

RAF COLTISHALL, NORFOLK A PHOTOGRAPHIC CHARACTERISATION

Wayne Cocroft and Steve Cole



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Careful consideration was given to the landscape design of the RAF's 1930s permanent airfields. This is evident in the careful symmetry of the roads and the use of trees to create a pleasant working and living environment. To the top is part of the airfield's technical area, including the watch office, hangars, stores and workshops. In the centre is the tall water tower, the H-shaped 1930s barracks and at the bottom the large airmen's institute. © English Heritage NMR 24369/037

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1 Summary

This photographic survey of RAF Coltishall was created during its last month as an operational station and during the subsequent drawdown until closure in November 2006. Other elements of this historic characterisation of the airfield, included air photography, a characterisation map and work by three audio-visual artists Angus Boulton, Gair Dunlop and Louise K Wilson. This report presents a collection of English Heritage ground photography and a selection of low-level oblique air photography.

2 Introduction

RAF Coltishall, Norfolk (TG 270 225) in the parish of Scottow lies 15 km (9 miles) to the northeast of Norwich and 1.6 km (1 mile) to the northwest of the village of Coltishall. Topographically it lies between the confluence of the River Bure and Stakebridge Beck, with the flying field occupying a flat broad plateau about 18m (59 ft) above OD, with the domestic building occupying gently rising ground to the north. The present airfield covers around 260 hectares (642 acres), although this is smaller than its full extent at the end of the Second World War. This short account of the history and development of RAF Coltishall is given as an introduction to the photographic documentation of the airbase. Michael Bowyer has written a fuller account of the squadrons based at RAF Coltishall and their operational history (1979, 85-92), *see also* Lawrence and Jennings (2005). Mick Jennings is also writing a new history of the station. Primary records relating to RAF Coltishall held by the National Archives were not consulted as part of this study.

3 Origins and layout

In late 1938 it was announced that a new aerodrome was to be built in the parish of Scottow, although it later took the name of the nearby village and became RAF Coltishall. Construction work began in February 1939, when it was originally designed as a standard bomber station with five C-type hangars and to their east a grass flying field. In May 1940, with its relative proximity to the coast and the growing threat of a German invasion it was redesignated a fighter station and a month later became operational as part of Fighter Command's No.12 Group (Bowyer 1979, 85).

In addition to the loss of agricultural land, the new airfield caused other disruptions to the local landscape. The main south to north avenue leading to Scottow Hall was cleared (RAF/106G/UK/1701, frame 3034, 27 Aug 1946). Historic lanes were also severed, to the south of the airfield Frogge Lane to the north-west of Herne's farm was cut, although to the north its line was maintained to define one side of the officers' housing estate, where it was later renamed Filby Road. To the north, the westward continuation of The Fairstead, the main approach to Scottow Hall, was also cut. In this case Scottow Road was relaid in the 1960s about 300m (984 ft) to the north of its original line, providing a link from the main B1150 road to the airfield and the villages of Lamas and Buxton. The airfield was also conveniently sited close to the former Great Eastern railway line, with stations at Buxton Lamas and Coltishall.

The airfield was built to 1930s permanent airfield standards. Contemporary concerns about the impact of the newest service on the countryside led to protest from the Council for the Protection of Rural England, and advice on aerodrome design from the Royal Fine Arts Commission. In keeping with the local area most of the buildings in the domestic area were faced in yellow brick with tiled or flat roofs. The more important buildings such as the station headquarters, the officers' and sergeants' messes and the guardroom were built with restrained neo-Georgian proportions. In the technical area modernity could be celebrated and most of the buildings were constructed from reinforced concrete. This construction eased the demand for bricks, and skilled bricklayers created by the rearmament programme and also provided greater protection against bombing. The station water tower, that might have been left as a tank mounted on a steel tower, was encased in an elegant Art Deco style concrete tower with lodges to either side. Many of the buildings in this area have flat roofs with deep parapets that could be filled with sand to give further protection from incendiary bombs. In common with other Watch Offices, or control towers, built before the war it too was built of concrete with 14-inch (35.5 cm) walls. Compared to earlier watch offices it was relatively large and included, a meteorological section, pyrotechnics store, teleprinter room, pilots' room, control room, balloon room, airfield lighting controls and offices (Francis 1996, 121-4).

The original flying field was a levelled grassy field. This was adequate for the pre-war bombers and the relatively small fighters based at Coltishall, it also offered greater flexibility in allowing comparatively low-powered aircraft to make the optimal use of the prevailing

wind. Subsequently, during the war, due to the heavy usage of the field the landing strip was strengthened with Sommerfield matting. This comprised a woven wire chain-link mesh with metal rods threaded through it at 8-inch intervals (Bowyer 1979, 90). The airfield's bomb stores were located remotely on the east side of the flying field, and comprised two standard groups of six bomb stores and associated fuzing buildings.

In considering the layout of an airfield an architect needed to consider the necessity of dispersing buildings to guard against bombing, set against the loss of operational efficiency if buildings were placed too far apart. The wide roads and spaces between buildings were used to good effect to create avenues lined with ornamental trees. The original buildings were laid out around a series of arcs and axes roughly centred on the Watch Office, or control tower. To the northwest of the tower three hangars are laid out in a gentle arc. The original intention was to have two additional hangars to the rear; this scheme was abandoned when the one to the south was destroyed by enemy action before it was completed. Behind the hangars were many technical buildings, including the parachute store, armoury, stores and motor transport section. If we now take a line from Watch Office to the main gate, this axis includes all the station's central activities, the hospital and adjacent protected gas decontamination centre, the protected operations room and adjacent to it the station headquarters. If we follow another line from the Watch Office to the northwest, this passes through the centre of the imposing station water tower and the Airmen's Institute. This building was central to the lives of the non-commissioned personnel on the base and to its southeast is a large parade ground and to either side H-shaped barrack blocks. Another line was used to layout the officers' housing estate, this passes through the centre of the Officers' Mess and roughly northwards along Barnby Road. A further small group of buildings were constructed on the old Scottow Road, comprising on the south side of the road the station telephone exchange and on the opposite side an arc of houses for married personnel.

Life on an RAF station is clearly demarcated by rank and is most visible in the three messes. All three are sited on the rising ground to the north, roughly along the 20m (65 ft) contour line; the Airmen's Institute looks down onto the parade ground and the airfield, the Sergeants' Mess from its vantage point enjoys views over most of the airfield. In contrast the front of the Officers' Mess faces to the south and away from the airfield, the southwest extension of the runway only coming into view after the end of the Second World War.

4 The Second World War

After its early change of role, RAF Coltishall became a day fighter station and later a night fighter station, and was associated with some of the RAF's most well-known wartime fighters, including the Spitfire, Hurricane, Beaufighter, Defiant, Mosquito, and Typhoon. Amongst the many airmen who served at RAF Coltishall during the war were some of RAF's most famous fighter pilots, including Max Aitken, Douglas Bader, John 'Cats Eyes' Cunningham, 'Johnnie' Johnson, Adolph 'Sailor' Mallan, and Bob Stanford-Tuck (Johnson 1956, 35-7, 139, 176). Given its proximity to the North Sea, attacks against enemy shipping was an important theme in the station's operations, and the Fleet Air Arm also deployed Swordfish and Albacore aircraft at the airfield. Random hit and run raids, or 'Rhubarbs', against enemy targets on the continent were also a feature RAF Coltishall's wartime undertakings. This closeness to the European mainland also brought unwelcome attention from German bombers, and there were numerous attacks on the airfield especially during the early years of the war. One of the consequences of these attacks was the loss of one of the partly built hangars.

After the outbreak of war the order of the late 1930s was soon put aside as the base moved onto a war footing. The newly completed buildings received a coat of camouflage paint, traces of which may still be seen on the officers' mess, airmen's barrack blocks and married accommodation. If the Germans invaded its closeness to the coast also heightened the threat from ground attack. To meet this menace, concrete pillboxes were placed around the base, a number of which survive in the fields immediately to the east of the airfield. Another danger was that the Germans might try to seize the airfield by airborne assault using paratroopers. To defend the airfield from this form of attack, three Pickett-Hamilton retractable pillboxes were placed on the airfield. These pillboxes are believed to survive, but were not located during the current fieldwork.

The hangars potentially formed concentrated and easily identifiable targets. To provide more protection for the aircraft protected dispersal points were built around the periphery of the airfield, one of which survives to the south of Manor Farm. This example has a roughly W-shaped plan, with a surrounding traverse of cement filled sand bags and a central brick shelter for the crew and servicing personnel. On the eastern side of the airfield, within and outside the present perimeter fence, are remains of other dispersal points represented by their central brick shelters. Rare wartime oblique photographs of the base show that the dispersal points were places of intense activity, with pairs of aircraft in the dispersal pens, surrounded by tents and temporary huts (MSO 31269 PO-6, 2 October 1941). The permanent hangars were supplemented by blister hangars of light welded steel construction - six standard Over and six Extra Over Types.

To both increase the capacity of RAF Coltishall and to further disperse its aircraft satellite airfields were built at Matlaske (TG 153 345) and Ludham (TG 395 195). An alternative Operations Room was also constructed on the outskirts of Norwich at Catton, this wooden hut still survives and is now occupied by the Air Training Corps (TG 23562 11237).

