DALE AIRFIELD 1941 – 2008

Introduction

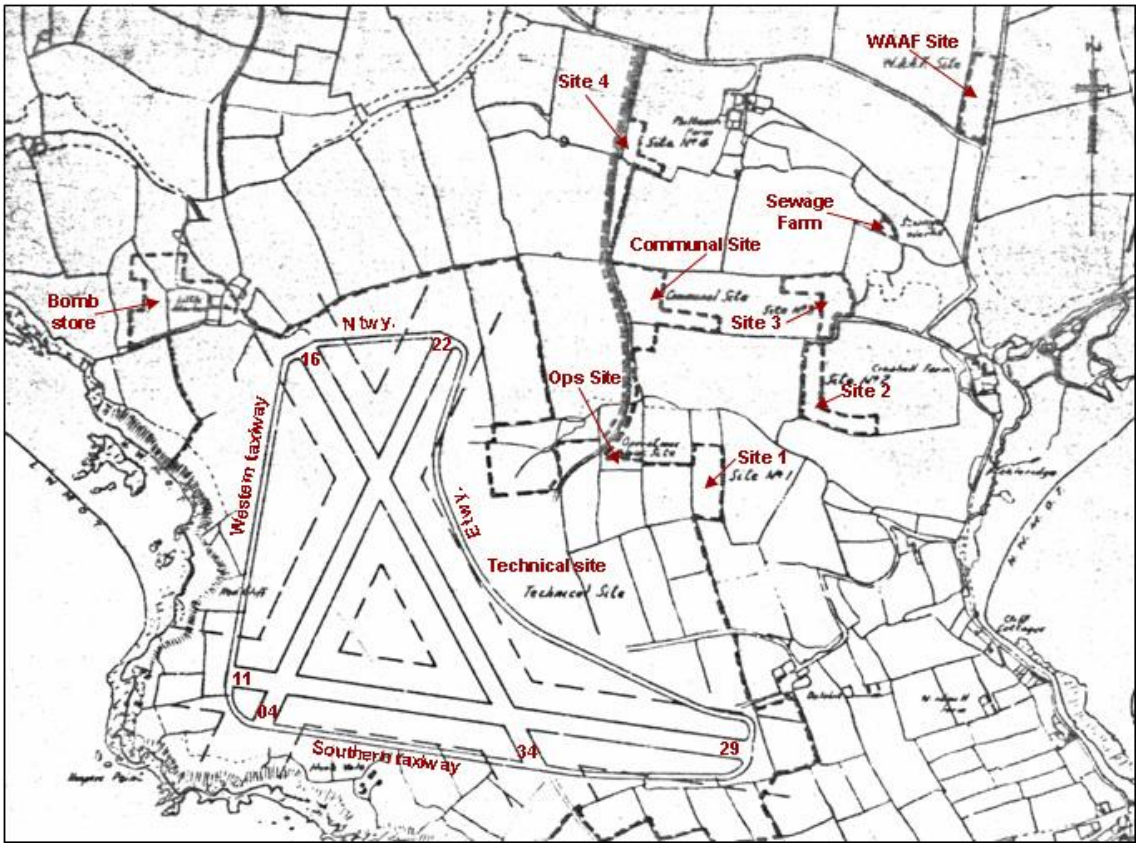
Dale airfield is spectacularly located on a small plateau a little over half a mile north-west of the charming Pembrokeshire village of Dale. Falling entirely within the Pembrokeshire Coast National Park, it is bounded to the west and south by sheer cliffs that fall more than 200 feet to Marloes Sands and Westdale Bay. To the north the ground drops away somewhat, before rising again towards the village of Marloes. To the east the land slopes quite steeply down to Dale and the wide sand and shingle bay to the north of the village. Views in all directions are spectacular. On a calm and sunny day the airfield is a most peaceful and indeed beautiful place. In stormy weather it is wild and quite frightening. All in all, it is a most unusual place to site an airfield.

RAF Dale – 1941 to 1943

Following requisitioning of the land from three farms, one of which had to be demolished, construction began in 1941. Foundations for the runways, taxiways and hardstandings required the excavation of thousands of tons of gravel from land immediately behind the beach just north of Dale and commonly known as Pickleridge Pools. As originally built, there was one T2 hangar, a Watch Office (control tower) to drawing no. 2658/42, a substantial technical site, five dispersed domestic sites including one for WAAFs, a bomb storage area, a sewage farm, four fuel stores holding a total of 144,000 gallons of aviation gasoline, a Battle HQ to drawing no. 11008/41, and aircraft dispersals in the form of 36 circular hardstandings. The runways, listed as being concrete with a tarmac top-dressing, were a little short when compared with those of a typical Bomber Command station. Dimensions for Dale, with magnetic bearings as at December 1944, were:

04 / 22 – 1140 x 50 yards
11 / 29 – 1410 x 50 yards
16 / 34 – 1280 x 50 yards

(In this document all measurements are given in Imperial units since WW2 was fought in Imperial units, by the Allies, at any rate).



RAF Dale in 1942

The airfield was declared ready for operational use on June 1st 1942. The first unit to be based there was 304 (Polish) Squadron, who arrived after a very brief stay at RAF Tiree and in doing so transferred from Coastal Command 15 Group to the relatively newly-formed 19 Group. The main party travelled down by ferry and train on June 12th whilst the aircrews flew 16 Wellington 1Cs in on the 15th and the remaining 6 Wellingtons, along with the Squadron's Tiger Moth, on the 16th. Formerly a Bomber Command squadron, 304 were to operate in tandem with 311 (Czech) Squadron who were based at RAF Talbenny, just 4 miles to the north-east (and benefiting from rather better accommodation).

Wellington 1C HD987 in front of the T2 hangar (Jozef Krzywonos)

The primary role of 304 (squadron code NZ) was to be anti-U-boat and anti-shipping operations in the Western Approaches and the Bay of Biscay. Secondary roles included the bombing of

enemy ships and facilities in north-western French ports. In addition to sinking and damaging a number of U-boats and ships and generally making the task of the U-boat commanders difficult, 304 achieved some astonishing air combat successes. Here are two reports from the squadron's operational records.

4th September 1942
DALE

> An encounter with two Ju. 88's was experienced by Wellington aircraft R1413 (Captain – S/L B. Nowicki) while carrying out an anti-submarine patrol. One of the enemy aircraft made off after hits had been scored on it with the port engine smoking, and hits were also registered on the second enemy aircraft in each of five attacks. This aircraft also made off toward the French coast with smoke coming from the starboard engine. The only damage to the Wellington was about seven bullet holes in the rear turret. None of the crew was injured. Altogether six Squadron aircraft were engaged on the patrol.

16th September 1942
DALE

> Attacked in turn by six Ju 88 aircraft while on patrol, Wellington HF836, the crew of which consisted of F/O S M Targowski, Sgt Z Kowalewicz, F/O W Minakowski, Sgt Z Piechowiak, Sgts W Mlynarski and Kubacik, shot down one of the attackers into the sea and all the remaining five were hit by machine-gun fire. Large pieces were seen to break off the tailplane of one of the five, which broke off combat and made off with thick black smoke coming from one of the engines. After a combat lasting from 12 to 15 minutes, the Wellington climbed into cloud and evaded further attack. Despite a considerable number of holes caused by the fire of the enemy aircraft, the Wellington made a successful flight back.

On 9th February 1943 another such incident was reported. S/L Ladro in NZ-K fought off four Ju 88s in an engagement that lasted the better part of an hour. Having seen the approaching 88s, S/L Ladro immediately jettisoned his weapons load and took violent avoiding action. One 88 was hit by his nose gunner and left the area. The remaining three continued their attacks and NZ-K took many hits, including one in the starboard wing from a 20mm cannon shell. As the attacks continued the co-pilot was slightly injured. However the front turret was hit by a 20mm cannon shell and the gunner was badly wounded. The rear gunner, with a damaged sighting system, continued to fire. After nearly an hour the 88s, probably out of ammunition and certainly becoming low on fuel, broke off the attack, allowing NZ-K to limp in to RAF Predannack. Meanwhile a radio commentary from NZ-K had alerted 19 Group to the engagement and a section of Beaufighters was despatched to intercept the enemy aircraft. In the ensuing combat all three Ju 88s were shot down.

NZ-K (W5718) at Predannack after the engagement of Feb 9th 1943, with cannon shell damage to the starboard wing outboard of the engine (W Ratuszynski).

