“Soviet topographic maps of the UK”

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A preliminary study of the Soviet topographic maps of the UK and their sources
John L Cruickshank

At the end of 1996 David Archer circulated his now-celebrated sales catalogue of Red Army Maps of the United Kingdom. Suddenly many CCS members became familiar with the existence and appearance of the large number of maps of this country produced by the USSR. Like many other members, I bought items from this catalogue and puzzled over their features. Since then, a succession of progressively more detailed studies of the large-scale town plans of Britain and elsewhere in the World have been carried out. These have culminated in the publication of *The Red Atlas* by John Davies and Alex Kent. They have demonstrated that the sources used for the town plans were very diverse, and included not only a range of cartographic materials, but also written sources, and furthermore (particularly for the more recent plans) remote sensing data obtained from orbital satellites.¹

Yet while the town plans have thus received considerable attention, the Soviet topographic maps of the country, and their source materials, have been much less studied. Well over a decade ago Desmond Travers examined the Soviet 1:100,000 maps of Ireland, and went on to write an introductory account to the maps of the whole of the British Isles. Many of his observations are still pertinent, but with hindsight his general account can now be seen to have overlooked some important features and characteristics of the series as a whole.² The present study attempts to begin the process of updating this. It focusses on the maps at the scales of 1:50,000, 1:100,000 and to a lesser extent 1:200,000, and will not consider the small-scale maps at 1:500,000 and 1:1,000,000 which require their own study. Nor will it repeat the descriptions of the general characteristics and nomenclature of Soviet topographic maps that have been given by Davies and Kent, amongst others. It is based upon a limited number of sheets in private collections. These have provided extensive, but nevertheless incomplete, coverage of southern and northern England. Fewer sheets were available covering Wales and the English Midlands. A large number of sheets covering Scotland are known to exist, but very few of these were available for this study. The present account must therefore necessarily be considered provisional until

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such time as more extensive collections of these sheets have been examined.

By the end of the Second World War the Soviet Union was playing the role of a Great Power, alongside Britain and the USA, and as Britain’s pretensions to that status faded during the 1950s and 1960s, the USSR became one of just two states aspiring to political and military world-dominance. Mapping the world was a symbol and an assertion of the country’s status, even if many of the maps made were never publicly revealed, and were seldom (if ever) used in the field. There are clear signs that the idea of mapping Britain to Soviet standards was under consideration from the 1950s. In 1950 a 1:200,000 map covering Norwich and its hinterland was produced. Although its sheet-lines conformed to the standard Soviet system, its drawing specification was utterly non-standard, and indeed rather primitive. The justification for its making is now unclear, and it may simply have been a propaganda exercise. Nevertheless, since the First World War Russian and Soviet policy had always been whenever possible to prepare Cyrillic-script maps of potential areas of military action. During the 1930s, 40s and 50s successive editions of the principal Soviet officer-training manual in Military Topography recognised that this might not always be possible, and included example plates showing the appearances of various foreign maps. In the 1950s these plates included a British one-inch map with an abbreviated OS conventional signs table, and in 1957 the Military Topographic Directorate (VTU) of the Soviet General Staff produced a first edition of their manual giving complete tables of equivalent conventional signs on Soviet, British and American topographic maps.

In the early 1960s the presumption that Soviet troops might in some circumstances need to use foreign maps was abandoned. In the first instance, small- and medium-scale topographic maps of Britain were produced by some other East-bloc countries. These were substantially reliant on Bartholomew’s maps for their source material. Whether these had been truly independent initiatives by the satellite members of the Warsaw Pact alliance, or whether they were commissioned by the Soviets as feasibility studies, is presently obscure, but at the very least the Soviet authorities must have been aware of them.