Subsequently a new purpose-built Operations Room was moved to Stratton Strawless Hall on the Norwich to Aylesham Road (Lawrence and Jennings 2005, 7). To further lessen the potential impact of German attacks on RAF Coltishall, it was provided with Q type decoy sites at Beeston St Lawrence (TG 318 227) and Suffield (TG 242 320) (Dobinson 2000, 248).

Another important task for RAF Coltishall was search and rescue. During the war Lysander and Walrus aircraft were used for this task and in the post-war period a succession of helicopters. This role lasted until 1994 when the search and rescue activity moved to RAF Wattisham, Suffolk.

The war also brought growing casualties and a section of a small remote cemetery on an un-named lane to the north of the airfield was acquired, later marked a Commonwealth War Graves Commission Cross of Sacrifice. Sited below the runway's northern flight path it is an appropriate last resting place for the RAF personnel, Commonwealth and allies from other nations, and German airmen who lost their lives in the area. This small cemetery continued in use in the post-war period, and includes the graves of pilots who lost their lives in flying accidents and other personnel who died on service.

5 The early post-war period

During the war many RAF units were manned by Polish pilots and for a short time after the end of the war RAF Coltishall was home to the RAF's Polish squadrons until February 1946. From this date RAF Coltishall became a night fighter station at first equipped with a Wing of Mosquito aircraft.

In the years following the war as political divisions between east and west hardened into the Cold War there were new threats from the east, and defence planners envisaged possible attacks by nuclear armed Soviet bombers. Again RAF Coltishall's relative closeness to the North Sea ensured it was located at a critical location to intercept Soviet aircraft while they were still over the sea and to defend the increasing number of United States Air Force bases in East Anglia.

During the post-war period the airfield was modified on a number of occasions to accommodate the deployment of new aircraft and weapons systems. One of the key requirements for the new jet aircraft was an asphalt runway, this was laid approximately south-west to north-east, with quick reaction platforms at either end, where aircraft could be held for take-off at a few minute's notice. Aircraft Servicing Platforms were also added in front of the hangars and the control tower updated in preparation for new jet fighters, beginning with Vampire night fighters, and from autumn 1951 Meteor night fighters (RAF/541/T/35 8 Oct 1950, frame 3076).

6 The 1950s and 1960s

In anticipation of a new generation of jet aircraft, in September 1956, John Laing and Co Ltd won the contract to strengthen the runways and taxiways. To protect aircraft from low-level attack while on the ground it was also at this time that two groups of eight pairs of Y-shaped hardstandings with concrete blast walls were constructed. One group was placed to the east close to the bomb and missile stores and the other to the south west of the main runway, each large enough to accommodate a squadron's aircraft. In addition to the blast walls each group was also provided with an unprotected Y-shaped hardstanding.

The early post-war jets were mainly armed with medium calibre cannons. In expectation of the introduction of the Javelin, the airfield was again remodelled. To the east, a new missile handling section was added to the wartime bomb stores in preparation for the introduction of – Firestreak - the RAF's first operational air-to-air missile (Bowyer 1979, 91). In contrast to cannon ammunition, missiles were far larger to handle and required the use of special trolleys. They were also far more complex, comprising electronic components and explosives that required constant maintenance and careful storage. During the 1950s the domestic accommodation was also extended, including a new barrack blocks, officers' housing and around Barton Road another housing estate.

In 1959, the Air Fighting Development Squadron of the Central Flying Establishment moved to RAF Coltishall, it was originally equipped with Hunters, which were soon replaced with the supersonic single-seater fighter the Lightning. In preparation for the introduction of the Lightning, between October 1958 and May 1959 the runway was strengthened and extended to include a 1000 feet (304m) overrun to the northeast (Lawrence and Jennings 2005, 23; F22/58/RAF/255, 28 Aug 58, frame 0028: RAF/V31/255, 6 Jul 50, frame 5). From April 1964 the Lightning Operational Conversion Unit was also based at RAF Coltishall where it remained until September 1974 (Bowyer 1979, 91). Between 1963 and 1976 the airfield was also home to the RAF Historic Aircraft Flight, later renamed the Battle of Britain Memorial Flight. Also between 1963 and 1994 the station was home to two air sea rescue squadrons, No 22 Squadron flying Wessex helicopter and No 202 Squadron operating Sea Kings.

The end of conscription in the early 1960s and the increasing demands for the retention of technical personnel led to new pressures on the station's accommodation. RAF Coltishall also provided accommodation for the nearby radar station at RAF Neatishead, which placed further demands on the airfield's facilities. To the north of the existing wartime houses, a new estate of airmen's housing of terraces and multi-storey housing was added on Ormesby Road, Cromer Place and Hoveton Place. Probably due to problems with the flat roofs of the late 1930s buildings, many such as the sergeants' mess, the airmen's institute and some barrack blocks were given pitched roofs. With the growing size of the community it was provided with its own school, the Douglas Bader School, and a dedicated interdenominational chapel. By 2005, the station was home to about 1600 service personnel and 1400 dependents. Up to 200 civilians were also employed on the airfield.

7 The Jaguar Force

For over 30 years RAF Coltishall has been synonymous with the Jaguar aircraft operated by Nos 6, 41 and 54 Squadrons and from 2000 16 (R) squadron. In the 1980s, as part of Strike Command, 38 Group, Nos 6 and 54 Squadrons armed with conventional weapons were tasked with strike and attack duties, while No 41 Squadron was responsible for photo-reconnaissance work. A further four Jaguar squadrons were based at RAF Bruggen and RAF Laarbruch, West Germany, until they were replaced by Tornado aircraft in the mid-1980s. The Operational Conversion Unit for the type was at RAF Lossiemouth, Scotland.

Prior to the arrival of the Jaguar aircraft at RAF Coltishall a small number of new buildings were built to service this new aircraft type. These included a new workshop for the assembly of the Jaguars' Rolls-Royce/Turbomeca Adour engines, and a detached building for running uninstalled engines. A similar facility was also built in one of the 1950s dispersal blast walls, where engines could be tested after installation. A special paint shop was also built to accommodate a single Jaguar aircraft. It was also perhaps at this time that the store building to the east of Hangar 1 was constructed.

An important part of the pilots' training routine was a regular session in a flight simulator, where various missions and emergency routines might be practiced. To serve the Jaguar squadrons a dedicated simulator was constructed. To achieve the sensation of flying, part of the building was given over to a large landscape model over which a camera traversed producing an image that could be projected on to a screen in front of a static cockpit. Within the model room illumination was so intense that an adjacent cooling plant was required to remove the heat generated by the lights. Around 2000, this model was removed and a fully computerised training system installed. This powerful system allowed not only realistic virtual landscape models to be projected in front of the pilot, training routines could also be practiced, such as take-offs and landing, emergency routines, air-to-air refuelling and evading hostile missiles.

Other changes to the airfield included extensions to the front of the control tower and the construction of an adjoining metrological section, with a large upstairs briefing room. In the bomb stores, three standard NATO munitions storage 'igloos' were constructed during the late 1970s or early 1980s. Close to the main gate a large L-shaped building was built, housing an open learning centre, a museum and briefing room, and offices.

During the Cold War RAF Coltishall's Jaguar squadrons were allocated to Strategic Air Command Europe's (SACEUR) Strategic Reserve (Air). In the event of war they might be deployed to any airfield on the European mainland to reinforce an area's defences or attacks on enemy armour and installations. Given their need for a relatively short runway they might also operate from damaged runways or make shift airstrips (Mason 1982, 27-28). In particular RAF Coltishall's Jaguars were tasked with defending NATO's northern flanks in Denmark and Norway.

In the lead up to war the Jaguars and ground personnel would be deployed to their wartime bases. Meanwhile RAF Coltishall would be reduced to a ghost town, perhaps leaving store's and engineering personnel, and remaining dependents. Although the airfield might be pressed into emergency use, it had no designated war fighting role. For this reason RAF Coltishall escaped the massive building campaigns of the 1970s and 1980s, which typified the architecture of many NATO facilities at this time.

To support No 41 Squadron in its reconnaissance role a temporary double-storey analysis building was built to the east of the 1930s hangars. In the latest series of upgrades digital imaging and additional sensing techniques replaced the Jaguar's wet film cameras. In the field processing of reconnaissance data was undertaken in mobile cabins, which were stored around the base.

From the early 1970s RAF bases became possible terrorist targets, and in the event of war Warsaw Pact special forces might also launch attacks on NATO airfields. To counter these dangers, use might be made of wartime pillboxes and a new type of defence post, the Yarnold shelter, appeared on airfields, one of which survives close to the main gate.

In the decade following the end of the Cold War the Jaguars were deployed during the first Gulf War and later to police the no-fly zone over northern Iraq. They also played an important role in the establishing peace in the Balkans and later during in operations in Sierra Leone.

8 The End

In July 2004, the Secretary of State for Defence, Geoff Hoon, announced to the House of Commons that RAF Coltishall would close by the end of 2006. In the lead up to closure Nos16 (Reserve) and 54 (F) Squadrons were disbanded in March 2005. Also at this time the No 41 Squadron number plate was transferred to the Fast Jet and Weapons Evaluation Unit, also based at RAF Coningsby. A year later No 6 Squadron flew out to its new home at RAF Coningsby, Lincolnshire. Subsequent to the departure of the Jaguar aircraft over the following months, the remaining personnel from RAF Coltishall were redeployed and the buildings stripped of their contents. On Thursday 30 November 2006, the station was closed marked by a parade, fly past, and the final lowering of the RAF ensign.

