

Heritage Citation



Rocklea Munitions Works - Tools & Gauges building (former)

Key details

Addresses	At 23 Precision Street, Salisbury, Queensland 4107
Type of place	Defence site
Period	World War II 1939-1945
Lot plan	L2_RP189950
Key dates	Local Heritage Place Since — 1 January 2005 Date of Citation — June 2004
Construction	Roof: Corrugated iron; Walls: Face brick

People/associations	Civil Construction Corps (Builder); Department of the Interior Works and Services Branch (Architect)
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Criterion for listing	(A) Historical; (B) Rarity; (F) Technical
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Although Queensland was strategically vulnerable during the Pacific phase of World War II, construction of a munitions facility (Rocklea Munitions Works) in Brisbane was undertaken to decentralise production and take advantage of an available workforce. This former Tools and Gauges Building (Building No. 28) was constructed in 1941-42. Machine tools such as milling machines, lathes and shapers were used to form, cut, grind, scrape and polish pieces of metal into shapes. These shapes or 'parts' could be used to build or repair other machine tools.

History

This former Tools and Gauges Building (Building No. 28) was constructed in 1941-42, one of approximately eighty buildings that comprised the Rocklea Munitions Works.

The Rocklea Munitions Works

Consisting principally of two Small Arms Ammunition (SAA) plants, known together as SAA Factory No. 5, and a cartridge case factory, the Rocklea Munitions Works (RMW) was established to supply ammunition to the Eastern Supply Group. Although at the time Queensland was strategically vulnerable, construction of a munitions facility in Brisbane was undertaken to decentralise production and take advantage of an available workforce. Between March 1942 and October 1943 a total of 137,729,208 million rounds of small arms ammunition were produced at the RMW, as well as 1,221,122 brass cartridge cases for 25-pounder shells.

The RMW was constructed on land to the north and south of Evans Road, then known as Compo Road. Prior to the Second World War, although suburban development was slowly occurring on the area, the predominant land usage was still primary production. South of Compo Road James Greer and Ernest Barstow had operated slaughter yards on their respective properties backing on to Rocky Water Holes Creek. The establishment of a Queensland Meat Industry Board and the operation of an abattoir at Cannon Hill as a State utility for the City of Brisbane led to the closure in the early 1930s of private slaughter yards such as those in Compo Road. For the next decade the land was used for grazing purposes.

North of Compo Road, Kathleen Quine, Elijah and Alice Beckett and Janet Jensen operated poultry farms during the interwar years. James Greer also owned land on the north of Compo Road. In expectation of residential growth, Greer had subdivided his 16 acre Portion 205 into 67 allotments. By late 1940 none had sold.

As likelihood of war became more apparent, the Minister of Defence announced a rearmament program. This first period of expansion from December 1938 focused on southern states where both raw materials and labour were in close proximity. In June 1940 a second round of munition factory building commenced. A new SAA factory was constructed at Hendon, South Australia, and a cartridge case factory at Finsbury, also in South Australia.

Early in 1941 the Commonwealth announced that an initial £1,500,000 would be spent in the construction of a Small Arms Ammunition factory at Rocklea, Queensland. The Director-General of Munitions, Essington Lewis, chose the Compo Road site on advice from Department of Munitions officers during a visit on 22 January 1941. The site was considered favourable because it was reasonably flat and above flood level, could be provided readily with road, rail, electricity, water and gas services and was accessible to populated areas.

From February 1941 the Works and Services Branch of the Department of the Interior prepared the plans needed for the RMW. As some of the Small Arms Ammunition section was to be a duplication of factories in southern states, Department of Interior officer Clive Heath made a hurried visit to Melbourne to study already established Small Arms Ammunition factories. Where possible plans were sourced from Victoria or traced off pre-existing plans. The Small Arms Ammunition factory at Rocklea commenced operations in November 1941, ten months after the site was chosen. The cost of completing the buildings, works, services, air raid precautions and camouflage at the Munitions Works amounted to £989,288.

