“The Isle of Lewis survey reconsidered”

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The Isle of Lewis survey reconsidered

John Moore

“Carried on to an extent which I consider perfectly unjustifiable”. Although commenting specifically on contouring, this criticism by Henry James, Superintendent of the Ordnance Survey has a relevance to the whole question of the Lewis survey, a rather exceptional episode in the history of Ordnance mapping in Scotland. 1 John Hall Maxwell, Secretary to the Highland and Agricultural Society of Scotland viewed it as ‘a still greater mistake’ than re-commencing the survey of Scotland in Wigtownshire, when giving evidence to a parliamentary committee five years earlier. 2 This particular survey has been considered elsewhere but both studies form only part of a wider discussion. 3 Despite an element of letting sleeping dogs lie with this singular undertaking, scrutiny of the available contemporary evidence suggests that a more detailed investigation is justifiable.

On 24 September 1843, James Stewart-Mackenzie died and, the following year, the Seaforth connection with Lewis ended when the island was sold to James Matheson, Member of Parliament and founding partner in Jardine, Matheson and Company, which was to become the largest British firm trading in Asia. Entering into possession of his new property on Whitsunday (26 May) 1844, Matheson was a man with deep pockets and big improvement ideas, including constructing new houses, upgrading harbour facilities, road and maritime communications, and, most importantly, developing Lewis’s agricultural capacity. At that time, only about 10,000 of the island’s over 417,000 acres were arable. With this in mind, Matheson wrote to fellow Scot, Sir George Murray, Master General of the Ordnance in September 1845, seeking to have Lewis surveyed out of sequence at his expense. 4 Five years earlier, in April 1840, Sir George Mackenzie had raised the possibility of such a survey for the county of Ross to be funded by subscriptions from the local gentry. In his application, he stated: “The nature of the county, nine-tenths of it being open, will not cause too much labour as counties more extensively cultivated, but with the view to improvements of various kinds, the map will be of the utmost service.” 5

This attempt failed but Mackenzie re-applied in 1845 on Matheson’s behalf and the latter’s letter to Murray appears to have set the ball rolling on an event which was to prove that Mackenzie’s comment on the effort required was overly optimistic. Treasury agreement was reached with Matheson that he would meet some portion of the additional expense to defray the cost and, although claiming to be ‘staggered’ by the amount required, he offered to contribute £1200 and purchase 100 copies of the engraved map. 6 A proviso was made

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1 Reply by Lt.-Col. Henry James, 10 April 1856. Report from the Select Committee on Ordnance Survey of Scotland. HC Paper 1856 (198) XIV. 361. p.71
2 Report from the Select Committee on Ordnance Survey (Scotland). HC Paper 1851 (519) X. 359. p.68
5 Ordnance Maps. Correspondence respecting the Scale for the Ordnance Survey, and upon Contouring and Hill Delineation. HC Paper 1854 (1831) XLI. 187. pp.1-2
6 TNA. T1/5175/15250. Letter dated 19 June 1846. In 1884, William Mackay, Chamberlain of Lewis
whereby ‘the first moiety’ of his subvention would be paid on receipt of the first engraved sheet. Events were to prove that he would have a long wait. The need for agricultural improvement was soon brought into sharp focus by a famine resulting from the first of a series of potato crop failures on the island in 1846, which Matheson met by laying out considerable sums on oatmeal to support his tenants. With this as a backdrop to the survey, an expeditious approach might have been considered essential to Matheson’s needs.

Mapping such a remote and isolated part of the British Isles was always going to face problems in terms of communication both within the island and, possibly more importantly, with the Board of Ordnance itself. One of Matheson’s major financial commitments was towards improving the island’s roads and bridges, underlining one of the complications met in negotiating an all-too-underdeveloped terrain. Combined with this, there was, inevitably, a challenge in the more remote areas where Gaelic was the only language spoken. Fortunately, one of the labourers attached to the survey party was John Morrison, a Stornoway man whose name appears as an accepted authority in 62 of the OS Name Books for Lewis. His contribution was particularly valuable in cases where residents were unable to spell. It should also be remembered that the Sabbath was, and still is, strictly observed in many parts of Lewis. The survey of Rona exemplifies some of the problems faced by the Sappers engaged in the mapping. Originally, it was intended that a party of ten civilian labourers under Corporal Michael Hayes would accompany Sergeant James Steel and his team to the island. Steel was engaged in taking observations to complete the determination of stations for the national trigonometrical survey and the party embarked in late August 1850. Unfortunately, turbulent seas left Hayes and his men stranded on the island with few supplies and little shelter for a week before a returning vessel was able to land.⁷

