

Book Review

Geoffrey Russell, *Water for Gold! The fight to quench Central Victoria's Goldfields*, Australian Scholarly Publishing, North Melbourne, 2009. ISBN 978 1 921509 39 1; ix-xii, 288 pp, 24 photographs, maps.

Water for Gold! stems from Russell's PhD dissertation whilst at La Trobe University (2007). It makes for an informative read and is packed with historical data that would appeal to people interested in local history, engineering and mining history alike. The book tells an intriguing tale of the 26-year battle to obtain fresh and reliable water for mining, agricultural and domestic use in the Central Victorian Goldfields.

The Coliban Scheme was designed by Irish Engineer Joseph Brady and involved damming the distant Coliban River and diverting the water along a 102 km gravity fed open channel feeding reservoirs in Bendigo and Castlemaine. At the time it was regarded as Colonial Australia's most ambitious, sophisticated and controversial project. The Scheme was plagued by delays in funding and support, lengthy debates about how the scheme should be managed and who would own it, not to mention continuous changes in government. These issues resulted in extensive delays and almost constant debate on the validity of the entire Scheme itself.

It is surprising that the Coliban Scheme was ever completed given the litany of errors and miscalculations not to mention wrangling between contractors and inept supervision by government officials. Perhaps the most significant issue to arise was the discovery of faults in the construction of the embankments of Malmsbury Reservoir. This 'fiasco' is said to have almost 'ruined the Coliban Scheme, barely 18-months into its construction'. To add to this already woeful state of affairs, a row had erupted between the Superintendent Engineer for Supply of Water to the Gold Fields Henry Christopherson and the contractor Thomas Greenwood and Co. In the end, Greenwood left the project and commenced legal proceedings against the Government. Russell notes that similar problems also flared between Christopherson and contractors working on the Geelong Water Scheme. These problems brought into question the manner and quality of work being carried out at Malmsbury and resulted in a review of the works by Thomas Higginbotham, Victorian Railways Engineer-in-Chief. Higginbotham was critical of works completed at the time of his inspection, which inflamed the problem

with Christopherson. Due to this impasse, Edward Moriarty the well-known and respected Engineer-in-Chief of New South Wales was invited to provide an independent review and assessment of the works.

Moriarty endorsed the works completed, but questioned Christopherson's estimates regarding the volume of water that would flow into the scheme and concluded that the only way to reach the predicted volume was to construct additional reservoirs, a venture the debt stricken government could not afford. The Parliament's Select Committee on Water Supply tabled Moriarty's report on 11th May 1869, which resulted in renewed doubts over the competence of Christopherson, not only on the Coliban but also the Geelong Water Scheme. This led to additional Government enquiries and finally the arrival of Lieutenant-Colonel Richard Sankey who had been the Superintendent Engineer on the East Coast Canal in Madras, as well as on numerous other water schemes.

Sankey's task was to provide a review and assessment of the Coliban Scheme. He found 'a great number of grievous errors' and recognised that contractors had 'scamped' on works, that bye-washes remained unfinished, and that the damaged Malmsbury tower outlet would require expensive repairs, not to mention that its design was on 'an extravagantly large and costly scale'. The lists of problems continued to mount and were not only focused on Malmsbury, they pertained to other works that were part of the Coliban Scheme, and like Moriarty, Sankey also questioned the estimates of the water capacity of the scheme.

By 1871, Sankey's report was referred to the newly established Water Supply Board, and works halted while the recommendations of the report were deliberated. Minister McLellan deferred making any decisions on Sankey's report until the arrival of George Gordon from the Madras Irrigation Company, the new Engineer-in-Chief of the Victorian Water Department. Gordon, an experienced hydraulic engineer was charged with the responsibility of completing the Coliban Scheme, and between Brady and Gordon, works progressed on the Coliban Scheme. In June 1872, Premier Francis approved funds for works on the Crusoe Reservoir and tenders were called on the following day. By mid July, Gordon had stepped up remediation works on the southern section of the scheme. In addition, he was able to secure funds for construction of the Upper Coliban reservoir, completion of the Main Channel to Bendigo, and distribution channels to Fryerstown and Expedition Pass, as well as for new mains from Spring Gully Reservoir to Eaglehawk.

On 17th November 1877, with very little fanfare, the Bendigo District Engineer John Henderson declared the aqueduct from Malmsbury to Bendigo complete. However, with the first trickle of water from the Main Channel, Bendigo residents found a renewed optimism for the Scheme.

Perhaps the most poignant aspects of this complicated and multifaceted tale are the constant periods of drought, the civic determination to secure a reliable water supply, and the political battles and casualties that follow any ambitious infrastructure projects. These are issues that have not faded with time and are still relevant to Australia today. Russell's book is informative and relevant to the current debate on sustainable water management and makes for a worthwhile read.

HCPL, Heritage + Archaeology

Lori Sciusco