

'WHERE'S MY EMBASSY, COMRADE?': AN EXAMINATION OF THE 1981 SOVIET MILITARY CITY PLAN OF CANBERRA

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Abstract: During the Cold War, the Soviet military produced secret mapping of over 2000 cities around the world. Detailed plans are known to exist for five Australian and three New Zealand cities. The single-sheet 1:25,000 map of Canberra is described here, and the descriptive marginal texts fully translated for the first time. The source materials are identified, and the quality and known errors of the mapping discussed.

INTRODUCTION

The story of Russian topographic mapping in the 20th century – at least what we know of it, despite ongoing secrecy – is remarkable (see, e.g. Cruickshank, 2015). After the Bolshevik Revolution of 1917, the new Soviet regime placed all mapping activities under state supervision, and promulgated standardised specifications, including a range of new metric scales (1:10,000, 1:25,000, 1:50,000, 1:100,000, 1:200,000, 1:500,000 and 1:1,000,000) replacing verst-based Imperial Russian scales.¹ However, it was only after the end of WW2 that nationwide – and indeed world-wide – coverage was really taken shape. Mapping of the USSR at a scale of 1:100,000 in 13,133 sheets was achieved by 1954. These maps were then used to derive smaller-scale mapping at 1:200,000 and 1:500,000. Meanwhile work progressed on a 1:25,000 series, for which complete coverage of the USSR (in some 200,000 sheets) was achieved in 1987, and mapping at 1:10,000 was also conducted for important areas (Davies & Kent, 2017, 4-11). For areas outside the USSR, besides the commercially-available bilingual *Karta Mira* series at 1:2,500,000, secret military mapping occurred at the same scales and in the same style as mapping of the USSR itself. Worldwide coverage was achieved at 1:1,000,000 and 1:500,000, and possibly also at 1:200,000, with the more strategic areas, such as Western Europe, the Middle East, and parts of Asia, mapped at 1:100,000 and 1:50,000.

These topographic series used a standardised and highly detailed symbology (e.g. see East View Press 2005). In addition, the 1:200,000 series was back-printed with a *spravka* (справка = information) – a detailed 1000-2000 word description of the terrain, vegetation, geology, soils, climate and human geography of the area depicted. Davies & Kent (2017, 215-218) provide a translation of a *spravka* for the sheet covering Cambridge, UK, while East View Press (2003, 2014 & 2015) has published books of *spravka* translations from the 1:200,000 sheets covering Afghanistan, Ukraine, and Lebanon and Syria.

Besides the topographic series at the seven scales noted above, the Soviet military also produced city plans for at least 2000 cities in over 130 countries around the world (**Fig. 1**).² These plans are generally at scales of 1:10,000 or 1:25,000, although some sheets were produced at 1:5000, 1:15,000 or 1:20,000. Unlike the topographic series, which used standardised lat./long. sheet lines based on subdivisions of the International Map of the World (IWM) system, each city plan was centred on its subject city, and sheet sizes varied as required. Many cities required more than one sheet for complete coverage, 2 or 4 sheets being most common, with Los Angeles, on 12 sheets, being the largest known.

Most city plans have a compilation note, indicating that they were compiled from existing local sources, including topographic and tourist maps and other publications. For cities beyond Europe and North America in particular, detail was also derived from imagery from the USSR's *Zenit* satellites, and misinterpretation of this imagery explains a number of errors discovered on maps, such as trenching for new pipelines being mapped as roads under construction (Davies & Kent, 2017, 53-57).

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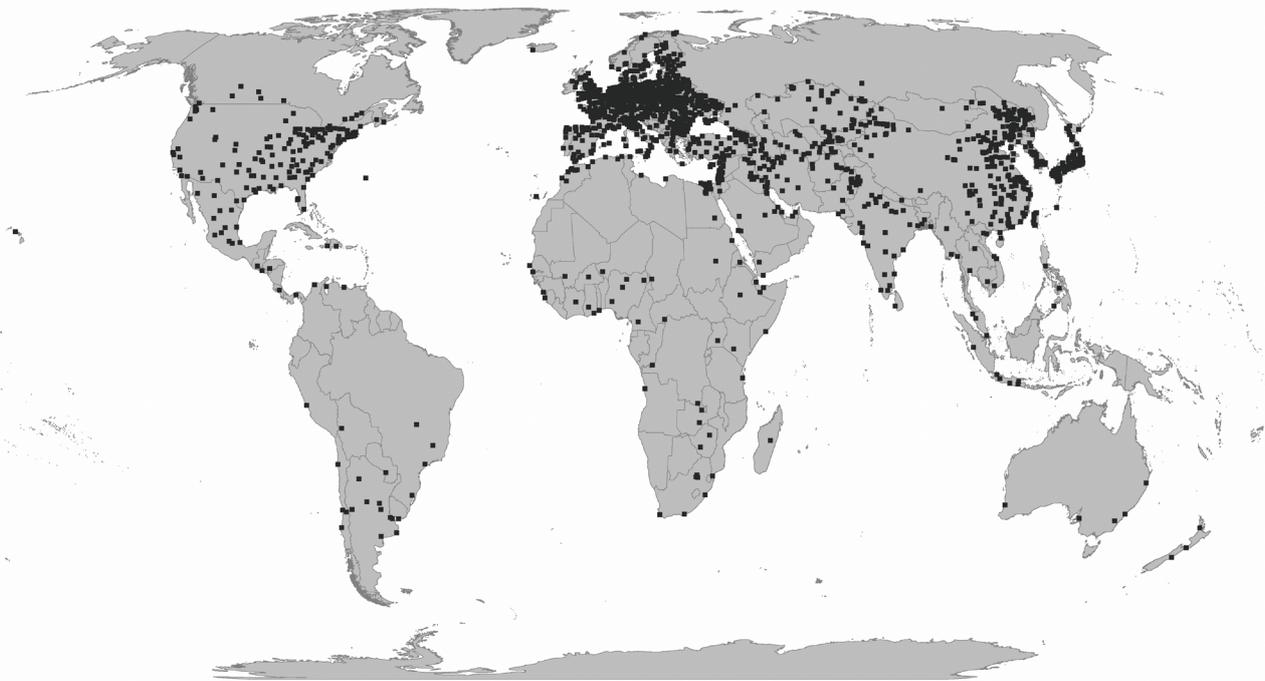


Figure 1. Soviet military city plans: known global coverage. (courtesy Martin Davis)

No doubt some information was supplied by Russian diplomats or agents on the ground, but the inclusion on many maps of obsolete features that were easily checkable, suggests that:

- a) the compilers of the maps in the USSR were working mechanically and not critically, and were not themselves familiar with the places they mapped;
- b) observational information supplied by local agents was not a dominant source, and field checking was limited if not non-existent; and
- c) the maps were not primarily intended to be a point-in-time snapshot of a city, nor necessarily for directing military invasion (per the western public's popular perception), but rather for a variety of informational, military, economic, diplomatic and administrative purposes. Thus the maps were visual, spatially-based compendia of geographic information.

