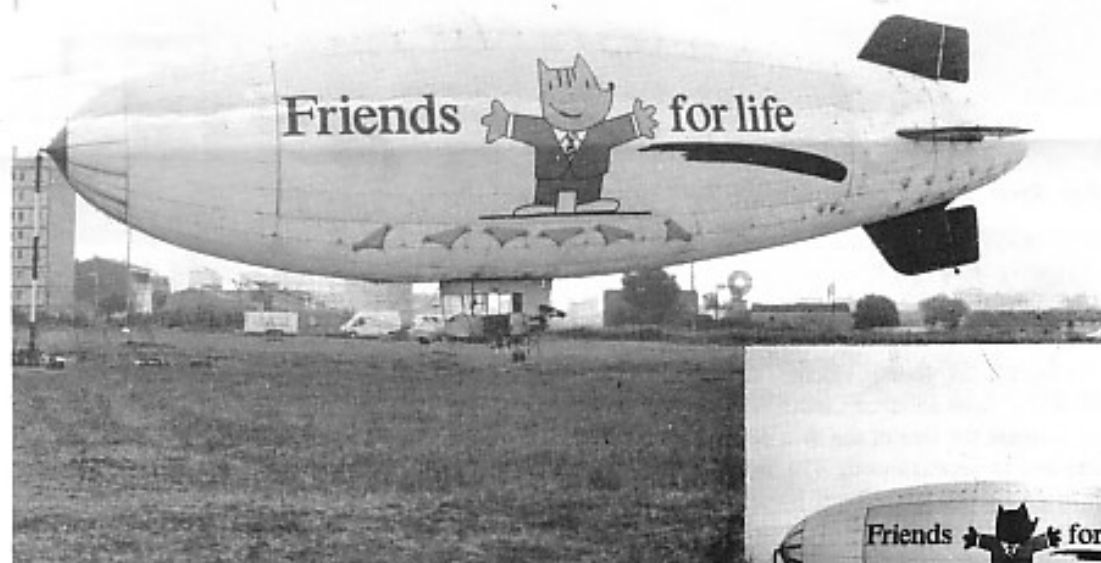


DIRIGIBLE

THE JOURNAL OF THE AIRSHIP & BALLOON MUSEUM

PUBLISHED BY THE FRIENDS OF CARDINGTON AIRSHIP STATION. No. 12, OCTOBER - DECEMBER 1992

OLYMPIC LIGHTSHIP DONATION



The A60 'Lightship' at Sabadell airport during the Olympics with the 'Friends For Life' banner. The other side carried the same message in Spanish. Right, the ship at sunset with internal illumination.



An unusual addition to the museum collection is a banner carried by the A60 'Lightship' airship while filming the 1992 Olympics in Barcelona. The "Friends For Life" banner measures 70 x 22 feet and has been donated by Virgin Lightships who operate the blimp. The banner has been signed by the pilots and ground crew of the airship. During the opening ceremonies of the games it is estimated the airship was seen, carrying the banner, by a worldwide television audience of 300 million.

WEATHER DOWNS BALLOON RALLY

The Balloon Rally organised jointly by FOCAS and the Chiltern Region of the BBAC for the weekend of the 12th/13th September fell foul of the unpredictable weather. Although the forecast was encouraging, only 2 balloons were launched at 0600 hours on the Saturday before wind gusts started to make inflation dangerous. Two more launches were achieved at 1800 hours but then the same difficulty arose again. The event was abandoned at 0600 on the Sunday after another adverse forecast had been received and what was intended as a good money raiser for the Museum Appeal Fund became a net loss!

Having said that the Council were very grateful for all the hard work by the dedicated volunteers in preparing the site, supplemented by some excellent support by the members of the Bedford ATC Squadron who turned out in force to help at 0600 hours on both mornings



Albert Hunt and Roy Boyle helping prepare the site for the Balloon Meet.
Photo: J. Frith

FOCAS DISPLAY FOR OLD WARDEN

The Shuttleworth Collection of flying vintage aircraft based at Old Warden, a few miles south of Cardington has decided to move and increase the size of the area devoted to lighter-than-air displays to approximately 45ft by 50ft. The collection has a large number of visitors, swelled by many thousands for the special event days and weekends which the SC holds during the year.

