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“Charting the aeronautical landscape-
part 2”

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Charting the aeronautical landscape

Part 2: depiction of airfields on OS one-inch and 1:50,000 maps from the onset of the Cold War to beyond the millennium

Ronald Blake



In a recent companion article¹ the depiction of airfields on the Ordnance Survey general-purpose maps was reviewed, series-by-series, up to the expiry of the New Popular Edition in the mid-1950s. Originally, it had been the writer's intention to span the whole of the twentieth-century in a single essay, but due to the topic's unfolding complexity it proved necessary to split the narrative into two parts, dealing respectively with aviation's 'piston' and 'jet' eras and pivoting on a step-change in the design and content of the nation's best-selling map.

This follow-up article extends the story over the past sixty years, focusing on the one-inch-to-one-mile (1:63,360) Seventh Series, its 1:50,000 *Landranger* successor, and the Northern Ireland (OSNI) counterparts of mainland mapping. The aims, scope and methodology remain broadly the same as for part 1 (qv), with two thematic sections added to explain post-war airfield morphology. To best portray detail, map extracts are at varying scales, but the kilometre grid squares will help comparison.

Components of airfield identity and classification

Cartographically, every airfield has a unique identity, comprising its official name, operational status and landscape footprint. As noted in part 1, prior to the Second World War (WW2) airfield locality names were rarely printed on one-inch maps, institutional titles being preferred in exceptional cases. After 1945 most New Popular sheets representing the Home Counties identified civil airports by name, but this refinement was not routinely extended to military air-bases or minor civil aerodromes till the early 1960s.²

Operational status is inherently difficult to express on general-purpose maps because standard generic terminology (Airfield, Aerodrome, Airport, Airstrip, etc) is incapable of integrating every dimension of public and professional interest (role, capacity, facilities, etc).³ Unsurprisingly, the OS has studiously avoided making an explicit distinction between 'military' and 'civil'

¹ Ronald Blake, 'Charting the aeronautical landscape part 1': *Sheetlines* 99, (2014), 19-39.

² In this respect the OS standard topographical map differs from statutory (1:500,000 and 1:250,000) Air Charts which print the names of all active and many disused airfields to assist pilots with flight planning, navigation and emergency touch-down.

³ The key variables of airfield 'status' are: aircraft category (aeroplane, microlight, floatplane, helicopter, glider, etc); type of operator (military, civil, joint-user); air traffic control zoning; customs and licensing arrangement; runway calibre (length, orientation, surface); number of based aircraft; traffic throughput (aircraft movements, passengers, freight); and field limits (shape and size of footprint).

sites and direct references to particular Service operators are rare.⁴ Since 1952 the umbrella term ‘Airfield’ has predominated and (despite also applying to some civil sites) now evokes military activity in the popular mind. Correspondingly, ‘Aerodrome’ has declined and (despite continued usage in statutory Air Charts and documentation) smacks increasingly of a bygone age.⁵ Disused airfields with intact runways are normally described as such, but the abandoned grass-only types have typically ceased to be identified in words.

As regards footprint, the conventional binary classification into ‘hard’ (paved-runway) and ‘soft’ (grass landing surface) remains a core tool of landscape impact analysis, although a third hybrid category of grass-surface airfields with perimeter tracking and significant built accommodation is recognized here (*figure 1*).⁶ Other diagnostic features include aircraft factories, dispersed wartime camps and tiny airstrips.

The 1:63,360 Seventh Series

As the most territorially inclusive and thoroughly revised series to date, the ‘Seventh’ was poised to reveal as much about airfields as peacetime security rules allowed. During the map’s 24-year life-span (1952-1976) a record 145 sheets (73%) carried some written or graphic evidence of recent flying activity. Aeronautically, Britain in the 1950s and 1960s saw a radical restructuring of its home defences to meet Soviet threats, a mass disposal of superfluous WW2 aerodromes, and the rise of regional airports to boost air transport both domestically and abroad. Thanks to the scale, durability and ubiquity of wartime infrastructure, no additional air-bases were needed on virgin sites after 1945⁷ and all commercial airports with one exception⁸ grew from sites with a war-effort pedigree.

Compiled from a combination of air-photograph mosaics and field work,⁹ the Seventh avoided the worst shortcomings of its predecessors, yet regional inequalities persisted due to the issue in phases of its first (‘A’-coded) sheets

⁴ Until quite recently the only OS popular-scale reference to the RAF was its college at Cranwell. Since the early 1950s the other Service airfield operators have comprised Fleet Air Arm (FAA), Army Air Corps (AAC), Ministry of Defence and agencies (eg RAE) and United States Air Force (as RAF ‘tenants’). Nowhere are ‘FAA’ and ‘AAC’ specified on the map, although the abbreviation ‘RNAS’ appears at two locations.

⁵ It is still unclear why ‘Aerodrome’ remains the term of choice on statutory Air Charts or why ‘Airfield’ was so readily adopted by the OS for its post-war standard topographical series.

⁶ A tentative physical typology of airfields can be found in Roger Hellyer and Richard Oliver, *A Guide to the Ordnance Survey 1:25,000 First Series*, London: Charles Close Society, 2003, 58-59, 72. Due to transfer of data from larger-scale (mainly the six-inch) series these diagnostic features have typically been portrayed somewhat inconsistently on ‘one-inch-type’ maps.

⁷ Culdrose, though commissioned in 1947, was under construction during WW2 and so not strictly a post-war land acquisition.

⁸ Lydd (Ferryfield) was the only early post-war airport built on an entirely new site, its initial purpose being to transport motor-cars to northern France.

⁹ Christopher Board, ‘Air photo mosaics’, *Sheetlines* 71, (2004), 24-38.

over a nine-year period.¹⁰ Because metropolitan England already enjoyed ample stocks of up-to-date New Popular sheets, release of the Seventh began in Wales, fanned out across the central-eastern body of the country and completed its first coverage in northern Scotland and the southernmost counties of England.¹¹

Hesitantly, pioneer sheet 142 *Hereford* (1952) concealed its sole WW2 airfield, Madley (415375), in old landscape ornament, possibly because a policy for aviation had yet to be decided.¹² Happily, adjoining 'A' sheet 129 identified (Shobdon) *Airfield* (395605) over blank space, this rudimentary signature being the provisional norm for air-bases everywhere. Civil airfields meanwhile continued to be marked more elaborately eg *Cardiff Airport* (154, 215770, 1952) and *Liverpool Airport* (100, 415835, 1952) which each bore runway layouts as well as their names. This emergent doctrine was displayed to perfection on overlapping sheets 138 and 151 (1952) where the label *Haverfordwest (Withybushe) Aerodrome* over runways (960190) stood aloof among six plain *Airfield* descriptions (all military) and a fairly obvious security blank highlighting the Pembroke Dock flying-boat station (960037).¹³

To understand a potentially more complex picture, it is helpful to consider the 'A' publication round (1952-1961) as comprising two phases each of five years duration. 'Early-A' sheets (those issued 1952-1956 inclusive) accounted for some 400 of OSGB's ever-to-be depicted WW2 sites, 85% of which bore a sparse 'Shobdon-style' *Airfield* label. 'Prolific' sheets (those containing eight or more airfields apiece) formed a coherent block across central-eastern England, the most packed being number 113 *Lincoln* with eighteen labelled sites.¹⁴ By previous (and later) standards this was a strikingly homogeneous picture, its obvious downside in retrospect being the absence of any distinction between active and disused sites.¹⁵

¹⁰ The genesis and composition of this quintessentially post-war map is fully explained (with a cartobibliography) by Richard Oliver: *A Guide to the Ordnance Survey One-inch Seventh Series*, London: The Charles Close Society, 2004.

¹¹ Bizarrely, several years after mass airfield placements had been appearing on midland and eastern counties sheets, 'aviation tinkering' was still taking place on New Popular sheets in the South (e.g. at Ford, 182, 1959) (see *Sheetlines* 99, 32).

¹² As well as sheet 142 being quasi-experimental, it is also possible that the suppression of Madley airfield had something to do with radio/radar experiments.

¹³ The Pembroke Dock 'blank' provides the only suggestion in the Seventh Series of the RAF's obsolescent flying-boat capability that was finally withdrawn in 1956.

¹⁴ The early block of so-called 'airfield-rich' sheets comprised numbers 96, 97, 99, 104, 113, 118, 122, 125, 134, 136, 144, 145, 146 and 148.

¹⁵ The great majority of one-inch 'Airfield' placements in the mid-1950s were classified as 'Care and Maintenance', i.e. vacant sites reserved for aircraft dispersal in case the Cold War hotted up. It is beyond the scope of this essay to probe which ones were earmarked for upgrading or imminent disposal.

