

‘Providence has indeed been good to us’: The Collins House Group in the First World War.

Abstract:

The First World War transformed the Collins House group. In 1914 the Broken Hill mining companies at the core of the group were totally dependent on a cartel of German metal traders for the sale of their production. By November 1918 they controlled production and marketing through ‘producers associations’, carried out an ever-increasing proportion of their own smelting and refining and had made their first steps into manufacturing. The transformation came about largely because the leaders of the group, W L Baillieu and W S Robinson, saw that Billy Hughes’ campaign against the ‘German octopus’ was an opportunity for the group rather than a threat, while the British government’s purchase of almost the entire output of lead, copper and zinc at high wartime prices enabled the companies in the group to build large cash reserves to finance post-war expansion and diversification.

Although there are arguments over the numbers, there is a general consensus among economic historians that Australia’s GDP fell sharply during the First World War. A recent estimate by Ian McLean is that ‘Real aggregate GDP declined across the six years 1914 to 1920 by 9.5 per cent’.¹ As the population grew during the war, real per capita incomes declined by over 16 per cent, providing a simple, if incomplete, explanation for the wave of strikes and social unrest that swept the country from 1916.

While the general picture was dismal, some areas of the economy prospered and emerged from the war stronger and poised for continued growth in the 1920s. In this paper I will discuss the fortunes of the Collins House Group as an example of a mining and industrial conglomerate, which emerged from the war vastly stronger than it had been in 1914.

The Collins House group was a close alliance of Melbourne-based mining and industrial companies that was built up in the decade before the First World War by William Lawrence Baillieu. Named for Collins House at 360 Collins Street in Melbourne where most of the companies had their head offices, the Collins House group was a major force in Australian business from the 1910s to the 1970s. Major companies within the group included North Broken Hill, Broken Hill South, the Zinc Corporation (later Consolidated Zinc, then CRA, now Rio Tinto), Amalgamated Zinc, Broken Hill Associated Smelters, Electrolytic Zinc,

¹ Ian McLean. 2013. *Why Australia Prospered: the shifting sources of economic growth*, Princeton, Princetown University Press, pp. 147-8.

Electrolytic Refining and Smelting, Metal Manufactures, British Australian Lead Manufactures, Dunlop Rubber, the Herald & Weekly Times and Carlton & United Breweries. The lasting impact of the group can still be seen today, most notably with Rio Tinto, the zinc refinery at Hobart, the lead smelter at Port Pirie, and many major companies including News Corporation, the ANZ Bank, Oz Minerals, Pacific Brands and many others, who trace at least part of their ancestry back to Collins House.

The Collins House group was not a conglomerate in the modern sense but rather an alliance of companies held together by interlocking shareholdings and directorships and, even more importantly, friendship and trust between their leaders. The relations between the companies that made up the group are hard to comprehend today, when many of their activities would lead to prosecution for breaching competition laws, but the arrangement worked well in the first half of the 20th century. One of the group's leaders, W S Robinson, wrote that:

... there was never any agreement or letter covering any arrangement of any kind between the parties. They were merely friends believing in Australia and its future – doing business together if they desired to; offering each other participation in transactions when they felt justified in doing so. They never had control by votes or share-holdings of any company. Where they were in authority their power lay in the confidence of the shareholders in their ability to give results. No deal they ever put forward to any company was ever capped by other people giving better terms. Their friendly association in business extended far past mining, in which industry at one time they were examining properties as far apart as New Guinea, Rhodesia and Spitzbergen!²

WL Baillieu, the founder of the Collins House group was one of the most extraordinary figures in Australian business history.³ Most highly successful businessmen make their fortunes in one industry – Frank Lowy in shopping centres, the Packers and Rupert Murdoch in media, Richard Pratt in packaging – but Baillieu's fortune came from real estate, mining, metals processing, paint, newspapers, tyres, stock broking, banking, electricity supply, brewing and more. Born in 1859, the third of 16 children of a poor boatman and his child bride (she was 15 when she married) Baillieu was tall, powerfully- built (he was a highly rated amateur boxer) and a natural leader from a young age. After leaving school at the age of

² W.S. Robinson, 'Notes on Broken Hill', W S Robinson Papers (WSRP), file 232, University of Melbourne Archives (UMA).

