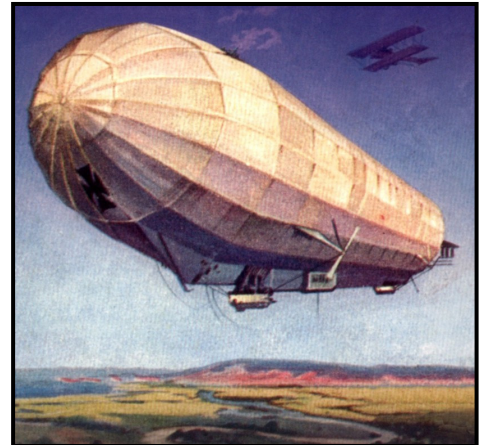


# “THE FIRST BLITZ”

## German Air Raids on Great Britain 1914 to 1918

The ending of the Great War saw the establishment of the world's first integrated air defence system and the following highlights how the observer corps system started in those far off days.

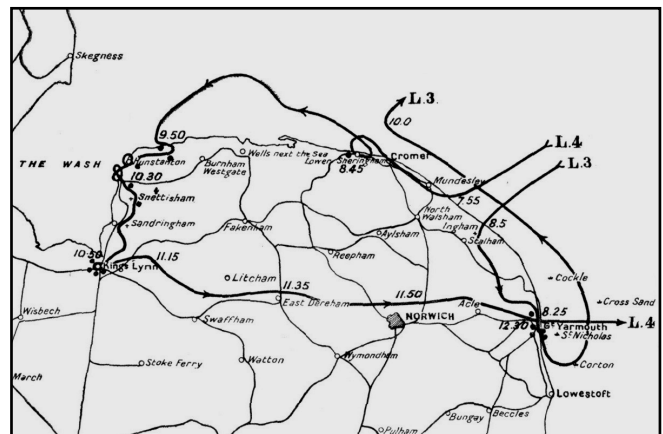
On Christmas Eve 1914 at 1045hrs Britain was attacked from the skies when a German FF29 Seaplane dropped a bomb on Dover. The Royal Flying Corps (RFC) had been created two years earlier in April 1912. Then on the night of 19/20 January 1915 two German Zeppelins dropped a series of bombs on Great Yarmouth, Kings Lynn and several small villages in Norfolk. After 30 May 1915 Zeppelins began to drop bombs on London and other targets in south east England. In late 1915 at last five look-out posts were established between Folkestone and Shoeburyness near Southend on Sea and the Police set up a 60 mile warning zone round London.



The Admiralty who were in charge of defence were busy combating an increasing U-boat menace. On 10 February 1916 the Army took over mainland defence. There was rivalry between the Royal Naval Air Service (RNAS) and the RFC, causing confusion, and the RFC aircraft once airborne were very much on their own. Throughout 1915 and the early part of 1916 Zeppelins were effectively invulnerable to British air defences. Not a single Zeppelin was lost to British fire during the whole of 1915. But the Zeppelin menace had arisen, peaked and would decline in just two years.

In 1915 air defences were virtually non-existent. London's anti-aircraft armament amounted to 12 guns, the fighter forces totalled ten small scattered detachments and a proper reporting and tracking organisation had yet to be formed. Such information as there was came from the police, Army units, gun positions and even railway stations. Telephone calls were long delayed and some reports were even sent through the mail! The form for reporting "air-craft" had the following introduction:-

*"If you see an airship or aeroplane try and note these points about her. Then, as quickly as possible, call up 'Anti-aircraft, London' on the nearest telephone. Commence your message with the words 'Aircraft Report,' and proceed to give your information in the following order . . ."*



The first German Airship Raid on Great Britain on the night of 19/20 January 1915.

