

SUMMARY OF STATE HERITAGE PLACE

Entry in the South Australian Heritage Register in accordance with s14(1)(a) of the *Heritage Places Act 1993*

NAME: Brinkworth Bulk Grain Handling Complex **PLACE NO.:** 26601

ADDRESS: Karna and Ngadjuri Country
Lot 32, Main Street
Brinkworth SA 5464
CT 6028/47 D77195 A32

STATEMENT OF HERITAGE SIGNIFICANCE

Established by the South Australian Co-operative of Bulk Handling (SACBH) in 1956, the Brinkworth Bulk Grain Handling Complex is associated with the industrialisation of South Australia's grain industry through the adoption of bulk handling. One of the first built in the state, the complex is an outstanding example of its class, retaining a faithful and intact representation of storage, weighing and grading infrastructure typical of country intake facilities operating across the state during the second half of the twentieth century. Featuring three types of storage silos, the Brinkworth Bulk Grain Handling Complex evolved at the same pace as the SACBH and, as such, demonstrates the early success and rapid expansion of the state's bulk handling system.

RELEVANT CRITERIA (under section 16 of the Heritage Places Act 1993)

(a) it demonstrates important aspects of the evolution or pattern of the State's history

Operational from 1956 to 2019, the complex at Brinkworth is associated with the industrialisation of South Australia's grain industry through the adoption of bulk handling and, as a consequence, the agricultural expansion and economic development of the state in the second half of the twentieth century. Bulk handling transformed the state's grain industry, providing cost- and time-effective storage and transportation of grain to export terminals, ensuring that South Australian farmers remained competitive on the world market.

Following the passing of the *Bulk Handling of Grain Act 1955*, the South Australian Co-operative of Bulk Handling (SACBH) constructed an extensive network of over 100 upcountry storage sites and seven port terminals across agricultural areas of the state. The first generation of storage facilities fed the Ardrossan terminal on Yorke Peninsula, opening first at Paskeville and Bute, before expanding to Balaklava, Brinkworth, Hoyleton and Snowtown. All utilised a horizontal shed storage design, with the first concrete vertical silos being erected shortly afterwards at Nantawarra, Gulnare, and Redhill. Of these initial storage sites, Brinkworth retains a highly intact representation of its original structures not found at the other sites established in 1956. For example, the horizontal sheds at Bute and Balaklava have been demolished, and those at Snowtown and Paskeville have been upgraded. As a consequence, the Brinkworth Bulk Grain Handling Complex better demonstrates the establishment of the state's bulk grain handling network and the industrialisation of its grain industry.

Growth was rapid under the bulk handling scheme with yearly grain receivals in the state increasing dramatically from 154,260 tonnes in 1956 to 4,918,606 tonnes in 1997. In response to bumper grain harvests in the 1960s, SACBH erected additional storage across its regional receival centres, and by the 1980s, most facilities had two or more intake systems. Development of storage at the Brinkworth Bulk Grain Handling Complex corresponded with the growth and success of the SACBH, the facility expanding to include a concrete vertical silo and steel vertical silos by 1970. Consequently, the complex at Brinkworth demonstrates not only the early implementation of the state's bulk handling system, but its rapid expansion and success during its first decades of operation.

(d) it is an outstanding representative of a particular class of place of cultural significance

The bulk grain handling facility at Brinkworth is an exceptional example of the class of place known as bulk grain handling facilities. Bulk grain handling facilities emerged in South Australia in the second half of the twentieth century and were critical in enabling the storage, transportation, and export of the state's grain in bulk. One of the first upcountry bulk receival sites established by the SACBH in 1956, the facility at Brinkworth developed steadily in accordance with the rise of the state's bulk handling movement.

The complex at Brinkworth demonstrates all the principal characteristics that are typical of bulk grain handling facilities, including a horizontal storage shed (1956), steel vertical silo (1969), and concrete vertical silo (1970), classification office, weighbridge office and weighbridge footings.

