



Sheetlines

The journal of
THE CHARLES CLOSE SOCIETY
for the Study of Ordnance Survey Maps

“Sir Henry James’ Domesday book”

Rob Wheeler

Sheetlines, 113 (December 2018), pp42-47

Stable URL: <https://s3.eu-west-2.amazonaws.com/sheetlines-articles/Issue113page42.pdf>

*This article is provided for personal, non-commercial use only.
Please contact the Society regarding any other use of this work.*

Published by
THE CHARLES CLOSE SOCIETY
for the Study of Ordnance Survey Maps
www.CharlesCloseSociety.org

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.

Sir Henry James' Domesday Book

Rob Wheeler

Introduction

In *Sheetlines* 84, Bill Henwood gave an excellent account of Sir Henry James' production of a facsimile of the Domesday Book which concludes: 'There have been many subsequent reproductions of the Domesday Book but the 1860s facsimile stands comparison with most. Whether it should have [been] published by the Ordnance Survey is another matter.' I believe that conclusion is in danger of being misunderstood; I also want to draw attention to a development which has led to the OS version being used more heavily than for many years.

The potential misunderstanding revolves around that word *reproductions*. To produce a satisfactory photographic reproduction requires the volumes to be disbound. This was done in the 1860s. The next rebinding was in 1952, followed by another in 1984-6. This last occasion provided the opportunity for the photography which formed the basis of the (very expensive) Alecto edition. Only the OS and Alecto have ever published reproductions based on photography.

The first ever reproduction had been made by Abraham Farley in 1783 using a specially-made set of type that reproduced the forms of the letters used by the original scribes, including eleven different abbreviation symbols. This was an amazing project, lasting sixteen years, and produced a result that bears an astonishingly close resemblance to the original. It was reproduced, along with a modern translation, in the Phillimore edition of 1975-86.

From the 1860s onwards, various extended Latin texts (ie with the contracted words in full) have been produced, along with English translations. For most local historians these are perfectly adequate. The problem is that many of the abbreviations were ambiguous. For example, *mol'* may stand for *molinum* or *molendinum*. Both words mean *mill*, and the received wisdom is that there is no difference in meaning, but the difference may tell us something about the particular source from which the Domesday scribe was working.¹

Recent scholarship on Domesday Book has drawn attention to entries squeezed into insufficient space, a practice which implies that material was not to hand when the scribe was working on the preceding and following entries, so space was left, which turned out to be inadequate.² To spot something like this, Farley will not serve, and one needs to consult a photographic reproduction.

The most recent development has been the development of digital editions which allow the user to start with a place and be given links to the entries concerning that place, or to start with a landowner and be given links to the descriptions of his holdings, or to see the Domesday places that lie in the vicinity of some specified place.³ Ideally the user might like the links to show the latest

¹ David Roffe & KSB Keats-Rohan (eds), *Domesday Now*, 2016 - see chapter by Frank Thorn.

² For an example, see Peter Sawyer, *Anglo-Saxon Lincolnshire*, 1998, Fig 1.1.

³ Roffe & Keats-Rohan (eds) - chapter by A Lowerre.

photographic images but these are only available behind a pay-wall. If one wants to check the render of 75,000 eels from Harmston, the payment required is reasonable enough; if one wants to look at line-spacing over an entire county it is unaffordable.

For that reason, the Open Domesday project, www.opendomesday.org, offers links to the OS photolithographed edition.⁴ This is by no means as clear as the latest photography but it serves perfectly well for most purposes. That is why Sir Henry James's work is seeing more use than it has for many years.

That surge in use stimulates questions about the OS volumes, questions which have been ignored by its users – who generally know little about lithography – and also by CCS members, who tended to regard the publication as a mere curiosity. The question of most relevance to the modern user is how much touching-up was done: is one really looking at the equivalent of a photograph? The second, and related question is what technical means were used to produce a facsimile which, like the original, is in red and black.

