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

This edition of Sheetlines was published in 2011 and the articles may have been superseded by later research.
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THE CHARLES CLOSE SOCIETY
for the Study of Ordnance Survey Maps
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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.
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Our chairman, Dr Christopher Board, was invited to represent the Society at the official opening of the Ordnance Survey’s new building by the Duke of Edinburgh. OS was celebrating 220 years of existence and, coincidentally a century since Charles Close took over as Director General. Vanessa Lawrence invited Prince Philip to unveil a plaque to record the event, mentioning that OS had occupied four sites since its creation. In reply the Duke commented that he had accompanied the Queen to open the former headquarters building in Romsey Road, saying that he doubted he would be around when OS moved again. Prince Philip had been shown a carefully selected range of exhibits to illustrate the evolution of survey and mapping over two centuries. He was introduced to many of the staff and visitors, among them our chairman. He wanted to know who was Charles Close and why we existed as a society. Also present was Dr Yolande Hodson, another founding member of CCS, who is currently cataloguing King George III’s military map collection in Windsor Castle.
Less welcome publicity appeared in the *Sunday Times* of 25 September under the headline *Ordnance Survey staff find their way to caviar on the taxpayer*. Defending the organisation, an OS source emphasised that overseas trips often involved officials winning business from foreign governments.

The CCS website has recently been enhanced with the addition of another thirty images to the digital archive of rare or important historic OS maps, bringing the total viewable online to over 200. The latest batch include fascinating examples of First World War Air packets. See [www.charlesclosesociety.org/digital](http://www.charlesclosesociety.org/digital)

The Society has become a sponsor of the London Mapping Festival, running throughout 2012. More about this in *Sheetlines* 93. Meanwhile for details of events see [www.londonmappingfestival.org](http://www.londonmappingfestival.org) and also keep an eye on our own website.

Another interesting website, focussing on London maps and including reproductions of out-of-copyright 1:25,000 OS mapping, can be found at [http://mappinglondon.co.uk](http://mappinglondon.co.uk). A review of a new atlas of London can be found on page 54 of this issue of *Sheetlines*.

Elsewhere in this issue are reports of summer visits by the Society to Gotha and Dublin. A gallery of photographs by participants in these events can be seen at [www.charlesclosesociety.org/visits](http://www.charlesclosesociety.org/visits)

Two forthcoming talks which may be of interest to members are included in the 2012 programme of the Oxford Seminars in Cartography, held at the University of Oxford Centre for the Environment, South Parks Road, Oxford, OX1 3QY. Both are given by CCS members, both run from 5pm to 6.30 pm. On Thursday 23 February Rachel Hewitt (author of *Map of a Nation*) will talk about Ordnance Survey history, whilst on Thursday 24 May Alexander Kent speaks on modern European topographic mapping. For more information contact Nick Millea, nick.millea@bodleian.ox.ac.uk

Those interested in open source graphic index applications – or in viewing historic map series of Scotland – will be interested in the new Sheet Viewer at [http://geo.nls.uk/search](http://geo.nls.uk/search) on the National Library of Scotland maps website. The viewer allows a choice of historic and modern mapping layers as a backdrop to selecting map sheets of interest. More details from Chris Fleet C.Fleet@nls.uk

**Christmas competition**

*David Archer writes*: Having fought their way to the end of this month’s Kerry musings (page 56), those who can bear it might wish to count up the number of Ordnance Survey or cartographic ‘references’ in it. I will give a small prize for the largest number spotted over 170. No prize for the lowest number spotted. Let me know the number before 31 January 2012 by email to david@david-archer-maps.co.uk and I will then ask those proposing the three highest numbers to mark up a copy with their suggestions.

Suggestions for future puzzles (with or without a prize!) are most welcome. Send your ideas to the editors.
Ordnance Survey maps now printed by Butler Tanner & Dennis

Steve Burry and Matt Maiden

In the Autumn of 2009 Ordnance Survey Print and Warehouse operations underwent a market evaluation ‘testing the market’ process to see if they still offered the best value to the business and were up-to-date with the changing consumer markets. External providers were invited to bid for the contracts and in September 2010 Ordnance Survey outsourced both the Print and the Warehouse operations to the successful companies.

The contract for Print & Finishing was awarded to Butler, Tanner & Dennis Ltd, in Frome, Somerset and the contract for Warehouse & Fulfilment was awarded to Promotional Logistics Ltd, Nottingham. Although this led to some voluntary job losses, Ordnance Survey was able to redeploy a number of Print and Warehouse staff into different roles within the business.

Butler, Tanner & Dennis wholeheartedly embraced the opportunity to be associated with the iconic Ordnance Survey brand and set about learning the new skills required with great enthusiasm and energy.

The company has been printing ‘large format’ sheets at its Frome home since 1910 so there was an instant familiarity with the technology involved in the printing process. There were, however, new skills to be acquired and perfected in the processes of map folding and ‘casing’ (joining the folded map to the cover).

In order to transition smoothly, without impacting stock availability, both factories operated in tandem for the first four weeks. BT&D began by finishing (trimming, folding, casing) small format maps that had been printed at Ordnance Survey. The next stage was for BT&D to print their first maps as well as finishing large format maps that had been printed at Ordnance Survey. By the end of November 2010 full production had been transferred to BT&D and the transition period had reached a successful conclusion.

In order to ensure a connection with the business Ordnance Survey set up the Demand Management team, made up of members who previously worked in the Print Services Department. This team is responsible for the management of both print and warehouse contracts and oversees the map production, inventory management and order fulfilment process, ensuring that service levels are met and that customers continue to receive an excellent service from Ordnance Survey.

In addition to the demand management team, Ordnance Survey has also enhanced the quality assurance process (which now includes an ex-printer). This team receive ten copies of every sheet BT&D produce and these are inspected against Ordnance Survey’s quality control criteria.

As of October 2011 BT&D have printed almost two million maps. The relationship continues to develop and evolve with a focus on not only producing the best quality product but also exploring ways of enhancing the product in the future for the benefit of all users of Ordnance Survey paper mapping.
Left and above: the map production area in the Frome factory

The recent Crystal Palace map and the forthcoming Leicester map in the CCS Maps from the past series have been printed by Butler, Tanner & Dennis.

Steve Burry is director of the maps division of BT&D
Matt Maiden is print contract manager at Ordnance Survey

photographs kindly supplied by BT&D
Surveying the administrative boundaries of Lancashire and Yorkshire after the 1841 Ordnance Survey Act

John L Cruickshank

In Sheetlines 91 Richard Oliver showed (once more) that the commonly asserted obligation on the OS under the 1841 Ordnance Survey Act to record public boundaries is complete bunkum.¹ In so doing he has slaughtered a sacred cow that had lived far too long. His article is welcome indeed. One simply hopes the cow stays dead!

However, perhaps because of his desire to achieve clarity, and also because he wished to focus on the mapping of tidelines, he has understated some of the legal difficulties inherent in a boundary survey carried out under the provisions of the 1841 Act. He has also glossed over the complexity of the situation encountered by the Ordnance surveyors when they first set to work recording administrative boundaries on the six-inch survey of Lancashire and Yorkshire. Richard does point out that while the 1825 Acts for the Irish survey had enacted that the various boundaries recorded there would thenceforth be the legal boundaries, the 1841 Act for the survey of Great Britain did not give the boundaries recorded by the OS any legal status. He did not however emphasise that the OS was explicitly not authorised to settle the position of any disputed or uncertain boundary.²

Furthermore Richard mentions that from 1849 the OS established a separate department for boundary work in England located in London where it was able to use the tithe surveys of 1836-1850. He also subsequently mentions the campaign for the rationalisation of administrative boundaries during the 1870s and 1880s and the fact that the OS at that time worked closely with the Local Government Board both to ensure that rationalisations took place before the OS carried out large-scale surveys, and to ensure that the OS did not attempt to record the full complexity of administrative boundaries as they existed before legislation of 1876. He does not however spell out why these interactions with other bodies about boundaries were so important to the OS. To understand the consequences of the 1841 Act fully it is necessary to look at all these matters in more detail.

Nevertheless before considering details of administrative boundaries in Lancashire and Yorkshire it is worth pointing out that the history of local administration in England has been complex, in part because England as a country was only created well after many of its local administrative structures. Structures in northern England in particular were often quite different to those familiar to Westminster lawyers and administrators. Over the centuries there have been many attempts to standardise and rationalise English local administration. Much sixteenth-century legislation for example attempted to do this, but with

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² Richard does quote the relevant part of the 1841 Act (4 & 5 Victoria, c. 30) in the appendix to his paper.
limited success in practice. Richard has cited some of the torrent of nineteenth-century legislation that aimed to achieve rationalisation, but nevertheless only when the 1925 property legislation had come into full force (after a significant transition period), as well as the 1929 Local Government Act cited by Richard, could the process be regarded as in any way complete. And the successive changes to the names, functions, powers and areas of local authorities made later in the twentieth century might suggest that even the present arrangements should only be regarded as an interim condition.

To understand the complexity encountered in the 1840s we need to review how the medieval and early-modern system worked, particularly in the counties north of the Humber and Mersey. Local administration in medieval England was carried out through three parallel hierarchical systems of courts. The smallest element of what might now be called the civil administrative structure is usually referred to as the vill (from the Latin word villa used in medieval records). Vills were aggregated into groups usually called wapentakes or hundreds (depending on the county and period) and in some counties these might be further aggregated into ridings, parts, or other structures below the county itself. In principle, courts would be held at each level of this hierarchy, and official representatives from each court would be required to attend the superior court. In practice there was much diversity and considerable change with time, but the basic system remained in existence, if only because it provided an important structure for the collection of various taxes and for enforcement of the criminal law. In the northern counties during the post-medieval centuries the vill would usually be referred to as a ‘township’, or sometimes as a ‘constabulary’ because the township constable was the individual who was required to collect taxes and to report to and attend at the superior court. In Yorkshire the pattern of townships seems to have become fixed long before the Norman conquest. For some townships the Roman road network provides boundaries, while others are thought to have had stable boundaries since the bronze age. The grouping of townships into wapentakes was still evolving at the time of Domesday Book (1086), but at least one of these clearly corresponds to one of the principalities of post-Roman Britain before the Anglian conquest.

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3 A group of Acts of Parliament, of which the 1925 Law of Property Act is only one, substantially changed English land law and legal procedure thereafter. In particular the surviving copyholds and all military tenures were assimilated to freehold, and manorial lordship was left effectively empty of practical functions: 15 & 16 George V, cc. 20, 18, 23, 22, 19 and 21.


5 P N Wood, ‘On the Little British Kingdom of Craven’, Northern History 32 (1996), 1-20. Craven is thought to have fallen to Anglian Northumbria in the seventh century. At a date between 1086 and 1166 it was renamed Staincliffe Wapentake, but the corresponding rural deanery retained the name of Craven (and almost identical boundaries) into the nineteenth century. In the 1970s the name of Craven was once more applied to a local government area, although
The ecclesiastical system of parishes, rural deaneries and dioceses (and the associated system of courts) was superimposed on this system at a relatively late date. Although Yorkshire had been Christianised well before the time of Bede in the 730s, the subsequent Danish invasions and the establishment of the (initially pagan) Viking kingdom of York in the southern half of Northumbria seem to have set back the process of founding local churches. Thus when the parish structure became fixed by the progressive imposition of the tithe system between the tenth and twelfth centuries, only in the East Riding did the distribution of parishes correspond to the distribution of townships in a one-to-one manner. Elsewhere in Yorkshire, and in all the other northern counties, parishes varied hugely in size. The norm was for one parish to cover the area of several townships. For example, the parish of Leeds covered the area of eleven and a half townships (so note that parish boundaries did not always follow township boundaries). Parishes such as Halifax and Ecclesfield in Yorkshire, or Kendal in Westmorland were far bigger than Leeds.6

By stating that townships are subdivisions of parishes Richard Oliver is thus in error. He is by no means the first, nor probably the last. Westminster lawyers have, for centuries, tended to be unaware of the distinction between northern parishes and townships, and when framing legislation to have assumed that the coincidence of these institutions in southern counties was universal throughout England. Thus the 1552 Act of Parliament that established the basis of what became the Poor Law made the parish responsible for poor relief.7 In southern England this was workable, but in the north it was completely impractical. In practice poor relief had to be organised (and funded) at township level, yet only after the Restoration was amending legislation passed to formalise what actually

the simultaneous transfer of much of the old wapentake to Lancashire meant that it was now rather smaller than formerly. Domesday Book (1086) records hundreds in the East Riding that were subsequently reorganised into larger wapentakes, however the Domesday hundreds of south Lancashire were reorganised into larger hundreds.

6 That the establishment of local churches and parishes was often late is shown for example by the continuing obligations of many widely scattered townships to pay tithes and pensions to Dewsbury Minster, despite the subsequent creation of individual parishes (many themselves large) within the extensive territory of this mother church: M L Faul & S A Moorhouse (eds), West Yorkshire: an Archaeological Survey to AD 1500, Wakefield: West Yorkshire Metropolitan County Council, 1981, vol 1, 216-218, and vol. 4, map 15. The history of the establishment of tithe and the development of parishes in England is however complex and in many parts unclear. Lord Ernle’s chapter on tithe remains a useful introduction but does not specifically consider northern England: R E Prothero (Lord Ernle), English Farming Past and Present, fifth edition revised by AD Hall, 1936; reprinted with new introductions by G E Fussel and O R McGregor, London, 1961, chapter XVI. For the nineteenth-century tithe surveys see Roger Kain and Richard Oliver, Tithe maps of England and Wales: Cartographic analysis and county by county catalogue, Cambridge University Press, 1994. Rural Deaneries were created by the Normans between 1066 and 1108: F Barlow, The English Church 1066-1154, London: Longman, 1979, 48-50.

7 5 & 6 Edward VI, c. 2.
happened. Similarly when the Royal charter creating the new Borough of Leeds was issued in 1625 the borough was made coterminous with the parish of Leeds. The then urban area of Leeds was only about ten percent of Leeds township, which in turn was just one of eleven and a half townships in the parish. Many of the inhabitants of the other townships were thus both surprised by, and resentful of, their subjection to this unexpected and unwanted new authority.

The third administrative hierarchy was the feudal system of land-holding (land-ownership) introduced at the Norman conquest. This was imposed from top down through the process of subinfeudation. Thus in return for military services the King awarded large land-holdings in his newly conquered realm to tenants-in-chief. These in turn awarded parts of their lands to their supporters in return for their services. In turn these could (and did) subinfeud estates to others. In theory each military tenant had a feudal superior at whose Honour Court he was bound to appear, and could create further sub-tenants, each with the right to hold a manorial court. However subinfeudation progressively snowballed as a market in land developed and progressively smaller holdings were created. The right to subinfeud, and thus the right to create new manors, was eventually abolished in 1290 by the Statute of *Quia Emptores*. Nevertheless by this time an impossibly complex feudal hierarchy had been created. Lordships and landholdings could be bought and sold, and although Royal bureaucrats valiantly tried to keep track of changes in lordship, by the late middle-ages all sorts of topsy-turvy feudal relationships had developed. The system of superior courts largely fell into disuse, except where the Crown itself held the Honour. For example the Honours of Pontefract, Knaresborough, and Pickering (all in Yorkshire) were parcels of the Duchy of Lancaster, and thus even in the nineteenth century litigation concerning (amongst other things) the often valuable feudal rights to mills in these areas of Yorkshire continued to be heard in the Lancaster Court of Duchy Chamber. At the bottom level, particularly where copyhold land tenure or common use-rights to land persisted, many manorial courts continued to have public administrative functions into the twentieth century.