The complex at Brinkworth retains these characteristics to a higher quality and intactness than is typical of the class. Following the demutualisation of SACBH, ownership of its bulk handling facilities passed through several companies. To this

end, dozens of early receival sites closed and their critical structures were either altered or removed. For example, the removal of the weighbridge office at Paskeville and the demolition of the horizontal shed silo at Balaklava (SHP 12942). As such, the Brinkworth Bulk Grain Handling Complex is an outstanding representative of bulk grain handling facilities, its extant physical fabric enabling the bulk grain receival and storage process to be clearly understood and appreciated.

SITE PLAN, PHYSICAL DESCRIPTION & ELEMENTS OF SIGNIFICANCE

Entry in the South Australian Heritage Register in accordance with s14(2)(a) of the *Heritage Places Act 1993*

Brinkworth Bulk Grain Handling Complex

PLACE NO.: 26601

Main Street, Brinkworth SA 5464



Elements of Significance:


Elements of heritage significance include (but are not necessarily limited to):

1. Horizontal shed silo,
2. 2-cell steel vertical silo,
3. 4-cell concrete vertical silo,
4. Weighbridge and weighbridge office,
5. Classification office.


Elements not considered to contribute to significance of place include (but are not necessarily limited to):

- Brinkworth Railway Station Complex (LHP).

LEGEND

 Parcel boundaries (Indicates extent of Listing)

 Existing State Heritage Place(s)

 Outline of Elements of Significance for State Heritage Place – Red outline is indicative of elements of significance, noting imperfect alignment of aerial imagery with parcel cadastre.

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Physical Description

The Brinkworth Bulk Grain Handling Complex is arranged linearly along the town's main road next to the now-removed railway line. The complex is comprised of several built structures, namely, a horizontal shed silo, a two-cell steel vertical silo, a four-cell concrete vertical silo, weighbridge office and classification office. Each is described in turn:

1. Horizontal shed silo (1956)

- Rectangular corrugated iron shed with gable roof,
- Corrugated iron grain elevator, dual receival hopper shed, and switchboard to northern end,
- Steel structural framing to the interior, with posts running along centre,
- Elevated conveyor belt with blue grain discharge shuttle and metal walkway to centre,
- Curved outer wall panels comprised of several horizontal panels of corrugated iron,
- Timber posts reinforced with squared steel columns to outside of shed,
- Low profile, curved top vent along top ridge of shed,
- Meshed soffit between fascia and walls.

2. Two-cell steel vertical silo (1969)

- Two flat-bottomed cylindrical cells made of horizontal riveted steel panels,
- Dual receival hopper with lean-to galvanised corrugated steel shed to western side connected to grain elevator,
- Grain elevator partially enclosed by supporting steel framework including staircase and platform at top,
- Three overhead gravity chutes protruding from top of grain elevator, two feeding each respective grain bin, the third feeding the outloading bin on the silo's eastern side,
- Outloading bin with conical bottom supported by steel platform with access stairwell and access platforms,
- Outloading bin connected to gravity fed outloading chute.

3. Four-cell concrete vertical silo (1970)

- Silo comprising four cylindrical cells,
- Dual receival hopper enclosed by galvanised corrugated steel shed to southern side,
- Enclosed concrete grain elevator shaft to southern side,
- Enclosed belt conveyor system above silo cells,
- Switchboard panel to southeastern cell,
- Square direct cell outloaders, in steel, at base of each cell,
- Metal gravity outloading chute to western side suspended over old railway line,
- Steel access ladder, next to gravity outloading chute, on the northeastern cell,

- Corrugated steel, lean-to room to northern side.
4. Weighbridge and weighbridge office
 - Galvanised corrugated steel shed with shallow gable roof,
 - Green painted timber doorways, windows and fascias,
 - Iron security bars to all windows,
 - Plasterboard walls to interior,
 - Air conditioning unit to southern end.
 5. Classification office
 - Rectangular corrugated steel shed with gable roof on stilts,
 - Timber windows to north, west and south elevations with door on the western side,
 - Elevated metal walkway to western and southern sides of office, with access stairs located to the south,
 - Walkway extends past office on western side,
 - Galvanised steel shed with gable roof behind classification office to the east with green painted timber quoins and fascias.

Elements of Significance:

Elements of heritage significance include (but are not necessarily limited to):

- Horizontal shed silo,
- 2-cell steel vertical silo,
- 4-cell concrete vertical silo,
- Weighbridge office and weighbridge foundation,
- Lavatory,
- SACBH metal sign,
- Classification office.

