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“The Baker Committee of 1892”

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The Charles Close Society was founded in 1980 to bring together all those with an interest in the maps and history of the Ordnance Survey of Great Britain and its counterparts in the island of Ireland. The Society takes its name from Colonel Sir Charles Arden-Close, OS Director General from 1911 to 1922, and initiator of many of the maps now sought after by collectors.

The Society publishes a wide range of books and booklets on historic OS map series and its journal, *Sheetlines*, is recognised internationally for its specialist articles on Ordnance Survey-related topics.

The Baker Committee of 1892 and a reinterpretation of some Ordnance Survey history

Richard Oliver

Recently, Peter Collier has published two articles, in the *Cartographic Journal* and in *Sheetlines*, on the Committee on a Military Map of the United Kingdom – the Baker Committee – of 1892.¹ The articles take as their starting-point the half-sentence mention of the Committee in the ‘Seymour’ history of the Ordnance Survey, published shortly after the founding of the Charles Close Society in 1980.² For articles that were published in 2013 and 2014 it is curious that the only secondary literature referred to – and then only in the *Cartographic Journal* article – is the Owen and Pilbeam ‘popular history’ of the Ordnance Survey, published in 1992 and relying very largely on the Seymour account.³ Although it is certainly the case that the Baker Committee had not hitherto been the subject of a separate study in its own right, it has hardly gone unnoticed, with references both in an important ground-breaking article on military mapping by the late Tim Nicholson, published in the *Cartographic Journal* in 1988, and in several Charles Close Society publications.⁴ Whilst it would be over-reacting to cry ‘No story!’, nonetheless both the Collier articles are inadequate to the occasion in the light of

¹ Peter Collier, ‘The Military Map of the United Kingdom and its impact on mapping in the twentieth century’, *Cartographic Journal* 50 (2013), 324-31; Peter Collier, ‘The Military Map of the United Kingdom and its impact on Ordnance Survey mapping’, *Sheetlines* 99 (2014), 44-53. The report is *Report of Committee on a military map of the United Kingdom*, unpublished, printed at the War Office, 1892 [A.237], hereafter *Baker Committee*. The only publicly accessible copy that I know of is in The National Archives, WO 33/52, pp 639 ff; there is another in the Royal Geographical Society collection at Z.72/4. (The writer is indebted to Peter Clark for access to a photocopy from an unidentified original.)

² WA Seymour (ed), *A history of the Ordnance Survey*, Folkestone: Dawson, 1980: despite the date, the book only seems to have been issued in the spring of 1981. The Baker Committee’s half-sentence is on p.188.

³ Tim Owen and Elaine Pilbeam, *Ordnance Survey: map makers to Britain since 1791*, Southampton and London: Ordnance Survey and HMSO, 1992; the softback edition, dated 1992, but actually issued in 1993, has some small revisions to the text.

⁴ Tim Nicholson, ‘The Ordnance Survey and smaller scale military maps of Britain 1854-1914’, *Cartographic Journal* 25 (1988), 109-27, esp. pp 116-7; Richard Oliver, ‘New light on the New Series’, *Sheetlines* 12 (1985), 7-11, esp. p.8; [extracts from Baker Committee report], *Sheetlines* 16 (1986), 16-20; Yolande Hodson, *Popular maps: the Ordnance Survey Popular Edition one-inch map of England and Wales 1919-1926*, London: Charles Close Society, 1999, 3, 10, 41, 87, 113, 114, 128, 131, 154, 185, 211; Tim Nicholson, *The birth of the modern Ordnance Survey small-scale map*, London: Charles Close Society, 2002, 10-12; Roger Hellyer and Richard Oliver, *A guide to the Ordnance Survey one-inch Third Edition maps, in colour*, London: Charles Close Society, 2003, 3; Roger Hellyer and Richard Oliver, *Military maps: the one-inch series of Great Britain and Ireland*, London: Charles Close Society, 2004, 4-5; Roger Hellyer and Richard Oliver, *One-inch engraved maps of the Ordnance Survey from 1847*, London: Charles Close Society, 2009, 55; Bill Bignell, *Mapping the windmill: the Ordnance Survey in England*, London: Charles Close Society, 2013, 124 ff. The Baker Committee is also discussed in Richard Oliver, *The Ordnance Survey in the nineteenth century: maps, money and the growth of government*, London: Charles Close Society, 2014, 370-2.

the secondary literature that has appeared since 1981, and also of the information to be quarried quite easily from internet searching.

The terminology for the Ordnance Survey one-inch (1:63,360) map used in the article is symptomatic of the apparent lack of awareness of developments. Although for much of the twentieth century this terminology was the source of confusion, in the early 1990s – following much discussion and correspondence – a system was devised that respected both the taxonomic and bibliographic aspects.⁵ For England and Wales the earlier generations are:

- The Old Series: published 1805-74
- The New Series: published 1874-96 [but incorporating earlier mapping published 1847-74]
- The revised New Series: published 1895-9
- The Third Edition: published 1903-13
- The Fourth Edition: seven sheets only, published 1911-12
- The Popular Edition: published 1918-26
- The Fifth Edition: published 1931-9, but abandoned incomplete.

