Basic Detail Report

00056191

Title

Sydney Harbour Bridge

Date

1924

Medium

Watercolour

Dimensions

Estimated acquisition size: 172 x 77 cm

Name

Painting

History

Proposals to build a bridge joining Sydney with its north shore began with colonial architect Francis Greenway in 1815. Until the 1870s the city’s north shore was relatively undeveloped, with the short distance across the harbour being served largely by punts and ferries. By the end of the nineteenth century, however, the growth in the city’s population and public transport systems changed both urban patterns and commuter expectations. A dozen designs for either a submarine tunnel or a bridge to span Sydney Harbour from Milsons Point to McMahons Point were reviewed by an 1890 Royal Commission, which dismissed any immediate plans but recommended a single span across the 800-metre gap. In January 1900 the New South Wales Government launched a global design competition that attracted numerous entries, but no winner. Revised entry criteria led to the acceptance of a design by Australian engineer and architect, Norman Selfe. Although the decision was announced in 1903, at a time when Sydney’s foreshores were being drastically remodelled in the wake of a bubonic plague outbreak, no contract was let to build the planned bridge (Laila Ellmoos and Lisa Murray, Building the Sydney Harbour Bridge, The Dictionary of Sydney, 2015). A range of Selfe’s plans and those submitted by entrants in this competition are held both at State Archives & Records NSW and the State Library of New South Wales (for instance, ML 1401, MLMSS 6537/Box 1, MLMSS 6537/Folder 2 , MLMSS 6537/Item 3X, PXD 312, PXD 313, PXD 327, PXD 330, PXD 331, PXD 332, PXD 500). In 1908 the state’s Parliamentary Committee on Public Works reconsidered the issue. A bold vision for a single-span bridge by Australian engineer John Bradfield led to his appointment in 1912 as head of the new Sydney Harbour Bridge and City Transit Department. By 1913 a version of Selfe’s cantilever design was favoured both by Bradfield the Department of Public Works, but work did not commence owing to World War I (see design at State Library of New South Wales, XV1/Bri /Syd Har/1). The museum holds a depiction of the approved pre-war design (Plan: Bridge to Connect Sydney with North Sydney. Design Recommended by the Public Works Committee, 1913, TBS_5885, 20140203-13). After World War I, momentum to connect the city grew until the New South Wales Sydney

Harbour Bridge Act was passed in 1922. By this time Bradfield favoured a more rigid arch design, especially following his 1922 tour of Europe and North America to consult with fellow engineers about the practicalities of constructing such a massive span. He was particularly inspired by the 1916 Hell Gate Bridge which connected Queens and Manhattan in New York City (for example, see Bradfield's 1921 renderings at the State Library of New South Wales, XV1/Bri/Syd Har/10). A worldwide call for tenders was based heavily on Bradfield's design for a two-hinged steel arch, with entries closing in January 1924. The winning tender was one of seven lodged by the engineering firm of Dorman Long & Co., based in Middlesbrough in the north of England. Awarded on 11 March 1924, the company signed a construction contract for £4,217,721 on 24 March. A major consideration in the negotiations was the use of local expertise and materials, including the facing of the decorative pylons from granite quarried in Moruya, while approximately 20% of the steel was delivered by the BHP Steelworks in Newcastle, which had opened in 1915. Fabrication of sections would be undertaken at Dorman Long's workshops on the Lavender Bay foreshore – a location which in 1935 became Sydney's Luna Park (W.F.B., 'Sydney Harbour Bridge', in The Australian Encyclopedia Volume II, Sydney: Angus & Robertson, 1926, pp.527–8). The final design presented in this painting is close to the Sydney Harbour Bridge that was built over 1924–32, despite several changes of state government. However, an increasingly fractious relationship developed between Bradfield and Dorman Long's consulting engineer, Ralph Freeman. Working with fellow engineer Georges Camille Imbault, Freeman translated the overall design into working engineering drawings. The result was a bitter rift with Bradfield over who should be credited with the bridge as built. Perhaps to assert his claim to priority, Freeman later assisted Dorman Long in creating the Birchenough Bridge in Southern Rhodesia (now Zimbabwe). This 1935 structure is effectively a two-thirds scale version of the Sydney Harbour Bridge, and still considered a major engineering feat in African context. Freeman did not want the Sydney project to include pylons, so Dorman Long contracted their design to Scottish architect Thomas Smith Tait, a partner in the consulting architectural firm Sir John Burnet & Partners. After World War I, this company undertook numerous war memorial commissions, including Tait's Lone Pine Memorial at Gallipoli (1922–24). This firm were pioneers of stripped-back decoration and early modernism in British architecture, although Tait was also influenced by ancient Egyptian temple architecture. The pylon design for the Sydney Harbour Bridge bears many resemblances to the Lone Pine Memorial, both in intent and in execution. Formed of pre-stressed concrete and glad in granite, the pylons have been deemed 'truly adventurous, modern pieces of design' (Dennis Wardleworth, 'The RIBA Gold Medal of 1923 and London Architecture Medal of 1934: John Burnet and Thomas Tait, Early British Modernism, and the Pylons of Sydney Harbour Bridge', in Proceedings of the Society of Architectural Historians Australia and New Zealand, Melbourne: Society of Architectural Historians Australia and New Zealand, 2016, p.704). They also represented approximately 18 per cent of the final cost of the bridge, confirming the value placed upon aesthetics in selecting the final design. As one of Britain's leading architectural practices, Sir John Burnet & Partners were almost certainly responsible for commissioning a series of watercolour perspectives to encapsulate Dorman Long's preferred designs. The choice of a perspectival rather than plan section gave visual prominence to the pylons rather than the engineering feat embodied in the steel span. Painted over 1923–24, the series was executed by Cyril Arthur Farey, a Fellow of the Royal Institute of British Architects and a leading perspectivist of his era. 'No architect could draw as well as [Farey] and I doubt whether his equal will be seen again in this country', claims British architectural artist, Raymond