The Soviets themselves seem to have

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3 Images of this map, with some others mentioned in this article, can be viewed on-line at http://redatlasbook.com.
4 VV Glushkov, EI Dolgov & AA Sharavin, Korpus Boennikh Topografov Russkoy Armii v Godi pervoy Mirovoy Boyni (Moscow, 1999), 143.
conducted some preliminary trials. For example, the Soviet 1:100,000 sheets of the Shetlands were initially compiled in 1957-58 from the post-war Popular Edition of Scotland of 1947-8, and subsequently revised from Seventh Series maps before they were printed and issued in 1964 (see figure 1). 1964 was the year the topographic mapping of Britain by the USSR took off. During that year over three hundred 1:100,000 sheets were compiled and printed. They covered the whole of Britain from the south coast of England to the Hebrides, Orkney and the Shetland Islands. A small part of the Antrim coast also appeared on sheet N-30-25 Саутенден (Southend, Kintyre). The sheet-lines were those based on the International Map of the World that were standard for all Soviet maps. The drawing specification likewise corresponded to the then-current Soviet standards. While the majority of the sheets of this series did not survive to become public after the break-up of the Soviet Union, because by then they had been superseded by later issues, a considerable number have nevertheless become available. In particular, many sheets from the area covered by IMW sheets M-31 and N-31 (England east of the Greenwich meridian, including Spurn, eastern Lincolnshire, East Anglia, Kent and East Sussex) have been preserved, as have those of Mull and Shetland. Subsequently, during 1965-67, this 1:100,000 series was used for the compilation of a 1:200,000 series of Britain. The surviving 1:200,000 sheets of this date carry compilation notes that explicitly state this relationship, and confirm the country-wide extent of the 1:100,000 series. In turn, the 1:200,000 series was used to prepare 1:500,000 and 1:1,000,000 maps. Each smaller scale series was issued slightly later than the series from which it had been generalised.

The compilation notes on the surviving 1:100,000 sheets from 1964 are detailed and very specific. These maps were all compiled from 1:63,360 maps of specified dates in the 1950s and very early 1960s. For coastal sheets, hydrographic charts of specified scales and dates were also used. Only the OS produced one-inch maps of the whole country during that time, and so the maps providing the source material for the 1964-7 Soviet compilations appear to have been early states of the Ordnance Survey One-Inch Seventh Series. None of the surviving sheets examined mention any use of the OS 1:25,000 Provisional Edition. I have not attempted to check the hydrographic sources, but I assume that these were British Admiralty charts, although some independent Soviet surveys also seem to exist. The compilation notes for two sheets are different. The 1964 editions of sheets M-31-1 Харлоу (Harlow, in Essex) and M-31-2 Колчестер (Colchester) each declare that they were derived not from 1" maps, but from 1:50,000 maps corrected to 1963. Since no British publisher at that time was producing 1:50,000 scale maps, it seems clear that for the area of these two sheets the Soviets had made their own 1:50,000 maps from an unspecified source, presumably as an

7 The present author hopes shortly to publish an account of the evolving characteristics of Soviet and Russian topographic maps from 1917 to the present.
8 For details of Soviet methods and procedures for the generalisation of maps at this time see: A.M. Komkov, S.A. Nikolaev & N.I. Shilov, Sostablenie u Redaktirovanie Kart, Chasti Pervaya i Vtoraya (Izdanie Voenno-Inzhenernaya Krasnoznamennaya Akademiya: Moscow, 1958), chapters 5-10.
experimental exercise.

In 1966, when the 1:100,000 series was complete and the subsequent processes of generalisation to smaller scales were well advanced, the VTU published the second edition of their manual of the conventional signs on Soviet, British and American topographic maps. It should be noted that similar editions were likewise published in the 1960s for a number of other countries. This makes clear that by then the Soviet project to map the world at topographic scales was well under way.9

When the Soviet maps of Britain first became public, the Ordnance Survey published a statement that they all breached OS copyright and should not be imported or traded without OS licence. ‘Technical examinations of examples’ had supposedly made this clear. I am told that this assertion was justified by the OS having recognised their own depictions of coastal sandbanks on some of the Soviet maps. Whether they had looked any further than Southampton Water and the Solent is unclear.10 Concerning the 1:100,000 series of 1964, and the smaller-scale series derived from it, the OS claim to be the data source was true: the compilation notes are perfectly clear about this. Nevertheless the maps had been entirely redrawn to a different drawing specification, and when they emerged in the 1990s the OS material concerned was already 30 years or more out of date. The passage of a further quarter-century has now made this material well over 50 years out of date, and so out of copyright. For the subsequent Soviet map issues the copyright question is much more complex.