As I have explained elsewhere, the terms ‘Old Series’ and ‘New Series’ originally referred to number series rather than to generations of maps, and it was only with the development of systematic revision in the 1890s that the term ‘edition’ for a generation came into use.⁶ The term ‘series’ only came into use in 1951-2 as a result of NATO standardisation agreements, which introduced a hierarchy of series-sheet-edition: what is familiar as the Seventh *Series* was still the Seventh *Edition* on proof printings in the autumn of 1951. Use of ‘series’ to designate what in the agreed system and on the face of the maps is the Third Edition is therefore both anachronistic and bibliographically wrong. The reference to a ‘Third Series’ authorised in 1897 actually refers to the fixing of a sales price for the coloured version of the revised New Series.⁷ The only ‘Third Series’ that has been produced in these islands is the final generation of the one-inch of Northern Ireland, first published in 1960-4. The only ‘First Series’ and ‘Second Series’ published by the Ordnance Survey in Great Britain were of the 1:25,000 and 1:50,000 series.⁸ Confusion is made worse by ‘Figure 1’ in the Collier *Sheetlines* article, which is described as ‘First Series’ and appears to be intended to represent the Old Series, but is actually an extract from New Series sheet 285 – in contoured outline, whereas the Old Series was hachured but uncontroled (*figure 1*). This was the first New Series sheet of southern Britain to be published, in 1874; the extract is from a state of the outline form, printed between about 1886 and 1892.⁹

⁵ This system is to be found in Owen & Pilbeam, *Ordnance Survey...*, [1993 edition], 180, Roger Hellyer, *Ordnance Survey small scale maps indexes: 1801-1998*, Kerry: David Archer, 1999, 3-41 *passim*, and in Hodson, *Popular maps*, 15.

⁶ Hellyer & Oliver, *One-inch engraved maps*, 44.

⁷ Collier, ‘The military map of the United Kingdom...’, 44, 45.

⁸ The designation ‘Second Series’ had been removed from the 1:50,000 *Landranger* series [note the lower-case] by 2008, and the 1:25,000 *Explorer* never has been a ‘numbered series’.

⁹ Hellyer & Oliver, *One-inch engraved maps*, 366-7.

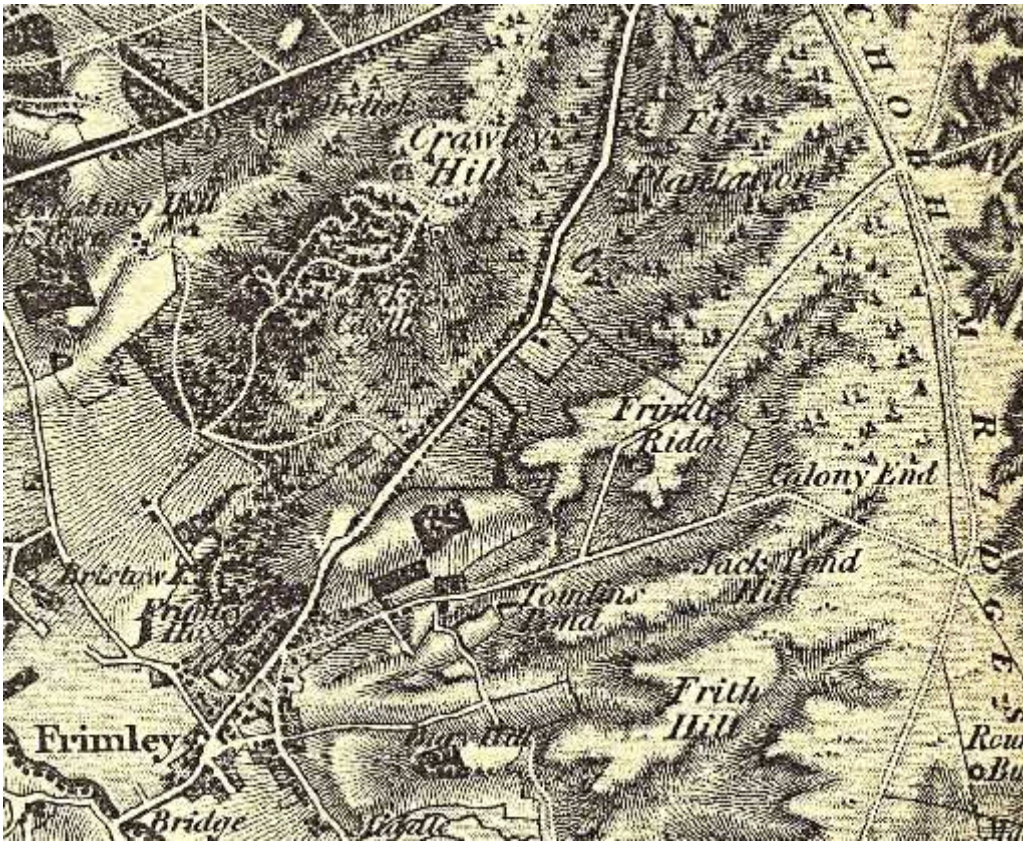


Figure 1.
One-inch Old
Series: hachured.
An extract from
sheet 8 (1816)

The context of the Baker Committee

Peter Collier suggests that military concerns about the one-inch map arose in the early 1870s, leading to the authorisation of the New Series, and that, though sheets of the mapping were sent periodically to the War Office, they were found unsatisfactory, leading eventually to the setting-up of a committee – the Baker Committee – to consider the problem. Unfortunately, this is at best a misreading of events.