³ For a full account of Baillieu's life and business career, see Peter Yule. 2012. *William Lawrence Baillieu: founder of Australia's greatest business empire*, Melbourne, Hardie Grant.

13, he made and lost a fortune in the Melbourne land boom and bust of the 1880s and 1890s. Although the 1890s was a decade of gloom and depression in Melbourne, Baillieu fought back from insolvency to build a new and lasting fortune. With his brothers, he began a new 'variety business', W.L. Baillieu & Co., which dealt in real estate, debt collection, winding up insolvent estates, insurance and agency work of many types, and the share-broking business of E.L. & C. Baillieu. These businesses provided the cash to invest in the real money-making ventures, of which the most important was gold mining in Victoria – he made over £100,000 from the Duke mines at Maryborough and the Jubilee mine at Scarsdale alone. Baillieu used the money from gold to invest in mining, metals processing, manufacturing, real estate, stockbroking, and agriculture. With Theodore Fink and later Keith Murdoch, he built the Herald & Weekly Times into Australia's leading media business; with Montague Cohen he founded Carlton & United Breweries; he engineered the mergers that established Dunlop as Australia's leading tyre and rubber company; he bought and subdivided many large pastoral properties and was a major city developer. He ran Melbourne's largest electricity supply company and his plans to use the brown coal of the La Trobe Valley to generate electricity for Melbourne were well-advanced when war broke out in 1914 and his partner, the German company Siemens, was forced to withdraw from the venture.

In 1905, Baillieu and a group of friends, including W S Robinson and future American president Herbert Hoover, took over several of the most productive mines on the rich Broken Hill silver, lead and zinc field, notably North Broken Hill and Broken Hill South. Baillieu and his associates then set up the Zinc Corporation (one of the main ancestors of today's Rio Tinto) and Amalgamated Zinc to exploit the new technology of flotation to treat Broken Hill's huge reserves of complex sulphide ores that had long defied metallurgists. After early setbacks, flotation proved highly successful and made the Broken Hill mines enormously profitable.

The Broken Hill mining and processing companies were the heart of the Collins House group, and the cash they generated financed the establishment of a vast array of new businesses around Australia. However, in the decade before 1914 Baillieu and Robinson were acutely aware that their mining and processing companies had a major area of vulnerability. Although they were highly profitable producers of silver, lead and zinc concentrates, they had no smelting or refining capacity and had become totally reliant on a cartel of German metal

traders, the Metalgesellschaft, Aron Hirsch, and Beer, Sondheimer, for marketing their products.

It made sense for the Broken Hill mining companies to deal with the German metal traders because they had long-established channels of distribution, knowledge of the market, technological expertise, financial strength and close links with the European smelters and refineries. Further, the German-controlled cartels kept metal prices high and the long term contracts they offered gave an unusual degree of certainty in a highly cyclical industry.⁴

Nonetheless, on several occasions Baillieu and his colleagues sought to break away from German domination and establish their own smelters in Australia or Britain. This was not driven by nationalism (though they presented it as such during and after the war), rather it was designed to increase the potential profits from their mines and processing plants by cutting out middlemen and reducing transport costs.

In 1905 the Baillieu-dominated Broken Hill mining companies formed the Australian Smelting Corporation to build a lead smelter at Dapto near Wollongong in New South Wales. But the smelter was never completed due to a fall in world metal prices and the concerted action of the German metal traders, who offered the mining companies long-term contracts at better prices than the new smelter could match.⁵

In spite of the failure of the Australian Smelting Co., the Collins House mining companies, still aspired to acquire their own lead smelting capacity and in 1913 made an offer to buy BHP's lead smelter at Port Pirie in South Australia. BHP was willing to sell, but the two parties could not agree on a price and nothing came of it until the war changed perceptions of the value of the smelter.⁶

⁴ Susan Becker. 1998. 'The German Metal Traders before 1914', in Geoffrey Jones (ed.), *The Multinational Traders*, London, Routledge.

