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“OS Act, tidelines and growth of a  
myth”

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

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

## ***The Ordnance Survey Act, tidelines and the growth of a myth***

***Richard Oliver***

Two recent articles by Brian Baily, in the *Cartographic Journal* and in *Sheetlines*, make a substantial contribution to the study of Ordnance Survey mapping of tidelines in the twentieth century. However, both repeat a misconception about the OS, that it has a legal obligation to map public boundaries, including tidelines, and both accept without question the rationale for the Survey's adoption of 'ordinary', 'medium' or 'mean' as a basis for tidelines in England and Wales.<sup>1</sup> The purpose of the present paper is to explain first the genesis of the Ordnance Survey Act, 1841 (4 & 5 Victoria, chapter 30), second the genesis of the concept of an obligation to undertake boundary mapping, and third certain points as to the mapping of tidelines in the later nineteenth century.

### ***The origins of the Ordnance Survey Act of 1841***

The authority under which the Ordnance Survey has undertaken boundary mapping is an Act of 1841, commonly referred to as the Ordnance Survey Act, though the original title is somewhat different.<sup>2</sup> The origins of the Act were explained in a brief note published in *Sheetlines* in 1988, which was written following one of Ordnance Survey's numerous claims of a legal obligation to map boundaries under the 1841 Act: what follows is a fuller exposition.<sup>3</sup>

It is well known that the Survey's early mapping was militarily-oriented, usually at the two-inch (1:31,680) scale with a view to publication at the one-inch (1:63,360) scale. The specification of such mapping was nominally determined by military rather than civil requirements, but in practice the two were so nearly the same that by 1819, when over half of England and Wales had been mapped and a start was made on Scotland, the justification for continuing the work was civil rather than military. It was presumably only a matter of time before a similar survey was undertaken in Ireland, but when the survey of that country did begin, in 1824-5, it was of a somewhat different nature from those in Britain. It was at the six-inch (1:10,560) scale, and whilst it was intended to provide all the details that were being recorded in Britain, and with a similar end in view of one-inch publication, its principal justification was as a survey for fiscal purposes of the boundaries of townlands, the smallest official division. In Britain the one-inch map showed county boundaries, and sometimes a few others: sheet 70 (1824) showed the Soke of Grantham, and by the late 1830s some borough boundaries

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<sup>1</sup> Brian Baily and Peter Collier, 'The development of the photogrammetric mapping of tidal lines by the Ordnance Survey', *Cartographic Journal* 47 (2010), 262-9, esp. 262, 264; Brian Baily, 'Ordnance Survey data collection policy and the mapping of tidal features – a review of policy, methods and potential analysis', *Sheetlines* 90 (2011), 4-17, esp. p.6.

<sup>2</sup> *An Act to authorize and facilitate the completion of a survey of Great Britain, Berwick upon Tweed, and the Isle of Man*, 4 & 5 Vict., cap 30, 21 June 1841.

<sup>3</sup> Richard Oliver, 'The Ordnance Survey Act, 1841', *Sheetlines* 23 (December 1988), 24, written in response to Chris Simmonds, 'Boundaries: some recent developments at Ordnance Survey', *OS News* 89 (February 1988), reprinted in *Sheetlines* 22 (August 1988), 2-3.

were appearing on newly-surveyed maps.<sup>4</sup> It was symptomatic of the greater concern for accuracy cultivated by Colonel Thomas Colby after he took charge of the Survey in 1820 that the recording of county boundaries was refined: the change is epitomised by the contrast between the disregarding of a kink in the Kent-Surrey boundary where it follows a Roman road near Chelsham on sheet 6 (1819) on the one hand, and the small detached parts of Derbyshire and Staffordshire on sheet 72 SE (1836) on the other. In contrast, both Christopher Greenwood and Andrew Bryant showed parish and some other boundaries on their contemporary one-inch county maps, even if sometimes with questionable planimetric accuracy; thus in Britain the Ordnance Survey was decidedly conservative.

Although in Ireland all the actual surveying and subsequent cartographic processes were undertaken by the Ordnance Survey, they were effectively an intermediate stage in a larger process. The Irish valuation department ascertained the boundaries on the ground, and used the finished maps as a framework for the townland valuation that was the justification for the survey in the first place. In order to ascertain what townlands and other administrative divisions existed, an Act of 1824 directed that lists were to be prepared by county grand juries; this was quickly replaced by another Act in 1825, which retained the obligation to prepare lists, and included powers for representatives of the Lord Lieutenant (in practice the valuation department) to enter lands in order to ascertain and mark the position of townland and other public boundaries, and power for the Board of Ordnance's representatives (in practice the Survey) to enter lands to survey the boundaries thus marked, and to erect any necessary 'objects' (*i.e.* poles marking trigonometrical points, and the like) in order to facilitate their work. The most substantial provision of the 1825 Act was that the boundaries determined using its powers were henceforth to be the legal boundaries of the townlands and other divisions.<sup>5</sup>

The balance of the Irish survey soon shifted away from any residual military small-scale topographical basis, with boundary recording appended (and in the earlier stages carried out as a separate field operation by the Ordnance surveyors), towards something rather more elaborate: a comprehensive record of the boundaries and a comprehensive record of the landscape mutually complementing each other. This shift had been anticipated in 1825 by Colby's instruction that the six-inch mapping was 'to be drawn with all the accuracy and minuteness of detail which that scale admits', except for the fields: a decade later

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<sup>4</sup> The symbol for the Soke of Grantham boundary appears in the bottom margin of sheet 70: this seems to be the only example of a legend on a one-inch map before 1886. The rationale for borough and other boundaries appearing has yet to be investigated.

