



CAIRT

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Newsletter of the Scottish Maps Forum

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Scottish Maps Forum

The Forum was initiated by the National Library of Scotland in 2002:

- To encourage multi-disciplinary map use, study and research, particularly relating to Scottish maps and mapmakers
- To disseminate information on Scottish maps and map collections
- To record information on maps and mapmaking, particularly in a Scottish context
- To liaise with other groups and individuals with map related interests
- To build on, and to continue, the work of Project Pont

Cairt

The newsletter is issued twice a year. "Cairt" is Gaelic and 17th century Scots for map.

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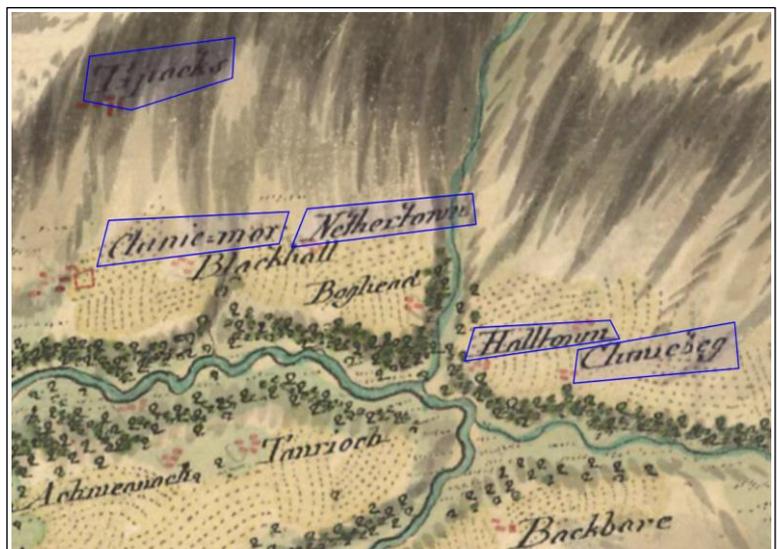
New online resources at maps.nls.uk

In the last six months, the most useful new Scottish resources on the NLS maps website have been through the work of volunteers. Thanks to their work, we now have a fully searchable gazetteer of all 33,523 placenames on the Roy [Military Survey Map of Scotland](#) (1747-55) - the most important and detailed map covering all of mainland Scotland in the 18th century.

Another map transcription project has created the most detailed ever historical gazetteer of Edinburgh - with all text transcribed from [Ordnance Survey 25 inch to the mile maps of Edinburgh](#) in the 1890s.

Meanwhile you can view over 120,000 [footpaths](#), extending over 38,000 miles, traced from Ordnance Survey 1900s mapping of Scotland.

On other fronts, the NLS has also upgraded and enhanced their popular georeferenced maps viewers and improved their display on mobile phones. New online maps include the [Special Emergency Edition](#) (1938-39), a rapid revision of the Ordnance Survey's Six-Inch to the mile maps for Air Raid Precaution purposes. Also online are just over 6,000 [air photo mosaics](#) of parts of England and Wales published by Ordnance Survey in the later 1940s. They cover 20% of the British landscape at 1:10,560 scale, showing useful information about fields, farms, roads, railways and woodland, and sixteen towns/cities in England and Wales at 1:1,250 scale, with excellent detail of urban topography including buildings and industrial premises.



Place-names highlighted in the Roy Gazetteer.

James Forbes Beattie (1804-77): village planning in Aberdeenshire, 1859 and 1873

Douglas Lockhart discusses plans of Kemnay and Sandhaven.

Recent issues of *Cairt* have featured land surveyors whose plans are in the FA Macdonald Collection [MS 3860] in the Special Collections Centre at the University of Aberdeen: Alexander Smith [issue 35]; Alexander Adam [39] and John Hepburn [40]. While the work of more than forty surveyors in north-east Scotland is represented in the collection, the largest number of plans are by David Walker (1793-1844) and James Forbes Beattie.¹ Ongoing research on Beattie has revealed a varied career and this article focusses on his role in village planning.

