Five types of timber truss bridges. Source: Prepared by Jack Pulczynski and Amie Nicholas

All five types of timber truss bridges make use of cast iron connector pieces, usually called shoes. The de Burgh truss had the most complex of the cast iron connector pieces and in this truss they were called anchor blocks. They are more complex castings because they are cellular in structure (hollow on the inside), and are used to connect the top chords, the diagonal tension rods and vertical timber struts.

 Hollows were provided for the tension rods and holes were provided for bolts to connect the timber vertical struts, the timber top chords and the metal sway braces in place.

New South Wales gives the best timber in the world for bridge building. In 1886 L.C. Smellie, former for the design of the Sydney Harbour Bridge, reported on the comparative strength of timber and iron, and found that for the same weight, iron is more than three times stronger than iron in tension and almost twice as strong as iron in compression.

Further testing confirmed that the hardwood timbers of NSW are second to none in Australia and indeed comparable favourably, both for strength and durability, with any timbers in the world.

Between 1858 and 1872, over 600 timber truss road bridges were built in NSW, all of which were designed by engineers of the NSW Department of Public Works.

The five exceptional engineers who applied their sound engineering principles to design elegant and durable timber truss bridges that continue to carry vehicles today that are larger, heavier and faster than the original designers could have possibly imagined. The de Burgh truss is the fourth type and it was designed by E.M. de Burgh.

Ernst Macdonald de Burgh (1863-1929) was born and educated in Ireland. After graduating, he worked on the railways in Ireland and later came to NSW, joining the Public Works Department in 1885.

Within two years he was in charge of the construction of metal bridges across the Murrumbidgee and Snowy Rivers, and that designed and superintended the construction of many other bridges throughout the State including Barham Bridge, which he designed.

It was said that although he was often, 'a de Burgh truss' in appearance, at all the time he possessed that characteristic Irish air and humour that resided in the flag but did not the flag'. He was regarded as one of the ablest civil engineers in Australia when he retired on 22 November 1927.

There were 20 de Burgh truss bridges constructed in NSW, all between 1900 and 1905.

The De Burgh truss is the fourth type and was designed by E.M. de Burgh. Ernst Macdonald de Burgh (1863-1929) was born and educated in Ireland. After graduating, he worked on the railways in Ireland and later came to NSW, joining the Public Works Department in 1885. Within two years he was in charge of the construction of metal bridges across the Murrumbidgee and Snowy Rivers, and that designed and superintended the construction of many other bridges throughout the State including Barham Bridge, which he designed.