These engagements are a tribute not only to the tremendous skill and bravery of the Polish aircrews but also to the capabilities of the Wellington. Originally conceived as a long range

bomber, the aircraft proved to be an excellent jack-of-all-trades. Due to its unusual Barnes-Wallis-conceived fabric-covered geodetic construction (a diamond lattice formed of aluminium channel) it was extremely strong and capable of absorbing considerable battle damage. First flown in June 1936 it was originally powered by two 1000hp Pegasus XVIIIs. Later Marks were fitted with Hercules, Merlin and Twin Wasp engines. Maximum speeds were between 235mph (Mk 1C) and 300mph (Mk V and VI) and range was typically 2200 miles, making it eminently suitable for long over-water missions. In addition to turret- and waist-mounted 0.303 Browning machine guns, Coastal Command versions could carry up to 4500 lbs of air-dropped weapons (depending on fuel load) including bombs, depth charges and torpedoes. Flotation bags could also be carried in the bomb bay to delay sinking in the event of a forced landing on water. Later Marks carried ASV Mk II and III radars and Leigh Lights. A small number of Mark 1s were converted into the DWI version which carried a horizontally-mounted 48ft hoop formed from a tube containing a cable loop that was connected to a 90KW generator driven by a DH Gipsy Queen aero-engine mounted inside the fuselage. The electromagnetic effect thus produced was used to detonate magnetic mines. Of almost 11500 Wellingtons built between 1936 and 1945 only two complete aircraft remain – a Mk 1A at the Brooklands museum and a T Mk X at the RAF Museum, Hendon.

Although 304 Squadron found the weather at Dale (and the number of available targets) much more to their liking than that at Tiree, it was nonetheless a tricky place from which to operate. In addition to windshear caused by updraughts, downdraughts and curl-over at this lofty location, pilots also had to contend with birdstrikes. However it was a crosswind that caused a particularly tragic accident. Returning to squadron operational records:

August 11th 1942
DALE

> When taking off for an operational flight — the first to be attempted at night from RAF Station, Dale — at 03.20 hours, aircraft HX384 crashed into the sea about half-a-mile off the aerodrome and the entire crew, consisting of F/O T Siuzdak, F/O L Maslanka, Sgt Omieljaszko, Sgy Modrewski, SGT Wojtowicz and Sgt Drozdziok were drowned. Six other crews took part later in the day in an anti-submarine patrol.

Apparently the aircraft was obliged to take off using an out-of-wind runway since the into-wind one was temporarily out of service for repairs. Shortly after lifting off, the combination of the strong crosswind and violent cliff-induced turbulence rendered HX384 uncontrollable and she sliced down into the sea. Desperate attempts were made to rescue the crew but were sadly unsuccessful. They are buried in Dale churchyard.

Wellington 1C DV597, ready for departure (Jozef Krzywonos)

There were numerous other incidents and losses, sometimes due to enemy action but mostly as a result of accidents during training sorties and unexplained failures to return from a mission. Long patrols over the ocean can be very unforgiving.

On November 4th 1942, 304 moved temporarily from Dale to Talbenny. This relocation was required to allow contractors at Dale to install Drem lighting, which consisted of a ring of lights

around the airfield, funnels of lead-in lights positioned to facilitate curving night approaches, and runway and taxiway edge lighting. The squadron returned to Dale on December 1st.

Stormy weather: DV803 firmly tied down on a mud-encircled western dispersal. Skokholm Island can just be seen in the background (PAF).

In February 1943 the squadron received two new Wellington Mk Xs as replacements for worn out 1Cs. On the March 30th 1943 Coastal Command Headquarters reassigned 304 Squadron to North Sea operations with 16 Group. They were posted to RAF Docking in Norfolk where they completed their conversion to Wellington Mk Xs. They departed from Dale on April 2nd.

Reassigned to RAF Docking: Wellington X HZ258 in 1943 (W Ratuszynski)

304 Squadron remained at Docking for just a few months before being reassigned back to 19 Group and posted to Davidstow Moor. The Squadron was finally disbanded in December 1946 after having served at a further 6 airfields and spending its final year operating first Warwicks and then Halifaxes for Transport Command. Its operational record is as follows:

> **Bomber Command** (pre-Tiree and Dale): 488 operational sorties for a total of 2481 hours (average sortie 5.08 hrs). 800 tons of bombs dropped for the loss of 12 aircraft, 102 aircrew killed or missing in action, and 35 prisoners of war.
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> **Coastal Command**: 2451 operational sorties for a total of 21331 hrs (average sortie a punishing 8.7 hrs). 21 tons of bombs and 43 tons of mines dropped. 33 U-boats attacked with 2 confirmed sunk, 5 damaged, and 16 unknown or uncertain. Shipping:

not recorded. 3 enemy aircraft shot down plus 3 probables and 4 damaged. Operational losses were 106 killed or missing and 14 aircraft lost.

The departure of 304 signalled the end of Dale's career as a frontline air base. However it also marked the beginning of four very busy years of highly varied support operations involving an impressive range of aircraft.

Shortly after 304 departed, the Coastal Command Development Unit (CCDU) flew in from Tain. This unit was originally tasked with undertaking service trials of various types of radar equipment and investigating the tactics for optimum employment of such equipment in Coastal Command aircraft. However its scope soon increased to cover service and tactical trials of all Coastal Command aircraft and equipment. The Unit was originally established at RAF Carew Cheriton, less than 20 miles from Dale, in December 1940. It then moved to Ballykelly before transferring to Tain and almost completing a full circle in arriving at Dale.

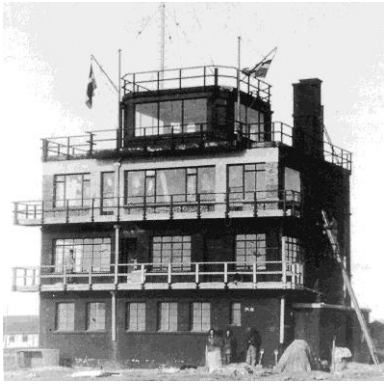
Whilst at Dale the CCDU flew examples of almost the entire range of the then current Coastal Command land-based aircraft. The list included Beaufighters, B17s, B24s, Halifaxes, Hudsons, Mosquitos and Wellingtons. Aside from different marks of radar, equipment tested included the Leigh Light and early versions of sonar buoys in addition to trials involving various types of mine, torpedo, depth charge, bomb, rocket, and gun. Each type of equipment and weapon required a significant number of tests to determine whether it functioned correctly and to specification in the aircraft in which it was carried, its limitations, and how to deploy it (often in conjunction with other equipment) to best advantage.

During the summer of 1943 Talbenny was closed temporarily for the installation of Drem Lighting. At that time 303 Ferry Training Unit, with up to 24 Wellingtons at any one time, was based there and engaged in training flight crews to ferry new Wellingtons to overseas RAF bases. The entire unit decamped to Dale for several weeks, causing some overcrowding.

Following a degree of ongoing R/T and air traffic conflict between the Coastal Command Bases at Dale, Talbenny and Pembroke Dock, and the Fleet Air Arm (FAA) base at Angle, it was decided that the RAF at Dale and the FAA at Angle would exchange bases. So, in September 1943, CCDU transferred to Angle where it remained until the airfield closed early in 1945. At that point CCDU moved to Thorney Island and was renamed the Air Sea Warfare Development Unit. Its remit was modified slightly to that of enhancing operational efficiency through trials of equipment and assisting its development through collaboration with research and development establishments.

RNAS Dale / HMS Goldcrest – 1943 to 1947

As the RAF moved out of Dale, so the Navy moved in. They arrived initially, not with aircraft, but with an army of Royal Marine Engineers and construction workers. Thus the final quarter of 1943 saw considerable building activity commencing once more at Dale. Work continued well into 1945, by which time the Marines were required for service in the Far East and were replaced by locally-hired labour.



A new and somewhat luxurious control tower was erected just to the south east of the original RAF watch office. The new building, a Navy standard design to drawing 3860/42, comprised four storeys, all extensively glazed, the top floor consisting of a small penthouse and the whole being liberally supplied with balconies. A little to the south-east of the towers a large parking / servicing ramp area was laid with access from the eastern taxiway. The existing RAF domestic sites were retained but the Communal Site was extended eastwards towards Site 3 with a number of terracotta block hut groups. A large group of Nissen-type huts was built between the Communal Site and the T2 hangar. Further buildings, mostly of brick, were erected to the north of the runway 29 and 22 thresholds.