The city plans include only a very brief legend. Because the Soviet mapping symbology was standardised, a symbology manual was issued and taught to troops, and once learned, a user could pick up a map of anywhere in the world, and immediately understand that city's geography. Maps also included an alphabetic index of streets, a numbered list of important buildings and other 'objects', and, like the 1:200,000 topographic maps, a *spravka* – a 2000-3500 word descriptive summary of the physical and cultural characteristics of the city and its surrounds.³

While Soviet mapping has received reasonable attention in the academic and popular literature (e.g. see the reference lists in Cruickshank, 2015 & Davies & Kent, 2017), few studies of individual city maps have been made. These include those for the 1:200,000 topographic map and 1:10,000 city plan of Cambridge (Davies & Kent, 2017, 211-18) and Oxford (Davies & Kent, 2020). Therefore, to offer a perspective of Soviet mapping of a city almost antipodean to these examples, the present paper gives a description and translation of the texts on the Soviet city plan of Canberra.

SOVIET MAPPING OF AUSTRALASIA

Soviet military topographic mapping of Australia and New Zealand exists at the 1:1,000,000 and 1:500,000 scales;⁴ if coverage was also published at larger scales, its existence remains secret. City plans, all at 1:25,000 scale, are known to exist for Adelaide (2 sheets, 1981), Brisbane (4 sheets, 1985), Canberra (1 sheet, 1981), Perth (2 sheets, 1985) and Sydney (4 sheets, 1984); and for Auckland (2 sheets, 1979), Christchurch (2 sheets 1979) and Wellington (1 sheet, 1978).⁵ Later editions (or possibly simply re-printings?) may also exist for Canberra (1984), Sydney (1985), Christchurch (1984) and Wellington (1979).⁶ As mentioned (see note 2), no coverage for Melbourne is known to exist, but it seems incredible that the Soviets did not produce it; it probably just hasn't yet come to light in the West.

THE 1981 SOVIET MILITARY CITY PLAN OF CANBERRA

The National Library of Australia (NLA) holds a digital scan of the 1981 1:25,000 Soviet military city plan of Canberra on DVD, the scan being produced by East View Cartographic of Minneapolis *c.*2010 (**Fig. 2.**).⁷ The Library also holds a paper copy printed from the scan, at a slightly reduced scale (1:26,250).⁸

The original map itself is portrait format, 96 × 84 cm on a sheet of about 130 × 94 cm (the NLA's paper plot is slightly smaller at 92 × 80 and 127 × 90). The map was compiled in 1981 and printed in Tashkent in December of that year. It is printed in 10 colours: light blue, green, yellow, orange, purple, magenta, grey, blue, brown and black, as shown by the colour registration squares on the left-hand side (**Fig. 3.**). Like most Soviet mapping, the map is on a Gauss-Krüger conformal cylindrical traverse projection. The map covers an area of 21 km east-west and 24 km north-south (and thus an area of 504 km²), and the extent conforms to a rectangular Gauss-Krüger grid of 21 × 24 1000-m squares. To facilitate feature location, the squares are labelled horizontally outside the neat line with the numbers 1 to 21, and vertically with 24 of the first 26 letters of 33-letter Cyrillic alphabet (i.e. A to III, but excluding Ё and Ъ to avoid confusion with their respective immediately preceding letters E and I).

Outside this primary Gauss-Krüger grid is a graticule frame indicating latitude and longitude in minutes, with associated tick marks inside the neat line. The frame graticule is subdivided to show 10-second intervals by small dots. Latitudes and longitudes at 5-minute intervals are indicated with long tick marks extending from the frame through the Gauss-Krüger index to meet the ticks inside the neat line, and labelled with their numerical values: 149°05' and 149°10' East on both the top and bottom margins, and 35°15' and 35°20' South on both the left and right margins.

Because Canberra falls near the eastern edge of its Gauss-Krüger zone (zone 25, 144°E-150°E), a secondary 1000-m Gauss-Krüger graticule, with tick marks and numerical values for the next zone to the east (zone 26, 150°E-156°E), appears on the outside of the lat./long. graticule frame. This simplifies the calculation of distances from points on the Canberra map to points on a map on that zone.

As with all other Soviet military city plans, the Canberra plan is a combination of a city street map, and a topographic map. It shows, names and indexes streets, but also shows contours, spot heights, survey marks, vegetation, hydrology, and important infrastructure such as powerlines and radio masts.

The map is **titled** “Канбеппа” (Kanberra = Canberra). All placenames are rendered in a letter-by-letter transcription, rather than purely phonetically, allowing a user to use the map to help read and pronounce local road signs.⁹ Beneath the title is “(I-55-119, 131 (Ю.П.))”, being the sheet numbers of the two Soviet 1:100,000 topographic map sheets onto which this city plan falls: I-55-119 & I-55-131. However, it is not known whether the Soviets actually produced any 1:100,000 mapping for Australia, or if this is simply a standardised locator reference. “(Ю.П.)” is an abbreviation for ЮЖНОЕ Полушарие (Yuzhnoye Polushariye = Southern Hemisphere), because the IMW-based sheet numbering system is otherwise identical north and south of the equator. Similarly Australia's 1:1,000,000 and 1:250,000 mapping sometimes uses I55 or I55-16 for the respective sheets that cover