No 6 Squadron continued operational flying until 30 April 2007, No 6 Squadron was disbanded a month later on 31 May 2007.

9 Methodology

This project offered a unique opportunity to document an airfield's draw down, incorporating the mundane and ceremonial. To meet this challenge a particular approach was adopted based on the broad principles of characterisation. The photographic record of RAF Coltishall during its last 9 months or so is one element of the project to document the airfield's activities and draw down. The aim of the photographic characterisation was not to produce a building-by-building record of the station's architecture. Instead, it sought to capture impressions of the appearance of the base, the groupings of the buildings and how the spaces between buildings were used. This project also offered the occasion to record many of the station's behind the scenes activities prior to closure and to produce a snapshot of air force life in early 21st century.

A characterisation study was also commissioned to analyse the historical evolution of the airfield and its functional areas. In addition, three sound and visual artists, Angus Boulton, Gair Dunlop, and Louise K Wilson recorded their impressions of the airfield during its draw down. Their work brought new perceptions to complement the stills photography, capturing for example the essential character of the place, the trauma of closure, and the rituals and ceremonies that accompanied it. Air photography was used to record the final layout of the station's buildings and its wider impact on the surrounding landscape. Together these records constitute a characterisation of the base at this time, and a documentation of the processes of change and their effect on service personnel, the local community and landscape.

10 Acknowledgements

English Heritage is grateful to Wing Commander Paul Robins and the personnel of RAF Coltishall for their friendly assistance during the last months of the station's operation and subsequent draw down. The success of the project was also due to Mick Jennings, Community Relations Officer, through his unfailing support and knowledge of the base's history. Steve Cole took the ground photography and Damian Grady was responsible for the air photographs.

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Airfield Environs, Main Gate and Headquarters Area



Figure 1 RAF Coltishall, from the south west. This view shows the impact of the airfield on this rural landscape. Towards the bottom of the photograph is Frogge Lane whose route has been cut by the airfield. Running from the bottom left to the top centre another ancient route may be seen snaking diagonally across the landscape, its line was partly lost in the construction of Scottow Hall and later by the airfield. To the left is Scottow Road, this was constructed in the 1960s to link the villages of Buxton and Lamas to the B1150. (c) English Heritage NMR 24369/012



Figure 2 RAF Coltishall, from southwest. To the top is the Watch Office, or Control Tower, and four C type hangars, between them and the H-shaped barrack blocks is the technical area, including the parachute packing building, engine maintenance building and stores. (c) English Heritage NMR24369/038



Figure 3 Coltishall village, road sign to RAF Coltishall. (c) English Heritage AA054387



Figure 4 Scottow Road to the north of the airfield, built in the 1960s to link the villages of Buxton and Lamas to the B1150. This replaced an earlier route to the south which had been severed by the construction of the airfield. (c) English Heritage AA054358



Figure 5 Runway approach lighting to northeast of runway off Scottow Road. (c) English Heritage DP029257



Figure 6 Frogge Lane, to the north of Herne's farm, cut by the construction of the airfield. (c) English Heritage AA054478



Figure 7 Jaguar GR1 XW563 stood at the gate to RAF Coltishall as a memorial to the members of the Jaguar force who lost their lives during the course of their duties. It was originally mounted at RAF Bruggen, Germany, from October 1985 until August 2001 when it was brought to RAF Coltishall. It was unveiled by the then station commander Group Captain Christopher Harper MA FiMgt RAF on 14 September 2001. In 2007 it was moved and re-erected outside County Hall where now Air Vice Marshal Harper, Air Officer Commanding No.1 Group unveiled the aircraft for a second time. (c) English Heritage AA054379



Figure 8 Jaguar GR1 XW563. (c) English Heritage AA054380



Figure 9 RAF Coltishall's mission statement until April 2006. (c) English Heritage AA054408



Figure 10 RAF Coltishall's mission statement from April to November 2006. (c) English Heritage DP027318



Figure 11 Main gate, showing the original guard room whose open veranda has been partly enclosed. To the right is a prefabricated Yarnold Shelter, these were constructed in the 1980s to guard against possible terrorist attack. (c) English Heritage AA054382



Figure 12 Main gate, looking outwards. (c) English Heritage AA054383



Figure 13 Replica Hurricane Mark I depicted as LED V7467 Douglas Bader's aircraft while serving with 242 Squadron. He was one of the many wartime fighter aces who served at the station. (c) English Heritage AA054378



Figure 14 Replica Hurricane Mark I. (c) English Heritage AA054388



Figure 15 Building 35, Station Headquarters. (c) English Heritage AA054462



Figure 16 Station Headquarters, main entrance. (c) English Heritage AA054463



Figure 17 Station Headquarters, main door from rear. (c) English Heritage DP027352



Figure 18 Station Headquarters, detail of window. (c) English Heritage DP027353



Figure 19 Station Headquarters, southwest ground floor corridor. (c) English Heritage DP027347



Figure 20 Station Headquarters, ground floor end of southwest corridor (c) English Heritage
DP027348



Figure 21 Station Headquarters, stairs to upper floor. (c) English Heritage DP027349



Figure 22 Station Headquarters, upper floor. (c) English Heritage DP027351



Figure 23 Station Headquarters, upper floor. (c) English Heritage DP027350



Figure 24 Building 3, Briefing and station history room. (c) English Heritage AA054384



Figure 25 Building 3, Briefing and station history room. (c) English Heritage AA054385



Figure 26 Building 3, Briefing and history room. (c) English Heritage AA054386



Figure 27 Wartime protected operations block and to its rear is the station hospital and wartime decontamination block. (c) English Heritage AA054436



Figure 28 Building 23, station mortuary last used as a rugby club house. (c) English Heritage AA054392



Figure 29 Station water tower. (c) English Heritage AA054435

Messes



Figure 30 Building 50, The officers' mess, this fine neo-Georgian style building is typical of the care taken over the design of many permanent RAF airfields during the late 1930s. Traces of wartime camouflage may still be seen on its walls. (c) English Heritage AA054416



Figure 31 The officers' mess, architectural detail. (c) English Heritage AA054417



Figure 32 The officers' mess, foyer. (c) English Heritage AA054418



Figure 33 The officers' mess, foyer and in the background the Battle of Britain lace by Dobsons and M Browne Limited Nottingham, this was presented to the station by Sellincourt Limited on 19 July 1973 and is now hung in Norwich cathedral. (c) English Heritage AA054419



Figure 34 The officers' mess, foyer , looking east down the corridor giving access to the bar (left) and the reception room (right). (c) English Heritage AA054420



Figure 35 The officers' mess, reception room lounge. This room was used as a reception area prior to mess dinners and at other times after meals as a reading area. (c) English Heritage AA054423



Figure 36 The officers' mess, lounge. (c) English Heritage AA054424



Figure 37 The officers' mess, lounge. (c) English Heritage AA054425



Figure 38 The officers' mess, the bar. (c) English Heritage AA054421



Figure 39 March 2006, the officers' mess, the dining room, looking north. (c) English Heritage AA054422



Figure 40 October 2006, the officers' mess, the dining room. (c) English Heritage DP035661



Figure 41 The officers' mess, the kitchen. (c) English Heritage DP029258



Figure 42 The officers' mess, the kitchen. (c) English Heritage DP029259



Figure 43 The officers' mess, entrance to the Spitfire Bar, the cellar area was originally constructed as an air raid shelter. (c) English Heritage DP035671



Figure 44 The officers' mess, the Spitfire bar, the ace of hearts. (c) English Heritage DP035668



Figure 45 The officers' mess, the Spitfire Bar. (c) English Heritage DP035667



Figure 46 The officers' mess, the Spitfire Bar. (c) English Heritage DP035669



Figure 47 The officers' mess, the Spitfire Bar in the air raid shelter beneath the mess was redecorated between 1970 and 1971 by officers from the Lightning squadron. (c) English Heritage DP035666



Figure 48 The officers' mess, officers responsible for the work. (c) English Heritage DP035670



Figure 49 The sergeants' mess, this building originally had a flat roof. (c) English Heritage AA054438



Figure 50 The sergeants' mess, name board. (c) English Heritage DP029268



Figure 51 The sergeants' mess, foyer, looking east the corridor gives access to the reception room to the right, the door to the left leads to the dining room. (c) English Heritage AA054439



Figure 52 The sergeants' mess, this room was used as reception room prior to mess dinners and at other times as reading area after meals. (c) English Heritage AA054444



Figure 53 The sergeants' mess, billiard room. (c) English Heritage AA054445



Figure 54 The sergeants' mess, the bar. (c) English Heritage AA054443



Figure 55 The sergeants' mess, the dining room, to the rear are the doors to the foyer and to the left are the doors to the self service counter. (c) English Heritage AA054441



Figure 56 The sergeants' mess, dining room. (c) English Heritage AA054440



Figure 57 The sergeants' mess, self service counter. (c) English Heritage AA054442