There followed a series of extraordinary questions –

- Airship or Aeroplane?
- Where seen (this should include name of nearest large town)?
- At what time?
- Proceeding in what direction?
- Who actually saw it?
- Did he hear its engine?
- Does anyone corroborate this?
- What colour was it?
- Were there any particular distinguishing marks noticed?
- If Aeroplane, was it a) Monoplane or b) Biplane?
- What type?
- Any letters painted on it?
- If Airship how many cars underneath it?
- Any other information?

In 1916 the observation system, now called the Metropolitan Observation Service, was re-organised, with some 200 observer posts established well out from vital areas so that adequate warning could be given. Manning of the posts was at

first undertaken by troops, but these were mostly superseded by police. To improve communications seven warning "controls" were created, each with an AA defence commander and short lines to the trunk telephone network. The air-raid warnings were issued from the controls to districts. These arrangements, together with a crude form of sound locator, were successful in combating the Zeppelin.

In late 1916 and early 1917 the Gotha IVs were replaced by the Gotha V. At the same time the Germans introduced another larger bi-plane bomber called the Staaken 'Giant R-plane'. Giants could have 4, 5 or even 6 engines and the wing span was only 3ft shorter than that of a WWII B29! Giants had radios and machine guns and could carry a much larger bomb load. The Giants gave excellent results.



*Zeppelin L20 wrecked in the Hafstrsjord, Norway after raiding Scotland 2 May 1916.*

Britain's sense of security was again shattered on 25 May 1917 when a squadron of new Gotha GIV bombers attacked England. 23 Gothas took off and raided targets in south east England including Hythe and Folkestone. Despite a heavy anti-aircraft barrage no Gotha was hit. 74 British fighters tried to intercept the raiders but only two even came within range. 300 people were killed or injured.

Raids continued in June 1917 mainly on London. But Britain's air defences were slowly improving and daylight raids were supplemented by night raids to take advantage of the safety of darkness. The main squadron carrying out the raids was called 'The England Squadron'. The England Squadron Gotha raids continued on 4 July, 7 July and 22 July. Over 120 British aircraft got airborne but only one could find and shoot at the raiders. Again there was public outcry at the failure.

The Government reaction, following investigations by the famous South African Lieutenant General (later Field Marshal) Jan Smuts, was to put all sections of ground and air defence of London under the command of one officer. On 31 July 1917, to answer public demands for something to be done, the London Air Defence Area (LADA) was established.



*German Gotha IV bombers of the England Squadron were used increasingly from 1916 to attack the UK.*

In charge was the monocle wearing moustachioed old Etonian Brigadier General 'Splash' Ashmore. He was recalled from his artillery command north of Ypres. He immediately set about dealing with aeroplane day raids and placed a gun belt 20 miles to the east of London with fighter patrol lanes inside it. Large white arrows were provided at searchlight units, pointing in the direction of the enemy. About 120 fighters were available for the defence of London, plus RNAS machines which were under orders to co-operate. All this was achieved often in the space of days and in time to meet a Gotha daylight raid on August 12, which was turned back. He coordinated the work of observation and listening posts, anti-aircraft batteries, balloons and defence squadrons. His work was hampered by conflicting priorities.

Ashmore also established the main Operations Room in Horse Guards, London, which was equipped with a giant map table lit from below by coloured lamps. The map was divided into four lettered squares – Ack, Emma, Jay and York. These squares were again split into a further four squares numbered 1,2,3,4. An enemy raider would be reported as 'Air bandit 421, Emma 3'. Ten plotters stood around the map table moving symbols as they received information through telephone headsets from 26 sub control centres.

Discs were used for single enemy aircraft, rectangles for enemy formations and aircraft shaped counters for British fighters. The system was much better than that in use before but reports still took 3 to 4 minutes to reach Horse Guards. On receipt of information the Ops Room would then scramble fighters and issue air raid warnings to the public. Warnings were given by Police whistles, car horns and even bugle calls. Later maroons were used but these were often mistaken for exploding bombs.