Elements not considered to contribute to significance of place include (but are not necessarily limited to):

- Brinkworth Railway Station Complex (LHP), including corrugated iron goods shed and platform, steel cargo crane, steel water tower, signage and stand, railway turntable and water standpipe.

HISTORY, CHRONOLOGY, SITE DETAILS & PHOTOGRAPHS

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History of the Place

Origins of Bulk Handling

Handling grain in bulk originated in the United States of America during the latter half of the eighteenth century, beginning with Oliver Evans' invention of the first bucket grain elevator in the 1780s. Robert Dunbar improved Evans' design in 1843, leading to the adoption of elevators to load and unload grain from ships throughout North America.¹ The construction of bulk storage and management facilities followed, and by the beginning of the twentieth century most wheat in the USA and Canada was handled in bulk, with the latter operating a bulk handling system exceeding a capacity of 150 million bushels.² Other countries also began adopting the bulk system. Russia, for example, constructed a network of bulk grain elevators throughout their grain-growing provinces in the 1910s.³

Despite proven success overseas, and foreign purchasers' increasing preference for bulk imports of grain, the transition from bagged to bulk handling in Australia was slow. In South Australia, the transition took almost fifty years, making the State one of the last major wheat-producing regions in the world to adopt a bulk grain handling system. The delay was due in part to concerns about monopolisation and job losses, as well as the technical and financial challenges of equipping multiple port terminals with the requisite facilities.

Bagged Versus Bulk

During the first half of the twentieth century, South Australia's grain was bagged in four-bushel sacks made of jute or corn and manually handled from farms to local rail sidings, then onto ports and finally ships for exportation.⁴ By this time, the process was inefficient and had many disadvantages, foremost being the amount of time and labour involved, with hundreds employed in Port Adelaide alone for the sole purpose of receiving grain and loading ships at harvest time.⁵

Bulk handling was first considered in South Australia in 1908, when a Royal Commission was appointed to investigate the marketing of wheat. Although the seven members of the House of Assembly commended the bulk handling system in principle, they ultimately decided the time was not right.⁶ In 1914, Parliament again raised the question, when the House of Assembly commissioned Canadian silo firm Metcalf & Co. to examine the costs and benefits of substituting a 'system of handling wheat in bulk for the present system of handling in bags.'⁷ The resulting report exposed the major deficiencies of bagged handling over bulk handling, arguing:

- the cost of handling and transporting wheat in bags was excessive, with South Australian farmers losing £250,000 to £300,000 annually between purchasing and reselling their bags;
- the speed of handling in bags was slow, with each bag having to be sewn on the farm;
- the method of weighing bagged grain at country rail stations was inaccurate;
- the bag system congested railways, country stations, and ports;
- the bag system was highly susceptible to weather, vermin and pests;
- the cost of cleaning sacked wheat was excessive, with Australian wheat often incurring a large penalty overseas due to it not being fully cleaned;
- the free storage system was not equitable and gave merchants control of the crop.

Metcalf & Co.'s report proposed a £1,100,000 bulk handling system for the state comprised of a network of upcountry storage sites that would feed into five export terminals at Port Adelaide (Outer Harbor), Wallaroo, Port Pirie, Port Lincoln and Thevenard.⁸ It was estimated that annual savings would be in the order of £275,000, and the system would pay for itself in four years. After considerable debate the motion lapsed due to heavy establishment costs and apathy from growers.⁹

In addition to the financial expense of the bag system, critics demonstrated that it led to inadequate inspection, grading, and selling systems. In 1888, South Australia developed the Fair Average Quality (F.A.Q.) system to grade grain in bags. Each harvest season, the Chamber of Commerce drew samples from every delivery point on a percentage basis, excluding obviously inferior lots. These samples were bulked and mixed before an official composite sample was fixed and its imperial bushel weight determined. The sample was thus a weighted average.¹⁰ This system drew constant criticism, as it disadvantaged farmers who produced a higher grade of grain, and rewarded farmers who produced a lower grade, thus removing any incentive for farmers to grow and deliver the best and cleanest wheat possible.¹¹