Figure 58 Building 44, the 1930s airmens' institute, this building also originally had a flat roof. (c) English Heritage AA054449



Figure 59 The airmens' institute, latterly Junior Ranks Mess, entrance. (c) English Heritage AA054450



Figure 60 The Junior Ranks Mess, entrance lobby. (c) English Heritage AA054450



Figure 61 *The airmens' institute, stair rail upper floor. (c) English Heritage AA054456*



Figure 62 *The Junior Ranks Mess, detail of stair rail. (c) English Heritage AA054456*



Figure 63 The Junior Ranks Mess, ground floor dining rooms, kitchen to right. (c) English Heritage AA054454



Figure 64 The Junior Ranks Mess, kitchen pantry. (c) English Heritage AA054451



Figure 65 The Junior Ranks Mess, kitchen, west end, late 1930s Collins Cantilever Oven by Thomas Collins Co Ltd, Telephone Bristol 57061, it was originally coal fired oven. (c) English Heritage AA054452



Figure 66 The Junior Ranks Mess, kitchen, west end, oven with top door open. (c) English Heritage AA054453



Figure 67 The airmens' institute, ground floor Freddie's bar. (c) English Heritage AA054458



Figure 68 The airmens' institute, ground floor seating area. (c) English Heritage AA054459



Figure 69 The airmens' institute, to the rear the stores. (c) English Heritage DP035659



Figure 70 The airmens' institute, to the rear the stores. (c) English Heritage DP035660

Barracks and Housing



Figure 71 This view from the north west shows the careful symmetry of the 1930s design, with an axis running from the control tower (top) through Hangar 2, the former parade ground, latterly used as a car park, to in the foreground the large airmen's institute. To either side are the H-shaped barrack blocks, these were all originally flat roofed, a number have subsequently been given gable roofs. (c) English Heritage NMR24369/037



Figure 72 1930s barracks to the northeast of the parade ground, in the foreground Braham, Building 27B and to its rear 27A. These buildings originally had flat incendiary bomb proof roofs that have been replaced by later gable roofs. (c) English Heritage AA054446



Figure 73 Braham, Building 27B, 1930s barracks to the northeast of the parade ground. (c) English Heritage AA054447



Figure 74 Braham, Building 27B, 1930s barracks to the northeast of the parade ground. Traces of wartime camouflage paint is still visible on many of the barrack buildings. (c) English Heritage AA054448



Figure 75 Salmon block, Building 202A, to the north west of the Airmens' Institute, is a relatively unusual example of a permanent 1950s barracks buildings. It too originally had a flat roof that has been replaced with a gable roof. (c) English Heritage AA0544460



Figure 76 Hanbury block, main entrance. (c) English Heritage DP027330



Figure 77 Hanbury block, main entrance, detail of 1950s radiators. (c) English Heritage DP027333



Figure 78 Hanbury block, ground floor corridor looking south. (c) English Heritage DP027332



Figure 79 Hanbury block, laundry room. (c) English Heritage DP027331



Figure 80 Hanbury block originally comprised a number of large open plan barrack rooms. To meet changing social expectations these have subsequently been converted into double or single living units. (c) English Heritage DP027329



Figure 81 Hanbury block, single study-type bedroom. (c) English Heritage DP027328



Figure 82 Hanbury block, staircase at south end. (c) English Heritage DP027335



Figure 83 Hanbury block, staircase at south end. (c) English Heritage DP027334



Figure 84 Hanbury block south end, fireplace in former communal room. (c) English Heritage DP027336



Figure 85 1930s Officers' housing, Barnby Road. (c) English Heritage AA054372



Figure 86 1950s Officers' housing, off Barnby Road. (c) English Heritage AA054374



Figure 87 1950s Officers' housing, Barnby Road to rear of Officers' mess. (c) English Heritage AA054373



Figure 88 Cromes Place, 1930s Airmens' housing, many of the houses still retain traces of wartime camouflage. (c) English Heritage AA054359



Figure 89 Cromes Place, 1930s Airmens' housing, in the foreground are the remains of a communal air raid shelter. (c) English Heritage AA054377



Figure 90 Cromes Place, 1930s Airmens' housing, south east corner of Ormesby Road. (c) English Heritage AA054362



Figure 91 Filby Road, Ministry of Defence notice, to the rear is Rollesby Place, which comprised eight semi-detached houses normally reserved for Warrant Officers. (c) English Heritage AA054360



Figure 92 1950s Airmens' housing, Barton Road. (c) English Heritage AA054370



Figure 93 1950s Airmens' housing, Barton Road, March 2006 removal men at work. (c) English Heritage AA054371



Figure 93 Spar Supermarket, incorporating part of the 1930s telephone exchange, originally Building 45. (c) English Heritage AA054361



Figure 94 The Douglas Bader School, Filby Road. (c) English Heritage AA054375



Figure 95 Station Chapel, Edward the Confessor, from west. The church was inter-denominational, and used for Roman Catholic services on Saturdays and Church of England services on Sundays. (c) English Heritage AA054376



Figure 96 Chapel foyer. (c) English Heritage DP029234



Figure 97 Station Chapel, Edward the Confessor, the Padre's table. (c) English Heritage DP029224



Figure 98 Station Chapel, Edward the Confessor, XVI Squadron (1915-1990) stained glass window, Squadron motto 'Operta Aperta' - hidden things are revealed. In memory of three pilots, Squadron Leader Garry Lennox (1956-1994), Squadron Leader Kev Weeks (1953-1991) and Flight Lieutenant 'Stan' Bowles (1959-1990). (c) English Heritage DP029235



Figure 99 Station Chapel, Edward the Confessor, interior, the tapestry was completed in 1991. (c) English Heritage DP029233



Figure 100 Station Chapel, Edward the Confessor, altar and central panel of tapestry. (c) English Heritage DP029260



Figure 101 Station Chapel, Edward the Confessor, left hand panel of the chapel's tapestry acknowledging RAF Coltishall's role in air sea rescue 1963-1994. This panel shows a yellow rescue helicopter of 22 Squadron. (c) English Heritage DP029261



Figure 102 Station Chapel, Edward the Confessor, right hand panel of the chapel's tapestry showing two Jaguar aircraft. (c) English Heritage DP029262



Figure 103 The south west corner of the airfield showing the largely post-war housing estate. (c) English Heritage NMR 24369/043



Figure 104 Hoveton Place, off Ormesby Road, post-war Airmens' housing. (c) English Heritage AA054363



Figure 105 Post-war airmens' housing. (c) English Heritage AA054366



Figure 106 Post-war airmens' accommodation, 177-188 Ormesby Road. (c) English Heritage AA054368



Figure 107 RAF Coltishall Families Centre, Ormesby Road. (c) English Heritage AA054367



Figure 108 RAF Coltishall Amenities Centre, off Ormesby Road. (c) English Heritage AA054369



Figure 109 Playground in the centre of the Ormesby Road post-war housing estate, with Norwich saint motif on hoarding. (c) English Heritage AA054364



Figure 110 Playground in post-war housing estate. (c) English Heritage AA054365

Technical Area 1



Figure 111 Close up of the hangars and technical area from the north west. To the top is the Watch Office and to its left the fire station. In the lower centre is the Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility and above it the Brake Parachute Packing Building. To their right is the survival equipment section. The tall white structure is the station's water tower. (c) English Heritage NMR 24369/036



Figure 112 Survival Equipment Section, to its left is the immersion coverall repair bay and to the rear right the Parachute Brake Bay, from south east. (c) English Heritage AA054426



Figure 113 Survival Equipment Section, parachute packing table, note the pulleys in the ceiling used to suspend parachutes. (c) English Heritage AA054433



Figure 114 Survival Equipment Section, immersion coverall repair section. Above the central work bench are extractors to remove the fumes created by the bonding agents used to repair the suits. (c) English Heritage AA054434



Figure 115 Parachute Brake Bay, packing a brake parachute. (c) English Heritage AA054428



Figure 116 Parachute Brake Bay, packing a brake parachute. (c) English Heritage AA054429



Figure 117 Parachute Brake Bay, brake parachute packing table. (c) English Heritage AA054433



Figure 118 Parachute Brake Bay, detail of bench along south wall. (c) English Heritage AA054428



Figure 119 Parachute Brake Bay, painting showing a Jaguar in winter camouflage, Rich 2003 (Richard Weyman). (c) English Heritage AA054430