Seven new Pentad-type hangars were built, three just to the north of the northern taxiway and a further four on the east side of the airfield and within the Technical Site. The Pentad was a Navy design and comparable in size to the existing 120ft x 240ft T2. No less than 17 of the smaller Mainhill hangars (approximately 75ft x 80ft) were built on new bases adjacent to dispersals on the south and east sides of the airfield. By the time this building programme had ended, Dale, with a total of 25 hangars (1 x T2, 7 x Pentad, 17 x Mainhill) was very likely the most hangar'd airfield in the world.

Mainhill Hangar

Pentad Hangar

During the final stages of the war the Fleet Air Arm expanded rapidly as the focus of attention began to move from Europe, by now primarily a land-based conflict, to the Far East. Here, sea power and naval aviation were expected to be crucial to victory. Thus there was a significant surge in the demands placed on the Fleet Air Arm's training squadrons, the 700 series.

The first to arrive at Dale was 794 Naval Air Squadron (NAS) on 5th September 1943. Originally a sleeve target-towing unit operating Defiants, Fulmars, Masters and Martinets, it was supplemented on 10th September 1943 by a detachment of Seafires from 759 NAS and renamed the Air Firing Unit. It was later supplemented by a detachment of Sea Hurricanes. This unit was reassigned to Henstridge on 22nd November 1943.

During February and March 1944 two Seafire IIC squadrons used to Dale as a temporary base while their carrier, HMS Stalker, returned to port following operations in the Mediterranean. 897 NAS arrived on 18th February 1944 and departed on 26th February for Lee on Solent. 809 stayed for some weeks during February and March prior to flying across the Irish Sea to Long Kesh.

On April 1st 1944 762 NAS, the Twin Engine Conversion Unit (TCU), arrived at Dale with Oxfords, Blenheims, Beauforts, Beaufighters, Mosquitoes and Wellingtons. The TCU was somewhat urgently tasked with teaching Fleet Air Arm pilots to fly the relatively heavy and complex twins that were then coming into service with the Navy. Students were for the most part experienced single-engine fighter pilots converting to twins. In the case of the Mosquito, very recently qualified for carrier operations by Capt. Eric "Winkle" Brown, the training was especially demanding. The aircraft could be quite a handful on even the most expansive of runways and was a real challenge for carrier deck operations. 762 moved on to Ford on 8th December 1944.

The next squadron to be posted to Dale was 790 NAS, arriving in April 1944, well before the departure of 762. 790 operated a range of aircraft that included Ansons, Fireflies, Seafire Vs and XVs, Wildcats, Oxfords, and Mosquitoes. Their tasking was the provision of simulated operations for a new Fighter Direction School.

790 NAS Fireflies over Dale with Skomer Is. in the background (Sub Lt [A] G Aitchison.)

At this point it is appropriate to describe the developments at Kete, a mile or so further down the clifftops towards St Ann's Head.

As part of the programme to extend the Chain Home air defence radar system to the whole coastline of Britain, early in the war a Chain Home Low station was established at Kete. When the Navy exchanged Angle for Dale, and as a matter of convenience, the Fleet Air Arm took over RAF Kete.

Late in 1943, with the FAA and the demands upon it growing rapidly, the Fighter Direction School at Yeovilton was becoming overwhelmed. With RNAS Dale now a major FAA shore base, it was decided that Kete would be a suitable location for a new Fighter Direction School, as an affiliated site to the neighbouring airfield. At the same time it was determined that the Naval School of Meteorology should be located on the same site. Building commenced early in 1944 and the Schools were commissioned in February 1945. The base was initially called HMS Goldcrest 2, but later (1948) renamed HMS Harrier.

Kete was a very substantial establishment, with buildings and roads spread over an area nearly a mile long and half a mile deep. At some point the radar equipment was added-to in the form of a Type 52 Chain Home Extra Low set (rotating dish type, for detecting ships as well as aircraft flying below 200ft, range 45 miles on a good day).

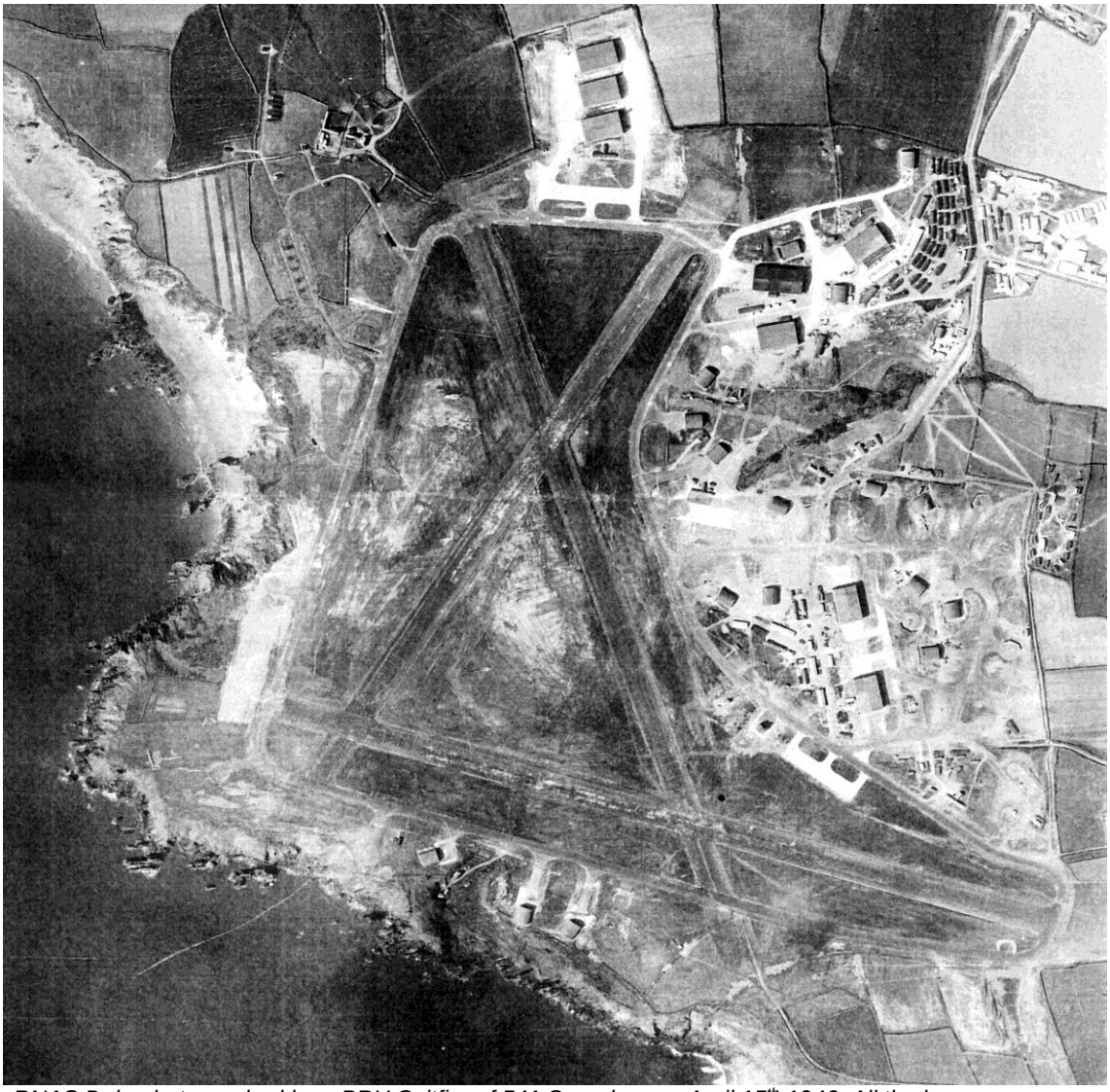
Following basic training, 790 NAS provided all manner of simulated enemy attacks so that student Fighter Controllers would be able to experience very realistic GCI (Ground Controlled Interception) situations. 790 also provided the defending fighters that were to be vectored onto the attackers using GCI techniques and equipment. Incidentally, a GCI station at RAF Ripperston, three miles to the north-east of Dale, remained in operation until 1954.

An experimental GCA (Ground Controlled Approach) unit was reported as having been temporarily established at Dale 1946 and for which 790 NAS provided aircraft and crews for evaluation purposes.

790 remained at Dale until shortly before the airfield closed. The squadron was disbanded in November 1949.