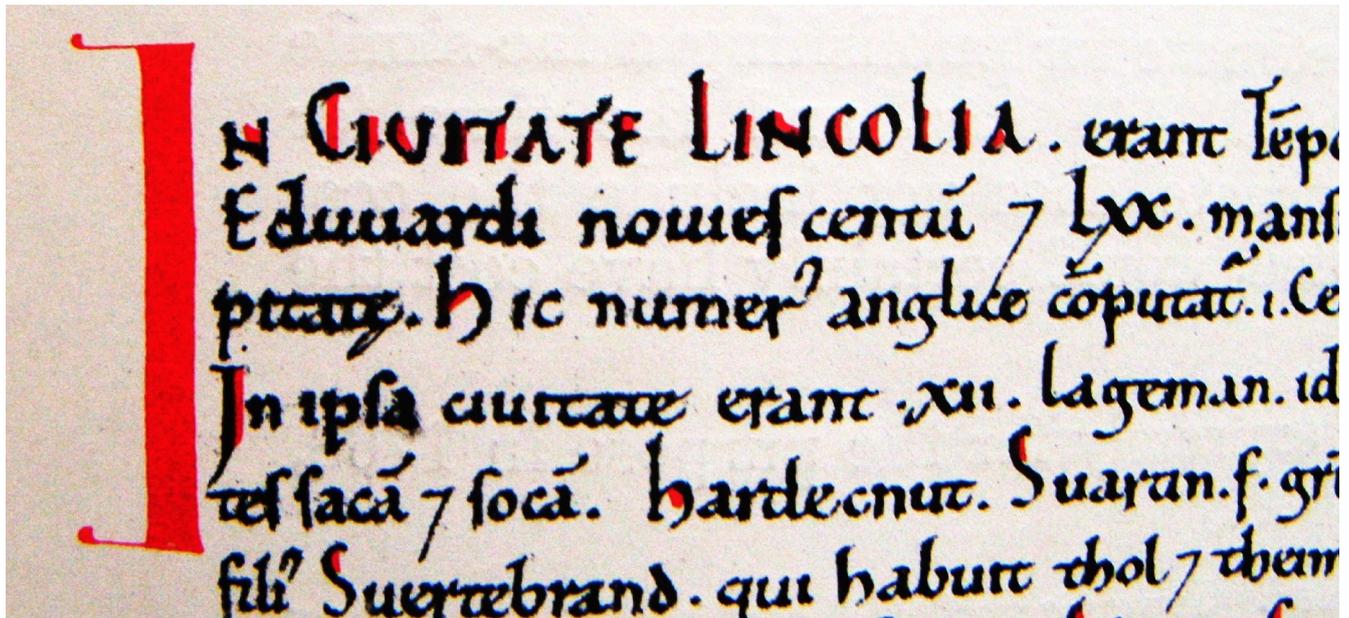


Figure 1: Extract from Lincolnshire Specimen page

Untouched by human hand?

The first question might appear to be answered in the introduction to the very first volume.

“In examining copies made by Photo-zincography, it must be remembered that ... not a single letter of the copy has been in any way altered for the sake of making them more distinct ... I have thought it better to print the copy exactly as it is produced by the photograph.”

That appears clear enough. But when we go on to the second question, we shall find that James was being economical with the truth.

⁴ One also encounters references to www.domesdaymap.co.uk. This appears to be a derelict version of the same system, with much of the functionality being non-functional.

Printing technique

Much of this account will relate to Lincolnshire. The county was published late in the sequence, so represents the Survey's mature practice on this project. It also has one rather unfortunate distinction, in that a couple of pages are disfigured by dark patches that seriously obscure the text. They seriously obscure the black on the OS facsimile, suggesting that this is indeed a photographic image without any cleaning-up. However, the red has not suffered in the slightest. This suggests that the red is worthy of particular attention.

Figure 1 shows part of the Specimens page from the Lincolnshire introduction. It has the unusual feature (for the Domesday Book) of a large initial letter, wholly in red. There is no ornament as such, just an elegant flourish at the start of the two serifs: a balanced and tasteful composition. The same section of text is reproduced in its proper place in the main body of the book. Again, there is a large red 'T' with long serifs to the left, but this time there are no flourishes at their extremities. Clearly both of these cannot be photographic reproductions.

To find the truth, one needs to consult the Alecto reproduction. This shows a large red 'T' with serifs elongated to the left but also extending to the right. At the end of the top one is a tiny disc: it may possibly be a pin hole in the parchment that was used in ruling-out and has become filled with red ink. There is a similar disc on the lower serif a couple of millimetres short of its end. Quite clearly the red on the Specimens page has been hand drawn. Perhaps the draughtsman was told to produce something a little more showy than the original. More creditably, the draughtsman was perhaps working from an image on which the red had reproduced poorly: he could see the discs but couldn't make out what they were and assumed they represented a flourish which had barely come out on his reproduction. Perhaps the continuation of the serifs to the right had reproduced so poorly that he missed them altogether. If so, the 'T' in the main text would appear to be hand-drawn also, but in this case the draughtsman missed the tiny discs, or decided they might be unintentional blotches.

One can find other signs that the red plate was hand-drawn with a pen. The second letter of the second word in figure 1 is another 'T', this time in what the modern typographer would term 'small caps'. The red 'shadow' ends in an acute angle – about 40° from the vertical. On the original, the shadow ends at an angle of about 60° from the vertical. The draughtsman was holding his pen at a different angle from the scribe.