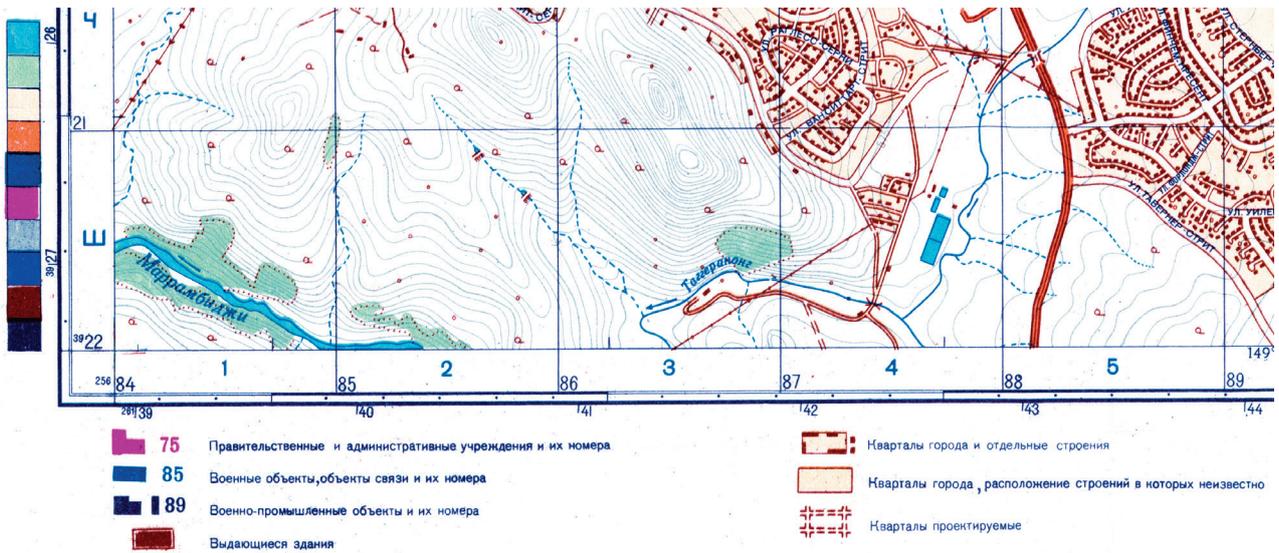


Figure 3. Colour registration squares, map frame (with two Gauss-Krüger graticules as well as lat./long), and legend. Note also the minor roads in the suburbs depicted narrower than the feeder roads, and the direction arrows on rivers.



Figure 4. Misidentifications in Griffith: #66 and #103.

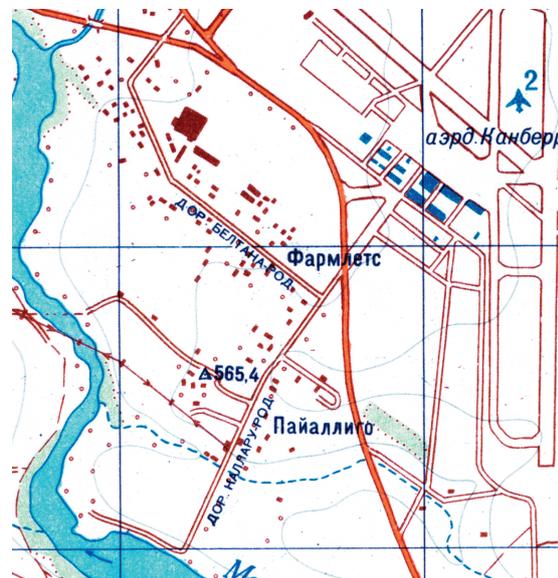


Figure 5. 'Farmlets' as a toponym at Beltana Rd in Pialligo.

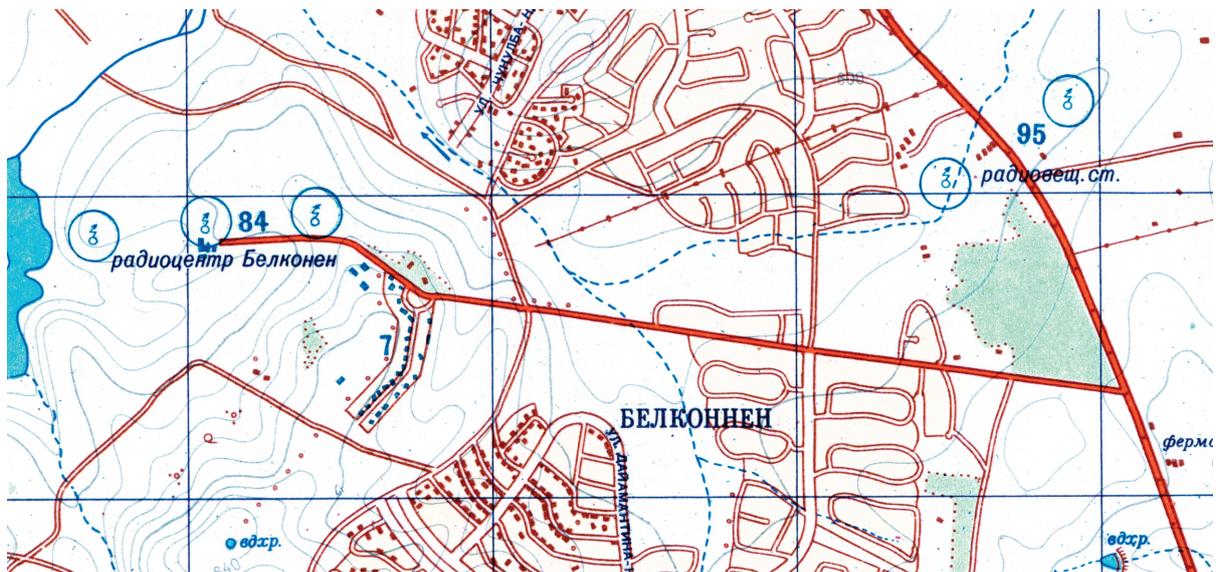


Figure 6. Attempt to reconcile the road to Belconnen naval radio station, (no longer extant by 1977) and new suburb of Kaleen (named Belconnen on map). Note also the military and commercial radio masts identified (#84 & 95).

Canberra, only prefixing these sheet numbers with an 'S' (SI55 or SI55-16), when it is necessary to distinguish them from their Northern Hemisphere equivalents NI55 and NI55-16 (covering part of the North Pacific Ocean east of Japan). Beneath the sheet numbers is the statement "Издание 1981 г." (Izdaniye 1981 g[od] = 1981 edition).

Directly above the top left edge of the map frame is a description of the area covered by the map: "AUSTRALIA Canberra metropolitan area & state of New South Wales". The map includes not only Canberra city, but the adjacent urban area of Queanbeyan, NSW as well.