<sup>5</sup> *An Act... tables of manors, parishes, town lands and other sub-denominations of land, in Ireland, for the purpose of providing for the future survey and valuation... and for settling the boundaries of counties, cities and towns...*, 5 Geo. IV, c.112, 24 June 1824; *An Act... relative to the forming tables of manors, parishes, and townships in Ireland, and to make provisions for ascertaining the boundaries of the same*, 6 Geo. IV, cap 99, 5 July 1825.

these were being mapped as well.<sup>6</sup>

The survey of Scotland begun in 1819 progressed slowly and was abandoned in 1828. By 1834 there was a definite demand for a resumption of work, and by 1839 Colby had persuaded the leading campaigners that the six-inch scale should be adopted. At this time survey in England had only reached slightly to the north of the Humber and the Mersey, and a demand for the six-inch scale arose there too; both campaigns had geological applications at root. An argument for adopting the six-inch in place of the one-inch was that the Irish survey was nearing completion and a large trained workforce would shortly become available. The survey at six-inch of Scotland and northern England was duly authorised by the Treasury in October 1840.

Colby produced several reports arguing the case for the six-inch; that of 11 July 1840 is of relevance here. In it he said that it would be necessary to pass a short Act of Parliament, along the lines of that of 1825 for the Irish survey, which would enable the Ordnance surveyors to ascertain boundaries, would give a right of entry into lands and would protect trigonometrical poles and similar markers. Hitherto in Britain trigonometrical markers had been liable to disturbance, thereby impeding observations to them from other stations, and on earlier Ordnance surveys

‘the surveyors neglected the survey of the lesser streams, to obviate the inconvenience of trespassing and to save themselves trouble; those maps on which the streams were mostly inserted by sketches from distant views, became, before they were revised, of very little use to the mineral surveyors or geologists, to whom the correct position of the streams and watercourses is the most valuable information a map can give.’

Powers of entry would also be useful for surveying county and parish boundaries.<sup>7</sup> Colby did not mention that in the past march routes had been used in Britain; perhaps, in the light of Irish experience, this method had been found cumbersome.<sup>8</sup>

The necessary Bill was duly published in February 1841 and passed into law on 21 June, having received a number of amendments and additional sections that were partly to do with terminology, and had the effect of increasing verbosity in disproportion to substance, but included two substantial additions. Section XII provided that nothing done under the Act was to affect any property rights or claims, and section XVIII provided that its powers were to expire on 31 December 1846. Section XII was similar to section XV of the 1825 Irish Act, and seems to have been inserted to meet the objections of Lord Granville Somerset; it

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<sup>6</sup> Thomas Colby, ‘Instructions for the Interior Survey of Ireland’, 1825, ss 1, 65, printed in J H Andrews, *A paper landscape: the Ordnance Survey in nineteenth-century Ireland*, Oxford: Clarendon Press, 1975, 309-21.

<sup>7</sup> Colby to Inspector-General of Fortifications, 11 July 1840, in The National Archives (Public Record Office) [TNA PRO] WO 44/702: printed in *Correspondence respecting the scale for the Ordnance Survey...*, British Parliamentary Papers, House of Commons series [BPP (HC)] 1854 (1831), XLI, 187, pp 13-14.

<sup>8</sup> Colby to Lord F Somerset, 2 September 1820: copy at f.124 in PRO TNA OS 3/260.

is unclear what the genesis of section XVIII was. There seems to have been a general expectation that the six-inch survey of northern Britain would proceed expeditiously, and that there would be no need for the powers conferred under the Act to continue indefinitely. The most substantial difference between the 1825 and 1841 Acts was that the 1841 Act contained no provision for the boundaries ascertained using its powers to have any legal status. Common to both Acts were the powers to compel co-operation from county and other officials and from individuals, and to enter lands and erect markers.<sup>9</sup>

The 1841 Act was to ‘authorise and facilitate’ the survey of Britain: in this it was similar to a railway, in that an Act enabled the railway to be constructed, and lands to be entered into and compulsorily purchased, but it did not compel construction.<sup>10</sup> Neither the 1825 Act nor that of 1841 made any mention of scale of survey.

### ***The Ordnance Survey in the nineteenth century: an occasion***

The apparent lack of importance attached by contemporaries to the Ordnance Survey’s boundary recording is evident from the development of the Survey after 1840. The 1841 Act was renewed in 1846 and at intervals thereafter: it was made permanent in 1922.<sup>11</sup> This apparently rather makeshift attitude is more explicable in the light of the prevailing nineteenth century attitude towards the Ordnance Survey, which was essentially that it was an occasion rather than an institution: once the survey was complete the organisation could be largely disbanded.<sup>12</sup> Thus any powers such as those conferred by the Act of 1841 need not run indefinitely. (Given later contentions that the OS was *obliged* to map boundaries, this limitation in time is of considerable significance.) Once again, there is an analogy with railway Acts: they invariably limited the time for which powers were available for the construction of the line and, if a line was not completed when

<sup>9</sup> The bill as originally presented on 1 February 1841 (*A bill to authorize and facilitate the completion of a survey of Great Britain and the Isle of Man*) is in British Parliamentary Papers (House of Commons Series) 1841-Sess.I (79), III, 3; the amended version of 1 April is *ibid* (202), III, 11; the further amended version of 26 May, which introduced sections XII and XVIII, is at *ibid* (335), III, 21. The only records of discussion in *Hansard’s Parliamentary Debates*, Third Series, are in Vol LVI, cc 529-33, LVII, cc 510-12, and 772-3. Procedural records will be found in *Journals of the House of Commons*, 96, 311, 331-2, 342, 364; for delays to the bill, *ibid*, 152, 157, 171, 191, 227, 251, 258, 275, 282, 290, 295, 308. The Act is 4 & 5 Vict., cap XXX: the reference to the bill in Baily, ‘Ordnance Survey data collection policy...’, 6, n.4, is unfortunate, as a bill has no legal effect: it is merely a proposal.

<sup>10</sup> Some Acts did compel the provision of a train service once the line was completed: the Lewes and East Grinstead line is a well-known example of this (opened 1882, closed 1955, forced to reopen 1956, closed 1958 following new legislation; part later reopened as the Bluebell Railway). A variation was a penalty for non-completion: the Surrey and Sussex line (Croydon-Groombridge), abandoned in the late 1860s, is an example. However, neither seems to have been at all common, and do not, I think, invalidate my analogy.