⁵ Baillieu to Herbert Hoover, 14 November 1906, Mining Letter Book, no. 1, Herbert Hoover Papers, Herbert Hoover Presidential Library, West Branch, Iowa; F C Howard to Secretary, Australian Smelting Co. Ltd, Melbourne, 19 June and 13 August 1906, Broken Hill South Silver Mining Company, Outwards Correspondence, 1904-1907, Book 2, Broken Hill South Papers (BHSP), box 73, University of Melbourne Archives (UMA); *Argus*, 3 and 5 October 1907; *Adelaide Advertiser*, 18 January, 11 March and 15 April 1908; *Argus*, 3 October 1914; Becker, 1998, pp. 77-8...

⁶ W L Baillieu, 'Memo for Colin Fraser', 3 July 1920, 'Consigning companies creation and administration: W L Baillieu's services', Colin Fraser Papers (CFP), 1/38/19, UMA.

Consequently, when the war began, almost the entire output of silver-lead concentrates of the Collins House companies was sold to the German metal traders for export to continental Europe. In 1913 Australia exported silver/lead concentrates representing 112,000 tons of refined lead (about 100,000 tons coming from Collins House companies), with 102,000 tons going to Germany or the German controlled smelters in Belgium, 5000 tons to the Netherlands (all of which was in transit to Germany) and 4000 tons to Austria-Hungary. Only 1000 tons went to Britain.⁷

With the technology of the time, refining zinc concentrates was much more difficult than smelting lead. The standard method of roasting and distilling the concentrates required highly skilled workers, large quantities of coal and special clay for the retorts, as well as heavy manual labour under conditions W L Baillieu described as being ‘uncongenial to Britishers’.⁸ BHP’s smelter at Port Pirie had a small zinc plant, but it was able to treat less than five per cent of Broken Hill’s zinc concentrates, and the zinc it produced was not pure enough for many industrial uses. Consequently, the Collins House companies were totally reliant on the German metal traders to buy their concentrates to be refined in German or Belgian smelters.

It has generally been believed that the Collins House companies accepted this situation and were only prompted to act when the First World War cut off access to European refiners. While it is true they thought it would be impossible to build a viable zinc refinery using existing technology, they were constantly investigating new approaches, taking particular interests in progress with electrolysis. In 1911, for example, 400 tons of ore from Broken Hill was sent to Silesia for trials with a new electrolytic process, for which the Collins House companies had bought an option for the world rights.⁹ The pre-war investigations and consequent familiarity with electrolysis helps to explain the speed with which Baillieu and his colleagues moved in 1916 to build an electrolytic zinc refinery.

⁷ Committee on the Trade Relations of the United Kingdom within the Empire, report on Lead Production, September 1918, in NAA series A2, 1919/1089, item 48734.

⁸ W L Baillieu to W M Hughes, 17 September 1915, WSRP, file 71, Electrolytic Zinc.

⁹ North Broken Hill Papers (NBHP), 1/22/1 Book One: June 1910-March 1914; Baillieu to F. Howard, 12 June 1913, BHSP, Box 122, General Correspondence, 1913-14; *Adelaide Advertiser*, 22 November 1911.

The declaration of war with Germany was catastrophic for the Broken Hill mining companies. Suddenly their best customers were enemies, their concentrates unsaleable and their cash flows negative. In order to avoid mass unemployment, the companies kept working on a half-time basis, with the result that massive quantities of lead and zinc concentrates soon began to pile up at Broken Hill and Port Pirie. Britain needed lead and zinc for munitions, but lacked the smelting and refining capacity to treat Australian concentrates, forcing it to buy refined metals, primarily from the United States at highly inflated prices.

The mining companies tried desperately to find new markets, but faced great difficulties. They had no experience in marketing their products except through the Germans. While contracts with enemy companies were suspended on the outbreak of war, there was great uncertainty as to whether they could legally be cancelled, which made it problematic to enter into new contracts. The drying up of their cash flows, together with the general belief that the war would be short, made building their own smelters and refineries a highly risky proposition. Further, the influence of the Germans was still strong, particularly in neutral countries such as the United States – the bona fides of every potential customer needed to be carefully checked to avoid the risk of being charged with trading with the enemy. As W S Robinson wrote to his brother, who was sounding out possible markets, ‘In all this metal business you must be extra careful to see that the enemy does not creep in.’¹⁰

The resolution of the mining companies’ dilemma came from a surprising source.