The authorisation of the New Series was more complicated than simply being the fulfilment of a request from the military. A long-overlooked sentence in the relevant published OS annual report indicates that work on the new map was already under way in 1869, and indeed the production of revised one-inch mapping had been implicit in the authorisation of the 1:2500 resurvey of southern Britain in 1863.¹⁰ The War Office's request of 1871 seems to have been mainly effective in enabling what had begun as a discreet civil initiative to come into the open.¹¹

There is no known evidence to dispute the Baker Committee's statement that 'though sheets have from time to time been submitted to the War Department prior to publication, it has been found that the military character of the map has suffered by the too great predominance given to detail of no military importance'. Nonetheless I suggest that it may be reading too much into these words to suggest that there was growing military discontent.¹² In 1897 General Redvers

¹⁰ Hellyer & Oliver, *One-inch engraved maps*, 38.

¹¹ Hellyer & Oliver, *One-inch engraved maps*, 42-3.

¹² *Baker Committee*, 5.

Buller wrote that he had been trying for ‘sixteen years’ (*i.e.* since 1881) ‘to get a decent ordnance military map made of England’ (*sic*), but his tone suggests that his was a minority voice, and he is not recorded as contributing to the Baker Committee’s proceedings.¹³ If there was significant military dissatisfaction with the one-inch between 1872 and 1892, why did the War Office not say so sooner? It might be because the recipients of the proof-copies at the War Office were not very map-minded and simply had no comment; it might also be that the geography of military postings might mean that their experience lay outside the areas for which the new mapping was being prepared. It is natural for a committee seeking change not to understate the unsatisfactory nature of the present state of things: the facts need to lend themselves to a good story.

Whilst it is certainly true that there are no known surviving papers bearing on the appointment of the Committee, it has been noted both by the late Tim Nicholson and by myself that it was appointed several weeks after a successful motion by Henry Roby in the House of Commons for a select committee on the Ordnance Survey, passed on 11 February 1892.¹⁴ The motion was the outcome of a campaign by Henry Crook, a Manchester civil engineer, spare-time soldier and constituent of Roby’s, for improvements to Ordnance Survey mapping, particularly the one-inch. Following negotiations with Roby, the select committee, which would have been composed exclusively of MPs, was replaced by a departmental committee appointed by the Board of Agriculture (the Survey’s ‘sponsoring ministry’ in later parlance), which included both MPs and outside specialists, including General Anthony Cooke, who had directed the Survey between 1878 and 1883, and would not be hampered by any Parliamentary timetable. The committee was appointed on 26 April, and the chairman was Sir John Dorington, Conservative MP for Gloucestershire. It finally reported on 31 December 1892; in July 1892 Lord Salisbury’s Conservative ministry was replaced by a Liberal one under Gladstone.

The timing of the Baker Committee

So far, then, from the Baker Committee being the culmination of military frustration, the timing instead suggests that Colonel Sir Charles William Wilson, the Director-General of the Ordnance Survey from November 1886 to March 1894, took the opportunity to suggest to the War Office that it hold its own enquiry, in order to ensure that any military desires were taken account of in the departmental committee’s proceedings.

Four points need to be noted here. The first is a broad political one: the Ordnance Survey, like all other government departments, was subject to Treasury control, and the Treasury tended to be very sceptical about spending on the Survey. Parliament and public opinion might insist on the principle, but the

¹³ Baker to Hicks Beach, 17 September 1897, quoted in Oliver, *The Ordnance Survey in the nineteenth century*, 438.

¹⁴ Nicholson, *The birth of the modern Ordnance Survey small-scale map*, 10-12; Hellyer & Oliver, *One-inch engraved maps...*, 54-5. See also Oliver, *The Ordnance Survey in the nineteenth century*, 369 ff.

Treasury determined the spending practice. In 1868 and 1880 the Treasury had been forced by outside pressure to agree increases, but by 1886 it was looking to rein in the Survey.¹⁵

The second concerns the one-inch New Series under Wilson's directorship. As has been explained elsewhere, the design of the New Series was anything but static after 1872 – and particularly after Wilson took charge. He had had considerable experience both of the Survey and of soldiering, notably in the Sudan in 1884-5, where the death of his two superiors led to his assuming command of the unsuccessful expedition to rescue General Gordon. Between 1874 and 1885 output of the New Series was slow – a total of 42 sheets, all of south-east England, and an average of about four a year – because of the pressure for the one-inch of Scotland, which was completed in 1887. That year must have seemed an *annus mirabilis* for the New Series, as 27 sheets were published; yet in 1888 only nine appeared. Then there were 23 in 1889, 31 in 1890 and 27 in 1891. The explanation for the fall-off in 1888 seems to lie in a change of procedure ordered by Wilson. Hitherto the one-inch had been prepared, by reduction from the six-inch and larger scales, wholly in the office: Wilson introduced the practice of examining sheets in the field before publication in order to check that nothing of importance had been omitted or distorted in the reduction. This was probably only decided on some time after his appointment, and thus took effect only after the sheets published in 1887 were at too advanced a stage to be field-checked, but a delay for such a check would account for the temporary fall-off in output in 1888.¹⁶ A possible stimulus to the new policy might have been the very dense supply of names on the Cheshire sheets issued in 1887; those along the border with Lancashire were issued with the latter county's area blank, pending resurvey, and were only issued complete in 1896, and there is a striking contrast in the density of minor names between the two counties on the completed mapping. Wilson may indeed have been dissatisfied with the New Series as a military map when he assumed the Directorship, but he was doing something about it well before 1892.