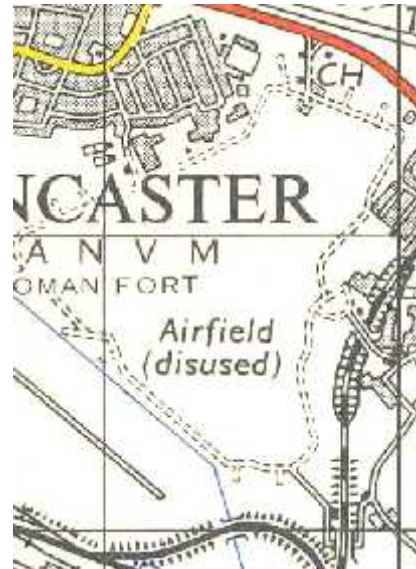


Figure 1A top left, Wroughton, Wilts, sheet 157, B, 1968 (140790)
 1B top centre, Cranfield, Beds, sheet 146, B, 1968 (945420)
 1C top right, Doncaster sheet 103, C, 1968 (595020)



1D far left, Bramcote, Warwicks, sheet 132, 1964 (410880)
 1E near left, Bramcote, Warwicks, sheet 132, 1967 (410880)

**Above and left: Airfield types on Seventh Series maps
 Are they military or civil?
 Answers on page 27**

Below: Figure 2 Brawdy airfield, Pembrokeshire (850250) on Seventh Series maps
 2A left, sheet 151, A, 1952; 2B centre, sheet 151, A//, 1960; 2C right, sheet 138/151, C/ 1971

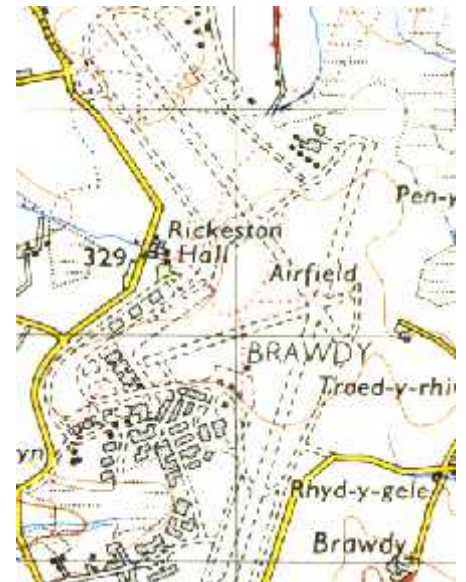




Figure 3. Military airfields on Seventh Series maps

3A top left, North Killingholme, Lincs, sheet 104, A, 1954 (135170)

3B top centre, Snailwell, Cambs, sheet 135, A, 1954 (655660)

3C top right, Hinton-in-the-Hedges, Northants, sheet 145, A, 1953 (545370)

3D lower left, Benson, Oxon, sheet 158, B, 1967 (630910)

3E lower centre, Machrihanish, Argyll, sheet 65, A/, 1960 (660225)

3F lower right, Thorpe Abbots, Norfolk, sheet 137, B, 1969 (185810)

The remaining 15 per cent (of early-A depictions) ranged from various civil airfields to a pair of prematurely named air-bases¹⁶ and a miscellany of partial and whole excisions. At Inskip (94, 450370, 1954) an eye-catching unlabelled runway pattern concealed naval radio apparatus. The RAF College at Cranwell and its 'South' aerodrome (113, 015490, 1954) were more predictable excisions, but the total blanks at North Killingholme (*figure 3A*) and Longtown (76, 4100680, 1955) can only be conjectured as hiding vulnerable storage sites.¹⁷ Across the eastern counties a number of abandoned grass fighter

¹⁶ Intriguingly, *Pershore (Airfield)* (144, 975495, 1953) and *Leconfield Aerodrome* (99, 030435, 1955) and were labelled thus several years ahead of general OS practice.

¹⁷ For some years after WW2 certain paved airfields were used as dumps for surplus vehicles and equipment, rendering their runways unusable for flying. It is possible that non-Air Ministry departments with stricter security rules wanted such premises denied.

airfields eg Snailwell (*figure 3B*) were unlabelled but still discernible by their perimeter tracks.¹⁸

A stylistic hallmark of early-A sheets was the oblique (sometimes curved and/or stretched) *A i r f i e l d* label, flamboyant examples being Colerne (156, 805715, 1953) and Hinton-in-the-Hedges (*figure 3C*). A less satisfactory placement was that at Brawdy (*figure 2A*) where legibility was inadvertently compromised by a near-vertical inscription echoing the orientation of the main runway. ‘Tilted’ descriptions, doubtless meant to avoid ‘collision’ with existing settlement names, were practically confined to a block of hand-lettered sheets covering Wales and west-central England, although the odd outlier eg Hunsdon (148, 425135, 1954) can be spotted on early photo-letterpress sheets.

By contrast, the 63 ‘late-A’ sheets with aviation content (issued 1957-1961) were characterised by three important mapping innovations: the general prefixing of locality names to active military air-bases; the suffixing of the status qualifier ‘(*disused*)’ where regular Service flying had ceased; and the adoption of Gill Sans (sans-serif) Italic font (in place of Times Roman).¹⁹

The first military air-base (other than the Leconfield anomaly) to be named and in modern typeface was *Leuchars Aerodrome* (56, 465205, 1957), its passé generic terminology influenced no doubt by a long operational history. Prolific naming of air-bases first took hold on Cotswolds sheet 157 (1958) eg *Aston Down Aerodrome* (910010) and *South Cerney Aerodrome* (055990) whose conservative description echoed their 1930s Expansion origins.

The first air-base to be mapped by name in tandem with post-war terminology was *Bovingdon Airfield* (159, 005040, 1959) in the Chilterns, its label redolent of a WW2 origin and USAF occupancy in peacetime.²⁰ Finally, as a consequence of geographically phased sheet issue, the last air-bases to make their popular cartographic débuts were *St Mawgan Airfield* (185, 870645) and *Culdrose Airfield* (189, 675255) on the Cornish peninsula in 1961.

Written affirmation of disuse was invariably accompanied by an infrastructure footprint, the first display of this quintessentially post-war combination being (Lulsgate) *Aerodrome (disused)* (165, 505650, 1958), shortly before the site’s revival as Bristol’s modern civic airport. Henstridge (also in Somerset) first appeared in an unusually florid manner as *Air Station (Admiralty) (Disused)* (166, 750205, 1959), while the New Forest ex-fighter base (officially called Holmsley South) was oddly marked *Plain Heath Airfield (Disused)* (179/210990, 1960), suggesting absence of an OS naming procedure.²¹ Additionally, south-west England contained a couple of

¹⁸ Other examples of unlabelled defunct grass airfields were Docking (125, 790390, 1954) and East Wretham (136, 905895, 1954) in west Norfolk.

¹⁹ A later adoption of this modern typeface can be seen at Brawdy in *figure 2B*.

²⁰ After its civil stint assisting with Heathrow’s expansion, Bovingdon returned to a military transport flying role from 1947-69.

²¹ Other airfields mapped later with ‘curious’ (i.e. non-Air Ministry) names were ‘Hodsow Field’ (for Pocklington, 98, B/*, 1967) and ‘Hemplands’ (for Millom, 88, 140790, B/, 1971).

unlabelled runway layouts: Keevil (166, 920570, 1959) had most likely been partially censored because it hosted some undisclosed government activity while Winkleigh (175, 620095, 1960) was by this stage already disposed of.²²

Similar nuances abounded on the late-A sheets in northern Scotland. Sheet 7 (1959) marked Castletown ex-fighter base as *Old Airfield* (215670), possibly echoing local parlance,²³ while sheet 30 (1959) drew a subtle distinction between (Banff) *Airfield (Disused)* (620645) and (Dallarchy) *Aerodrome (Disused)* (365635) possibly due to civilian gliding at the latter site. Common use of upper-case 'D' in Scotland (and on late-A sheets in southern England) suggests that OS revisers initially lacked specific guideline on how to label disused airfields.²⁴

As the Cold War intensified, the national set of late-A sheets together contained over 40 aeronautical excisions (ie twice the early-A count), this being part of a nationwide security tightening that also affected mines, factories and power utilities.²⁵ A prime target was 'airfield-rich' sheet 157 (1958) whose two most strategic air-bases, Fairford (155985) and Lyneham (005785), were both suppressed by the simple device of reproducing pre-war landscape detail.²⁶ Other 'southern' airfields denied in this security swoop included the RAF training school at Halton (159, 870110, 1959), a 'fall-back' base at Merryfield (177, 345185, 1960), the signals-mast array at St.Eval (185, 875685, 1961) and nuclear laboratories such as Culham (158, 535955, 1959) in the mid-Thames sub-region.²⁷

Thanks to 'intermediate revision', gross regional inequalities stemming from unsynchronized sheet correction began to be ironed out. By 1960 most 'early-A' sheets had been revised at least once, bringing them into line with their more modish 'late-A' counterparts²⁸ (*see again figure 2B*). A typical factual upgrade was *Acklington Airfield* (71, 230010, A/ 1960), a flying-training base first described (A, 1956) in plain generic terms but now distinguished from unnamed dormant neighbours. Insertion of station names could however be misleading eg *Melton Mowbray Airfield* (122, 750155, 1960) which belonged to

²² In 1959 Keevil was still required by the RAF and USAF as an exercise runway. Winkleigh had been transferred to the Ministry of Agriculture in 1948.

²³ Legend has it that new toponyms are decided upon by the OS after seeking a majority preference from local residents: did this apply to some airfields?

²⁴ During the 1960s the lower-case 'd' became practically ubiquitous for vacant abandoned, suggesting an eventual consistency ruling.

²⁵ An item on Cold War security can be found in: Chris Higley: *Old Series to Explorer: a field guide to the Ordnance map*, London: Charles Close Society, 2011, 123-125.

²⁶ When sheet 157 was being revised it is possible that Fairford and Lyneham were classified as 'inactive' due to runway and camp reconstruction work and therefore not strictly airfields in the land-use sense.

²⁷ Other defunct airfields blanked to conceal new laboratories at this time were Harwell (158, 480865) and Aldermaston (168, 595635).