<sup>11</sup> There had been earlier discussions on making it permanent which did not lead anywhere, in 1885 and 1894: see file 3711/85 in TNA PRO T1/8160B and file 12778/94 in T1/8851B.

<sup>12</sup> These developments are studied in detail in Richard Oliver, *The Ordnance Survey in the nineteenth century: maps, money and the growth of government* (in preparation for publication by the Charles Close Society).

powers expired, another Act had to be sought. The survey of northern Britain moved forward a good deal slower than did that of any railway. The basic standard scale of the survey changed in 1853-4, with the six-inch giving place to 1:2500, and in 1863 the resurvey of England and Wales south of the Mersey and the Humber was authorised. The remapping of southern Britain was completed in 1888, and those cultivated areas only mapped at six-inch before 1855 were remapped at 1:2500 between 1887 and 1896. From about 1894 the main activity of the Ordnance Survey in Britain was revision rather than survey or resurvey.<sup>13</sup>

In 1840 Colby evidently envisaged that a steady stream of funding would enable the six-inch mapping of northern Britain to proceed expeditiously: this perhaps explains why, unlike in Ireland, the powers of the 1841 Act were in effect temporary. Expedition was thwarted by a squeeze on public spending, and by there being proportionately far more urban areas to be mapped than there had been in Ireland. In Ireland larger towns had been mapped at, mostly, 1:1056, as an aid to the valuers, and this scale was duly adopted, without any specific authority, for towns of over 4000 population in northern Britain: when the Ordnance and the Treasury learnt of what was going on, they were effectively presented with a *fait accompli*.<sup>14</sup> Both large-scale urban survey and detailed boundary recording were practices that had been developed in Ireland, and came to Britain with the largely Irish workforce. Continuing pressures from the Treasury for economy on the one hand and from frustrated would-be map-users on the other led to the adoption of the 1:2500 in the mid 1850s, on the basis that it was more cost-effective than was the six-inch. The boundary-recording function went unmentioned in the debate of the 1850s known as ‘the Battle of the Scales’.

The tension between the Treasury and the would-be users continued after 1863. The latter got the upper hand, and more money for the Survey, in 1868, on the back of fears for coal supplies and the need for large-scale OS mapping for mineral exploration. The users were successful again in 1880, now on the back of anticipated general land registration. For some years after 1880 there was a substantial increase in Survey output in Britain: whilst this was largely due to increased funding, it was also helped by efficiency developments. A well-known example is the replacement of engraving by photo-zincography for the production of the six-inch: less well-known is a rationalisation in boundary recording of 1878-9, to which we shall return later. After 1886 the Treasury asserted itself, and steady funding from 1894 onwards was at the expense of dropping the mapping of urban areas at larger than 1:2500. In sum, the Treasury regarded the Ordnance Survey as more of a national nuisance than a national asset.

To return to the 1840s: whereas in Ireland the preliminary research into boundaries had been made by the valuation department, in northern Britain this work fell upon the Ordnance surveyors. At first it was undertaken by the Royal

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<sup>13</sup> It often seems to be overlooked that the main work of the Ordnance Survey as a whole between about 1893 and 1912 was the 1:2500 remapping of Ireland.

<sup>14</sup> See TNA PRO WO 44/702 for papers both on funding and on urban survey.

Engineer officers in charge of local divisions, but this proved unsatisfactory, and in 1849 a separate department for boundary work in England was formed, based in London. The boundary department had the advantage of being both a centre of expertise and of being able to use the tithe surveys of 1836-50 as a starting point. There were no tithe surveys in Scotland, which was one reason for the greater pressure from that country for the Ordnance Survey, but Scottish boundaries were much more straightforward, and continued to be ascertained by division officers, with reference to London only in difficult cases.<sup>15</sup> The separate boundary office was disbanded in 1893, and a few staff at Southampton – ten before 1914 – were sufficient to handle any work arising from changed boundaries that could not be undertaken by local divisions.<sup>16</sup>

The pressure between 1875 and 1888 to complete the 1:2500 coincided with a campaign for the rationalisation of administrative boundaries, particularly in England and Wales. This was largely effected by Acts passed in 1876 and 1882 which were aimed at getting rid of detached areas, and by Local Government Acts of 1888 and 1894 which created county, parish, and urban and rural district councils. This campaign was not completely successful, and near-complete rationalisation had to await a further Local Government Act in 1929, but by 1900 there was a much simpler pattern of local administration than there had been in 1875.<sup>17</sup> It is worth pointing out that this rationalisation was put in hand at a time when the OS boundary survey, using the powers in the 1841 Act, had only covered about half of England and Wales, and indeed the OS worked closely with the Local Government Board in the 1880s to ensure that, as far as possible, boundary rationalisations took place in advance of detail survey.<sup>18</sup> Thus the Ordnance Survey did not record the full complexity of boundaries as they had existed before 1876.<sup>19</sup>

Although by the late 1880s the initial topographic and boundary survey was substantially complete, the mapping was still not being put to as much use as it might have been: the prospect of comprehensive land registration had receded. In his report for 1888 the then Director, Colonel Sir Charles Wilson, wrote that further legislation was desirable if the mapping was to be put to full use: he particularly instanced legal recognition for the boundaries mapped by the Survey in Britain.

‘It seems most desirable, in the public interest, that the arrangements in Great

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<sup>15</sup> James to Potter, 15 April 1871: copy in TNA PRO OS 1/2/1.

<sup>16</sup> H S L Winterbotham, *The national plans*, London: HMSO, 1934, 56.