The federal election of September 1914 saw the election of a Labor government, with Andrew Fisher as Prime Minister. The real driving force of the government, however, was Billy Hughes, the fiery and eloquent Attorney-General. As Attorney-General, Hughes had responsibility for the drafting and enforcement of the *War Precautions Act* and the *Trading with the Enemy Act* which gave the government extraordinary powers over all aspects of Australia’s society and economy. Although from the left of politics, Hughes was totally committed to winning the war and also to building up closer economic ties within the British Empire – in spite of modern mythology, support for the empire was not found solely among conservatives. He began a crusade to destroy German economic influence, not just for the duration of the war, but into the distant future, and not just in Australia, but around the world.

¹⁰ W.S. Robinson to Lionel Robinson, 16 December 1914, WSRP, File 125.

On taking office Hughes immediately made the restructuring of the base metals industry one of his main priorities as he believed this was the area of greatest enemy influence within the Australian economy.¹¹ Hughes was apparently motivated by an article published in Germany in 1913 detailing the interlocking worldwide interests of the German metal traders. Of particular interest to him, the article showed the domination the ‘German octopus’ had over the entire Australian base metal industry.¹² The *Trading with the Enemy Act* became his primary instrument for investigating businesses suspected of being German-owned or controlled or of trading with German-owned businesses. While the majority of firms targeted by the act were pitiful cases of small concerns encumbered with German-sounding names, the base metals industry was an altogether bigger target, and one which had for long had close, open and undeniable links with Germany.

Billy Hughes began his campaign against the ‘German octopus’ with a dramatic gesture. On Sunday 8 November the head offices of the leading mining companies at Collins House were raided by Hughes’ inspectors accompanied by soldiers with fixed bayonets. The offices were searched, safes opened and truck loads of documents removed for examination.¹³

Baillieu, Robinson and other leaders of the mining industry were outraged at Hughes’ action and loudly proclaimed their loyalty. However, at this stage they did not understand Hughes’ motivation. He did not really expect to find that major public companies were openly trading with Germany, but he saw the war as an opportunity to reshape the world’s base metal industries by ending German control and developing the processing and marketing of metals within the British Empire. He was determined to make the mining companies realise that the old order would never be restored. In Parliament on 10 December he replied to a question about the raids by admitting that

The investigation ... has not disclosed any offence against the law, but it is on the other hand quite clear that a position exists quite incompatible with our ... vital interests at stake during the present war, the commercial and industrial supremacy of the Empire and the development of the resources of the Commonwealth.¹⁴

¹¹ L F Fitzhardinge. 1979. *The Little Digger: a Political Biography of William Morris Hughes*, vol. 2, Sydney, Angus and Robertson, pp. 17-19; and Ernest Scott. 1938. *Australia During the War*, Sydney, Angus & Robertson, 1938, pp. 553-4

¹² Robert Liefmann. 1913. ‘The International Organisation of the Frankfurt Metal Trade’, *Weltwirtschaftliches Archiv*, vol. 1, Jena.

¹³ *Argus*, 9 November 1914.

¹⁴ *Commonwealth Parliamentary Debates*, vol. 75, p. 1509, 10 December 1914

Hughes pointed out that the Germans had a virtual monopoly over the world's base metal industries and that by selling the bulk of Australia's production of lead, zinc and copper to Germany 'Australian capital, enterprise and labour have materially aided the enemy in this dreadful conflict'. He accepted that the Australian mining companies had already ceased shipments to Germany but saw that, unless new smelters and refineries were built in Australia or Britain and new marketing arrangements set up, the companies could quickly revert to their old relationship with the Germans when the war was over. Hughes argued that the sacrifices of the war would be in vain if at the end of it 'we are again compelled to pour into the lap of Germany the lion's share of the wealth created by Australia'.