A third point is that coloured one-inch mapping was not something completely unknown to the Ordnance Survey in the spring of 1892 when the Baker Committee was sitting. A zincographically-printed map of the Aldershot district had been produced in 1874, and was frequently reissued over the next twenty years, with the hills shown by horizontal form-lines printed in various shades of grey or brown, and by 1892 several other such maps had been produced for military purposes. Though Wilson seems to have been personally unenthusiastic about the sort of extensively coloured map that the committee would recommend, he was certainly averse neither to the principle of colour nor to experiments. In 1887 the Survey had published two New Series sheets, 255 and

¹⁵ Oliver, *The Ordnance Survey in the nineteenth century*, 331-2, 342.

¹⁶ Hellyer & Oliver, *One-inch engraved maps...*, 49-50.

274, in a three-colour style: outline in black, water in blue and contours in red.¹⁷ They seem to have been published shortly after Wilson's appointment, and were presumably initiated under his predecessor, Stotherd. They were available for sale, but at 1s.6d as compared with 1s.0d for the standard engraved style they found few purchasers. Did Wilson not like them? Or were they not worth the extra price? The next colour development was double-printing from copper: this enabled the one-inch hill-map to be issued with outline in black and hills in another colour – in practice brown. The early history of this is obscure, but by 1890 a separate hill-plate had been prepared for sheet 345, covering the south-east of the Isle of Wight. In August 1891 preparation began of an interim form of New Series hill-map, printed zincographically, with outline in black transferred from copper and hills in brown produced from drawing. More ambitious was a five-colour photozincographed map of the 'Isle of Wight' – possibly a version of New Series sheet 331, since it included Portsmouth – that was exhibited to Dorington Committee witnesses: no copy is known, but it can be inferred that it had outline and hills in black), water blue, buildings red, woods green and roads brown. The reversion to hills in black may seem odd in view of the hills-brown convention, but can be explained by imitation of the French 1:100,000 *Carte Vicinale*.¹⁸ No maps were exhibited to Baker Committee witnesses.

The fourth point is that revision of the large scales was already in hand, and there were sound precedents for such revision finding its way to the one-inch in due course. There was no need for any official investigation to get the principle of revision; thus the Dorington Committee was a tactic, not a necessary preliminary to a strategy.¹⁹

Thus the timing of the Baker Committee seems to have been determined by wider civil developments: an agitation for improved mapping leading to a civil enquiry – which the soldiers exploited for military ends.

¹⁷ Sheet 274 was subsequently printed in a two-colour form, with both water and contours in blue.

¹⁸ *Report of the Departmental Committee appointed by the Board of Agriculture to inquire into the present condition of the Ordnance Survey...*, British Parliamentary Papers (House of Commons series) 1893-94 [C.6895], LXXII, 305, evidence, qq 1722 ff, 2835, 3203 ff, 3473 ff, 4033, 4619, 4626, 4783. The *Carte Vicinale* had outline in black, hills in sepia, water in blue, woods in green and road outlines in red. It is unclear from the Dorington evidence whether on the Isle of Wight map roads were brown casings, as on the *Carte Vicinale*, or infilled brown, as would be standard later OS practice. The photozincographic method of colour-separation entailed photographing the original map as many times as there were colours, and then deleting from each negative everything not wanted for that particular colour. The method was certainly rigorous, in that the relative dimensional stability of the glass negatives would minimise problems inherent in paper distortion, but it was evidently more labour-intensive than the method standardised by the OS after 1895, of taking a transfer in lithographic ink from the parent copper plate and then scraping off anything not wanted before retransferring the image to a plate or stone.

¹⁹ Oliver, *The Ordnance Survey in the nineteenth century*, 356 ff.

The appointment of the Baker committee and its witnesses

Wilson would have been an obvious choice as a member, being both a soldier and head of the civil-controlled national survey; as Peter Collier notes, Sir Thomas Baker was no doubt appointed because of his seniority. Major-General Edward Chapman was Director of Military Intelligence, and his appointment was as logical as Wilson's, as the separate military organisation concerned with mapping was the Intelligence Division of the War Office – IDWO. The appointment of Colonel James Dalton, of the Adjutant's General office, can be explained by that department's responsibility for military training.²⁰



Figure 2.
Colonel William Willoughby Cole Verner in Gibraltar in 1903, photographed by Sarah Acland in natural colour using the Sanger-Shepherd process. (Source: Wikipedia Commons)

Peter Collier performs a valuable service in identifying some of the Committee's witnesses, but he says of Major William Willoughby Cole Verner, Deputy Assistant Adjutant-General for Instruction, South-East District, that 'little is known'.²¹ In fact, an internet search quickly yields not only biographical notes but even an early natural-colour photograph, taken in 1903 (*figure 2*).²² He was 'quite someone', for he was briefly professor of topology at Sandhurst, patented a cavalry sketching-board, and in 1895 devised a new form of prismatic compass that was still being produced in the 1940s; other interests included ornithology and fossil bones. His writings include *An historical account of the Rifle Brigade and of the King's Royal Rifle Corps* (1890), *Some Notes on Military Topography* (1891) and *Map Reading and the Elements of Field Sketching* (1893). As if these were not qualifications enough, he had served in the Sudan in 1884-5 – he published *Sketches in the Soudan* in 1885 – and therefore must have come into contact with Wilson, who might perhaps have recommended Verner as a Baker witness.²³ The 'church with tower' symbol

recommended by the Baker Committee appears in essence on a specimen military sketch signed by Verner in 1891, and his apparent association with this now

²⁰ General Sir Thomas Durand Baker (1837-93) - Quarter-Master General from October 1890; General Sir Edward Francis Chapman (1840-1926) - Director of Military Intelligence, 1891-6, KCB 1905; General James Cecil Dalton (1848-1931).