Overlapping with the both the Twin Conversion Unit and 790 NAS for two months was the next arrival, 748 NAS. This was an Operational Training Unit (OTU) and brought with it a selection of fighter / attack aircraft including Corsairs, Hellcats, Wildcats, Seafires and Fireflies. 748 arrived on 1st October 1944 and departed on 14th August 1945.

The next squadron, 784 NAS, arrived on 1st February 1946. This squadron supported the FAA's Night Fighting School and operated, in addition to a few Ansons, Fireflies equipped with the American ASH (Air and Surface Homing) radar. This radar, also known as AN/APS-4 (US) and AI Mk XV (RAF) was an X-band search radar designed for low-level operations against ships and aircraft. Being a short range (4 miles) radar, for interceptions it could only be effectively operated in a GCI environment so although not recorded as having done so, it is probable that 784 operated in conjunction with Kete. The squadron was disbanded on 10th September 1946, the radar equipment removed, and the aircraft absorbed into 790 Squadron.



RNAS Dale photographed by a PRU Spitfire of 541 Squadron on April 15th 1946. All the hangars can clearly be seen, and it is possible to make out nine aircraft, possibly Fireflies, parked in the vicinity of the easternmost group of three Mainhill hangars. Also just visible beyond the thresholds of each runway are gridlines, painted to resemble carrier deck landing area markings (RCAHMW).

The last squadron based at Dale was 861 of the Royal Netherlands Navy, formed at the airfield on 16th September 1946 with Fireflies. Following a successful working-up period it left to embark on the Dutch aircraft carrier HRMS Karel Doorman in February 1947.

Following the departure of 790 NAS to Culdrose in December 1947 the Navy had no further use for Dale and after more than 5 hectic years the airfield was closed on 13th December 1947. HMS Goldcrest was transferred to Brawdy. The Twin Conversion Unit moved to nearby St Davids. HMS Harrier closed in 1961, with the School of Meteorology transferring to Culdrose and the Fighter Direction School to HMS Dryad.

Due to the sheer volume of FAA training missions together with the frequently tricky weather conditions, there were quite a few accidents involving RNAS Dale-based aircraft over the years. Several aircrew are buried at Dale cemetery.

Dale in 2008

There is nothing left to see of HMS Harrier at Kete other than a few sections of road and a commemorative plaque. The National Trust bought the site from the MoD and all the buildings were demolished in the 1980s. The lofty and peaceful clifftop plateau is now just another part of the Pembrokeshire Coast National Park.

The Dale airfield site is another matter altogether.

At least 60% of the land within the boundary of the original airfield is a mixture of rough grassland and gorse, liberally sprinkled with wild flowers, and is a haven for wildlife (although the smaller animals that are prey to the kestrels and buzzards would probably disagree). The rest is partially-cultivated arable land. Much of the area is fenced-off for a substantial number of very healthy-looking sheep, so it is well-fertilised. Earth and rubble banks have been built on and across parts of the taxiways and runways, essential in this exposed area. The old technical site, where most of the hangars once stood, is rough heathland and in places gorse and grass are invading expansion joints in the taxiways and dispersals. A track for off-road vehicles has been laid out in this area. Farm equipment and detritus is in evidence in several places, mostly on parts of the runways and taxiways.

The surface of the whole site undulates fairly gently but sufficient to make it difficult to see all quarters from any one point. This might explain why the Navy felt it necessary to build such a tall control tower.

Although the control towers and all bar one of the hangars are long gone, the airfield is otherwise absolutely complete. As far as can be seen, from both the ground and the air, not a single square foot of concrete has been removed, neither from the runways nor the taxiways, nor the roads, hardstandings, and building bases. The hangar floors are in near-perfect condition. Most of the Communal Site hut groups remain almost intact and are used for a variety of agricultural and storage purposes. In fact one hut group is, as of 22/2/07, Grade II Listed. This is due to splendid cartoons of aviation activity having been painted on the walls, mostly by Sub-Lieutenant A R Dashfield who was stationed at Dale in 1946-47. All the aircraft types depicted are clearly identifiable. Photos of these cartoons can be seen by accessing the website of the Royal Commission on the Ancient and Historical Monuments of Wales and navigating through the *coflein* portal to The National Monuments Record of Wales.

Of the other Domestic Sites (1 – 4 and WAAF), all the huts are gone but remains of roads, paths, huts bases and the like are still visible. Likewise, the bomb store huts and bunkers have gone but all the roadways are still present.

One of the Mainhill hangars remains, but only as a steel skeleton. It would seem to have been used primarily as a workshop since there are a number of internal brick structures and an overhead gantry with pulley gear. There are several brick buildings just north of the runway 29 threshold, some with earth revetments, and either derelict or used for agricultural purposes. To the south-east of the southern taxiway is the Battle Headquarters, from which airfield defence would be coordinated in the event of an enemy attack. It is apparently complete but best viewed only from the outside due to the decidedly malodorous condition of the interior. According to a 1994 Defence of Britain survey it is “now derelict. 21 ft x 8 ft (6.40 x 2.44m) underground complex of rooms c. 6 ft (1.83m) square, accessed by a flight of steps at southern end of structure. A 6 ft (1.83m) square concrete observation cupola rises 3 ft (.91m) above the roof of the main structure. A 360 degree narrow observation slot in the cupola permits all round vision. An emergency exit hatch is adjacent to the east side of the cupola. Built per Air Ministry Drawing 11008/41”.

Some sections of taxiway and runway are in surprisingly good condition and still exhibit a thin tarmac dressing. About 500 yards of the southern taxiway forms part of the access road to The Hookses, a small group of buildings located somewhat precariously in a cleft on the clifftop. The Hookses is in fact one of the pre-1941 farms and was originally called Hooks Vale. It was bought by an author in 1954, restored by him, and has been used ever since as a retreat.

Some parts of the taxiways and runways are perfectly usable by light aircraft. However,

currently only the Pembrokeshire Model Club has permission to use of the airfield.

In spite of the missing hangars and control towers, there are good reasons to believe that this may be the most complete and original World War 2 airfield in Britain.

Turning back to the 1940s for a moment, the RAF and FAA airmen who were based at Dale seem to be part of a rather neglected group. People are comparatively unaware of the enormous contribution to the war effort that was made by the FAA training units such as those based at Dale. Similarly, RAF Coastal Command is felt by many to be a Cinderella outfit, kept well in the shadows of its two illustrious sisters: Fighter Command and Bomber Command. However it seems quite possible that without Coastal Command, the Battle of the Atlantic (U-boats vs allied convoys), and with it the war, might at least have been prolonged, if not lost. The Polish RAF Coastal Command squadrons made a notable contribution to victory in the Atlantic and indeed elsewhere, yet relatively few people are aware of the extent, if not the fact, of Polish aircrew and groundcrew participation in Coastal Command.

A timely and effective reminder of the Polish contribution, and especially that of 304, appeared in 2003, in the form of a Polish Air Force M28 Bryza 1R that arrived at the International Air Tattoo at Fairford painted in wartime Coastal Command colours (*picture, right*). The QD squadron code was used by 304 in 1945.

Dale airfield represents a very significant and highly evocative monument to both the RAF and the FAA. It is hoped that at some point it might be granted some form of “historic landscape” status and thus protected from deliberate damage. It would be advantageous too if the site were to be provided with reasonably convenient, if limited, public access. One hopes that access could be extended to include the Grade II Listed hut group. This could perhaps be used as the location for a display that would describe and commemorate the people, squadrons, units and aircraft formerly based there. One can imagine relatives of those who served at Dale standing for a moment in the middle of one of the weather-worn runways. What might they see? A heavily-loaded Wellington perhaps, struggling to become airborne at the start of a punishing 8 hour mission way out over the Atlantic. Or a pair of Seafires thundering off into a squally November sky to simulate yet another GCI engagement. Such images are so much more powerful than photographs or the written word and would provide a real insight into what it must have been like for their forebears more than 60 years ago.

Note: full-sized versions of the photographs in the following sections can be seen in a separate file, each indexed and named according to the numbers (01 through 56) shown in the accompanying descriptions. Also included in this file is an image of the full-size 1942 airfield layout drawing.

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A walk round Dale

This first of two visits to the airfield was a brief exploratory trip on a showery evening.

The first photo (01), looking westwards, was taken from the halfway point of the southern taxiway, glistening in the evening light.

Standing on one of the nearby earth bank windbreaks and looking north-west you could see quite a long way down runway 34 (02).

Towards the sea the light has caught a few sheep wandering across one of the Mainhill hangar bases (03).