As with all Soviet mapping, whether topographic maps or city plans, a **print code** appears inside and at the extreme right of the bottom edge of the map's outer frame. The code for the Canberra plan is "И-25 XII 81-T". И indicates a city plan; 25 is the job number; XII 81 is the print date (December 1981); and T is the location of the printing facility, in this case Tashkent in what was then the Uzbek S.S.R. For more information on print codes see Davies & Kent (2017, 223-224).

Immediately beneath the map are, from right to left, a legend, scale, and compilation information.

The **legend (Fig. 3.)** is minimal, showing only seven symbols, four being differentiated by colour:

- Government and administrative agencies and their numbers [in magenta]
- Military facilities, communications facilities and their numbers [in blue]
- Military-industrial facilities and their numbers [in black]
- Prominent buildings [in brown]
- City neighbourhoods and individual buildings
- City neighbourhoods, where the location of buildings is unknown
- Projected/proposed neighbourhoods

The **scale** is given as both a ratio (1:25,000) and a statement (1 cm = 250 m), above a scale bar representing 2 km, with the right-hand kilometre divided by ticks into 500 m and 250m intervals, and the left-hand kilometre further subdivided into 50 and 100 m intervals. Beneath the bar is a contour statement: "Solid contours drawn every 5 metres."

The **compilation information** states:

- Compiled from 1:50,000 maps dated 1960 & 1967
- with the use of [other] materials dated 1969, 1974, 1977.

The first line refers to the first (1961) and second (1967) editions of the Australian 1:50,000 topographic map sheet Canberra 8727-III, produced by the Royal Australian Survey Corps (RASvy) as part of series R753.¹⁰ A third edition was not produced until 1986. Neither the NSW *1:31,680 Topographic Series*, published from 1958 to the late 1970s, nor the metric 1:25,000 series which slowly replaced and expanded it from 1968, had covered the Canberra area by 1981. Likewise, the relevant sheets of the NSW *1:25,000 Orthophotomap* series – Canberra 8727-III-N, Tuggeranong 8727-III-S and Hall 8727-IV-S – which included a topographic overprint of a green orthophoto base, were only issued in 1980, too late to inform the Soviet plan. The 'other materials' cited on the Soviet plan therefore likely include sheets from the ACT's *1:10,000 Planning Series*, particularly the block of 12 sheets from 200-588 to 216-606, which were issued c.1977, and which displayed 5m contours. The 1969 material may have been either the Department of the Interior's 12-sheet *Canberra* cadastral map, or more likely an outdated edition of its *Tourist Map of Canberra*, produced near-annually and published by the UBD up to 1970.¹¹ The 1974 and 1977 material may well be editions of UBD's own subsequent annual map *UBD Australia wide tourist map Canberra*.

At the bottom of the sheet are, on the left, a four-column *spravka* above a four-column numerical listing of 107 keyed locations, with a seven-column street index on the right.

Spravka

The *spravka* is probably the most interesting part of Soviet city maps. A comparison with the translations of the Cambridge and Oxford *spravkas* (Davies & Kent, 2017 & 2020) shows that they follow closely to a template in both content, order, and linguistic style. Sentences are generally succinct, lapsing into listings in places. The paragraphing of the original *spravka* is retained in the translation below, even though this makes for dense reading.

GENERAL INFORMATION. Canberra – capital city of Australia, administrative centre Federal Capital Territory. Important business, scientific and cultural centre of the country. Railway station, automobile road network, airport, tourist centre. Located in the south-east of the country, in the Molonglo River valley (tributary of the Murrumbidgee River), 120 km west of the Pacific Ocean coast. City population 235 thousand people (1978). Area approx. 140 km².

SURROUNDINGS OF THE CITY. Canberra is located in Molonglo River valley and on the slopes of the surrounding hills and mountains. The river valley is wide (5 km), its bottom is flat. Hills (relative height 200 m above valley) have open tops and gentle slopes. Mountain crests (700-900 m high), tops round or flat, average slopes and steep curves (10-15°), dissected by gullies and streams. Medium-height mountains cover the approaches to Canberra from the west (15 km) and east (30 km). In the west the mountains have an altitude of 1000-1900 m. The mountain ridges have narrow rounded peaks, with slopes of medium steepness. In the east, the mountains (Great Dividing Range) have an altitude of 1000-1600 m with wide crests and flat tops. River valleys in the mountains are mostly narrow (0.1-0.8 km). Soils in the valleys are loamy; the slopes of hills and mountains are of gravel-loam and gravel-sandy loam. In the mountains, rocks lie under sandy clays and sandy loams and rise to the surface at the cliffs. Water obstacle on the approaches to Canberra from the west is the Murrumbidgee River. Width up to 80 m, depth up to 1 m, flow velocity 1-5 m/s. Other rivers near Canberra are small, their width to 30 m (Molonglo River to 50 m), predominant depth 0.4-0.6 m. River banks are high in the mountains, and low in flat areas. Riverbeds are rocky-pebble in the mountains, and sandy-pebble on the flat areas. On the Molonglo River in the city was built the concrete Scrivener Dam (#17 on map), 318.5 m long and 14.8 m high, above which the Burley Griffin reservoir was formed. In Canberra's region there are 8 bridges on the river. Dams have also been built on many other rivers, forming reservoirs above. The largest is Burrinjuck on the Murrumbidgee River (55 km NW from Canberra) – 1032 million m³. Highest water levels in the rivers are between October-February. At this time water levels rise 3-5 m (max. to 10 m) above low water. Forests in Canberra are located on the slopes of hills and mountains. They are mostly planted pine forest, with a network of firebreaks (width 2-5 m). A large area is covered by bush and savannah – representing a combination of grassy vegetation (mainly cereals) with individual trees or groups of trees (eucalyptus, acacia, banksia), between which grow shrubs. Predominant tree height – 15-30 m (max. 45m), shrubs 1.5-2.5 m. There are many orchards in the area. The road network around Canberra is well developed and allows mechanised transport throughout the year in many directions. Highways have two separate carriageways, each 9 m wide. Surface is asphalt or asphalt-concrete. Main roads, covered with asphalt, lane width 7.2 m, total width 10.4 m. Other roads are gravel or crushed stone, lane width 3.7-6 m. In some places dirt roads are improved by gravel. Dirt roads on loamy soils are soggy during rain periods, and become difficult to pass, especially for wheeled vehicles. Road bridges are made from reinforced concrete and metal. Their carrying capacity on highways and main roads is 50-80 t; on other roads 20-25 t. The area around Canberra is sparsely populated. There are only small farms consisting of one or more 1-2 storey brick or wooden farmhouses and farm buildings. Most of the farms have electricity and sewerage systems. Some use water from wells or bores. The climate of the Canberra region is subtropical continental. Rainfall (to 600 mm annually) falls mainly between October and February. From the air Canberra is recognised by its layout between the Molonglo River valley and Murrumbidgee River (6.5 km west from the city), Lake George (27 km to the NE), also by the typical layout of urban blocks. Mines for the extraction of iron ore, lead, zinc and copper can be used as shelters in the vicinity.

