The WW2 Airfield at Royal Air Force Pocklington

by John Nottingham and Jeff Peck

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Terminology For consistency with 1940s practice, distances throughout this article are given in miles or yards. The terms 'Watch Tower' and 'Air Traffic Control tower' appear to have been used synonymously. Airfield runway directions are normally defined relative to the magnetic north pole, to the nearest 10°, the third digit being omitted. In the UK in the 1940s, the angular difference between the true and magnetic north poles ('variation') was around 12° west. So for example, a runway aligned with the true north pole – as at Pocklington – is routinely referred to as 'R/W 01/19', as seen on an aircraft magnetic compass when aligned with the north-south runway.

In the late-1930s, in the face of increasing likelihood of war with Nazi Germany, the British government embarked upon a major expansion programme for operational RAF airfields. However, construction of the planned bomber base which came to be known as '*RAF Pocklington*' had not begun by the outbreak of World War 2. Indeed, it was not operational until mid-1941 and, for various reasons, had already been subject to several significant changes to the original runway specifications.

Furthermore, some years later, the original Air Traffic Control (ATC) tower was replaced by a similar building on the opposite side of the airfield; a seemingly strange development in the middle of a lengthy war.

While there has been general discussion in printed references and on the internet, as far as we know there has not been any relatively in-depth consideration of the reasons for either of these unusual occurrences, and it is the main aim of this article to collate and assess the available data with a view to deducing the most likely reasons for such noteworthy changes.

By way of introduction we can usefully note that, whilst not necessarily unique, the choice of the real estate subject to compulsory purchase for Pocklington airfield was in some respects abnormal. And as we shall see, that very quickly presented practical limitations with, especially, a resulting near-total lack of flexibility in dealing with the several operational problems which soon came to light.

Military airfields are by preference located in open countryside, with the nearest significant habitation (other than isolated farmsteads) typically being the 'host' village some distance away. Existing roads will usually afford convenient access to the airfield but invariably these are relatively minor.

For example, RAF Pocklington's neighbour at Holme-on-Spalding-Moor was originally named RAF Tollingham, after the farm on whose land it was located. But that was soon changed to RAF Holme-on-Spalding-Moor (abbreviated to 'Holme' or simply 'HOSM'), after the nearest village a mile or so away, and with just a minor road serving the airfield.

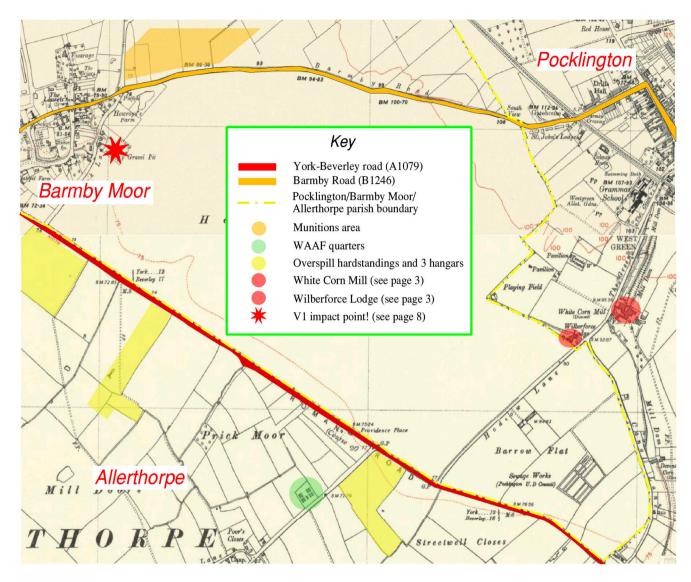
With the lands surrounding service airfields being mostly rural, there were generally few if any substantial obstructions affecting safe flying, while later extensions to runway lengths to take account of changing operational needs could normally be achieved without significant restriction or upheaval.