Beattie was born in Inch (Aberdeenshire). His father Dr Peter Beattie was the local doctor and tenant of Dunnideer farm. James was apprenticed to David Walker and became his partner in 1825 on completion of his apprenticeship. Meanwhile in 1821 Walker had moved his surveying business from the family farm at Wester Fintray, near Kintore, to Aberdeen. When judged by their surviving plan output, which is mainly of farms and estates, the partnership was the most prolific in the region during the late 1820s and 1830s.² In 1839, at a time when there were many land surveyors competing for work,³ James Beattie sold his farm stock and emigrated with his wife, arriving in Sydney, New South Wales in December. Before departing it was announced that he would manage the assets of the North British Australasian Loan and Investment Company which drew investors from the Aberdeen area.⁴ Alexander Jopp (1804-70) Beattie's cousin, together with Robert Shand, were the company's law agents in Aberdeen. In addition, Beattie was involved in stock breeding and sheep farming at Lochinvar, near Maitland, 110 miles from Sydney, and at other locations in New South Wales and Queensland.⁵ He was also active in the export of wool and tallow and in 1844 began trading copper ore mined on the island of Kawau near Auckland, New Zealand.⁶ The copper mining venture met with limited success, and coupled with news of David Walker's death in May 1844, might have persuaded him to return along with his wife and

three children to Aberdeen where he recommenced land surveying in autumn 1845.⁷

Much of his business was concerned with implementing agricultural improvement: drainage; new dykes; estate roads; cottages; and farm buildings. The evidence from contemporary newspapers, however, indicates that Beattie enjoyed a greater variety of work, drawn from a wider hinterland than his contemporaries. This included plans for the division of commonties, feuing schemes for housing in Aberdeen and rural Aberdeenshire, and landscaping the policies of country houses. His design of the Balmoral Castle grounds for Queen Victoria and Prince Albert, which was underway in summer 1860, was the perfect advertisement for this branch of his business.⁸ He had strong links to local and national government: new cemeteries; assistant commissioner under the Public Money Drainage Act (1846); arbiter in the assessment of property under the Lands Valuation (Scotland) Act (1854). Beattie's interests also extended beyond purely rural affairs, he was a managing director of the North of Scotland Bank, the Gas Light Company of Aberdeen and local surveyor for the Standard Investment and Building Society. His social life reflected an extensive circle of business associates, glimpses of which can be seen in a toast to the tenantry at the dinner to mark the marriage of Major HK Erskine of Pittodrie (1851), one of his clients. Another significant occasion was his attendance at the dinner at Balmoral for the tenantry of the Royal estates which celebrated the marriage of Victoria, Princess Royal (1858).⁹ Although joined in the business by his son, James Alexander Beattie (1846-1914), in the early 1870s, he continued working and died suddenly on 10 January 1877 while surveying at Ecclesgreig near St Cyrus (Kincardineshire).¹⁰ His death was reported in newspapers throughout Britain when his work at Balmoral was highlighted.¹¹

¹ In addition, many plans are held by NRS; NLS has three plans, two of which were surveyed by Messrs JF Beattie & Son.

² *Aberdeen Journal*, 6 June 1821 p.3 col.1; 14 July 1875 p.6 col.5.

³ NRS Seafield Papers GD248/3382/10/10/1 Letter, Alexander Duncan to Earl of Seafield: Banff, 7 August 1843.

⁴ *Ibid* 30 January 1839 p.2 col.7; 17 April 1839 p.2 col.3; *New South Wales Government Gazette*, 4 June 1840 p.542.

⁵ *Sydney Herald*, 26 August 1841 p.3 col.6; *Sydney Morning Herald*, 20 August 1842 p.1 col.5; 23 May 1843 p.1 col.6; *Maitland Mercury*, 1 April 1843 p.3 col.4.

⁶ *Sydney Morning Herald*, 31 May 1844 p.2 col.1; 31 December 1844 p.2 col.1; 13 January 1845 p.2 col.1; *Shipping Gazette*, 22 June 1844 p.99 col.1.