Plaques on maps were used at all controls and the results transmitted in standardised form. Originally all information had been in written form, which was inefficient and time-wasting. It was the GS0.2, Major P. Fooks, who first suggested that there should be an operations table with a map, around which the plotters should sit, using symbols to represent the messages, thus eliminating all writing. Gridded maps were used so that references were the same throughout the system. At each sub-control sat a LADA officer who was in direct communications with LADA HQ.

The plot messages were in code and the map table symbols were extremely simple. The arrow was only displayed if the direction of flight was known. To avoid the maps being cluttered with useless information, clocks at controls were divided into four quarter-hour periods, the first five minutes coloured green, the next red and the third yellow. The map table symbols were similarly coloured and those of only two five-minute periods were allowed to remain there at any one time. At LADA central control Ashmore himself had a seat on a dais from where he could see all tracks on the table and dispose his forces accordingly. A personal telephone switch system enabled him to talk direct to any of the sub-controls. To complete the team, recorders maintained miniature maps of the tracks shown on the table, using green, red and yellow pencils.



*Ashmore's Ops Room in Horse Guards, London in 1917. Note the plotting table, telephones and aircraft plaques which had changed little by 1940-41.*

Ashmore estimated that the time taken for a ground sighting to be translated through the system to a symbol on his map-table was of the order of half a minute. For warnings Ashmore had a colour code – “Readiness” for warning troops, police, etc ; “Green” for air raid threatened ; “Red” for air raid imminent ; “White” for enemy clear of the district ; “Yellow” for cancelling readiness measures etc. Warnings to the civil population were issued by the Home Office. It is remarkable that many years later the nuclear warnings for attack imminent and no further attack or radio-active fallout were “Red” and “White” respectively. Ashmore therefore had set about a complete re-organisation of the observer network, the control system and the communication set-up to go with them. The Metropolitan Observation Service - the real forerunner of the Royal Observer Corps had been the key source of information for some time, but it only covered the county of London. Ashmore extended the network outwards to include a variety of other observation posts and defence units and he standardised the method of reporting.

At observer posts a basic instrument was provided, consisting of a flat wheel with the circumference marked in bearings and a radial arm, pivoting about the centre, on which was mounted a sighting rod. The instrument was designed by the Royal Navy Hydrographer, Rear Admiral Parry, and when sighted on an aircraft it gave a bearing and an angle to the target. By comparing readings from two or more posts it was possible to fix the position of the aircraft over the ground. It was basically similar in concept to the ROC instrument of the Second World War, but without a height bar or pointer. The information from the observer posts was fed to one of 26 sub-controls which work out positions and then phoned them through to central control in Horse Guards.

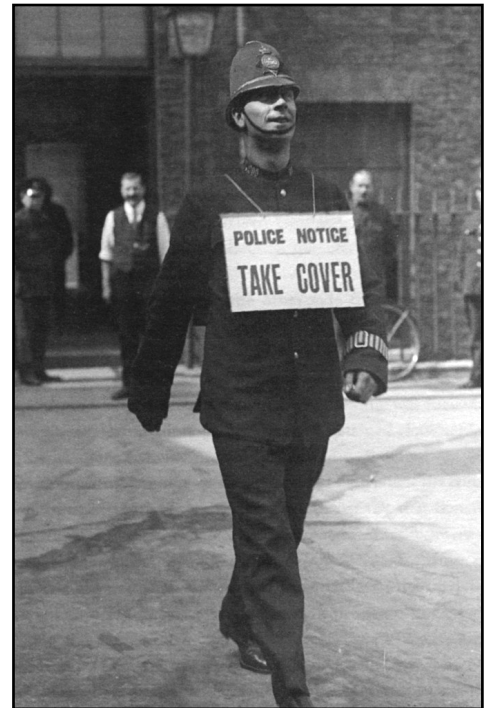
Observers monitoring the skies for aircraft often grossly over estimated the numbers of raiders and often confused British fighters with German bombers. Some observers were posted to listening stations but on at least one occasion confused Giants with Zeppelins. Fighters still had problems with night raids and it was stated that 17 out of 18 fighter pilots saw nothing!