For Hughes, the war gave the opportunity to transform the metals industry by moving from simple quarrying to processing and manufacturing. He emphasised to the British government that Australia was capable of producing almost all Britain's requirements of base metals and suggested joint action to develop the Empire's smelting and refining capacity. The first step must be legislation in Britain and Australia to legalise and compel the termination of contracts with German firms, and this was achieved in Australia with the passing of the *Enemy Contracts Annulment Act* in May 1915. Although the Asquith government in Britain was opposed to interfering with 'the sanctity of contracts', it eventually passed similar legislation.¹⁵

In July 1915 Hughes established the Australian Metal Exchange with power to control the export of all base metals. Exports were only permitted if the contract was registered with the exchange and registration was refused to any contracts with metal traders associated with the pre-war German cartel. The Australian Metal Exchange quickly developed into an efficient and successful marketing organisation for Australian metals.¹⁶

After nine months of open hostility, during the winter of 1915 Hughes reached a *rapprochement* with Baillieu and Robinson that transformed the position of the metals industry. In public Hughes continued to lambast the leaders of the Collins House companies for their relationships with the German metal traders, but in private he began meeting with

¹⁵ Malcolm Booker. 1980. *The Great Professional: a study of W.M. Hughes*, Sydney, McGraw Hill, p. 183.

¹⁶ Letter by Sir John Higgins dated 29 November 1918, *Commonwealth Parliamentary Papers*, 1917-19, vol. 5, p. 5; Sir Lennon Raws. 1928. 'The Marketing of Australian Base Metals', *Economic Record*, vol. 4, no. 1. 1928.

them frequently and seeking their advice on restructuring the metals industry.¹⁷ He eventually accepted that Baillieu and Robinson shared his ambition that all ores from Australian mines should be processed in Australia. For their part, Baillieu and Robinson became convinced that by cooperating with Hughes they would be acting in the best interests of the Collins House mining companies as well as ‘doing their bit’ for the war effort. They had come to see that the war gave them the opportunity to replace German control of the base metals industry with Australian control directed from 360 Collins Street, and to build their own downstream smelting and refining operations in Australia.¹⁸

By the end of 1915 the mining companies and the government were working closely together to restructure the industry and develop Australian processing. This was helped by the rapid change in the underlying economic position of the mining companies. Whereas in 1914 they faced the problem of the loss of their markets, by the middle of 1915 the position had changed dramatically as the war began to generate an enormous demand for metals. Profits rose rapidly, giving the companies cash and confidence to invest in downstream processing. North Broken Hill’s profit, for example, was £131,950 for the six months July-December 1913, fell to £55,787 for July-December 1914 and soared to £196,205 for July-December 1915.

The companies were able to increase the output of lead and zinc concentrates from Broken Hill, but lack of smelting and refining capacity prevented them from taking full advantage of rapidly rising prices. To break this bottleneck, in April 1915 the Collins House mining companies bought a controlling interest in the Port Pirie lead smelter, establishing a joint enterprise company called Broken Hill Associated Smelters (BHAS). Under BHP’s management, the smelter had become run-down, inefficient and a hotbed of industrial unrest, but led by Baillieu and Robinson, it was quickly transformed. In the last year of BHP’s ownership, Port Pirie produced less than 100,000 tons of lead. Under BHAS’s management, production was increased to about 160,000 tons in 1917 and by the end of the war it was the largest smelter in the world, producing 250,000 tons of lead and 8,000,000 ounces of silver per annum. From the middle of 1915 the British Ministry of Munitions became the primary customer for Australian lead, buying up to ninety per cent of production at prices well above pre-war market rates.

¹⁷ *Argus*, 19 and 30 July 1915; Diary of W S Robinson, 13 July 1915 et al, WSRP.

¹⁸ W.S. Robinson to Lionel Robinson, 16 December 1914, WSRP, file 125.

In addition to the silver-lead-zinc miners of Broken Hill, the Collins House group included some significant copper producers, notably in the Hampden-Cloncurry copper field in Queensland. In 1913 a consortium of the group's leaders bought the Mount Morgan gold and copper mine near Rockhampton, and with it a one-third interest in Electrolytic Refining & Smelting's copper refinery at Port Kembla. With the outbreak of war, the copper industry faced different problems from lead and zinc. The modern refinery at Port Kembla enabled most copper mines to continue working, but the industry had an even higher level of German influence than lead or zinc, with Aron Hirsch & Sohn handling virtually all copper sales and also having a large shareholding in the refinery. The company's board, and particularly its chairman R G Casey (father of the Governor-General) had always worked closely with the Germans and when war came were reluctant to take harsh actions against their colleagues. The contracts with Aron Hirsch & Sohn for selling copper were not cancelled until well into 1915 and even then a new contract was made with Francis Snow, who had been Hirsch's agent in Australia for many years.¹⁹ Not surprisingly, this was viewed with great suspicion by Billy Hughes and soon after the new contract was signed Snow was prosecuted for trading with the enemy.²⁰