Allen R. Callaghan argues that the major problems that the advocates of bulk-handling faced were political, not technical.¹² Opposition was based on the cost of maintenance, fears of monopoly¹³ and concerns that bulk handling 'would seriously affect the labour market by increasing the volume of unemployment.'¹⁴ Journalist Maxwell Lamshed adds that high initial costs also played a role in arguments against bulk handling, with the proposed systems all requiring the purchase of special delivery trucks for the farmer and the establishment of siding storages and terminal silos.¹⁵

For the next thirty years numerous attempts to establish bulk handling in South Australia were made. In 1922, a farmers' co-operative company called the Farmers' Bulk Handling of Grain Co-operative Limited took over the Metcalf plans. In 1933, an inquiry comprising over 290 pages of evidence taken from farmers across the State was presented to the government, and in 1934 the Public Works Committee submitted

recommendations for the establishment of a bulk handling scheme. All attempts were unsuccessful.

The Second World War provided a stimulus for the development of bulk handling when the Australian Wheat Board (AWB) was empowered by the Minister for Commerce to sell and dispose of any wheat acquired by the Commonwealth, and manage all matters regarding its handling, care, movement and shipment.¹⁶ As the War had severely curtailed exports, the AWB had to house wheat that would normally have been shipped. In response, the Board embarked on an extensive construction scheme between 1941 and 1943, erecting large bulk bins in Western Australia and Victoria. However, the scheme did not make it to South Australia during the war.¹⁷

Following the war, the AWB saw an opportunity for South Australia to adopt bulk handling after the Broken Hill Proprietary Company (BHP) constructed a jetty and conveyor belt at Ardrossan in 1948 to ship dolomite interstate. By 1951, an agreement was reached between the State Government, BHP, the South Australian Harbors Board (SAHB), and AWB to construct a bulk grain handling facility at the port, a decision motivated in part by a shortage of grain bags at the time.¹⁸ Under the agreement, the AWB provided funding to construct a million-bushel capacity, horizontal shed with a sloping internal floor and gravity-fed underground conveyor, linked to the BHP belt. The new storage facility was opened by the Premier, Sir Thomas Playford, on 25 November 1952, marking the first silo constructed as part of the bulk handling system in the State.¹⁹

The South Australian Co-operative of Bulk Handling

In 1954, the South Australian Wheat and Woolgrowers' Association (SAWWA) prepared a draft bill proposing the establishment of a bulk grain handling co-operative. The suggested entity was to be a non-distributing co-operative, with no share capital or dividends paid on shares, focussing only on bulk handling and storage of wheat, and was not to become a grain trading business.²⁰ Growers were to pay the company a compulsory toll of 3d per bushel for all wheat they produced, which was to be applied towards financing the construction and operation of bulk grain handling facilities.²¹ The scheme provided for the construction of 100 upcountry sidings with an average capacity of 270,000 bushels each at an estimated cost of £4,850,000 or about 3s7d a bushel based on a normal wheat crop of 27,000,000 bushels.

To support their bill, SAWWA provided the Government with 5,000 signatures from growers committing to paying tolls of no less than 3d a bushel for 12 years for the purpose of raising capital in the company.²² On 7 December 1954, SAWWA proceeded to register a new company, the South Australian Co-operative of Bulk Handling Limited (SACBH).²³

The *Bulk Handling of Grain Act* (Bulk Handling Act) was assented to by Parliament on 7 July 1955, granting SACBH the exclusive right to handle wheat and other grains in bulk within South Australia. Their principal objective was to establish, maintain, and

conduct 'a scheme or system for receiving, handling, transporting, and storing wheat and other grain in bulk' in South Australia.²⁴

As detailed in SAWWA's bill, SACBH was a private co-operative wholly owned by grain growers, raising capital through tolls.²⁵ Growers who signed up as members when the company was first formed agreed to pay 3d per bushel for all grain delivered to storage. In subsequent years, as the storage network expanded, growers paid 6d per bushel. Members paid these tolls over a 12-year period, after which they were refunded their contributions in 12 annual instalments. No interest was earned or paid on the toll as all net profits were used to establish bulk handling facilities, as well as maintenance and improvements, as specified by the Act.²⁶ Within twelve months, 8,500 members had signed up to the Co-operative, growing to 17,388 members in 1961.²⁷