⁷ *Daily Southern Cross*, 16 November 1844 p.1 col.4; 24 July 1849 p.3; *New Zealand Herald*, 7 April 1928 p.13; *Sydney Morning Herald*, 12 March 1845 p.3 col.2; 13 March 1845 p.2 col.1; *Aberdeen Journal*, 15 October 1845 p.2 col.5.

⁸ *The Scotsman*, 16 August 1860 p.2 col.4.

⁹ *Aberdeen Journal*, 14 June 1851 p.3 col.6; 27 January 1858 p.5 col.1.

¹⁰ *Ibid* 8 May 1872 p.6 col.3; 11 January 1877 p.3 col.3; *Aberdeen Free Press*, 11 January 1877 p.3 col.1.

¹¹ for example, *South Wales Daily News*, 15 January 1877 p.8 col.4.

An obituary in the *Aberdeen Free Press* paid tribute to his knowledge of eastern Scotland: His “range” extended, more or less from Caithness ... [to] ... Fifeshire; but of course, his immediate business connection lay with Aberdeenshire, Banffshire, and Kincardineshire. Of these three counties his topographical knowledge was something really wonderful – so complete and accurate was it, down even to the minutest details’.¹²

Case studies

Two plans by Beattie have been chosen to illustrate village design work: Kemnay on Donside and Sandhaven on the north coast of Buchan. The former was subsequently highly successful, the latter less so.

The arrival of railways in rural Aberdeenshire presented opportunities for landowners to feu building plots near stations and create new communities (Rothney, adjacent Insch Station; Maud).¹³ The opening of the Alford Valley Railway in March 1859 was followed two months later by advertisements for building ground at Kemnay.

Kemnay was a typical kirktown consisting of the parish church and manse; Kirkstyle farm, a smithy, school and three cottages.¹⁴ In June, Alexander Burnett of Kemnay offered sites for villas close to the Kintore and Alford turnpike and the railway station.¹⁵ Another consequence of the arrival of the railway was the expansion of a granite quarry near Kemnay with the growing village providing a ready market for building stone. Next was a visit by Beattie in September 1859 to survey the ground and advise on a feuing strategy which was advertised in the local press in January 1860 (See **Figs 1 and 2**). The new village became a desirable place to live. In 1875 Alexander Smith reported that twenty-five houses had already been built while the Rev. John Davidson of Inverurie writing in 1888 described it as: ‘... a bright grey village radiating from an ornate railway station in lines of busy shops (which serve clusters of small villa cottages) ...’.¹⁶ By the 1901 Census the population had grown to 986.

The construction of new harbours and the extension of existing facilities was another major stimulus for housing development. Landed investment was



Fig. 1. Kemnay Village Design for Feuing, September 1859 by James Forbes Beattie. AUL MS 3860/12251.

¹² *Aberdeen Free Press* op cit.

¹³ *Aberdeen Journal*, 2 August 1854 p.2 col.5; 9 January 1856 p.1 col.2 [Rothney]; 8 May 1861 p.1 col.6; 17 May 1865 p.1 col.4; *Banffshire Journal*, 11 February 1862 p.4 col.4 [Maud].

¹⁴ *Banffshire Journal*, 22 March 1859 p.6 col.2.

¹⁵ *Aberdeen Journal*, 8 June 1859 p.4 col.3.

¹⁶ A Smith, *A New History of Aberdeenshire* (Aberdeen, 1875) vol.2 pp.781-2; J Davidson, *Inverurie Supplement: Recollections of Forty Years* (Inverurie, 1886-9) p.67 [photocopy in NLS and Inverurie Library].