URBAN AREA is divided by the reservoir Burley Griffin (area 72 km², length 11 km, width 800 m, depth 4 m) into two parts (north and south), connected by two road bridges. Canberra consists of functional zones (administrative, business, training, commercial etc.) separated from each other by extensive parklands and open spaces. In the middle of each zone is a square from which lead several radial roads interconnected by roundabouts [or: circular or ring roads?]. Between these quarters the area

is mainly landscaped, in some places with a rectangular layout and sparse development. Main and through-roads in Canberra are wide (to 60 m) asphalt roads; often arranged like freeways (two carriageways with a central dividing strip). Other streets are much narrower and mainly asphalted. Houses predominately one or two storey brick (cottage type), with gardens. In new areas and in the centre are many 5-10 storey apartments built of stone, concrete and glass. The administrative zone of Canberra is on the southern edge of reservoir Burley Griffin, in the region of Capital-Hill (H-9, 10). Here are located: the Parliament (#16), the residences of the Governor-General (#86) and the Prime Minister (#87), numerous ministries, many diplomatic representatives (#26-30, 32-41, 43, 46-63, 65, 70-83), Government Printing Office (#90); law court (#103); General Post Office and central telegraph office [Telecom Australia?]. Part of the administrative and most business institutions of the city are located on the northern edge of the Burley Griffin reservoir, in the region of Civic, City (K9-10). Here you can find numerous companies (#11-13), [diplomatic] representative offices (#42, 44), reserve bank (#3), law court (#102). An industrial zone (#9) is in the SE part of the city; some enterprises on the west. Canberra is a very green city with many parks, gardens, squares, there is a botanic garden; trees line the main streets.

Canberra – important cultural centre of the country. Here is Australian National University (#104) with a number of faculties, and the institute of higher scientific research [Institute of Advanced Studies] (research in the field of physics, including nuclear chemistry, economics, history, medicine, and other sciences),¹² Academy of Sciences (#1), university and technical colleges, laboratory complex for scientific and industrial research [CSIRO] (#14), including the departments of computer engineering, e[n]tomology,¹³ land management, etc., the Bureau of Mineral Resources and research institutes of anatomy and forestry. The largest observatory in the country and the southern hemisphere is “Mount Stromlo”; National Library. In Canberra are three military schools including the officer training school [i.e. Royal Military College, Duntroon] (#107), command and staff college, and the air force college [RAAF Staff College, RAAF Base Fairburn]. On the eastern outskirts of Canberra are two military training grounds.

INDUSTRIAL AND TRANSPORT OBJECTS. Canberra's industrial importance is low. The largest industry is electronic computers for the military, scientific research and government agencies. There are also brickworks (#8) and sawmills (O-12), and small enterprises for food and light industries, car repair and mechanical workshops. The city has about 200 warehouses (inc. #88) for various purposes.

From Canberra trains go to Goulburn and Bombala. The city is served by the Canberra passenger and freight station (#92) and Queanbeyan passenger station (#93). The total length of the sidings at Canberra station is 2 km; the station has a turntable and warehouses.

Canberra's airport (#2) is a military and civilian airport. It has two asphalt-concrete runways; the longest is 2682 m. Near the airport there are 4 group parking areas for planes, two hangars, munitions depots, fuel, and residential accommodation for air force crews. Navigation and radar equipment of the airport allows aircraft to fly in adverse weather conditions, day and night.

MUNICIPAL ECONOMY, COMMUNICATIONS AND MEDICAL FACILITIES.

Canberra receives electricity from the “Snowy Mountains” hydroelectric power station complex (located on Tumut River, 80 km SW of the city), which are part of the power system of the state of New South Wales. The city has a water supply. Main sources of water supply of the city is a reservoir (total capacity 90 million m³), on the Cotter River (10 km west of the city). Water is transported to a water treatment station by pumping stations and later to the urban water supply. Sewage works: there are two water treatment stations (inc. #94). Intra-city transport – bus. Canberra is provided with all kinds of modern communication technology. Telephone and telegraph communication is carried out by radio-relay, underground and underwater cable (coaxial) lines. Transcontinental multichannel lines connect Canberra with the state capitals and the main cities of South East Asia, USA, Canada and Europe. The telephone network is automated. There are several telephone exchanges (inc. #97-100). International connections are through radio and also through the “Intelsat” satellite communication system. There are two naval radio stations, a transmitter at Belconnen (#84) and receiver at Harman (#85), three broadcasting stations (inc. #95) and two television stations (inc. #96).

In Canberra there are several hospitals (inc. M-9, T-19) and a number of other health-care facilities.

List of Important Objects

The List of Important Objects (перечень важных объектов = perechen' vazhnykh ob'yektov) is a numerical listing of 107 important government/administrative, military & communications, and industrial-military facilities.¹⁴ The listing is in alphabetical order, which eases finding an item in the list, but necessitates a complete renumbering of the map if the listing changed over subsequent editions. With little industry in Canberra, the feature list is necessarily dominated by embassies (58 locations covering 60 countries), listed alphabetically by the Russian name of each country, with locations presumably taken from the UBD tourist maps. In the translation below, the original spacings are retained, but the grid-references for each location are omitted. For ease of understanding, further explanatory details, such as suburb names, have been added in square brackets.