Looking westwards again (04) you can see two dispersals off the southern taxiway, with Skokholm Island just visible in the distance through the mist. There is a windbreak extending all along the north side of this taxiway.

Turning around, a distant Nissen hut (05) can be seen just to the north of runway 29 threshold.

The equally distant skeleton of the one remaining Mainhill hangar (06) has been picked out by the low sun. This photo shows that even recently-cultivated land is now reverting to scrub.

The second visit a day later was much longer and consisted of a clockwise walk round all the taxiways, starting from the same point half way along the southern one. On this occasion the weather was fine and calm and the airfield seemed very peaceful and atmospheric.

This (07) is a wide-angle view of runway 11. It is crossed in several places by windbreaks.

A telephoto view (08) of runway 11. It is humpbacked enough for the 29 threshold to be invisible.

This close-up of 11 (09) shows that at least part of the surface is in remarkable condition, bearing in mind that it has had no maintenance whatsoever for over 60 years.

This photo (10) is of runway 04 and shows that its surface is even better than that of 11. The yellow dotted lines may be for the use of aeromodellers.

This view (11) is of one of the southern dispersals, with Skokholm Island in the background. Some of these dispersals are alarmingly close to the cliff edge. With the nose-high attitude of most wartime aircraft, the forward view whilst taxiing towards this dispersal would be only of the sea.

This is Marloes Sands (12), taken from just beyond one of the western dispersals. The sea really was that colour. This must be one of the best viewpoints in Britain.

Looking back towards the airfield from the same dispersal, this picture (13) shows grass and gorse next to the western taxiway. Clearly not all the grass has been cropped by the sheep.

Turning back towards the sea again, this (14) is the view to the north west. In the centre is Gateholm Island, at the northern end of Marloes Sands, with Skomer Island in the background.

First sight (15) of the remaining Mainhill hangar that is 50 yards or so from the eastern taxiway. The tyres seem to be part of an off-road track that loops across an old hangar base and round the gorse either side of this taxiway. In the background is Rhoscrowther oil refinery, a little over 6 miles away across Milford Haven.

A closer view (16) of the Mainhill hangar indicates that there are quite extensive brick structures within it. It is situated just beyond one of the Pentad hangar bases so it may have been a workshop, perhaps for engine overhauls.

A close-up (17) of the hangar.

This building (18) sits on a large concrete apron and is located about half way between the Mainhill hangar and the Communal Site. There is no clear indication as to its original use. The windows have been bricked-in with the same kind of terracotta blocks that were used to build many of the Communal Site huts. It may have been a fuel store depot added by the Navy, or perhaps that's simply the impression one gets thanks to the rusting period bowser in front of it.

The Communal Site (19), taken from the Mainhill hangar. The oil refinery in the background is about 6 miles away, at Rickeston. Many of these huts are constructed from concrete pillars and roof trusses, with the spaces between the pillars infilled with terracotta blocks.

One of the dispersals (20) off the eastern taxiway and forming part of the Technical Site. Here the grass and gorse are making a determined attempt to take over. This kind of unspoiled heathland is perfect for all manner of birds and small mammals, hence the number of buzzards and kestrels that seem perpetually to hover overhead.

First sight (21) of the group of buildings just north of the runway 29 threshold.

A minute or two after taking this photo (22) an alarmed buzzard shot out of the gorse on top of the revetment.

The walls of this hut were built to last (23) – the bricklaying has been done to a high standard. The asbestos roof hasn't stayed the course.

Looking north (24) from the revetment round the hut shown in the previous two pictures, you can see much of the Communal Site. Further to the right, the land slopes steeply down to the main road into Dale village.

Next to the roofless hut is this air raid shelter (25). It is in good condition but has clearly been used by sheep for some time and is rather mucky inside. You can just see another Nissen hut beyond it and to the right. In this area are several bases of long-gone huts.

Just beyond this group of buildings is the substantial Nissen hut (26) first encountered in picture 05.

Apparently it has been used for agricultural purposes. Like some of the domestic site buildings it is partly constructed from terracotta blocks (27).

This (28) is the building in the background of picture 25. As is readily evident, it is in quite good condition.

Just south of the eastern part of the southern taxiway is the station's Battle Headquarters (29). The floor was deep in smelly sludge so no further investigation was made. The metal box on the left side is an old water tank that has been placed over the emergency exit stairwell to keep sheep out. The horizontal slot, about 3 inches in height, would have provided a view out with little risk of being hit by shrapnel or bullets.

With the circular tour almost complete, this (30) is a view westwards along the southern taxiway. The section beyond the fence, about 500 yards long, forms the access road to The Hookses and is in very good condition. The state of the surface in the foreground shows what happens when the surface remains unused. On the left is yet another windbreak.

This sign (31) was probably erected by the aeromodellers. It is at the threshold of runway 34.

A final view of the sheep (32). Three of this group were first spotted in the distance galloping along the eastern taxiway at breakneck speed. Judging by the fine condition of all the animals, Dale airfield is a very healthy home for sheep. Perhaps they know something of the history of Dale and its contribution to ensuring "that sheep may safely graze".

An aerial tour of Dale

The next visit to Dale, ten days after the taxiway walk, was entirely by air and was the focal point of a photosurvey of all of the major World War 2 Pembrokeshire airfields. Following the necessary transit flight, the route flown was Haverfordwest – Brawdy – St Davids – Talbenny – Angle – Carew Cheriton – Templeton – Haverfordwest (followed by a further transit flight home). For completeness and context photos of the other airfields are included at the end of this section.

For anyone interested in technical aspects, the photos were taken obliquely from an altitude of 2400 ft and mostly during slow (120KT / 138mph) orbits or partial orbits of the airfields. This is an effective way to minimise the movement of the aircraft relative to the ground. A full orbit was not possible in the case of Angle due to its proximity to the Castlemartin Ranges. For a similar reason it was necessary to omit the former Manorbier airfield, although in any case almost nothing remains to be seen here. No orbits of Haverfordwest were attempted since it is an active airfield and was our temporary base for the day. The camera used was an 8.1MP digital SLR with a 28 – 320 equivalent zoom lens. An ISO value of 200 was set, and a shutter speed of 1/1250th second was used throughout (to contend with thermal turbulence). Due to optical degradation caused by shooting through ¼" Perspex, all photos required a degree of post-processing. The canopy reflections that appear in some photos cannot successfully be removed. Some of the intrusions of parts of the airframe could not be removed without compromising the pictures.

The weather was perfect for aerial sightseeing and Pembrokeshire looked, as ever, absolutely stunning from the air.

Approaching Dale from Talbenny (33), with the Communal Site in the foreground. The sewage farm was located just above the pool centre foreground. The Officers' Mess was in the compound just across the road from the top left corner of the Communal Site.

A closer view (34) shows just how extensive the site is. In the background is the eastern part of the site in which most of the hangars were located. It is almost bisected by a small valley. Just above and to right of centre is the skeleton of the Mainhill hangar. The old concrete road in the centre foreground served Domestic Site 3.

Having rolled into the start of an orbit of the airfield, the sheer size of the Technical Site is readily apparent (35). Domestic Site 1 was in the rough-looking area to the left of the small light brown field that lies just below the centre of the photo. In fact by cross-referencing to the airfield layout shown on Page 2, every part of the original 1942 airfield complex can be identified from the air.

This view (36) shows the entire airfield, with Pickleridge Pools and the bay just north of Dale village in the foreground and Skokholm Island, 3 miles away, in the background. It is evident that most of the airfield site is covered in gorse and rough pasture.

Further into the orbit, Marloes Sands and Gateholm and Skomer islands can be seen (37). The sharp change in tonal quality between this and the previous picture results from changes in the camera angle with respect to the cockpit canopy, and aircraft angle in relation to the sun. The hedge to the left of the bottom of the Communal Site formed the northern boundary of Site 2. The marks in the field below the left-hand part of this hedge are the only visible remains of Site 2.

Beginning to turn westwards, a close-up (38) of the area around runway 29 threshold shows the buildings in photos 21 – 28. More or less centre is the parking apron added by the FAA, together with the bases of both control towers. The buildings in the bottom right hand corner are part of a farm.

This view (39) looking north-west shows part of Westdale Bay (bottom left), the cliffs bordering the southern taxiway, and Marloes Sands. Top right is Marloes village, with St Brides Bay beyond it. The best views of the airfield are from south west, where the extent to which it juts out into the sea is readily apparent. Dale has more than a little in common with an aircraft carrier. The dark triangular strip on the right that lies just beyond the Communal Site is all that remains of Site 4, the rest being somewhere under the light-coloured field to the right.

