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Born in Glasgow in 1837, George Morrison Barr was educated in Glasgow, where he completed his scholastic course at the University, taking two first prizes under the late Professor Rankine for engineering and mechanics.

He served his articles with Mr. Thomas Kyle, who had extensive works in and around Glasgow, for the Clyde Trustees, the Glasgow Corporation and other important local bodies. After completing his term of five years, Mr. Barr continued with his employers for three years as assistant, before removing to Edinburgh, where he entered the service of Mr. Charles Jopp, M. Inst. C.E. This gentleman was at that time consulting engineer to The North British Railway Company, for which Mr. Barr surveyed several branch lines in the south and east of Scotland under his principal.

As the Provincial Government of Otago required an experienced surveyor, the eminent firm of engineers—Messrs. D. and T. Stevenson of Edinburgh—were entrusted with the selection of a suitable man. Mr. Barr was an applicant, and after submitting himself for competitive examination, was selected for the post in June, 1862.

He landed at Port Chalmers in the ship “Jura” in the month of October of 1862, and was engaged in various parts of the province for the ensuing four years under the survey department. In August, 1896, he was transferred to the public works department of which he

became chief engineer three years later, which position he held till November, 1872, when he resigned and commenced the private practice of his profession in Dunedin.

Ten years later in 1882 Mr. Barr was appointed engineer to the Dunedin Harbour Board, with which he remained till November, 1888, when he retired from the position owing to the exhaustion of loans which necessitated the stoppage of large works. Since that time he has been engaged in private practice. During the term of his appointment as provincial engineer Mr. Barr had charge of all harbours, roads, and buildings in the province; together with all works in connection therewith. Many iron, timber, and stone bridges were designed and erected by him during this period; some of them over the largest rivers in the district.

Mr. Barr has taken a prominent part in connection with the Dunedin Harbour, he having been one of the first to recommend the opening up of the western channel in preference to the old channel on the eastern side. In 1870, under his direction work was commenced, but owing to an accident to the dredge it was stopped, and not subsequently resumed till after the constitution of the Otago Harbour Board in 1874. The scheme of works, then initiated, has since developed into the Victoria Channel, so that seventeen years after the first dredging Mr. Barr, as the harbour board's engineer, had the satisfaction of bringing them to such a stage as to be available for the navigation of vessels drawing up to twenty feet of water.

In 1882 on taking office as engineer of the harbour board, Mr. Barr found that there was only some fifteen or sixteen feet of water on the bar at the Tairaroa Heads. The board had already ordered a powerful dredge from Scotland, with the intention of cutting a deeper channel. Mr. Barr pointed out that while a certain amount of temporary gain would result from dredging operations, the condition of the natural currents were such that the "cut" would be speedily silted up, so that vessels of large size would be unable to cross the bar in safety, particularly in stormy weather; and further that the dredging operations would involve a heavy and continuous expense. He considered that the proper course would be to erect a training wall on the west side of the entrance at the heads, for the purpose of deflecting the current from its oblique course, and of sending it more directly across the bar. Sir John Coode had previously given a general report upon this matter, in which he had advocated an eastern wall in addition. Mr. Barr was strongly of opinion that the western wall would be sufficient, and as the cost of the two walls would have been beyond the means of the board, it became a question whether works of that character could be undertaken or not. The recommendations and designs of the engineer were sent to London for Sir John Coode's opinion. He suggested alterations in some of the details, several of which were adopted and several were not, and on the question of the walls, he thought the western wall would be advisable to an extent that would justify the expense involved in its construction; but that the depth of water on the bar would be liable to fluctuation, unless the eastern wall were also completed. The western wall was therefore constructed, though owing to the failure of funds, it was not carried up so high as Mr. Barr recommended; the outer extremity being twelve or fourteen feet below the level of low water. Notwithstanding the consequent escape of a large proportion of the ebb water in the old direction, there is now a well maintained depth of thirty feet of water at low tide, as compared with the natural depth, which varied from twelve to sixteen feet. It is worthy of note that these works were carried out for something less than one half the estimate of cost formulated by Sir John Coode.

Mr. Barr designed and carried out harbour works at Wanganui to a certain extent; training walls which were approved by Sir John Coode being erected between the heads and the town. He also designed a wall to be erected outside the heads for the purpose of deepening the bar:

this was carried out, though only about one third the length recommended, and consequently it cannot be said to have much effect on the depth; but it has steadied the direction of the channel to a certain degree.

In private practice, Mr. Barr designed and constructed water works at New Plymouth, Queenstown, and Cromwell, and recommended for Dunedin a water supply scheme, which is now (1903–4) being carried out. Of road and bridge works, he has constructed too many to particularise in the columns of this Cyclopaedia.

Mr. Barr was elected a member of the Institute of Civil Engineers, London, in February, 1882, and in 1892, he was awarded a Telford premium for a paper on the Otago Harbour Works, which was contributed by him, and was published in the transactions of the Institute.

Mr. Barr served two years as a member of the Dunedin City Council, and after ceasing to be engineer to the Otago Harbour Board, he was a member of that body for four years. He was one of the first members of the Mornington school committee and its first chairman. He was one of the first vice-presidents of the New Zealand Institute of Surveyors; was a member of the first board of examiners for surveyors in New Zealand; and is now (1904) the sole survivor of the founders of the Glasgow Geological Society. Mr. Barr married in 1871 a daughter of Mr. Thomas Oliver, C.E., of Kaikorai, and has five daughters and two sons. George Morrison Barr died on 27 April 1907 and is buried in Dunedin's Southern Cemetery in the family grave which holds seven other family members.

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