<sup>17</sup> The Acts are: Divided Parishes and Poor Law Amendment Act, 1876, 30 & 40 Vict. C.61; Divided Parishes and Poor Law Amendment Act, 1882, 45 & 46 Vict. C.58; Local Government (England and Wales) Act 1888, 51 & 52 Vict. C.41; Local Government Act 1894, 57 & 58 Vict. C.73; Local Government Act 1929, 19 Geo. V C17. A few detached areas escaped even the 1929 Act.

<sup>18</sup> See file 19540/84 in TNA PRO T1/8138A.

<sup>19</sup> For a study of the OS boundary archive see David Fletcher, ‘The Ordnance Survey’s nineteenth century boundary survey: context, characteristics and impact’, *Imago Mundi* 51 (1999), 131-46.

Britain as regards boundaries, should be assimilated to those in Ireland.... the boundaries... ascertained under the important powers granted for the purposes of the survey should have legal recognition as rating and administrative boundaries.<sup>20</sup>

No doubt: but nothing happened, and a successor, Brigadier Winterbotham, wrote in 1934 that as the boundaries had no legal standing questions were very occasionally raised as to their status.<sup>21</sup> The OS did maintain from 1895 onwards a manuscript record, on current one-inch and six-inch sheets, of boundary changes that had taken place since the latest edition of each sheet had been published, and a set of these was available for public inspection in London, but with restrictions on copying.<sup>22</sup> This appears to have been a matter of public convenience, a political expediency, rather than any statutory duty.

### ***The twentieth century and the emergence of the Survey Act myth***

After 1914 the OS was subjected to severe funding constraints, and the boundary section shrank at one stage to a strength of only three, though the results of the 1929 Local Government Act forced a substantial increase in 1933.<sup>23</sup> It was in these circumstances that the exasperated but publicly tactful Director, Winterbotham, wrote his combination of user's manual and propaganda, *The national plans*. Of boundary mapping he wrote that, unlike in Ireland, the boundaries shown by the Survey in Britain had no legal recognition: rather, 'for the convenience of Government Department, local authority, and individual alike, the plan must show administrative boundaries'.<sup>24</sup> 'Convenience', not 'obligation', be it noted. Widespread dissatisfaction with OS funding and the arrears of large-scale revision led to the appointment of a Departmental Committee in 1935, chaired by J C C (later Viscount) Davidson.<sup>25</sup> The Committee issued its final report in 1938: as in the debates of the 1850s, boundaries went unmentioned.<sup>26</sup>

It is evident that, whatever 'the convenience of Government Department, local authority, and individual', there was no belief in the inter-war period that the Ordnance Survey had any statutory duty under the 1841 Act to record boundaries. Nor was anything made of the boundary-recording function in the first post-war

<sup>20</sup> *Report... Ordnance Survey... 1888*, BPP (HC) 1889 [C.5659], LX, 911, pp 6, 7.

<sup>21</sup> Winterbotham, *The national plans*, 52.

<sup>22</sup> *Report... Ordnance Survey... 1896*, BPP (HC) 1896 [C.8157], LXVIII, 463, p.17; rules re map inspection, 25 October 1905 and 1 November 1907, in TNA PRO OS 3/336. The six-inch sheets were presumably copies of the 'boundary record maps' now in TNA PRO OS 40 and OS 41.

<sup>23</sup> Winterbotham, *The national plans*, 56.

<sup>24</sup> Winterbotham, *The national plans*, 52.

<sup>25</sup> The circumstances of the Davidson Committee's appointment have as yet not been fully explored, probably not least because of a lack of obvious surviving material at TNA: there is no mention in Robert Rhodes James, *Memoirs of a Conservative: J C C Davidson's memoirs and papers, 1910-37*, London: Weidenfield & Nicolson, 1969. I find it suggestive that Davidson's reputation seems to rest on his being Stanley Baldwin's hit-man.

<sup>26</sup> *Final report of the Departmental Committee on the Ordnance Survey*, London: HMSO, 1938, 32 has a bald mention of the 1841 Act in the chronology, but no indication of why it should be worth the honour.



edition of *A description of the Ordnance Survey large scale plans*, issued in 1947:

‘The boundaries shown on the 25-inch plan are, in the main, those which are visible to the eye on the surface of the ground. No attention is paid to property boundaries whatsoever... Administrative boundaries... are, however, shown in their correct positions, whether or not they lie along the visible boundaries.’<sup>27</sup>

However, the idea of a supposed obligation under the 1841 Act had emerged in 1946 in, interestingly, a discussion of recording tidelines on the large-scale resurvey then getting under way. The question of legal obligation was raised at a Director-General’s conference of officers on 16 August, and the officer to whom it was referred reported that:

‘By the Ordnance Survey Act 1841, para 1, Justices of the Peace were required to appoint meresmen to assist the Master General and Board of Ordnance in “examining, ascertaining and marking out the reputed boundaries of each County, City, Borough, Town, Parish, etc.”’

As the extracts from the Act in Appendix 1 show, there was no mention that the justices were only obliged to act thus when applied to by the Ordnance. Investigation of methods of surveying tidelines went ahead, on this misunderstanding of a legal requirement, bolstered by the extension of parochiality to low water by the Poor Law Amendment Act of 1868 and the consequent use of this mark for defining the acreages of parishes, which were being used both by local authorities and by Boundary Commissioners.<sup>28</sup>

By 1951 the doctrine of a statutory obligation on the Ordnance Survey was taking a hold. A mild form was stated in an internal manual, *Administrative boundaries in Great Britain 1951*:

‘Under the provisions of 4th & 5th Victoria Cap.XXX, usually referred to as the Ordnance Survey Act, the responsibility for ascertaining and recording public boundaries in Great Britain and the Isle of Man was placed upon the Master General and Board of Ordnance, now the Director General of the Ordnance Survey. Since then the Department has surveyed all rating and voting boundaries...’<sup>29</sup>

At the same time the Director of Establishment and Finance, F G C Bentley, wrote that

‘If any specific legal obligation had been imposed on the Ordnance Survey in this connection I am quite sure that we should have been aware of it. I th[ink,] therefore, that it can be safely assumed that our responsibility in this matter starts and finishes with the Survey Act of 1841. Section I of this Act imposes the task of completing the Survey and marking out the reputed boundaries of each county, city, borough, etc....’