²¹ Collier, 'The military map of the United Kingdom...', 49. Major Verner's post demonstrates why the military like their abbreviations.

²² en.wikipedia.org/wiki/William_Willoughby_Cole_Verner: accessed 14 June 2014.

²³ I owe the likely connection with Wilson to Bill Bignell. 'It's not *what* you know...'

familiar symbol merits further investigation (*figure 3*).²⁴ It is of interest that the one non-commissioned officer to give evidence, Sergeant Short, was an assistant to Verner. It is also of interest that another witness had served in Sudan in 1884-5: Colonel Elliott Wood.

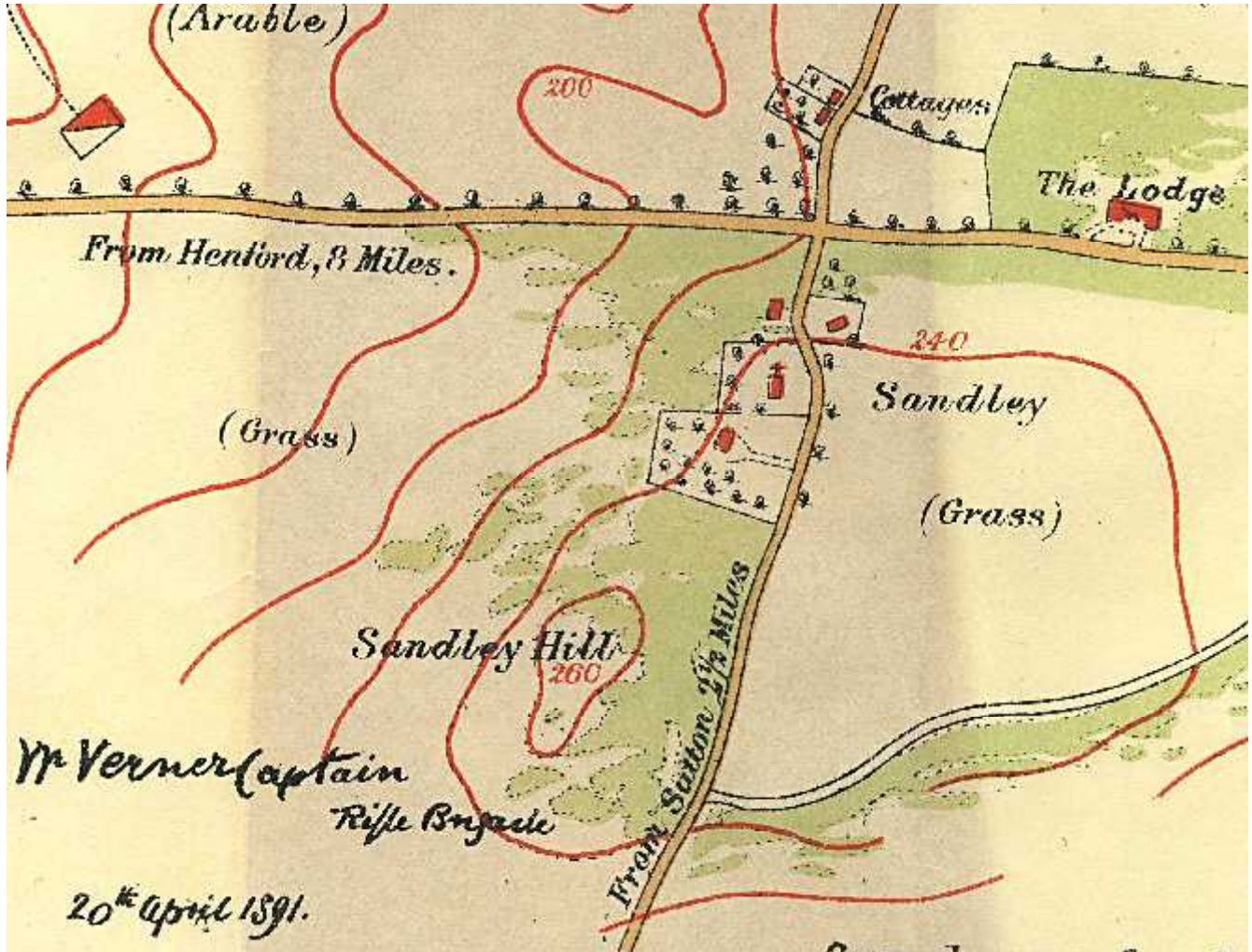


Figure 3. Part of the specimen sketch, signed by Willoughby Verner in 1891, included as an insert in the *Text Book of Military Topography* (1898); observe the church symbol

Although the choice of witnesses would have been restricted to those who were available at comparatively short notice – the Committee was appointed on 22 March, and took verbal evidence on 5 and 8 April – if there is a common thread, then it seems to be the Sudan expedition of 1884-5 and its eventual commander, Wilson.