Establishment of the Rocklea Munitions Works involved:

- Extensive surveying and earthworks by the Queensland Main Road Commission.
- Extending the tram service along Compo Road, work conducted by the Brisbane City Council and the Queensland Main Road Commission.
- Upgrading of water supply and electricity services, including the establishment of two new substations by the Brisbane City Council.
- Construction of approximately 80 buildings. Private contractors and the Civil Construction Corps completed this work.
- Production of the tools, gauges, presses and other engineering machinery needed for gun cartridge making. The Queensland Railway Workshops and prominent Queensland engineering firms assisted in this area of expertise.

As preparation of the site progressed, Department of Munitions officers sought financial approval for expenditure of over £1.6 million on stores, raw materials, plant, machinery, equipment and installation work.

JD O'Shea of the Ammunition Factory at Footscray in Victoria was appointed manager of the Rocklea Works on 1 January 1941. Other staff, notably engineers, came from Victorian munitions establishments and private industry. Technical staff were recruited in Queensland. JB Affleck was Chief Accountant. Special training in Melbourne was provided for twelve appointed Queensland accountants. The factory's business administrator was RJ Bright. He was assisted by metallurgist GR Donaldson. The assistant manager was FE Allen, formerly of the Colonial Sugar Refinery. Following interviews in February 1941 fourteen tool makers, twenty-two trade workers, twenty-eight process workers and fifty-six 'female operators' were chosen for six months training in Melbourne.

The Queensland Main Roads Commission commenced the cutting and filling ground work for the first large building on site, the SAA factory building (now 32 Commerce Street, Salisbury), on 10 March 1941. The first production lot of 200,000 rounds of cartridge SA Ball .303 inch Mk VII was submitted for Army inspection in February 1942. Other types of ammunition produced included cartridge SA Revolver .455 inch MK II, cartridge SA revolver .455 inch Mk VI and cartridge SA revolver .380 inch Mk II. Production units were as follows:

Cartridge SA Ball .303 Inch Mk VII	127,310,520
Cartridge SA Revolver .455 Inch MK II	162,600
Cartridge SA Revolver .455 Inch Mk VI	1,735,200

Cartridge SA Revolver .380 Inch Mk II	8,520,888
Total	137,729,208

In addition the SAA factory reconditioned and repacked American ammunition, some of which had been salvaged from a wreck site. This involved 'rumbling' the ammunition in granulated cork.

The largest building within the Munitions Works was the QF Case Shop, on which foundation work commenced in May 1941. Manufacture of the 25 pounder QF Case Mk II commenced in April 1942. Under the one roof covering 6.25 acres were two cartridge case plants, each plant capable of producing 1 million cases per annum on a one-shift basis.

Although initially planned for the Ipswich Railway Workshops, the manufacture of Shell QF Smoke 25 pounder Mk III was shifted to Rocklea. Production commenced in a small way in July 1943 but was soon wound down. In August 1943 this section of the Works was removed to Rutherford, NSW.

At its peak the Rocklea Munitions Works employed approximately 3,000 people. The larger Footscray factory in Melbourne, by comparison, employed over 9,000. The peak for Rocklea was reached in May 1943 when 926 men and 1,573 women were recorded as engaged in factory work. An additional 500 men and women worked in the associated areas of Army inspection, food services, medical and welfare. Absenteeism was a problem. The reasons blamed for this included the introduction of night shifts, the regimentation of the work, industrial fatigue and lack of proper meals.

From mid-1943, with the threat of invasion removed and less projected demand for munitions, planning commenced for the conversion of the munitions works buildings to the overhaul of aircraft engines. In November 1943 Cabinet approved £385,000 for this task. Munitions equipment was to be removed from buildings by that same month.

Aircraft engine overhaul at the Rocklea works commenced early in 1944. Banks of sound-proofed engine testing stands were constructed at the eastern end of Evans Road. Unfortunately, the demand for aero engine overhaul had by then decreased. A number of the former Munitions Works buildings were then turned over to the military for use as storage facilities.