A complete renewal of the Soviet topographic maps of Great Britain took place in the 1980s. This was preceded in 1979 by the production of 1:100,000 sheets of Northern Ireland, as part of a series covering the whole of the island of Ireland.11 For Britain, an entirely new series of 1:50,000 maps was begun in 1980, and production continued through 1981 and 1982 until the whole of England, Wales and Scotland had been completed. The maps of this series were not all produced in the same way, and only limited parts of the series have become public. In all, 240 of these sheets have emerged from Soviet stores and have entered public and private collections here. Almost all are within IMW sheets M-30 and M-31 (that is to say, England and Wales south of the 52° N parallel, or roughly speaking, a line between Fishguard and Felixstowe). North of this line only a group of twenty 1:50,000 sheets in N-31 covering coastal and off-shore

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10 Ordnance Survey Statement (signed by Robin Knights, Intellectual Property Manager), 10 September 1997. This document threatening litigation has now (September 2020) been removed from the OS website, but see https://s3.eu-west-2.amazonaws.com/redatlas/OS_Statement.pdf . It was sufficiently poorly drafted that the official names of the Soviet producer organisations were incorrectly given, and so was probably void and of no legal effect at the time it was issued.
11 Desmond Travers, op. cit, (2008). The 1:100,000 sheets of Northern Ireland were compiled from the OSNI 1° sheets of the early 1960s, updated to the 1970s using written sources.
areas of East Anglia have been revealed. The 1:50,000 sheets of the rest of the country are only known from their citations in the compilation notes of the subsequent smaller-scale derived series.

All the 1:50,000 sheets that have been revealed bear compilation notes indicating that various Ordnance Survey maps were the source materials used. Nevertheless these notes indicate that the sheets had been compiled in two different ways (see figure 2). The first group comprises sheets covering Oxford, Southampton and all the sheets between and to the east of these, including the London area. Of these, some were compiled directly from OS 1:50,000 maps of 1974, without later revision. Others were compiled from OS 1:50,000 maps of the same date, but their content had been updated (either wholly or in part) using OS 1:25,000 maps (see figure 3). In contrast, the sheets to the west of this group were compiled from OS 1:25,000 maps of various specified dates, with updated content added from more recent 1:50,000 maps. The two blocks appear to have been planned in order to compare the results of different compilation and generalisation procedures.

Over the last twenty (and more) years the missing 1:50,000 sheets to the north of the Fishguard – Felixstowe line have been much sought for, but despite occasional rumours that they might eventually appear in electronic form, they have not so far come to light. The re-imposition of cartographic secrecy in Putin’s Russia, and its increasingly effective enforcement, probably mean that there is now little chance that these maps will appear in the West at any time soon. It has generally been assumed that the failure of these maps to appear in

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12 Two further sheets, N-30-144-B (Bedford) and N-30-144-G (Royston), appear on indexes, but I have not seen them.
13 These are all the 1:50,000 sheets within 1:100,000 sheet M-30-10, and to the east and south of it.
14 It should be noted that 1974 is significant for being the date that the OS published the first tranche of its own 1:50,000 maps.
the West had been a chance effect arising from the uneven survival of the contents of former Soviet map stores after the break-up of the Soviet Union. However examination of the smaller-scale maps derived from the missing 1:50,000 maps strongly suggests that this assumption is incorrect.