The early Ordnance Survey one-inch sheets of England south of the Preston to Hull line with few exceptions did not record administrative boundaries except those of counties. When, following the Irish survey, the OS began to survey

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8 13 & 14 Charles II, c. 12.
9 18 Edward I, c.1.
10 Those familiar with manorial court records should bear in mind the difference between Courts Leet and Courts Baron. In theory, a Court Leet was convened by the lord for the administration of the township, while a Court Baron was the personal court of the lord convened to administer matters of landholding, inheritance and land transfer within his lordship. In practice, particularly when township and manor coincided (as was routine in medieval times and common even after the changes to many manors in the sixteenth and seventeenth century) these functions were often not clearly distinguished. Where manors covered more than one township (and some manors like Wakefield and Almondbury in the West Riding, and High Furness in Lancashire North of the Sands included many townships) customary procedure varied but was necessarily rather more complex in order, for example, to ensure that each township had the necessary office-holders appointed.
Lancashire and Yorkshire at the six-inch scale it attempted to record all civil boundaries and parochial boundaries, but not those of individual properties, manors, or any other feudal entities, nor those of rural deaneries, dioceses or ecclesiastical provinces. In Southampton this had no doubt seemed a simple enough proposition. In particular the Irish requirement to record manorial boundaries had been dropped. The complexities that the surveyors actually encountered on the ground must soon have dismayed and disheartened both the surveyors and their Director.

Let us consider the situation in a single Yorkshire township, that of Headingley-cum-Burley in Skyrack Wapentake of the West Riding.\(^{11}\) This was one of the eleven and a half townships within the parish and Borough of Leeds. In the 1840s it was still largely rural and strongly maintained its considerable independence from the adjacent town. Thus, to minimise the cost of poor relief and so keep its poor rates below those of urban Leeds, for poor-law purposes the township had joined in a Union of similar largely-rural townships that excluded Leeds township.\(^{12}\)

The original boundaries of Headingley-cum-Burley had probably been fairly simple and conventional, in that they had followed a succession of well-defined watercourses. Only two short stretches had originally had to be defined across dry land. However by the nineteenth century the accepted boundaries had departed from these watercourses to follow property boundaries at several points. The northern boundary of the township (and thus of the parish and the borough) in particular had changed to follow a series of property boundaries well to the north of the original watercourses, and one section of this northern boundary was disputed.

How had this seemingly impossible situation come about?

The original boundaries had probably continued to be recognised until after the Dissolution of Kirkstall Abbey in 1539. The abbey had owned the manor of Headingley\(^ {\text{cum membris}}\) and all the tenements within the township with the exception of one. Similarly it had also owned the manors and almost all the land in the adjacent townships of Bramley, Chapel Allerton, Horsforth, and Cookridge. The abbey had administered each of these manors separately, and thus had an interest in maintaining the manorial boundaries which coincided with the township boundaries. However the various water-driven mills that it owned were conversely often recorded with the manor on the opposite side of the watercourse from the mill’s site,\(^ {13}\) and the major commercial woodlands that

\(^{11}\) J L Cruickshank, *Headingley-cum-Burley c1540 to c1784*, unpublished PhD thesis; University of Leeds, 2003, contains additional detail and fuller references to historical sources for this township.

\(^{12}\) To minimise its poor-rates the township of Headingley-cum-Burley had traditionally adopted policies exactly like those of a ‘close parish’ as described by B A Holderness for areas where the parish was the area of poor-law administration. See: B A Holderness, “Open” and “Close” Parishes in England in the Eighteenth and Nineteenth Centuries’, *Agricultural History Review*, 20 (1972), 126-139.

\(^{13}\) Thus at the Dissolution Armley Mill (in Armley township) was included in the records of
extensively overlapped the township boundaries were managed entirely outside the manorial framework. Collection of the great tithes of Leeds, which before the Dissolution were owned by Holy Trinity, York, and thereafter by Christ Church, Oxford, had in practice been leased to separate contractors for each township both before and after the Dissolution. However while this should have provided a continuing reason for boundaries to be remembered, the Lateran Concordat of

Headingley manor, but Wood Mill (once the manorial mill of Headingley) was included in the records of Chapel Allerton manor. The fulling mill that would later become the site of Kirkstall Forge (in Headingley-cum-Burley) was recorded with Bramley manor.
1215 had established that the demesne lands of Cistercian abbeys would be exempt from tithe. In England this exemption was continued for the new secular purchasers of such land after the Dissolution. And because Kirkstall Abbey itself stood within Headingley-cum-Burley, a substantial part of the township had been retained in demesne until immediately before the Dissolution. Furthermore this demesne land had included the extensive commercial woodlands crossing the northern boundaries of the township. Woodlands (while still wooded) were also not liable to tithe. The subsequent piecemeal nature of the sales of former monastic land by the Crown thus allowed much confusion, some of which was used by the new owners to their advantage.

Nevertheless, the north-west, south-west and south-east boundaries of the township remained unchanged and unchallenged despite a number of landholdings extending across them. The first two of these were marked by substantial watercourses (Oil Mill Beck in its deep gorge and the River Aire), and the third, the boundary with Leeds township, had been fixed and marked following litigation when Burley was enclosed in the twelfth century.

The north-east boundary had also followed a quite substantial watercourse, now called Meanwood Beck. However by the nineteenth century three deviations from this had become established. Firstly, just before the Dissolution, the Abbey had leased a triangular area of demesne land called Bentley, which lay on the opposite side of Meanwood Beck from Headingley in the angle between that beck and its tributary Stain Beck, to their tenant of nearby Headingley Hall.14 After the Dissolution (and until the nineteenth century) Bentley continued to remain part of the Headingley Hall tenancy. It was thus sold with it by the Crown as a part of Headingley, so diverting the line of the boundary. Secondly, soon after the Dissolution, the former Headingley manorial mill on this beck (already listed with Chapel Allerton manor in the Dissolution accounts) was sold by the Crown (without soke rights) with lands in the adjacent Chapel Allerton township, and as a result that mill came to be seen as being in that township and the township boundary came to be regarded as following this mill’s long header goit rather than the beck itself. Thirdly, at the north-north-eastern corner of the township the site of a monastic ironworks (Weetwood and Hesilwell Smithies) had straddled the boundary beck. Although the early-eighteenth-century property deeds of this land continued to express some ambiguity about which township it stood in, by the nineteenth century all of the site of the former ironworks was regarded as being in Chapel Allerton, including the part on the Headingley side of the beck, and it was so recorded both on the Chapel Allerton inclosure award map of 1814 and on the Headingley-cum-Burley inclosure award map of 1834.15

14 Stain Beck also formed part of the boundary between Chapel Allerton and Potternewton townships.
15 The Parliamentary inclosure of Headingley Moor took place under an Act of 1829: 10 George IV, c. 17. This Act permitted the commissioners to define the township boundary, but only where it passed alongside the (relatively small) area to be inclosed. In the event this power proved unnecessary. The details of how this inclosure was carried out have recently been reviewed in E Bradford, ‘The Enclosure of Common Land in Headingley-cum-Burley, 1828-
For the surveyors of the Ordnance Survey these deviations from the obvious original line were no great problem. By 1847 they were long established and undisputed. In particular their having been accepted and recorded without challenge by the Parliamentary inclosure commissioners of both Headingley-cum-Burley (1834) and Chapel Allerton (1814) gave them a clear standing. They simply had to be recorded on the new maps in conformity with the inclosure-award maps.

The northern boundary was rather different, in that the whole of it had been altered as a result of the changes in land-ownership after the Dissolution and part of it was disputed. This was important since this was also the northern boundary of the parish of Leeds and thus of the borough of Leeds. English law at the time gave very few options for resolving disputed boundaries which therefore might remain in dispute for very long periods. This dispute can be traced to 1609, when Sir John Savile (the then owner of most of Headingley-cum-Burley) claimed that following previous litigation originally begun by his father he should be the owner of Cookridge Wood. His justification was that since the monastic leaseholder of Moor Grange in Headingley had had use-rights in Cookridge Wood at the time the freehold of Moor Grange had been sold by the Crown to Sir John’s father, possession of the wood was implicit in the purchase. Sir John claimed that he had previously been unaware of any claim that Cookridge Wood (like the rest of Cookridge township) lay in Adel-cum-Eccup parish and not in Leeds. Sir John clearly wanted the wood in order to provide charcoal for the new iron-forghe was about to construct on the site of a monastic fulling mill in Headingley, on the River Aire north of the abbey site. The claim should have been thrown out as nonsense, but perhaps because Sir John was a rising political power in the county (and would eventually be raised to the peerage) he seems not only to have been able to force a sale of the wood by the rightful owners to himself, but also to establish legal doubt about what parish it lay in. In this he was no doubt helped by the wood having been part of the monastic demesne and therefore having been exempt from tithe. There were therefore no tithe documents to confirm what would have been obvious to any local person – that Cookridge Wood lay in Cookridge township, and so in Adel-cum-Eccup parish. But once legal doubt about the course of the boundary had been established, unless a local consensus

34; Conflicts of Interest’, Publications of the Thoresby Society, second series 18 (2008), 63-87. The Chapel Allerton inclosure acts were 48 George III, c.6 (1808) and 51 George III, c.15 (1811). These Acts gave no formal powers to define township boundaries. The deposited copies of the enclosure awards and maps are now at the West Yorkshire Archive Service (Leeds).


17 TNA SP 14/49 23.
could be achieved, there was no legal mechanism for removing the doubt. And subsequently the situation was further complicated by the division of Cookridge Wood between four landowners, one of whom was an alderman of Leeds, during the eighteenth century.

The adjacent length of the northern boundary of Headingley had originally passed through the northern part of another abbey-demesne wood, Weetwood, which had straddled the boundary between Headingley-cum-Burley and Adel townships. This had formed part of the estate (which also included the site of Kirkstall Abbey itself) granted by the Crown to Archbishop Cranmer before the death of Edward VI and Cranmer’s consequent attainder and execution. The subsequent litigation about this estate was extremely complex, long-lasting and expensive, and so in 1583 Sir Thomas Cecil (elder son of Sir William Cecil, Lord Burghley, Chief Minister to Elizabeth I) was able to buy it from the bankrupt son of the Archbishop for immediate resale in smaller chunks. Nevertheless, when he gained permission to sell Weetwood it was correctly described as being in Leeds and Adel parishes. However at some later date it became accepted that Weetwood was wholly in Headingley, but that a small piece of woodland within its edge, called Lawnswood, was in Adel township. This had the effect of causing a small, almost rectangular, deviation from an otherwise smooth new boundary line. Nevertheless, despite the shift in this part of the boundary, by the nineteenth century there was no dispute about where its course should run and so the OS could simply record this stretch of the boundary where everybody agreed that it was.

So while part of the new northern boundary was uncontroversial, part still remained legally uncertain in the nineteenth century, with no local consensus about where it should run. This can be demonstrated by comparing the two-inch map of the proposed boundaries of the Borough of Leeds made in 1832 by Lieutenant Robert Kearsley Dawson RE with the later OS maps. The Dawson map shows a much more northerly line through Cookridge Wood than the OS one. Dawson’s map reproduces the line shown on Joshua Thorpe’s Map of the Country extending Ten Miles round Leeds originally surveyed in 1819-1821, published in 1821 and republished with revisions in 1831. A further revision of Thorpe’s map published in 1849 would still show the same northern course for this boundary.

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18 TNA C 66/1250 m2. List and Index Society. 287, no 1261.
19 Lawnswood was eventually to be bought by Leeds Borough Corporation for use as a burial ground in replacement for that of Leeds parish church which had become scandalously overfull. Considerable controversy then arose about the idea of Leeds burying its dead outside the borough boundary.
20 Boundary Commission (Parliamentary) 1832. Plans of the cities and boroughs of England and Wales: showing their boundaries as established by the Boundaries Act passed 11 July 1832 &c(vol. 2). A reduced copy of the Dawson map showing the more northerly line of the boundary was published by J & C Walker on plate CXII of their atlas of the new boroughs. Many copies of this map survive.
The survey of OS six-inch sheets 202, 203, 217 and 218 of Yorkshire took place in 1847 and 1848 under Captain Tucker, although contouring and publication was delayed until 1851. Until 1849 the Royal Engineer officer in charge of the division was responsible for establishing where boundaries were. So how did Tucker resolve this problem in order to draw the clear boundary line shown on sheets 202 and 203 of the new six-inch map of Yorkshire?

The answer seems to be that by 1848 he was able to accept a legally more binding claim than the one chosen by Dawson. Two separate, but cartographically linked events made this possible. While Cookridge township had been fully enclosed by agreement in the seventeenth century with little if any surviving documentation, and little need for subsequent surveys, Headingley had retained a small area of common pasture into the nineteenth century which had then been subjected to Parliamentary enclosure. The enclosure commissioners made their award in 1834 using a map of the whole township that was an updated version of an existing older survey of the township. This most likely derived ultimately from a survey commissioned by Leeds Quarter Sessions for township rating purposes in 1784 for which the schedule of lands, owners and occupiers still exists, but for which the map itself is sadly untraceable.22 The enclosure map, almost incidentally, shows the northern boundary of the township as following exactly the line later recorded on the OS six-inch maps.

The second event was the survey of Headingley-cum-Burley for the tithe commutation commissioners in 1846, ie immediately before the six-inch survey. As was standard practice, the tithe commissioners did not resurvey the township from scratch; they simply updated the same existing map as had been used by the enclosure commissioners. Not surprisingly, the boundary shown also follows the same line as shown on the 1834 map.23

While the Ordnance Survey did not have the power to settle disputed boundaries by establishing a definitive line, the tithe commissioners did.24 This was obviously intended to enable tithe liabilities from land to be correctly attributed so that the subsequent rent charges could then be calculated. However since the land in question along the northern boundary of Headingley-cum-Burley was formerly abbey demesne, and thus exempt from tithe, the precise line was in fact unimportant for tithe purposes. Nevertheless the fact that they (following the Headingley enclosure commissioners and the earlier survey) had

22 Although the 1784 map seems not to have survived, John Tuke’s Map of the Parish or Borough of Leeds of 1781 shows the same line as the enclosure map, the tithe map and the OS map: see Bonsor & Nichols (op. cit.) no. 27.
23 For the inclosure see above. Richard Brooke, Nathaniel Jowett and John Gott, A particular Survey and Valuation of all the Houses, Woods, Lands, Tythes, Mills, Forges &c., &c. within the Township of Headingley Taken Spring 1784, MS Box XVI, Thoresby Society Library, Leeds. The Tithe Commission File on Headingley-cum-Burley is TNA IR 18/12594; the tithe map is TNA IR 130-43-203; the apportionment is TNA IR 29-43-203. Although the ownership of tithes was obviously parochial, the administration and collection of tithe had been based on the township structure since medieval times. Hence Headingley-cum-Burley had its own tithe survey and apportionment.
24 2 & 3 Victoria c. 62, s. 34, and 3 & 4 Victoria c. 15, s. 28.
drawn a boundary line on their maps could be taken by Captain Tucker as giving him a legally valid line for the township boundary. How much time and effort he expended before achieving this solution to his problem is now unknown. It does however seem obvious that during his survey he must have made (at the very least) some contact with the tithe commissioners to establish what their policy on the boundary had been. That his survey took place after that of the tithe commissioners was also highly convenient.

Having established where the northern boundary line was to be drawn, which was actually along the property boundary between the eighteenth-century divisions of Cookridge Wood, Captain Tucker made a further significant decision. The name of Cookridge Wood, which until then had been in general use to refer to the woodland on both sides of the boundary line, and which had been included on Dawsons’s two-inch map, was omitted from the Ordnance Survey map. Instead, individual names for the four divisions were given. These names had not previously been in common use (and at least one, Clayton Wood, may even have been newly coined), but these are the names that now survive in use, while the name of Cookridge Wood is now forgotten.  

The northern boundary of the township was however not the most difficult boundary problem facing Captain Tucker in Headingley-cum-Burley. His instructions were to record the boundaries of any sub-divisions of townships. And indeed Headingley-cum-Burley was subdivided, in that while it was considered to be a single township for almost all purposes, for the purposes of highway maintenance it was considered to be three separate townships called Headingley, Burley and Kirkstall. This had been the case since the assumption of powers to direct township highway maintenance by Leeds Borough Quarter Sessions at the very beginning of the eighteenth century, although the custom may well have been no older than that. In establishing the boundaries of these three areas Tucker was on uncertain, because poorly recorded, ground.