Comparing RAF Pocklington with the norm, the map illustrates the considerable differences. The boundaries of the main operational airfield area were most certainly not in open country; the outskirts of a medium-sized market town – Pocklington – are only some 50 yards to the east; the village of Barmby Moor is also some 50 yards away, to the west; the well-used York Road joining the two (now the B1246 Barmby Road) was immediately to the north of the airfield boundary; and the busy York-Beverley highway (now the A1079 trunk road) formed the south-west boundary.

Although the base was named 'RAF Pocklington', no part of the site actually lay within the civil parish of Pocklington. The airfield, the associated technical area and most of the accommodation facilities were instead located within the parish of the host village of Barmby Moor, with an overspill of several hangars, hardstandings and the WAAF accommodation located to the south-west of the main road, in the neighbouring parish of Allerthorpe. Munitions were stored, serviced and prepared in a separate area, on the north side of York Road (B1246) although uncomfortably close to the outskirts of Barmby Moor.

Several other factors will be discussed in detail later but it is immediately clear that these abnormal space constraints impacted signific-

antly even on day-to-day activities, with civilian and other traffic on both main roads routinely being held up to allow for the passage of towed aircraft, explosive ordnance and service vehicles moving between the main site and the subsidiary areas in both the Barmby Moor and Allerthorpe parishes.



(As an aside, even the name 'RAF Pocklington' resulted in some muddle, especially in print, with the nearby market town often being referred to as Pocklington *village*, and therefore prone to being confused with the village of Barmby Moor.)

The airfield construction finally started in late-1940, based on the semi-standard design of 3 runways arranged at 60° intervals. This was to provide operating flexibility so that, regardless of the ambient wind speed and especially direction, aircraft takeoffs and landings need not be subjected to excessive cross-winds.

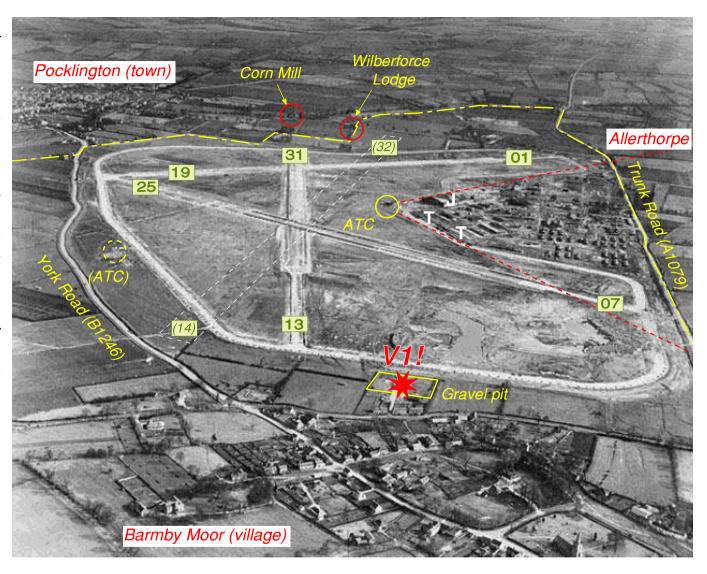
Originally, the airfield was planned to have grass runways, but the requirement for concrete runways and perimeter track to support heavier aircraft and bomb loads had already been introduced by the time work commenced.

The oblique view in the photograph, dated 6th March 1941, shows the 3 concrete runways and perimeter track in the late stages of construction, with just the runway thresholds still to be completed. The main technical and accommodation area was also approaching completion, with the locations of both the original and later replacement ATC buildings identified on the photo.

At this stage, the 3 specified runway (magnetic) directions and lengths were:

R/W 01/19 1400 yards R/W 07/25 1300 yards R/W 13/31 1300 yards

At around this time, a command decision was also made to extend the runway lengths of all bomber airfields to cater for the even heavier 4-engined aircraft and bomb loads shortly to come into service. At nearby HOSM, for example, this was achieved without undue difficulty, with the original 1100-1800 yard runways being extended to 1400-2000 yards.