During the 1980s the whole of Britain was covered with 1:100,000 sheets derived the Soviet 1:50,000 series. At first sight, these 1:100,000 maps appear to be a uniform series throughout England, Wales and Scotland. Each sheet states that it is derived from the corresponding (Soviet) 1:50,000 maps of 1980-82. However closer inspection of the sheets north of the Fishguard – Felixstowe line reveals that they differ from those to the south. To the north of this line, each sheet gives within its upper border a date or date-range for the ‘condition of the terrain’, which we might term the revision date of the materials used. To the south of the line, where the maps were derived from OS materials, this date is not always given. Furthermore, a detailed examination of the sheets of northern England reveals a number of errors and oddities indicating that Ordnance Survey materials were not used for this part of the country.

One such error appears on the 1984 Barrow in Furness 1:100,000 sheet (N-30-66, condition of the terrain 1973-1980), (see figure 4). A prominent feature of Barrow, right beside the shipyard, is the Jubilee Bridge which carries the A590 trunk road across the shallow channel between Barrow Island and Vickerstown on Walney Island. The bridge is a bascule (lifting) bridge, built between 1905 and 1908. The bridge and the road have been prominently shown on successive OS maps since it was first opened, yet it is entirely missing from the Soviet map. The roads at either side are likewise shown without any suggestion that they are main roads. This error is the more surprising, because the bridge is shown with accurate detail on the 1:10,000 Soviet Military-topographic town plan of Barrow compiled from unspecified sources in 1973 and issued in 1975.

Fig. 3. Compilation note from 1:50,000 sheet M-30-46-A, Southampton (Southampton), issued 1981. The text states: ‘Compiled from a map at 1:50,000 published in 1974, [Areas marked 1 on the diagram] corrected from maps at 1:25,000 published 1975-77.’

Fig. 4. Fragment of Soviet sheet N-30-66 Барроу-ин-Фернесс (Barrow in Furness), issued 1984, condition of the terrain 1973-80, showing the town of Barrow. Note the absence of any bridge between the town and Walney Island.

not checked for more recent legislation.

16 The possible exceptions are the Shetland Islands, Islay, and some (but not all) of East-Anglia, for which I have not so far seen 1:100,000 sheets issued in the 1980s.

On the same 1:100,000 sheet a different oddity appears at Hodbarrow haematite mine near to Millom on the Duddon estuary (NGR SD 173779), (see figures 5, 6, 7). The ore deposit here extended under the sea-bed, and to protect the workings as the sea-bed subsided, a long curving sea wall and dam was built to protect the mine. As long as the mine remained open, the area within the sea-wall was pumped dry. The mine closed in 1968, and the area within the sea-wall very slowly flooded. It has now become an RSPB wildlife reserve. The OS First Series 1:50,000 sheet 96 Barrow-in-Furness (print-code A, 1974) shows the site as dry except for two small ponds. The OS Second Series 1:50,000 sheet (print code A, revised 1980) shows the site fully flooded. The Soviet sheet shows neither of these conditions; the site is shown partially flooded. This does not seem to have been a drawing accident, since the outline of the part shown flooded corresponds to an existing subdivision of the site.

Fig 5 (top) Fragment of OS First Series 1:50,000 sheet 96 Barrow in Furness (edition A, 1974), showing Hodbarrow Mine at Haverigg before flooding.

Fig. 6. Fragment of Soviet sheet N-30-66 Барроу-ин-Фернесс (Barrow in Furness), issued 1984, condition of the terrain 1973-80, showing Hodbarrow Mine. Note partial flooding of the site.

Fig. 7. Fragment of OS Second Series 1:50,000 sheet 96 South Lakeland (edition A, revised 1980, major roads revised 1981) showing Hodbarrow Mine. Note complete flooding of the site.

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18 For the history of the site see http://www.engineering-timelines.com/scripts/engineeringItem.asp?id=876 .
This Soviet map appears therefore to show a condition of the terrain intermediate between OS revisions. To me the only plausible explanation for this is that the map was made from Soviet satellite imagery. Whether this might also explain the missing bridge in Barrow is less clear. It is perhaps possible that the bascule bridge was lifted when the photographs were taken, or perhaps more likely that a cloud or local pollution obscured the available images of the area. What seems quite certain is that no twentieth-century OS map was consulted before the Soviet map was signed off for printing.