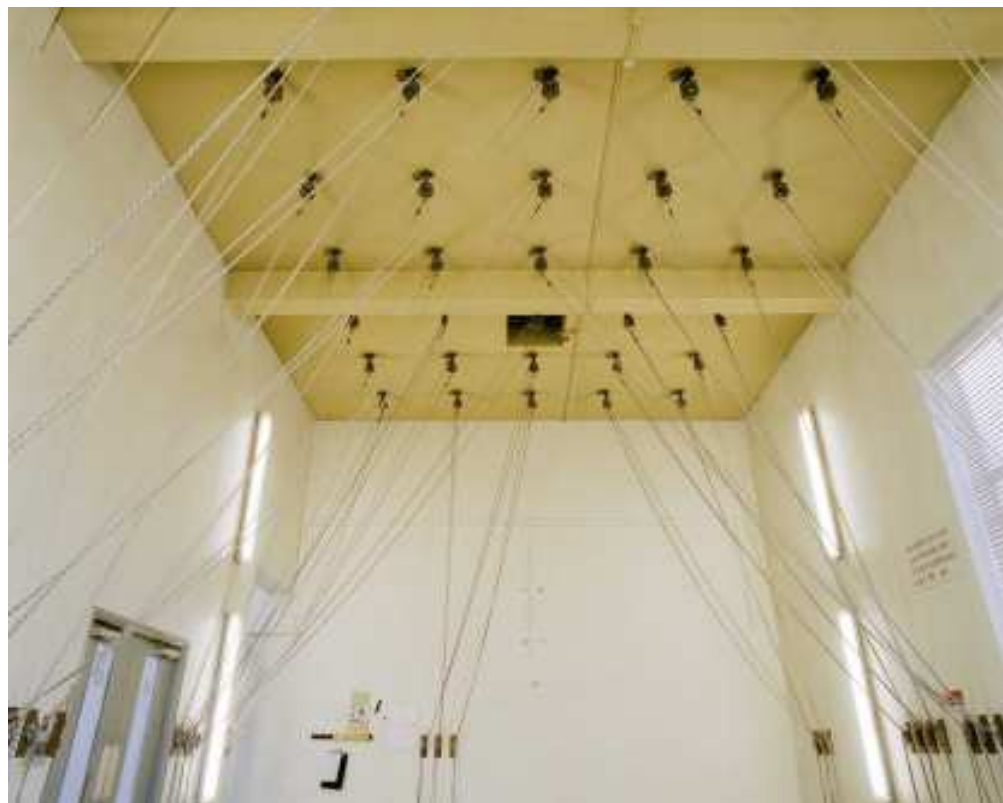


Figure 120 Parachute Brake Bay, parachute drying room. (c) English Heritage AA054432



Figure 121 Supply and Movements Squadron, late 1930s reinforced concrete stores building. (c) English Heritage DP027354



Figure 122 Supply and Movements Squadron, counter for issuing stores. (c) English Heritage AA054473



Figure 123 Supply and Movements Squadron, March 2006 dress uniforms being prepared for the last day of flying ceremony. (c) English Heritage AA054473



Figure 124 Supply and Movements Squadron, clothing store office, it was used as a tea room until about 1990. (c) English Heritage AA054470



Figure 125 Supply and Movements Squadron, office mural design and artwork and graphics Cpl Keith Riley. (c) English Heritage AA054471



Figure 126 Supply and Movements Squadron, office mural. (c) English Heritage AA054472



Figure 127 Supply and Movements Squadron, rest room. (c) English Heritage AA054475



Figure 128 Supply and Movements Squadron, rest room. (c) English Heritage AA054476



Figure 129 Building 378, Jaguar Paint Facility, this structure was purpose-built for spraying Jaguar aircraft . (c) English Heritage DP027167



Figure 130 Building 378, Jaguar Paint Facility. (c) English Heritage AA054473



Figure 131 Jaguar Paint Facility, vents. (c) English Heritage DP027172



Figure 132 Jaguar Paint Facility, entrance. (c) English Heritage DP027179



Figure 133 Building 539, Painters and Finishers. (c) English Heritage DP027342



Figure 134 Building 539, Painters and Finishers. (c) English Heritage DP027344



Figure 135 Building 539, Painters and Finishers. (c) English Heritage DP027343



Figure 136 Building 539, Painters and Finishers. (c) English Heritage DP027345



Figure 137 Building 295, Headquarters Electrical Engineering Squadron. This building was constructed at the beginning of the 1950s to maintain and service the increasingly complex electronic equipment carried by post-war jet aircraft. (c) English Heritage DP029240



Figure 138 Building 295, Headquarters Electrical Engineering Squadron. (c) English Heritage DP029239



Figure 139 Building 295, Headquarters Electrical Engineering Squadron, internal corridor from south west (c) English Heritage DP029242.



Figure 140 Building 295, Headquarters Electrical Engineering Squadron, electrical bay with central office. (c) English Heritage DP029238



Figure 141 Building 295, Headquarters Electrical Engineering Squadron, stores area. (c) English Heritage DP029241



Figure 142 Building 295, Headquarters Electrical Engineering Squadron, store racking. (c) English Heritage DP029244



Figure 143 Building 295, Headquarters Electrical Engineering Squadron, rest area. (c) English Heritage DP029243



Figure 144 Building 295, Headquarters Electrical Engineering Squadron. (c) English Heritage DP029246



Figure 145 Building 295, Headquarters Electrical Engineering Squadron. (c) English Heritage DP029245



Figure 146 Building 280, Entrance to the Jaguar Maintenance School. (c) English Heritage DO029256

Technical Area 2



Figure 147 Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility. This building was specially constructed in 1975 for the servicing of the Jaguars' engines. (c) English Heritage DP029252



Figure 148 Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility. Each Jaguar aircraft was powered by two Rolls-Royce Turbomeca engines, these were subject to regular checks rebuilding to ensure that the maximum number of aircraft remained in serviceable condition. (c) English Heritage DP029247



Figure 149 Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility interior. A complete engine, engine 2056E, waits on a handling trolley for its journey to the Uninstalled Engine Test Facility (UTEF). (c) English Heritage AA054464



Figure 150 Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility. The overhead crane was built by Matterson, Rochdale, 1975 DO34379 Contract No S534716 SWL 3 tons 3048 kg. (c) English Heritage AA054467



Figure 151 Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility. In the foreground is an after burner from one of the jet engines, this was a component that most often needed attention. (c) English Heritage AA054466



Figure 152 Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility, safety notices. (c) English Heritage DP029251



Figure 153 Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility. In its final years the engine assembly work was carried out by two teams, the friendly rivalry between the teams was one means of ensuring high standards of work. This shot shows Team 1's work area. (c) English Heritage AA054468



Figure 154 Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility. Spare Turbomeca engines awaiting installation. (c) English Heritage AA054469



Figure 155 Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility, detail of Rolls-Royce Turbomeca engine 1220E. (c) English Heritage DP029252



Figure 156 Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility. Friday, 24 March 2006 work underway on the assembly of the last Rolls-Royce Turbomeca Engine built at RAF Coltishall, engine number 1229E. (c) English Heritage DP029249



Figure 157 Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility. Friday, 24 March 2006 work underway on the assembly of the last Rolls-Royce Turbomeca Engine built at RAF Coltishall, engine number 1229E. (c) English Heritage DP029248



Figure 158 October 2006, Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility. (c) English Heritage DP035662



Figure 159 October 2006, Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility. (c) English Heritage DP035663



Figure 160 Uninstalled Engine Test Facility (UETF) in this building engines were brought from the Propulsion and Aircraft Components Flight (PACF) Adour Engine Assembly Facility for static testing before being installed . (c) English Heritage DP027169



Figure 161 Uninstalled Engine Test Facility (UETF), control room. (c) English Heritage DP027323



Figure 162 Uninstalled Engine Test Facility (UETF), control room, stickers or 'zaps'. (c) English Heritage DP027320



Figure 163 Uninstalled Engine Test Facility (UETF), test chamber looking towards the mouth of the detuner, which reduced the noise during test firing. (c) English Heritage DP027325

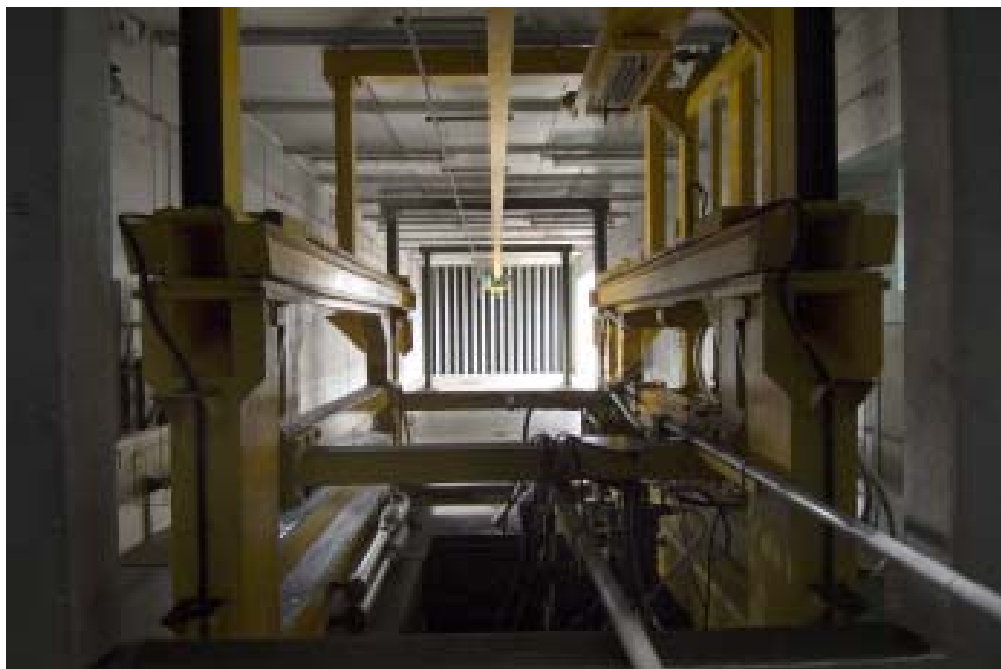


Figure 164 Uninstalled Engine Test Facility (UETF), test chamber showing the engine support frame and looking towards the air intake. (c) English Heritage DP027323