Myerscough-Walker (quoted in G. Stamp, The Great Perspectivists, London, 1982, p. 131). Farey's 1923 perspectives appear to have been critical to Dorman Long deciding that they would commit to the final tendering process for the Sydney Harbour Bridge, including Bradfield's late preference for an arched design (Wardleworth, 'The RIBA Gold Medal of 1923 and London Architecture Medal of 1934', p.705). It is likely that a selection of these artworks travelled with the company's representatives to Sydney during the final phases of the tendering process in 1923. Four such watercolours survive at State Archives & Records NSW (Series NRS 17137, a series of 4 Perspective Drawings by Cyril A Farey, submitted as part of the winning tender for the Harbour Bridge construction by Dorman, Long & Co in 1924). Signed by Farey and dated 1923, the borders of the paintings are also inscribed with 'Sir John Burnet & Partners'. This evidence further suggests that they were commissioned by the architects rather than the engineers. Each of these design options bear subtle but important differences from the bridge as built. Farey's collaborator for the final design perspective in 1924 was architect Graham Richards Dawbarn, who went on to undertake leading British commissions through the mid-20th century. Farey and Dawbarn also collaborated on a design for Raffles College in Singapore, which in 1924 was declared the winning entry from a global field of competitors. Their architectural drawings therefore spoke to a shifting spirit of modern building design that helped unite the British empire in its late form. Indeed, considerations of imperial loyalty were politically sensitive at a time of growing American and European predominance in modernist architectural design, engineering and construction. Given the 1924 date of the work it is unlikely that the painting travelled to Australia prior to the tender being awarded. However, Bradfield would certainly have viewed the watercolour when visiting Dorman Long's Middlesbrough premises in October that year. It appears that his own vision for how the building of the bridge would proceed was illustrated by local painter and lithographer R. Charles G. Coulter (State Library of New South Wales, Government Printing Office 1 – 13656, V1/Bri/Syd Har/4, V1/Bri/Syd Har/5, V1/Bri/Syd Har/6, V1/Bri/Syd Har/7 and V1/Bri/Syd Har/11). The similarities between these works and Farey's rendering are striking. The Sydney Harbour Bridge finally opened on 19 March 1932 and rapidly became an icon of Sydney, Australia and mid-century modernity. 'When the Sydney Harbour Bridge Bill passed in the New South Wales Parliament in 1922', writes urban historian Peter Spearitt, 'Australians saw it as an opportunity to demonstrate the modernity and progress of a new nation' ('Sydney Harbour Bridge, in Symbols of Australia, Sydney: UNSW Press, 2010, p.146). Transport historian Robert Lee argues that 'There is no more impressive piece of infrastructure in Australia than the Sydney Harbour Bridge, and no place which more eloquently symbolises the nation's aspirations and ambitions' (Transport in Australia, Sydney: UNSW Press, 2010, p.218). As a landmark structure, the Sydney Harbour Bridge is protected as a heritage item on the City of Sydney Local Environmental Plan, the New South Wales State Heritage Register and the Australian National Heritage List. It has previously been nominated for the UNESCO World Heritage List. Farey and Dawbarn's painting also signified in an escalation in Dorman Long's own corporate ambitions. Previously known for mining, smelting and functional civil engineering works, the Australian contract propelled the company onto a global stage. The firm was concurrently contracted to build the New Tyne Bridge in northern England. Constructed over 1925–28, it comprised a similar steel arch design but was notably smaller in both scale and visual aspect when compared with their Sydney masterpiece. In addition to providing a large contract for their steel, Dorman Long also acknowledged the importance of visual impact in presenting their Sydney Harbour Bridge designs. 'Particular attention was paid to the aesthetic features of the bridge', the company noted

in a 1930 publication, ‘since it was realised that a structure of such magnitude placed across the entrance of one of the World’s finest harbours must be inherently attractive in its outline and dimensions’. Unusually for a smelting and engineering firm, Dorman Long also recognised ‘that all decorative and architectural features should be in keeping with the natural beauty of the surroundings’ (Bridges: a Few Examples of the Work of a Pioneer Firm in the Manufacture of Steel and Steelwork, London: Dorman Long & Co., 1930, p.6). Unsurprisingly, Farey’s luminous artwork spearheaded Dorman Long’s promotional materials throughout the interwar era, while the original painting retained pride of place in their Middlesbrough headquarters. In 1990, Dorman Long & Co. merged with the Cleveland Bridge & Engineering Company, also based in northern England. This firm, in turn, went into receivership in July 2021, following which its assets were sold off early in 2022. Among them was the 1924 Farey watercolour of the Sydney Harbour Bridge. It appears to have been a rare relic from the firm’s roots, as the majority of Dorman Long’s records were lodged with the Teesside Archives in Middlesbrough in 1970. They contain further material likely to inform research into both the Sydney Harbour Bridge and this watercolour, including bridge contracts, commemorative items, product catalogues, photographs, illustrated magazines and visitor books (Teesside Archives, Reference BS/DL, Dorman Long and Company Limited Collection).