Further errors can be seen on the adjacent Soviet 1:100,000 sheet, N-30-67 (Lancaster, 1984, condition of the terrain 1981), (see figure 8). The junction between the M6 motorway, the A65 and the A590 is shown in what appears to be a half-built condition. While the long slip roads from the M6 are shown quite plausibly, the roundabout over the motorway, essential for traffic to and between the A-roads, is absent. As represented, the junction is completely unusable.

The motorway here was opened in 1970, but heavy traffic volumes through this junction soon led to its reconstruction. It seems that the Soviet image records either the construction or reconstruction of this junction, not its working reality. Again, this was not compiled from any OS map. A further feature nearby that the Soviet map-makers clearly had difficulty understanding was the course of the (already derelict) Lancaster Canal as it passed through this area. The canal had been culverted where it was crossed by the M6, but the map-makers failed to spot the aqueducts at Crooklands and Stainton just to the north of this, and so drew impossible junctions between the canal and other watercourses there. They likewise failed to appreciate that the canal had formerly passed through a tunnel near where it had recently been blocked by the building of the A590. They therefore interpreted a minor road as a continuation of the canal and drew an entirely false course southwards across the A590 and the west coast main railway line to a termination at a disused railway junction. While poor mapping of disused canals might not have been important to a Soviet commander in the field, this is a further example of detail on the Soviet map that was not derived from the OS.
In many other places across the north of England motorway junctions are also poorly represented. Those drawing the maps seem to have had no intuitive ‘feel’ for how such junctions work, and for how different traffic streams passing through them are separated and merged. Even simple junctions in open countryside are erroneously shown. In crowded urban areas this problem becomes worse.

Leeds branded itself as ‘The Motorway City of the 1970s’, and even sponsored the publication of a book by the Cement and Concrete Association to celebrate the construction of its Inner Ring Road. During the 1970s the final elements of the complex motorway links between the city, its inner ring road, and the M1 and M62 to the south were still being completed. At the same time, the city’s rail connections were being rationalised in the light of changing rail traffic patterns following the Beeching cuts and coal-mine closures. The Soviet 1:100,000 map (N-30-81, Leeds, 1984, condition of the terrain 1973) shows most of the elements of this changing pattern, but fails to show their interconnections coherently (see figure 9). In particular, junctions are shown between incompatible elements, particularly where they cross at different levels. Thus the unlabelled radial road from Otley to Leeds (actually Woodhouse Lane, the A660) is shown to meet the inner ring road at a cross-roads. In reality the inner ring road here is in a deep trench, and the A660 crosses it on a bridge. To the south of the city centre there is a complex network of rail lines that includes a line built on a high viaduct by the LNWR to allow their trans-Pennine services through Morley to by-pass the junctions associated with Leeds Central railway station before wiggling directly into Leeds City station. By the date of this map Leeds Central station, prominently named on the map, had been closed following the Beeching Report, while Leeds City station, which is not named, is only shown as buildings beside the railway. The Soviet map shows part of the by-pass railway and its viaduct, but then shows a cross-roads junction between the viaduct and an urban street (Domestic Street, Holbeck).
Holbeck, which in fact passes below the viaduct) beyond which the railway viaduct is shown as a straight-line road joining others and without its wiggle into the station. Some common factors can be recognised here. Firstly, the source materials available to the map-makers did not make differences in the elevations of roads and railways obvious. This suggests a reliance by the map makers on high-altitude vertical photographs. Secondly, in making a 1:100,000 map of a crowded urban area such as central Leeds, choices have to be made during the processes of compilation and generalisation about what features to prioritise, and which to allow to be lost in the generalisation. On this sheet the Soviet map-makers tried to show a bit of everything, and so ended up with an incoherent jumble. Comparison with an OS map of the city might have assisted them in prioritising what to show. As it is, the eighteenth-century Middleton Railway (preserved by a student railway society and run at the weekends to entertain small children and their parents) is given greater prominence than the newly built M1 motorway which is shown as a single carriageway road, kinked where it crosses the preserved railway.