The resistance of the ER&S board meant that it was not until 1915 that the company began to remove Germans from the share register. When they did so, most of the shares were bought by Mt Morgan, with the result that by the end of 1915 Collins House had effective control of ER&S, with four out of seven directors.²¹ Control of Australia's largest copper refinery provided the group with a base to move from mining and processing to manufacturing. Before the First World War virtually no copper products were made in Australia. Yet copper was, after iron, the most vital metal for industrial societies in the early 20th century, with both the old technology of steam and the new technologies of electricity and telephony dependent on copper – without copper tubes, wires and conductors modern economies would collapse. The war increased the demand for these products, and also for copper for cartridges and shells, while greatly restricting the supply of copper products from Britain and Europe.

¹⁹ Electrolytic Refining & Smelting Co., Minute Book, 1907-16, board meeting, 8 December 1914, Electrolytic Refining & Smelting Papers (ERSP), 95/64/5, UMA.

²⁰ In April 1915 Snow was acquitted of the charges against him, but the Crown appealed and he was eventually convicted and fined £2000 in September 1919. See *Argus*, 24 March-15 April 1915 and 9-23 September 1919.

²¹ ER&S Board Minutes, 8 January, 9 February, 2 March, 16 and 31 August, 13 December 1915, ERSP.

In April 1915 Billy Hughes and Baillieu discussed the possibility of the Collins House companies establishing a copper manufacturing industry in Australia. Baillieu's position was that 'I and my colleagues are prepared forthwith to take steps to commence the manufacture in Australia of copper and brass goods provided that the Commonwealth Government will undertake to obtain its supplies from us for a definite period when the works are completed.'²²

Further action was delayed by the continued controversy over enemy influence at ER&S and other Collins House companies and it was not until September 1915 that Hughes agreed to Baillieu's stipulation for government support. The government suggested that the first step should be a copper drawing plant for the manufacture of cable and wire and Baillieu and Robinson put together a consortium for this purpose.²³ The new company, Metal Manufactures, was registered in March 1916 and immediately began construction of a wire drawing mill at Port Kembla next to the copper refinery. From that time until the onset of the depression the company expanded rapidly to become one of the largest manufacturing companies in Australia. Aided by high tariffs and a specific preference in government contracts, it came to supply almost the entire Australian demand for copper wire and tubes and many other copper, bronze and brass products.²⁴

By early 1916 the greatest difficulty still facing the Collins House mining companies was finding outlets for its production of zinc concentrates. Zinc distillation plants in Britain and Australia could only process a tiny proportion of Broken Hill's production and vast quantities of zinc concentrates built up, in spite of the efforts to find new markets.

In July 1915 Billy Hughes accused the Collins House companies of lack of action in solving the zinc problem, asking:

Will not the Zinc producers join together first to extend as quickly as possible the Zinc Smelters in Australia. Are we not among the leading producers of Zinc ores in the World? Is not Zinc wanted more urgently than any other metal by the Allies?²⁵

²² Robinson to Baillieu, 3 May 1915, WSRP, file 129 'Metals'.

²³ WSRP, file 62, 'W.L. Baillieu, 1915-21'.

²⁴ Colin Forster. 1964. *Industrial Development in Australia, 1920-1930*, Canberra, ANU Press, pp. 122-125.

²⁵ W.M. Hughes to Chairman, North Broken Hill, 12 July 1915, WSRP, file 71.

Baillieu responded with a lengthy and pessimistic letter outlining the history of the zinc problem and concluding that ‘To erect large Smelters in Australia at the present time would only result in severe financial loss.’²⁶ In spite of this pessimism, the Collins House group continued to study the problem. Plans were made to expand the existing small zinc plant at Port Pirie, but it was soon decided that it was so badly designed and inefficient that this would too costly.²⁷ At the same time Collins House engineers investigated the possibility of building a plant at San Remo in Victoria with power to come from brown coal in the nearby La Trobe Valley.²⁸ Although early experiments were quite promising, this plan quickly took a back seat when first information came of a new production method developed in America.