By the conclusion of the war eighty-two of the buildings within the former Rocklea Munitions Works were occupied by the Department of the Army, the Royal Navy and the Department of Aircraft Production.

Postwar, the former Rocklea facility was viewed as a significant site for future manufacturing and industry. In 1947 the Queensland Government commenced a progressive purchase of the site, commencing with the area north of Evans Road. By 1947 there were fifty-six tenants on the industrial estate occupying 500,000 square feet (46.45 square metres) of floor space with over 700 employees.

Former Tools & Gauges Building (No. 28)

The Department of Munitions was created on 11 June 1940 at a meeting of Federal Executive Council. Munitions manufacture was split into eight main sections or directorates, one of which was the Machine Tools and Gauges Directorate. Frederick G Thorpe, a mechanical and electrical engineer and company director, was placed in charge.

The relationship between machine tools, precision gauges and munitions is an important one. Machine tools such as milling machines, lathes and shapers are used to form, cut, grind, scrape and polish pieces of metal into shapes. These shapes or 'parts' may be used to build or repair other machine tools.

Because the Australian Military forces needed ammunition designed to a precise calibre and weight, its mass

production by unskilled workers depended on accurate process repetition. This required assessment using precision gauges. In mass production sets of gauges can be master sets, inspection sets or working sets, depending on their accuracy. While master sets require storage in controlled conditions, inspection sets are used to ascertain the accuracy of working sets which are then used in workshops for machine tool set ups.

Detailed and specific planning for the Rocklea Munitions Works commenced in Victoria in February 1941. The Administrative Office was transferred to Brisbane in July 1941. Throughout this period while buildings were being constructed, the process of 'tooling up' was also undertaken. Initially it was planned for two-thirds of the required tools and gauges to be obtained from the Railway Annexe at Ipswich and one third from the Rocklea factory's tool room.¹ Financial approval for an expenditure of £96,000 on the purchase of manufacturing tools and gauges was obtained.

Following interviews in February 1941 fourteen tool makers from Brisbane were sent to Melbourne. For the next six months these trainees worked at the Ammunition Factory in Footscray. In September 1941, under the instruction of WA Mappin, the assistant manager of the Rocklea Works, and engineer GA Pitcher, the trained tool makers temporarily installed their equipment in the Assembly Room within the SAA factory (32 Commerce Street, Salisbury) until the Tools and Gauges building was completed.

Plans for the Tools and Gauges building (No. 28) were completed in June 1941. Additional financial approval for expenditure of £98,500 on machinery and £5,400 on measuring equipment, including gauges, was obtained. When construction was completed the machine tools were transferred there. The manager of the section was GA Pitcher. In August 1943 when production was at its peak the Tools and Gauges section worked three shifts. The foremen at the time were VS Stanley (Senior Foreman), K Kane, JS Jenkinson and H Robertson.

It is not known what role the building served when the Munitions Works was converted to aero engine overhaul in 1944. From May 1946 Building 28 was leased, initially to Aircrafts Proprietary Limited, an aviation company which in the immediate postwar years sought other ways in which to employ the skilled metalwork staff it had trained during the Second World War. Aircrafts Proprietary Limited was one of the enterprises sponsored by the Secondary Industries Commission and at the time produced domestic refrigerators under the brand name 'Airstream'. During this period the Queensland Manufactures Year Book for 1947 described Building 28 as an 'excellent type factory construction' building at Rocklea.

As part of the Rocklea Munitions Works complex, the former Tools and Gauges building is important in demonstrating the evolution of land usage from agricultural to industrial which occurred during the Second World War in the Rocklea/Salisbury area. As a steel frame workshop which features different roof heights, a brick office and brick with corrugated iron exterior, it exhibits uncommon and endangered aspects of local area's cultural heritage. Specifically designed to accommodate machine tools, it is important in demonstrating the high degree of technological achievement involved in the manufacture of munitions during work during the Second World War.