All these instances indicate that the Soviet topographic sheets of northern England compiled and issued in the 1980s were not derived from OS originals, but were primarily based on Soviet high-altitude (satellite) images. That the errors arising from this process went forward to appear on the printed maps strongly suggests that OS maps were not even used for the final proof-reading of these sheets. The implications of this are considerable. By the 1990s Soviet and Russian remote sensing technology had reached the point that it could be used for extensive topographic mapping of the USSR itself. A decade earlier, the 1:50,000 mapping of the UK seems to have represented a significant trial stage in the development of this technology. The maps produced of southern England using different variants of conventional copying techniques could be compared to those produced from satellite images. That the area mapped by copying was only a

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20 There are many other errors and inadequacies in the representation of Leeds on this map. These include the labelling of the M621 as the M62, and the placing of a station symbol at Marsh Lane. That station was closed in 1958. The Soviet 1:10,000 town plan of Leeds (4 sheets, compiled 1971, printed and issued 1972) incorporates some material from satellite images, and was made before the M1 had been extended into the city centre, but the viaduct by-passing Leeds Central station is shown correctly, as is the A660 bridge over the inner ring road. There are however different errors on this 1:10,000 town plan that also suggest mis-reading of high-altitude images: see John L Cruickshank, ‘Military Mapping by Russia and the Soviet Union’ (in) Mark Monmonier (ed.), The History of Cartography, volume 6, Cartography in the Twentieth Century (Chicago, 2015), 932-942.

21 In 1999 it was stated that [Russian Federation] maps at the scales of 1:10,000 and 1:25,000 were still generally made by conventional aerial photographic survey, but maps at the scales of 1:50,000 and smaller were made using photographic images from satellites. A.V. Dontsov, Kartografirovanie Zemel’ Rossi: Istoriya, Nauchnie Osnovi, Sostoyanie, Perspektivi (Moscow: Kartgeotsentr-Geodezizdat, 1999), 205. The number and capability of Russian orbital platforms substantially declined after 1993, so I interpret this to be a statement of the situation around the end of the Soviet period. Under V.V. Putin’s leadership Russia’s satellite programmes and capabilities have sharply recovered once more.
small proportion of the whole country suggests that the area mapped from satellites may itself have been subdivided in order to trial different variants of the techniques being developed. In the absence of the missing 1:50,000 sheets this may have to remain a matter for speculation. Nevertheless detailed examination of the sheets covering Scotland may yet prove revealing. It certainly must not be assumed that all the sheets of Scotland were made in the same way as those of England.

In any case, whatever the details of the Soviet project of the 1980s, the Ordnance Survey claim to copyright in the Soviet topographic maps produced from 1980 onwards is unsustainable north of the Fishguard to Felixstowe line. 

As in the 1960s, the 1:100,000 sheets of the 1980s were used to compile corresponding 1:200,000 sheets of both Britain and Ireland, which in turn were used for the compilation of smaller-scale maps. The known sheets are dated from 1985 to 1987. Although it is assumed that this 1:200,000 series was completed, since derived 1:500,000 map sheets are known, collections of the maps at this scale often comprise mixtures of sheets from the 1960s and 1980s, and are often incomplete. Examples of many sheets are difficult to find; for example, I have only seen two of the Irish sheets.22

There are some elements of topographic maps which cannot be registered using remote sensing technology. Most obviously, place-names and road numbers cannot be sourced from high-altitude photographs. Some other source has to have been used. A brief comparison of one 1964 1:100,000 sheet (unfortunately including a very large sea area) with the same sheet in the 1984 edition suggests that the place-names could have been copied from one edition to the next. While there are small shifts in the positions of most minor place-names, the same names appear in roughly the same places on both editions.23 However this tells us nothing about sources for the place names shown. And unless differences can be found in the names recorded on the two editions, no firm conclusions can be drawn about whether additional or different sources were used in the 1980s. It would of course be fascinating to know whether the place-name sets on the missing 1:50,000 sheets were limited to those appearing on the older 1:100,000 sheets.