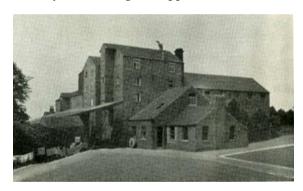


However, at Pocklington, the space constraints previously discussed came to the fore. Neither R/W 01/19 nor R/W 07/25 could realistically be extended across the main trunk road (A1079) without the latter being considerably realigned. Similarly, neither runway could be extended to the north or north-east without overrunning the Pocklington-Barmby Moor road (B1246).



In the event, a very limited extension to both runways was achieved at the N/NE end with a curious loop arrangement where the two thresholds coincided. Even that resulted in the then York Road having to be closed to routine traffic, although local inhabitants could apply for a pass to be allowed across the loop between aircraft takeoffs and landings, presumably under the control of service personnel; hardly a safe or convenient compromise.

However, the 1300 yard R/W13/31, still under construction in March 1941, could not be extended without the need for very considerable extra clearance work. At the south-eastern end, directly on the extended runway centreline and already obstructing the approach and overshoot area, stood the centuries-old



and very substantial 5-storey 'White Corn Mill' (marked on the photo on page 3). As a major flour supplier for the local area, it would make little sense to demolish the mill and exacerbate the considerable problem of feeding the population in wartime conditions.

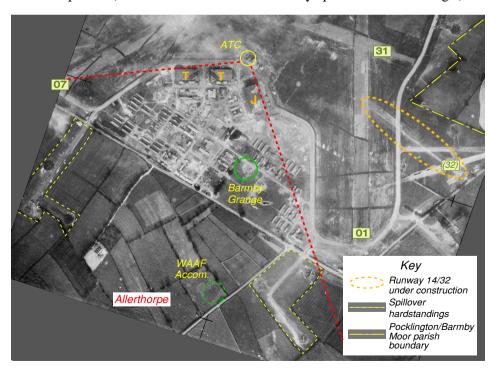
By the same token, any runway extension at the north-western end would require a sizeable swathe of Barmby Moor village to be levelled, not only for the paved runway extension, but also to provide a further safe area, free of obstructions, both beyond and on both sides of the runway, to allow for aircraft overruns or undershoots.

Clearly this was an entirely impractical proposition and a decision appears to have been made around this time to abandon the unfinished R/W 13/31 and to replace it with what became the longest operational runway at RAF Pocklington – the 1600 yard R/W 14/32 (outlined on the photo on page 3).

Even then, this replacement '4th runway' (14/32) was not without its problems. At the south-east end, it was only some 200 yards from 'Wilberforce Lodge' which was overspill accommodation for staff and pupils of Pocklington School, so (for example) any aircraft veering off the runway on take-off would endanger the aircrew and occupants of the Lodge. Similarly, at the north-west end, any aircraft suffering a similar off-runway excursion would endanger the crew and inhabitants of Barmby Moor.

Furthermore, to achieve the full length of 1600 yards, it was necessary for the runway to extend at least as far as the Pocklington-Barmby Moor road (B1246) and which, reportedly, was then closed to all traffic for the duration.

Nevertheless, these were the eventual solutions to provide the 3 longer runways, despite the very significant space constraints, and the vertical view in the photo below, dated 9th August 1941, shows the 'new' R/W 14/32 in the early stages of construction. The thresholds of runways 01 and 07 have also been completed. (Note the aircraft on the southerly spillover hardstandings.)



The visible presence of the aircraft on the spillover hardstandings to the south of the main road (and elsewhere) suggests that RAF Pocklington was most likely operational by this date, the resident squadron being *No. 405* (*Vancouver*) *Squadron RCAF*, at that stage flying 2-engined Wellington bombers. On 7th August 1942, No. 405 Squadron were replaced at RAF Pocklington by *No. 102* (*Ceylon*) *Squadron RAF*, now flying 4-engined Halifax bombers.

The August 1941 photo on page 4 marks the locations of the WAAF accommodation near Allerthorpe (still to be built) and 'Barmby Grange' farmhouse. The latter was the only significant pre-war building in the land area subject to compulsory purchase for the airfield; it was retained and became accommodation for the senior officers.