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Surveying had begun on Lewis in July 1847 and appears to have been completed by August 1852. However, by June 1850, there was already concern about the length of time being taken. Colonel Lewis Hall, Superintendent of the Survey at this date, was asked by the Board of Ordnance for a statement as to its progress and the likely date of completion.\textsuperscript{8} One year earlier, he had reported that only three Lewis sheets were at the engraving stage.\textsuperscript{9} As Oliver has observed, ‘Hall had the disadvantage of knowing nothing about the detailed working of the Ordnance Survey. He was as complete an outsider as it was possible to be’ and, in truth, he had inherited the decision to proceed with this survey when he took up his post in April 1847.\textsuperscript{10} In evidence to the 1856 Select Committee, James, Hall’s successor highlighted that the mapping of Lewis was undertaken under extremely difficult circumstances, particularly mentioning that the party sent there had not been previously instructed. This resulted in the whole training cost being added to the overall expenditure of the work itself.

The Royal Engineer officer in charge on Lewis, Richard Burnaby had received his commission in 1839 but served in Canada between 1841 and 1846. His involvement in home survey only began in January 1847. Nonetheless, his senior NCO, Sergeant Robert Barlow, was fresh from working in Kirkcudbrightshire while the average age of the other non-commissioned officers, as recorded in the 1851 census, was just over 30, suggesting a degree of experience in the field. Additionally, Ireland was the recorded birthplace for 46 (46.9\%) of the 98 names listed as working for the Ordnance Survey in the Lewis census returns and it is assumed that these men would have brought a level of skill and practical expertise with them.

It is when the Name Books for the island are investigated that a degree of complete impracticality in relation to the task in hand can be discerned. Lewis consists of four parishes - Barvas, Lochs, Stornoway and Uig - while the mainland area of Ross and Cromarty is made up of twenty-seven parishes. These are covered in fifty-one volumes. In contrast, the Lewis Name Books run to an astounding 136, with two volumes weighing in at 475 and 346 pages and a seemingly limitless number of small rocky or heathy hills identified. Putting this in some sort of perspective, the county of Argyllshire is covered in 81 books and Lanarkshire by a mere 59 volumes. The level of detail can be seen on the maps themselves; for example on sheet 17 (figure 1), where the naming of coastal features around Camus Bhòstaìdh seems to have gone into overdrive. This is replicated in the recording of what appears as an excessive number of bench marks running west of Loch Raonasgail on sheet 29 (figure 2) and a string of spot heights, often with less than ten feet between them, on the southern flank of Stacashal on sheet 19 (figure 3).

\textsuperscript{8} TNA. WO55/963. Letter dated 10 June 1850
\textsuperscript{9} Second Report from the Select Committee on Army and Ordnance Expenditure. HC Paper 1849 (499) IX. 5. p.463
\textsuperscript{10} Oliver op. cit. p.154. Hall’s replies to the 1849 Committee questions do suggest a lack of command of the details and reliance on the experience of other officers, particularly William Yolland. According to Hall, the expenditure on Lewis until June 1849 had been £6,500
Figure 1: Island of Lewis, Sheet 17 (extract), published 1854 (NLS)

Figure 2: Island of Lewis, Sheet 29 (NLS)