Headingley and Burley had been separate entities before the Norman conquest, but had been united by the time of the making of Domesday Book in 1086. Nevertheless a definite distinction between these two had been maintained until the Dissolution when holdings in the two villages were listed separately and slightly different conditions of landholding could still be recognised. Even after these tenurial differences were abolished, Burley remained a physically distinct settlement with its own inhabitants occupying their own fields. The Cardigan estate records continued to differentiate tenancies in Headingley from those in Burley throughout the eighteenth century. Only in one area called Lea Carr was there any lack of clarity. This was beside an area called Burley Hill that until the

25 The Headingley-cum-Burley tithe survey uses Cookridge Wood as the name for what the OS two years later called Clayton Wood. The name Iveson Wood was however used both in the tithe survey and by the OS for that part of Cookridge Wood that had been owned by Alderman Iveson and his family in the eighteenth century.

26 As Richard Oliver points out, subdivisions of townships were formally referred to by the OS as hamlets. While this terminology is logical and correct, I shall follow the illogical local practice of referring to these subdivisions as ‘townships for highways purposes’.
early seventeenth century had been Burley’s common grazing and had then been inclosed with the creation of a new farmstead and a number of closes. Burley Hill had thus belonged to Burley alone and was delimited from Headingley by a pair of small becks and the wetland area, Lea Carr, that was the source of both becks. The situation after inclosure is shown on the earliest known estate map of the area surveyed in 1711; this groups both Burley Hill and the ‘Leaker’ (Lea Carr) closes with the other Burley farms.27 Nevertheless there was clearly some continuing ambiguity about the attribution of the closes formed from the former Lea Carr. A small group of these recorded with Burley in 1711 were listed as part of Headingley in a 1798 estate survey, and by the time of the Ordnance survey a further close had been reassigned from Burley to Headingley.28

Medieval Headingley had itself once been subdivided into West Headingley and East Headingley, but following its acquisition by Kirkstall Abbey in the twelfth century the settlement of West Headingley seems to have been replaced by their New Grange. By the time of the Dissolution only a handful of monastic leases of pasture closes contained any mention of West Headingley, and the former East Headingley was by then simply called Headingley. Furthermore it is clear that before the Dissolution the name Kirkstall referred simply to the monastery itself and its site. It was not a subdivision of the township. It is also notable that the 1784 rating survey commissioned by the Quarter Sessions for the Borough of Leeds does not mention Kirkstall (or Burley) as separate units, and thus does not define their boundaries (or rateable values).29

So how had a new division of the township arisen, why was it called Kirkstall, and how had its boundaries been decided? Since Captain Tucker and the OS appear to have made the only complete record of its boundaries to have survived, we can only work from the OS maps to find explanations. However the boundaries then recorded seem to have arisen in three different ways.

Part of the explanation is that when the Cranmer estate was created from the abbey’s demesne lands in 1542-1547 manorial rights to the estate were granted by the Crown even though there had not previously been a specific manor corresponding to this rather fragmented property (various elements of the abbey demesne had originally been part of several different manors). When this estate was broken up and sold by Sir Thomas Cecil in 1583 the individual components were therefore sold with their manorial rights. Thus when Sir Thomas Savile (by then owner of much of the rest of the township) bought the part of the former Cranmer estate in Headingley-cum-Burley that included the site of Kirkstall Abbey he felt entitled to call this ‘the Manor of the former Monastery of Kirkstall’. His legal justification for this may have been a little shaky, but a manorial court for this new manor seems to have been established even though there were no

28 John Bainbridge, *A Particular and Valuation of the Estates of the Right Hon. James Earl of Cardigan in the County of York, (1798)*, Northamptonshire Record Office, BD ASR 559. A level area beside the former wetland is now the site of Headingley Cricket Ground.
29 See note 23 above.
manorial tenures within the property but only leaseholders. The northern boundary recorded by Tucker for Kirkstall corresponds to the northern boundary of this reputed manor.

The eastern boundary of Kirkstall also derives from this reputed manor, in that it follows the boundary between the former Savile property (which by the nineteenth century had become part of the Earl of Cardigan’s estate) and some land sold separately by Cecil in 1584 which subsequently formed the New Grange estate. However not all of the line recorded by Tucker here was ancient. This property boundary had been shifted by exchange as part of the 1834 Headingley-cum-Burley enclosure award and Tucker followed the post-1834 property boundary.

The southern boundary of ‘Kirkstall’ was quite different, in that the southern boundary of Kirkstall recorded by the Ordnance Survey was substantially further south than the southern boundary of the reputed Manor of the Former Monastery of Kirkstall. The line recorded by Tucker included a substantial part of Burley Hill, hitherto part of Burley, within Kirkstall.

Progressively, from the late sixteenth century onwards, a substantial leasehold estate had been assembled piecemeal on both sides of the River Aire, with its centre at the former monastic mill complex on the Aire immediately downstream of the Kirkstall Abbey site in Headingley. Although the leaseholder of this industrial, commercial and agricultural business became sufficiently wealthy to be appointed an assistant member of Leeds Borough Council, he continued to hold these properties under conventional twenty-one year leases until after the Civil War. However during that war he had provided substantial finance for his landlord Thomas Viscount Savile (a prominent but controversial Royalist) that could not be repaid following the Parliamentarian victory. To cancel the debts his twenty-one year leases were replaced by a group of 500-year leases to this large estate, which thus became almost (but not quite) a freehold. Although centred on the Kirkstall Abbey Mills, the largest part of the long leasehold within Headingley-cum-Burley lay to the south of these mills in Burley, and included most of Burley Hill. In 1781 this long-leasehold was acquired in marriage by a London barrister who in 1808 was raised to the baronetcy as Sir James Graham ‘of Kirkstall’. By the time of the OS six-inch survey in 1847-8 the property and the baronetcy had been inherited by Sir Sandford Graham, the second baronet ‘of Kirkstall’.

When his baronetcy was conferred, James Graham clearly regarded Kirkstall as a desirable appellation; the name of an ancient abbey perhaps provided his title with an air of venerable antiquity. Yet he, and subsequently his son, clearly seem to have felt that their entitlement to the name was weak, because the bulk of the Graham estate in Headingley-cum-Burley was in areas originally regarded as being in Burley, and not in areas that were part of the Manor of the Former Monastery of Kirkstall. This is made absolutely clear by the 1784 rating survey which recorded which lands were tithe-free (as former abbey demesne) and which were titheable. Only about fifty acres of the Graham land (out of over two hundred and seventy in the township) were tithe-free and had thus been part of this manor. However between 1792 and 1798 the Cardigan estates in Yorkshire
were resurveyed by John Bainbridge. In the *Particular and Valuation* of this survey the individual fields and houses of the township are listed within three so-called manors, Headingley, Burley and Kirkstall. These were not legal manors, but were simply convenient subdivisions of the whole. In this survey the size of Kirkstall had been expanded at the expense of Burley, in that several low-lying closes near the River Aire had been reassigned, and thus about eighty acres of James Grahams’s land was listed as being in Kirkstall. No explanation appears for the transfer of these lands into the Manor of Kirkstall and the resultant enlargement of that manor. One is left with a suspicion that James Graham had somehow persuaded the surveyor to ignore the evidence of tithe liability recorded in the previous survey (which was clearly available because all the same field names and area values are given), and to reclassify some of Graham’s land as he wished. Nevertheless, in the 1798 survey all of Burley Hill remained in Burley, and even according to this reclassification (which was only recorded in a private estate document) there was still very little of the Graham estate listed within Kirkstall.

The arrival of Captain Tucker and the Ordnance surveyors in 1847 provided Sir Sandford Graham with a golden opportunity to correct this. How the line printed on the maps for the southern boundary of Kirkstall was chosen is now unknown, but this new line had the effect of adding a substantial chunk of the Graham estate, hitherto unquestionably part of Burley, to Kirkstall. The only discernable motive for doing this was to improve Sir Sandford Graham’s public face. Given the very limited documentation for the subdivision of the township (and perhaps also the limited practical importance of the issue since an Act of 1835 had abolished statute labour and regularised the levying of rates for highway maintenance), Captain Tucker was probably happy enough to accept the word of a baronet about where this obscure boundary should be drawn across his own land.

As to why Kirkstall had come to be treated as a separate township for highway purposes, it seems likely that the division of responsibility had begun in the late seventeenth century, quite possibly as an informal way of resolving a local spat between individual land-owners as to which roads should be repaired at whose expense. The assumption of responsibility for the supervision of highway repairs by Leeds Borough Quarter Sessions (in place of the West Riding Sessions) at the beginning of the eighteenth century then provided an opportunity to formalise the division. Who actually gained and who lost by this division of the township is now completely forgotten.

We do not now know how much of the historical background to all these peculiarities of the Headingley-cum-Burley boundaries Captain Tucker was aware of in 1847-48, but it seems obvious that he was unaware that tithe records could have provided him with a different southern boundary for Kirkstall. What we can be quite certain about is that by the time he had established all these boundaries and plotted them on his survey he must have been heartily fed up of the whole

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30 5 & 6 William IV, c 50.
issue. And as we have seen, while he was not supposed to be mapping property boundaries, in practice many of the administrative boundaries he did map had become dependent on property boundaries which he therefore found himself having to record. Furthermore he must have been acutely aware that Headingley-cum-Burley was just one fairly unremarkable township out of several hundred in Yorkshire alone. Because there had been many Cistercian and other abbeys in Yorkshire, which between them had owned large areas of the county, the confusion of boundaries as areas of land adjacent to or crossing township boundaries were sold by the Crown in the sixteenth century must have been repeated in many other townships. And also it should be noted that Headingley-cum-Burley’s boundaries were less complex than those of some other townships. For Captain Tucker and all his colleagues the recording of administrative boundaries on the six-inch surveys of Lancashire and Yorkshire must have been both difficult and hugely time-consuming.

For the Director of the Ordnance Survey it must very soon have become clear that if the OS was to continue to record administrative boundaries on the new large-scale surveys, every possible means of having them defined (and, if possible, simplified) before a survey took place had to be found. This is why close communication with the tithe commissioners (who alone had a general power to fix the line of boundaries) was found to be essential, and this is why a department for boundary work was formed in London from 1849. Furthermore southern England had its own boundary complexities. When the rationalisation of boundaries by statute became possible later in the century it is thus abundantly clear why the OS was keen to follow on after such changes had been made, and why it avoided trying to record the complex boundaries existing before rationalisation. It is certainly no surprise that the OS abandoned recording subdivisions of townships in 1854; unless the tithe surveyors had also recorded them they were inevitably open to challenge, even when the surveyor had not been bamboozled by a baronet into recording a completely novel line. And indeed it now seems surprising that the decision to abandon mapping the boundaries of wapentakes and of Church of England parishes was left as late as 1878.

The highly interlocking boundary between Cumberworth Half and Cumberworth townships (the one including parts of the parishes of Emley and Kirkburton, and the other including parts of the parishes of High Hoyland and Silkstone) was particularly complex; it was also a wapentake boundary. See M L Faull and S A Moorhouse, op cit., vol. 2, 353-356, and vol. 4, map 1 and map 15. And see OS six-inch sheets Yorkshire 261 and 273.

The parochial structure outside the City of Gloucester was, for example, extremely tangled. There, a number of intra-urban parishes included extensive areas outside the city’s boundary (and jurisdiction) which were interlocked with each other and with several extra-parochial areas and an extra-parochial vill. For a written description see C R Elrington (ed.), The Victoria County History of the County of Gloucester, vol. IV (City of Gloucester), London, 1988, 382-4. It is significant that even the VCH avoided attempting to map this complexity. An earlier historical atlas of Gloucester gives an entirely misleading picture by only mapping the intra-urban parts of the city’s parishes: M D Lobel and J Tann, ‘Gloucester’, (in) M D Lobel, Historic Towns, volume one, London: Lovell Johns-Cook, Hammond & Kell Organisation, 1969.
It is however a measure of the continuing importance of these structures for administration and taxation even in the mid-nineteenth century that mapping them had been considered at all. However once tithes had been commuted to fixed money rents, the registration of vital events had been made a civil matter, and the church itself, in an attempt to Christianise an uncaring (or even Methodist) working population, had initiated the creation of innumerable new and frequently changing parochial church districts, the parish structure of the Anglican church became irrelevant for civil administration and could then be deleted from what were seen as purely civil administrative maps.

So thus far it might seem that the OS had achieved an understanding of the essentials of the administrative boundaries in Yorkshire. However in 1889-1890 a series of maps appeared that make clear that the senior officers of the OS still retained the inability to learn from history and experience for which nineteenth-century military officers have become famous. At this date the townships remained legally and practically the building blocks of local administration in the county. They had not been re-titled, although the Borough of Leeds (under its 1866 Act of Parliament) had been able to assume most of the functions of those within the borough. The 1892 local government reforms which (we are told) established the tautology of the 'civil parish' were still in the future. Yet when the newly-surveyed ten-foot (1:500) plans of the urban part of Leeds were published in 1890 and 1891, the township boundaries within Leeds were indicated, and the names of the townships were given, but instead of being called townships they were called parishes. Nor was the word parish qualified by the word 'civil' or anything else. This demonstrates a wilful disregard of the then legal, administrative and practical reality. They were still townships, even if most of their functions had been abolished, and while several of them had (many decades previously) been perpetual curacies, none of them had ever had parochial status. In any case by the time of publication of these maps the evolving Anglican parochial structure of Leeds had long-since broken free of any reliance on the township structure. By calling them parishes the OS may have been trying to anticipate the 1892 changes in local government organisation. However by recording them but giving them an entirely wrong status the OS simply made it clear that it was completely out of touch with reality.

Furthermore, even after the 1892 legislation, and despite what was printed on OS maps, the designation 'civil parish' was very slow to be accepted, both by officialdom and in common use. All the formal submissions by Leeds City Council concerning proposed boundary extensions before the First World War, and even in the 1920s, used the word township to describe the areas to be added to the City, as did the witnesses to the corresponding public enquiries.

33 Nevertheless responsibility for burials remained with separate Burial Boards for each township into the twentieth century.

34 The following are examples from a number of similar and related documents held in Leeds Local and Family History Library at case mark LQ 352 L517: The City of Leeds, Representation to the Local Government Board (under section 54 of the Local Government Act, 1888) as to an alteration of the Boundary of the City, (Jeeves, Town Clerk, Leeds and Sharpe, Parker,
For the Ordnance Survey it seems it was all much too complicated to get a grip on. Using the justification of the 1892 legislation, it decided to stop recording the many Yorkshire township boundaries within boroughs (and cities) and so save itself time and mental effort. Accordingly the new 1:2500 plans of Leeds that appeared very shortly afterwards only record the newly chartered city’s wards (which grouped townships together) and their boundaries.

In conclusion, we tend to think of the nineteenth century as a time of increasing scientific enquiry and of increasing precision and content of topographic mapping. Perhaps however we should regard the history of boundary survey by the nineteenth-century OS as a slow but inexorable retreat from the (quite modest) aspirations of the 1840s. But perhaps it is unfair to lay all the blame on the OS itself. Just as it had not the resources to keep up with the pace of building and industrial development during the nineteenth century, equally it could not keep up with the associated torrent of local and national administrative change. Put simply, even the modest aspirations of the 1840s turned out to be unsustainable.