A close liaison has existed for some time between FOCAS and the SC and an invitation was extended to take over the new area and create an extensive LTA display, using some of the FOCAS artefacts, models and archives, together with some of the existing SC display items. The Council have approved the proposal in principle, subject to a formal agreement. When our Airship and Balloon Museum opens, the display at Old Warden will be transferred to Cardington.

BBM&L member Jenni d'Alton and her husband Richard have volunteered their professional expertise to offer a design plan for the exhibition which will give FOCAS and the BBM&L an excellent shop window. It is hoped to have the display ready for public viewing by the beginning of April 1993.

LES MURTON HONOURED AT 92

FOCAS member Leslie Murton, the last surviving member of the WW1 airship crews, was honoured recently when he was invited as Guest of Honour to a function at the Norwich Central Library. During the event Leslie was asked to press a button which inaugurated the link up of computer systems throughout Norfolk's Branch libraries.

R.A.F. LEAVE HQ BUILDING



An ATC band plays outside the Cardington Administration Building which was 'surrendered' during the closing ceremony.
Photo: J. Frith

After 56 years the Royal Air Force have left the Administration Building at Cardington which has been the Headquarters for No 217 Maintenance Unit. The unit has now moved its HQ to join the main area of its operations within the fenced compound at Cardington.

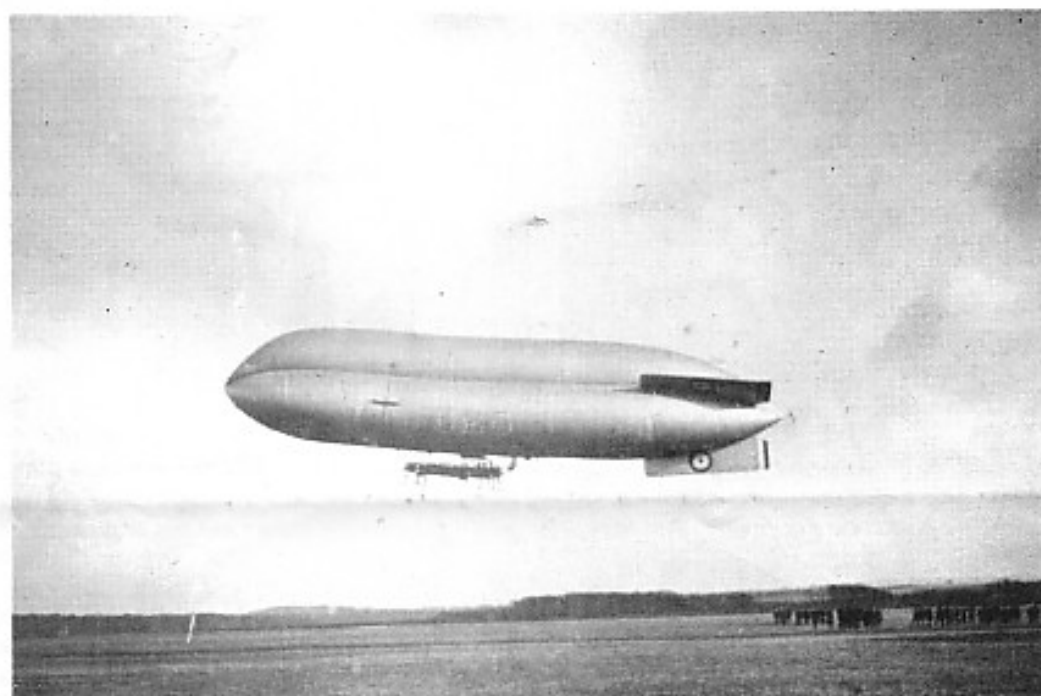
On the 19th August the transfer of the RAF ensign from the flagpole outside the Administrative Building to a new flagstaff within the compound was marked by a "Sunset Ceremony" when the ensign was lowered to the Last Post played by a member of the Bedford Squadron of the ATC who had paraded with their band. In support of the event the RAF Museum and FOCAS staged displays of photographs and memorabilia. Amongst the many who attended the ceremony, representing FOCAS were the Chairman, Jarvis Frith, Executive Secretary, Peter Garth and the Honorary Curator Den Burchmore.