²⁸ Richard Oliver, in 'Airfields on one-inch New Popular and Seventh Series mapping', *Sheetlines* 47, (1996), 66-68, has remarked on the way airfield revision tends to cut across the normal pattern on 'full' and 'partial' revision.

a group of 30 ground-based ballistic missile enclaves positioned on partially reclaimed wartime aerodromes.²⁹

Further complicating this evolving scene, the A/ revision round saw another 60 airfield excisions, these being ‘outer ripples’ of the swingeing Duncan Sandys cuts of RAF legend.³⁰ Blank spaces occurred across central and eastern England, chiefly on sheets corrected in 1957 and 1958 when V-bomber and missile deployments peaked. As well as strike bases such as Bruntingthorpe (132, 595885, 1957) and Finningley (103, 660990, 1958), several company aerodromes engaged in air-defence procurement eg Hawarden (109, 350650, 1957) and Bitteswell (132, 510845, 1957) were also blanked.³¹ On the other hand certain key combat bases eg Wittering (123, 040030, A, 1954) eluded censorship altogether, it clearly depending on the OS’s sheet revision schedule which particular airfields got erased or left on the map. In any case, from 1959 onward most of the aforementioned excisions and others in the same security tranche were reversed.³²

While Cold War censorship generally targeted specific sites, sheet 97 (south of York) was atypically re-issued twice (A/ 1957 and B 1960) with mass excisions where 15 WW2 airfields had already been shown generically on the ‘A’ (1955) printing. This remarkable ‘overkill’ is doubly intriguing because several of the sites erased appeared normally on the overlap portion of sheet 98 (A/ 1960 and B 1962). Exactly why sheet 97 should have been so ‘aeronautically cleansed’ is mysterious, provoking speculation that ‘adjacent’ revisers or draughtsmen might have been working at cross purposes.³³ In due course (B/*, 1967) all the affected airfields in this locality were restored to the map, albeit with some descriptive variation in the overlap zone of the two sheets concerned.³⁴

The next pair of pertinent cartographic innovations were fruit of the ‘B’ revision round, namely: the routine insertion of ground-truth runway-and-camp layouts at active military air-bases, and the progressive ‘thinning’ of already abandoned footprints as demolition, land restoration and

²⁹ No missile enclave was ever marked as such at one-inch scale. Across the country the phenomenon was variously mapped by place-name, total void or normal airfield placement, each depending on sheet concerned and its correction date.

³⁰ White Paper, *Defence: an outline of future policy* (Cmnd 124), London: HMSO, 1957.

³¹ Ironically, most of these censored industrial airfields had been indicated by label on the previous (A round) sheets, rendering the security measures somewhat pointless.

³² Other ‘escapees’ from censorship were Alconbury (134, 285745) and Wyton (134, 285750) because their sheet did not come up for revision during 1957 or 1958.

³³ There are sufficient small differences between sheets revised in the same year as to suggest some lack of coordination within either the Air Ministry or the OS.

³⁴ On sheet 98 (B/* 1967) Brighton and Full Sutton were both mapped ‘Airfield’ prefixed by their respective locality names (implying active status), whereas on overlapping sheet 97 (same state, same date) they were both labelled ‘Airfield (disused)’. With similar inconsistency Elvington was named over a blank space on sheet 98 but labelled ‘Airfield’ over its runway footprint on sheet 97.

redevelopment took effect. Discounting the Leconfield prematurity,³⁵ the first Service layouts to appear as part of a general trend occurred on sheet 171 (B, 1964) at *Biggin Hill Airfield* (415605) and *West Malling Airfield* (680555), possibly because these venerable RAF fighter stations were by then predominantly used by civil flyers.³⁶ More importantly, the first cluster of truly strategic air-bases to be mapped by name and full infrastructure appeared on sheet 158 (B, 1967), including *Benson Airfield* (figure 3D) and *Brize Norton Airfield* (295060) in Oxfordshire.

As the Seventh Series coasted to maturity, the ‘name-plus-footprint’ combination became practically ubiquitous for active air-bases, but the national ‘exit’ picture was not quite uniform because certain sheets were last revised at a relatively early date. On sheet 118 *Shawbury Airfield* (118, 550225, C/*, 1965) never got its footprint, conceivably because there was a ‘sensitive’ storage depot at nearby High Ercall (118, 610180) that specially needed blanking.³⁷ Other footprints withheld throughout the series were those at *Machrihanish Airfield* (figure 3E) and *Milltown Airfield* (29, 2270660) in Morayshire.³⁸

In a coastal area of East Anglia the infrequency of revision had a noticeably collective effect. Sheet 137 (B, 1969) still showed all twelve of its WW2 airfields in footprint form, but only one site (Thorpe Abbots, 185810) was actually labelled ‘Airfield (disused)’. Three others were coyly overprinted ‘Airfield’, suggesting light aviation, but the remaining eight carried no explanatory wording whatsoever. Circumstantially, it seems that during 1968 OS officers decided to dispense with the ‘(disused)’ qualifier in cases of advanced abandonment, and skip directly instead from the bland initial ‘Airfield’ marking (as seen on 137, A//, 1962) to a wordless footprint.³⁹

To conclude the military discussion, there were some twenty aviation security blanks still on Seventh sheets when the series exited in the mid 1970s. Only two sites were in regular flying use, namely Llanbedr (116, 570260, B/* 1967) and West Freugh (79, 110545, B, 1963) where hazardous testing took place off-shore. In the English lowlands, Faldingworth (104, 035855, B/* 1969) stored atom bombs for the RAF while Welford (158, 415745, B 1967) did

³⁵ It is just conceivable that Leconfield’s prematurely elaborate depiction was related to the site’s potential as a civil airport for Hull.

³⁶ Fittingly, Biggin Hill and West Malling were both subsequently remapped ‘Aerodrome’ before progressing to various other descriptions.

³⁷ On overlapping sheet 119 (B/*/*, 1969) *Shawbury Airfield* and (High Ercall) *Airfield (disused)* both had their runways shown, suggesting a security relaxation sometime after 1965.

³⁸ Targeted excisions of the runways at Machrihanish and Milltown were probably motivated by munitions storage for NATO and RN forces.

³⁹ The ‘slimming down’ of airfields depictions on sheet 137 had parallels on other East Anglian sheets: see David Marris, ‘Norfolk airfields’, *Sheetlines* 78, (2006), 34-37. However, sheet 136 and others further inland seem to have had higher survival rates of ‘Airfield (disused)’ when the series ended.

likewise for the USAF.⁴⁰ Other denied airfield sites included a rocket propulsion facility at Westcott (159, 710170, B, 1968), a hill-top radio-telescope at Chilbolton (168, 390380, B/*, 1972)⁴¹ and the Portreath (or Nanceceuk) chemical factory in Cornwall (189, 670460, B, 1971).

As for civil aviation, some 120 non-military airfields were depicted during the Seventh's reign, over four-fifths having a WW2 pedigree, the rest comprising two revivals from the 1930s⁴² and about a dozen being *ab initio* sites. While most were mapped without change throughout the series, there were a few notable closures eg *West Hartlepool Civic Airport* (85, 505285, A, 1955).⁴³ In remote Scotland *Benbecula Airfield* (23, 785560, 1959) appeared initially over a plain background (doubtless to play down a reserve military role) but later (A/* 1970) the runways were inserted when 'social-service' flying assumed precedence.⁴⁴ Likewise, *Bournemouth (Hurn) Airport* (179, 115990, A, 1960) first appeared with all ground detail erased (presumably to conceal 'sensitive' factories) but on subsequent printings it was fully depicted.

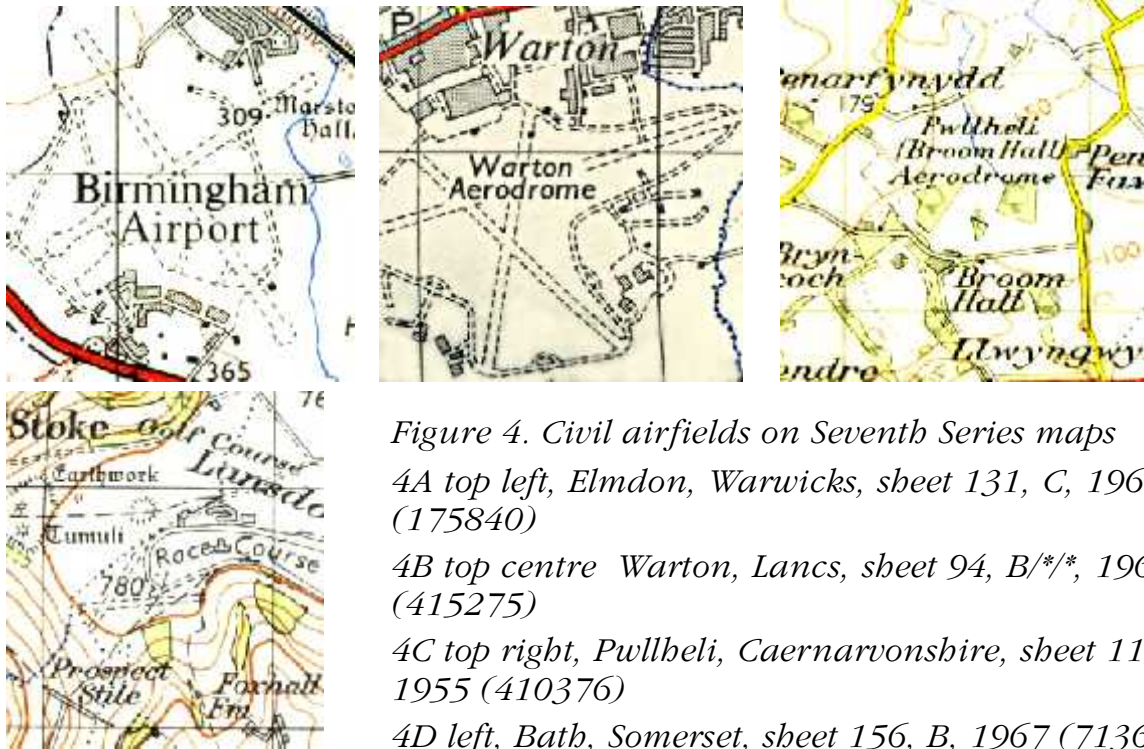


Figure 4. Civil airfields on Seventh Series maps

4A top left, Elmdon, Warwicks, sheet 131, C, 1967 (175840)

4B top centre Warton, Lancs, sheet 94, B/*/*, 1969 (415275)

4C top right, Pwllbeli, Caernarvonshire, sheet 115, B, 1955 (410376)

4D left, Bath, Somerset, sheet 156, B, 1967 (713686)

⁴⁰ Faldingworth, like many Cold War excisions, had been marked as an airfield on the A edition of sheet 104 (1955), adding to the argument that excision in the age of spy satellites was futile: see Wayne Cocroft and Roger Thomas, *Cold War: building for nuclear confrontation 1946-1989*, Swindon: English Heritage, 2003.