Bentley’s suggestion that the point be confirmed by legal advice was not

<sup>27</sup> *A description of the Ordnance Survey large scale plans*, Chessington: Ordnance Survey, 1947, 6, 7.

<sup>28</sup> A/OLD to DG through OLS, 29 August 1946: item 0A in TNA PRO OS 1/561.

<sup>29</sup> *Administrative boundaries in Great Britain 1951*, 5: copies at British Library Maps 207.aaa.14, and TNA PRO OS 45/52 and OS 45/98.

taken up.<sup>30</sup>

The new doctrine was stated for restricted circulation in two policy papers drafted in 1951-2, and in public in the 1954 edition of *A description of the Ordnance Survey large scale plans*: ‘The Ordnance Survey is required by the Ordnance Survey Act of 1841 to ascertain and mark out public boundaries in Great Britain and the Isle of Man. Private property boundaries, as such are not surveyed or recorded by the department.’ [sic]<sup>31</sup> Yet the 1955 edition of *A description of Ordnance Survey medium scale maps* used wording similar to the 1947 large-scale *Description*.<sup>32</sup>

Thereafter the obligation under the 1841 Act was the official line, frequently repeated where both Survey staff and the public would see it, but it did not pass unquestioned in discussions of OS policy.<sup>33</sup> In May 1966 the Deputy Director, Large Scales, wrote that ‘There is a statutory obligation to provide civil parish boundaries for Great Britain at a scale of *at least* One-inch to one mile’, but this was questioned by the Director-General, Major-General A H Dowson who asked for ‘chapter and verse’ on any statutory requirements.<sup>34</sup> A subsequent investigation showed that Orders in Council and Statutory Instruments habitually required the OS to mere new boundary, but the Solicitor’s Department of the OS’s superintending ministry, Housing and Local Government, wrote bluntly ‘I find no requirement on Ordnance Survey in the Act of 1841’.<sup>35</sup> This might have been thought conclusive, but the revisers of the relevant Policy Paper instead took refuge in dubious authorities, including papers presumed to have been destroyed by enemy action in 1940, the Departmental Committee of 1892, Close’s *The early years of the Ordnance Survey* and Winterbotham’s *The National Plans*: it is unclear which passages in these works were supposed to provide support. ‘All accepted that these instructions were mandatory. No actual file records now exist.’ The eventual solution was a doctrine of ‘indirect obligation’:

‘Statutory Requirements are the duties defined by Statute and the action is prescribed, e.g. boundaries must be ascertained and marked out. Statutory Obligations are those actions which, although not prescribed, are made

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<sup>30</sup> DEF to DFS, 1 September 1951, minute 62 in TNA PRO OS 1/561.

<sup>31</sup> Draft for Policy Paper 40 (depiction of tidelines), [18 December 1951], item 7A, and final version, item 14A, in TNA PRO OS 11/46; Draft for Policy Paper 41, Note on boundaries, by RHD, November 1951, item 7A in TNA PRO OS 11/47; *A description of the Ordnance Survey large scale plans*, Chessington: Ordnance Survey, 1954, 7.

<sup>32</sup> *A description of Ordnance Survey medium scale maps*, Chessington: Ordnance Survey, 1955, 7.

<sup>33</sup> These discussions took place in ‘Policy Paper’ files, now in TNA PRO class OS 11. Under the ‘thirty year rule’ most of these files only became available from the late 1990s onwards, which explains their apparent neglect in earlier writings. For a brief discussion of the policy paper system see W A Seymour (ed), *A history of the Ordnance Survey*, Folkestone: Dawson, 1980, 299.

<sup>34</sup> DDLs to DMP, pp DG to DDSS (as DMP), and extract from DG’s Conference 483, 2 and 17 May 1966, minutes 94, 96 and 97 in TNA PRO OS 11/47.

<sup>35</sup> Draft of Policy Paper 41: Annexure II [June 1966]: item 99A in TNA PRO OS 11/47; Lewis, MHLG Solicitor’s Department, to Walmesley White, 7 August 1967: item 9A in OS 11/48.

necessary by the requirement, e.g. an Ordnance Map is prescribed in certain statutes or orders as being necessary. The boundaries on this must be shown at that scale – hence the indirect obligation.’<sup>36</sup>

None of this affected public pronouncements, which enunciated an uncomplicated obligation: these included the *Descriptive manual* of 1975, the report of the Serpell review committee in 1979, and a manual of boundary-making that was perhaps more remarkable for erudition than sustained interest.<sup>37</sup> And it duly appeared in 1988 in an article in *OS News* that was reprinted in *Sheetlines*, which drew forth a brief note from the present writer. After that the claim of an obligation disappeared as markedly as it had arisen nearly forty years earlier.<sup>38</sup> In the popular history of the OS issued in 1992 the section on the Survey Act is admirably objective.<sup>39</sup>

Thus the myth that there is any obligation under the 1841 Act for the Ordnance Survey to survey boundaries is seen to be a comparatively recent development, sanctioned neither by attention to the wording of the Act, nor by the history of the Survey in the first century after the Act’s passage. It is possible that the mistaken belief in such an obligation accounts for the obligation in two statutory instruments, of 1976 and 1977, whereby the OS is required to mere boundary created by those instruments: a department for which there is no statutory provision or founding charter is obliged to record isolated lengths of boundary!<sup>40</sup>

Although there appears to have been no legislation conferring formal legal recognition on Ordnance Survey depiction of boundaries, two judgements, in 1939 and 1957, ruled that what was shown on an OS map was *prima facie* evidence of existence on the ground. Although both judgements concerned the limits of landed property, the principle was extended to the depiction of administrative boundaries.<sup>41</sup>

<sup>36</sup> Draft Policy Paper 41 and DDLS to DMP, 24 November 1967, item 9B and minute 11 in TNA PRO OS 11/48. The 1892 Committee is *Report of the Departmental Committee appointed by the Board of Agriculture to inquire into the present condition of the Ordnance Survey...*, BPP (HC) 1893-94 [C.6895], LXXII, 305, and Close’s work is Sir Charles Close, *The early years of the Ordnance Survey*, Chatham: Royal Engineers, 1926.

