

The Royal Air Force at Kidbrooke by David Wise

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Work in progress. From a variety of sources, mainly internet. Some conflicting info - best guesses have sometimes been necessary. Any additions and corrections welcomed, also any relevant publishable photos.

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RAF units at Kidbrooke:

RAF Kidbrooke was a non-airfield stores depot, along with other ancillary roles, in South East London. It surrounded Kidbrooke railway station on the Bexleyheath Line route between London and Dartford. The initial Depot was south of the railway. Later extensions saw sites developed to the North East and North West, mainly with separate functions. For details of Kidbrooke Railway station, see: <https://kentrail.org.uk/kidbrooke.htm>

South East and South West Sites

From 1915, the Royal Flying Corps had operated Ordnance Aircraft Stores Depots, parented on Farnborough. B and C Groups of OASD were located at Greenwich. These were renamed as No 1 Stores Depot on 1 January 1917 and relocated to Kidbrook (initially without the final "e") in June 1917.

Its initial role covered items such as tools, motor transport, wireless, photographic, armaments, etc.,

The RFC merged with the Royal Naval Air Service to become the Royal Air Force in January 1918

1 March 1920 the Stores Depot came under management of No 1 Group.

2 Feb 1937 renamed No 1 Equipment Depot. Role included barrack equipment and general tools

9 April 1938 renamed No 1 Maintenance Unit

15 Feb 1947 officially disbanded as a separate unit, but continued in use as satellite.

Eventually closed completely in 1962.

South of railway, the Stores Depot stretched for more than half a mile, both sides of Kidbrooke Park Road, joined by under-bridges linking the sites. It distributed the technical and domestic necessities of life at RAF Stations. This site was relinquished in 1965, and was cleared and redeveloped as the Ferrier housing estate.

West of Kidbrooke station on the South side, a rail connection through a gate led to standard-gauge sidings with its own shunter. There was also a 2 ft gauge railway system within the depot, including bridging under Kidbrooke Park Road.

There is a preserved 2 ft gauge Bagnall steam 0-4-0 saddle tank, builders number 2043 built in 1917 and named Kidbrooke, which originally served here. It was eventually sold to a slate quarry at Minffordd in North Wales, then passed to the Ffestiniog Railway, and then rebuilt and now in service at the Yaxham Light Railway in Norfolk.

The standard gauge South Eastern & Chatham Railway P class 0-6-0 tank engine number 178, now on the Bluebell railway, had served at Kidbrooke in about 1917-18. Manning-Wardle 0-6-0 saddle tank RAF 111 Aldwyth also served at Kidbrooke and is preserved in Leeds Industrial Museum. There was a diesel shunter here in 1950's until closure.

As well as the stores depot, a variety of other significant units were based at Kidbrooke.

No 1 Group Headquarters re-formed at Kidbrooke on 19 May 1924 as the Headquarters organisation of all UK RAF Maintenance Units. This moved to West Drayton and was renumbered as 21 Group on 12 April 1926.

A Stores and Accounts Training School was set up in about 1924.

A Radio Direction Finding School was located here from about 1940

A very important unit based at Kidbrooke was No 2 Installation Unit. From 1939, this was responsible for constructing, maintaining and repairing all of the Chain Home radar station masts around the UK coasts throughout WW-2. The standard CH station layout had four steel 360 ft transmitting pylons (some later ones in the West had 360 ft guyed steel masts) with four 240 ft guyed wooden receiving masts. The Unit moved to West Drayton in 1945. The last Chain Home radar station closed in 1955.

See; https://en.wikipedia.org/wiki/Chain_Home

<https://www.bbc.co.uk/history/ww2peopleswar/stories/91/a2137691.shtml>

An RAF Technical & Wireless School was at Kidbrooke from the 1920's. As well as its instructional work, this had an important R&D role.

In recent years, the story of the work at Bletchley Park to decrypt the German Enigma communication system has been widely publicised. This opens the question of what were the Allies doing to protect their own messages? Both the British (initially at Kidbrooke) and the Americans had separately developed their own versions of Enigma!

German Enigma encryption machines originally were not secret. Early versions were sold openly from the mid 1920s for commercially confidential communication, while also being adopted by the German military. Lord Mountbatten, who was responsible for security in the Mediterranean Fleet at the time, had expressed concern. A pair of commercial Enigma machines were purchased by the British State Security Committee for evaluation, but were shelved.