THE OLD AIRSHIP MEN

A Series of sketches of Cardington Airshipmen

By E A Johnston

Part 2 - EAST FORTUNE



C25 taking off from East Fortune in March 1918. She disappeared in July of that year and only a single propeller was found.

In April 1917 Flight Lieutenant Ernest Johnston was posted to East Fortune to fly Coastals. Within a few days of arriving he was airborne as Observer in C20 piloted by Lieut. Sugden, with whom he made a couple of short patrols. He was then sent down to Kingsnorth for a brief technical course on the type; here he encountered Wing Commander Tom Cave-Brown-Cave, who was in charge of the development and production of non-rigids, and came under the spell of Lieutenant Michael Rope, the brilliant engineer who had, without official sanction, devised the highly successful SS Zero variant at Capel the year before. After returning to East Fortune, he flew a memorable patrol with his Flight Commander, W. Warneford, in C20, which stands as a record for the type; they were airborne at 9:20 pm on July 9th, worked three-hour

watches throughout, and landed back at 9:30 pm on the 10th, Warneford later became captain of NS11.

After making his first solo in C15, Johnston was appointed captain of C20 in August and began operational flying in real earnest. The scale of operations at East Fortune greatly exceeded that at Anglesey: the ships were operated more intensively and closer to their limits of performance; and the weather, particularly in winter, was more severe. Owing to the virtual failure of the Rigid programme and the mechanical problems of the North Sea class, both of which had been planned to operate in support of the Fleet at sea, the Admiralty was forced to use the Coastals as a substitute: it was a role which stretched the Coastals to the limit. Bill Warneford was largely



The flight of C20, 16 September, 1917. From top left clockwise. The ship being towed into Aberdeen Harbour by HMS Ulysses. Being towed out of the harbour by two paddleboats. The approach to land at Nigg Bay with the offending telephone pole in the foreground. The crew deflating the ship after the impact and loss of pressure.

responsible for the development of tactics for working with the Fleet.

Johnston did his first Fleet escort on 5th September with Flight Lieut. Carmichael Irwin as his Observer; the flight lasted 11 hours. Irwin was a recent arrival; he had been flying Submarine Scouts of the Airship Expeditionary Force in the Eastern Mediterranean, initially in connection with the Dardanelles campaign. He already had a fine reputation as a pilot.

On his next Fleet escort mission in C20, Johnston was in the air for over 24 action-packed hours. The weather was poor, and owing to the low purity of gas the ship left the ground heavy and had to maintain high engine speed in order to keep aloft. After some four hours on escort, Johnston obtained the Senior Naval Officer's permission to return to base to refuel. Very little headway was made against a rising wind, and just before midnight, he decided to take the ship slowly down from 1,000 feet to determine whether she was now over land; on breaking cloud he identified his position inside the Firth of Tay but immediately flew into dense cloud again. Soon afterwards the ship hit the water with her altimeter still reading 400 feet. The

impact broke the forward propeller and stopped the after engine. All water ballast was jettisoned; the ship lifted off the sea; the after engine was restarted but made such a racket that damage to the crankshaft was deduced. Johnston attempted to make a landing near Arbroath, but the combination of a jammed rudder and the total blackness of the night rendered it too dangerous. At half past midnight the engine seized up. As she was now drifting over the sea a drogue was dropped, but she rode badly; the gas pressure fell rapidly and the auxiliary blower was kept running to keep the envelope inflated.

At 1:30 am the ship was pitched up in a squall and the ship rose rapidly to 2,000 feet. As soon as the blower was stopped, pressure began falling again; the forward ballonet was obviously punctured. The ship was now pitched 20 degrees down by the stern, and the pressure could just be maintained at 5mm by continuous blowing. All available weights were disposed forward and the crew sat on the forward engine; this trimmed the ship to about 12 degrees.