The replies of some witnesses suggested that their experience of Ordnance Survey mapping was perhaps geographically and temporally limited. For example, Lieut-General Goodenough thought that footpaths were not shown, and that windmills should be shown; Verner also thought that windmills should be

²⁴ The specimen was included as an inset in *Text book of military topography*, London: HMSO, 1898.

shown. This was a natural reaction for men who used pre-1885 New Series mapping of south-east England, but had either been familiar with recent New Series sheets they would have known that Wilson had already addressed these points. Both oral and written evidence showed that there was nothing approaching consensus on scales, relief depiction or the use of colour. Evidence to the Dorington Committee showed a similar diversity of views on relief and colour; for the civilians there was no scale-question.

The Baker Committee's recommendations and the longer term

The Baker Committee made a number of recommendations which have been explored in more detail elsewhere, notably that a separate 'military' one-inch be produced, in colour, which would differ in some content from its engraved civil counterpart.²⁵ In the event, some of the 'military' information, such as an improved road classification, postal facilities, and distinction of church steeples, was added to the basic civil engraved map, and the 'military' map was in essence a colour-enhanced derivative of the civil map. It lacked the surveyed additional contours asked for; additional contours did reach the one-inch in 1914, but they were interpolated. The Baker Committee had asked for parish boundaries to be omitted from the 'military' map, but they stayed: it was symptomatic of the coloured map being, so far from something distinctively military, simply the cheapest possible compromise. Tim Nicholson noted, in his study of the early one-inch coloured mapping, that at first it was 'on probation', and that its extension from the area of greatest military interest, the south-east, to the rest of England and Wales (and, by implication, to Ireland and Scotland) seems to have been for civil rather than military reasons.²⁶

The Baker Committee also discussed, more briefly, other scales produced by the Ordnance Survey that were of some military application, notably two-inch maps for military training: the *Cannock Chase* map of 1894 was, like the 'military one-inch', a dilution of their recommendations. However, the Committee made no mention at all of what was to be the most striking development in military mapping in the 1900s and 1910s: the half-inch map.²⁷ The full story of this has yet to be told, but it is clear that by the summer of 1900 the War Office was fully persuaded of the merits of this scale; it used the commercial Bartholomew offering as a makeshift, but in May 1902 the Ordnance Survey was authorised to produce an official half-inch. The map went through a number of styles before the military decided in the early 1920s to revert to the one-inch as their standard scale. The map went through a number of styles before the military reverted to the one-inch in the early 1920s.

²⁵ Nicholson, *The birth of the modern Ordnance Survey small-scale map*, 20; Hellyer & Oliver, *One-inch engraved maps...*, 58ff, 76-104 *passim*.

²⁶ Nicholson, *The birth of the modern Ordnance Survey small-scale map*, 19-24; 'probation' on p.21.

²⁷ For the introduction of the half-inch map see Oliver, *The Ordnance Survey in the nineteenth century*, 443-6; for the re-adoption of the one-inch as the standard military scale, see Hellyer & Oliver, *Military maps*, 10-11.

There are four points to note about the half-inch. First, in 1909 Major Charles Close, then head of the Geographical Section General Staff, indicated the relative military status of one-inch and half-inch when he told the Australian Government that ‘the scale for general issue is $\frac{1}{2}$ inch to 1 mile... with a very small issue of 1 inch maps’.²⁸ Second, whatever the style, the basic content of the half-inch reflected the ‘Baker one-inch’, but with some elements diluted or omitted, for example church steeples and the distinction of railway earthworks. Third – and I do not think this point has been made before in print – the elaborate road classification particularly associated with the one-inch Popular Edition was actually devised for the half-inch map.²⁹ The classification appeared at the larger scale because, in the same way that the six-inch was based on fieldwork at 1:2500, so was the half-inch a derivative of the one-inch. Fourth – and also, I think, new to print – the well-known relief experiments on the one-inch, carried out by Close after his appointment as Director-General of the Ordnance Survey and exemplified by the two Aldershot district sheets of 1914 (*figure 4*), perhaps ought likewise to be seen as ultimately benefitting the half-inch.



Figure 4. Extract from Aldershot (S) (1914), in ‘fully coloured’ style

The Baker Committee observed that ‘Great difference of opinion appears to prevail with regard to the best mode of delineating ground’; it was really a difference between the advocates of pictorial methods, such as hachures, and of

²⁸ Hellyer & Oliver, *Military maps*, 6, quoting report by Close, 29 March 1909.

²⁹ *Report of a Committee which assembled at the War Office at the request of the Director-General of the Ordnance Survey to consider, with regard to the half-inch Ordnance Map:- (1) The question of overlaps. (2) The size of sheets. (3) The system of road classification:* copy in TNA WO 33/3265; the accompanying plate is not present, and the evidence was not printed, and is probably no longer extant. Historians of cartography are in the debt of Alan Kimbell, who ferreted out the report.

contours.³⁰ Pictorial methods pointed to a ‘fully coloured’ map; contours to a ‘coloured outline’ map.³¹ The story of the evolution of the ‘coloured outline’ Popular Edition from the ‘fully coloured’ map of 1914 may yet prove to be as much a matter of functionality as of enforced economies.³² A ‘coloured outline’ half-inch manoeuvre map was produced in 1914, evidently shortly before ‘coloured outline’ versions of the two new Aldershot sheets, which are direct precursors of the Popular Edition (*figure 5*).³³ The origins of the ‘coloured outline’ style have yet to be fully explored, but by 1914 the 1:125,000 of the Orange Free State (GSGS 2230) and the 1:100,000 of Belgium (GSGS 2364) were just two examples, and more appeared during the war (*figures 6 and 7*). One senses functionality as much as economy. One illustration after another in the official account of mapping and survey during World War II is a testimony to the prevalence of the ‘coloured outline’ style.³⁴