<sup>37</sup> ‘Boundaries (1)’, handout for draughtsman training DH 10, n.d., [?1970]: copy in writer’s possession; J B Harley, *Ordnance Survey maps: a descriptive manual*, Southampton: Ordnance Survey (1975), 38 [an astounding statement, perhaps the result of OS ‘vetting’]; *Report of the Ordnance Survey Review Committee*, London: HMSO, 1979, 68; J R S Booth, *Public boundaries and Ordnance Survey 1840 – 1980*, [Southampton: Ordnance Survey], 1980, 2, 10.

<sup>38</sup> Simmonds, ‘Boundaries: some recent developments ...’; Oliver, ‘The Ordnance Survey Act, 1841’. The writer’s recollection is that he communicated directly with OS on the point, but he cannot find any trace of this in his files.

<sup>39</sup> Tim Owen and Elaine Pilbeam, *Ordnance Survey, map makers to Britain since 1791*, London: HMSO, and Southampton: Ordnance Survey (1992), 39.

<sup>40</sup> SI 1976/246 [regulation 6], SI 1977/8 (S.1) [regulation 3].

<sup>41</sup> The two cases which established this were *Fisher v. Winch*, 1939, 2 All ER 144 (Ct of Appeal 1939 1 KB 666), and *Davey v. Harrow Corporation*, 1957, 2 All ER 305. See also Harley, *Ordnance Survey maps: a descriptive manual*, 39.

### ***The adoption of 'ordinary' tides***

The quotation above from the 1947 *Description* demonstrates a long-standing Ordnance Survey policy of confining itself to recording physical facts: administrative boundaries, at any rate when not having the limited visibility of permanent posts or stones, were a special exception to this. Colby's instruction of 1825 to record everything attached to the ground was extended in spirit to northern England in the 1840s to include every possible public boundary. Parishes were often divided into townships (sometimes called hamlets), and these in turn might be further divided.<sup>42</sup> The recording of these divisions of townships was abandoned in 1854.<sup>43</sup> (In Scotland there were no divisions of parishes.) Whatever their status, both in Ireland and at first in Britain boundaries were only shown above high water mark. By the early 1850s parish and hundred, but not township, boundaries extending across the foreshore were being shown on the six-inch mapping of Yorkshire; this may possibly reflect a provision in an Act of 1832 determining boundaries for Parliamentary purposes, that 'the sea' should be determined by 'the Low-water Mark'.<sup>44</sup> It is unclear how high and low water marks were defined on the one-inch mapping surveyed before 1841, or on the Irish six-inch townland survey. On the earliest six-inch mapping of Britain, of Lancashire, the treatment of tidelines varies. Low water mark is invariably not described: high water mark is occasionally not described, or described as 'ordinary', and on some sheets both 'ordinary' and spring high water marks are described, but by the late 1840s in Britain high and low water of 'ordinary spring tides' were being recorded. The 'springs' were presumably adopted on the grounds that they represented normal physical limits: already in Ireland 'Liable to Floods' had appeared, implying exceptional inundation, and no doubt the survey of high water springs was facilitated by indications such as the extent of vegetation. Tides were an awkward exception to the general OS tendency to present a static, frozen, view: the adoption of springs was perhaps seen as making the best of a bad job. In Scotland spring tidelines were recognised by ancient custom as indicating property rights.

The change in OS usage from spring to 'ordinary' tides in England and Wales came in 1868. On the face of it, it is not entirely clear what occasioned this. A straightforward answer might be that it was a consequence of the Poor Law Amendment Act of that year, which included a provision for 'parochialising' the foreshore.<sup>45</sup> If so, the OS's reaction was a strange, even perverse one: it changed its definition of high and low water mark, but it did not extend the boundaries

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<sup>42</sup> Note that 'hamlet' has a precise meaning, distinct from the more recent popular use of it for a small settlement. An analogous corruption of a precise term is 'main road', which has a precise meaning under the Highways and Locomotives (Amendment) Act, 1878 41 & 42 Vict., ch.77, s.13.

<sup>43</sup> Winterbotham, *The national plans*, 97. I know of no other record of this decision – other than, of course, the evidence of the published maps: divisions of townships appear throughout Lancashire and Yorkshire, and in the north-east and south-east parts of Durham.

<sup>44</sup> See, for example, Yorkshire sheet 238A. Act 2 & 3 William IV, s.36(10).

<sup>45</sup> Poor Law Amendment Act, 31 & 31 Vict., C.122, s.27.

across the foreshore. Neither this Act nor the Territorial Waters Jurisdiction Act, 1878, defined what ‘low water mark’ might be.<sup>46</sup> Setting aside the difficulty that the boundaries across the foreshore were not mapped, the decision to adopt ‘ordinary’ high and low water, which in fact was based on property, as discussed below, would seem to be accounted for the practical purpose behind the ‘parochialising’ the foreshore, of bringing all landed property within the scope of rating. An argument used around 1862-3 for the resurvey of southern Britain at 1:2500 was the potential use of such mapping in local rating valuation work, though in 1888 Wilson complained that in practice little such use was actually made of the maps.<sup>47</sup> At first after 1868 low water mark was not annotated as ‘ordinary’, unlike high water: evidently it was assumed, and it was only after 1878 that an explicit description of ‘ordinary’ was added.