List of important objects	39	Israel
	40	India
1 Academy of Sciences	41	Indonesia
2 Canberra airport	42	Jordan
3 Reserve Bank	43	Iran
4 National Archives	44	Ireland, New Zealand, Austria
5 Government Transport Office	45	Spain
6 Mint	46	Italy
7 Transport [bus] depot	47	Cambodia
8 [Yarralumla] Brickworks	48	Canada
9 [Fyshwick] Industrial zone	49	Cyprus
10 British High Commission	50	China
	51	Laos
Aviation companies: [All three names are transliterated]	52	Lebanon
11 Qantas Empire Airways ['Empire' is misspelt with an 'n' not an 'm']	53	Malaysia
12 Trans-Australia ['Trans' is misspelt without an 'n']	54	Malta
13 Airways-House	55	Mexico
14 CSIRO laboratory complex	56	Nigeria
15 Ministry [i.e. Department] of Defence	57	Netherlands
16 Parliament	58	Norway
17 Dam: Scrivener Dam	59	Pakistan
18 [Tralee] Runway – landing-strip	60	Papua New Guinea
19 [Lyneham] Post Office	61	Peru
20 [O'Connor] Post Office	62	Poland
21 [Ainslie] Post Office	63	Portugal
22 [Yarralumla] Post Office	64	Romania
23 [Curtin] Post Office	65	Singapore
24 [Hughes] Post Office	66	USSR [incorrectly located, see below]
25 [Lyons] Post Office	67	USA
Diplomatic representatives [alphabetic]:	68	Thailand
26 Argentina	69	Turkey
27 Bangladesh	70	Uruguay
28 Belgium	71	Fiji
29 Burma	72	Philippines
30 Brazil	73	Finland
31 The Vatican	74	France
32 Hungary	75	FRG [West Germany]
33 Vietnam	76	Chile
34 Ghana	77	Switzerland
35 GDR [East Germany]	78	Sweden
36 Greece	79	Sri Lanka
37 Denmark	80	SAR [South Africa]
38 Egypt	81	Yugoslavia
	82	South Korea
	83	Japan

84 Belconnen Naval Radio Transmitting Station	96 Television station [mast]
85 Harman Naval Radio Receiving Station	97 [Belconnen] Telephone [exchange]
86 Governor-General's residence	98 [Barton] Telephone [exchange]
87 Prime Minister's residence	99 [Deakin] Telephone [exchange]
88 warehouses [Dalby St, Kingston. I have not identified what these were in 1981] ¹⁵	100 [Mawson] Telephone [exchange]
89 Post Office depot [The Causeway]	101 Australian Broadcasting Corporation [ABC] radio broadcasting studios
90 Government Printing Office	102 Law courts
91 Tariff Board	103 Throsby Court [misinterpretation, see below]
Stations:	104 Australian National University (ANU)
92 Canberra railway station	105 Administrative offices [Anzac Park West]
93 Queanbeyan passenger railway station	106 Administrative offices [John Gorton Building]
94 Wastewater treatment plant	107 Military school [Royal Military College, Duntroon]
95 Radio broadcasting station [masts]	

There are two major errors in this listing. Firstly, Throsby Court, a public housing block in Griffith adjacent to that suburb's local shops, is misidentified (#103) as a law court (суд = sud) (**Fig. 4.**). Because the block is barely one kilometre from the Soviet embassy, it is unlikely to have been a mistake made by agents on the ground. Rather, the cartographers in Russia, seem to have misread the 1969 tourist map, where the name is given (in capital letters) but without any building outline or point symbol to locate it explicitly. This confirms the suspicion that the 1969 map was one of the sources, because neither the 1974 or 1977 tourist maps, nor the 1977 planning maps show or name the Court. The mistake is readily understandable, and Davies & Kent (2017, 85) point out an identical error on both the 1977 and 1989 editions of the Cambridge (UK) city, where Harvey Court, a building in the university's Gonville and Caius College is likewise erroneously labelled суд.

The second major error, and the most ironic, is the mis-identification of the two depicted buildings of St Edmund's College – a boy's high school, also in Griffith, and occupying an entire block on Canberra Avenue – as the Soviet embassy (#66), when the embassy was in fact a single building three blocks further west along the same street (**Fig. 4.**). The error seems to be the result of sloppiness, because St Edmund's is also correctly labelled колледж (kolledzh = college) on the map itself, and its buildings clearly identified as a school on the presumed source materials (albeit less clearly than elsewhere on both editions of the RASvy map). Such an error again confirms that while the map's compilation may well have used material purchased by the Soviet embassy, there was little or no cross-checking of sources by the compilers back in Russia, or double-checking or proofing by embassy staff. Hopefully, if there really was a revised edition in 1984, this error was corrected.

Street Index

Finally, the street index lists about 600 streets; ordered alphabetically by their Russian transliterations. The transliterated street name and street type are linked by a hyphen (*e.g.* А'бекет – стрит = A'Becket Street), then followed by a comma and a Russian class of street. Most streets are classed as улица (yulitsa = street), but four are given as шоссе (shosse = highway) and two as дорога (doroga = road). This classification is not related to the English-language street type (road, street, highway, avenue, parade, etc.), but does seem to fit a pattern. Three of the four *shosse* are Adelaide Ave, Yarra Glen and Yamba Drive, which form a continuous divided highway east-southeast then south from Capital Hill; the fourth is the section of Hindmarsh Drive east of Yamba Drive, linking Phillip to Fyshwick, but which is *not* shown as a divided highway on the Soviet plan.¹⁶ The two *doroga* are Beltana and Kallaroo Roads, again forming a single and somewhat rural roadway at Pialligo near the airport (**Fig. 5.**)¹⁷