The photo also shows the location of the original ATC building, in the semi-standard position for contemporary airfields such as HOSM, namely facing the general runway area, forward of the main hangars and separated by the perimeter track. The ATC building, with the fire tender shelter and fire party hut immediately to its right, are seen in the background of the left-hand photo below.





These images are from a film clip dated 11th May 1943, taken as the Commander-in-Chief of Bomber Command, Air Chief Marshal 'Bomber' Harris, entered his staff car during a visit to RAF Pocklington, having taken his leave of the then Air Commodore Walker.

<u>Augustus ('Gus') Walker</u> was the popular air officer commanding No. 42 Base, comprising the RAF stations at Elvington, Melbourne and Pocklington. (Note the 'left-handed' handshake, Gus Walker having lost his right arm in an accident in 1942, described in more detail in the link above.)

Yet again, the available space constraints at RAF Pocklington made their adverse effects felt on the ATC building which, in its original location, evidently had a significantly restricted view of the operational area (denoted by the dashed red lines on the main photos on pages 3 and 4). To the south-south-east, the approach to R/W 01 could be seen only from the right side of the first floor viewpoint, and even that was limited by the presence of the large Type 'J' hangar. Hardly convenient for air traffic controllers.

Looking to the west, necessarily from the left side of the control tower, the restricted view was very much more troublesome. The presence of both Type 'T' hangars blocked the outlook not only of the approach to R/W 07, plus its threshold, but even the first 200 yards or so of the runway.

An assistant controller in the runway caravan, normally parked alongside the active runway threshold and with a much better view of approaching aircraft, could provide additional supervision. But frankly it is difficult to see how such a markedly poor view of both runways from the original ATC tower, impacting on safe operations, could have been tolerated from the outset. (For the record, the more 'open-plan' aspect from similarly-located ATC towers at HOSM and other bases suffered nothing like the same limitations.)

Even the abandonment of R/W 13/31 and replacement with R/W 14/32 triggered an unfortunate knock-on effect on safety. As originally specified, the distance from the ATC building to the edge of R/W 13/31 was of the order of 130 yards and which was the norm for similar airfields.

However, the distance from the ATC building to the edge of the replacement runway 14/32 was then reduced to only 85 yards or so. As a result, runway 14/32 passed disturbingly close to the ATC and associated buildings in the event of any aircraft suffering an off-runway excursion on takeoff or landing.

Despite all these evident shortcomings, which taken together must surely have adversely affected operations at Pocklington, the original ATC building is believed to have remained operational until at least mid-1943. This was despite there having been at least one previous 'near miss' as a listing of No. 102 Squadron's losses records that on:

"9th September 1942 ... Pocklington, 0347 hrs ... Port engine failed to reduce revs, [aircraft] bounced over air traffic control and hit Halifax". [!]

Amazingly, the aircrew were uninjured but (perhaps in the light of this near-catastrophe) a senior pilot's account subsequently reported that:

"... one of the runways ran within the danger zone of the Flying Control Tower and therefore a deep trench had been dug in front of it, the purpose of which was to wipe off the undercarriage of errant aircraft ... at the time we were equipped with Halifax Mark IIs which had the unmodified tail fins. Later on, with the Mark IIIs they changed the tail fins in order to give greater lateral control, particularly at low speeds."

The very real risks were again highlighted by two more serious accidents, within only 5 days of each other, endangering the aircrews and occupants of the ATC building, but again remarkably without very serious injury. The pilot of the first aircraft later recorded in his diary that:

"On the 23rd of August 1943, we were tasked to attack Berlin. On take off, I opened the throttles and, almost immediately, power decreased on the port side. Try as I might, I could not correct the swing. In no time, one wheel was on the grass and we were heading for the Control Tower. ... [I retracted] the undercarriage and the aircraft slithered to a halt not far short of the building. ... under these circumstances ... the first chap out had to be the pilot through an escape hatch in the top of the cockpit near his seat. The rest of the crew followed me very smartly but the bomb aimer caught his flying boot on something and fell on his head; he was the only casualty.