The Silo Construction Project

Under the *Bulk Handling of Grain Act 1955*, SACBH had to promptly establish adequate bulk handling facilities at terminal ports and railway stations and sidings.²⁸ The original infrastructure plan envisaged five port terminals and 70 upcountry silos across the State at a cost of £5,000,000.²⁹ The initial phase of construction was largely funded by a £1,000,000 loan from the Commonwealth Bank, guaranteed by the State Government.³⁰ Membership tolls funded the rest. On 10 November 1955, SACBH purchased the Ardrossan silo from the AWB following agreements with the SAHB for lease of land and with BHP for use of its conveyor belt.³¹ Within the first twelve months, more than 4,000,000 bushels of wheat was exported in 21 ships. Pressure quickly mounted to build additional bulk country storage that would feed the Ardrossan terminal.

The first upcountry silo in the State, a horizontal shed type, opened at Paskeville in January 1956. Bute followed a few months later. That same year, the Co-operative received approval to erect five horizontal shed-type silos at Balaklava, Snowtown, Blyth, Hoyleton and Brinkworth, and three cylindrical concrete vertical silos at Nantawarra, Redhill and Gulnare.³² In just two years, a new terminal and 13 upcountry silos, representing 10 million bushels of storage, had been completed, with demand escalating thereafter. The order of priority for the erection of bulk handling facilities was determined by the urgency of the needs of growers and the amount of grain produced in the various parts of the State.³³ Expansion echoed the growth of members, as the toll system financed silo construction: more members meant more upcountry silos.

The bulk system operated in stages. Growers would first deliver grain by road to either upcountry storage receival sites or directly to port storage, where it was collected, weighed, tested, graded and stored by SACBH for later shipment or sale to local markets. From upcountry storage, SACBH was then responsible for freighting the grain by rail and road to an export terminal. Finally, the grain was loaded onto shipping vessels through one of the seven port terminal loading facilities.³⁴

By 1965, just ten years after the passing of the *Bulk Handling of Grain Act 1955*, the Co-operative had constructed provision for the storage of 48,877,000 bushels of grain.³⁵ The basic components of the bulk handling network were now established, propelled forward by bumper harvests in the late 1960s. By the mid-1980s, most receival centres had two or more intake systems to keep up with demand, with grain elevators capable of handling rates from 60 to 200 tonnes per hour. Additional storage at these facilities consisted of steel vertical, horizontal, bunker, and emergency shed type storages, and were usually a self-contained block with its own intake and outload equipment.³⁶ Shipping rates had also increased dramatically, terminals like Port Lincoln reaching loading speeds of 4000tph.³⁷

Bulk Storage Design

Over the course of its 40-year history, SACBH utilised numerous designs for the bulk storage of grain.³⁸ The first type was the horizontal shed, which was used at early upcountry storage sites such as Paskeville and Brinkworth. Built using an in-house design, they were fast and affordable to construct.³⁹ However, the horizontal shed had inherent long-term disadvantages such as high labour, operating and maintenance costs. Its cell-less design also made it difficult to segregate grain types and grades, and to undertake grain inspection and fumigation.⁴⁰

While the design was quickly abandoned in favour of concrete vertical silos, the Co-operative later utilised horizontal sheds for supplementary storage. In the 1960s, galvanised iron sheds with structural steel framework and bulkhead walls were used to establish 11 million bushels of emergency storage.⁴¹ Shed storage capable of accommodating three separations of grain was also employed by SACBH in the 1990s. These were often built in pairs and shared a common elevator with loading rates of 400tph.⁴²

Built at around 104 upcountry storage sites, for a total capacity of 79 million bushels, the concrete vertical silo became the “backbone” of South Australia's silo network.⁴³ They were based on a low-cost design submitted by the Australian silo construction company Haunstrup & Co. Comprised predominantly of either four or six main cylindrical cells, their modular design was capable of extension by adding more cells. Multi-cell silos played a pivotal role in the existing storage system by providing segregation capacity for minor grains such as barley and oats, as well as grades of grain which in turn allowed growers to earn higher premiums for their grain.⁴⁴