Pritchards, Barham & Lawford, Parliamentary Agents, Westminster, 30 November 1903); The City of Leeds, Representation to the Minister of Heath (under section 54 of the Local Government Act, 1888) as to an alteration of the Boundary of the City, (Sir Robert Fox, Town Clerk, Leeds and Sharpe, Pritchard & Co., Parliamentary Agents, Westminster, 1920). A similar representation was made in 1911. Transcripts of each of the corresponding public enquiries are shelved (and in some case bound) with the Representations.
The later Ordnance Survey half-inch maps; some points of detail

Richard Oliver

The Charles Close Society’s latest map reissue is of half-inch (1:126,720) Second Series sheet 37, from a proof of 1960. Research for this, together with my long-standing desire for a suitable modern national series at 1:100,000 or 1:125,000, prompts consideration as to how effective the Second Series was in certain respects. The half-inch, the 1:125,000 and 1:100,000 together constitute a scale-family; it can be assumed that its main potential uses in Britain are for cycle-touring, medium-distance motoring away from ‘main’ roads, and general geographical reference. An additional ‘green’ justification is that it is more economical of paper and ink than is the 1:50,000 Landranger. In view of speed of movement and cover by larger scales, the half-inch family does not seem relevant to pedestrian or equestrian needs. In 2011 the only maps at 1:100,000 that can be considered as ‘fit for purpose’ for cycling are a few isolated unofficial sheets.¹

The half-inch story in brief

Between 1903 and 1910 the OS published a half-inch map of Great Britain, initially mainly for military use, and produced by rapid rather than refined techniques (figure 1). In 1935 a wholly recompiled and redrawn sheet, Greater London, was published (figure 2); an unpublished trial section of part of Devon followed in 1937, and in 1938 sheet lines for a new national series were devised. Work was halted by World War II, and revival in 1946 was followed by further redesign, including an unpublished trial section of Sheffield. A full sheet completed in 1949 – 51, Canterbury – was belatedly published as a ‘Provisional Edition’ in 1956 (figure 3), and five Second Series sheets, including 37, were taken to at least proof stage before the series was abandoned in 1961 for want of resources (figure 4).² Sheet 28, republished in 1966 as an independent tourist

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¹ These are by Mike Harrison (of Herefordshire (1998, out of print; see Christopher Romyn, ‘A cycling map’, Sheetlines 54 (1999), 5-6), and of south-west England (2005; see Richard Oliver, in Sheetlines 74 (2005), 45), now being reissued; see www.croydecycle.co.uk, which has extracts), and Harvey Maps (Yorkshire Dales for cyclists, 2003; not reviewed in Sheetlines). News of others would be welcome. For cycle-mapping see Richard Oliver, ‘Ordnance Survey maps for the cycle-tourist’, Sheetlines 51 (1998), 14-31, and Richard Oliver, ‘Mapping for cycle-touring in Britain; past, present, and a possible future’, Cartographic Journal 38 (2001), 48-60. The latter is a better piece of work than the former; both explain, implicitly or explicitly, why other 1:100,000 mapping on sale in recent years is ‘unfit for purpose’.

sheet, Snowdonia National Park, was withdrawn in 1990. An alternative to the OS was offered by Bartholomew; its half-inch was first published 1875-1903, reissued at 1:100,000 in 1975-8, and abandoned as a national series by 1987.\(^3\)

![Figure 1. Half-inch sheet 34 (1926: reprint 5000/32), incorporating post-1914 revision, stamped text](image1)

![Figure 2. Half-inch Greater London sheet (1935: revised 1931-4) handwritten text](image2)

![Figure 3. Half-inch ‘Provisional Edition’ sheet 51 (revised 1931-6; drawn 1949; published 1956), handwritten text](image3)

![Figure 4. Half-inch Second Series [sheet 43], Greater London (1962: revised 1950-56) (© Crown copyright), phototypeset text](image4)

In figs 1, 2 & 3 the fort at Tilbury is unnamed or omitted on security grounds

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\(^3\) The experimental sections are in TNA PRO OS 1/351; that of 1937 (which includes a legend) at 55A, 58A, that of 1947 (without legend) at 72A-C, 75B-D. The only copy of sheet 51 in its original form that I know of in a public collection is in TNA PRO OS 1/441, at 11A.


**Classification of lesser roads**

The early half-inch maps used the same fourfold classification as the one-inch maps from which they were derived. From 1924 some of the sheets were republished with a simplified version of the classification used on the contemporary one-inch Popular Edition: ‘good and fit for fast traffic’, ‘fit for ordinary traffic’, ‘indifferent or winding’, and ‘other roads’. There was no overt reference to the one-inch’s distinction of roads with over and under fourteen feet of metalling. The 1935 *Greater London* distinguished Ministry of Transport ‘A’ and ‘B’ roads, which alone were infilled, and ‘unclassified, wide’ and ‘narrow’, and ‘unmetalled’.4 By this time road tarring was well advanced, such ‘sealed’ surfaces might be expected to offer a smoother ride, higher speeds and less risk of punctures, and the distinction was duly made on newly-published one-inch sheets. The unpublished 1937 experiment, and probably also that of 1947, distinguished ‘over 14 feet tarred’ and ‘other roads’; by 1949, when sheet 51 was completed, there was simply ‘other roads’, without infill, and not particularly easy to read in the ‘noise’ of rather dull layer-colouring and woods and orchards shown by black tree symbols. The main object of publishing this sheet belatedly in 1956 was to test public reaction to the colour scheme, and in this version ‘other roads’ over 14 feet in width were infilled yellow. A problem common to all the designs, from 1935 to 1956, was that it was unclear which of the lowest classed roads were tarred. The one-inch made the dual distinctions of width and surface, and it seems very strange that the half-inch did not, when surely the great majority of readers would have been road users. The definitive half-inch Second Series specification divided unclassified roads into ‘metalled and tarred’ and ‘other roads’. In this it was similar to the 1:25,000 Provisional Edition; at least users were warned of possibly rough surfaces, though they were denied the route-planning facility of wider and narrower roads, and the result could sometimes tend to ‘visual spaghetti’. As the ‘other’ roads were drawn to a narrower gauge than were the tarred ones, it is difficult to see why the one-inch’s principle of distinction by a combination of gauge and infill could not have been used. In this respect the Second Series was better than its immediate predecessors, but could still have been improved.

**Paths**

Unlike the Bartholomew offering, the early OS half-inch did not show paths; they were added to those sheets that were revised and republished from 1924 onwards. Was the idea to poach some customers from Bartholomew? From 1884 to the late 1940s the OS distinguished foot and bridle paths on its six-inch and larger-scale mapping, but this information was not passed onto the one-inch, and indeed even today the 1:50,000 *Landranger* has only one physical category of ‘path’, and this is all that is shown in Scotland. Legal status apart, a fundamental distinction between foot and bridle paths is that the former may be obstructed for cyclists and equestrians by stiles and ‘kissing gates’. The half-inch designs of

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4 The MoT roads are sufficiently obvious for the scale that they need no further discussion.
1935-49 all included ‘paths’; figures 1 to 3 show that the depiction was certainly copious. Given the dubious relevance of the scale to pedestrians, omitting paths from the definitive Second Series specification certainly seemed more logical than their introduction in the 1920s. In 1960 the OS began to show public rights of way in England and Wales, but as legal status rather than ground features. When Snowdonia National Park was published in 1966 ‘principal paths’ were added, perhaps as a species of tourist information; a strangely elongated ‘point feature’.

The Countryside Act of 1968 conferred a general right to cycle on bridleways, and thus introduced both a reason and an apparently ready-made distinction for showing them on mapping at a scale rather too small for pedestrian use. Just over a fifth of the ‘off-road’ rights-of-way network was potentially of use to cyclists, and increasing traffic on roads means that such ways are potentially useful for both short- and long-distance cyclists. However, there are two complications. One is that some bridleways would seem to be totally impracticable to cycle on; horses can be ridden where no cycle can go. (The bridleway at the top of Ingleborough, illustrated in figure 5, is perhaps an extreme case.) The other is that some cycles are better able to tackle unsealed surfaces than others; it has been suggested to me that there are three basic categories of cycle, being ‘racing’ types with narrow tyres, which are practically confined to a sealed surface, ‘ordinary’ cycles with more robust tyres (typically 1 3/8-inch), which can be ridden on some unsealed surfaces, and ‘mountain bikes’, with heavy-duty tyres, which can be ridden on much rougher surfaces. Thus a half-inch-type map that included all bridleways would include a number that

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5 Countryside Act, 1968 (c.41), s.30. The British Horse Society gives a figure of 188,700 km of rights of way in England, being footpaths 146,600, bridleways 32,400, byways 3700 and restricted byways 6000; www.bhs.org.uk/Riding/Riding-Off-Road/Fight-for-your-Bridleways/Campaign/Forestry-Sell-off.aspx (accessed 7 October 2011); although this figure is given in a campaigning context, my snap impression from inspecting OS maps of various parts of the country would suggest an over-estimate – so no doubt it is correct.

6 Chris Juden of the Cyclists Touring Club suggested the three-fold distinction to me in conversation, some years ago; ‘mountain bike tyres’ can include both ‘on-road’ and ‘off-road’ types, implying even a four-fold distinction. I am indebted to Bridget Oliver for on-the-ground assessment of the suitability of certain bridle ways for horses.
would be quite impracticable for any bicycle, and more that are only practicable for specialised cycles and, given the changeability of ‘unsealed surfaces’, regular surveys on the ground would be necessary.\(^7\)

In omitting ‘paths’ the half-inch Second Series was being sensible in view of the legal situation and practical considerations in the 1950s and earlier 1960s; for any successor, depiction would be a more complicated matter.

**Churches**

All the OS half-inch maps used a single symbol for ‘church or chapel’; more of these were shown in rural than in built-up areas, but generally all with steeples were included, except in very close areas such as central London. The depiction of churches on OS mapping merits a detailed study; it may be assumed that their inclusion on the original OS half-inch was a combination of contemporary conventional religious attitudes, practical way-finding, and some tourist interest.\(^8\)

In way-finding churches can provide punctuation marks in the landscape or townscape, and can be valuable for identifying road junctions. Diversification of both faiths and buildings have led OS to consider alternatives on at least two occasions, but the indignation that greeted an experiment conducted in 2002-3, of substituting symbols for buildings with towers or spires, makes a substantial change of policy unlikely.\(^9\)

The half-inch Second Series ‘performed adequately’ in depicting churches.

**Antiquities**

A selection of these appeared on the original half-inch; the criteria for inclusion are uncertain although, as with churches, it may be a mixture of conventional assumptions, way-finding, and tourism. In 1947 the draft specification for the new half-inch proposed that ‘only those of first importance to be shown, e.g. Stonehenge, Figsbury Ring, etc.’\(^10\) By the time sheet 51 was completed in 1949 this had been modified to complete omission, and the mapping was published in this form in 1956; it might perhaps be explained, if not excused, by a generally ‘minimalist’ approach to text on this sheet. Within the area of sheet 51 contemporary quarter-inch (1:253,440) mapping showed ten Roman and 34 other remains or sites, including the Battle of Hastings and castles at Bodiam and Leeds. Antiquities were restored to the definitive Second Series; their omission from sheet 51 was one of those interesting experiments that seem remarkable on a published map.

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\(^7\) I have no statistics to offer, but Mike Harrison’s 1:100,000 maps of Devon and Cornwall, which are aimed at cyclists, only show bridle ways very selectively, presumably on the basis of inspection.

\(^8\) For a preliminary study – again, not a perfect piece of work – see Richard Oliver, ‘Steeples and spires; the use of church symbols on Ordnance Survey one-inch maps’, *Sheetlines* 28 (1990), 24-31.

\(^9\) Verbal information from OS staff at CCS meetings, London, June 1986, and Exeter, September 2002; see ‘Hundreds of churches to be wiped off the map’, and Simon Jenkins, ‘A cross marks the spot’, *The Times*, 9 May 2003, pp 1, 24.

\(^10\) Draft specification, n.d. [August-September 1947]; item 81A in TNA PRO OS 1/351.
Names

As with antiquities, successive designs of half-inch map varied in their treatment. Whilst larger settlements, like classified roads, are unproblematic, the question of which lesser ones should be named is complicated by varying settlement patterns and local signing policies, and avoiding ‘clutter’ on the finished mapping. A solution that is cartographically satisfactory in one part of the country can result in crowding or sparseness elsewhere. It may be suggested that a reasonable test is the extent to which the map includes those settlements that appear on official direction signs.

Perhaps following Bartholomew, the original OS half-inch showed a considerable number of farm and similar minor names. This was generally continued on the 1935 Greater London sheet, though in practice a number of ‘hamlet’ names were omitted. Perhaps as a reaction to this, sheet 51 of 1949 took a minimalist approach; individual building names were mainly confined to certain country houses and similarly large buildings, though coastguard stations and some isolated inns also appear. As with Greater London, there were apparent inconsistencies, and some ‘hamlet’ names that gave their names to railway stations were omitted, for example Sharnal Street (TQ 785745). Deficiencies in Greater London and sheet 51 were addressed in the definitive Second Series; the Second Series Greater London perhaps over-compensated by including numerous railway station names, and some minor names of questionable interest, though figure 4 shows that it omitted some which had appeared on the overlapping part of sheet 51.

Public telephones

The final feature to be discussed is hardly the least remarkable. Like the one-inch, the original OS half-inch showed post and telegraph facilities; from 1914 telephones at post offices were added, and in the late 1920s telephone kiosks began to be recorded in those places where there were no post offices. All these were added to the half-inch and were part of the designs of 1935-47, but then it was decided to omit the post offices, and distinguish public and motoring organisation kiosks. This practice was followed on the definitive Second Series, and on the 1:250,000 from 1961. The practical result is that whereas there is comprehensive coverage of the motoring organisation kiosks, that of ‘ordinary’ public ones is extremely fragmentary, and strict logic, without the benefit of the parent one-inch or 1:50,000 or OS internal instructions, would suggest a very eccentric distribution. In this respect the half-inch Second Series cannot be judged satisfactory.

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11 Erratic treatment, as compared with one-inch Fifth Edition sheet 95, can be seen east of Luton: Tea Green (1,124,000-1,353,000) is omitted but Chiltern Hall (1,123,500-1,350,500) is included. A more sensitive approach to ‘antiquities’ would suggest the inclusion of Someries (1,122,200-1,350,200).

12 See, for example, around TQ 3756 Nore Hill, Chelsham Court, Chelsham Place and Winders Hill; the practical effect is to diminish the importance of the name Chelsham.

13 I counted 11 on sheet 36, Birmingham.
**The National Grid six-inch and 1:10,000 scales**  
**John Cole**

As in the cases of the 1:1250 and 1:2500 maps, this is an endeavour to add to official histories on the subject as well as filling in a few blank areas.

It is fairly well known that the six-inch and its 1969 successor 1:10,000 scale map were, and are, the largest scales to cover all of England, Scotland and Wales. In the case of many Scottish counties and islands the scale includes almost 100% of the terrain.

Nearly fifty counties contain varying amounts of originally basic surveys at these scales, as follows:

<table>
<thead>
<tr>
<th>Mainly 1:10,000 scale</th>
<th>Argyll &amp; Bute, Caithness, Inverness, Islands of Arran, Hoy, Islay, Lewis, Mull, Shetland and Skye, Ross &amp; Cromarty, Sutherland.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approx 50% of county at basic 1:10,000 scale</td>
<td>Aberdeen, Angus, Banff, Brecknock, Caernarvon, Cumberland, Dumfries, Dunbarton, Durham, Kirkcudbright, Lanark, Merioneth, Moray, Nairn, Peebles, Perth, Radnor, Roxburgh, Stirling, Westmorland, Wigtown, Yorkshire North and West Ridings.</td>
</tr>
<tr>
<td>Small areas at basic 1:10,000 scale (excluding coastal)</td>
<td>Ayr, Berwick, Cardigan, Clackmannan, Devon, Denbigh, East Lothian, Edinburgh, Hereford, Isles of Scilly (parts) Kincardine, Kinross, Lancashire, Linlithgow, Midlothian, Montgomery, Monmouth, Northumberland, Orkney, Renfrew.</td>
</tr>
</tbody>
</table>

In the 1960s the estimation was 3058 maps for Scotland, 501 for England and 258 for Wales. That was in addition to 6400 maps derived from the 1:1250 and 1:2500 scales. A pilot sheet for the latter may have been published in 1950 – possibly SZ09SE at Bournemouth, or any one of seven sheets in or east of Edinburgh. But in the same year, differing from all future six-inch and 1:10,000 work in basic areas (which were resurvey) revision of the county series on national Grid sheet lines commenced in Devon. This resulted in twelve maps covering the southern part of Dartmoor published in 1954 (all but one, part 1:2500).

In 1956-7 work in Scotland commenced south-east of Ayr. Originally it was hoped to marry a revision of the county series detail (as per Devon) with air surveyed contours but this was soon found to be impracticable. The location was roughly NS30-70 and NX39-79. Complete resurvey started soon after, west of Ben Hope in Sutherland, the initial maps (published 1960) being NC34NW, SW, SE, SE and NC35SW. Meanwhile provisional six-inch maps covering the whole of Great Britain (except most of the highlands and islands of Scotland) were published between 1947 and 1965 with variable degrees of revision content including much for the one-inch map. However, an area in Durham and Northumberland was specifically revised to six-inch standards during 1947-8 and these provisional

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1 NT27NW, NE, SW, SE, NT36NW, NT37SW, SE
maps are much superior historically to SX49SW, 49SE, 69NE and SS22SW in the 'by-passed' area of Devon which although published in the early 1960s were 1:2500 revisions of 1904-05!