The aircraft by now was on fire and we all high-tailed it across the airfield as fast as we could and, at a suitable distance, we threw ourselves to the ground and waited for the big bang ... The inevitable happened ... innumerable windows were removed and no good was done to buildings,

in particular the Flying Control Tower. Those inside had exited in no time at all ... Being a dusk take off we were not seen to get out of the aircraft and were given up for dead. When we wandered back across the airfield and turned up out of the gloom, people were astonished! ... I assume all flying was stopped but I know that Pocklington was operational the next day. Being war, there was no time for a court of inquiry!"

The wireless operator of the second accident aircraft recalled that:

"... due to continuing atrocious weather conditions, we were diverted to Snaith in Yorkshire, taking off from there at 1545 hours [on 27th August 1943]. On final approach to Pocklington, the ferocious winds were playing all sorts of tricks with air currents and only the superb handling of the aircraft by the pilot enabled us to touch down on the runway before being immediately hit broadside by a violent gust of wind of a terrific force.

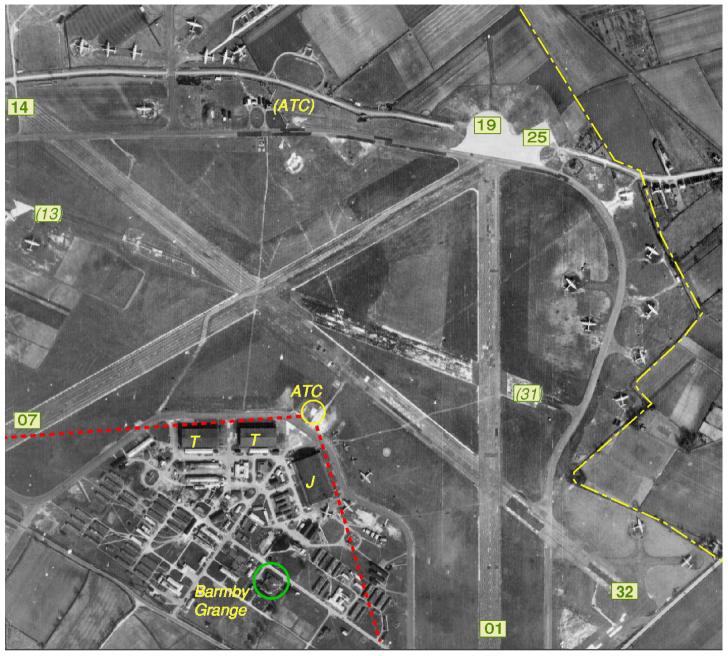
... DY-K for "King" swung off the runway until the man-made trench surrounding the Control Tower removed the undercarriage and we finished up with our wing tip literally inches from the Control Tower windows, causing confusion and a mass exodus of personnel in all directions. To add to our embarrassment, a brand new Halifax landed and taxied up to the Tower. This was piloted by an Air Transport Auxiliary lady pilot who gave us a wry smile as she passed by."

Enough was enough; any one of these three accidents could so easily have resulted in the needless deaths of many aircrew and ground personnel. The decision to replace the original ATC tower and associated

fire tender buildings with their successors on the north side of the airfield (reputedly at a cost of £3,600) is not dated. But commonsense suggests it could have come shortly after these two 'final warnings'. After the original buildings were replaced, they were reportedly demolished to avoid the risk of further accidents from aircraft suffering off-runway excursions.

The post-WW2 photo on page 7, dated 27th March 1946, identifies the location of the replacement ATC and fire tender buildings, seen here in more detail.





Although one source states that the 'replacement' R/W 14/32 extended across York Road (B1246), this later view shows that the end of the paved runway evidently stopped immediately short of the road, as confirmed by another report. However, York Road was nevertheless finally closed to *all* traffic, minimising the risks to civilian and service personnel from aircraft undershoots or overruns.

No. 102 Squadron had moved from RAF Pocklington on 8th September 1945, exactly 5 months after VE Day, and the many aircraft parked on hardstandings in the March 1946 view are 4-engine Stirling bombers, awaiting conversion to Mark V standard.