Figure 3: Island of Lewis, Sheet 19 (NLS)
With the exception of sheet 20, which covers Lewis Castle and Stornoway, Burnaby himself is credited with the contouring on all the engraved Lewis sheets and it was this aspect which warranted James’s particular censure. However, while he considered the money incurred there as unjustifiable, James did agree that the introduction of the six-inch scale was the best for the Scottish Highlands. There were weighty opinions to the contrary. On the same day that he gave evidence, he was followed by no less a person than Sir Roderick Impey Murchison, Director-General of the Geological Survey and a Ross-shire man himself, who stated that, ‘for all purposes of a military, engineering, or geological nature, a map on a one-inch scale...is fully adequate for the Highlands and Islands of Scotland’. Citing the particular illustration of Lewis, Murchison continued by asserting that maps of ‘wild and undivided tracts’ on the six-inch scale would be of little use to proprietors who were likely to find them cumbersome and comparatively useless. In his view, he considered that the one-inch map of Lewis exhibited to the Committee served as an example ‘where every object which the proprietor could have desired would have been attained’ if it alone had been published. As it was, the dating of the six-inch sheets shows that only 11 were published between 1851 and 1852 whereas nearly half (24) were not issued until 1854-55. The engraving of the one-inch map only began in February 1852 and the eventual date of completion was given as 1859, at an estimated cost of £1190, which would have come in a little under the subvention originally offered by Matheson.

As James pointed out in 1855, ‘fifteen months elapsed between … April 1853, and … July 1854, before orders were given to draw the plans upon any scale’, the repeated changes, or in effect absence, of orders causing a considerable loss of time and money. In 1850, Matheson’s improvement scheme was suspended and, soon after, was given up completely. Although Matheson spent eight or nine months each year on Lewis, nowhere in the literature does there appear to be any mention of him or his Chamberlain, John Munro Mackenzie showing concern about the time being taken or, indeed, the suitability of the six-inch scale for the improvement scheme. Mackenzie’s diary for 1851 includes several references to his visits to the Survey office to examine plans, as well as meetings with Burnaby, but his one concern seems to have been more about the length of time Burnaby would be resident before his cottage could be released to Rev William MacRae, a local minister.

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11 Report from the Select Committee on Ordnance Survey of Scotland op. cit. p.76-77. It should be noted that Murchison, like others, was to experience a change of mind subsequently
12 The seven sheets of the first edition one-inch map covering Lewis are all dated as published in July 1858. However, the sheets complete with hill shading did not appear until December 1860 to August 1864, with sheet 98 only coming out in May 1886
Burnaby mixed socially with Matheson; both their wives had been born in Canada. When the foundation stone of Lews Castle was laid in November 1847, Burnaby was among those depicted in the painting (left) commissioned to commemorate the event. Subsequently, he dined at the castle when Sir John McNeill was a guest, travelled with the Mathesons to Oban and Glasgow in May 1851 and, when a public dinner was held for Matheson in January 1852, Mackenzie proposed the health of both Burnaby and the surveying party, testifying to their good conduct.

It is difficult not to sense that a greater degree of familiarity than was usual grew up between the leading figures in Stornoway society and the surveyors when it is realised that three separate private commissions were produced by them outwith their six-inch survey work. These were a plan of the Lewis-Harris boundary detailing the march line for a legal process, an 1850 manuscript map of the Lewis demesne drawn by William Ogburn, listed as an OS draughtsman, and a map of North Rona prepared to accompany Burnaby’s description in support of Matheson’s offer of the island to the government as a potential penal colony in 1852. Certainly, Burnaby’s later career does not seem to have been adversely affected by what happened on Lewis. He was later stationed at Manchester, Portsmouth and Aldershot, retiring in 1881 with the rank of Major-General. Two questions remain: did Matheson ever get his 100 copies of the 49 Lewis six-inch sheets (or even the seven one-inch maps) and where are they now?

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16 At least another six of the survey party were enrolled as members of the Stornoway masonic lodge between 1848 and 1849 and three more are identified in the subsequent painting. See George Clavey, A History of Lodge Fortrose No.108 Stornoway. Stornoway, 1992, p.69
17 Inverness Courier and General Advertiser for the Counties of Inverness, Ross, Moray, Nairn, Cromarty, Sutherland and Caithness, no.1788, 19 February 1852, p.3, col.4
18 National Records of Scotland. RHP24963; Stornoway Public Library. Plan of the Lews or Lewis Demesne; Royal Geographical Society. mr Scotland S/S.25