Whereas the Specimens page only has red 'shadows' (apart from that initial capital), the main text includes headings in red. It seemed unlikely that these had been written in a convincing 11th-century hand by a 19th-century draughtsman. Yet once again there turn out to be key differences. One of these concerns the letter 'x' in Roman numerals. Tenants-in-chief are numbered, and these numbers appear in red in a list at the start and then again by the side of each tenant-in-chief. The fourth line of figure 1 has an 'x' in the numeral '.xii.'. Observe how the bottom-left arm of the 'x' ends in a serif - or a flourish; what one calls it is

irrelevant, what matters is that it is angled up quite sharply. In contrast, our draughtsman likes to start his stroke with the pen moving almost horizontally and then to curve up to the 45° needed for the up-stroke of the 'x'. His 'x' is more elegant; it is also easily distinguished. His other letters are more exact copies of the original but the scribe often forms them imperfectly - for example, the up-stroke of his 'A' often meets the down-stroke some way below the apex; the draughtsman tends to draw them the way the scribe ought to have done.

In order to ensure correct registration, this drawing must have been done on an image of the manuscript reproduced in such a manner that the red reproduced adequately but in a different manner from the black. A grey tone would serve. It would be possible for the image to be formed directly on the plate, but if printed on paper the draughtsman could form his letters the right way round using lithographic ink and this could then be transferred to the red plate.

One other piece of Lincolnshire evidence ought to be mentioned, though I am unsure of its significance. The lower third of page XV can exhibit a speckle of red on letters that ought to be wholly black. When I first saw it, I supposed it a failing in an automatic process of colour-separation; but it could be accounted for if the non-printing (or non-reproducing) drawing base for the red material had actually printed, albeit very weakly. The phenomenon does not appear on all copies: it is clear in the CUL copy but is definitely absent in Lincoln Central Library's copy.

To summarise the conclusions on Lincolnshire: the book was printed from separate black and red plates: the black plate was produced by photozincography, done in such a way that the red did not reproduce; the red plate was drawn by a (very capable) draughtsman using some form of drawing-base produced in such a way that the red did reproduce.

Hampshire – and Cornwall

Hampshire was the fifth county to be issued. Inspection of the Hampshire volume yielded similar evidence to that described above. It can therefore be assumed that it was produced in the same manner as Lincolnshire. Likewise, all the sixteen volumes produced after Hampshire and before Lincolnshire were presumable produced in this manner.

The reason for examining Hampshire is that Richard Oliver very kindly sent me details of an estimate for the production of the Hampshire volume he had discovered.⁵ This is the only known estimate for this project but its existence, along with the change in the wording of the preface which Bill Henwood mentioned, from "I have been directed to publish this volume" to "I have been directed to publish the whole work", indicates that approval for the project was initially given one volume at a time.

⁵ File 14418/61 in TNA T1/6332A.

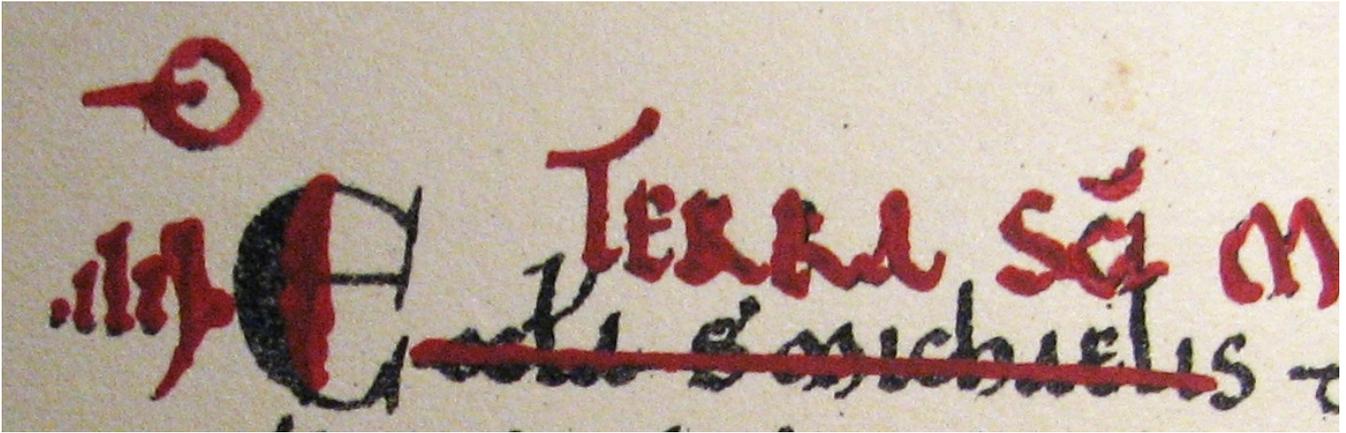


Figure 2: Extract from Cornwall.