Figure 165 Uninstalled Engine Test Facility (UETF), detail of the air intake at the southwest end of the building. (c) English Heritage DP027324

Jaguar Flight Simulator



Figure 166 Building 349, Jaguar Flight Simulator operated by Thames Merlin Training Services, from south east. This building was specially constructed about 1975 to meet the training needs of the Jaguar pilots. (c) English Heritage DP027204



Figure 167 Building 349, Jaguar Flight Simulator, part of the cooling plant that was initially required to cool the heat generated by the lights over the large terrain model. (c) English Heritage DP027203



Figure 168 Jaguar Flight Simulator building, main corridor, classroom 1 to rear. (c) English Heritage, DP 027202



Figure 169 Jaguar Flight Simulator building, Classroom 1 with ejector seat and diagram showing the aircraft's cockpit layout. (c) English Heritage DP027201



Figure 170 Jaguar Flight Simulator building, central computer room, in around 2000 the old physical terrain model was replaced by this fully computerised training suite. (c) English Heritage DP027199



Figure 171 Jaguar Flight Simulator building, main frame computer used to mimic the aircrafts operating systems and to project images of changing terrain on to hemisphere in front of the simulator. (c) English Heritage DP027200



Figure 172 Jaguar Flight Simulator building, from these consoles the instructors were able to present the pilots with a variety of virtual missions and emergency scenarios. (c) English Heritage DP027196



Figure 173 Jaguar Flight Simulator building, rear of fibreglass hemisphere into which images of the moving terrain were projected. (c) English Heritage DP027195



Figure 174 Jaguar Flight Simulator building, training cockpit and to the rear the projectors used to project the moving images on to the hemisphere. (c) English Heritage DP027194



Figure 175 Jaguar Flight Simulator building, closeup of training cockpit interior. (c) English Heritage DP027192



Figure 176 Jaguar Flight Simulator building, training cockpit from rear. (c) English Heritage DP027177



Figure 177 Jaguar Flight Simulator building, training cockpit and terrain image projected inside the hemisphere. (c) English Heritage DP027168



Figure 178 Jaguar Flight Simulator building, training cockpit and terrain image projected inside the hemisphere. (c) English Heritage DP027173



Figure 179 Jaguar Flight Simulator building, training cockpit and pilot 'JD'. (c) English Heritage DP027186



Figure 180 Jaguar Flight Simulator building, here the pilot is training linking up with a VC10 refuelling aircraft. (c) English Heritage DP027184



Figure 181 Jaguar Flight Simulator building, training cockpit and terrain image projected inside the hemisphere. (c) English Heritage DP027180



Figure 182 Jaguar Flight Simulator building, training cockpit and a projection of RAF Coltishall. (c) English Heritage DP027198



Figure 183 Jaguar Flight Simulator building, training cockpit and a projection of RAF Coltishall. (c) English Heritage DP027197



Figure 184 Jaguar Flight Simulator building, training cockpit. (c) English Heritage DP027188



Figure 185 Jaguar Flight Simulator building, training cockpit and blank hemispherical screen. (c) English Heritage DP027190

Hangars



Figure 186 This view from the south shows the sweep of the hangars and to their right the 1950s aircraft servicing platforms. In the foreground is hangar 3 and above it hangars 2 and 1 with hangar 4 to the rear. In the original scheme it was intended to build another hangar to the right of hangar 3 but before completion it was destroyed German bombing. (c) English Heritage NMR 24369/017



Figure 187 March 2006, Jaguar aircraft on the apron in front of Hangar 3 (c) English Heritage DP029218



Figure 188 March 2006, Jaguar aircraft on the apron in front of Hangar 3. (c) English Heritage AA054437



Figure 189 March 2006, Jaguar aircraft on the apron in front of Hangar 3, left to right , Jaguar T4 XX835 (EX), Jaguar GR 3As XX119 (EB) and XZ398 (FA). (c) English Heritage AA054413



Figure 190 March 2006, Jaguar aircraft on the apron in front of Hangar 3, left to right , Jaguar T4 XX835 (EX), Jaguar GR 3As XX119 (EB) and XZ398 (FA). (c) English Heritage AA054414



Figure 191 March 2006, Jaguar aircraft on the apron in front of Hangar 3, left to right , Jaguar T4 XX835 (EX), Jaguar GR 3As XX119 (EB) and XZ398 (FA). (c) English Heritage AA054415



Figure 192 Fuel bowzers to the rear of Hangar 3. (c) English Heritage DP027319



Figure 193 Fuel bowzers to the rear of Hangar 3. (c) English Heritage DP027322



Figure 194 Fuel bowsers to the rear of Hangar 3. (c) English Heritage DP027315



Figure 195 Hangar 2 and to the rear Hangar 3. All the hangars at Coltishall are standard Air Ministry Type C Protected Type, they have concrete lower walls with a glazed panel above and were originally clad in asbestos sheeting. As may be seen in the far hangar the asbestos sheeting roof was left exposed above the doors. (c) English Heritage AA054396



Figure 196 Hangar 3, C Type hangar from the Watch Office. (c) English Heritage DP035652



Figure 197 Hangar 3, south end. (c) English Heritage DP054394



Figure 198 Hangar 3 , 6 Squadron badge and motto *Oculi Exercitus* 'The Eyes of the Army' . (c) English Heritage AA054412



Figure 199 Hangar 3 , 6 Squadron badge. (c) English Heritage AA054411



Figure 200 Hangar 1 from west. (c) English Heritage DP054389



Figure 201 Hangar 4 from west. (c) English Heritage AA054390



Figure 202 Hangar 2, badges reading left to right, 6 Squadron 'Oculi Exercitus', RAF Coltishall 'Aggressive in Defence', 16 Squadron 'Operta Aperta', 41 Squadron 'Seek and Destroy', Group Headquarters 1 'Swift to Attack' and LIV (54) Squadron 'Audux omnia perpeti'. (c) English Heritage AA054398



Figure 203 Hangar 1 viewed from the Watch Office. (c) English Heritage DP035658



Figure 204 Hangar 2 north end (c) English Heritage AA054394



Figure 205 Hangar 1 showing its east doors with a large mural painted shortly after 41 Squadron returned Operation Granby, the 1991 Gulf War to liberate Kuwait. At the centre of the design is a large double armed Cross of Lorraine taken from the Squadron's badge and derived from its association during the First World War with the town of St Omer, France, the cross being part of the town's arms. (c) English Heritage AA054397



Figure 206 Hangar 1 interior showing its east doors. (c) English Heritage AA054398



Figure 207 Hangar 1 east doors, in the centre is tired and worn out Jaguar over a destroyed Scud missile, to its left is an Iraqi MIG-25 (Foxbat) fighter and to the right a Jaguar is attacked by three Iraqi missiles. (c) English Heritage AA054399



Figure 208 Hangar 1 detail of Jaguar undergoing servicing. (c) English Heritage AA



Figure 209 October 2006, Hangar 1 east doors detail of painting showing deterioration of the paint work a few months after the RAF's withdrawal. (c) English Heritage DP035655



Figure 210 Hangar 1 east doors, a Jaguar is attacked by three Iraqi missiles. (c) English Heritage AA054400



Figure 211 Hangar 1 east doors, a tired and worn out Jaguar with bombs indicating six operational sorties. (c) English Heritage AA054401



Figure 212 Hangar 1 interior looking towards the west doors. (c) English Heritage AA054404



Figure 213 Hangar 1 interior looking towards the west doors, Jaguars undergoing servicing. (c) English Heritage AA054402



Figure 214 Hangar 1 interior looking towards the west doors. (c) English Heritage AA054406



Figure 215 Hangar 1 a tractor starts to pull a Jaguar towards the east door. (c) English Heritage AA054403

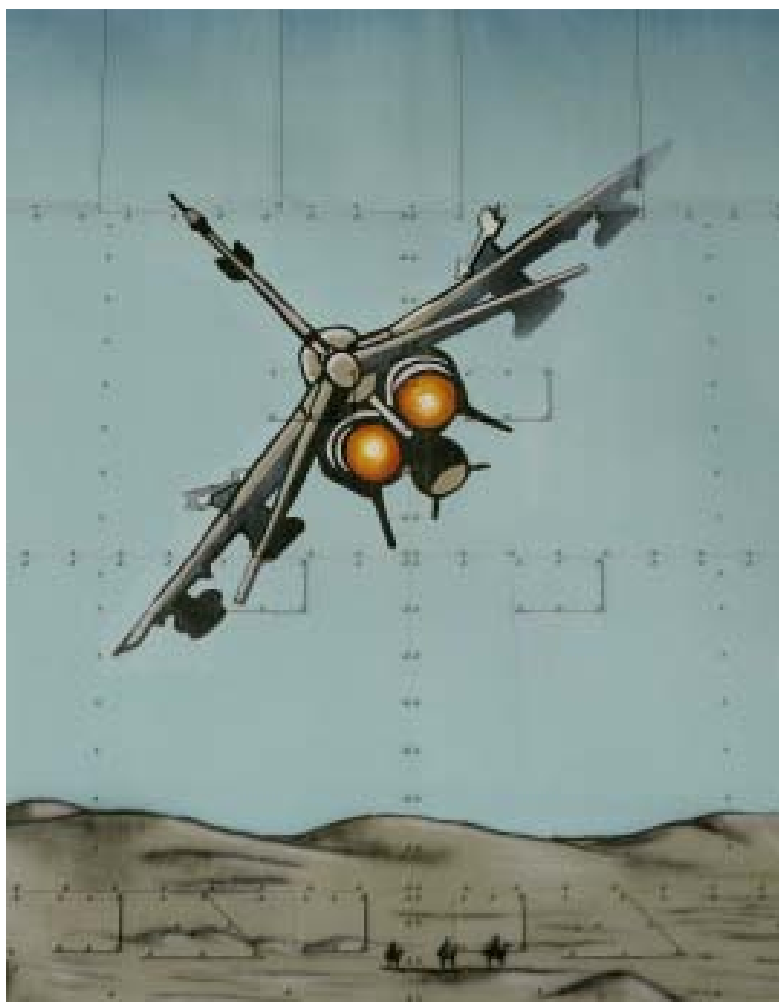


Figure 216 Hangar 1 interior detail of the west door. (c) English Heritage AA054407