considerable while harbour dues were insufficient to repay capital costs and so feuing offered a way of increasing estate rent rolls. New villages populated by fishermen, such as Gordonsburgh near Buckie, and planned suburbs (Rosehearty), were commonplace. Sandhaven was founded in 1838, adjacent to the old seatown of Pitullie (population about 200), and a small harbour, part-funded by the Fishery Board, was constructed.¹⁷ However only a few new houses were built, and the combined population of Sandhaven/Pitullie had reached 399 at the 1871 Census. Situated between Fraserburgh and Rosehearty, it was always likely to be overshadowed by its larger neighbours. This difficulty did not deter the laird, Charles Trefusis, Lord Clinton (1834-1904) from embarking on major harbour improvements prompted by the growing size of fishing boats and a need to compete with neighbouring ports. James Beattie was employed to prepare a plan of new streets in what was intended to become a small town (Fig. 3). It was a further four years before feuing conditions were prepared and it was not until 1886 that the harbour was completed at a cost of £22716.¹⁸ The grand housing development envisaged in Beattie's plan failed to materialise and by 1896 it was 'said that the fishing boats have grown too big for such shallow harbours as Rosehearty, Sandhaven and Pittulie and have been drawn away to Fraserburgh'.¹⁹

Comparison of the first and second editions of the Ordnance Survey 25 inch to the mile maps show only a new main road through the village flanked by short rows of houses, two churches and a new school. Modest growth of the combined Sandhaven/Pitullie was achieved with a population of 526 in 1891 rising to 617 by 1901.

Acknowledgements

Thanks to staff in the Special Collections Centre, University of Aberdeen. The illustrations are reproduced Courtesy of Special Collections and Museums. Australian and New Zealand newspapers were sourced from the online *Trove* and *Papers Past* websites.

¹⁷ *Aberdeen Journal*, 7 November 1838 p.2 col.3; *New Statistical Account* Vol.XII, p.399 [compiled October 1840]; The estate papers for Sandhaven are in NLS Fettercairn Papers Acc.4796.

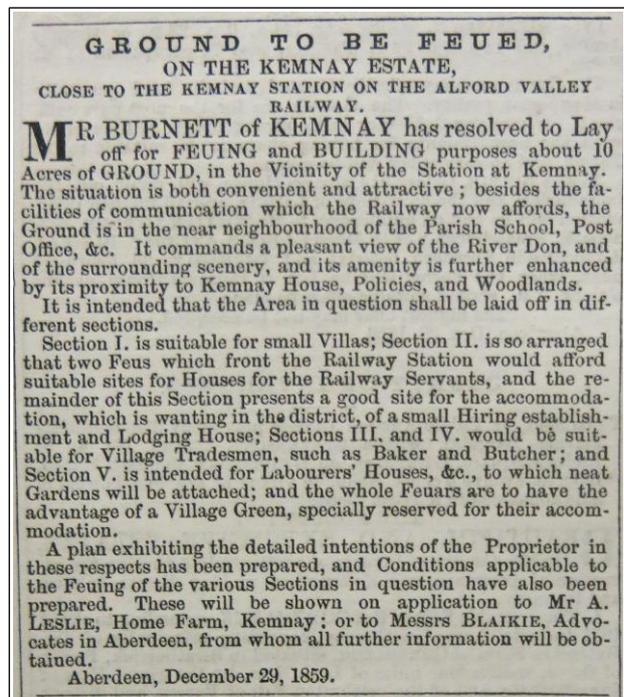
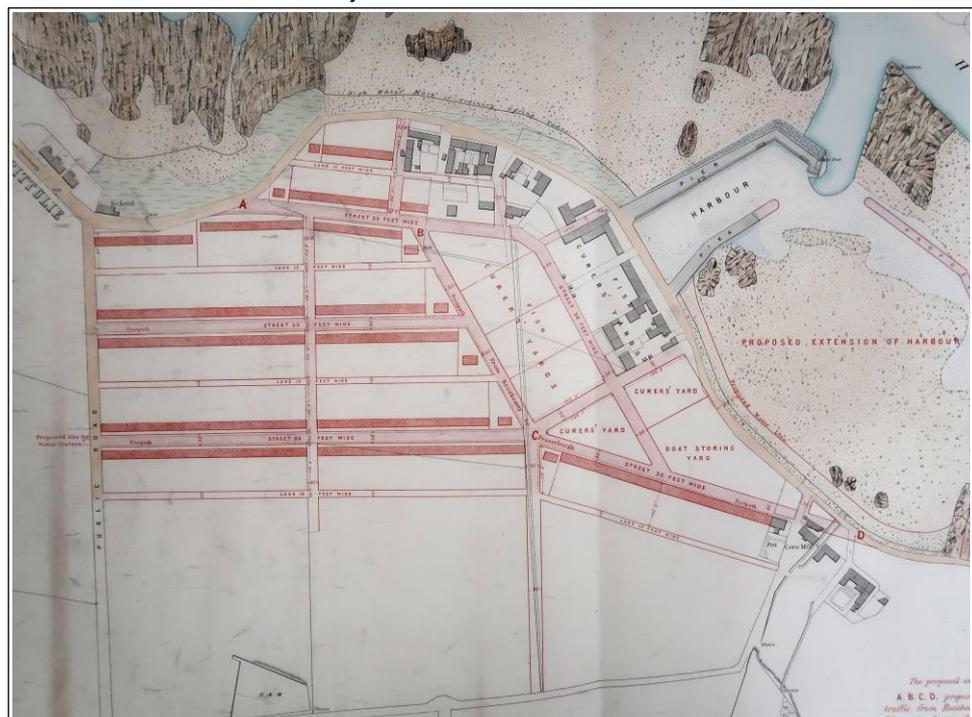