By the end of the 1960s, concrete vertical silos were becoming increasingly expensive to build, and SACBH turned to using steel vertical silos. The steel bins, either 1,800 tonne or 6,000 tonne in capacity, were quick to build, cost effective and had the further advantage of being gas-tight to facilitate more efficient grain fumigation and the use of nitrogen and carbon dioxide-controlled atmospheres.⁴⁵

An increase in grower delivery pressures and the rising inability to segregate grains and grades and every silo site across the state resulted in the introduction of bunker

storage in the 1980s. Bunker storage involved placing grain on surfaced ground buttressed with retaining walls of galvanised iron. Plastic sheeting was used to protect the grain from weather.⁴⁶ Established at strategic sites across the state such as Ardrossan, Gladstone and Kimba, this type of storage provided more rapid turnover times for growers and their trucking contractors.

Demutualisation

By 1980, SACBH had reached a peak membership of over 16,300 growers and were operating bulk grain storage facilities with a capacity of more than 4 million tonnes.⁴⁷ In 1989, the *Wheat Marketing Act* was passed, deregulating the domestic wheat market. This legislation removed the monopoly power of marketing authorities such as the AWB and the Australian Barley Board (ABB), as well as that of state-based bulk handling businesses such as SABCH.⁴⁸

According to historian David Thomas, by the mid-1990s, escalating competitive forces were unleashed within South Australia's grain industry, resulting from the deregulation, privatisation, and consolidation of statutory rail, marketing, storage and handling organisations.⁴⁹ For SACBH, this process culminated in the repealing of the Bulk Handling Act in 1996, which took away the Co-operative's monopoly rights and gave federal organisations AWB and ABB significant powers to override State legislation.⁵⁰ The once amicable relationship SACBH had enjoyed with AWB and ABB became more competitive as the decade ended.

In response, SACBH appointed its first independent, non-grower director, Perry Gunner, to the board and by acquiring bulk handling facilities at seaports from the newly privatised SAHB, then known as Ports Corp. This move gave the Co-operative total control of the handling channel from receipt point to ship.⁵¹

In August 2000, at a special general meeting, SACBH was formally demutualised by a vote of 96% of members. SACBH was restructured, abandoning its non-distributing co-operative business structure for a hybrid structure consisting of AusBulk, a conventional company limited by shares, and a holding company, United Grower Holdings, a solely grower-owned public company that in turn owned 51% of AusBulk.⁵² The new business was known as AusBulk-UGH.

At the same time, ABB privatised into ABB Grain Ltd. During the early 2000s, the entire Australian grain industry was highly competitive, with the newly privatised AWB Ltd. and ABB Grain Ltd. and the demutualised AusBulk-UGH all keen to maximise their shareholder returns via diversification, acquisition, or mergers. AusBulk-UGH became a takeover target and merged with ABB Grain Ltd in September 2004.⁵³ In September 2009, the company was acquired by Viterro Canada for \$1.6 billion.

Mid North Region

Situated well below the geographical centre of the state, South Australia's Mid North region encompasses a roughly rectangular area north from Kapunda to Carrieton

and from Port Pirie to the pastoral country east of Burra.⁵⁴ Topography, climate and natural resources, namely copper, cereal grain and wool, determined the principal industries and settlement patterns in the region. Copper was discovered at Kapunda in 1842 and Burra in 1845 with mining activities continuing into the late 1870s.

Sheep and cattle runs were established in the early 1840s. Demand for arable farm land during the 1860s resulted in major land reform legislation such as the *Waste Land Amendments Act 1869*. The Act enabled prospective farmers to buy land on credit transforming many sheep runs into small wheat farms.⁵⁵ With these schemes, wheat growing and grazing sheep for wool and meat became, and remain, the dominant farming activities in the region.

