

Nimmo, Alexander (1783-1832), civil engineer, was born at Kirkcaldy, Fife, the son of a watchmaker who afterwards kept a hardware shop. He was educated at Kirkcaldy grammar school, where he is said to have been brilliant. In 1796-9 he attended Latin, Greek, mathematics, logic, ethics, and natural philosophy classes at St Andrews University and in 1799-1800, physics, ethics, and mathematics classes at Edinburgh University. He then went north to be second master of Fortrose Academy where it is recorded that he taught 'arithmetic, bookkeeping and drawing; the elements of Euclid, navigation, land surveying and other mensurations; architecture, fortification and gunnery; also the elements of chemistry and natural philosophy' (Ruddock, 197). He is said to have read seven languages. At the age of twenty-two, against severe competition, he became rector of Inverness Academy where, according to Joseph Mitchell, he was considered 'a gentleman of great scientific acquirements' (Mitchell, 44). About 1810 Nimmo resigned his post because the governors had censured him for failing to attend church. He was then employed on the recommendation of Thomas Telford by the commission on the practicability of draining and cultivating the bogs in Ireland.

Nimmo was a protégé of Telford, coming to his notice as a competent person to accurately determine the boundaries of the northern counties of Scotland for the commissioners for highland roads and bridges. They recorded that he performed this task during his summer vacation of 1806 with 'a zeal and intelligence surpassing their expectations' (Arrowsmith, 20), and published his 'Historical statement of the erection and boundaries of the shires of Inverness, Ross, Cromarty, Sutherland, and Caithness' in their third report (1807). On another occasion while rector, he surveyed and estimated the cost of a drove road along Loch Treig crossing Rannoch Moor to Glen Lyon and Killin, work which formed the basis for a Telford report of 1810.

About this time, almost certainly at Telford's instigation, Nimmo wrote valuable original articles for *The Edinburgh Encyclopaedia* on 'Boscovitch's theory', the theory of bridges, the theory of carpentry, and 'Draining', all first published in 1812-13 and later, part of 'Navigation, inland', published in 1821. Throughout 1811, 1812, and 1813 Nimmo worked intensively for the Irish bogs commission and his admirable series of maps and reports on draining and cultivating bogs in Roscommon, co. Kerry, Cork, and Galway, covering close on 2000 square miles, were published in 1814 in the commissioners' fourth report. His proposals included canals, river navigation improvements, and roads. In 1814-15 Nimmo made proposals for a harbour near Dunmore, Waterford, and for improving the river and harbour of Cork. About this time he embarked on a study tour of public works in France, Germany, and the Netherlands. On his return he became engineer for extensive works at Dunmore harbour for which he prepared a plan in 1818. From 1820 onwards Nimmo was employed by the Irish fisheries board to make surveys of the coast and harbours of Ireland and their internal communication, and to build various harbours and piers. Several of his charts were published in 1821-2, his work culminating in 1832 with *New Piloting Directions for St George's Channel and the Coast of Ireland*.

In 1822 Nimmo was also appointed engineer for improving the western district of Ireland, mainly Connemara, where he built Corrib Lodge in the Maam valley as his residence. By 1830, £167,000 had been spent in reclaiming waste land and opening up the country, at the same time making a major contribution to the alleviation of poverty and famine. During Nimmo's lifetime upwards of thirty piers or harbours were built under his direction on the Irish coast, and a harbour at Porth-cawl in Glamorgan; the Wellesley Bridge and docks at Limerick were also designed by him. He built many bridges and is notable for a flamboyant Gothic-influenced design style, good examples of which can still be seen on the former turnpike road at Poulaphouca between Dublin and Baltinglass. His most important bridge was the elliptical five-arch masonry Wellesley (now Sarsfield) Bridge over the Shannon at Limerick, constructed in 1824-35 for £89,000. This skilfully designed bridge, with its whole soffit curved in cross-section into a double bell-mouth shape, is described by Ruddock as 'in everything except size the equal of Perronet's and in its basic form at least a little nearer perfection' (Ruddock, 200). In 1825 Nimmo became interested in railways and reported on a proposed Limerick to Waterford line.

From about 1823 Nimmo practised increasingly in north-west England as a consulting engineer to, for example, the Mersey and Irwell Navigation and the duchy of Lancaster, and jointly with Telford and Robert Stevenson on the abortive Wallasey trans-Wirral ship canal in 1828. In 1826 he gave evidence to parliamentary committees on the Liverpool and Manchester Railway and Norwich Navigation. Later work included the St Helens and Runcorn Gap Railway, the Preston and Wigan Railway, and the Birkenhead and Chester Railway. He was engineer for the Liverpool and Leeds Railway and the Manchester, Bolton, and Bury Railway. In 1827 Nimmo won great distinction for the brilliance of his evidence under cross-examination in the trial between Liverpool corporation and the Mersey Navigation Company regarding the effect on the Mersey river-bed of abstracting water at Woolston. It has been said that he was 'the only engineer of the age who could at all have competed with [Henry] Brougham, the examining counsel, in his knowledge of the higher mathematics and natural philosophy, on which the whole subject in dispute depended' (DNB).

Although business occupied much of his time, Nimmo also made contributions to practical astronomy, chemistry, and geology. He was elected a fellow of the Royal Society of Edinburgh in 1811, a member of the Royal Irish Academy (to whom he contributed a paper relating geology and navigation) in 1818, and a member of the Institution of Civil Engineers in 1828. He is not known to have received any formal practical training and was one of the earliest British engineers with an academic approach to his work: as Stevenson commented to Telford, 'there is no bringing him to rule-of-thumb-work' (Stevenson to Telford, 18 Nov 1828, NL Scot., Acc 10706.14). Nimmo died at his home, 78 Marlborough Street, Dublin, on 20 January 1832, aged forty-nine; his obituarist in the *Galway Independent* justly commented on his immensely useful life and that 'as a theorist and scientific member of his profession, he has left no equal'.

Roland Paxton

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J. E. Jones, bust, Royal Dublin Society

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