Fig. 2. Feuing Advertisement, *Aberdeen Journal*, 11 January 1860 p.2 col.4.

Below: Fig. 3. The Town of Sandhaven: Feuing Plan, 1873 by James F Beattie & Son. AUL MS 3860/20504.



¹⁸ *Banffshire Journal*, 19 October 1886 p.5 col.7 and p.6 col.1-2.

¹⁹ *Peterhead Sentinel*, 7 December 1896 p.6 col.1.

James Fraser's Map of the Counties of Fife and Kinross, 1841

John Moore compares James Fraser's map to an earlier map of Fife by Sharp, Greenwood & Fowler.

On 24 April 1841, *The Scotsman* carried a glowing review of a new county map of Fife and Kinross published by James Fraser, a local land surveyor based in Markinch.¹ Describing the work as 'a perfect cyclopaedia of information', the notice referred to its predecessor, a map of the two counties produced by Thomas Sharp, Christopher Greenwood and William Fowler which had been published in 1828, but considered that Fraser's numerous additions and corrections rendered his edition 'almost entirely a new production'. Visual comparison of the two versions confirms that Fraser had access to John Dower's plates for the original engraving and it has been assumed that he used his local knowledge to update his representation. The calligraphy, dedication, key-style border, placing of place-names and layout of the key are exactly similar to the earlier depiction. Just how far did this revision confirm the reviewer's unqualified approbation of Fraser's 'immense labour'?

Fraser is likely to have been born on 25 September 1796 at Cupar and this accords with a recorded age of 45 in the 1841 census return for Markinch.² The first public advertisement of Fraser's services as a land surveyor and measurer of artificer's work appeared in July 1831 when he announced his removal to offices in Cupar, following 'upwards of twelve years' in business, presumably on the Balgonie estate.³ This would suggest the start of his career being about 1819.⁴ It is possible that he trained under David Martin, a surveyor based at Craighrothie, or his son, Alexander who resided in Cupar between 1826 and 1828. There are a considerable number of Fraser's surveys and architectural drawings held within the Balfour of Balgonie estate papers for the period 1827-31 but his move to Cupar did not end his work for the family and, by 1833, he appears to have been

resident in Markinch. Certainly, four years later, he was listed there as a surveyor and bookseller.⁵