⁴¹ Chilbolton is one of very few paved WW2 airfields never labelled as such. Jet combat planes were tested there from 1947-1961.

⁴² Bembridge and Sandown airports were staked off during WW2 to deter enemy glider landings.

⁴³ Other 'lost' airports caught in time by the Seventh Series are Hanworth (170, 115725, A//, 1960), Loughborough (121, 525215, A/, 1956) and Ramsgate (173, 375675, B, 1969).

⁴⁴ Other Scottish airports initially shown without runways were Dyce (40, 880125, A/, 1962) and Wick (16, 365525, A 1959). Both were graphically upgraded in the same manner as Benbecula.

During the 1960s several redundant air-bases were converted to regional airports, two slightly different cases being *Abbotsinch Airfield* (60, 480670, B, 1965) which seamlessly switched to ‘Glasgow Airport’ (B/* 1968), and (Castle Donington) *Airfield* which required a more laborious reconstruction as ‘East Midlands Airport’ (121, 450260, B/*/*, 1971) after 20 years under the plough.⁴⁵ To highlight such airports, a hallmark of the Seventh Series was the magnified Times Roman upright font, illustrated here by Birmingham Eldon (*figure 4A*). By 1970 nearly half of civil depictions were mapped ‘Airport’, the rest being divided about evenly between ‘Airfield’ and ‘Aerodrome.’. Prevalent use of the latter term for factory airfields such as *Dunsfold Aerodrome* (170, 025365, B, 1965) and *Warton Aerodrome* (*figure 4B*) could have reflected aerospace industry tradition mixed with local habit.

Discounting the Lydd (Ferryfield) Airport exception (184, 065215), the earliest post-war *ab initio* sites tended to be associated with holiday camps, eg *Pwelli (Broom Hall) Aerodrome* (*figure 4C*) and *Skegness Aerodrome* (114, 565675, B, 1962), and manufacturing industry in the case of ‘Huddersfield (Crosland Moor) Aerodrome’ (102, 115140, B/*, 1966). Dundee’s imaginative and successful shoreline *Aerodrome* (50, 380923, A//*, 1967) was rapidly remapped *Airfield* (B, 1969) doubtless for marketing reasons. Other civil initiatives on the map included a new gateway to the Scilly Isles at ‘Penzance Heliport’ (189, 487313, A/, 1966), a public strip for Glenrothes New Town (55, 245996, B/* 1972), and gliding clubs at Long Mynd (129, 407917, C, 1967) and Sutton Bank (92, 517817, B/*, 1970). Oddly, very few of the strips proliferating on Scottish islands were yet shown, pioneer exceptions being Baltasound (1, 625077, A/, 1971) and Glenforsa (45, 590429, A/*, 1971). In southern England, only two private strips gained one-inch placements, namely (Compton Abbas) *Aerodrome* (179, 890186, B, 1966) and Bath’s Lansdowne race-course whose intersecting strips are faintly visible at the 870-foot spot height in *figure 4D*.

Taking joint stock of military and civil airfields, some 620 different sites were depicted at some point during the life of the Seventh Series, comprising (in round figures) 230 by individual locality name; 320 in generic terms only, and 70 as unmistakable footprints. Against the historic peak of 850 WW2 airfields, the crude series ‘hit rate’ was 75 per cent, ie about four times the combined achievement of the New Popular and Scottish Popular series.⁴⁶ By a wide margin, the most frequently mapped term was ‘Airfield’ (80%), followed by ‘Aerodrome’ (10%), ‘Airport’ (9%) and a tiny miscellaneous residuum. The status qualifier ‘disused’ (and synonyms) appeared on 230 sites.⁴⁷

⁴⁵ Other civic airports created from defunct RAF stations included Tees-side (Middleton St George, 85, 375130, B/*, 1965) and Norwich (Horsham St Faith, 126, 220135, B/, 1967).

⁴⁶ A separate calculation for just paved-runway aerodromes raises the success rate to 90 per cent.

⁴⁷ This figure applies largely to paved aerodromes, although some of the grass type were also labelled ‘disused’ on early Seventh sheets. Odd disused landing grounds, eg Merston (181, 885030) were cryptically marked by perimeter fragments, but scores of minor grass sites were never labelled at all.

Though ‘Airfield’ coupled with a locality name gave a strong hint of military status (80 cases), some 30 nameless ‘Airfield’ placements were also military, albeit mostly in ‘support’ (rather than ‘regular’) roles.⁴⁸ To further cloud the picture, a dozen of all ‘Aerodrome’ placements were military too, the only clues to that status being location, physique and name (where given). Surprisingly, some ‘big hitters’ such as Marham (124, 725085, B/*, 1969), Waddington (113, 965645, B/*, 1968) and Farnborough (169, 860540, B/*, 1972) were never place-named in the series.⁴⁹ Finally, while the labels ‘Airport’ and (to a lesser extent) ‘Aerodrome’ evoked civil flying, the loose employment of ‘Airfield’ for certain aircraft factories⁵⁰ and wartime runways frequented by light aircraft has frustrated map analysts.

To end this review of the last-ever mainstream map series at one-inch scale, a handful of enigmas are worth noting. Silverstone (145, 675430) failed to earn an aeronautical label due to its early (1949) conversion to motor-racing. Pulham (137, 195840), a WW1 airship base closed in 1920, was mistakenly re-mapped ‘Airfield’ after WW2 (1954 and 1958) because it still had an Air Ministry depot. Templeton (152, 095110, A, 1952) at one stage got an exceptionally large label. An oddity near Edinburgh had been recorded by the OS since its early days: a hamlet called Airfield, which had no aeronautical connection

The 1:50,000 (Landranger) series

This 40-years-old and enduring brand has witnessed the ending of the Cold War, deregulation of airport ownership and development, and a flowering of light aviation on vacant wartime runways and virgin airstrips. The improved scale of 1¼ inches to the mile and provision of grid values on the sheet faces have demonstrably assisted the portrayal and analysis of airfield detail. As with all previous popular series, there were initially some geographical inequalities in composition, happily confined and short-lived. Launched in 1974, all sheets south of Lancaster-York (apart from two covering London and one covering Snowdon) were ‘First Series’, being photographically enlarged from Seventh Series material with road and other selective changes. North of that line all sheets were published in 1976, roughly half in the conservative ‘First’ style and half in a revised and redrawn ‘Second Series’ style.⁵¹

⁴⁸ ‘Support’ roles include Service volunteer gliding, circuit-and-bump training, parachute dropping, Army barracks and various depots.

⁴⁹ Another ‘big hitter’ without a name was the famous ‘Dam Buster’ and V-bomber base at Scampton (104, 965795). RAE Farnborough did not get a generic ‘Airfield’ label or layout till the B printing (1971).

⁵⁰ Yeovil (177, 540155, B, 1970) and Hucknall (112, 525470, C/*, 1971) were industrial examples of this alternative description.

⁵¹ Richard Oliver, ‘Twenty years of the Ordnance Survey 1:50,000 map (with a list of editions 1974-1994)’, *Sheetlines* 39, (1994), 6-19. Apart from occasional publication updates and seminar reports in *Sheetlines* there is no detailed text on the evolution of the *Landranger* over the past two decades.