By October 1917 the German Air Force was attempting to ‘fire’ London by the use of incendiary bombs but this plan failed mainly because of the poor quality of the bombs. On 29 November 1917 the Air Force Bill was passed and the Air Ministry was established in January 1918. In April 1918 the RNAS and the RFC were merged to form the Royal Air Force. This meant that for the first time the new RAF had the capability of launching retaliatory strikes against German cities.

In early 1918 Giants continued to raid London and due to their great range it was once feared that they would bomb New York. However, by 1918 London was defended by 166 fighters, hundreds of anti-aircraft guns and searchlights and an effective system of looking and listening posts manned by the Police. All these factors began to take a heavy toll on the attacking German raiders.

Then in April 1918 German scientists perfected the 'Elektron Fire Bomb'. This bomb was much more effective than the small incendiary bombs used previously and the German High Command decided to launch another 'Fire Plan' on London in August or September 1918. Allied Intelligence knew virtually nothing of this plan. On 23 September the German squadrons were preparing to load thousands of Elektron bombs aboard their aircraft when German High Command General Erich Ludendorff's nerve failed and he issued orders that the attack was to be cancelled.

Germany then began to sue for peace. The Armistice was signed on 11 November 1918. Between 1914 and 1918 German airships, aircraft and seaplanes had carried out 103 bombing raids on Britain. German aircraft dropped 9000 bombs of some 280 tons weight. London was bombed 12 times by airships and 19 times by aircraft. They killed 1,413 people and injured 3,407 (670 killed and 1,960 injured in London, where they caused damage estimated to be worth just over £2 million). The first raid took place on 21 December 1914 and the last took place on 11 August 1918. With a relatively small force they had succeeded in disrupting civilian life, holding back industrial output and keeping large numbers of troops and airmen away from the western front. The undisguised motive was to unnerve the British public. At first the targets were military but soon the attacks became malicious and focussed on London. The capital only just missed being attacked by firestorm in 1918. It is ironic that seed sown in the Great War would later, in 1943 and 1945, engulf its creators as Hamburg and then Dresden did indeed suffer death by firestorm.



*Air Raid warning 1917 style. Whistles, sirens, car horns and even Policemen walking around with placards were used!*

Relatively small numbers of German pilots were sufficient to cause the British Government to install 469 anti-aircraft guns, 622 searchlights, 258 height finders, 10 sound locators and 376 aircraft at readiness (only 166 were classed as 'efficient'). Over 8000 men serviced aircraft and manned all the air defence services. The air defence system which was to serve so effectively in the Battle of Britain 20 years later was indeed forged in the latter stages of the Great War. Ashmore's description of the Horse Guards Operations Room in September 1918 could, with little alteration, have been applied to Fighter Command's Ops Room in 1940 – "I sat overlooking the map from the raised gallery...in effect I could follow the course of all aircraft flying over the country as counters crept across the map. The system worked rapidly from the time an observer saw an aircraft over him to the time a counter representing it appeared on my map was not more than half a minute".

## POSTSCRIPT

After the Armistice Ashmore proposed a peacetime air defence organisation but in the apathy and false economy after the war he saw his wartime organisation slipping away. By 1920 there was nothing left of the observer/control network. By 1922 the responsibility for air defence passed from the War Office to the Air Ministry and various committees looked at air defence again including a new observer network. All Ashmore's recommendations were re-considered and in October 1925 the Observer Corps was formed with Ashmore as the first Commandant.

## SOURCES

'Attack Warning Red' by Derek Wood. The Lawrence Holmes Archive.  
'The German Air Raids on Great Britain 1914 – 1918' by Captain Joseph Morris.  
'First Blitz' by Neil Hanson. Various items on the internet.

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