It is sobering to note that the No. 102 Squadron accidents described on page 6 were only 3 of some 24 recorded as having occurred within the airfield boundary, consisting of a mix of crashlandings (often by battle-damaged aircraft), collapsed undercarriages (including those intentionally retracted), off-runway excursions and overruns.

Of the 160+ airmen involved (the Halifax normally carried a 7-man crew), there were no fatalities and indeed only 2 were injured, implying that – provided the aircraft could be set down on the prepared surface, cleared of obstructions – there was a very high probability of survival.

Many other aircraft crashed in the immediate area, having either failed to climb away safely after take-off, or failed to land at the airfield. In some cases, the entire crew survived a crash-landing in open country, without serious injury. But in the more fateful crashes, a significant number of aircraft had collided with ground obstructions, resulting in aircrew fatalities or serious injuries; extraordinarily, there were only 2 civilian fatalities.

Of the several crashes within the Pocklington parish, 4 involved residential properties, either within the town itself or nearby; only one other crashed in an open area within the town boundary. The aircraft concerned in 2 of these accidents collided with the *same* property, directly on the extended centreline of the runway. Where details are known, many of the crashes are documented on the *Pocklington & Local District History Group* website and, for ease of cross-reference, those located within the Pocklington parish are marked on the photo, listed from left to right (click on each link for further details):



10 Aug 1943 Halifax collided with <u>Red House</u>, Yapham Road, Pocklington, before crashing some 350 yards from the runway.

31 Jul 1945 Halifax crashed into <u>Red House</u>, Yapham Road, Pocklington, after take-off.

24 Jul 1942 Halifax crashed into houses adjacent to the school in <u>New</u> Street, Pocklington.

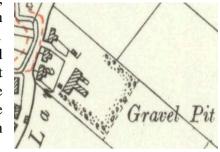
29 Mar 1943 Halifax crashed onto West Green, Pocklington.

26 Nov 1943 Lancaster diverted to Pocklington from Skellingthorpe, Lincolnshire, crashed into properties at <u>Canal Head</u>.

At the western end of the airfield, Barmby Moor had several lucky escapes. Although a number of aircraft crashed within the parish area, the more serious resulting in the tragic loss of many aircrew, none occurred within the bounds of the village.

The Barmby Moor residents' good fortunes extended even to the effects of enemy action. In November 1940 in Pocklington, a German bomb fell in

Garths End (not far from Red House), resulting in 2 civilian fatalities; while on Christmas Eve 1944, an air-launched V1 'buzz bomb' fell well short of its intended target of Manchester and impacted at Back Lane, Barmby Moor, between the village and the airfield. Providentially, the V1 fell into a large gravel pit (identified in the photo on page 3).



Although the concrete and wooden huts within the pit were demolished in the explosion, the sides of the pit contained much of the blast and, while considerable debris was thrown up and outwards, the resulting damage in the village was nothing like the carnage which would have resulted had the V1 not fallen into and exploded within the pit. The adjacent housing on Back Lane would most certainly have been decimated. In the event, some 30 properties in the village suffered damage to varying degrees, and a Halifax aircraft on an adjacent hardstanding was written off, but there were no fatalities and injuries were relatively minor.

Nevertheless, much of this discussion poses the fundamental questions: had the RAF airfield not been built so very close to built-up areas – in particular the market town of Pocklington – would fewer aircraft have collided with obstacles, resulting in fewer fatalities or serious injuries to the crews, and civilians being put at less risk? Even if a crash was unavoidable, would the aircraft have landed in open countryside instead, with a much higher probability of aircrew survival?

Yet again, this goes right back to the basic issue of the considerable space constraints resulting from the choice of the airfield location as originally set out in the late-1930s, and which, in the event, adversely affected RAF Pocklington in so many ways and at such cost in lives and property. Could all this not have been avoided at the pre-WW2 planning stage?

John Nottingham & Jeff Peck May 2015