A little further into the turn (40), The Hookses, two thirds down the left side, comes quite sharply into focus. Also clearly visible are the concrete squares, mostly adjacent to dispersals, which formed the bases of the Mainhill hangars. Some of them are very close indeed to the cliff edge. From the air it is evident that few of the runways would give you a much of a chance in the event of an engine failure after takeoff or an undershoot on landing.

This (41) is a close-up of the northern Pentad hangar site together with runway 16 and 22 thresholds. The white-roofed building is modern. In the centre of the picture are the remains of a large T-shaped Nissen hut.

Looking straight up runway 04, Pickleridge Pools appear again towards the top right (42). The cliffs below the southern taxiway (foreground) contain red strata that run all the way across the peninsula to the north. Also in the foreground, just right of centre, is The Hookses.

This collection of roads at the north-west corner of the airfield (43) marks the original location of the explosive ordnance stores (bombs, tail units, fuzes, incendiaries, pyrotechnics, etc). There were once bunkers (within the loop just below and left of centre) and huts here but now there is almost no evidence remaining of any wartime structures in this area. The roads are very handy for the farm next door.

The Communal Site again, this time seen from west. This view (44) indicates that it is in remarkably good condition considering the weathering it has received over more than 60 years. Most of the huts are in interconnected groups. As mentioned earlier, one of the groups is Grade II Listed. The road that curves across the top of this photo in the direction of the pond led to the sewage farm. The road in the bottom right-hand corner is part of Site 3.

Now passing down the east side of the airfield again, this picture (45) shows the former locations of most of the hangars. The serpentine track towards the bottom left is the comparatively modern off-road course. To the right are the bases of the original RAF and later FAA control towers, and beyond them, the parking apron. The road running from right to left was the main route to the Technical Site and control towers. The narrow road running up towards the top left-hand corner leads to Site 1.

At the centre of this picture (46) is the group of buildings to the north of runway 29 threshold. At the top and just right of centre is Dale Castle, a 19th century residence built on an original 13th century fortified manor house. A number of hut bases can be seen on either side of the road to the control towers.

A closer view (47) of the runway 29 threshold and the adjacent buildings. Just right of centre, and a little beyond the southern taxiway, is the Battle HQ. At the top, half of Dale Castle is still in shot. The objects on the taxiway are tractors and other farm vehicles.

This (48) shows the access road from Dale village to The Hookses. It joins (and uses) part of the southern taxiway. Beyond it is Westdale Bay The runway threshold shown is 34.

The Battle HQ is well to left of centre. This photo (49) was taken primarily to see if there were any interesting fieldmarks surrounding it. Unfortunately there aren't any, aside from the land drains just visible towards the right-hand corner between the taxiway and the runway. At this point we left Dale and headed south east for Angle.

Just for completeness, this (50) is Brawdy, first of the airfields visited during this aerial survey of the main Pembrokeshire airfields. Today it is Cawdor Barracks, home to the 14th Regiment (Electronic Warfare) of the Royal Corps of Signals. The runways remain in excellent condition despite the fact that the last aviation occupants (the RAF) pulled out in 1992.

Next, (51) St Davids. Very few original buildings remain but the east-west runway, maintained for circuit work and diversion purposes for a time whilst Brawdy remained open, is in good condition. St Davids closed in 1959.

Heading south from St Davids, next on the route was Talbenny (52). There seem to have been differing views as to whether it should be dug up or retained for other uses. Many buildings remain, especially on the original Technical Site (around the pond, lower right) and the Domestic Sites (well out of shot to the bottom right). The former domestic buildings are used for a variety of commercial purposes and can easily be seen from the Dale – Haverfordwest road. Talbenny closed in 1946.

Angle (53) is just a couple of flying minutes south east of Dale, on the other side of Milford Haven. Aside from a short stretch of taxiway nothing whatsoever remains of this once busy airfield. However the fieldmarks are distinctive enough to enable all three runways and the entire taxiway to be picked out. Although the station closed in 1945, some of the buildings remained in use for several more years.

Heading east, and staying well clear of the Castlemartin Ranges, Carew Cheriton (54) appears shortly beyond Pembroke. The hard surfaces are fairly complete and used for a variety of purposes. The Technical Site was completely removed quite recently to facilitate the building of a new road (bottom left quadrant). Just down from, and left of, centre can be seen the superbly restored and very unusual control tower. The station closed in 1945.

Another few minutes beyond Carew Cheriton is Templeton (55). Although flying ceased in 1945, it is still owned by the MoD and used for a variety of military exercises. The runways are in passable condition but almost all the original buildings are long gone. Towards the top right and next to the main road are two recently-built military communications facilities. The Battle HQ, now filled-in, is almost dead centre of the photo.

Finally, the return to the departure point: Haverfordwest Airfield. This photo (56) was taken whilst in the circuit to land back on runway 03. The airfield has been owned by Pembrokeshire County Council for some years now. A considerable amount of money has been invested in it, to very good effect. It is now a fine General Aviation airfield with two excellent runways (the third of the original runways is now used for parking and as a taxiway) and first-class facilities.

A Day in the Life of RAF Dale

This is an attempt to go beyond a simple factual history and current description of Dale and bring the 1940s air base to life. Although entirely fictitious it is hopefully representative of the actual environment and atmosphere. It is based on the airfield's operational Coastal Command period since during that time there would have existed a readily-discernible pattern of daily activities.

A WW2 military airfield was rather like a small industrial town, typically with a population of around 2500 people. Even as a single-squadron base, as it was during 304's occupancy, RAF Dale's establishment may well have approached or even exceeded 2000. Indeed, when 304 were later posted to Benbecula, which they shared only with a detachment of 42 Group oil and aviation fuel depot staff, the establishment as at Dec 1st 1944 is given as 116 officers, 60 senior NCOs, 2124 other ranks, and 260 WAAFs, making a total of 2560.

Considering that 304 Squadron only operated 22 Wellingtons and at any one time availability would have been around 60% (i.e. about 12 aircraft), one wonders what all these people might have been doing. A look at a day in the life of Dale might go some way towards answering this question.

It is a breezy, chilly night in late September 1942. The Squadron's tasking for the following day has just arrived on one of the station's teleprinters. It is manned by night duty WAAFs in a secure area within the Operations Block, and they immediately set to work to decode the message. The result is passed to operations staff who first assess the requirements of the operation and then begin to plan all the details. Six aircraft are tasked to patrol defined sectors of the Bay of Biscay, to depart at 0800 and be back on the ground by around 1600. This timing will avoid takeoffs and landings in the dark, a very good thing since as yet the only runway lighting available is in the form of portable kerosene gooseneck lamps. The objectives of the mission are (1) to spot and sink U-boats wherever possible, (2) to deter U-boat attacks simply by being present and visible, and (3) in the same way, to force U-boats to remain submerged so that they are unable to recharge their batteries. Departing just 15 minutes later to patrol

adjacent sectors of the Bay will be Wellingtons from neighbouring Talbenny's 311 Squadron. Offset routes and timing should minimise the risk of air traffic conflicts between the two stations.

Based on which aircraft are currently serviceable and which crews are both rostered and available for the next mission, operations staff first select the aircraft and crews that will undertake the mission. This done, they break the plan down into detailed requirements for each aircraft in terms of flight routings, bomb and fuze types, pyrotechnic and smoke float types and quantities, and fuel loads. The results are immediately sent to the various support groups involved.

On the far north-west corner of the airfield, the duty armourers, on receiving details of the bomb loads, make a start on fitting tail units and the required fuzes to the bare bombs. Although still generally termed "bombs" they are in fact 250lb thin-cased Torpex-filled depth charges, recently adopted by Coastal Command after conventional bombs were found to be ineffective against U-boats. Once assembled, the bombs are loaded onto trolleys ready for the duty MT driver to bring his tractor unit along and tow them round to each selected aircraft. On arrival at each dispersal, a team of armourers will hoist the bombs into position in the Wellington's triple-bay bomb compartment and attach them to their shackles. Once the arming connections are made they will extract the safety cotter pins to render the bombs live. At the same time another group of armourers will be busy checking and topping up the magazines for each of the Wellington's six .303 Browning machine guns.

Refuellers have received notification of fuel loads. With bowsers filled from the bulk aviation spirit stores, the drivers head off to the dispersals to top up the Wellingtons to the levels required for the mission. Typically the aircraft will be departing with full, or nearly full, tanks.