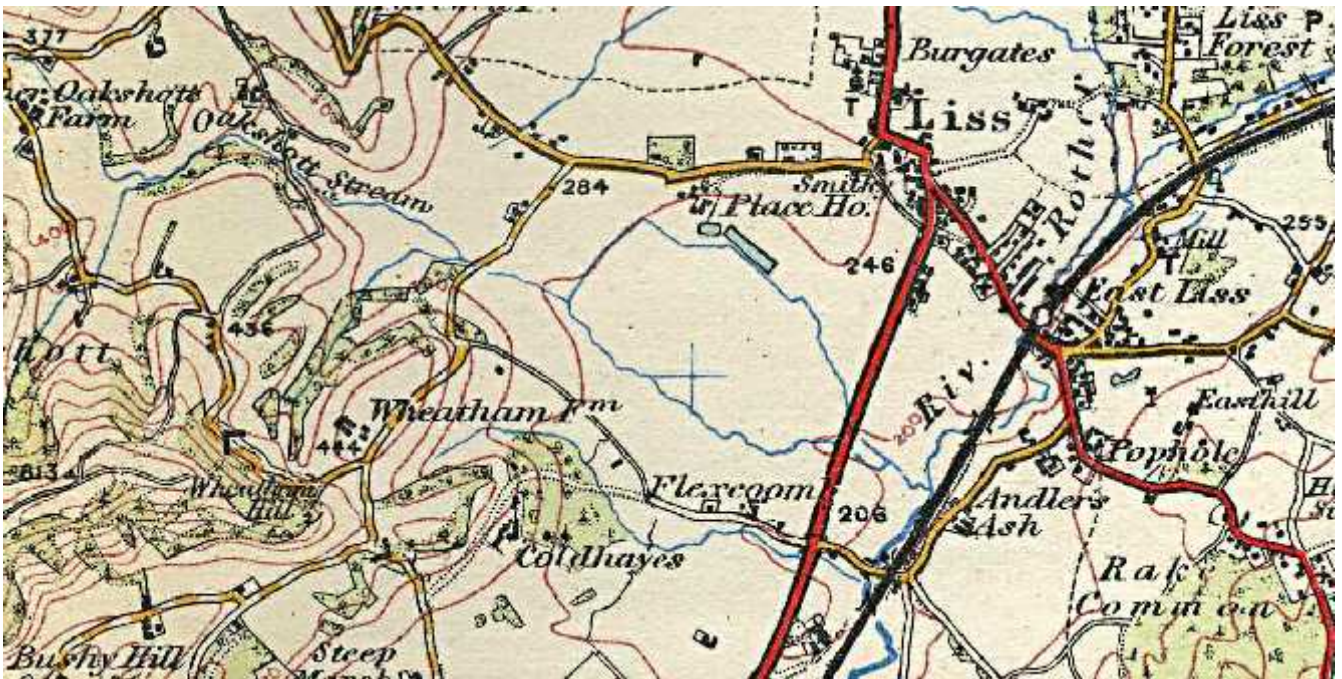


Figure 5. Extract from Aldershot (S) (1914), in ‘coloured outline’ style

³¹ The phrase ‘coloured outline’ appears in the letterpress of the buff bookfold covers found on sheets of the one-inch Third Edition (Large Sheet Series) and Popular Edition dateable to 1919: ‘Map... in colour or in black outline... A popular edition in coloured outline is also in course of publication...’ The phrase ‘fully coloured’ occurs in J.H. Andrews, *A paper landscape*, Oxford University Press, 1975, 293, 294, in the context of the style introduced in 1901, with hachures and green woods, but I think it is reasonable to use it for the more elaborate style of one-inch that Close developed after 1911.

³² For the ‘enforced economy’ see Hodson, *Popular maps*, 19-29.

³³ I am indebted to Roger Hellyer for details of the 1914 manoeuvre map. A third version of the Aldershot (S) sheet is known in a private collection, with hachures but without layers.

³⁴ A.B. Clough, *Maps and survey*, [London:] War Office, 1952: 23 of the 57 plates are classifiable as ‘coloured outline’ in character, but several of the other plates are of ‘improvised’ mapping where production in ‘coloured outline’ form would perhaps have been an unrealistic call on resources.

Conclusion

It is fair to conclude, as Peter Collier does, that the coloured form of the standard Ordnance Survey one-inch that began to appear in the mid 1890s can be credited as an achievement of the Baker Committee; the Committee was also influential – more indeed than it perhaps intended – on the content of the predominantly civil-user basic monochrome one-inch. However, what was achieved was overall less impressive, and a great deal less expensive, than what the Committee recommended. The Committee failed to anticipate that a requirement might arise for a military half-inch map. Its recommendation of a coloured one-inch with hachures was at odds with what would prove to be the prevailing form of both civil and military topographic mapping for much of the twentieth century: the contours-only ‘coloured outline’ form.