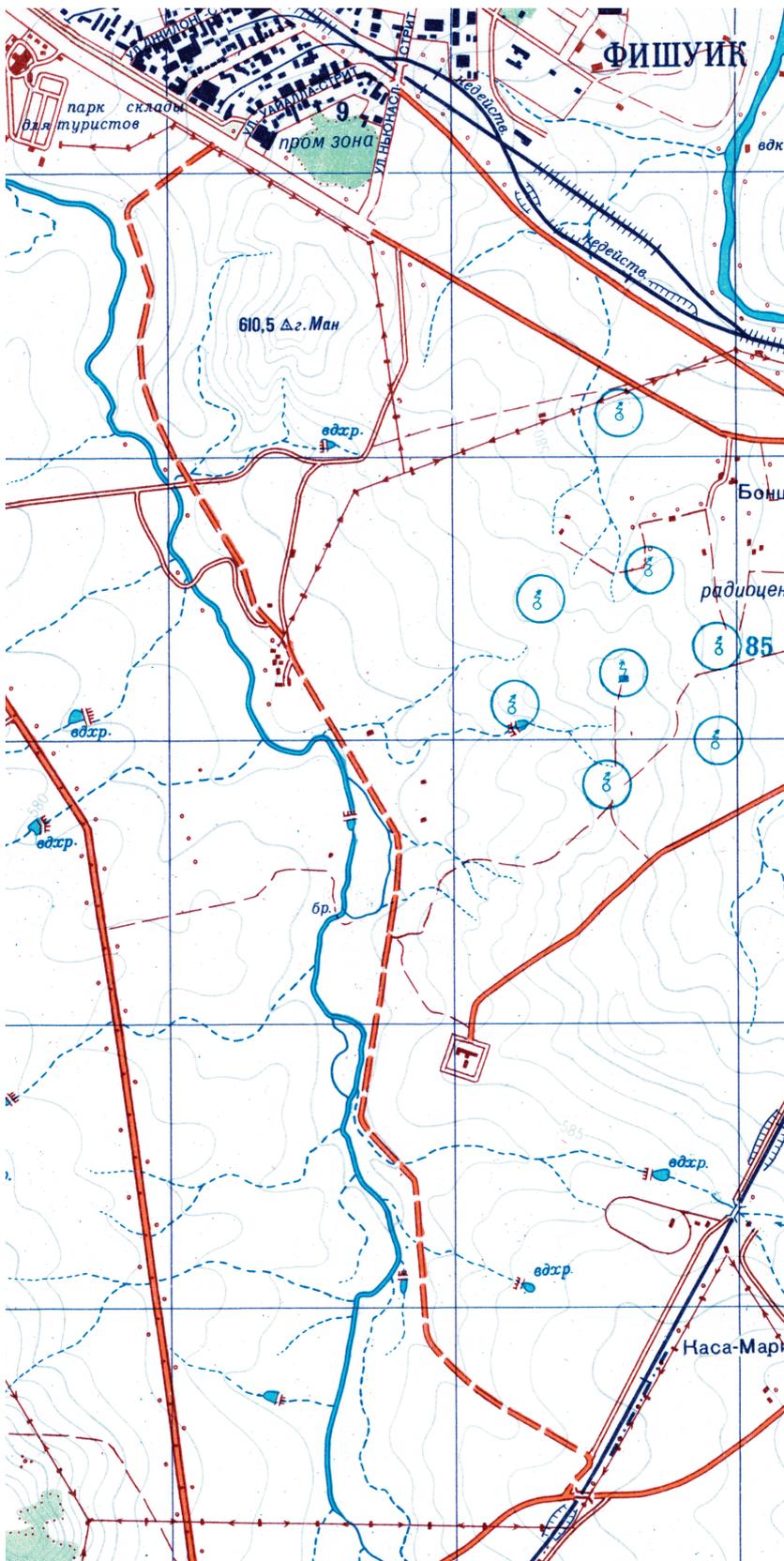


Figure 7. Erroneous road (shown as under construction) running from Fyshwick south to the NSW border railway at Hume.. Note also the 8 masts symbols at HMS Harman naval radio station.

DISCUSSION

Looking at the map itself, much of the wealth of detail reflects Soviet military mapping standards. For example, Lake Burley Griffin is named in upper-case, indicating navigability, while the rivers are named in lower case, indicating their non-navigability. Survey marks and spot heights are carefully copied from the RASvy and Planning maps, and converted from feet on the RASvy map to metric decimetre accuracy. The extent of the city is accurately depicted, at least given the source material, but building detail and street names are lacking in the newer outer suburbs. Given Canberra's plethora of small cul-de-sacs and crescents which curve back to rejoin the same feeder road, it is not surprising that even in the older suburbs, only the main feeder roads are named, with the cul-de-sacs and crescents left unnamed and depicted much narrower (Figs. 3 & 6.). This makes the map quite useful for rapid visual navigation through Canberra's disorienting street layout.

Somewhat unusually, there are no numerical data on the map describing the widths and surfaces of roads, or the length, height, width and load-bearing capacity of bridges, not even for the two main bridges over the lake (the Commonwealth and Kings Ave bridges). This information is instead given more generically in the *spravka*. Perhaps because Canberra is a recent and planned city, specifications for infrastructure are more uniform,

so the figures given in the *spravka* apply across the map, without the need to specify data on the map for each bridge or main road, as would be the case in European cities whose infrastructure covers a longer time-span. Similarly with waterways: information on banks, beds, widths and depths is left to the general statements in the *spravka*. Only the directions of flow are noted on the map, by arrows along the

Queanbeyan and Molonglo Rivers and several of the creeks; and only at one point, adjacent to Coppins Crossing west of the city, is the width of the Molonglo river indicated by a figure of 50m on the map.

Several of the major buildings depicted are inexplicably left unlabelled, despite their seeming significance to a foreign military. These include the Woden Valley Hospital in Garran, the Defence Department buildings tucked behind Mount Ainslie at Campbell, and – despite its symbolic prominence at one end of the city's major visual axis – the Australian War Memorial.

The cartographer's attempt to reconcile his various source materials also leads to some confusion. The former private road running straight and westward from the Barton Highway to the Belconnen naval radio facility is depicted (as it was on the 1974 tourist map), as is the new suburb of Kaleen built astride it in the mid-1970s (as depicted on the 1977 tourist map) (**Fig. 6**). Even in 1977, only two sections of the old road remained, as parts of Tyrrell and Ashburton Circuits. Meanwhile, near Fyshwick, a major road is depicted under construction down the right bank of the Jerrabomberra Creek (**Fig. 7**). There has never been a road here, but between December 1976 and April 1978, the Googong water pipeline was laid along this alignment (Henderson, 1978), so the depiction is likely a misinterpretation of satellite imagery, similar to cases in the US and UK identified by Davies & Kent (2017, 53-54).

Another error involving the misinterpretation of text on source material is the word *Фармлетс* (farmlets) at Beltana Rd in Pialligo (**Fig. 5**). The use of upright text indicates a placename rather than a feature descriptor, which would have been depicted in italics. This inadvertently reverses the intention of the source material – the two editions of the RASvy map – which both include the word 'Farmlets', in sans-serif text, as a descriptor of the fairly dense cluster of individual buildings they depict.¹⁸ Again, Davies & Kent (2017, 83-91) provide examples of several similar errors on Soviet plans of the US and UK.

Lastly, although published in 1981, the map is clearly a product of its mid-1970s sources. But even based on those it is out-of-date in places. For example, sections of Evatt and Weston shown as developed on the 1977 UBD map are left blank on the Soviet plan.