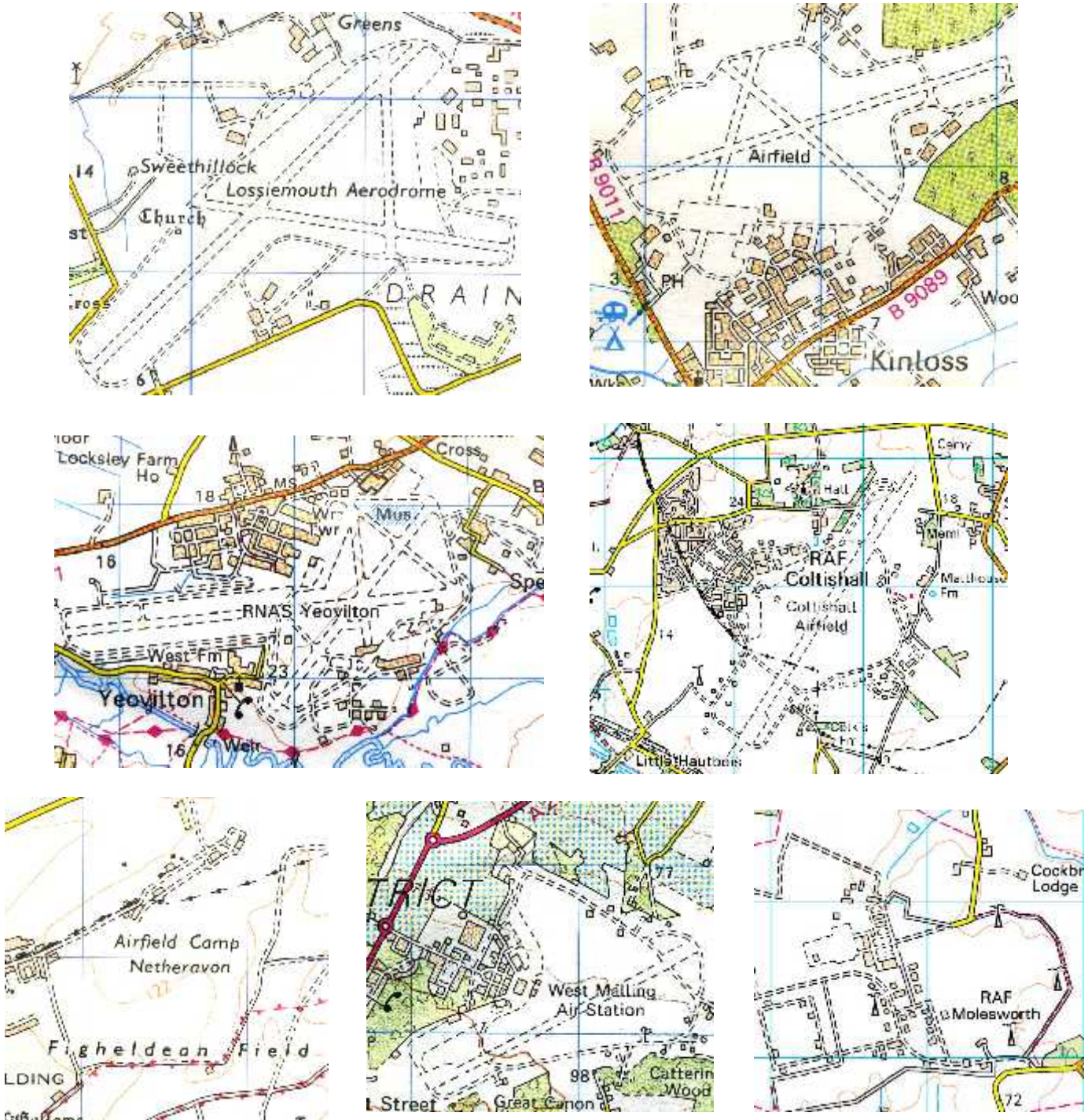


Figure 5 Military airfields on 1:50,000 / Landranger maps

5A top left, Lossiemouth, Grampian, 1st Series sheet 28, A, 1976 (210695)

5B top right, Kinloss, Grampian, 2nd Series sheet 27, B, 1996 (070630)

5C centre left, Yeovilton, Somerset, 2nd Series sheet 183, C, 1999 (550235)

5D centre right, Coltishall, Norfolk, 2nd Series sheet 133, D, 2009 (265225)

5E lower left, Netheravon, Wiltshire, 1st Series sheet 184, A/*, 1979 (165490)

5F lower centre, West Malling, Kent, 2nd Series sheet 188, B, 1990 (680555)

5G lower right, Molesworth, Cambridgeshire, 2nd Series sheet 142, D2, 2001 (080775)

As 90 per cent of all WW2 airfield sites fell within 'First' (or 'provisional') sheet-lines, local style clashes were nationally few but nevertheless germane. Near London 'Fair Oaks Airport' (005620) appeared slightly differently on overlapping sheets 176 and 186 (1974) because of contrasting typesets. 'Prestwick Scotland Airport' (70, 365270, 1976) and Tees-side Airport (93, 375130, 1976) contrasted typographically because they occupied different style blocks, as did the Yorkshire RAF stations (Church Fenton) *Airfield* (105, 530380, 1974) and (Catterick) *Airfield* (99, 250965, 1976).

Quite unrelated, an embryonic airport called *Leicester East Aerodrome* (141, 655015, A, 1974) was archaically labelled in Times Roman Italic, seemingly due to an uncritical re-cycling of obsolete Seventh material.

As many as 150 airfields were found to have experienced a change of image caused by the transition from last Seventh Series to first 1:50,000 printing. Although aviation was not specifically cited in sheet marginalia as a correction priority, this weight of change is compelling proof that airfields were appraised. Over 40 permutations of change have come to light, ranging from operational upgrades, via neutral switches of terminology, to various manifestations of downgrade.⁵² Numerically, the most common 'trans-series' effect was the loss of more than 60 'Airfield (disused)' placements.

A rare operational upgrade was *Fulbeck Airfield* (121, 900510, 1974), previously mapped as disused (Seventh Series sheet 113, B/*, 1968) but re-labelled in recognition of its re-activation to relieve overcrowding at Cranwell. By contrast, the belated acknowledgement of (Llanbedr) *Royal Aircraft Establishment* (124, 570260, 1974) was a mere 'paper' upgrade reversing the security blank mentioned earlier. In the case of (Deenethorpe) *Airfield* (141, 960905, 1974) erasure of the previous '(disused)' qualifier denoted re-use by British Steel at Corby.

Operational downgrades included (Elvington) *Airfield* (105/106, 670480, 1974), which lost its (Seventh Series) locality name on demotion from front-line duties, and (Rufforth) *Airfield (disused)* (105, 535550, 1974) which added that qualification on being decommissioned. Among pure switches of terminology, *Hullavington Airfield* (173, 905810, 1974) simply replaced its Cotswold-type 'Aerodrome' label of old (*compare* Seventh Series 157, B/*, 1971). In the civil domain *Booker Airfield* was remapped *Wycombe Air Park* (175, 825910, 1974) while 'Lympe Airport' became 'Ashford Airport' (189, 115355, 1974) with its new hard runway inserted.

In 1980 the whole 1:50,000 series was re-branded *Landranger* and by 1988 all First Series sheets had been fully revised and redrawn as Second Series, lettered in Univers.⁵³ Aeronautically, the 1980s turned out to be a relatively

⁵² 'Downgrades' and upgrades' can be either changes in operational status or mere changes of terminology and footprint. Extrication of the two need not detain us here.

⁵³ Richard Oliver, 'A few notes on map lettering', *Sheetlines* 95, (2012), 35-42. A separate study of airfield labels would be fruitful at some stage.

stable decade, in which only one front-line air-base was closed⁵⁴ and major civil airports were consolidated rather than expanded in number.⁵⁵ When the Cold War formally ended in 1989 there followed a cascade of air-base closure (part of the so-called ‘peace dividend’) which unleashed opportunities for new civil airports and urban expansion. In the years since the Millennium military closures have been reduced to a trickle, with stations such as Cottesmore (130, 910155), Kinloss and Lyneham converting to Army bases rather than being scheduled for disposal. Simultaneously, technical advances in data-capture and digital printing have enabled the OS to revise its popular map with greater frequency, offering unprecedented insights into changing airfield status and morphology.

When the 1:50,000 series first went on sale, Britain still contained 85 officially active air-bases, since when 40 have closed to regular flying, leaving only 45 on the current active list.⁵⁶ With these statistics in mind it is now opportune to name representative victims and survivors and consider how OS practice has reflected what is regularly published in independent sources.⁵⁷ On sheets as first published there were still half a dozen outmoded usages, one being *Lossiemouth Aerodrome* (*figure 6A*). However, on later corrected reprints most such anachronisms (including ‘Lossie’) were amended to ‘Airfield’, though in the case of neighbouring Kinloss (*figure 6B*) the locality name was for some reason dropped. For historical interest, the penultimate military base to eject ‘Aerodrome’ from its label was Manston (179, 335660, 1994), and today only RAF Northolt retains that dwindling term.⁵⁸

As on the Seventh Series, not all active air-bases marked on 1:50,000 maps have been graced with a locality name. In fact, the proportion has dropped slightly (from 80% to 70%) and today there are barely 30 named air-defence placements.⁵⁹ One dogged survivor is ‘RNAS Yeovilton’ (*figure 5C*) which merits praise for reintroducing the Service-operator tags to the modern map.⁶⁰ This openness was followed (on B edition sheets) by the re-labelling of the ‘Moray Firth Twins’ as RAF Kinloss and RAF Lossiemouth, although the move was not to be emulated nationwide. Barely a dozen other air-bases, all in

⁵⁴ RAF Binbrook (113, 190960) was closed in 1988 when the Lightning interceptor was retired.

⁵⁵ Leo Marriott, *British Airports: then and now*, Shepperton: Ian Allan, 1993.

⁵⁶ This process is analysed in: Ronald Blake, ‘Airfield closures and air defence reorientation in Britain during the Cold War and its immediate aftermath’, *Area*, 41 (2009), 285-299.

⁵⁷ The key independent sources for evaluating OS maps are: ICAO, *1: 250,000 Topographical Air Charts UK*, London: Civil Aviation Authority (annual) and No.1 AIDU, *En Route Supplement: British Isles and North Atlantic*, London: RAF Northolt (annual). A short essay by Chris Higley (*Sheetlines* 81, (2008), 13) is helpful in this regard.

⁵⁸ On departure of its last RAF unit Manston became ‘Kent International Airport’ (from C, 1998). Manston, incidentally, has never been labelled ‘Airfield’.

⁵⁹ Middle Wallop (185, 305385) and St Athan (170, 005685) are key air-bases still not named on the OS popular map.

⁶⁰ Since before WW1 the Navy has held the lead in *sui generis* aviation descriptions (see part 1 of this study).

lowland England, have subsequently added a Service tag, one being RAF Coltishall which recently closed (*figure 5D*).⁶¹

While 95 per cent of today's active air-bases are dubbed 'Airfield' by the OS, a miscellany of labels were deployed in the lead-up to greater consistency. The individualistic titles *Airfield Camp Netheravon* (*figure 5E*) and 'West Malling Air Station' (*figure 5F*) both resound to the past, doubtless reflecting in-Service and local community usages.⁶² Recently, a number of ex-Cold War 'super-bases' have adopted a label that combines locality with defunct status, a representative case being 'Upper Heyford Airfield (dis)' (164, 515265, D1, 2006). Beginning in the late 1990s, this tendency was probably engendered by the sheer size of Cold War bases, some eg 'RAF Molesworth / Airfield (disused)' having been without aircraft for several decades.⁶³ Other current curiosities include slanted labels aligned to the runway eg Mildenhall Airfield (143, 690770, D, 2002).