Daylight came about 04:30. The ship was brought down immediately until the drogue was in the water,

when she rode well in the 20mph southwesterly wind. The rudder controls were cleared and the after engine was restarted at low revs so as to give the overheated blower a rest. Shortly afterwards a searchlight was sighted and answered with an Aldis lamp; it proved to be HMS Ulysses, who intercepted C20 at 6:15 about 70 miles east of Aberdeen, and, after some initial problems managed to tow her into Aberdeen Harbour at 12:50 pm. There the tow was transferred to two paddle tugs which towed her out of the harbour into Nigg Bay, where a landing party from RNAS Longside were waiting for her. The end of the tow-rope was passed ashore, but just as she was being hauled down the auxiliary blower seized up, and when she was almost in the hands of the landing party the after balloonet was punctured on a telegraph

pole. By 3:15 pm, however, she was safely on the ground, fifteen minutes later was packed up for transport by rail back to East Fortune.

During the following month rigid airship No 24 arrived on station at East Fortune under command of Squadron Commander Spurling. Her First Officer was Flight Lieut. Ralph Booth, with whom Johnston struck up a close friendship. Booth had been a Seaman Officer in the Royal Navy until transferring to the Airship Service in 1915, after which he had flown submarine Scouts and Coastals with distinction.

Whilst C20 was undergoing repairs, Johnston was given command of C24, but in December he was back flying C20, though not for long. On 22nd December she was out escorting units of the Grand Fleet again when the wind rose to 30 knots from the north west and as she struggled home against it, fuel ran out off St Abbs Head about 4:00 pm. In the last remaining

daylight a tow-rope was passed to a destroyer, but it parted a couple of hours later and C20 free-ballooned at 30 knots in a southeasterly direction. With difficulty in maintaining gas pressure, Johnston had no option but to ditch. Visual contact was made with HMS Oriana. After more than 12 hours in the air C20 was ditched in rough seas close by her; the crew were picked up by ship's boat and at 8:20 pm C20 was destroyed by gunfire.



On patrol in C Star 7. E. L. Johnston is second from the front. The names of the other occupants are unknown.
All photographs E. A. Johnston

On the last day of 1917 Johnston was appointed Flight Commander and put in charge of the Coastal flight, Warneford having been selected to command NS11. He took over Warneford's old ship C25. From then until the end of May he flew her intensively, but was consistently plagued by

engine failures. In May 1918 he sent Irwin down to Kingsnorth to bring up the first Coastal Star, C Star 1, to replace the Coastals. Johnston was quick to do some circuits and landings under Irwin's guidance and in June he went down to Kingsnorth to take delivery of C Star 7 as his own ship. Rope was still the leading technical light there. On his way back he stopped a couple of nights at Pulham, where he ran into Cave-Brown-Cave and Scott again. Back at East Fortune he settled down to a steady programme of operational flying until the middle of August in C Star 7, which proved far less hair-raising than the temperamental Coastals. During this period R29 arrived on station, commanded by Squadron Commander G. M. Thomas; his First Officer was Lieut. Noel Grabowski (later Atherstone) who had been a distinguished pilot of SS Zeros at Capel and Luce Bay.

In August Johnston was promoted to Major and posted to Command Luce Bay.

THE MODELS OF GEORGE AMBRIDGE



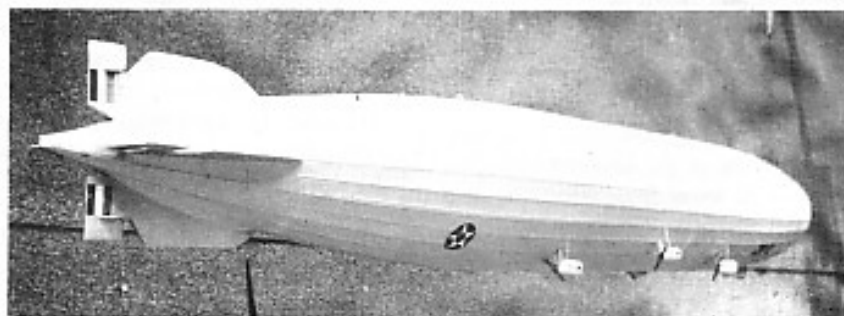
George Ambridge's superb model of the Graf Zeppelin. The gondola is fully detailed and includes crew and working lights! The propellers are also motorised.