Soviet topographic maps routinely show population data for towns by small numbers immediately below the place-name. Accordingly, the Soviet maps of Britain provide this information. In addition, the Soviet 1:50,000 maps of southern England also differentiate towns with more than 50,000 inhabitants (for which the building infill is orange) from those with fewer (for which the infill is in grey).24

22 N-29-XXVIII (Ennis, 1985). N-29-XXXIV (Limerick, 1985). Note however that these 1:200,000 sheets of Ireland were compiled directly from the Irish 1:127,260 maps, not from the derived Soviet 1:100,000 sheets.

23 Comments based on 1:100,000 sheet N-31-73 (Withernsea). Examples of sheets N-31-136 (Leiston) and M-31-1 (Harlow) are known in both editions, but for each of these the component 1:50,000 sheets were compiled from OS maps.

24 This distinction is not a standard feature of Soviet 1:50,000 maps, so the English sheets carry a note in the right margin explaining this.
This creates some contrasts that to us seem disconcerting. Thus, on sheet M-30-46-A, *Southampton*, the buildings of Southampton itself (population 213,000) are shown in orange, while those of Eastleigh (population 45,3 thousand) are shown in grey. On sheet M-30-24-B, *London South-West*, Harmondsworth, on one side of Heathrow Airport, is shown with orange infills, while West Bedfont, on the other, has grey infills. It should be noted that while census data for Britain is freely available, it does not routinely appear on OS topographic maps.

A further additional element also appears on some of these maps. Desmond Travers pointed out that a few of the Soviet sheets of northern England and of Scotland include data on motorway surfaces that he assumed to be the result of ground reconnaissance. For example the width and surface material of the M62 motorway is recorded at two places on sheet N-30-91 (Liverpool, 1986). He also recognised a small number of sheets with data on the materials and dimensions of bridges, however seven of the ten bridges he identified in England with such data were in the university city of Oxford. While he felt that this data might have been derived from ‘air photo appreciation’, it seems more likely that this information was likewise the result of ground reconnaissance, perhaps by a visiting Russian academic.

The showing of place names, road numbers, population figures, and occasional ground reconnaissance data all indicate that various written sources were used in the compilation of the Soviet topographic maps of Britain, even though cartographic sources seem not to have been used for England north of the Fishguard to Felixstowe line. Whether the compilation of the sheets still further north used the same procedures remains to be established. Travers noted that the Gaelic place-names of the west of Ireland had been phonetically recorded in Cyrillic script, and felt that this had been done well. How well this was done in Scotland and the Western Isles requires investigation.

A prominent feature of all Soviet topographic maps is their security classification. The default security classification of any Soviet topographic map was ‘Secret’ (Секретно). This classification applied to all accurate maps of the USSR itself and of the other Warsaw Pact nations. In contrast, most topographic maps of western countries, including Britain and Ireland, were only classified as ‘For official use’ (Для служебного пользования). This presumably reflected the derived character of the content of these maps. Higher security classifications, of course, also existed. Their existence was itself secret, but by common repute an upper tier exists called ‘Absolutely secret’ (Совершенно секретно). The existence

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25 Travers noted such data for the ‘E33’ (M6) on sheets N-30-117, N-30-142 and N-30-143, and for the M11 on sheets N-31-133 and M-31-1. In Scotland he noted equivalent data for the M90 on sheet O-30-138 (*Kirkcaldy*).