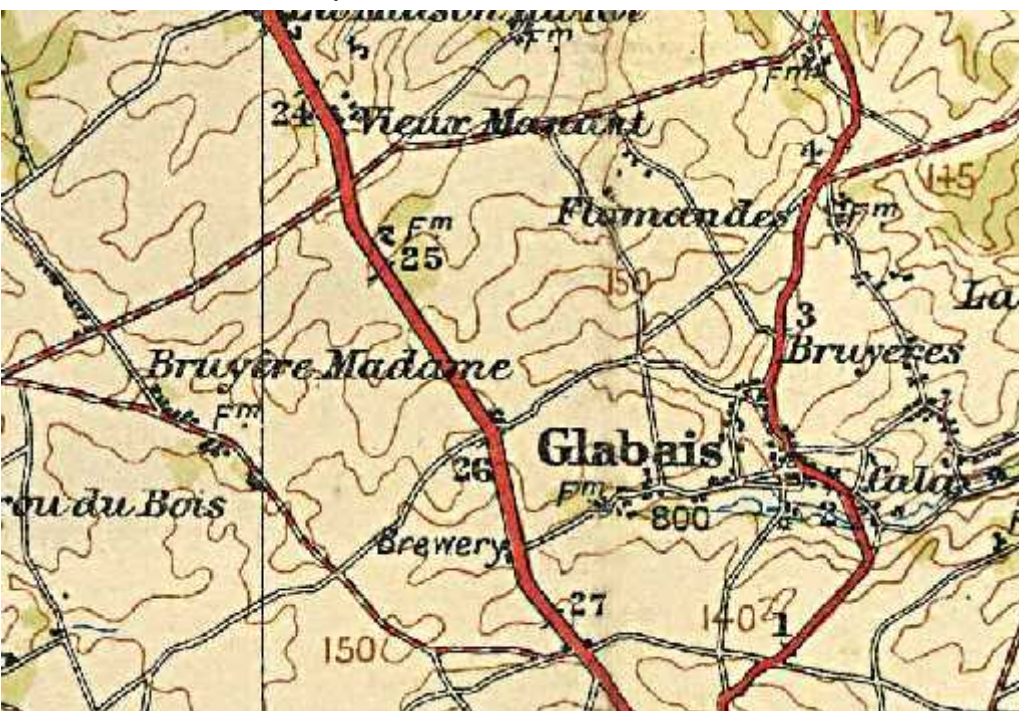


Figure 6 (left).
Extract from Belgium
1:100,000 Brussels (later sheet
5), GSGS 2364 (1910), with
road infills in solid and
'dotted' ('poor surface') red

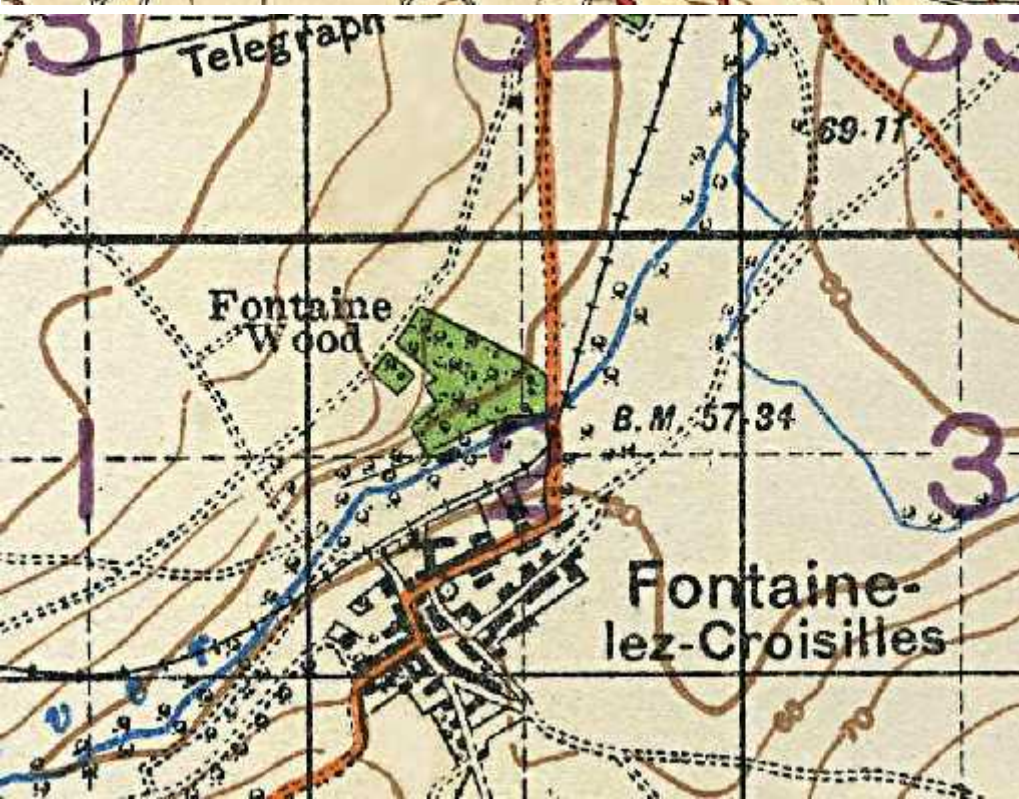


Figure 7 (below).
Extract from 1:40,000
mapping of Belgium and part
of France, GSGS 2743, sheet
51B, Edition 2, October 1917;
note the burnt sienna road
infill

Roger Hellyer adds:

Peter Collier reports (*Sheetlines* 99, 51) that only one copy of IDWO 971 Aldershot Division Autumn Manoeuvres, 1893 is known, in the British Library. There is in fact a second copy in the National Library of Wales. And there is also an additional copy of the Cannock Chase manoeuvre map, IDWO 1030, to which he refers, in the Bodleian Library, Oxford, transferred from the School of Geography collection.