Early in 1915, Herbert Gepp, manager of the Amalgamated Zinc plant at Broken Hill, went to America to try to sell the company’s mountains of zinc concentrates. For six months sales were slow, but then he sold 50,000 tons to the United States Steel Corporation, and more good sales followed. But more important than sales of zinc concentrates was Gepp’s research on American progress in electrolytic zinc refining. In early 1915 the Consolidated Mining & Metal Company of British Columbia and the Anaconda Copper Company in Montana both opened commercial plants for smelting zinc using electrolysis. The process was both simpler and less physically demanding on the labour force than the existing distillation process, although it required large amounts of electricity, provided for both plants by hydro-electricity. Gepp was told to investigate, and his encouraging reports pointed to ‘definite prospects of making refined zinc from Broken Hill concentrates’.²⁹ Baillieu authorised him to take an option on the Anaconda process and to carry out further research.

Production of zinc by electrolysis would require a supply of cheap electricity. Baillieu, as a director of the Melbourne Electric Supply Co., was aware that electricity costs in mainland Australia were very high, but a large hydro-electric scheme was on the verge of completion in Tasmania and promised much cheaper power. Consequently, early in November 1915 he began negotiations with the Tasmanian government.³⁰

²⁶ Baillieu to W.M. Hughes, 17 September 1915, WSRP, file 71, ‘Electrolytic Zinc’.

²⁷ See Fraser to W.S. Robinson, 4 February 1916, Report on Zinc smelting at Port Pirie, CFP, 1/27/5/1/1.

²⁸ Full accounts of the investigations into a possible zinc distillation plant in south Gippsland are in CFP, 1/27/6//1/1, 1/27/10/4/1 and 1/27/20/4/3.

²⁹ C D Kemp. 1964. *Big Businessmen: four biographical studies*, Melbourne, Institute of Public Affairs, p. 25.

³⁰ This account is taken from John Reynolds. 1957. ‘The Establishment of the Electrolytic Zinc Industry in Tasmania’, *Papers and Proceedings of the Tasmanian Historical Research Association*, vol. 6, no. 2.

At the same time as investigations were beginning on electrolysis, a cartel of Australian zinc producers was set up. The cartel had the ‘object of making permanent the present eradication of German influence from the metal trade and of enabling Great Britain to secure her supplies of spelter [refined zinc] from entirely British sources after the war’.³¹ In early April 1916 the cartel was formally established as the Zinc Producers’ Association, with Baillieu as chairman and its office in Collins House. The *Argus* reported that

This association is a co operative institution, the members of which are the zinc producing companies that are pledged to sell the whole of their output of marketable ore, concentrates, spelter, or electrolytic zinc ... for realisation through the medium of the association for a term of 50 years.³²

As the Collins House companies controlled a high proportion of Australia’s zinc output, the establishment of the cartel effectively cemented their dominance for half a century. Further, it gave Baillieu and Robinson security and confidence to pursue their plans for zinc processing in Australia.

Early in 1916 Robinson sailed for England as an advisor to Billy Hughes, who was attending the Imperial Conference. The party sailed via Canada for safety reasons and Robinson took the opportunity to bring himself up to date on the development of electrolytic zinc production. He cabled to Baillieu:

While the process is very interesting and is developing rapidly, there is no justification for believing it to be capable of being applied commercially at present. Notwithstanding this I strongly urge you to contract for all Tasmanian Government’s hydro-electric power – if we can’t produce zinc with it we’ll certainly be able to use it for something else.³³

On 16 April 1916 Baillieu reached an agreement with the Tasmanian government to lease 50 acres of crown land at Risdon near Hobart and buy a large proportion of the output of the hydro-electric scheme.³⁴ Once the decision had been made to go ahead with building a pilot plant, Baillieu set up a new company, the Electrolytic Zinc Co. of Australasia Pty Ltd (EZ),

³¹ Hobart *Mercury*, 12 February 1916.

³² *Argus*, 4 April 1916.

³³ Quoted in W S Robinson. 1967. *If I Remember Rightly*, edited by Geoffrey Blainey, Melbourne, F W Cheshire, Melbourne, p. 96.