Of greater relevance to the county map may be an engraved plan of the parish of Markinch produced by him in 1839 and deemed 'well executed' by the parish minister.⁶ With this under his belt, Fraser proceeded to advertise his intention of publishing a topographical and geological map of Fife and Kinross *from an original survey* to be engraved by W. & A. K. Johnston. This was to include the altitudes of significant places, as well as offshore soundings, parliamentary boundaries and geological strata, which could be coloured if desired. The announcement has an element of overkill in the listed number of geological authorities but its date helps provide a possible timescale for the genesis of the county map.⁷ Little is known of Christopher Greenwood's surveying work in Scotland but it seems very likely that W. & A. K. Johnston acquired his Scottish plates around this time, following his business sequestration. In a report of the monthly meeting of the Literary and Philosophical Society of St Andrews for February 1840, it was noted that Fraser had already obtained these plates.⁸ Although the engraving plates for Greenwood's *Atlas of the Counties of England & Wales*, first published in 1834, and other assorted maps were auctioned by Sotheby's in London in July 1840, the sale catalogue does not include any of Greenwood's Scottish maps which presumably had been sold previously.⁹ One month earlier, Fraser had written to the Duke of Buccleuch enclosing a prospectus for his proposed map and seeking his patronage.¹⁰

Continued on page 6

¹ *The Scotsman*, vol.25, no.2222, 24 April 1841, p.3, col.6.

² National Records of Scotland. Old Parish Registers. Births. Cupar 420/30 128 and 1841 Census. Markinch 447/4/1 at Markinch Croft, with wife Isobel (or Isabella, née Lyall) aged 45, 5 daughters, the oldest 25, and two sons, including James, 15, apprentice surveyor. At the same address are recorded a surgeon, a preacher and others.

³ *Fife Herald, Kinross, Strathearn, and Clackmannan Advertiser*, no.490, 28 July 1831, p.1, col.4.

⁴ Bendall, Sarah (ed.) *Dictionary of Land Surveyors and Local Map-Makers of Great Britain and Ireland 1530-1850*. 2nd ed. London, 1997. Vol.2, p.187.

⁵ *Fife Herald, Kinross, Strathearn, and Clackmannan Advertiser*, no.571, 14 February 1833, p.1.col.3. *Pigot and Co.'s National Commercial Directory of the Whole of Scotland and of the Isle of Man*. London, 1837, p.408.

⁶ *Fife Herald, Kinross, Strathearn, and Clackmannan Advertiser*, no.896, 9 May 1839, p.4, col.1. A photocopy of the original rolled plan is held within Fife Archives at A/ABB/1/1. Sievwright, Rev. J. 'Parish of Markinch' *New Statistical Account of Scotland*. Vol.9. Edinburgh, 1845, p.655. This account was written in June 1840.

⁷ *Fifeshire Journal, Clackmannan and Kinross Register*, no.352, 3 October 1839, p.1, col.4.

⁸ *Fife Herald, Kinross, Strathearn, and Clackmannan Advertiser*, no.936, 13 February 1840, p.4, col.3.

⁹ British Library. General Reference Collection S. C. Sotheby. The sale took place on 18 July 1840.

¹⁰ National Records of Scotland. GD224/627/1. Papers of the Montague-Douglas-Scott family, Dukes of Buccleuch. Miscellaneous correspondence, 1830-1846. This letter, dated 22 June 1840, is item 24 of a bundle of 78 from a variety of authors, artists, publishers and engravers all soliciting the Duke's patronage.

It is feasible that, impressed by Fraser's Markinch plan and seeing an ideal opportunity to provide an updated county map, the Edinburgh cartographers provided him with the plates as the basis for such a revision. It appears likely that Fraser was caught up in the growing interest in Scotland's mineral wealth for, in August 1841, he offered the inclusion on the map of a coastal section and his own geological transverses showing the upper strata.¹¹

Although Fraser's depiction included a table of references, with the information said to be from maps produced by the Fife geologists, David Landale, David Page and Dr John Anderson, those proposed transverse enhancements do not seem to have been published. In addition, the offshore soundings are given in feet and inches (rather than fathoms) but, with the indication of various ferry routes across the Forth, the map has been extended south to include the piers at Granton, Trinity, Newhaven and Leith. One notable addition is the indication of the heights of several of the two counties' hills and a more prominent feature is the inclusion of the Edinburgh & Northern Railway line running from Burntisland to Perth, with a branch extending to Cupar. It should be noted that the relevant parliamentary bill for this railway was not passed until June 1845. Interestingly, the boundary lines delineating the major Fife burghs are markedly similar to those appearing in the *Reports upon the Boundaries of the Several Cities ... in Scotland* published as a prelude to the Great Reform Act of 1832. Fraser also indicates the several seven mile boundary lines of various burghs.