Parish boundaries were only comprehensively extended across the foreshore after 1878. Shortly after becoming Director in August 1878 Cooke convened a committee of officers to consider boundaries: one result of their deliberations was the adoption of ‘civil parishes’ in place of ecclesiastical or mother parishes and townships and the discontinuing of mapping hundred boundaries, and another was the extension of boundaries across the foreshore. The decision to adopt civil parishes and omit hundred boundaries has hitherto been attributed to a Treasury decision, but reference was only made to the Treasury by the Office of Works, which had departmental responsibility for the Survey, for reasons of uncertainty of jurisdiction. No such reference is recorded for defining the foreshore.<sup>48</sup>

The definition of foreshore that was used in England and Wales from 1868 onwards, being adopted for purposes of property, was based on a definition of the foreshore from a property point of view by Lord Chief Justice Cranworth in 1854, in the case *Attorney-General v. Chambers*. This case concerned mineral rights under the foreshore near Llanelli, in south Wales. The judgement was influenced by the opinion of the seventeenth century jurist, Sir Matthew Hale, and was to the effect that the limits of the foreshore, and therefore of Crown interest, were the average of tides, on the basis that the areas above the average high and low water marks were respectively covered or exposed less often than those lying between the two averages.<sup>49</sup> As the limit of property represented the limit of rateable land, it was no doubt logical in 1868 to use the property principle to determine the limit of rateable areas.

<sup>46</sup> Territorial Waters Jurisdiction Act, 1878, 41 & 42 Vict. C.73, s.7, where there is reference to ‘any part of the open sea within one marine league of the coast measured from low-water mark’.

<sup>47</sup> An example of arguing for parochial assessment use is in James to Verney, 13 March 1862, in group 4263 in file 17170 in TNA PRO T1/6451B; *Report... Ordnance Survey... 1888*, BPP (HC) 1889 [c.5659], LX, 911, p.6.

<sup>48</sup> For the Committee: Winterbotham, *The national plans*, 53. For the civil parishes and hundreds see TNA PRO OS 1/9/3 and T1/15938, especial Noel to Works, 22 March 1879. For a straightforward attribution to the Treasury see Booth, *Public boundaries*, 355.

<sup>49</sup> *AG v. Chambers* 1854, 4 De G M & G 206, 43 Eng. Rep. 486 (1854): this can be ‘translated’ as *The English Reports, XLIII, Chancery XXII containing De Gex, MacNaughten & Gordon, Volumes 3 to 6*, Edinburgh: Blackwood and London: Stevens, 1904, 486-90.

Therefore, the definition of the foreshore in terms of property rather than physically was an exception to the usual OS practice of ignoring property boundaries. It could only be defended on the basis of the mapping having a

cadastral function, and though the Ordnance Survey Act of 1841 provided that nothing done under it should affect property rights or claims, nonetheless the determining of 'ordinary' tidelines had the effect of defining the limits of crown and non-crown property and rights. From the point of view of many map users it was inconvenient, as a line of 'ordinary', 'medium' or 'mean' tides is often hard to identify on the ground, and even on a markedly sloping beach there may be a considerable difference in the position of neap and spring lines. (See figures 1 to 5, showing Spurn Head in Yorkshire.) The new definition was used for all new survey work after 1868, and for revising pre-1868 surveys when national revision began in 1891. The resulting inconsistency seriously devalued Ordnance Survey evidence to the Royal Commission on Coast

Erosion of 1906-9.<sup>50</sup> It is unfortunate from the point of view of both the continuity of the physical record and the principle of recording what is physically evident on the ground that the OS did not continue to record spring tidelines, and treat the 'ordinary', 'mean' or 'medium' line as, in effect, an invisible boundary but, given funding constraints, unsurprising.

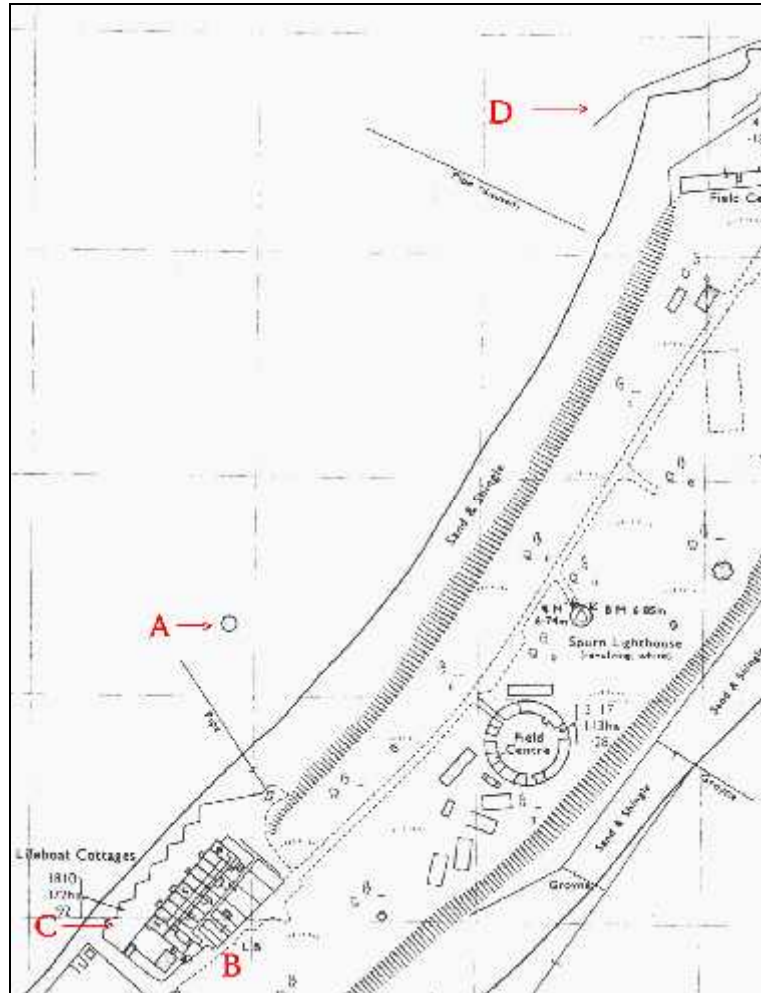


Figure 1. Extract from 1:2500 sheet TA 4011/4111, surveyed November 1970, published 1971, showing lighthouses at Spurn Head, East Riding of Yorkshire. Annotations refer to figures 2 to 4: 'A' is the former low lighthouse, built in 1852. The Lifeboat Cottages were demolished in 1975

<sup>50</sup> *Royal Commission on Coast Erosion – Volume I (Part II) – Minutes of evidence...*, BPP (HC) 1907 [Cd.3684], XXIV, 7: R C Hellard's evidence, qq 981-1313, 8097-8255, and appendices, 88-95.