³⁴ The details of the contract were given in the *Argus*, 12 July 1916.

initially as a subsidiary of Amalgamated Zinc, but with most Collins House companies taking shareholdings over the next two years.

Meanwhile in England Hughes and Robinson persuaded the British government to support the creation of the zinc works at Risdon as well as a new zinc works in Britain. Further, the British agreed to buy virtually all Australia's existing stocks and future production of zinc concentrates, up to 30 June 1930, with the existing high wartime prices to apply for the duration of the contract.³⁵

The contract with the British Government was crucial for the success of the Electrolytic Zinc works at Risdon. It gave Baillieu and his colleagues the confidence to proceed with the project in wartime and ensured the continued viability of the refinery through the 1920s when the world zinc price fell far below the price the British were contracted to pay. Without this contract the refinery would not have been built.

After many delays and difficulties, both technical and financial, large-scale production began early in 1922 and the plant immediately began operating at a profit. Protected by the British contracts while early inefficiencies were overcome, production steadily increased during the 1920s and the company survived the end of the contracts and the onset of the depression with remarkably little difficulty.

The First World War transformed the Collins House group. In 1914 the group was a loose alliance built around the business interests of W L Baillieu. The mining companies at the core of the group were totally dependent on a cartel of German metal traders for the sale of their production. By November 1918 the Collins House companies controlled production and marketing through 'producers associations', carried out an ever-increasing proportion of their own refining and smelting and had made their first steps into manufacturing. The Collins House group controlled three of the four pillars of Australian heavy industry – the lead smelter at Port Pirie, the copper refinery at Port Kembla and the zinc plant at Risdon. Only BHP's steel works at Newcastle was not in the Collins House orbit. Port Pirie, Port Kembla

³⁵ Robinson. 1967. p. 99.

and Risdon all represented capital investments on a similar scale to Newcastle and over the decades probably generated similar levels of jobs and profits. Further, high war-time metals prices meant that the last three years of the war were highly profitable so that the group was flush with cash. Between the two world wars, the Collins House group used the vast wealth extracted from the mines of Broken Hill to initiate a range of new industries unparalleled in Australian history. As one historian says, the Collins House group was ‘the most prolific parent of industrial enterprises Australia has ever seen’.³⁶ Many of the new ventures were logical extensions of mining and metals processing, notably the purchase and expansion of the lead smelters at Port Pirie and the building of the zinc works at Risdon, but also the manufacture of sulphuric acid from sulphide ores, fertilizers from sulphuric acid, white lead and paint from Broken Hill lead, and copper and bronze products from copper refined at Port Kembla. Others were more remote such as the establishment of the pulp and paper industry at Burnie in Tasmania, investment in the Queensland cotton industry and Fijian sugar and, in the late 1930s, the formation of the Commonwealth Aircraft Corporation. The only rivals to the Collins House group in terms of importance to the Australian economy between the wars were CSR and BHP, but neither had the breadth of interests of Collins House, nor were they responsible for launching anything like the same number of new industries.³⁷

Three of Baillieu’s four sons fought in France during the war. The overriding emotion in his first letter to his son Clive after the armistice was thankfulness that they had come through the war alive:

It is hard to realise that the war is ended ... What it entails, and what arises out of it and will follow in the various belligerent countries no one can certainly predict. I feel that just as events and happenings during the war have surprised the world beyond belief, so shall we all be similarly surprised by what the future holds in store for us ... for the moment I am consumed with thankfulness that you all have been spared. Providence has indeed been good to us, and I can only hope we are all charged with full appreciation.³⁸

³⁶ Peter Richardson. 1988. ‘Collins House Financiers’, in R T Appleyard and C B Schedvin (eds), *Australian Financiers, Biographical Essays*, Melbourne, Macmillan, p. 248.

³⁷ For the importance of the Collins House companies in Australian economic development between the wars, see Geoffrey Blainey. 1968. *The Rise of Broken Hill*, Melbourne, Macmillan, p. 81-2; Geoffrey Blainey. 1969. *The Rush that Never Ended*, 2nd ed., Melbourne, Melbourne University Press, pp. 280-2; Richardson. 1998. p. 248.

³⁸ W L Baillieu to Clive Baillieu, 22 November 1918, CLBP, 26/45/16.

The companies in the Collins House group could echo these words. Providence had indeed been good to them.