Regardless of all the enhancements promised, a careful inspection of the features on the Fraser map shows that comparatively little additional topographical information was introduced across wide swathes of the county. Despite the passing of thirteen years, of the sixty-two parishes which comprised Fife at that date, fourteen show no change from the earlier work of Sharp, Greenwood and Fowler. A further thirty-seven parishes have fewer than four alterations, varying from the addition of some buildings or piers to the renaming of individual properties (e.g. in Carnbee, Mortons Hall altered to Over Kellie). In total, Fraser altered the details of the topography to a slightly greater extent in only eleven parishes. These include Beath and Dunfermline, where coal-works, a bleach-field and a new church are among the additions, and St Andrews, where Madras College is now indicated. In contrast to the limited alterations in Falkland and Cupar, two parishes where Fraser's local knowledge would have been superior to his predecessors, the areas of slightly more change include Kennoway, Leslie and Wemyss, parishes which share a boundary with Markinch itself. In all three, some names are altered but it is only in Markinch itself that the information on the map could be said to justify the unqualified approbation of the press review (See **Figs 1-4, right**).



Top: Fig. 1. Kennoway area from Fraser's map of Fife.
Above: Fig. 2. Kennoway area from Sharp, Greenwood & Fowler's map.

Below: Fig. 3. Markinch area from Fraser's map.
Bottom: Fig. 4. Markinch area from Sharp, Greenwood & Fowler's map.



¹¹ *Fife Herald, Kinross, Strathearn, and Clackmanan Advertiser*, no.1015, 19 August 1841, p.1, col.2.

Fraser makes fourteen amendments to the original plate and these include the renaming of properties and the omission or addition of buildings and certain industrial features.

It is possible that, regardless of this being a solely Scottish publication, Fraser's gamble to promote his abilities through this map was flawed from the start, particularly given the limited amount of new information he introduced. A little more than a year after *The Scotsman* review, he faced insolvency and his business was sequestrated.¹² The remaining copies of the map were sold in February 1844 with no mention of any of the geological enhancements.¹³ A later version of the map, which the National Library of Scotland dates to 1846, no longer mentions Fraser as a publisher but this does display a note indicating both railways in operation or in progress, as well as those projected, although

inspection would suggest that the latter is restricted to the line linking Dunfermline to North Queensferry, not authorised until July 1873.

It is quite significant that when W. & A. K. Johnston published their *Map of the County of Fife with the Railways* in the 1850s, they reused the county map which appeared in John Thomson's *Atlas of Scotland* of 1832 as their base.

Although Fraser appears to have carried on surveying following his bankruptcy, he was found to have contravened the *Weights and Measure Act* of 1835 by using an unstamped chain.¹⁴ Far fewer plans were produced in the remaining years of his life, the majority being a sequence of farm surveys within the parish of Largo, including one of Unthank, dated 21 June 1847, only six days before he died.

¹² *London Gazette*, no.20104, 31 May 1842, p.1495. National Records of Scotland. Court of Session. Sequestration Petitions. CS279/710, 1842.

¹³ *Fifeshire Journal, Clackmannan and Kinross Register*, no.578, 1 February 1844, p.2, col.3.

¹⁴ *Fife Herald, and Kinross, Strathearn, and Clackmannan Advertiser*, no.1173, 29 August 1844, p.3, col.4. This was a rare example of a case considering the need to rectify measuring chains as proposed by the Society of Scottish Land Surveyors, see *Cairt*, no.38, January 2021, pp.2-5.