Anyone who supposes that survey work, particularly in the highlands of Scotland was idyllic, is directed to *Sheetlines 29* and an account of the 1870s work under the apt title of *Campaigning at home*. Even with such modern aids as helicopter transport and tidelines plotted as contours from air photographs as well as the bulk of the survey done by this means, life could be difficult, as the account of the relatively simple resurvey of South Dartmoor revealed.²

But continuing with the programme itself, the mid-1970s saw economic stringency once more and the temptation to considerably extend 1:10,000 area not only for locations not yet taken up, but create new ones including at least one already revised at 1:2500. Those known were on Exmoor, Salisbury Plain and west of the Rhondda. Such stringencies caused considerable alarm amongst 1:2500 map users, particularly in Scotland. And a check in 2005 revealed that the two English examples of major downgrading were in fact at 1:2500 scale.

Whilst the northern part of Dartmoor had been resurveyed at six-inch scale in 1964 (mainly SX58 and 68; four maps basic six-inch; four part 1:2500 of 1904, 1932 and 1953 possibly brought up to date for significant change), the bulk of the programme in England & Wales was due to commence in 1975. In April 1981 a last ceremonial measurement (by instrument) was taken on NY68NE at the Kielder reservoir. This was the ‘final’ English map with one each allegedly awaiting completion in Scotland and Wales.

Linear accuracy standards on the 1:10,000 map derived from the larger scales are good given that the detail is necessarily generalised. It is probably equally good on the basic 1:10,000 where all detail including contours and tide lines are surveyed by plotting machine from air photography. But possibly not so good by OS exacting standards where any fencing (not discernable on an air photograph) needed to be surveyed or completed on the ground using plane table and microptic alidade.

Historical accuracy at the date of publication would also be good for maps derived from 1:1250 or 1:2500 urban areas under continuous revision, and also basic 1:10,000 areas. Rural 1:2500 could be much more variable even if attempts were made to tackle significant change.³

The Dartmoor maps at six-inch scale⁴ were compared with their 1:10,000 successors detail and National Grid accuracy on the assumption that the latter would be more accurate due to the more sophisticated methods of survey. But in fact the 1950 revision compares remarkably well in all respects except possibly more accurate contours.

SX57NE includes eight square km of reduced 1:2500 mapping of 1951-2 and the survey diagram reflects this with the following notes: ‘Surveyed at (a) 1:2500

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² *Sheetlines* 55, 11
³ *Sheetlines* 55 and 57
⁴ SX56NE, 57NE
scale 1951-2 (b) 1:10,000 scale 1980. Revised for significant changes 1981. Contours surveyed 1980’. Splitting hairs, the 1:2500 was a revision not a survey.

A selection of twelve six-inch and a single 1:10,000 map survey diagrams and their somewhat complex variety appeared in *Sheetlines* 56. In general the later 1:10,000 examples seen are much more straightforward but a curious exception was noted in the case of TQ40SW published 1976. The survey diagram shows: ‘Surveyed at (a) 1:1250 scale 1964-71 (b) 1:2500 scale 1954-68’. Differing from diagram shown in *Sheetlines* 56 the individual 1:1250 squares are not dated except for two picked out in pecks with † shown therein with the explanation: ‘Not published at 1:1250’ they contain small areas of foreshore and low water mark. As in the case of SX57NE the 1:2500 was purely a revision of the old county series adjusted to the National Grid.

Digital 1:10,000 maps of Cornwall, comprising five maps at the Lizard and possibly fourteen in the Camelford / St Gennys area were first tried in 1980-82 but OS soon returned to analogue. Further experiments in the 1990s resulted in SK63SW (Keyworth, Notts) being produced from 1:2500 Landline data and this method of production is now the norm.

So also is site-centring as an option, as well as such benefits as: improved currency of information, plot on-demand production, colour output and improved graphic specification – with a very attractive result being the example centred on NT2476 (Edinburgh) in the products and services catalogue as early as 1999.

Adopting the axiom of Richard Oliver that something is better than nothing at all, this is something of a provisional account. County names have been taken from Richard’s concise guide as indeed was the detail regarding the 1947-8 six-inch revision of parts of Northumberland and Durham. Much of the dating comes from Annual Report progress maps – mainly 1959-60, 62-63, 73-74 and particularly the map which accompanied the 1979 Serpell report which gave the projected 1:10,000 areas of Exmoor, Salisbury Plan and South Wales, all three still apparently at a basic scale of 1:2500.

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John Cole has been a prolific contributor to *Sheetlines* over many years, focussing on large-scale mapping, a subject few others have studied. This is likely to be his final contribution, other than occasional letters (see page 60); as he says, ‘I’ve done my stint’. The current editors, on behalf of themselves and their predecessors, send hearty thanks to John for his efforts. For those members who know little of John’s career at OS, we hope to include a biographical note in *Sheetlines* 93.

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5 The list appearing on page 42 of *Sheetlines* 35 should probably read SW61NE & SE, SW71 NW, NE & SW, SX08 all quarters, SX18 all quarters, SX09SW, SX19 all quarters and possibly SS10SE.

6 *Sheetlines* 44

7 *Sheetlines* 24

Observations on BT&D map printings  

Ed Fielden

For those of us who are enthusiastic about OS and its long history of crafting its maps from concept right through to the finished product, it is sad to mark the passing of the print floor at Romsey Road.

Ordnance Survey themselves have been most helpful in providing information to me concerning the changeover, for which I thank them. Much of what they have told me forms the factual aspects of this article, alongside my own observations from map stocks ‘in the wild’.

Appropriately the very last map sheet print job completed in-house by OS was a run of 3000 copies of Landranger 196 The Solent & Isle of Wight edition D3/. The published map does not announce itself with any fanfare, instead humbly stating that it was ‘Made, printed and published by Ordnance Survey, Southampton, United Kingdom.’

Map products printed by BT&D began to appear on the shelves at the beginning of 2011 and not, as originally thought, in September/October the previous year. The change in cover typography noted last year was in fact enacted when new ‘masters’ were created for each cover, in preparation for the change of printer. OS printed covers using the new masters for some time before the handover to BT&D was completed.

The first map sheet printed by BT&D was a 2640-copy reprint of Landranger 152 Northampton & Milton Keynes, undertaken in October 2010.

Comparing Landrangers 196 and 36 (above), the most compelling evidence of the change of printer is the difference in half-toning across the map. BT&D’s appears far finer than OS’s and the effect is particularly noticeable on large

Left: Landranger 196 edition D3/, printed by OS. Right: Landranger 36 edition B3, printed by BT&D. Note the smoothness of halftone printing by BT&D compared to the coarse screen print of OS.

The first map sheet printed by BT&D was a 2640-copy reprint of Landranger 152 Northampton & Milton Keynes, undertaken in October 2010.

Comparing Landrangers 196 and 36 (above), the most compelling evidence of the change of printer is the difference in half-toning across the map. BT&D’s appears far finer than OS’s and the effect is particularly noticeable on large
buildings or expanses of water. The same observation is true of *Explorers*.

The first batch of covers printed by BT&D included that of *Explorer* 106 *Newquay & Padstow* edition B3. The first time I saw this was a few days after 2 February 2011 – its publication date. As per the map sheets, this no longer claims to have been ‘Made, printed & published by Ordnance Survey,’ merely now ‘Published by...’ and on the inside cover it carries the new Adanac Drive address.

Comparing again between OS and BT&D printed covers, the half-toning – particularly in the sea areas of rear-cover sheet indexes – appears finer on BT&D’s printings, although the difference is not as stark as with the map sheets. There is also overlap shading on the indexes where once there was none.

**Like Picasso, Ordnance Survey had a Blue Period.** This lasted three months rather than three years and resulted in the erroneous printing of blue-coloured OS logos on the spines of some *Explorer* and *Landranger* sheets in 2009.

Ed Fielden recorded this in *Sheetlines 87*, since when he has gained further information and now offers this definitive list of the 60,490 covers affected, printed on five separate days in January, February and March 2009.

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<th>Published</th>
<th>Cover print date</th>
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<td>26/01/2009</td>
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<td>26/01/2009</td>
<td>2100</td>
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</tr>
</tbody>
</table>
**CCS visit to Gotha**

*John Henry*

Gotha is one of numerous small towns in Germany of aristocratic origin and arranged decoratively at the foot of a schloss (a castle or palace) on a commanding height. Gotha is unique in being the home of Justus Perthes (JP), publishers of atlases, who celebrate their 225th anniversary this year, although rebranded as Klett Perthes. The first generation of the Bartholomew dynasty and of W and A K Johnston, both major Edinburgh cartographic firms, apprenticed at JP. A tradition of employee exchanges continued up to World War II between the firms in Germany and Britain. We understand it continues today with a German research student currently studying the Bartholomew’s archive at the National Library of Scotland. We also learned that August Petermann, an eminent cartographer in the JP organisation, was secretary to the Royal Geographical Society in London for a period in the 1850s, while freelancing in London before he joined JP. This was news to this reviewer but, once realised, the connection was obvious; maps in the RGS journals of the period are very similar to examples we saw of Petermann’s work for JP.

But, I am getting ahead of myself. The CCS trip to Gotha took place from 14-18 June. It came about after Anne Stauche, a native of Gotha and currently running her own London-based map company1 had mentioned her interest in the Perthes anniversary to Gerry Zierler. The trip was arranged around a day in the archive in Schloss Friedenstein, a vast pile set in an ‘English’ landscaped park on the hill above Gotha. The schloss accommodated the Herzog (duke) of Saxe-Coburg-Gotha and his extended family, his militia, his mint, his treasury, his church, his administration, his stables, his theatre and his collections. Successive Herzogs were patrons of art and science; among many interests they supported Justus Perthes in cartography and several proto-geologists, also of interest to your reviewer.

The Thursday was the core map day in the archive. Dr Petra Weigel, head of the Perthes Collection, introduced historical map material from the JP publishing house. Most of the vast collection is currently held nearby at Erfurt University but will be moved to the archive of Schloss Friedenstein over the next few years. When the seventh generation Perthes sold the business to Klett, part of the deal was that the company archive of JP went to the state archive.2

There followed a talk, ‘225 Years of Cartography from Gotha’, by Herr Volker Streibl, marketing director of Klett Perthes, direct successor to the JP cartographic dynasty. The business had been through the vicissitudes of two World Wars, Russian occupation and the Cold War and finally the re-unification of Germany,

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1 [www.thezoomablemap.com](http://www.thezoomablemap.com)
2 For more information see [www.uni-erfurt.de/fileadmin/public-ocs/Sammlung_Perthes/Startseite/Flyer_english.pdf](http://www.uni-erfurt.de/fileadmin/public-ocs/Sammlung_Perthes/Startseite/Flyer_english.pdf)
surviving through the post-WW2 phase as Haack and since 2003 as Klett Perthes. In both talks we learned of the great cartographers, Stieler, Petermann, and Haack et al and the great geographers von Humboldt and Berghaus. Scarcely known outside Germany, they had a profound influence on the design of atlases and the development of thematic mapping familiar to us through the various editions of Bartholomew and Times atlases.

After a tour of the Ducal collections and apartments, including a room of portraits reminding us of the Prince Albert of Saxe-Coburg-Gotha and Queen Victoria connection, we returned to the archive to look at the Perthes cartographic exhibition ‘Botanical world images’ showing plant-geographical maps of the Perthes collection.

There followed a visit to mr-kartographie, a remarkable cartographic design firm started by Herrs Muller and Richert in 1991. Following the collapse of the Iron Curtain and, soon after, their careers in Haack (the East German heirs of JP), Muller and Richert started with nothing but ideas. They now design a range of attractive map products for regional and local government, and private firms. Their cartographic heritage from JP via Haack is evident but modified and improved with the advantages of the digital revolution.

For the preceding day Anne had organised a tour on a vintage tram beginning with a fascinating visit to the depot and thence into the Thuringian mountains to a gypsum crystal mine. From there we took a minibus to Schloss Wartburg, a medieval castle occupying a pinnacle reached by a switchback track.
Beautiful in itself, Wartburg’s main claim to fame is that Martin Luther sheltered here *in cognito* when he was outlawed. While here he translated the New Testament from Greek into German. In its impact on the richness of the German language, Luther's translation is equivalent to the King James Bible’s contribution to English. We ended the day in the town of Eisenach, birthplace of Johann Sebastian Bach.

Following archive day, we travelled east by train to the small city of Erfurt, capital of the federal state of Thuringia. Erfurt is a beautiful and lively city. Instead of a herzog and a schloss, it had an archbishop and a cathedral or dom. On its high outcrop, the dom dominates the large market square and the medieval core which is spread on an alluvial plain traversed by several river channels with numerous bridges. The most enchanting bridge had shops built on both sides. The town centre is accessed by tramlines but is otherwise a pedestrian zone. After a guided tour on foot in the morning and lunch, we dispersed to explore. Your reviewer found a couple of antiquarian bookshops which were well patronised by several CCS collectors. Erfurt was organising for a major annual festival on the weekend and preparations for it were well advanced with market stalls and music stages being set up. We concluded the day and the trip with a wonderful meal in a lovely courtyard that we would never have found without Anne’s local knowledge.

We thank Anne Stauche for her organisation of the itinerary and her flexibility and attention to detail during the trip. Her native knowledge of Gotha was so very helpful in locating interesting and good places to eat. And, she was in the midst of moving from London, after ten years, to Berlin. Thanks, too, to CCS member Peter Lush, resident of Berlin, who was extremely helpful as a translator and observer of life in Germany. He hosted an additional mini-tour to Berlin. Finally, many thanks to Gerry Zierler, *bon vivre* and *raconteur*, who organised the visit at the British end, was purser during the visit and recognised abundantly that a CCS tour marches on its stomach.

Gotha will be worth a CCS re-visit in a few years time. The Schloss Friedenstein archive and museum are undergoing great changes and our visit caught them in mid-stride. Eventually all will be displayed, but currently most of the JP collection was inaccessible, as were the historic geological collections and maps of the adjacent *Museum der Natur*, also being moved to the schloss.

Gotha, Eisenach and Erfurt all possessed great character. Sensitive, high quality renovations and new buildings were evident in all three as part of the investment and reinvigoration following reunification. Each town is attractive and has an individual character. In retrospect, the neglect of the Communist era protected towns in former East Germany from the uniformity brought by national chain stores, insensitive central planning and overdevelopment. Each centre had retained and expanded its tram system and none were given over to the automobile or high rises. In addition to the beauty of the townscapes and landscapes, one of the delights of travel in former East Germany is that most tourism is internal. Few foreigners travel there outside of the major cities. English is not widely spoken and foreign visitors have to make a greater effort; but this is met with goodwill which enriched our travel there.
**CCS visit to Dublin**

**John Henry**

The Dublin trip in July 2011 was a great success cartographically and socially. Rodney Leary organised an excellent programme and our Irish hosts made us very welcome and were informative, interested and enthusiastic about their collections and their part of the story of the Ordnance Survey of Ireland.

The first morning, Thursday, we visited the Geological Survey of Ireland, in its remarkable fortress location in Beggars Bush. At the GSI, retired archivist, Petra Coffey, and Padraig Cannaughton and set out a fascinating display of one-inch and six-inch geological maps engraved and hand coloured on the OSI base-maps. The geologist George Victor Du Noyer was a remarkable artist, whose paintings and drawings of landscapes and rock exposures are well known in Ireland and were exhibited in the National Gallery several years ago.1 Some are drawn in the sea areas of his field maps. The GSI archive has several folios and albums of his work and remarkable wood-cut blocks of his work that appeared in geological reports. Petra’s collection added a third dimension to the GSI’s maps.