Members who attended this years AGM will have had the pleasure of seeing member George Ambridge donating his superb model of the Graf Zeppelin to the museum. The eleven foot model, complete with motorised propellers and lighting, was in fact the latest in a line of impressive models built by George and donated to the collection. Some time ago I asked George to describe the construction of his superb replicas;

"Each of the models are built to a scale of 1/72 as this enables a comparison to be made between the sizes of individual airships, and more interestingly,

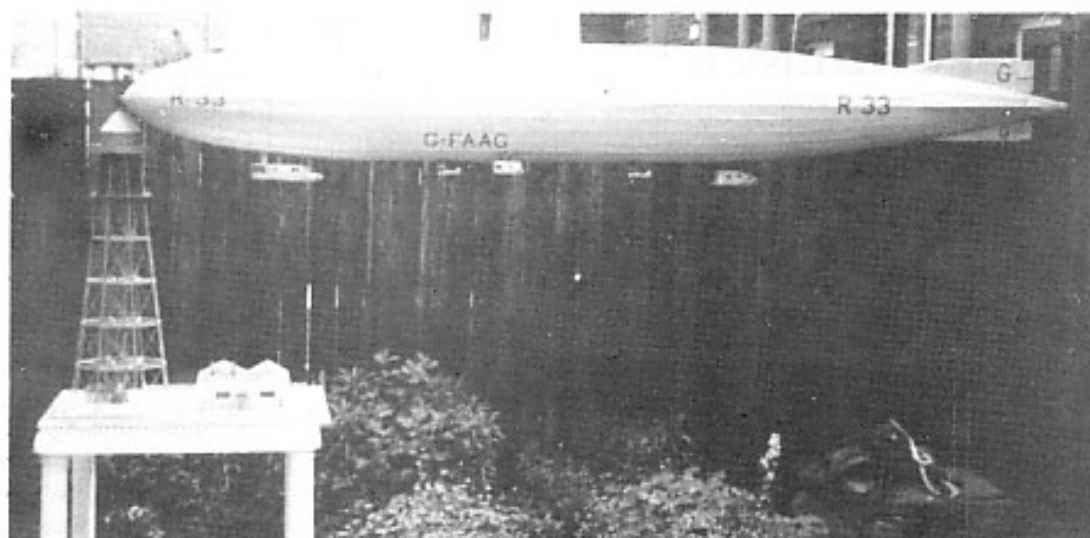
between people and everyday objects as well, which then gives a clearer impression of the true size of rigid airships. Using this scale also allows a reasonable amount of correctly scaled detail to be included in the finished model without giving it an 'overloaded' appearance.

The time required for building each model can vary between 3 and 8 months depending upon the usual factors of size, type and the amount of external fittings.



The R38 showing the unusual "cruiser type" control surfaces.

The tri-lobed envelopes of some WW1 non-rigid do present a few additional time consuming



problems compared with circular envelopes. Bearing in mind the weight factor, balsa wood is used whenever possible, but experience has proved that cardboard provides the most satisfactory material for constructing the transverse frames. The weight of each models varies from one pound for the SS type to ten pounds for the R33.

The basic structure is similar for both rigids and non-rigids with the difference being in the outer covering. In the case of rigids, panels of art paper are pre-cut to the size and shape required and affixed to the longitudinal girders using PVA adhesive. With non-rigids, each panel formed by the transverse and longitudinal 'girders' are infilled with individually shaped balsa wood blocks of sufficient thickness to form a complete shell when the surface is trimmed down to follow the curvature of the envelope. This will combine lightness and a strength capable of withstanding any subsequent handling, including the fitting of the crew car and control surfaces.

For rigid airships, the control surfaces are made of balsa wood whether flat or streamlined, and are an integral part of the structure. In respect of non-rigids, they are made of plasticard and attached

after the envelope has been completed. Straight pins are used for this purpose after being cut to length and inserted in to the root end profile of the fin, and then pushed firmly into the envelope. Rigidity for the surfaces is provided by the fitting of the bracing wires. The models must be completed in all other respects before applying the bracing wires, as 5 amp. fuse wire is extremely fragile when stretched between two fixed points.