Figure 217 Hangar 1, office 26, south side, west end, upper floor, a mural of a Jaguar from No.54 Squadron. (c) English Heritage DP035656



Figure 218 Hangar 1, south side, west end, upper floor, mural of a Jaguar in a crew briefing room, probably painted in the early 1990s after the first Gulf War 1991. (c) English Heritage DP035657



Figure 219 Hangar 1, upper floor, north side, 41 [F] Squadron Aircrew Equipment Assembly (AEA) section, after flight counter. In this room the aircrews' survival equipment was maintained and stored. (c) English Heritage DP029263



Figure 220 Hangar 1, upper floor, north side, 41 [F] Squadron Aircrew Equipment Assembly (AEA) section, after flight counter. In this room helmets and night flying goggles were serviced and running repairs carried out to webbing harnesses. Across the counter smaller items of survival equipment were issued to the pilots. (c) English Heritage DP029267



Figure 221 Hangar 1, upper floor, north side, 41 [F] Squadron Aircrew Equipment Assembly (AEA) section. Each of the helmets was individually fitted to a particular pilot. (c) English Heritage DP029265



Figure 222 Hangar 1, upper floor, north side, 41 [F] Squadron Aircrew Equipment Assembly (AEA) section. This room, the transition area, was also the changing area where aircrews dressed in immersion suits and life vests prior to flight. (c) English Heritage DP029264



Figure 223 Hangar 1, upper floor, north side, 41 [F] Squadron Aircrew Equipment Assembly (AEA) section. Aircrew Immersion Coveralls these were worn by all aircrew flying over the sea, a common route for many training sorties heading for the north of England or Scotland. (c) English Heritage DP029266



Figure 224 Hangar 4 from the northeast, in the foreground are fuel drop tanks. (c) English Heritage AA054391



Figure 225 Hangar 4, Engineering and Supply Wing name board. (c) English Heritage AA054393



Figure 226 March 2006, Jaguar aircraft are removed for scrap. (c) English Heritage DP029223



Figure 227 March 2006, notice on scrap aircraft. (c) English Heritage DP029222

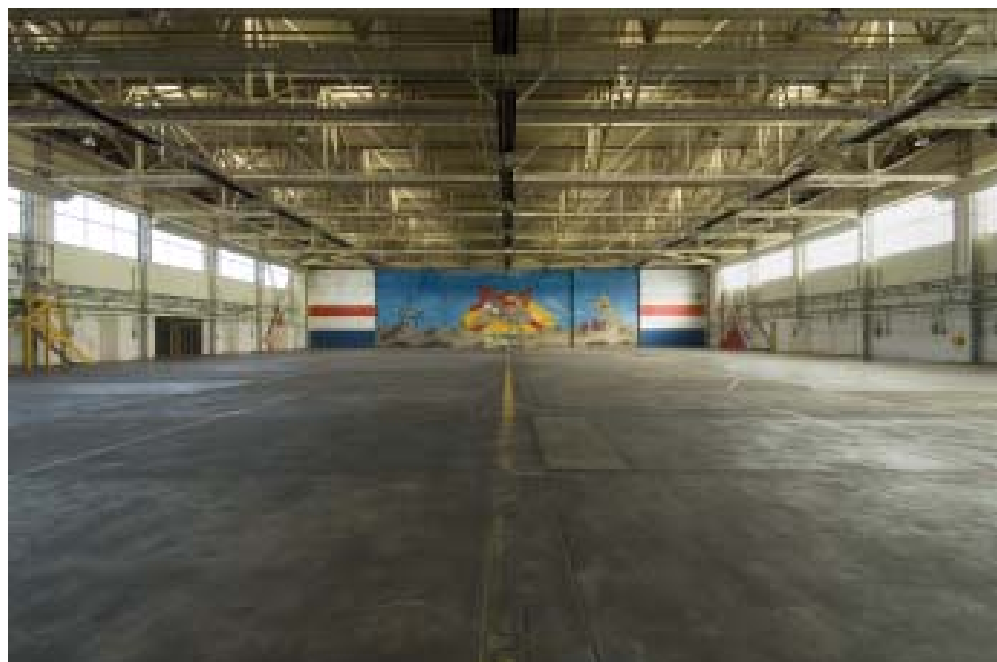


Figure 228 Hangar 1, October 2006, looking towards the east doors. (c) English Heritage DP035653



Figure 229 Hangar 1, October 2006, looking towards the west doors. (c) English Heritage DP035654



Figure 230 Watch Office, rear view from west showing the later 1950s extension to the right, with the meteorological briefing room on its upper floor. (c) English Heritage AA054461



Figure 231 The Watch Office is a standard Air Ministry 2328/39 design constructed from 14 inch thick reinforced concrete walls. Originally on the ground floor were telecommunications and teleprinter rooms and a pilots' rest room, on the first floor, the meteorological officer's bedroom, control officer's rest room, and the signals office and in the front of the building the control room. It was also equipped with hydrogen bottles for weather balloons. Post-war modifications include the meteorological section and a briefing room to the left, an extension to the front to the front of the structure and the Visual Control Room on the roof. (c) English Heritage AA054410



Figure 232 Watch Office and to its right the fire section (c) English Heritage AA054409



Figure 233 Watch Office roster board (c) English Heritage DP029229



Figure 234 Watch Office, March 2006 approach controllers at work on the middle floor (c) English Heritage DP029230



Figure 235 Watch Office, March 2006 approach controllers at work on the middle floor (c) English Heritage DP029231



Figure 236 Watch Office, March 2006 approach controllers at work on the middle floor (c) English Heritage DP029232



Figure 237 March 2006 Jaguar in flight over Coltishall. (c) English Heritage DP029254



Figure 238 Watch Office, October 2006, stripped middle floor, formerly occupied by the approach controllers. (c) English Heritage DP035644



Figure 239 Watch Office, October 2006, stripped ground floor of the post-war extension that formerly housed communications and navigation equipment. (c) English Heritage DP035645



Figure 240 Control tower, meteorological section, upper floor briefing room. (c) English Heritage DP029227



Figure 241 Control tower, meteorological section, upper floor briefing room notices. (c) English Heritage DP029228



Figure 242 Watch Office, March 2006, Visual Control Room (c) English Heritage DP029225



Figure 243 Watch Office, March 2006, Visual Control Room, (c) English Heritage DP029226



Figure 244 March 2006, view from Visual Control Room towards Hangar 1, Jaguar GR3A XX725, tailcode FE, on the taxiway in front of Hangar 1. (c) English Heritage DP029220



Figure 245 March 2006, View from Visual Control Room looking north east, Jaguar aircraft on the apron in front of Hangar 1. (c) English Heritage DP029221



Figure 246 March 2006, View from Visual Control Room looking to the north east, Jaguar aircraft on the apron in front of Hangar 1. (c) English Heritage DP029219



Figure 247 October 2006, Watch Office, Visual Control Room after stripping. (c) English Heritage DP029295

The Flying Field



Figure 248 RAF Coltishall viewed from the north east looking along runway 22. To the right are the airfield's domestic and technical area, including a control tower four large hangars. To the left are the wartime bomb stores and post war missile storage area. The original flying field was grass during the war this reinforced by steel matting and after the war in anticipation of the introduction of jet fighters replaced by a concrete runway and taxiways. In the mid-1950s the dispersed concrete blast protection walls were built to protect aircraft against low level strafing attacks. (c) English Heritage NMR 24369/009



Figure 249 Group of 1950s blast protection wall in the south west corner of the airfield. The blast walls gave protection against low level attack for a squadron of aircraft. The black and yellow chequered line on the runway marks the position of the south west Rotary Hydraulic Arrestor Gear, between it and the blast walls are the remains of the Instrument Landing System. To the rear is the Watchman radar tower. (c) English Heritage NMR 24369/018



Figure250 The main runway 04/22(m) oriented southwest to northeast, length 7,500 feet (2,286m) looking to the north east. It was formerly protected by Rotary Hydraulic Arrestor Gear (c) English Heritage DP035664



Figure 251 The main runway 04/22(m) looking to the north east (c) English Heritage DP035665