As fuel, bombs, and bullets are requisitioned, so paperwork flows to administrative staff, mostly WAAFs. This happens also in the case of thousands of other items, from toilet paper to powdered milk to aero-engine parts. It is the WAAF clerks' job to ensure stocks are maintained at the correct levels. To do so they must continuously process paperwork to monitor usage against actual stock levels and already-requested items in order to determine when to requisition more and when to chase-up deliveries.

As the station begins to wake to the new day, cooks are busy preparing breakfast in the RAF and WAAFs officers' and sergeants' messes and in the canteens used by the other ranks. In time WAAFs will share eating facilities with the men, but this has yet to happen at Dale. A couple of airmen are delivering coal to all the airfield's domestic and communal sites to top up the stoves in the accommodation huts and the boilers that serve the kitchens, washrooms and laundry. Cleaners are attending to the latrines that are scattered all over the domestic sites and indeed the rest of the airfield. The laundry staff are steeling themselves to tackle today's mountain of bed linen, uniforms and other clothing. The station's barber and hairdresser are preparing for a rather more pleasant day's work.

In readiness for the start-up of twelve Pegasus aero-engines and the departure of the six Wellingtons, the fire crew are checking their vehicles and equipment. Preparations are also being made in the Watch Office. Radios, pyrotechnics and signalling lamps are checked. The DF set, which is used in poor visibility conditions to give returning aircraft magnetic headings to fly to reach the airfield, is being tested. Several airmen are detailed to drive round the perimeter track and the duty runway to ensure that the surfaces are free of damage and clear of debris. Today the runway in use will be 22, which is facing almost directly into the fresh south-westerly wind. Less happily, 22's overshoot area is over the cliff and at 1140 yards it is the shortest runway. However with the cool dense air and the wind at 15 knots gusting 25, even a fully-loaded Wellington should be airborne with around 300 yards to spare.

In the sick quarters the station medic and his orderlies and nurses are also readying themselves and their equipment for the departure of the Wellingtons and their later return. They prepare not only for takeoff accidents but also for aircraft returning with wounded crewmen or with the sort of battle damage that will surely result in crash landings. Dealing with wounded aircrew will be their top priority task and additional to the usual ailments and injuries that must be attended-to on a daily basis. The station padre prepares himself too, and for much the same reasons.

It is time for a shift change for the airfield security patrols. These airmen, members of the recently-formed RAF Regiment, have just completed a very chilly and rather boring night's work,

walking more than 4 miles of perimeter fence or standing in guard huts at various points around the airfield and the domestic sites. They are looking forward to a hot breakfast and a long peaceful sleep in their small barrack block.

Aircrew, 36 in all, are woken at 0530 for breakfast at 0600. By 0645 they are sitting in the Operations Block awaiting their briefing. A senior officer explains the mission objectives, routings, and likely threats. The meteorological officer, furnished with up-to-date information from met. flights, ships' reports and land-based weather stations, gives them a forecast for the outbound flight, the patrol area, and the return trip. Navigators reach for their circular slide rules to calculate headings, timings, and fuel consumption. The station commander wishes them good hunting and the padre shares with them a brief but heartfelt prayer. At 0715 they climb aboard the crew transports to be taken first to collect their meal packs, Thermos flasks, lifejackets, parachutes, flying helmets and other personal equipment and then out to their waiting aircraft.

Back at the dispersals the maintenance crews for each aeroplane have removed tie-downs and covers, run the engines, and completed their final checks. Now they are ready to sign each Wellington over to its respective captain.

Meanwhile a veritable army of dayshift mechanics is about to start work. Some aeroplanes are undergoing major scheduled maintenance activity. Others are in the process of having both major and minor faults diagnosed and fixed. Yet others have suffered battle damage and substantial work is being carried out to engines, aerostructures, flight control systems, fabric, undercarriage, gun turrets, radio sets, instruments, Perspex glazing, paintwork, electrical systems, and a host of other things. Today there are seven aircraft all in need of urgent, and in some cases significant, attention. In the one T2 hangar, capable at a pinch of holding four Wellingtons, and also out on the exposed dispersals, riggers, fitters, engine mechanics, instrument technicians, electrical engineers, armourers and radio specialists are starting what will be another flat-out day. Engine oil tanks are topped up. Fuel filters are cleaned and leaks fixed. Batteries are changed. Defective radios are carted back to the radio block for component replacement and thorough testing. Worn out engines are detached and hoisted out, to be replaced with new units – a massively complex job. Cylinders, spark plugs and pistons are replaced. Magnetos are overhauled and engines re-timed. Generator brushes are cleaned or replaced. Faulty instruments are removed and either repaired, tested and refitted or replaced with new units. Faulty or worn-out guns are taken away, repaired, tested in the butts, and refitted to the aeroplanes prior to re-harmonisation. Accompanying each action are updates to work tickets, and entries on parts requisition forms and in aircraft technical logs. This work goes on day in and day out, and sometimes through the night. The Wellingtons have a tough life and are not helped by having to live and work in a salt-laden atmosphere that plays havoc with electrical components and connections and can begin to corrode unprotected steel and aluminium in hours.

Motor transport mechanics, too, will soon begin their working day. The station has a small fleet of trucks, tractor units, trailers of various kinds, fuel bowsers, staff cars, fire tenders, and an ambulance. At any one time several of these vehicles will be undergoing servicing and repairs in the MT garages or out on the parking areas.

By now dawn has well and truly broken and the station has come fully to life. In the light of the hazy but strengthening September sun the airfield still looks brand new. The dew-covered runways and taxiways, normally tarmac charcoal-grey, are turned silvery by the low light. The Wellingtons parked out on dispersals around the airfield are picked out in brilliant white, their dark upper surface camouflage barely visible from ground level. Beyond them the sea is a foam-flecked green-grey, the sky above a pale blue streaked with thin white cirrus clouds. Although grass has grown back to cover much of the evidence of recent construction, there are still scars and patches of reddish stony ground that were laid bare by bulldozers and earth movers less than a year ago. Many of the Maycrete buildings have been painted in wavy camouflage bands of matt green and brown which, though dull, looks fresh and new. The wooden huts still look pristine in their protective coats of shiny tarry black. The bare concrete of the roadways is highlighted as a creamy white as the sun rises further.

All around the technical and domestic sites people, mostly in RAF blue but with the occasional contrast of Navy blue and even Army khaki, are on the move. Some are walking, others are on bicycles, yet others are riding in RAF-blue staff cars and trucks. Going anywhere on an airfield

involves a long and tedious walk, all the more so when it is cold and wet and your workplace is nearly a mile away up a steep track from your accommodation hut, so a lift in a truck is always welcome. Meanwhile, driving in from the Haverfordwest road is the first of a steady trickle of both military and civilian vehicles that will arrive throughout the day to deliver mail, food, spare parts for aircraft and vehicles, fuel, medical supplies, and airmen and WAAFs newly posted to the site.

Back at a dispersal, the captain of a Wellington completes his pre-start checks and starts first one then the other engine. Tested by the ground crew just an hour or so before, they are fully warmed and ready for action. In the distance ten more Pegasus engines cough and rumble into life and ground crews drag chocks, battery carts and fire extinguishers to one side. After-start checks complete, the pilot taxies clockwise round the perimeter track and brakes to a halt next to the runway 22 threshold. The other five Wellingtons emerge from their scattered parking places and taxi round to follow their mission commander. Having completed his power and pre-takeoff checks at the holding point, he awaits the green light from Flying Control that will indicate that he is cleared for take-off (radio silence will be maintained throughout the early stages of this mission so that the enemy, both navy and air force, are not forewarned). Cleared after a few minutes' wait and on the dot of 0800, he taxies onto the runway, straightens up exactly on the centreline, locks the tailwheel, and begins to open the throttles. He leads with the starboard engine to help counter a tendency to swing to the right. The low rumble rises to a roar and the Wellington begins to accelerate down the runway. As speed builds he pushes forward on the control column to lift the tail and adds a dab of left rudder as the swing reasserts itself, and with drag now reduced the rate of acceleration increases. Reaching the indicated airspeed for takeoff after about 750 yards, he eases firmly back on the column and the heavy aeroplane lifts off and begins a ponderous climb. As undercarriage and takeoff flap are raised the rate of climb will improve. This is a tense time since the pilot needs another 30 mph before reaching single-engine minimum control airspeed. If an engine fails whilst the aeroplane is in the gap between these two critical airspeeds, it will crash. The only question is how badly. At the very best he might get away with a very heavy landing back on the runway with burst tyres, smoking brakes, and a prolonged grounding whilst everything is checked and damage repaired. At worst it will be an uncontrolled crash into the sea off Hoopers Point with little chance of survival. This time all is well and the climb continues, albeit with some lively buffeting as they pass through the turbulence above the cliff edge. Following behind at 90 second intervals the other five aircraft repeat the performance. The mission has begun.