The Geological Survey (GS) was originally part of the Ordnance Survey; in Ireland in the interminable debates with Treasury about the scale of published maps, the GS was instrumental in having the one inch scale adopted; in Britain, the GS was instrumental in the adoption of the six inch scale nationally based on its experience of its utility in Ireland.2

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1 See page 41. See also the article about Du Noyer by Petra Coffey which appeared in *Sheetlines* 35 and is now available at [www.charlesclosesociety.org/files/Issue35page14.pdf](http://www.charlesclosesociety.org/files/Issue35page14.pdf).
2 See my review at [www.history.ac.uk/reviews/review/1109](http://www.history.ac.uk/reviews/review/1109)
That afternoon we visited the National Archives of Ireland. Hazel Menton had set out a fascinating display using three localities to show field survey books, fair plans and proof sheets demonstrating the historic survey processes. In particular, the orthographic notes recorded the many variations in Gaelic and English of the place names the surveyors had to record and to get right. Many of the OS maps had come to the NAI from the various government departments marked for their particular use. The incredibly minute lettering and fine detail of the central Dublin map proofs were masterpieces of cartographic art.

After dinner Ann Marshall, an expatriate Dubliner and thespian, gave a lucid account of the play *Translations* which we would see the next evening.³

On Friday morning we visited Phoenix Park, the home of the Ordnance Survey of Ireland since 1824. Phoenix Park is one the largest landscaped urban parks in Europe at 707 hectares (1752 acres) and the OSI is at the far end from Dublin’s centre. Never having moved, the OSI has retained pieces of equipment that would have been lost or discarded in other organisations. Their museum, in the O’Donovan Room included a compensation bar invented by Colby and Drummond of the OSI and used for the precise measurement of the Loch Foyle base line. As well as various early theodolites, chains and other survey kit, there was a small collection of original water colours, inks and pens in the original packaging of the early 1900s. True ephemera.

Welcomed by Secretary to the OSI, Greg Whelan, we were then ably introduced by Maurice Kavanaugh and his staff, Paul Kane, Valerie O’Neil and Aoife Shinners. They made very clear and well illustrated presentations respectively covering: aerial survey – photogrammetry to balancing digital colour images; ‘lidar’⁴ – ‘point-clouds’ and ‘laser-world’; and marketing OSI data – GIS and government applications. Next door there was a very good and much appreciated map shop.

That afternoon we visited the Royal Irish Academy. Head Librarian Siobhan Fitzpatrick explained that many of the senior staff of the Ordnance and Geological Surveys had been members of the academy and therefore the RIA had unique sets of correspondence amongst them as well as a complete first edition of the six-inch map of Ireland. This documentation is a valuable resource for historians. The RIA, as an antiquarian society, had always had a great interest and fascination with the Gaelic language. It has the great library of Charles O’Connor, an Irish prince, which includes 1400 manuscripts in Old Irish and in a unique script. This library demonstrates the well developed capacity of Old Irish to record and discuss difficult topics in law, natural history, poetry and science. The RIA was a much used resource by the early OSI ‘topographic department’ which was very concerned with the veracity and accuracy of place names recorded on OS maps.

Jennifer Moore showed us many examples of a current and long-running RIA project, the Irish historic towns atlases. Using the resources of the RIA, the OSI,

³ See page 42.
⁴ See page 49.
and the NAI, they have produced well illustrated affordable atlases of, so far, 23 Irish towns with many more in the works. The atlases use manuscript illustrations and maps, including OSI maps to produce very informative histories of the physical development of Irish towns. This is a European Union project, enthusiastically embraced by the antiquarian and mapping establishments of Ireland. Is there anything like this going on in UK?

Tearing ourselves away from the RIA, we took an early supper, and moved on to the Abbey Theatre for a performance of Brian Friel’s *Translations*. The play explores the role of the Ordnance Survey in surveying and mapping Ireland in the 1830s as part of the occupation of Ireland. The OS was a much more intrusive organisation in Ireland than in Britain. Its initial brief was to prepare accurate maps for land evaluation and taxation. In carrying out its brief it was necessarily concerned with the productivity and potential resources of the land and soon found itself recording soil, geology, crops, natural fauna, and customs of the people. The native language was treated dismissively, with place names being mangled by English pronunciation or simply translated into an English equivalent. The play is included in the school curriculum and is well known and widely (but wrongly) believed as fact. The acting was vigorous and entertaining and, while entirely in English, it created the illusion very well of being bilingual. The inestimable value of the first edition OSI six-inch map is that it records a largely Gaelic Ireland before the great famine and the depopulation from eight to four million through starvation and emigration. *Translations* records the cultural loss emotively, but the maps record a lost landscape.

On Saturday morning we visited The Trinity College Library Dublin to see the Glucksman Map Library. There, Paul Ferguson and Paul Mulligan – the two Pauls who had accompanied us on many of our visits, the play and some dinners – had mounted a tour-de-force display of Irish mapping from the precursors of the OSI, through all states and scales of its output and supporting documentation in the form of valuation reports. Paul Ferguson talked us through the historical sequence of maps, manuscripts and influential individuals and concluded very aptly with a map signed by Charles Close.

The visit had one final pleasure. After our last meal together, retired OSI director Richard Kirwan reminisced about the first map that hooked him at six and his early experiences as a surveyor in the 1970s. He spoke about the changes in surveying and map-making that he has witnessed in his long career. These were the nuggets from his autobiography *If maps could speak* in which he also explores the main characters and history of the Survey. This was a good and very fitting conclusion to a most successful visit.

Thanks to organiser Rodney Leary, our several hosts, hostesses and speakers, and our many Irish CCS members who made this visit for a wonderful learning experience and exchange.

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**Kieran Wade, the man who shows Russians the way!**

*John L Cruickshank*

When you cancelled your newspapers and went on holiday in August you may have missed something. In the August issue of the well-known Dublin newspaper *Nasha gazeta* (*Our Newspaper*) is an article in Russian, whose title translates as ‘The man who shows us the way’. It was written by Svetlana Repina on the basis of an interview with Kieran Wade, a cartographer at the Ordnance Survey of Ireland.¹ What to me is notable about the article is not what Kieran Wade is reported to have said (which strikes me as mostly what you might expect a modern computer-based cartographer to say, even if his very brief account of the history of the OSI owes as much to Republican myth as to J H Andrews), but the interviewer’s comments and questions.

While the Russian public are generally thought to be unaccustomed to possession of maps, far less their use, Repina describes always keeping maps of Dublin and of Ireland in her car and that losing them would be like losing a hand! After discussing maps for tourism and large-scale mapping for farmers and as legal records, they then discuss mapping for the Irish police which Wade describes as a specialised part of the work of the OSI. He comments however that the Garda no longer use paper maps. They and the other emergency services need more up to date data in electronic form.

Accompanying the article are a picture of a framed modern reproduction of the 1869 Blanchardstown (Dublin) 25-inch plan and a photograph of Kieran Wade at a computer workstation with an unrecognisable map on the screen and an equally unrecognisable aerial photograph on the wall behind him.

The infomercial finishes (of course) with a recommendation that readers should visit the OSI website (*www.osi.ie*) ‘when they have a free moment’, and should buy the maps.

Is Phoenix Park alone in marketing its products and services to Russian-speakers, or have Southampton and Belfast also been developing a Russian-language customer base?

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¹ Svetlana Repina, ‘Chelovek, kotoriy ukazivaet nam put (The man who shows us the way)’, *Nasha gazeta* (Dublin) 30 [402], (3 August 2011), p 5. I am grateful to Damian O’Neill for drawing this article to my attention.
Brian Friel’s Translations
and the Ordnance Survey of Ireland 1824-1846

Ann Marshall

The CCS trip to Dublin in July included a visit to Brian Friel’s play
Translations. Ann Marshall is originally from Dublin and on retirement
completed a BA in theatre studies with a particular focus on Irish Theatre.
She accompanied her husband Ed on the trip. This is an edited version of
the talk she gave to the group prior to the theatre visit.

Brian Friel’s play is a fascinating one because it raises so many different
questions. I knew a great deal about the play when I started to put this talk
together and then discovered the intriguing world of the Irish Ordnance Survey. I
finished up with enough material for a talk lasting about three weeks – and the
Ordnance survey seems to have run into the same problem: in 1835 after ten
years of work the Historical department of the Ordnance Survey proudly
presented its report on one parish, Templemore, which ran to 400 pages. This
was largely because Colonel Colby and T A Larcom who were responsible for the
survey ‘desired to collect more information than could find room on the maps
themselves’ – but I will come back to that later.

I don’t intend to cover the amazing feats which were accomplished in the OS
work – I am sure you are all very familiar with these achievements but I would
like to quote one comment from the website Trigpointing Ireland ¹:

‘Measurement of the baseline began in 1827……. and was completed in
November 1828 after 60 days of measurement by 70 men. The accuracy
achieved is still marvelled at today’.

Neither am I going to tell you the story of the play: I am going to tell you
what the play is about.

Friel’s background is relevant. He was born in 1929 and grew up in the
depressed and depressing atmosphere of the minority Catholic community in
Derry which had been part of the United Kingdom since 1922 when Ireland was
divided into the Irish Free State and Northern Ireland. He is a native Irish speaker
as were his parents and grandparents so he was familiar with the linguistic
challenges which he identifies in the play. He spent his childhood holidays in
Donegal where his family had originated and Donegal has remained for him a
powerful image of possibility. The small town of Ballybeg – anglicised from the
Gaelic Baile which means town and Beag which means small – is the place
where many of his plays are set and is a mixture of the socially and politically
dislocated world of Derry and the haunting attraction of the lonely landscapes of
rural Donegal.

I thought I would begin where Friel began when he came to write the play
which was first presented at the Guildhall in Derry in 1980. He says that in the
years before he began to write he had some ideas in his head the most constant
being a play about the death of the Irish language and the acquisition of English.

¹ http://www.trigpointing-ireland.org.uk/
During that same period he made two accidental discoveries: he learnt that his great-great-grandfather had been a hedge-schoolmaster in Donegal and that he was ‘fond of a drop’ and this discovery led him to explore the hedge schools. The second discovery he made was that directly across the Foyle River from where he lived was a place called Magilligan and it was here that the first trigonometrical base for the Ordnance Survey was set up in 1828. The man in charge of that survey was Colonel Colby and that discovery sent Friel to his book *A Memoir of the City and the North-West Liberties of Londonderry*. He also began reading the letters of John O’Donovan, a noted Gaelic scholar who worked with the OS from 1830 almost continuously until 1842 researching place-names and researching and preserving manuscripts. The eureka moment for Friel was in 1976 when he came across J H Andrews’ *A paper landscape* where all the notions that had been visiting him over the previous years came together:

- An event in the first half of the nineteenth century
- An aspect of colonialism
- The death of the Irish language and the acquisition of English

Here was the perfect metaphor to accommodate and realise these shadowy notions: *mapmaking*.

All he had to do, he thought, was to dramatise *A paper landscape*. He started by trying to make it a play about Colby but that didn’t work and Colby appears in the play as a minor character, Captain Lancey. After several attempts to build the play around other characters in *A paper landscape* he abandoned that idea and made it a play about a drunken hedge-schoolmaster. He did use another real character from the OS team, Yolland, placing him in Donegal in 1833 when in fact the real Yolland did not join the team until 1838. Most of this information was given by Friel when he and Prof Andrews spoke at an interdisciplinary seminar held in Maynooth in January 1983. When Andrews saw the play he said how much he enjoyed it – he felt himself carried forward by it – until it came to the first historical event which Friel had invented. He looked around him thinking that everyone in the audience would have seen through it but he then realised that for the audience there were no historically incorrect events – they believed every word of it. Eventually he rationalised that the OS was only a dramatic convenience – the play does not suggest that any of the events had anything to do with mapmaking and he does admit that all the characters in the play, including Lancey are treated very fairly. One commentator has said that ‘Andrews choose graciously to excuse the fact that Friel had made a serious and unironic distortion of the historic reality which it implicitly claimed to represent’ and Andrews was too courteous to say so.

So that is the background of the play – a mixture of history and fiction. I want to now talk about some of the things in the play with which you may not be familiar. The action takes place in a hedge school in the townland of Baile Beag/Ballybegg. The Penal Laws which were passed between 1702 and 1719 were introduced to control the rebellious Irish and they covered many aspects of life.

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2 Professor John Andrews, incidentally, is Charles Close Society member number 4
for Irish Catholics. The relevant one here is the one about Catholic education:

‘No person of the popish religion shall publicly or in private houses teach school or instruct youth in learning within this realm’.

One commentator on this Penal Law said that it was not merely the persecution of a religion; it was an attempt to degrade and demoralize a whole nation. As late as 1825 the Protestant hierarchy petitioned the King saying ‘that amongst the ways to convert and civilise the Deluded People (that)….a sufficient number of English Protestant Schools be erected wherein the children of the Irish Natives should be instructed in the English Tongue and in the Fundamental Principles of the true Religion’.

The Irish Catholics did not attend these schools but instead established the hedge schools – originally under a hedge or in the side of a hill but over time they were held in barns as is the one in the play. The teachers were often priests who had been educated in seminaries on the Continent – hence the teaching of Latin and Greek was common, and some were classical scholars such as Hugh in the play. They also taught mathematics, history and geography, spelling and writing and of course catechism. There is one colourful description given by Seamus MacManus in his book The story of the Irish race:

‘Latin and Greek were taught to ragged hunted ones under shelter of the hedges whence these teachers were known as hedge schoolmasters. A knowledge of Latin was a frequent enough accomplishment among poor Irish mountaineers in the seventeenth century and was spoken by many of them on special occasions. And it is authoritatively boasted that cows were bought and sold in Greek in mountain market-places of Kerry’.

To give you some idea of the scale of the schools in 1826 a Commission of Inquiry reported that of the 550,000 pupils enrolled in all schools in Ireland, 403,000 were in hedge schools but there were many children who had no schooling at all. The hedge-schoolmasters were paid by the pupils often in kind. In the play Marie brings milk as her payment for lessons and another pupil brings money – so much for lessons in one subject and so much for another.

The Penal laws were gradually repealed and the prohibition on Irish teachers was lifted in 1782 so by the time of the play - 1833 - there was no secrecy about the hedge schools. In 1832 State Elementary Schools acceptable to Irish Catholic population were introduced and we hear about one such school in the play where Hugh says he has been offered the headmastership. Manus had promised Marie that he would apply for it but he couldn’t when his father applied. This highlights the problem of lack of work for men – or women - in these communities. Owen, Manus’s brother who speaks English has gone away to Dublin for work and there are mythical stories about how wealthy he has become. Those men who are left behind – and Synge shows this too in his play about the Arran Islands – are the old men, alcoholics like Hugh, men like Jimmy Jack who could not survive in the outside world and cripples like Manus who have a place in Ballybeg but would struggle elsewhere. Almost all the young men have emigrated mainly for England or America to find work and send money home.
The main issue in the play, Friel tell us, is the language. Conventionally the existence of a shared language has been one of the fundamental criteria for nationhood. Placenames combine two things - land and language – that have been central to the cultural projects of romantic nationalism. To lose the Gaelic language would be to lose the soul of the nation, it was argued, and crucially the ‘natural connection to the land that could only be experienced and articulated through the native tongue’. The terms of a seventeenth century royal edict extended to placenames the restrictions imposed on language, dress, customs and lifestyle ‘in order to preserve the cultural identity of the English settlers against the cultural and material threat of the ‘native Irish’.

‘His majesty taking notice of the barbarous and uncouth names by which most of the towns and places in the Kingdom of Ireland are called which hath occasioned much damage to diverse of his good subjects … for remedy thereof is pleased that it is enacted and be it enacted by the authority aforesaid that the Lord Lieutenant and council shall and may advise of, settle and direct in the passing of all letters patent in that kingdom for the future, how new and proper names more suitable to the English tongue many be inserted’.