28 It is therefore significant that the Soviet Military Topographic Town Plans of Britain were classified as ‘Secret’, rather than ‘For official use’.
of such tiers was revealed most explicitly after the fall of the Berlin Wall and the opening of the East German security archives and stores. In the German Democratic Republic the equivalent of ‘Secret’ was ‘VVS’ (Vertrauliche Verschlußsache), while the higher tier was ‘GVS’ (Geheime Verschlußsache). In addition to the many ‘VVS’ topographic maps, numerous maps classified as ‘GVS’, usually those with additional politically or strategically sensitive information, became public after the reunification of Germany.\(^{29}\) To my knowledge, while very many Soviet maps classified as ‘Secret’ have become public since the break-up of the USSR, no Soviet or Russian maps classified in any higher tier have done so. The nature of the missing 1:50,000 maps of Britain, as the primary maps created by a highly-secret space-based experimental mapping programme, almost certainly required them to be classified in a higher tier, and thus required them to be stored in more secure facilities. Their higher security classification is the most likely reason why we have never seen them, and may never do so.

In conclusion, the Soviet topographic maps of the United Kingdom merit much closer attention than they have so far received. They do not have a uniform basis. Their source materials illuminate the remote sensing and imaging capabilities of the USSR during the 1970s and 1980s. On the one hand this enables an appreciation of the longer-term evolution of these technologies in the Soviet Union and Russia. On the other, and closer to home, the Ordnance Survey claims to copyright over the content of these maps are only valid for the southernmost part of England and Wales. For the bulk of the country these maps provide an image of the nation that is independent of any other survey. They should be appreciated as such.

The implications of this are not trivial. The Ordnance Survey’s blanket claim to copyright in all the Soviet maps of the UK now appears to have been not only mistaken, but actually harmful to Britain’s national interest. By declaring that these maps were all derived from OS material, based on what was (at best) a slap-dash and incomplete investigation, they have inhibited the detailed evaluation of these maps for over twenty years. As Russia has steadily become more ready to act as a hostile power, it has become clear that its actions have been facilitated, sometimes actively assisted, by the casual actions, or inactions, of numerous government and private agencies.\(^{30}\) The Ordnance Survey must be included in the list of such agencies. Now that we appreciate that a hostile power has twice prepared its own topographic mapping of the whole of our country, and knowing that that power has the present capability to revise and improve on its satellite-based mapping of forty years ago, we must assume that Russia has by

\(^{29}\) Examples of maps and documents classified as GVS are cited in John L Cruickshank, “‘German-Soviet friendship’ and the Warsaw-Pact mapping of Britain and Western Europe”, Sheetlines 79 (2007), 23–43. See also Gerhard Fasching (ed), Militärisches Geowesen … der DDR von den Anfängen bis zur Wiedervereinigung (Wien: Bundesministerium für Landesverteidigung, 2006).

\(^{30}\) There is a large literature on this topic, much of it written by highly engaged individuals. For a recent relatively dispassionate account see Gordon Corera, Russians Among Us; Sleeper Cells, Ghost Stories and the Hunt for Putin’s Agents (William Collins, 2020).
now prepared updated and improved military maps at 1:50,000 (or larger) of the whole of this country from their own remote sensing and intelligence data. The errors in the maps that I have identified must have been picked up by the Russians themselves when they obtained newer images, became more used to motorways in their own country, and permitted many Russian citizens to live and travel legally in this country. It would be fascinating to be permitted to see the current Russian military-topographic maps of the UK. It’s unlikely to happen soon.

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I was surprised to see how differently the Explorer (sheet 183) and Landranger (sheet 167) depict the village of Blackmore, Essex (TL 603 019). These images are taken from the current mapping on the OS website at https://osmaps.ordnancesurvey.co.uk/ and can thus be assumed to be the latest version.

Note, for example, how the names Wells Farm and Redrose Farm differ. Also, that the 1:50,000 map shows a roundabout in the village centre, the spot height of 75m on the road to the south and includes the name Jericho Priory. The 1:25,000 map omits all these, but has a 73m spot height.

One would expect in these days of a single MasterMap database that the information would be consistent across both scales.

Incidentally, the village is something of a hidden gem. Not on the tourist trail, but a real delight of local traditional pastel-coloured pargetted and weatherboard cottages.

*John Davies*