This Hampshire estimate implies a process in which the title page and the specimens page are printed from separate black and red plates, but the main text is printed in black with the red being applied by hand, using a stencil. Figure 2 shows an extract from the Cornwall volume (the first county to be reproduced) showing the heading for the fourth of the tenants-in-chief. Note first the tenant's number, ".iiij." where the final stop has merged into the 'j'. On the original the individual letters and the stops are clearly separated; this shows the tendency for the red ink to spread, which seems to be a problem with stencilling. Secondly, note the rubrication of the large 'E' of 'Ecclesia', with its wavy outline towards the bottom. This is not a phenomenon one would see from a pen-stroke. Thirdly, the contraction sign in "sĀ", made with a single pen-stroke, displays similar blooming; and the islands of white on the two 'R's (but not the 'A') of TERRA have filled with red. This shows that, despite its technical difficulty, the lettering itself was done by stencil, and somehow the island in the 'A' was preserved. Fourthly, one can see that the "Ā" has been printed in black (perhaps not very clearly) and inked over in red.

Overall there can be no doubt that all the red of the main text was indeed applied by stencil. How these stencils were made is a puzzle. The Hampshire estimate quotes a cost of 2s for each stencil, the same sum as that quoted for making the black plate for each page. Is it possible that a zinc plate was used for the stencil, the red lettering being transferred from the black plate using transfer paper, the red 'shadows' being hand-drawn, and that gum was then applied to the rest so that the red parts could be etched through to produce a stencil?

The other puzzle is the rationale for printing the specimens page (and title) by a different process from the main text. Even more puzzling, the production cost per page (for 250 copies) by stencilling exceeded that for colour-printing. It may be significant that the specimens page has no lettering, so the red plate could be easily prepared by a litho-writer. But if the lettering could be transferred in order to make a stencil, the same process could have been used to make a red printing plate.

Stencils were only used for the Cornwall volume. Middlesex, Sussex and

Surrey, which came after Cornwall but before Hampshire, appear to have been printed. So why did the Hampshire estimate assume stencilling? Was the financial approvals process so slow that the estimate went in while there were three counties in the production pipeline?

Conclusions

Those interested in Domesday Book as a document need to appreciate that, while the black of the OS facsimile is a photographic copy, the red is not. What the OS shows is broadly correct, but anyone interested in exact letter forms needs to use the modern Alecto edition.

The initial impression that the publication represents a technical breakthrough by the OS proves false. The printing of the black image by photo-zincography may indeed be the most extensive use of the technique up to that date, but the methods used to produce the red were not novel: printing by two plates in different colours and stencilling were both well-established in the print trade.

The only technical innovation that may have occurred was - just possibly - in the manner of producing stencils for Cornwall. This proved a dead-end.

A speculative postscript

The Lincolnshire preface credits a 'Mr Appel' with transferring each photograph to the plate. That seems to imply a purely mechanical operation. However, Rudolph Appel was a patentee of the anastatic process who formerly had premises at 43 Gerrard Street, Soho, to which he appears to have moved from Ipswich in 1848 or 1849. At the Great Exhibition, he received a commendation for a process enabling images to be transferred to zinc.⁶ In 1855, he was approached by Edmund and Louis Schehl who wished him to make lithographic copies of Prussian bank notes.⁷ His evidence does not indicate whether the note was printed in more than one colour, but Appel was able to produce a separate plate for the water mark. During the Crimean War he had copied Austrian maps of Russia and Turkey for the War Office.⁸ By 1857, Appel was bankrupt, and for the next 35 years he worked for the Ordnance Survey.⁹ So was Appel responsible for improving the colour-separation process to the extent that the black plate on the later volumes excluded the red matter?

Events diary:

Tuesday 15 January, Cross Street, Manchester, 1pm. Manchester Geographical Society talk *The Secret Soviet Maps of Manchester, the North and the World*. www.mangeogsoc.org.uk

Thursday 24 January, Westminster, London, 6pm. UKGeoForum Annual Lecture by John Davies and Alexander J Kent. www.ukgeoforum.org

⁶ David McKitterick, *Old Books, New Technologies*, 2013, 105

⁷ www.oldbaileyonline.org - search for Schehl.

⁸ Journal of the Society of Arts, 18 Dec 1857, p73.

⁹ Pickering & Chatto (antiquarian booksellers), *Bulletin 41*, Jan 2014, item 28 in the catalogue (available on-line).