CONCLUSION

The errors and omissions are a reminder that even a superpower, mapping as accurately as possible for strategic if not direct military intent, does not necessarily get things 100% right. Users, and particularly historians, should remember to check the compilation notes carefully, because even a map for a small city such as Canberra may have been several years out-of-date by the time it was published; and seemingly simple facts, like the apparent existence of a major road on the Soviet plans, should be treated with caution if they cannot be corroborated from other sources. The Soviet city plans are in no way a snapshot in time in the way an aerial photograph is, but represent a compilation of data from disparate and possibly contradictory sources, of various dates, collated by cartographers with no personal knowledge of the culture or area, and without the field verification by embassy staff and agents that popular perception might assume occurred, especially in a city like Canberra in which a Soviet embassy existed and the embassy staff could freely move without suspicion. Yet despite their flaws, Soviet city plans provide a wealth of physical and cultural detail about the state of cities around the world in the mid-to-late 20th century, and this is especially true for cities in Africa and Asia where equivalent information often remains difficult to access even today.

The utility of the copies of Soviet city plans held by libraries such as the NLA will be much increased if critical examinations of what they do and do not show, and English translations of the *spravkas* and other marginalia texts, can be published and made available through Trove and other catalogues. The NLA would welcome any interest in undertaking such work from scholars with local knowledge, not only of the four other Australian cities, but also of the many Asian cities for which the Library also holds Soviet plans.

NOTES

- ¹ A *verst* (верста; 1.0668 km or 0.6629 English miles) was the imperial Russian equivalent of a mile (and is today a colloquialism for kilometre). Imperial Russian mapping was produced at scales of so many versts to the Russian inch (дюйм / dyuim, equal to an English inch or 2.54 cm). Common scales included the 1-verst (1:42,000), 2-verst (1:84,000), 3-verst (1:126,000), 5-verst (1:210,000), 8-verst (1:345,000) and 25-verst (1:1,050,000).
- ² As with other details in the present paper, this total only includes maps that have come to the knowledge of the West since the dissolution of the USSR. The Russians themselves retain great secrecy around their current and historical mapping activities. This also explains the apparent (but surely not actual) absence of Soviet city plans for several important cities including Lagos, Melbourne and Rio de Janeiro.
- ³ In some cases, particularly for larger cities, the *spravka*, feature key and street index were issued in a separate booklet, rather than printed on the map.
- ⁴ The National Library of Australia holds scans of the Australian sheets, and paper originals only for 1:1,000,000 sheet K55 (Tasmania) and 1:500,000 sheet I55-Г (Canberra). Due to licensing agreements, the scans are not online.
- ⁵ The National Library of Australia holds scans of the Australian city plans, and paper plots produced from the scans for all but the Adelaide sheets, but not paper originals. The scans are available for online viewing only in the Library's reading room, but the Canberra sheet is available publicly (see note 8 below).
- ⁶ See the 2015 listing by Martin Davis of Canterbury Christ Church University at <https://s3.eu-west-2.amazonaws.com/redatlas/SovietMilitaryCityPlansList.pdf>
- ⁷ Call number MAP Nmt 10108; catalogue record: <https://catalogue.nla.gov.au/Record/4832726>.
- ⁸ Call number MAP G8984.C3R1 1981, catalogue record <https://catalogue.nla.gov.au/Record/4832656> with attached image.
- ⁹ Even the survey mark named Quartz, in Symonston, is rendered as кюортц (=kuartts), instead of кварц (=kvarts) the Russian word for quartz.
- ¹⁰ These two maps can be viewed online at <https://catalogue.nla.gov.au/Record/8179082> and <https://catalogue.nla.gov.au/Record/8179128>
- ¹¹ The 1970 issue can be viewed online at <https://catalogue.nla.gov.au/Record/1878420>
- ¹² Founded in 1946 as a research university, ANU began undergraduate teaching in 1960 when Canberra University College was absorbed as the School of General Studies (from 1980, The Faculties). Existing postgraduate and other research became the Institute of Advanced Studies, which by 1980 comprised seven Research Schools for the Biological, Earth, Physical and Social Sciences, Chemistry, Pacific Studies, & the John Curtin School of Medical Research.
- ¹³ Misspelled in the original, omitting the 'n'.
- ¹⁴ For comparison, the number of objects listed on other plans are Adelaide 72, Brisbane 82, Perth 96, Sydney undetermined (the *spravka* and listing were in a separate booklet, of which I have been unable to source a copy). Davies & Kent (2017, 129) list figures for various US & UK cities including Oxford 41, Washington DC 252, London 374, & Los Angeles 500.
- ¹⁵ Davies & Kent (2017, 129) note that listings for industrial facilities, particularly on US city plans, often give the names of both the product and the company.
- ¹⁶ The section west of Yamba Drive is given a separate listing as a *yulitsa*. The Tuggeranong Parkway is shown on the map as a divided highway, but is not named, so is not included in the street listing. In contrast Northbourne Ave is named, but is not shown as divided, despite its wide and then-tree-lined median strip, originally planned as a future heavy rail alignment, and which in the last year or so has become Canberra's first light rail line.
- ¹⁷ The southern half of dead-end Kallaroo Rd remains unsealed to this day.
- ¹⁸ Even today Beltana Road is a string of small farms, plant nurseries and vineyards.

REFERENCES

- Cruickshank, John L., (2015), "Military Mapping by Russia and the Soviet Union", in M. Monmonier (ed.), *The History of Cartography, vol. 6, Cartography in the Twentieth Century*, part 1, University of Chicago Press, Chicago, pp.932-942.
- Davies, John & Kent, Alexander J., (2017), *The Red Atlas: how the Soviet Union secretly mapped the world*, University of Chicago Press, Chicago & London.
- , (2020), "Red Star to Red Lion: The Soviet Military Mapping of Oxford", in A.J. Kent, S. Vervust, I.J. Demhardt & N. Millea (eds), *Mapping empires: colonial cartographies of land and sea: 7th International Symposium of the ICA Commission on the History of Cartography, 2018*, Springer, Cham (Switz.), pp.143-158
- East View Cartographic, (2005), *Russian Military Mapping: a guide to using the most comprehensive source of global geospatial intelligence*, Minneapolis.
- East View Press, (2003), *Terrain Analysis of Afghanistan*, Minneapolis.
- , (2014), *Terrain Analysis of Ukraine*, Minneapolis.
- , (2015), *Terrain Analysis of Syria and Lebanon*, Minneapolis.
- Henderson, G.A.M., (1978), "Googong Pipeline ACT and NSW: Geological mapping of excavations during construction, 1977-78", *Record*, Bureau of Mineral Resources, Geology and Geophysics, Department of Natural Resources, 1978/84.