A growing number of historic air-bases with air museums (Mus) or roadside memorials (Meml) are now being marked, two examples occurring in *figures 5C* and *5D*.⁶⁴ Among the best-known museums are the 'Battle of Britain Flight' at Coningsby (122, 225565, C2, 2006) and the 'Museum of Flight' at East Fortune (66, 550785, 550783). In Sussex the previously unlabelled fighter landing ground at Coolham (198, 125225) is now sympathetically marked 'D-Day Airfield'.

Civil airfield depictions at 1:50,000 have displayed a similarly wide vocabulary (*figure 5*).⁶⁵ Since the mid-1970s the rolling count has risen from 120 to 320, although the latter figure is bloated by 140 *ab initio* airstrips.⁶⁶ Although the 'Airport' component is numerically larger than forty years ago, the fastest percentage increases have been in the 'Airfield' and 'Strip' categories. Of the 180 current civil placements with a WW2 past, a mere 16 are still labelled 'Aerodrome'.⁶⁷

⁶¹ Coltishall's flamboyant and informative OS label was acquired just before the base's closure (2006) when the Jaguar fighter was retired.

⁶² At the time of survey (1981) West Malling was 'quasi-military', having been disposed of by the government but still used by the RAF for volunteer gliding (till 1995).

⁶³ In the mid-1980s Molesworth was earmarked as a 'cruise missile' satellite of Greenham Common. It is still a USAF ground station.

⁶⁴ OS placements of 'Mus' and 'Meml' are often the only written indication today that an airfield ever existed. They are strongly associated with the USAAF in WW2, recent editions of sheet 141 containing three: 920808, 776777 and 938964.

⁶⁵ The key directory sources for civil airfields of all sizes are: *Pooley's Flight Guide UK*, Elstree Aerodrome: Pooley's Flight Equipment (annual), and *Lockyears Farm Strips and Private Airfields Flight Guide*, Stockport: Seaton Sands Ltd (occasional).

⁶⁶ Before the Civil Aviation Authority (CAA) was created (1972) most *ab initio* civil airfields shown on statutory Air Charts were ignored by the OS popular map. Excluding these 'newcomers' from present calculations, the rise in conventional WW2-vintage civil aerodromes has been a more modest 50 per cent.

⁶⁷ Since RAF Northolt is now effectively London's diplomatic and VIP airport, the term 'Aerodrome' has taken on an almost totally civil connotation.

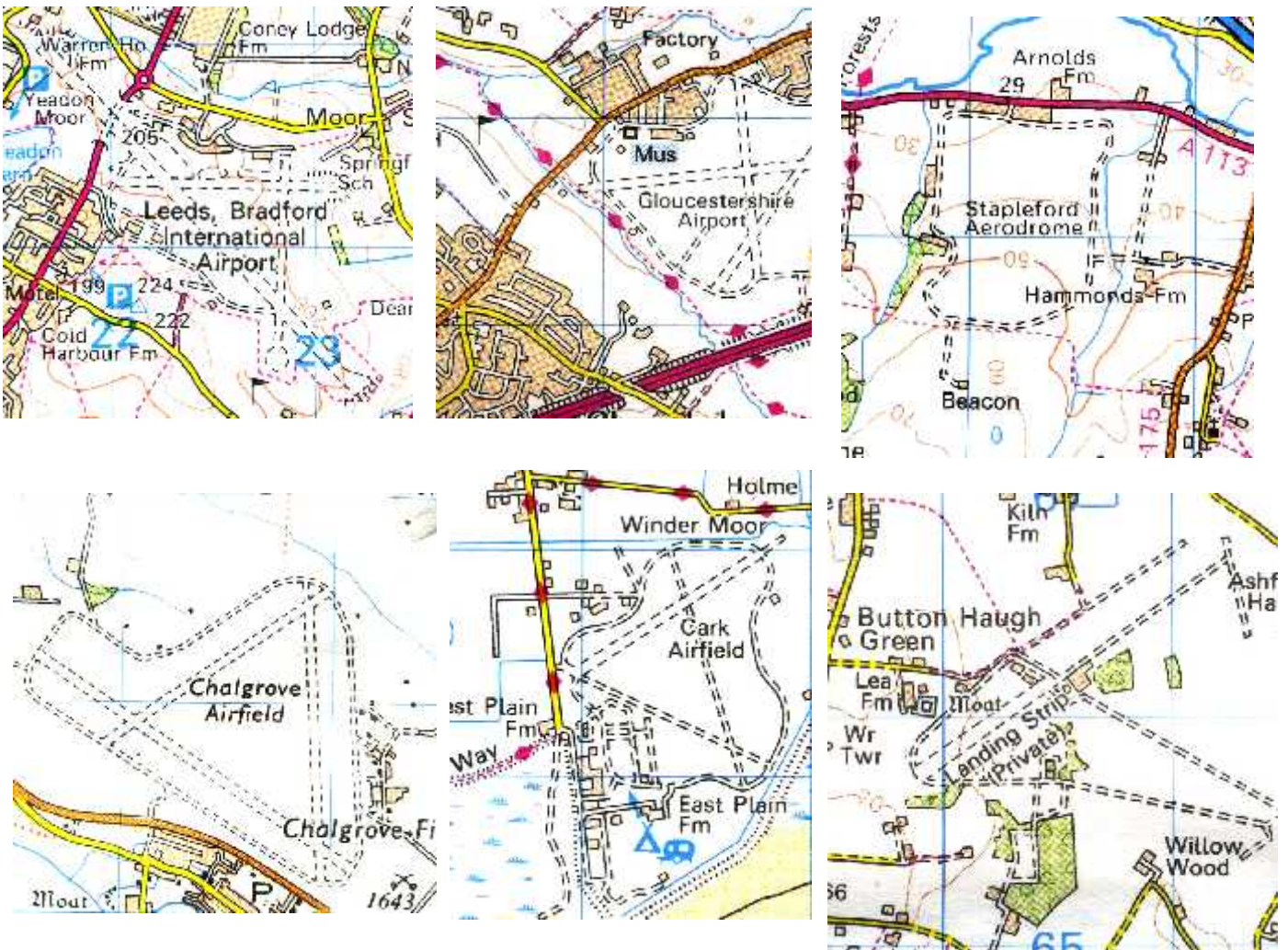


Figure 6 Civil airfields on 1:50,000 / Landranger maps

6A top left, Yeadon, West Yorkshire, 2nd Series sheet 104, C, 1998 (225415)

6B top centre, Staverton, Gloucestershire, 2nd Series sheet 162, C, 1998 (885215)

6C top right, Stapleford Tawney, Essex, 2nd Series sheet 177, E, 2001 (490970)

6D lower left, Chalgrove, Oxfordshire, 2nd Series sheet 164, A/*/*, 1979 (635980)

6E lower centre, Cark, Cumbria, 2nd Series sheet 96, 1998 (375745)

6F lower right, Great Ashfield, Suffolk, 2nd Series sheet 155, D, 2001 (000660)

Notable innovations of the past 20 years have been the incorporation of 'International' into the titles of a dozen leading airports (*figure 6A*)⁶⁸ and as part of the same marketing drive 'London' has been tagged at Luton, Lydd, Manston and Oxford. OS cartography has also helped middle-ranking civic aerodromes aspire to sub-regional status eg 'Gloucestershire' (formerly Staverton, *figure 6B*) and 'West Wales' (formerly Aberporth, 145, 250495). Mercifully, Britain has not chosen to name any aerial gateway after a modern

⁶⁸ Marketing clearly influences the choice of airfield titles today and the OS plays some small part in this. One wonders whether a long-term OS placement actually cements local popular usage.

national leader or hero, although England now has two ‘celebrity’ airports, namely ‘John Lennon’ (Liverpool, 108, 425825) and ‘Robin Hood’ (formerly RAF Finningley serving South Yorkshire, 111, 660990, C2, 2006). At a more specialized level, Cambridge Airport (154, 485585) has recently added ‘Marshalls’ (an aerospace company) to its title, while Old Warden (153, 153447, 2011) is now called ‘Shuttleworth Airfield’ after the founder of its vintage aeroplane collection.

Regrettably, many civil airfields are mapped quite ambiguously, offering few clues to their role or importance. In an extreme case Thame (Haddenham) Airfield (165, 730090) has for the past decade been missing from the map while still shown active on the contemporary Air Chart. ‘Stapleford Aerodrome’ (*figure 6C*) is a typical ‘general aviation field’ with flying schools on the outskirts of Greater London.⁶⁹ ‘Chalgrove Airfield’ (*figure 6D*) was operated throughout and since the Cold War by a firm testing ejector seats and still resembles the military diversion facility it then was. ‘Cark Airfield’ (*figure 6E*) is typical of many partially reclaimed WW2 airfields licensed (in this case) by a parachute club, while ‘Great Ashfield’ (*figure 6F*) illustrates a phenomenon whereby a strip based on a fragment of wartime runway is labelled at the appropriate angle.

Confusingly, the term ‘Airfield’ as applied by the OS cuts across an important historical divide between ‘adaptive’ (WW2-vintage) and the *ab initio* (post-war) strips.⁷⁰ The term ‘strip’ does likewise, as will be explained in the next section.

Ab initio airstrips and gliding sites

Largely absent from Seventh Series and provisional 1:50,000 sheets, the *ab initio* airstrip reflects a growing demand for private, business and recreational flying not entirely satisfied by the WW2 airfield legacy. To date, at least 160 of these ‘greenfield’ sites have been mapped at popular scale, including 40 gliding fields and a handful of heliports. Over 20 different modes of depiction have been found on *Landranger* sheets, a selection of which is presented as *figure 7*. Using Air Charts as a robust yardstick, the OS ‘hit’ rate today is about 40 per cent.