***Appendix 1 : Extracts from Ordnance Survey Act, 4 & 5 Victoria, cap. 30***

I – ‘Whereas several Counties in that Part of Great Britain called *England* have been surveyed by Officers appointed by the Master General and Board of Ordnance, and it is expedient that general Surveys and Maps of *England, Scotland, Berwick upon Tweed*, and of the *Isle of Man*, should be made and completed by Officers in like Manner appointed; and that the Boundaries of the several counties in *England* and *Scotland*, and of *Berwick upon Tweed* and of the *Isle of Man*, should be ascertained and marked out: Be it therefore enacted... That from and after the passing of this Act, for the Purpose of enabling the Master General and Board of Ordnance to make and complete such Surveys and Maps of *England, Scotland, Berwick upon Tweed*, and the *Isle of Man*, in manner aforesaid, it shall and may be lawful for the Justices assembled at any Quarter Sessions ... upon the Application in Writing of any Officer appointed by the Master General and Board of Ordnance for the Purposes of this Act ... to nominate and appoint One or more fit and proper Person or Persons to aid and assist, when required, any Officer appointed as aforesaid in examining, ascertaining, and marking out the reputed Boundaries of each County, City, Borough, Town, Parish, Burghs Royal, Parliamentary Burghs, Burghs of Regality and Barony, extra-parochial and other Places, Districts, and Divisions, in *England, Scotland, Berwick upon Tweed*, and the *Isle of Man*; and such Person shall from Time to Time act under and obey such Directions as he shall receive from the Officer or other Person appointed by the Master General and Board of Ordnance to make such Surveys and Maps as aforesaid...’

II – ‘...for the Execution of the Purposes of this Act it shall and may be lawful for... any Officer or Person appointed by or acting under the Orders of the Master General and Board of Ordnance... to enter into and upon any Estate or Property of any County, or of any Body Politic or Corporate, Ecclesiastical or Civil, and into and upon any Land, Ground, or Heritages of any Person or Persons whomsoever, for the Purpose of making and carrying on any Survey authorized by this Act, or by the Order of the Master General and Board of Ordnance, and for the purpose of fixing any Mark or Object to be used in the Survey, or any Post, Stone, or Boundary Mark whatsoever...’

XII – ‘... this present Act, or any Clause, Matter or Thing herein contained, shall not extend, or be deemed or be construed to extend, to ascertain, define, alter, enlarge, increase, or in any way to affect, any Boundary or Boundaries of any County, City, Borough, Town, Parish, Burghs Royal, Parliamentary Burghs, Burghs of Regality and Barony, extra-parochial and other Places, Districts, and Divisions, by whatsoever Denomination the same shall be respectively known or called, nor the Boundary or Boundaries of any Land or Property, with relation to any Owner or Owners, or Claimant or Claimants of any such Land respectively, nor to affect the Title of any such Owner or Owners, or Claimant or Claimants respectively, in or to or with respect to any such Lands or Property, but that all Right and Title of any Owner or Claimant of any Land or Property whatever within any Hundred, Parish, or other Division or Place whatever, shall remain to all Intents and Purposes in like State and Condition as if this Act had not been passed...’



**Appendix 2 : Tidelines in Lancashire, surveyed 1842-8**

High Water Springs only: sheets 6, 11, 13, 16, 84 (upper limit on River Douglas), 90, 105

High Water Springs with also some indication of 'Ordinary' High Water Mark: sheets 12, 15, 17, 21, 22, 27, 28, 30 (upper limit on River Lune is of 'ordinary' tide), 34, 38, 39, 43, 60, 113, 114 (Springs on Cheshire side only), 115 (Springs on Lancashire side only), 118 (ditto)

High Water Springs with also some indication of 'Ordinary' High Water Mark in part, undescribed in part: sheets 67 (undescribed on north side), 68 (ditto), 75

High Water Springs in part, unspecified High Water in part: sheet 18 (Springs in Westmorland)

Ordinary High Water in part, not specified elsewhere: sheets 29, 33

Ordinary High Water only: sheets 61, 99, 117

Not specified: sheets 24, 37, 42, 44, 50, 51, 58, 59, 74, 82, 98, 116



*Figure 2. Looking from south of point 'B' on Figure 1 northwards, at equinocal High Water Springs on 24 September 1991. Observe tide-line at point 'D'. [© Richard Oliver: R.95/17A]*



*Figure 3. Looking north from point 'C' on Figure 1, at neap tide, 13.30 GMT on 22 July 1995. Observe tide-line at point 'D'. [© Richard Oliver: R.136/17A]*





Figure 4. Beach at Spurn, looking north from about TA 398106, 14.11 GMT on 22 July 1995, with darker sand indicating high water neap tide. 'E' may indicate High Water Springs. [© Richard Oliver: R.136/21A]



Figure 5. Looking north from point 'C' on Figure 1, at low tide, 14.40 GMT on 22 July 1995. Observe tide-line at point 'D', and evidence of high water springs at 'F' [© Richard Oliver: R.137/1A]

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New member John Harmer is organising a map exhibition at Bexhill library in early September, possibly with out-of-hours viewing for CCS members. Anyone interested in visiting should contact John on 01424 773998 or [john@harmerfamily.plus.com](mailto:john@harmerfamily.plus.com)

Next year's AGM will be held in Lincoln on Saturday 12 May 2012.