For display purposes, the models is greatly enhanced if provided with a suitable diorama whenever practicable, and it is well worth the extra time and effort required. An additional bonus provided by the use of the 1/72 scale is the extensive range of proprietary human figures, vehicles etc. of the same scale, which are readily available to the modeller. When suitably adapted to the period and setting depicted they can be used to make the creation of a diorama possible.

One slight drawback with this scale is that rigids tend to be rather on the large size, but then the original ones were extremely large and most impressive, and after all it is the 'realistic' effect that modellers try to create!



Top: The R33 on the mast at Cardington. The size of the model can be gauged by the table the mast is resting on!

Right: Diorama depicting C25 over a U Boat.

CORRESPONDENCE

Mystery Canadian Sea Scout



Canadian member Kent O'Grady writes a fascinating letter concerning the location of the above photograph. The photo depicts a British Sea Scout airship in 1915 apparently flying over Camp Sacree military base near Calgary, Alberta. There are no known records of any British airship being sent to Canada until 1919 and Mr. O'Grady is keen to resolve the mystery for a book being written about the history of Canadian LTA.

Much research has already been undertaken into the history of the picture, so far without yielding conclusive proof. It was found at the Glenbow Institute in Calgary which holds a large archive of photos about the history of Western Canada. It was taken by a Mr. R. T. Hollies of Calgary and is simply identified on the rear "Camp Sacree with airship". The picture has been studied by photographic experts at the Glenbow Institute who have confirmed it is not a fake and does appear to show Camp Sacree. It has been suggested the landscape shown looks similar to the 1915 training ground at Salisbury Plain and the photograph has simply been mislabelled. However, relations of Mr. Hollies confirm he was in the Army and based at Camp Sacree in 1915.

The most solid proof so far uncovered is the following brief article in the Calgary Herald of July 19, 1915 which appeared with the photograph and was found after a nine hour search in the Calgary archives.

CALGARIANS "RUBBER" AT STRANGE BALLOON

White Speck in Air Cause of Much Curiosity In the City

Away in the far distant southern horizon, about ten o'clock this morning was an oscillating white speck of something. Spectators craned their necks until they had a positive pain. Someone said it was an airship making its way to the Sacree camp. Others claimed that it was making a circular detour in order to drop bombs on the C.P.R. track. Some were certain it was beating a hasty retreat to some secluded hanger on the international boundary line.

One thing was certain and was if Calgary was about to be raided by an enemy airship everyone was very cool and the only complaints were of the aforementioned pains in the region of the top portion of the vertebra.

It's "navigator" was, however, evidently as much at sea as the framers of the new liquor act, and after a exciting volplane action the "airship" suddenly collapsed.

If any FOCAS members can supply information about the airship or confirm the exact location of the photograph Mr. O'Grady can be reached via the editor.

DIRIGIBLE is the journal of the Airship and Balloon Museum and is published by Friends of Cardington Airship Station. It is published quarterly and distributed free to all members and associate members of FOCAS and, through our close associations, to the Friends of the British Balloon Museum and Library.

The objects of FOCAS are to foster and promote the study of the history of airships in every aspect, and to present the results of such study to the public, and to stimulate public interest in the role of Cardington as an airship base and in the conservation of the principle buildings thereof, and in particular to promote and assist in the formation and operation of a museum and study centre devoted to the airship.

Full membership of FOCAS is limited to persons who, having a particular interest in or knowledge of airships, are approved by the Governing Council, the Trustees, who are elected by members from among their number. There is also provision for Associate Membership, which is open to the public generally. Further information and application forms can be obtained from:

Norman Pritchard, Windsor Loft,
75 Albany Road, Old Windsor,
Berks SL4 2QD. Tel 0753
862977.

DIRIGIBLE

Editor: Paul Adams
41 Barnes Wallis Way
Churchdown
Glos
GL3 2TR

Tel: 0452 856858

Published by FOCAS.

Registered Office: 4 Goldington
Road Bedford

MK40 3NF

Registered in England: No
2104681

FOCAS is a registered charity.

Copyright © 1992 FOCAS.