Ab initio strips are rarely named on the OS popular map.⁷¹ About half are described as either ‘Landing Strip’ or ‘Airstrip’, but how this distinction is made and whether it correlates with roles is uncertain. Terminology apart, depiction ultimately depends on whether the label conforms to the strip’s orientation (*figure 7A*) or is placed horizontally (*figure 7F*), whether operator status is

⁶⁹ Most of the surviving ‘Aerodrome’ placements are clustered in the environs of Greater London and Manchester where aerospace companies and general aviation have the longest tradition. Perth (Scone) is an interesting outlier.

⁷⁰ ‘Strip’ is not however exclusive to sites of post-war origin. Some WW2-vintage runways are also described thus. By the same token, some new strips are blandly called ‘Airfield’, usually exaggerating their importance.

⁷¹ By contrast, statutory Air Charts name all pinpointed sites, thus providing an invaluable yardstick for assessing OS sheets.

suggested (*figure 7B*), whether there are multiple strips (*figures 7C*), whether a strip has a label at all (*figure 7D*), whether plural strips intersect or are tangential (*figure 7E*), whether a variant term is used (*figure 7F*) and whether the strip is straight!⁷² As with airfields in general, the popular map does not say whether a strip is grass, bare or clad.

Though ‘churning’ within this sub-genre has been limited, certain ephemeral depictions add value to the popular map as an air-historical source. Paull near Hull (107/113, 200247) appeared afresh in 1977 (A, Second Series) close to ‘Auster Grange’ and remained on the map till the 1990 (A5) printing of sheet 107. Another promising but temporary airstrip was that on the island of Jura (61, 548714, B2, 2007). Sheffield’s regenerative civic airstrip (110/111, 408888) closed after a brief life some years ago.⁷³

The only major *ab initio* airstrip created in recent decades is London’s Dockland City Airport (177, 425805) which has a minute label for want of space.⁷⁴

Airstrips (including gliding and helicopter facilities) have a deeper penetration into the countryside than conventional aerodromes because their small footprint and aerial approaches allow them to thrive in relatively hilly, forested, flood-prone and urbanised terrains (ie the classically ‘airfield-poor’ areas).⁷⁵ This flexibility has rendered certain sub-regions unexpectedly ‘airstrip-rich’, notably south Essex, the Weald, the Fens, Dorset-Devon, the Welsh marches, and Scotland’s highlands and islands. But why Orkney’s numerous strips are predominantly mapped ‘Airfield’ while those in the Shetlands are mostly called ‘Airstrip’ has yet to be investigated.

The ‘Gliding Club’ label (and its variants) is invariably placed horizontally (*figure 7G*). For reasons unknown, one of the oldest and best-known sites, Dunstable Downs (166, 004200) was not shown until the 1978 (A, Second Series) printing. Heliports are unique in having a (circular ‘H’) symbol (*figure 7H*), the best known OS depiction being Battersea (176, 266762).

⁷² A now defunct landing strip at Lydney (162, 627004, A 1980 to B2 1996) had a conspicuous bend in it.

⁷³ Sheffield’s attempt at providing a local airport on reclaimed industrial land was confounded by the ‘windfall’ of RAF Finningley’s closure in 1992.

⁷⁴ The City (of London) Airport has scheduled services and therefore is only a strip in the literal sense.

⁷⁵ Gliding is exceptional in being the only aeronautical activity widely specified on the popular map. For interest, about a dozen *ab initio* gliding sites stand above the normal aerodrome elevation of 750 feet AMSL.

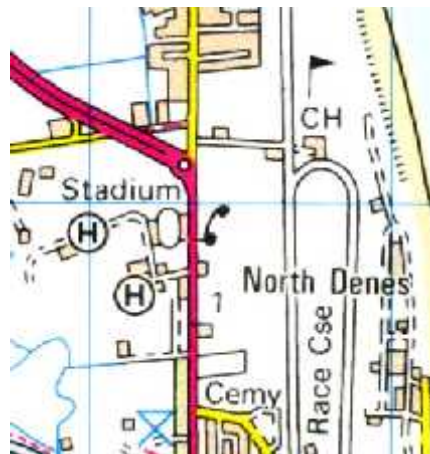


Figure 7 *Ab initio* airstrips on 1:50,000 / Landranger maps

7A top left, Swindon, Wilts, sheet 173, D, 2002 (179773)

7B top centre, Jura, Strathclyde, sheet 61, B2, 2007 (550714)

7C top right, Winsford, Cheshire, sheet 118, C, 1999 (623633)

7D centre row left, Rayne, Essex, sheet 167, C, 1998 (737237)

7E centre row centre, Eday, Orkney, sheet 6, A, 1976 (557339)

7F centre row right, Sandy, Bedfordshire, sheet 153, C, 1998 (155492)

7G bottom left, North Hill, Devon, sheet 192, C2, 2002 (105066)

7H bottom right, Great Yarmouth, Norfolk, sheet 134, C, 1997 (520108)

The OS Northern Ireland equivalent series

Between 1960 and 1964 Northern Ireland was covered by a Third Series one-inch map that remained on sale (with minimal and infrequent correction) until 1985.⁷⁶ During WW2 the Province had hosted 29 military air-bases, 19 with paved runways,⁷⁷ the rest comprising grass landing grounds and marine aircraft slipways. The Third Series only ever contained four active 'Airfield' placements, plus three security blanks, including the notorious Long Kesh or Maze prison (6, 225615), the solitary label (Cluntoe) *Airfield (disused)* (5, 945755, 1964) and traces of a dispersed wartime camp and road severance at Toome on Lough Neagh (*figure 8A*).

Between 1978 and 1985 this limited picture was clarified when the revised, redrawn and radically restyled 1:50,000 First Series (later branded 'Discoverer') was published. In addition to the continued suppression of two aerodrome-based prisons, eight other disused airfields have progressively been shown, including Bishop's Court (*figure 8B*) which perfectly illustrates the distinctive OSNI practice of plotting bold boundary fences around certain government holdings.⁷⁸ At Ballykelly (*figure 8C*) a projection of the runway fence across a main railway line curiously advertises likely use by Army helicopters.⁷⁹ Among the five remaining disused airfields, Mullaghmore (*figure 8D*) illustrates another commendable OSNI practice, namely the generous plotting of after-uses thanks to small lettering.

Finally, three additional licensed civil aerodromes have joined the map, including the former RAF coastal patrol base at Eglinton where Derry's civic airport now thrives (*figure 8E*). Curiously, however, the cluster of *ab initio* airstrips and gliding sites near Coleraine (shown on Topographical Air Chart 3) has yet to appear. If any stylistic criticism is to be made of the series, it is the use of hamlet-size lettering for the province's leading airports.

Summary, conclusions and recommendations

Over the past six decades the OS standard topographical map has depicted some 780 different UK airfields in words and/or footprints. Although their appearance *en masse* was delayed for between ten and twenty years after construction, a fair impression of where aircraft were based during WW2 had entered the public domain by the mid-1960s. According to a recent authoritative discourse on popular mapping,⁸⁰ few countries in the world enjoy such a frank public record of their air-defence and air transport infrastructure.

⁷⁶ Literature explaining the genesis and evolution of the Northern Ireland standard topographical map is fragmentary. Thanks are due to Richard Oliver for filling in the background and checking airfield placements.

⁷⁷ Northern Ireland accounts for barely 4 per cent of all the airfields appraised in this review, therefore any OSGB generalisations and statistics can be taken as applying to also to OSNI.

⁷⁸ Airfield boundaries are notably absent from OS maps, except for prisons and cemeteries.

⁷⁹ Ballykelly was closed as a conventional RAF base in 1969 largely through fear of terrorism. It is marked on current Air Charts as a 'government helicopter station'.

⁸⁰ Mike Parker, *Map Addict: A tale of obsession, fudge and the Ordnance Survey*, London: HarperCollins 2009.

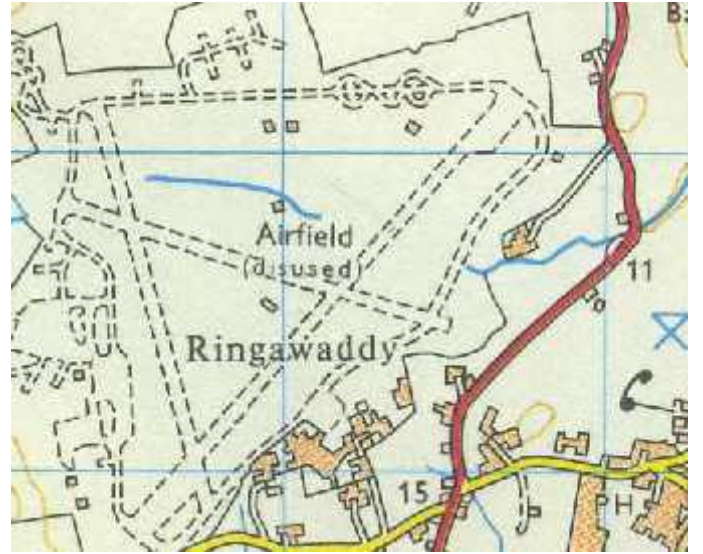
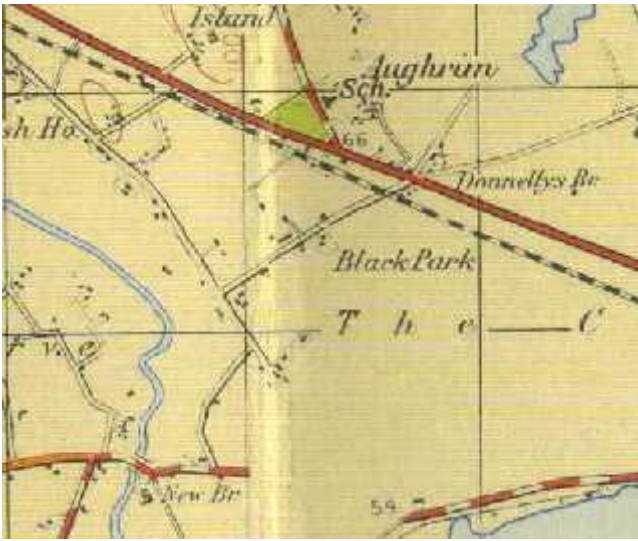