Figure 252 Eastern group of blast walls, 48 and 49 looking west. In 1956, in anticipation of the introduction of Javelin aircraft the airfield's runways and taxiways were strengthened, and two groups of eight pairs of Y-shaped blast walls built. Each group of blast walls was large enough to protect a squadron's aircraft. To either side of the blast walls were prefabricated huts for the aircrew and servicing personnel, their positions occupied by the more recent huts. (c) English Heritage DP035646



Figure 253 Blast walls 48 and 49. Late 1950s blast protection wall, between each blast wall is rectangular hardstanding that was used for parking a fuel bowser. This was connected to refuelling hoses through the circular hole in the centre of the blast walls, the hoses were supported on steels hoops set into the wall. (c) English Heritage DP035647



Figure 254 Late 1950s blast protection walls, wall 49 looking west. (c) English Heritage DP035648



Figure 255 Late 1950s blast protection walls, eastern group walls 48 and 49 looking west. (c) English Heritage DP035649



Figure 256 Late 1950s blast protection walls, eastern group 48 and 49 looking west. (c) English Heritage DP035672



Figure 257 Late 1950s blast protection walls (c) English Heritage DP035650



Figure 258 Late 1950s blast protection walls, eastern group wall 48 looking west (c) English Heritage DP035651



Figure 259 Late 1950s blast protection wall, the numbers refer to the bearing of the shelter's centre line, allowing the aircraft's navigation aids to be set prior to take-off. (c) English Heritage DP027326



Figure 260 Late 1950s blast protection walls. (c) English Heritage DP027355



Figure 261 Late 1950s blast protection walls. (c) English Heritage DP027358



Figure 262 Late 1950s blast protection wall. (c) English Heritage DP027356



Figure 263 Late 1950s blast protection walls. (c) English Heritage DP027357



Figure 264 Late 1950s blast protection wall. (c) English Heritage DP027164



Figure 265 Late 1950s blast protection wall. (c) English Heritage DP027170



Figure 266 Late 1950s blast protection wal, eastern group wall 46. (c) English Heritage DP027174



Figure 267 Fire training area, east side of airfield. (c) English Heritage DP027314



Figure 268 Fire training area. (c) English Heritage DP027317



Figure 269 Fire training area, training dummy (c) English Heritage DP027321



Figure 270 Second World War protected dispersal point to the south of Manor Farm, it has a roughly W-shape plan creating two protected bays with a central covered refuge. Each bay was large enough to take a single seater fighter, such as, a Hurricane, Spitfire or Typhoon (c) English Heritage DP027339



Figure 271 Second World War protected dispersal point to the south of Manor Farm, showing its cement sand bag walls and a small hut that perhaps originally housed an airfield tractor. The door opening has subsequently been reduced and a single door inserted. (c) English Heritage DP027341



Figure 272 Second World War protected dispersal point to the south of Manor Farm, showing detail of cement sand bag construction technique (c) English Heritage DP027340



Figure 273 Second World War protected dispersal point to the south of Manor Farm, showing detail of cement sand bag construction technique (c) English Heritage DP029236



Figure 274 Second World War protected dispersal point to the south of Manor Farm, empty sand bags dumped in the former tractor shed. (c) English Heritage DP029237

Missile and Munitions Storage Area



Figure 275 To rear of this photograph is the missile and munitions storage area. At the back are the original wartime bomb store buildings. To the left is the purpose-built 1950s missile storage section, with standard 1970s or 1980s NATO Igloo munitions bunkers to the left and rear. In the centre is the entry control point and offices and to their rear the missile inspection and preparation buildings. In the foreground are the 1950s protective blast protection walls, providing shelter for a squadron of aircraft. The missile section and the protective blast walls were built around 1956 in anticipation of the arrival of the Javelin fighter armed with the RAF's first air to air missile - Firestreak. (c) English Heritage NMR 24369/020



Figure 276 Missile and munitions storage area, 1950s missile inspection and preparation building. (c) English Heritage DP027181



Figure 277 Missile and munitions storage area, 1950s missile inspection and preparation building, from south east. (c) English Heritage DP027193



Figure 278 Missile and munitions storage area, 1950s missile inspection and preparation building, from south (c) English Heritage DP027185



Figure 279 Missile and munitions storage area, 1950s missile inspection and preparation building, Building 227 to rear. (c) English Heritage DP027193



Figure 280 Missile and munitions storage area, 1950s missile inspection and preparation building, Building 227, attack warning siren. If the air field was attacked sirens such as this would have sounded the warning. (c) English Heritage DP027187



Figure 281 Missile and munitions storage area, 1950s missile storage building, from west. (c) English Heritage DP027175



Figure 282 Missile and munitions storage area, 1950s missile storage building, from east. (c) English Heritage DP027178



Figure 283 Missile and munitions storage area, 1950s missile storage building 223B interior from west. (c) English Heritage DP027165



Figure 284 Missile and munitions storage area, 1950s missile storage building 223B interior, from north west. (c) English Heritage DP027171



Figure 285 Missile and munitions storage area, 1950s missile preparation building, south. (c) English Heritage DP027191



Figure 286 Missile and munitions storage area, refurbished wartime bomb stores, stores 69 A1, A2 and A3 (foreground). (c) English Heritage DP027189

Departure



Figure 287 Thursday 30 November 2006, the RAF ensign flies over RAF Coltishall for the last time.
(c) English Heritage DP035674



Figure 288 Thursday 30 November 2006, Air Officer commanding No.1 Group Air Vice Marshal David Walker CBE AFC RAF greets local dignitaries during the closure ceremony. (c) English Heritage DP035673



Figure 289 Thursday 30 November 2006, onlookers at the closure ceremony (c) English Heritage DP035685



Figure 290 Thursday 30 November 2006, City of Norwich Pipe Band. (c) English Heritage DP035692



Figure 291 Thursday 30 November 2006, City of Norwich Pipe Band. (c) English Heritage DP035693



Figure 292 Thursday 30 November 2006, the RAF ensign flies over RAF Coltishall for the last time. (c) English Heritage DP035675



Figure 293 Thursday 30 November 2006, the pennant flag is lowered from the mast head. (c) English Heritage DP035676



Figure 294 Thursday 30 November 2006, lowering of the pennant flag, solo piper Warrant Officer John Welton MBE, bugler Senior Aircrafts Woman Ruth Sydney. (c) English Heritage DP035677



Figure 295 Thursday 30 November 2006, lowering of the RAF ensign accompanied by the solo bugler. (c) English Heritage DP035678



Figure 296 Thursday 30 November 2006, lowering of the RAF ensign accompanied by the solo bugler. (c) English Heritage DP035679



Figure 297 Thursday 30 November 2006, lowering of the RAF ensign accompanied by the solo bugler. (c) English Heritage DP035680



Figure 298 Thursday 30 November 2006, folding the ensign. (c) English Heritage DP035681



Figure 299 Thursday 30 November 2006, folding the ensign. (c) English Heritage DP035682



Figure 300 The RAF ensign is escorted away. (c) English Heritage DP035683



Figure 301 Flypast by a Hurricane from the RAF's Battle of Britain Memorial Flight, piloted by Squadron Leader A L Pinner MBE, makes a low pass over the airfield. (c) English Heritage DP035686



Figure 302 A Hurricane from the RAF's Battle of Britain Memorial Flight. (c) English Heritage DP035688



Figure 303 Thursday 30 November 2006, Flypast, four Jaguars pass in formation over the headquarters building, flown by Squadron Leader Mark Discombe, Flight Lieutenants John Townsend, Chris Hoyle and Shaun Harrison. (c) English Heritage DP035691



Figure 304 All Saints' Church, Scottow, No 41 Fighter Squadron standard, squadron motto 'seek and Destroy'. This standard was presented to No 41 (F) Sqn. on 14th July 1957 at Royal Air Force Biggin Hill and laid up 27th July 1986 on occasion of the Squadron's 70th anniversary. Battle honours - Western Front 1916-1918, Somme 1916, Cambrai 1917, Amiens, Battle of Britain 1940, Dieppe, Fortress Europe 1940-144, France and Germany 1944-45. (c) English Heritage AA054491



Figure 305 Cemetery to northeast of the main runway. In the foreground are graves from the Second World War marked by the Commonwealth War Graves Commission Cross of Sacrifice, to its rear are post-war burials. (c) English Heritage AA054479



ENGLISH HERITAGE RESEARCH DEPARTMENT

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The Research Department provides English Heritage with this capacity in the fields of buildings history, archaeology, and landscape history. It brings together seven teams with complementary investigative and analytical skills to provide integrated research expertise across the range of the historic environment. These are:

- * Aerial Survey and Investigation*
- * Archaeological Projects (excavation)*
- * Archaeological Science*
- * Archaeological Survey and Investigation (landscape analysis)*
- * Architectural Investigation*
- * Imaging, Graphics and Survey (including measured and metric survey, and photography)*
- * Survey of London*

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We make the results of our work available through the Research Department Report Series, and through journal publications and monographs. Our publication Research News, which appears three times a year, aims to keep our partners within and outside English Heritage up-to-date with our projects and activities. A full list of Research Department Reports, with abstracts and information on how to obtain copies, may be found on www.english-heritage.org.uk/researchreports

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