English names were given to places some of which were still in use on maps up until the early twentieth century: Kingstown for Dun Laoghaire. Queenstown for Cobh, King’s County for Offaly and Queen’s County for Laois. The decision to map Ireland in the political context followed the Act of Union in 1801 when the protestant parliament in Dublin was dissolved and authority over Ireland returned to Westminster. The sappers had already done most of the mapping but Yolland’s job in the play is to take each of the Gaelic names - every hill, stream, rock, every patch of ground which possessed its own distinctive Irish name and Anglicise it either by changing it into an approximate English sound or by translating it into English words. Obviously the maps could not be printed without the names so Yolland was under some pressure from Lancey to complete the work of naming. Friel gives an example in the setting for Act 2: a Gaelic name like Cnoc Ban, cnoc meaning hill and Ban meaning white or fair - would become Knockban or directly translated Fair Hill. These new standardised names were entered into the Name Book and were used in the new maps. In the play Owen and Yolland talk about Bun na hAbbann: Bun means bottom and Abha means river – in the Church registry it is called Bunowen, the freeholders call it Owenmore but Owen argues that that is another place and a different river - and in the Grand Jury lists it is called Binhome. They eventually decide to call it Burnfoot. Another example in the play is linked to local folklore – back to the romance again as Owen says. They come to a crossroads locally called Tobair Vree. Owen knows the story because his grandfather told it to him but he doubts anyone else in the area knows it. Tobair means a well and Vree is a corruption of Breen – Brian in English. One hundred and fifty years ago there used to be a well in a field close to the crossroads. An old man called Brian whose face was disfigured by an enormous growth believed that the water in the well was blessed and went every day for seven months and bathed in it. But the growth did not go away and one
morning Brian was found drowned in the well. Ever since then the place has been known as Tobair Vree although the well has dried up long ago. It raised the question for Owen: do we give the crossroads a rational name or keep piety with a man long dead, his name long eroded beyond recognition whose trivial story nobody in the parish remembers. These two examples give a flavour of the problem of naming places particularly in a highly oral culture where few names were written down and the people often could not read or write. The names were passed on by word of mouth and when they were anglicised or corrupted it alienated the places from the people who lived there. Clearly for mapping purposes it was essential to have a stable name to which everyone could refer but for the local indigenous people at the time it was traumatic.

Language is clearly of great importance in the; play but Friel does give both sides of the argument for and against the introduction of English – or rather replacing Irish with English. Bridget points out that the new National Schools will only teach English, ‘every subject will be taught through English, she says ‘and everyone will end up as cute as the Buncrana people’. Marie is very much in favour of learning English and quotes Daniel O’Connell, the Liberator, who as recently as 1829 had brought about Catholic Emancipation giving Catholics the freedom to practice their religion, He had said ‘I don’t want Greek, I don’t want Latin I want English’.

Marie of course wants to learn English because she has decided to go to America. Although Hugh’s lessons are made to seem attractive and stimulating the question arises as to what benefit they were to the pupils other than the sheer enjoyment of the learning. Jimmy Jack is clearly well-read, speaks fluent Greek and Latin but is not portrayed as a man equipped to make a living. Owen, the son who had learnt English and left Ballybeg, is shown as being quite successful in contrast to other members of the community.

Friel’s source documents included George Steiner’s book about the history and theory of translation, After Babel. Two key ideas in Steiner’s book were important for Friel in relation to this play

1. Instead of acting as a living membrane, grammar and vocabulary become a barrier to new feeling. A civilisation is imprisoned in a linguistic contour which no longer matches... the changing landscape of fact – Hugh actually uses these words in the play. Hugh also says that English is the language of commerce while Gaelic had more connection with the classical tongues.

2. Eros and language mesh at every point. Intercourse and discourse, copula and copulation are sub-classes of the dominant fact of communication. They arise from the life-need of the ego to reach out and comprehend...another human being.

Friel uses this idea to portray the loving relationship which develops between Yolland and Marie in spite of the fact that they cannot understand each other. One of the difficulties Friel saw in the play was how to indicate that some people were speaking Gaelic and some were speaking English but he manages throughout the play to make it credible that the Irish people are speaking Gaelic although in fact they are speaking English and the English people cannot
understand them. This is almost certainly achieved by staging and performance: the actors can create the sense of speaking a different language where this might not be obvious on the page. This is quite different from the way Synge for instance deals with the native Irish – he has them speak a dialect which is a kind of translation of Gaelic into English but keeping the Gaelic word order – *sure it’s home I’ll be going when I have the tea taken*.

Friel’s play raises many issues and can be seen as a very emotive evocation of the lives of the culturally deprived Irish people. The replacement of place names has been seen as important even though Friel makes the point in the play that often local lore attached to these names quickly becomes irrelevant – the story of Tobair Vree for instance. Re-translating these names back to the original will not recreate a Gaelic past. Friel himself comments in the diary he kept during the writing of the play that one aspect which kept eluding him was *the wholeness, the integrity of that Gaelic past. Maybe because I don’t believe in it*. Earlier I promised some final thoughts on language before I return to Larcom and Colby.

Language is a tool for communicating and all tools need to be changed with time to adapt to new situations. Whether or not the English colonisers had suppressed Gaelic, it would have waned naturally anyway. For a country with so many of its people distributed throughout the world – mainly in America and Australia – the use of English was a necessity. There is bound to be a loss – and that will be at the point where the first generation to speak another language cannot communicate fully with their parents – and even less their grandparents. There are memories of the past which cannot be shared – the young people don’t know the word in the new language when their elders tell them stories from their own childhood. By the next generation it is as if they never existed – the old world has gone and taken its oral memories with it.

*But not that which has been written down* - and that brings us back to the Ordnance Survey. T A Larcom, under the command of Colonel Colby, gave a very detailed and wide specification to the people who were collecting data for the survey – they believed that for little extra effort useful cultural and social data could be collected. In addition to the broad categories in the specifications, a list of ‘hints’ was given as to what the headings might include. The hint for bogs, which was a subsection of a subsection begins:

> Their extent, height above the sea, and the nearest river, their probable origin, does timber occur embedded in the bogs? Of what trees principally (p148A) and so on’.

Section III which is on people, under which there are two subsections and under the first there were ten headings one of which is Habits of the people and the hint begins:

> ‘Note the general style of the cottages, as stone, mud, slated, glass windows, one storey or two, number of rooms, comfort and cleanliness ….any legendary tales or poems recited around the fireside? … Does emigration prevail? Do any return? and so on’.

The triangulation and measurements were undertaken by the soldiers and the fieldworkers sent out to investigate place names, architectural remains and
cultural artefacts were men like O'Donovan and O'Curry, eminent Irish scholars with a good knowledge of and a sympathetic interest in local antiquities and native lore. They salvaged the original placenames from neglect or corruption by painstaking inventorisation of manuscripts giving them English transliterations rather than translations and capturing a great deal of local lore and learning from communities which fifteen years later would be swept away by the famine. The possibility of the famine was foreshadowed in Friel's play where Marie talks about the sweet smell – the smell of rotting potatoes. The famine was devastating and it went on for four harvests 1845 to 1848. The population of Ireland at the time was eight million and after the famine it was six million - one million dead and one million emigrated many of whom died on their way to America in coffin ships. Larcom later became Commissioner of Public Works and was involved in organising famine relief. His later years were devoted to the collection of information concerning his own period of rule in Ireland which he arranged and had bound in hundreds of volumes. He left these to different learned societies, chiefly Irish, with whom he was closely associated.

The Ordnance Survey was a major contribution to the cultural nationalism of later decades in that it equated the very land itself with a Gaelic past and a Gaelic-speaking peasantry. One particularly important result at the ideological level was that the sense of place and sense of past were mutually linked. The Ordnance Survey which had worked under the very shadow of the imminent famine marked an important step in the development of interest in Ireland’s past cultural history however much Brian Friel tries to implicate it in the destruction of the Gaelic language. When challenged his reply is that this is a piece of theatre, a play, and should be treated as such: you don't go to Macbeth to find out about Scottish history.

THE TRIGONOMETRICAL EXPERIMENTAL SURVEY -
A detachment of the Sappers and Miners have commenced operations in this neighbourhood. The principal station is that of Beacon-hill, near Amesbury, where a small military encampment has been formed – a novelty which will doubtless attract many persons to that spot.

Salisbury & Winchester Journal, 19 May 1849, page 4, column 2

With thanks to Bill Riley
I first came across 3D models in a mapping context during a visit organised to the Imperial War Museum at Duxford when we were shown the models produced in 1944 to facilitate precision attacks by the RAF on certain targets in France and the Netherlands. Each model covered a very small area and had been produced manually at the cost of considerable effort.

Two-thirds of a century later, technology has progressed immeasurably and the party that visited Ordnance Survey of Ireland (OSI) this July were shown their digital 3D model which is under development but which in 2009 had been expected to cover all towns by 2012. A sample view appears in OSI’s corporate brochure, An insight into OSI.

The basis for the product is a height model derived from lidar survey. An aircraft has shone a laser down at the ground every two metres and measured the height by timing the returned pulse. Heights obtained in this way are highly accurate: a root-mean-square error of less than nine centimetres was quoted. The laser beam has spread out by the time it reaches the ground, so multiple returns may be present, for example from chimneys, from roofs and from street level. The software takes all this information and derives from it a simple geometrical model which might, for example represent all the buildings as a collection of rectangular blocks.

So far, there is no colour and no texture. OSI has overhead photography which it can drape on this model to colour the horizontal surfaces, but this is of little use for building façades. So one takes the equivalent of Google Streetview shots and projects them back within the model thereby applying not just colour but the shapes of doors and windows to the building façades. A final subtlety is to add a representation of vegetation whose approximate size will have been determined from the lidar survey. One now has a model one can look at from any viewpoint, even a moving one. Indeed, especially from a fast-moving viewpoint, it will give a convincing image of what one might see.

This would be ideal if the Irish Air Corps were planning precision attacks to rid Dublin of some of the monstrosities built before the beauties of Georgian architecture had become appreciated once again. However, so far as I am aware, that is not actually the intention behind this product. Rather, it seems that the idea is to assist planners in understanding the visual impact of proposed new buildings from a range of key (but static) viewpoints. For an aesthetic purpose like this, it is important to represent properly those features that are of aesthetic importance.

For Georgian houses, the symmetry and regularity of façades is important. For

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1 Geraldine Ruane, Stories from the people, who put Ireland on the map, Dublin: OSI, c2009, page 112
2 This can be downloaded from the home page of OSI’s website http://www.osi.ie/. The hard-copy version is unpaginated, but on the electronic version see page 11.
other buildings the spikiness of the roofline may be critical.\textsuperscript{3}

Now the basic model onto which the images have been projected has little spikiness to it. The lidar appears to have spotted the occasional chimney, but the occasional chimney is as much as can be expected with a data spacing of two metres. There is no way the pinnacles of St Pancras would be recognised for what they were. And while the Streetview images will show the pinnacles, at best they will be back-projected onto the sky and lost; at worst they will be projected onto the wall of some tower block that happens to be in line with them, and anyone viewing that tower block from a different angle will be scratching his head and wondering why someone has chosen to paint a gothic pinnacle there. Fortunately for OSI, Dublin has no St Pancras, but it has an awful lot of chimneys whose absence on their sample image makes the buildings look ‘not quite right’.

Worse is to come. It would be too much to hope that the camera position and direction for the Streetview images should be known with absolute precision. Make just a tiny error in this and all the windows and doors on the façades shift by a couple of feet. As was noted earlier, the regularity and symmetry of façades is a key aesthetic feature of Georgian architecture. So the eye is troubled when, looking at the left-hand side of their sample view, it spots a fine Georgian house just one bay of windows wide. To make matters worse the left-hand jambs of these windows are just inches from the street corner. Structurally, it looks in imminent danger of collapse. Aesthetically it looks as though the side street has been widened by taking a giant circular saw to the buildings on one side of it. This of course is exactly what will happen when doors and windows are shifted sideways as a result of alignment errors.

I simply do not see how the user can form a considered opinion on the aesthetic impact of a distant office block when the foreground buildings whose ambiance is to be preserved have been so callously treated. It may be protested that a crude representation is better than none. However, there is a very simple alternative, which is to take an ordinary digital photograph from the viewpoint of interest and to tweak it digitally by inserting the proposed new development in the background. Now there is certainly a requirement for a GIS product to facilitate inserting the new building in the right position in the photograph. One could even imagine such a product using the 3D model and knowledge of where the real photograph was taken from to insert the new building with the correct amount of it obscured by intervening structures or trees. Effectively one would take the product that OSI has developed and replace 99% of the scene with a real photograph.

Perhaps that is what OSI really intends. Or perhaps it has some other customer in mind, like the Irish Air Corps!

\textsuperscript{3} O’Connor’s view of St Pancras Hotel in London, hovering above the smoky haze like a vision of the New Jerusalem, is a fine example. See: http://www.movinghere.org.uk/search/catalogue.asp?sequence=122&resourcetypeID=2&recordID=57146
**Cannock Chase map**

Staffordshire County Council recently updated their visitor map covering the Area of Outstanding Natural Beauty known as Cannock Chase.

The two principal aims are to show on one side land use, footpaths and visitor information and on the other descriptions of flora, fauna, trees, woodlands and useful addresses. Land use is divided into categories: Country Park, Forestry Commission freehold, Forestry Commission leasehold, Other public land and Area of Outstanding Natural Beauty. Footpaths shown include major public routes such as the Staffordshire Way, local heritage trails and modern creations such as mountain bike trails. The visitor information concentrates on the location of car parks, information points, toilets and facilities for people with disabilities.

Staffordshire County Council has produced a handy folded visitor map of Cannock Chase for nearly fifty years. I first purchased a copy in 1965 when I visited an uncle who lived at Rawnsley on the edge of Cannock Chase. The information is based on Ordnance Survey base data and like all good maps, clearly shows the North point. Although no scale bar appears on the map, the scale can be judged to be 1:22,000. Editions of the map were produced in 1965, 1974, 1984 and the early nineties. The map complemented Ordnance Survey one-inch and two-and-a-half-inch series and, more recently, the Landranger and Explorer series of maps.

The map costs £1.20 including p&p and is available from Cannock Chase Visitor Centre, Marquis Drive, Hednesford, Cannock Staffordshire WS12 4PW Tel. No. 01543 871773. A complementary map that may be of interest is of Cannock Chase at a scale of 1:25,000 produced by Harvey on waterproof paper priced at £6.95, available from the same address.

_D C Kimber_
**Book reviews**


What I suspect regular users will soon abbreviate to *BME* is for Ordnance Survey students similar in three ways to John Andrews’ recent *Maps in those days*.¹ It covers far more than the OS, but contributes much to its story whilst at the same time being by no means complete in this regard.

The dust-jacket blurb says that over 1500 members of the map-trade in the British Isles are listed. I have counted 87 engravers who were employed by the OS at some time. Given *BME*’s scope, from the mid-sixteenth to the late nineteenth centuries, this is quite a high proportion, particularly as some of those who find a place here are not normally associated with map engraving, for example Thomas Bewick, William Blake and James Gillray. A minority of entries are for men who are not usually classed as engravers at all: they include some lithographers – all the main map-producing ones in nineteenth-century London seem to be here – various surveyors, including Saxton, Speed and the Greenwoods (but not the mysterious A Bryant), and some who can only be described as organisers, such as Col Robert Kearsley Dawson. Pedantic objections to this widely-drawn and not always clearly-apparent scope are overcome by the sheer volume of inclusiveness in what its authors admit is a less than complete guide to the British map trade; this is far more than a catalogue of facts about intaglio artists.

The standard entry includes a listing of cartographic output – sometimes only one or two examples, much longer but necessarily selective for the more prolific men and firms, and minimal for most OS engravers – a biography, known addresses, and known apprentices. Six diagrams show some threads of apprenticeship, in one instance stretching over nearly four hundred years, and demonstrating the wider context that moulded the OS style of work. It is no surprise to learn that *BME* has been a quarter of a century in the researching.