In 1934, at his own initiative, these were taken on by Wing Commander Oswyn Lywood at the T&W School at Kidbrooke. He led a small team who developed an encryption system, based on Enigma technology, but with a number of refinements, particularly adapting Creed Teletype machines, as used for the GPO Telex service, as input/output interfaces. This was easier to use, more accurate and faster than the German machines, though initially at the expense of weight and needing mains power which restricted their use to fixed bases. Briefly called "RAF Enigma Type X" they soon became known as Typex. At first there was a lack of official interest, but a trial batch entered service with the RAF in 1937, and large orders followed.

Typex was introduced by the Navy in 1939, initially for communication between headquarters units, including London to Malta and Gibraltar. It was later used throughout British and Empire military and diplomatic services.

It evolved over the following years. Versions were produced which were more portable. Creed opened a secret factory at Treforest in Wales to manufacture them and contributed improvements. Over 12,000 Typex machines of various models were made during WW-2, with production continuing for several years afterwards.

The Americans had separately developed their own Enigma-based M134 System, known as ECM in the US Navy and Sigaba in the US Army. A variant called CCM (Combined Cypher Machine) was developed to permit interworking between Typex and the American system. The CCM variant was extensively used by warships of the allied navies from 1943.

Though a few damaged Typex machines fell into German hands following Dunkerque, it was never cracked by the Germans. It is said that the Germans recognised it as Enigma technology which they believed to be unbreakable. After the war, Typex was further developed and the Mark 22 and 23 models were introduced in 1950. It continued to be used for several years. It was replaced by the British military from the mid 1950s, but Commonwealth use continued further, ultimately beyond 1970 with some diplomatic traffic for Canada and New Zealand.

Consequently Typex was kept secret for many years after the war, but information was eventually released. They are now among the cypher machines featured at the Bletchley Park museum and were also included in a special exhibition at the Science Museum in 2020,

Because of the continued secrecy, the important achievements initiated by Wing Commander Lywood and his team at Kidbrooke have never been publicly commemorated.

A Google search on Typex finds several accounts of its history. For example:

<https://typex.virtualcolossus.co.uk/typex.html>

<https://www.cryptomuseum.com/crypto/index.htm>

<http://www.jproc.ca/crypto/typex.html>

North West Site

North of the railway, west of Kidbrooke station, there was a single railway siding used as a civilian coal depot which eventually closed in October 1968. Beyond it was a large extension to the RAF estate, but mainly operated separately with its own units. The NW boundary of this site is the Kid Brook.

The NW site housed a Prisoner of War Camp in WW-2.

Post-war, No 4 Motor Transport Squadron, later called the London Movements Unit, were based at the NW site. This provided heavy transport including "Queen Mary" articulated lorries used for big loads like aircraft fuselages, throughout the South of England. It ceased as a separate unit in 1964, but some activity as a satellite continued. RAF staff were moved out in 1967, while civilian operation continued until final closure in 1968/9 when remaining staff transferred to Woolwich.

The Joint Services Linguistics School operated on the NW site from 1949 and taught military staff to speak other languages, predominantly Russian. The School moved to Tangmere in 1953 and then in 1964 to North Luffenham. A commemorative plaque was unveiled at Thomas Tallis School in 2008.

The RAF Movements School, previously at St Mawgan, moved to the NW site in January 1954, while Flight magazine has a report of the official opening of an extension on 21 February 1957. This provided a variety of training courses in cargo-handling for RAF load-masters as well as Army and Navy personnel. It used the fuselage of a Hastings transport aircraft, visible from passing trains. This was serial TG573 (also allocated ground instructional airframe serial 7594M). This arrived from 20MU at Aston Down in January 1959 and was removed to Abingdon in mid-1961 when the School was relocated away from Kidbrooke. The School moved to Kirton-in-Lindsey, Lincs, and later to Abingdon and then to Brize Norton in 1976.

After closure, the southern part of the NW site became a Post Office vehicle depot and currently a warehouse. Also Thomas Tallis School was built on the northern part of the site, while a big area is used for the Kidbrooke Park allotments.