Description

The former tools and gauges building is an elongated structure which covers approximately 20,000 square feet (1,850 square metres). It is constructed in brick and galvanised iron and features fourteen saw-tooth-roof bays. The southern two bays, most likely the original office, are faced with brick. The remaining walls are brick to approximately head height, topped by galvanised corrugated iron. The internal framework and supports are

steel.

Immediately north of the brick-walled office section are five bays supported by single steel posts, the remaining seven bays have a central row of doubled steel uprights. These appear to be additional support for the roof over the western side of these seven bays, set higher than the rest of the building.

The brick office section is relatively intact. The flooring throughout is predominantly hardwood timber. Flooring at the southern end of the building is in better condition than the north.

Statement of significance

Relevant assessment criteria

This is a place of local heritage significance and meets one or more of the local heritage criteria under the Heritage planning scheme policy of the *Brisbane City Plan 2014*. It is significant because:

Historical

CRITERION A

The place is important in demonstrating the evolution or pattern of the city's or local area's history as a significant building within the Rocklea Munitions Works complex.

Rarity

CRITERION B

The place demonstrates rare, uncommon or endangered aspects of the city's or local area's cultural heritage as an intact Second World War steel frame workshop with brick office and brick with corrugated iron exterior.

Technical

CRITERION F

The place is important in demonstrating a high degree of creative or technological achievement at a particular period

designed to accommodate machine tools specific to the process of munitions manufacture.

References

1. A private company or State government unit fulfilling a contract for munitions was referred to as an annexe
2. A & B Journal of Queensland, February 1941, April 1941, September 1941, October 1941
3. Australian Heritage Database, ADI Footscray, Gordon Street, Footscray, Vic
4. Brisbane City Council Minutes, 1940-44, 1947-48
5. Brisbane City Council Water Supply & Sewerage Detail Plans
6. Byrnes, Matthew (ed.) *Wartime recollections*. Brisbane: Australia Remembers 1945-1995 Moreton Commemorative Committee, 1995
7. Coopers Plains Local History Group, *A closer look at Salisbury and Nathan Heights*, Brisbane: CPLHG, 2000
8. *Courier-Mail*, 15 March 1941, 31 March 1941, 21 April 1941
9. Department of Natural Resources, Queensland Certificates of title and other records.
10. Environmental Protection Agency
11. JOL Estate Map Collection and photographic collection
12. National Australian Archives (Queensland) J56/11; QL686 Part 1; Rocklea Munitions – acquisition of site Part 1
13. National Australian Archives (Queensland) J56/11; QL686 Part 1B; Rocklea Munitions – acquisition of site Part 1B
14. National Australian Archives (Queensland) J56/11; QL686 Part 2; Rocklea Munitions – acquisition of site Part 2
15. National Australian Archives (Queensland) J56/11; QL686 Part 3; Rocklea Munitions – acquisition of site Part 3
16. National Australian Archives (Queensland) J2682; W6186 to QS3128; Register of architectural plans and sketch plans, single number
17. National Australian Archives (Victoria) MP438/3/0; S/43; History of the Ammunition Factory Rocklea Queensland
18. Queensland Main Roads Commission, *A history of the Queensland Main Roads during World War Two 1939-1945*
19. Trotter, Robin and Colin Mercer, Historical study: Cannon Hill Saleyards. Queensland Department of Housing, Local Government and Planning, Joint Ventures Management Group, 1995
20. Ross, A. T. *Armed and ready: The industrial development and defence of Australia 1900-1945*. Sydney: Turnton & Armstrong, 1995

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Note: This citation has been prepared on the basis of evidence available at the time including an external examination of the building. The statement of significance is a summary of the most culturally important aspects of the property based on the available evidence, and may be re-assessed if further information becomes available. The purpose of this citation is to provide an informed evaluation for heritage registration and information. This does not negate the necessity for a thorough conservation study by a qualified practitioner, before any action is taken which may affect its heritage significance.

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