

Lessons of the Munitions Supply Board (1921-39)

By Jeremy Beck

Today, Australia sits unprepared for turbulent times because our leaders in recent decades have failed to see the need for “self-containment”. Since the 1980s we have shut down productive industries and increasingly have become reliant on imported goods. Once Australian leaders had a different outlook, and the case of the Munitions Supply Board (MSB) demonstrates this in spades. Controller-General of munitions supply Arthur Edgar Leighton had the forethought that was essential in saving our nation from invasion in World War II. And the MSB focus on self-containment was key to its success.

Created on 13 August 1921 under the Commonwealth Department of Defence, the MSB operated until 1 July 1939, perfectly timed to prepare Australia for World War II. Author of *Armed and Ready: The Industrial Development and Defence of Australia, 1900-1945*, Andrew Ross explained the importance of the MSB: “the MSB planned to create the largest scientific industrial research organisation in Australia, and an elaborate

factory system in which the most advanced techniques of production engineering and inspection were practised.” During the inter-war period, “the MSB developed and controlled the largest and most advanced factory system in Australia”, and it also had the largest industrial support laboratories.

Leighton, who headed the MSB for nearly the entire inter-war period was

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A.E. Leighton, the brilliant chemical engineer who interfaced munitions supply with existing manufacturing, which supported general manufacturing and ensured Australia had scalable munitions manufacturing capacity in the event of war. Photo: DP Mellor, *The Role of Science and Industry*

a highly skilled chemist and manager. Originally from England, Leighton's talent impressed Cecil Napier Hake, chief inspector of explosives for Victoria. The two met in England in 1907 while Leighton was on leave. Hake recruited Leighton to Australia in 1909 to design and manage the cordite factory established by the Commonwealth government at Maribyrnong, Melbourne. During World War I, in 1915 Leighton proposed that Australia could assist in the production of munitions, and an expert committee was formed to make recommendations.

The Commonwealth government decided to establish an arsenal at Tuggeranong, near Canberra. Leighton was offered and initially accepted the position of General Manager of the Arsenal in July 1916. But soon after he argued that the Tuggeranong proposal should be abandoned. He suggested that engineering shops of the Commonwealth could be so organised that they could be readily converted into munitions factories in a time of need. Adding to existing enterprises was preferable than establishing a gigantic arsenal in one centre, whether at the protected inland site of Tuggeranong or elsewhere. The Tuggeranong arsenal did not proceed.

Leighton prepared a comprehensive report, dated 27 May 1919, concerning the production of munitions in Australia. This seminal document contained the fundamental aspects of self-containment of munitions production in Australia. The first step was to establish a properly equipped Laboratory and Inspection Department with qualified chemists and engineers who would have the knowledge necessary to turn local industries and raw materials to practical use in a time of need.

The Commonwealth government under Prime Minister Billy Hughes saw merit in Leighton's proposals of self-containment and in supporting local scientific and technical expertise. This new direction formed a major part of Prime Minister Hughes' May 1922 public statement on the new defence policy. The Munitions Supply Laboratories (MSL), created in that year, acted under the control of the MSB and was the centrepiece of the defence organisation, or its brain, as Leighton liked to describe it.

On 1 July 1939 Leighton said, "in spite of public apathy, munition-making was developing at a rate that would make Australia a tough nut for any enemy to attack". He was proved right! Later that year World War II commenced and in 1942 Japanese bombs fell on mainland Australia, yet our forces proved victorious. "In the early days", said Leighton, "we had to check even the sizes of nails to ascertain if they could be bought in Australia. Today 80 per cent of our requirements can be purchased locally." It was this domestic manufacturing capability which was so important when it came to defending Australia from Japanese invasion.

US General Douglas MacArthur concurred as to the extraordinary domestic productive capability which Australia had with a meagre 7 million population at the time. In his *Reminiscences*, published in 1964, MacArthur wrote: "Australia's supply contribution throughout the war was of paramount importance. Less than 100,000 tons arrived from the United States during the critical final quarter of 1942 and supplies to the New Guinea front were kept flowing only by the strictest compliance with the War Department directive that 'local resources will be exploited to the utmost'. Our ground and air forces in the Southwest Pacific Area were vastly more self-sufficient than those in any other theatre of operations.

Local produce and materials furnished 65 to 70 per cent of the resources needed by them for the second half of 1942. To the adjacent South Pacific theatre, I shipped a greater tonnage of supplies than the United States delivered to my own area. In general effect, therefore, the Southwest Pacific, far from being a drain on the United States, was self-sufficient. [PM John] Curtin was the mainspring of this magnificent Australian war effort."



A worker in the early 1940s machining caps for anti-aircraft shells at the Maribyrnong defence site established by A.E. Leighton. Photo: Defence.gov.au

The commitment to self-containment and domestic industry continued in the post war years until the end of the Bretton Woods system in 1971. Following the 1983 Australian dollar float, the new consensus of globalisation and outsourcing manifested, leaving us the severe economic vulnerabilities of today. In an interview with the *Australian Alert Service*, former Chairman of the Melbourne Chapter of the Society of Manufacturing Engineers, Ian Richards lamented how Australian industry has been "slowly eroded by outsourcing" under this new consensus. He noted how management systems regarded workforce personnel in terms of "cost centres" rather than "profit centres".

It's time we overturn the failed consensus of globalisation and return to the kind of forethought which once saved our nation.