North East Site

No 1 Balloon Centre was established at Kidbrooke in October 1937 and operated throughout WW-2. This was a Sector command unit reporting to 30 Balloon Barrage Group at Chessington. This occupied some undeveloped land already owned as part of the Kidbrooke Depot along with purchasing the 28 acre Lower Kidbrook Farm. It was equipped with new hangars and workshops to maintain and repair the balloons and ancillaries such as winches and gas equipment, along with a large open space for training and test inflations.

No 1 BC managed, trained and equipped Auxiliary Air Force Balloon Squadrons; initially 901 at Abbey Wood, 902 at Kidbrooke, and 903 at Forest Hill, each with five flights of nine balloons on sites spread across SE London. In early 1940, 903 Squadron was reassigned to No 2 BC at Hook and replaced in 1 BC with two new squadrons, 952 at Sheerness and 961 at Dover. These included balloon operations from boats in the Thames Estuary and off Dover Harbour. Also 2 Mobile Balloon Squadron was formed on 18 February 1942 to cover the Thames Estuary from Herne Bay and was disbanded 1 December 1942.

Initially staffed by men, a majority of the staff were women from late 1941. Hydrogen gas for the balloons was supplied from gas works with specialist equipment, and conveyed in cylinders by a fleet of lorries.

No1 BC was disbanded on 31 March 1945.

In addition to those parented on Kidbrooke, several more barrage balloon units were relocated to Kent from June 1944, as part of the defences against the V-1 flying bombs. Three other Balloon Centres with associated Squadrons were formed. They were very effective and succeeded in destroying 231 out of the 9,521 V-1s launched against England between June and October 1944.

The Number One Balloon Centre Dance Orchestra, led by Paul Fenhoulet and later renamed the Skyrockets, were a group of professional musicians who had joined up together in 1941. They qualified as Kidbrooke-based Balloon technicians as well as entertaining the troops and workers, recording and broadcasting.

Some balloon staff were killed and an accommodation building was destroyed by a V-1 in June 1944.

Balloons at Kidbrooke references:

https://en.wikipedia.org/wiki/RAF_Balloon_Command

<http://www.rafweb.org/Squadrons/Sqn900.htm.htm>

<http://www.bbrclub.org/>

Post-war following closure, the northern part of the NE site became a Government Training Centre. Some of the Balloon buildings were used for storage by the National Maritime Museum at Greenwich. Then in the 1980's, part of the site was redeveloped for housing and for the Rochester Way Relief Road. More recently, the modern high-tech NMM Prince Philip Conservation Centre, now accessed via Nelson Mandela Road, has been built on the site, while continuing to use some of the wartime buildings for storage.

Gliding Field

During WW-2 there was a glider training field, on a separate site about half a mile NE of the Stores complex.

No 141 Gliding School for Air Training Corps Cadets formed 25 October 1942. It only provided initial training, using primary gliders to make short hops along a grass runway to practise take-off and landing. It moved to Gravesend airfield on 1 December 1945, and then June 1946 to Detling, now with full-sized gliders. It later merged with two other Gliding School units, becoming 615 GS and continues to operate at Kenley.

No 149 Gliding School was formed here in November 1942, split off from 141 GS for service at Gravesend. It was combined back into 141 GS at Gravesend in December 1945.

An on-line account from someone who flew here as a schoolboy cadet said: "long field between rows of houses, beyond which were two hospitals on one side and cemetery on the other." This would be the Brook and Herbert Hospitals and Kidbrooke Cemetery

It was then a large open area, with Wricklemarsh Road to the north, Brook Hospital to the East, Broad Walk to the South and Woolacombe Road to the West. After the war, Dursley Road, Holburne Road, Corelli Road and the associated side-roads were built on the Northern and Eastern parts of the site, along with Kidbrooke School opened in 1954 - the school was later renamed Corelli College and then Halley Academy. The remainder of the site survives as the Kidbrooke Playing Fields. See 1946 OS map reproduced on https://www.francisfrith.com/kidbrooke/map-of-kidbrooke-1946_npo746797

Other references:

RAF Flying Training and Support Units Since 1912 by R.Sturtivant & J.Hamlin, published by Air Britain 2007.

<https://thamesfacingeast.wordpress.com/tag/raf-kidbrooke/>

<http://www.rafmuseum.org.uk/documents/Research/RAF-Historical-Society-Journals/Journal-35-Seminar-Supply.pdf>

https://en.wikipedia.org/wiki/RAF_Kidbrooke

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