A short-lived quiet spell falls over the airfield. It is broken first by the muted roar of eight 311 Squadron Wellingtons passing over the east side of the airfield as they climb out from Talbenny en route for Biscay. As the sound fades to silence the quiet is shattered again by the coughing clattering rumble of a Pegasus being started for a post-maintenance engine test. Later in the morning an off-duty pilot takes the aeroplane up for a short flight test, revelling in the lively performance available from a Wellington that is free of bombs and all bar one crew member and carrying fuel for no more than an hour's flying. Later three more Wellingtons will be satisfactorily air-tested and parked out on their dispersals ready for the next day's patrols or training flights.

In the station's administrative offices the daily round of work continues, interrupted only by a visit from the NAAFI tea wagon and a break for lunch. The personnel unit is busy as ever dealing with postings to and from the station, payroll details, entertainment plans, disciplinary matters, travel warrants, airmens' queries, promotions, and decorations to be awarded. An officer is reading and censoring outgoing letters. Clerks are processing the small mountains of paperwork that a busy RAF station receives, sends out, and circulates daily. Both the station and squadron commanders have reported problems and complaints to resolve, station and operational records to write up, disciplinary proceedings to attend, and senior civilian and military visitors to cosset. The WAAF on the station's switchboard is working constantly to connect incoming and outgoing calls, and patiently negotiating with distant operators to reconnect interrupted calls. Stores clerks are churning out requisitions for airframe components, engine parts, oxygen bottles, buildings supplies, stationery, and loaves of bread. The clatter of typewriters almost drowns out the sound of aircraft taking off on test flights and training sorties.

An airfield and its buildings and facilities need maintenance, just like those of any small town. Windows get broken, roofs spring leaks, taps drip, drains become blocked. A small number of airmen, occasionally supported by local contractors, are working their way steadily through a never-ending list of small problems. In peacetime several of them were plumbers, electricians and builders, all very welcome skills. Top priority is given to anything that might affect

operations. From time to time sections of tarmac peel back from the runways and taxiways, especially in the vicinity of expansion joints in the underlying concrete. This can lead to propeller and tyre damage, so whenever the duty runway inspectors or pilots spot debris, the maintenance team rush to patch the damaged areas. The telephone system, too, is a critical link not only to the outside world in general but also to Coastal Command 19 Group HQ in Plymouth and to the Admiralty, the latter responsible for all 304's operational taskings. Thus a pair of Post Office telephone engineers in a little khaki van is constantly on hand to repair faults in lines, handsets, the exchange and the teleprinters. Power cuts are an ever-present threat, so the maintenance team is always at the ready to start the standby generator.

Airfield movements continue throughout the day. Three Wellingtons depart on brief air-tests. A Spitfire, low on fuel and unable to make it back to its home base at Fairwood Common, calls in for fuel and a cup of tea. A squadron commander arrives in his Beaufighter to discuss fighter support and liaison with the Dale station commander. An Anson arrives with urgently-required spare parts for radios. Several of the serviceable 304 Squadron Wellingtons carry out a number of training flights throughout the day. Two depart to drop practice bombs on one of the many Welsh coastal ranges, another is off to the Bristol Channel to carry out simulated U-boat attacks on lighthouses, and yet another will be away for a few hours on a navigation exercise. On return each of the Wellingtons flies a few practice circuits. The occasional Sunderland passes overhead on its way back to Pembroke Dock from an Atlantic patrol, or outbound to shepherd a convoy.

Late in the afternoon, the first of the returning 304 Wellingtons is spotted by an airman on the Watch Office roof. It is approaching from the south-west and descending towards Kete for a downwind left-hand circuit join. As it begins a leisurely curve round towards runway 22 the pilot, squinting into the low sun, lowers the landing gear followed by the flaps. Straightening up for final approach the aircraft rocks a little in the turbulence, and swishes in over Domestic Site 4 to land neatly just beyond the runway threshold, tailwheel low and with tiny puffs of smoke and dust from the main wheels. Coasting to the end of the runway, it turns left onto the taxiway and heads round to a vacant dispersal that is close to the Communal Site and hence conveniently-located for a meal and a bath. The numbed and deafened crew, stiff and exhausted after a bumpy 8 hour sortie, will thank their captain for that. But first they must all visit the RAF intelligence officer in the operations block for a thorough debriefing. Meanwhile the ground crew tie the aircraft down and begin to check it over. A member of the photographic section collects the aircraft's cameras. Back in his darkroom he will remove the exposed film, develop and print it, and pass the results to the intelligence section for analysis.

During the next 40 minutes the other five Wellingtons land safely and the fire crew and station ambulance are stood down. There are no more flights expected today so the Watch Office staff can relax. The remaining five aircrews report to the intelligence officer and the score for the day becomes clear. There have been two suspected sightings of periscopes and two full bomb loads were dropped, but with inconclusive results. Later analysis of combat photography may help to clarify the situation. However even if neither sinkings nor damage can be confirmed, the mission will have served to constrain the U-boats' freedom of action and that is in itself a worthwhile achievement. Whilst actual sightings and successful attacks are a comparative rarity, Coastal Command and the Navy will very soon begin to sink U-boats faster than new ones can be built and crews trained to man them.

Three Wellingtons have returned from today's mission with a total of 18 live bombs still on board. They receive immediate attention from armourers, who first replace the safety pins and then transport the bombs to the fuzed weapons store at the north-west corner of the airfield. A fourth aircraft has jettisoned its bombs on spotting and attacking a FW 200 Condor, the airborne eyes and ears of the U-boat fleet. The Wellington's gunners have fired off much of its stock of .303 ammunition, so the armourers will check the guns right away to see if any barrels need replacing. The Condor was hit but sheered off and ran for home before real damage could be done. Another Wellington has a gaping hole in the leading edge of one wing, thanks to a birdstrike. It will be grounded for at least 24 hours while airframe fitters repair the damage. In addition there is a list of minor faults for the technical staff to work on: a sticking altimeter, a rough-running engine, a noisy gyro-compass that is clearly signalling imminent bearing failure, an oil leak, the odd loose screw and suchlike. Ground crews will work through the list as quickly as possible, all night if necessary, to ensure that the maximum number of aircraft are serviceable for whatever tomorrow will bring.

As afternoon fades into evening tired airmen and WAAFs trudge off to dinner. Some will return to their huts for some gentle relaxation and an early night. Others will cycle over to pubs in Dale or Marloes for a little fun. Shifts change over. Teleprinters begin to chatter. The cycle is starting all over again.

D J Akerman September 2008

Research Notes

The history of Coastal Command 304 Squadron is well-documented, thanks not only to various UK archives but also to websites concerned with wartime Polish RAF squadrons, their aircrew and ground crew, and their relatives. Information about the Coastal Command Development Unit is much harder to find, possibly due to the type of role it performed and the turnover of aircraft and aircrew. Reports from CCDU equipment trials are much more accessible, being held in the National Archives at Kew.

Whilst the wartime activities of the Fleet Air Arm operational squadrons are well-documented, details about the training squadrons are quite hard to find. The immediate post-war period (in this case 1945 – 1947) was a time of great change for the FAA, with aircraft carriers and squadrons being shuffled around and paid-off, so it is one of the more difficult periods to comprehend, let alone analyse.

Nevertheless a considerable amount of information is available to anyone with the determination and time to carry out the necessary research.

Primary sources

Imperial War Museum (archives).
The National Archives.
Polish Institute and Sikorski Museum.
Fleet Air Arm Museum (records and research centre).
RAF Museum (archives).
CADW (Welsh Assembly Government historic environment service).
The Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW).

In addition the Coastlands Local History Society, which covers Dale, Marloes, St Brides and St Ishmaels, has a collection of WW2 photos, newspaper cuttings and miscellaneous material.

Some secondary sources

"304 Squadron" by Mariusz Konarski
"Airfields and Landing Grounds of Wales: West" by Ivor Jones.
"Military Airfields of Wales" by Alan Phillips.
"Actions Stations 3: *Military Airfields of Wales and the North West" by David J Smith.*

Additionally, numerous books have been published about the activities of Coastal Command and the FAA during WW2.