Though extensive, the data for OS engravers is not comprehensive, even for those individuals who do find a place. The main sources seem to have been street directories, census records, and the maps themselves, but additional data can be found in national records, notably those of the Board of Ordnance and the Treasury. A big problem in respect of engravers working for large organisations, both official such as the OS, and commercial such as Johnston and Bartholomew, is that many of them are not named at all on their maps. OS policy varied, from the ‘Benjamin Baker and assistants’ of the early maps, through apparently detailed recitation in the middle decades of the nineteenth century, to complete silence by 1900. A sample of 16 six-inch and 24 five-foot maps yields 23 names, of whom only 16 are in *BME* – but then eight of the six-inch and 19 of the five-foot sheets

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do not name the engravers, and no amount of delving will supply these gaps.\footnote{Sheets examined: six-inch: Dublin 18*, 22*, 23*; Kildare 35; Yorkshire 43*, 58*, 73*, 89*, 169, 186, 202, 203, 215, 217, 218, 294; five-foot: Kingston upon Hull 7, 8, 11, 12; Leeds 10*, 11*, 14*, 15*, 19*; Manchester 22-24, 27-30, 32-35, 37-40. Sheets marked * name engravers. This sample was dictated by maps – mostly reissues – immediately to hand.}

Exploration of map imprints was evidently partial, and further work may well produce examples of men who worked for the OS for a comparatively short time, in between longer periods for commercial firms – or, indeed, overseas.

It may be pleaded, justly, that the employees of an organisation such as the OS are on rather a different footing from the freelancers who constitute the bulk of the entries in \textit{BME}; the OS was a mass-production organisation, and mass-production methods are appropriate to many aspects of its study. Many of the relevant documentary records are not immediately obvious, and a comprehensive search of map footnotes is likely to be a protracted business. Thus I hope that the splendid start made by \textit{BME} will inspire someone to compile as complete a list as possible of the ‘missing’ OS engravers: this will certainly throw up a great many names that never appeared on a map. Not to be neglected are census records and the implications of addresses for income and lifestyle. Here is a project for some reader of genealogical rather than geomatic bent.

\textit{BME} will probably not find as wide a readership as \textit{Maps in those days}, being both more specialised and costlier, but it is a magnificent achievement, and a model for further, more specialised work.

\textit{Richard Oliver}

\textbf{Also noted:}

CCS member Mike Parker has followed his highly successful \textit{Map Addict} with this lively and entertaining account of British footpaths and rights-of-way.

In his typical humorous and inquisitive style, Mike examines the history of the growth of the popularity of walking and exploring the countryside.

With many personal anecdotes and perceptive insights, \textit{The Wild Rover}, published by HarperCollins at £12.99 provides a rollicking read.
Lovers of London and maps have been treated to several excellent publications in recent times. Simon Foxall’s Mapping London and Peter Whitfield’s London: A life in maps have been particularly well received. Now Times Books has produced yet another treat with this magnificent volume, the latest title in the prestigious Times Atlas series.

Unlike Foxall’s and Whitfield’s books, this is indeed an atlas, with 1:65,000 maps of greater London and 1:10,000 street maps of inner London. But hardly an atlas for every day navigation – and certainly not one for carrying around. The large page size (12½ inches by 10 inches), heavy paper and substantial binding create a sturdy tome weighing some 2.5 kilos. But resting securely on the coffee-table, this is a book that will be referred to and pored over with delight for years to come. The book offers a cornucopia of maps, pictures and stories about many aspects of London, as promised by the sub-title ‘the story of a great city through maps, history and culture’.

The modern mapping is by Collins Bartholomew, another part of the HarperCollins empire, and, oddly, is the only less-than-totally-satisfactory feature of the book. Given the wealth of colour and detail on other pages, the outer London maps, in shades of pale grey, pale green and white, lack impact and, worse, lack any indication of terrain or land form.

The book is arranged in sections, starting with reproductions of famous historic maps such as Ogilby’s Britannia, Snow’s Cholera map, Booth’s Poverty map, Beck’s tube map and many others. London in Context, the next section, looks at the physical geography – with maps, old and new, charting such features as flood risk, geology and climate – and social and economic affairs, illustrated with statistics, photographs and charts. Successive sections deal with the growth of London, reproductions of historical views, a comprehensive chronology and a gazetteer of place-names and their meanings.

The main part of the book is organised geographically by borough, interspersed (slightly confusingly) with thematic features. Thus we get, for example, the sequence Croydon, Public transport, Ealing, Universities, Enfield, Roads and so on. However, the borough chapters are a delight, each a double-page spread with statistics and stories of famous residents, notable buildings and interesting events, lavishly illustrated with maps and photographs. Particularly fascinating are the series of ‘then and now’ maps and views.
A book such as this is inevitably out of date almost as soon as it appears, but care has been taken to include the very latest developments (such as Stratford City, opened just a week before publication date!) whilst a chapter on Future London describes buildings and transport links still to appear.

John Davies

Charles Close in Moscow

In the card index in the Russian State Library in Moscow, John Davies spotted this evidence that the Soviet Union had long studied Ordnance Survey maps!

Right: Staff gather to hear the Duke of Edinburgh’s speech at the opening of OS new head office on 4 October
Above: The Queen and Duke of Edinburgh opening Ordnance Survey’s previous head office in 1969. (photographs courtesy of Ordnance Survey)
Kerry musings  
David Archer

Ireland in 1830, and the senior Ordnance Survey man in the field was having a hard time of it. Top O'Graphical had problems with his men, equipment and the weather, which was so wet, tipping down without stop. At intervals he thought that the men were up to something and plotting against him. He had caught some of them hachuring a plot to steal equipment from the store, casing the joint, and ready to half-inch anything they could get their hands on. But to his great relief, they could not fathom out how to break in, steal the surveying equipment and sell it.

One day, all was to change. Topo, as he was known, returned to base having heard a local story about a rare map drawn by William Shakespeare being hidden in a cave beyond the botanic garden of the castle, way up the mountain above the col, by the summit. The only problem being that Mount Joy was protected by a beastly and ferocious Phoenix. Topo wanted the map and began to assemble a team of men to help him get it.

He saw sapper Kell from Killarney working in the yard. ‘What, man, still at it?’ Kell was bored of ordnance moving. Constantly humping shells here and there, he had recently been doing it on a scale not seen before. He would be useful for his strength. Then the regimental cook, who being a mountainmaster could spot heights which were unsafe, and could traverse the area better than anyone. As a pathfinder he was a legend. ‘Hoy, you over there’, shouted Topo to a man who was well wrapped in both a jersey and guernsey, but had nothing on his head and was atlas. ‘Hachure, hachure’, said the man Hammond. ‘Bless you, bless you’ replied Topo who did not catch the cold. ‘Come with me, there is work to be done.’

Stan Ford, the final recruit, was very popular, one-in-a-million they said. He did everything on a large scale, due perhaps to his county origin, rather than a restricted townland upbringing. At home, he had roamed extensively, frequently travelling the London Road to Southampton and Portsmouth town, plans of which he carried in his head, yet wanted to see more. During the Battle of the Scales, he had visited Burns’ country to see burnt Sienna after the great fire. So, once the party was assembled, Topo and Stan Ford, along with Cook, Hammond and Kell, started preparations for a hike to undertake a provisional reconnoitre of the cave. On such a dangerous mountain there was no latitude for error. Could a hiker cover the distance easily, a group of hikers even? Yes, if meticulous route planning commenced at once, with possible routes plotted and re-plotted, drawn as a neat line, sometimes with revision, nay continuous revision was needed to get round any projection obstructing the path. A final route was agreed and Stan Ford’s résumé of the route was written up in a descriptive manual for the group, a book of reference, in case of difficulties.

The castle had been built between 1254 and 1260, with the completion date 10.5.60 above the door. It was owned by Sir Veyor, who had personally drawn the plans for the adjoining botanic gardens. These had been ignored by Will, the wizened head gardner of unknown ancestry, who was thought to be an ancient
Britain from Neolithic Wessex, born long ago, some say in the dark ages, but more probably from southern Britain in the iron age, a Britain before the Norman conquest in fact.

Will had by-passed plans drawn by Sir Veyor, preferring his own tried and trusted methods and processes to achieve good results. His gardening management style was a direct, or general laissez faire approach. To start with, the whole area had needed a good overhaul, and we find that after an initial levelling with a bright yellow earth-moving JCT, Will is satisfied that the ex-moor is laid out to the great design, with no lines of initial levelling showing. However, his assistant, who never ate, as levelling staves off hunger, was almost illiterate, poor at scribing and could not copy right; thus he always got the same things wrong, but the old gardener invariably spotted the systematic error, which he corrected. On such hilly ground, the gardens were wonderful, except that dead olm disease had struck the trees along the western front, with a second series along the east also in decline. However, the major design involved a colourful compass rose in the centre, with a decorative floral border, composed of clumps of flowers, punctuated alternately by large trees, of which, a five foot May bush and a deciduous ten foot Bilby tower above the rest. ‘Perfect as they are and as they ought to be’ thought all who saw them. Heading east towards Lands End would mean sea level, and a walk along the shore, de la beche, after a pleasant meander down through Crab wood, a relatively new forest, always in full sunlight, with no hill shading the vegetation; a lovely withy combe, created by the agents of erosion, being the main attraction.

Sir Veyor looked round from close to the edge of the cliff. He had been looking out across the dunes, where ‘sand be plentiful’, watching spring rice being planted in lagoons, just above the high tide water mark, by men who sang as they worked ‘Oh, we do like to be beside the deeside....’. Looking further along the coast, Sir Veyor might have seen jolly Fisher Unwin, the old jack tar, in his waterproofs, only recently returned to Port Lock after traversing the seven seas, with the seventh being the most remarkable in the series.

When he returned and saw the vessels in the sound, ranging from dinghies to frigates, he was pleased to be home, and to celebrate took a swig of Old Sarum, a spirit level in strength with Azimuth or Pernod. To enter port in his yacht he had to look at the tide, gauge the depth of water and take all the physical features of the harbour into account.

Once ashore, he went to his favourite tavern where the bouncer, a nasty extrusion if ever there was one, looked as if he had been on a bender the previous evening. This door king had all the conventional signs and manoeuvres of a crook. His primary job was to control customers of all descriptions, large small and medium. In the Gordon and Loch Ness, there was a large bar, room enough for most gatherings and small compensation bars for those unable to get into the main room. At present, there was a bit of commotion as the French cartographer Theo de Lite, wanted someone to direct a General to tell him where Susi and the other girls, mostly Norfolk broads, were. These girls were very physical, with frequently sketched contours, and were always the litho the survey
party. Theo wanted to make the greatest impression, rather than let his friend Newlyn datum. The frenchman was very dapper, in later years he would have been a Mod, and had recently written a memoir, very small scale, about his experiences with fellow travellers in the Holy Land, where he undertook a survey of Jerusalem and Sinai. These memories were forever on his mind, as if engraved in stone; an advance edition of the memoir had already been distributed for reviews.

Within the castle, the guests included Sir Pell David, who had played county series cricket for Hampshire. All were relaxing before a fine fire in the airy, yet cosy drawing room in the tower. Roger was tinkling the piano keys, and playing anything from Elgar's magnetic variations to the new popular zincoplated dance tunes, keeping a neat base line. ‘Hell, yer can get a good tune out of that thing’ said Sir Pell. Just then, Henry the butler entered with a message for another guest, Sir William Roy, (yes, Will Roy was here), ‘Can’t you see Will playing draughts, man?’ roared Sir Pell, dismissing Henry, tipping him a pound. Sat at a plane table, the game was played for money, with the bets dublin constantly, Will against the rest, and constantly trying to cheat em.

On approaching the castle grounds Topo’s party crossed a fine green field, surveying all around them, noting especially the botanic gardens queue waiting to get in, and headed up the mountain to the col, rain pouring down, but better than yesterday when it had snowd on them. At the col, they found a near circular cave entrance, which from the sheep droppings, they decided was not a grotto or temple, more a rams den on several levels. They decided to undertake an interior survey, starting at the top, as in winter bottom levels could be flooded. The cave was dissected by a long wooden bench, marks on the floor, like parallel lines, showing where it had been dragged around. Carved on it were hundreds of personal and place names, some needing a Gaelic glossary to foyle any attempt at obfuscation.

Just then, a tiny creature scuttled in, having been outside in the field, sketching celtic earthworks, long barrows and other archaeology in the field. Obviously the guardian of the cave, it was not a Phoenix, but a little six-inch minofag, who guessed the reason for the visit, and ordering the party to one side, had ‘em bossed about in no time. ‘To see the treasure, you must pay a registration toll worth £1’ it said in a flash, spotting an opportunity. ‘But I will not help you find it’. Having paid, a dim light was turned on, illuminating the place’s old series of alcoves. Immediately, Topo’s dog headed off. As an experienced explorer and sniffer dog, would Trig point to the correct alcove? He stopped at the fifth, which contained a brown paper and string packet with a parcel number on it. Unwrapping it, they found three large pieces of paper folded and cloth backed. Topo felt ‘em and found them to be in poor condition, damp and soft like old Crawford crackers. Expectations were still high, and nothing could eclipse the excitement, but unfolding the third large sheet, confirmed that all were blank. The story was a hoax, another Shakespearian mudge ado about northing.
In praise of trig points

Trig points no longer have a practical purpose, but continue to cast their spell on the eyes and hearts of hikers, artists and poets. Iain Thornber’s photograph of Sgurr of Eigg (393m) at NM 463847 shows (left to right) Island of Rum, North Uist, the Cullins of Skye, Eigg and Laig Bay. Meanwhile, more southerly peaks have inspired Roly Hann’s poetic muse.

**Cheesefoot Head SU 531276 176m**

There’s a one-eyed concrete trig point
On the top of Cheesefoot Head.
There’s a little gravel car park with a view
Where a tired and sweaty hiker
With his friend, a scruffy biker,
Checked their progress on Explorer 132.

**Scafell Pike NY 215072 978m**

I wandered lonely in the cloud
That floats on high o’er Scafell’s screes.
When all at once I saw a crowd
A host of students on the top.
And Mars bars wrappers if you please
Fluttering and dancing in the breeze.

**To all Welsh trig points/piler triangli Cymraeg**

*(In the privacy of your own home, some of you may wish to sing this verse to the tune of ‘The British Grenadiers’)*

Some talk of Cader Idris
and some of Moelyn Mawr,
Of Diffwys and Plynlimon
and such great peaks as these.
But of all the Welsh great summits,
There’s none that can compare
To the very top of Snowdon
And the station café there.
**Letters**

Whilst I'm unable to supply any information about the artist M Hunter, I was delighted to read Roger Hellyer's piece about ‘Bert’ Eades.¹

Having completed National Service in March 1956, I joined two others on a refresher course at Southampton and our initial instructor was Albert Eades, a gentleman in every sense of the word. Nothing was too much trouble to explain in his quiet way and as a consequence our work, especially in the ‘field’ at Chandler’s Ford, were happy days indeed.

We were sorry that after a month or so he departed (probably this marked his taking over at Cosham) but I was destined to meet Bert once again when I was posted to Nettlebed, just north of Reading in 1964. I had to pay frequent visits to the Reading Continuous Revision office, where I was always made very welcome. Bert hadn’t changed a scrap!

*John Cole*

Rob Wheeler’s reservations on Bartholomews maps² were shared in the early 1950s by a small group from Daventry Road Club on a weekend cycling trip into unfamiliar countryside beyond their usual range. Someone had brought a Bartholomew map, well-recognised as ideal for cyclists, and this seemed to show a road over Bredon Hill, an outlier of the Cotswolds and just short of 1000 feet in height. Bredon became the day’s objective; however the road proved to be not much more that a rough lane, impossible to ride up on touring bikes with laden saddlebags.

After that experience anyone in the club producing a Bartholomew map was subjected to a certain amount of banter, the maps being regarded as unreliable or misleading. Nevertheless Bartholomew had given us the satisfaction of going over Bredon and taking in the wide views over to the Malverns and back to the edge of the Cotswolds.

The Ordnance Survey’s 1940 War Revision one-inch maps 81, 82, 92 and 93, based on the Popular Edition, each shows a quadrant of Bredon Hill, sliced by their sheet lines. The road which we took crosses the hill from Elmley Castle to Westmancote and was classified as a ‘minor road’. If I bought the suspect Bartholomew map to see its representation of Bredon, this would be my first Barts purchase.

For cycling my preference was to use OS one-inch maps for local rides and OS quarter inch for longer ones. The quarter-inch were a little awkward to pack into a saddlebag, but were sufficiently detailed for locating out-of-the-way CTC tea-places and Youth Hostels. Since Daventry was towards the centre of the Midlands map this was ideal and additional maps were only required for touring.

*Charles Strongman*

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¹ *Sheetlines* 91, 58
² *Sheetlines* 90, 36