Figure 8 Airfields on OS Northern Ireland one-inch Third Series and 1:50,000 Discoverer maps

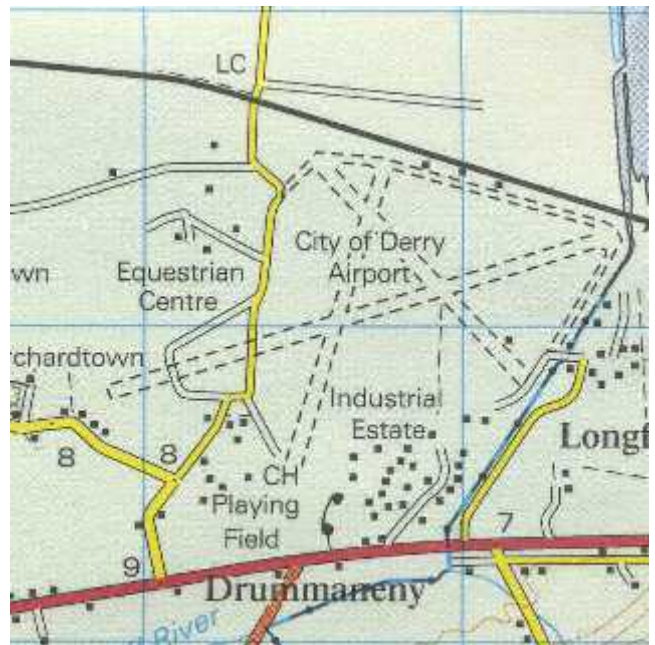
8A top left, Toome Co. Londonderry, Third Series sheet 3, 1960 (970905)

8B top right, Bishops Court, Co. Down, Discoverer sheet 21, 1989 (580425)

8C left, Ballykelly, Co. Londonderry, Discoverer sheet 4, B, 2001 (630240)

8D bottom left, Mullaghmore, Co. Londonderry, Discoverer sheet 4, B, 2001 (900210)

8E bottom right, Eglinton, Co. Londonderry, Discoverer sheet 7, B, 2001 (540220)



At the risks of over-simplification, the signal achievement of the Seventh Series was *quantitative*, in as much as it revealed the bulk of what the New Popular was obliged to suppress, while the outstanding contribution of the *Landranger* has been *qualitative*, nuancing a dynamic aeronautical landscape already sketched in outline.

However, almost every sheet with plural aviation sites has been found to contain some graphical or terminological inconsistency. Initially, censorship was the assumed culprit, but latterly the speed of aeronautical change has outpaced even the promptest sheet revision. The challenge for the OS reviser has always been to maximise new topographic detail while minimising clutter and, in the absence of a standard aviation symbology at popular scale, a perplexing multiplicity of written terms has resulted.⁸¹

The writer has frequently been asked whether this exercise could have been conducted more swiftly by electronic means. The short answer is a qualified 'no', simply because the vocabulary involved was not known until an exhaustive manual search had been completed. The catalogue of errors, omissions, exceptions and enigmas would certainly not have come to light without painstaking inspection of original OS sheets and checking findings against independent documentary sources.

A key strength of the standard-scale map has been the way it sets airfields in a wider landscape context.⁸² Regional and thematic aviation historians have made wise use of 'one-inch' inset maps to guide visitors to the correct sites.⁸³ From an academic standpoint, the faithful portrayal of the dimensions of Cold War air-bases and leading airports should not be underestimated. Though many *ab initio* airstrips do not yet have an OS presence, the *Landranger* has captured the overall diversity of airfields with aplomb.

Among the map's inevitable weaknesses are the persistence of vague terminology, paucity of informative symbols, and variable time-lags in sheet revision as compared with annually up-dated Air Charts and directories. The fact that only 55 'Airfield (disused)' labels survive could also be considered a shortcoming since many landscape traces are no longer explained. Topics for further research might therefore include a history of revision procedures,⁸⁴ data-flows from aviation organisations to the OS, a survey of airfield after-use

⁸¹ Appendices A and B give some idea of the permutations used to describe airfields on the popular map over the post-war decades.

⁸² Aeronautical symbology in the legend of 1:50,000 sheets is confined to 'heliport'. The only RAF airfield marked thus is Chetwynd (127, 725245), a relief landing ground for Shawbury. *Ab initio* Army helicopter sites (shown on Air Charts) do not appear on the popular OS map.

⁸³ Roger A Freeman, *Bases of Bomber Command: Then and Now*, London: After the Battle, 2001.

⁸⁴ Work by Jim Cooper, 'One-inch revision in the 1960s', *Sheetlines* 52, (1998), 30-40. provides a useful starting point for such an investigation.

based on OS evidence, and the equivalent mapping practices of advanced foreign countries.⁸⁵

Looking to the future, the following proposed adjustments to the popular map may be of interest to OS staff, other topographical map designers, and map-users generally:

1. clearer written indication of purpose eg 'Airfield (Mil)', 'Aerodrome (Civ)'.
2. greater use of small symbols to denote specific aeronautical activities and facilities
3. site curtilages at least for military air-bases and leading airports.
4. harmonised terminology and typography commensurate with airfield importance or impact.
5. wider acknowledgement of (active and disused) airfields with distinctive records and histories.

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Answers to the question posed in Figure 1:

Map A: Wroughton was a military air-base built in the late 1930s with dispersed maintenance hangars.

Map B: Cranfield was built as a bomber base to Expansion standards and since WW2 has been a civil institutional aerodrome.

Map C: Doncaster originated in the 1930s as a municipal aerodrome and after WW2 was used sporadically for civil flying till closure.

Maps D and E: Bramcote was a grass-surface WW2 training airfield still active till the mid-1950s and subsequently converted to Army barracks and a motorway.

Appendix A

<i>UK airfields 1952-1973: generic descriptions on 7th Series maps</i>	<i>Year</i>	<i>Location and sheet number of first (or early) usage</i>
Airfield [unnamed]	1952	Shobdon (129, 395605)
[Named] Aerodrome	1952	Haverfordwest (151, 960190)
[Named] Airport	1952	Liverpool Speke, (100, 415835)
[Named] Airfield (generic brackets)	1953	Pershore (143/144, 975495)
[Named] Civic Airport	1955	West Hartlepool (85, 505285)
[Named] Municipal Airport	1957	Southend (162, 870895)
Airfield (Disused)	1958	Tain (22, 830820)
Aerodrome (Disused)	1959	Dallarchy (30, 365635)
Air Station (Admiralty) [unnamed]	1959	Henstridge (166, 750205)
Old Airfield	1959	Castletown (11, 215670)

⁸⁵ The author's cursory acquaintance with Dutch topographical maps suggests this aspect could bear fruit. A recent article by Alex Kent and Peter Vujakovic 'Stylistic diversity in European state 1:50,000 topographic maps', *The Cartographic Journal*, 46 (2009), 179-213, suggests that airfields have been under-researched as a landscape feature.

Airfield (dis) [abbreviated]	1960	Chipping Ongar (161, 585055)
[Named] City Airport	1960	Portsmouth (180/181, 670035)
Airfield (disused)	1962	Ashbourne (111, 195455)
[Named] Airfield (dis)	1962	Melton Mowbray (122, 750155)
Gliding Club House [unnamed]	1963	Sutton Bank (92, 515815)
RAF College	1963	Cranwell South (113, 015490)
[Named] Regional Airport	1965	Woolsington (78, 195715)
Aerodrome (disused)	1965	Charterhall (64, 765465)
[Named] Aerodrome (Private)	1965	Walney Island (88, 175710)
H [within circle]	1966	Penzance Heliport (189, 486313)
[Named] Gliding Club	1967	Long Mynd (129, 407917)
[Named] Airstrip	1971	Baltasound (1, 625077)

Appendix B

UK airfields 1974- 2013: generic descriptions found on 1:50,000 maps

	<i>Year</i>	<i>Location and sheet number of first usage</i>
RAE	1974	Llanbedr (124, 570260)
Royal Aircraft Establishment	1974	Farnborough (186, 860540)
[Named] Air Park	1974	Booker (175, 825910)
Airstrip	1976	Flotta (7, 341936)
Disused Airfield [note: inversion]	1978	Church Lawford (140, 445735)
Landing Strip [on a disused WW2 site]	1980	Ludham (133, 395195)
[Named] Air Station	1981	West Malling (188, 680555)
Airfield (Private)	1982	Lympne (189, 115355)
Aircraft Factory	1985	Hawarden (117, 350650)
Landing Strip (Private)	1993	Ashcroft (118, 620632)
International Airport	1991	Bournemouth Hurn (195, 115980)
RNAS [+ name]	1994	Yeovilton (183, 550235)
[unnamed]	1998	Shoreham (198, 205055)
Gliding Field	1999	Camphill (119, 180787)
[Named] Landing Strip	1999	Netherthorpe (120, 537803)
RAF [+ station name] Airfield (dis)	2001	Molesworth (142, 080775)
RAF [+ station name]	2002	Kinloss (27, 070630)
DERA	2002	Aberporth (145, 250495)
Air Terminal	2002	Barra (31, 705055)
Battle of Britain Flight	2006	Coningsby (122, 222565)
Glider Launching Site	2006	Kirton in Lindsey (112, 945970)
Airstrip (dis)	2010	Cherterhall (74, 765465)
[military] H	2010	Chetwynd (127, 725245)
Business Airport	2011	Peterborough Glatton (192, 190870)

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