Scottish Maps Forum - future events survey

Please let us know your views on future events which you would like the *Scottish Maps Forum* to organise. Would you prefer to attend a real in-person event, along the lines of the day seminars we have run in the past, or would you prefer an online event, such as an online talk or set of online talks (or something else)?

We would also be interested in hearing your views of which subjects or topics you would find of most interest. This is a very brief survey with just two questions, so it should be very quick to complete!

Please head over to [the survey](#) by 31 January 2023. We are very keen to hear from you.

Recent publications on Scottish Maps

Paul Bishop, 'OS 25-inch mapping of threshing mills in Scotland', *Sheetlines*, 123 (April 2022), 7-25. View online [here](#).

John Moore, 'The Isle of Lewis survey reconsidered', *Sheetlines*, 125 (December 2022), 14-19.

Thomas Muller, 'Reconstructing long-term woodland cover changes and their environmental legacy using Scottish estate plans (c.1740-1835) and GIS'. University of Glasgow thesis, 2019. Now available [online](#).

David L Walker, 'An 1840 diagram of the Secondary Triangulation of N. Scotland', *Sheetlines*, 124 (August 2022), 34-46. View online [here](#).

***The Admiralty Hydrographic Service, 1795-1919.* By Vice-Admiral Sir Archibald Day. xi + 388pp, illustrations, charts. London: Her Majesty's Stationery Office, 1967**

Brian Tiplady reviews a classic work, which is now available online on the Internet Archive.

The Hydrographic Service was established in 1795, to organise and distribute nautical charts to the Royal Navy. After the Napoleonic Wars it took on responsibility for surveys as well as publication of charts and sailing directions, and made charts available to the public, with international coverage.

Archibald Day was Hydrographer of the Navy from 1950-1955. His historical review of the service up to the end of World War I was planned as a sequel to *Memoirs of Hydrography* by Commander L.S. Dawson, published in 1885. Susanna Nockolds, reviewing Day's book in *The Geographical Journal* in 1968, refers to *Memoirs* as 'a book which has been long out of print and of which only a few copies survive'. In this internet age it only needs one copy in a library that is willing to scan and upload it, and the book is now freely available to all. Thus *Memoirs* has resumed its place as an important source for the first 90 years of the Service.

The first third of Day's book covers the same period as *Memoirs*, but augments it in two main ways. Firstly, it deals with the internal organisation of the Department, and its relations with other bodies such as the Ordnance Survey and the commercial map publishers. Secondly it uses additional source material and provides biographical information on a number of officers omitted by Dawson. The remainder of the book follows Dawson's plan with a chapter on each of the Hydrographers from Wharton to Parry. There is an account of the activities of the Department, biographical information, and a tabulation of the principal surveys carried out. It also includes charts, illustrations of surveying ships, an extensive bibliography, and indexes of people, ships and a general index. The result is a work that more than half a century on is still indispensable for research on nautical surveying.



Above: Fig. 1. Fair copy of chart of Loch Awe by E.J. Bedford, 1861.

Readers with an interest in the charting of Scottish waters will find much of value. One item is a real gem, a reproduction of the fair copy of a chart of Loch Awe, prepared by E.J. Bedford in 1861 (**Fig. 1**). The Hydrographer at the time, John Washington, described it as 'one of the most beautiful ever sent in'. The illustrations of ships include two that were particularly important in Scottish waters in the mid-19th century, HMS Shearwater (**Fig. 2**) and HMS Porcupine. Both were small paddle-steamers, versatile and manoeuvrable. These are the only images of these ships that I am aware of.

Below: Fig. 2. HMS Shearwater, second from left, pictured when Queen Victoria visited Edinburgh in 1842.



Sources

Full text of both works are freely available on the Internet Archive:

- [Dawson Volume 1](#) (1750-1830):
- [Dawson Volume 2](#) (1830-1885):
- [Day](#)

Better scans of the illustrations are [here](#).

See also: Brian's article on [Beaufort's surveyors in Scotland](#).