Brinkworth

Brinkworth is located on Kurna and Ngadjuri country. Before the arrival of European settlers, Kurna people skilfully managed the land for hundreds of generations and maintained a deep knowledge of the environment. Teaching young people was a central part of Kurna life and understanding the environment was important for more than just food, shelter, tools and medicine. Kurna spirituality recognises the connectedness of people and culture with the worlds of plants, animals and stars.⁵⁶

Ngadjuri people lead a nomadic life, wandering from place to place in search of food. Wurleys, or shelters, were made by placing three sticks in the ground in a triangular shape before large sheets of bark from red gum trees with yacca leaves and reeds were added for cover.⁵⁷ Camps moved around once a fortnight. Today, many rock surfaces are alive with Ngadjuri carvings and paintings, their rock shelters, scar trees, and grave sites continuing to tell the stories of Ngadjuri people and their ongoing connection to the land.⁵⁸

Colonisation disrupted the Kurna and Ngadjuri ways of life. Within twenty years, they experienced a dramatic decline in population due to the introduction of violence and disease, the survivors experiencing dispossession and dispersal to other areas.⁵⁹ Some were transported to missions or settlements such as those at Point Pearce and Poonindie and others worked with or for the colonists, usually in exchange for rations or other goods. It was not until after the Second World War that First Nations populations began to grow again. The repeal of restrictive legislative provisions in the early 1960s enabled some to move more freely back to country where they were able to seek employment and education in Adelaide and to live near their families.⁶⁰

Located in the Hundred of Hart, the town of Brinkworth was established on sections owned by agriculturalist George Brinkworth. The township was proclaimed on 11 November 1892.⁶¹ Messrs. Richardson & Co., the auctioneers responsible for selling Brinkworth's new town allotments boasted the town's location as being 'in the centre of a very fine agricultural district' and 'one of the most important junctions in the colony for a trade centre.'⁶²

Brinkworth's railway station opened on 2 July 1894. It was a junction station, forming part of the railway line between Blyth and Gladstone, as well as linking Snowtown to Kadina via Snowtown and Bute.⁶³ The facilities at the railway station included a wooden passenger station, three distant and two home signals, a 5-tonne crane, 12 tonne weighbridge and office, and 45-foot turntable. A galvanised iron goods shed with a loading platform was erected shortly after.

Following the opening of the bulk grain storages at Paskeville and Bute in early 1956, the South Australian Co-operative of Bulk Handling (SACBH) invited tenders for the construction of 500,000-bushel bulk grain storages at Balaklava, Brinkworth and Snowtown. This first generation of silos were designed to feed the Ardrossan terminal which in turn supplied bulk wheat to New Zealand.⁶⁴

While the call for tenders specified the storage would have concrete walls, floors and footings, the resulting storage at each of the three sites was constructed of wood and corrugated iron. Designed by SACBH's consulting engineer, J Corbett, the sheds shared similarities with the low cost, horizontal wood and iron storage used throughout Western Australia.⁶⁵ Construction of the horizontal shed silo at Brinkworth was completed in time for the 1956/1957 grain harvest. The facility's storage expanded in 1969 with the construction of two steel bins, and again in 1970 with the erection of a four-cell concrete vertical silo.⁶⁶ With three types of storage capable of holding seven different grain segregations, Brinkworth's storage capacity had reached 36,400 tonnes.⁶⁷

Sometime after 1980, the weighbridge and weighbridge office were moved from the southern side to the northern side of the concrete vertical silo. Following the closure of Brinkworth's railway station in 1990, grain was collected and transported via road. The complex remained in operation until 2019.

Chronology

Year	Event
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|------|--|
| 1842 | Copper is discovered at Kapunda. |
| 1845 | Copper is discovered at Burra. |
| 1869 | The <i>Waste Land Amendments Act</i> is passed.
The Hundred of Hart is surveyed. |
| 1892 | 11 November: The township of Brinkworth is founded. The first allotments are offered for sale by auction. |
| 1894 | 2 July: Brinkworth becomes a stop on the railway extension from Blyth to Gladstone.
2 July: A railway line of 12 miles 65 chains between Snowtown and Brinkworth opens. |
| 1895 | 2 October: The railway refreshment rooms at Brinkworth open. |

- 1938 The railway refreshment room is closed and replaced by new rooms at Balaklava. They are demolished approximately 7 years later.
- 1952 The first bulk grain handling facility and export terminal in the State, comprised of a horizontal shed silo, is constructed at Ardrossan. The new facility is opened by Premier Sir Thomas Playford on 25 November.**
- 1955** The South Australia's Wheat and Woolgrowers' Association (SAWWA) provides the South Australian Government with 5,000 grower signatures committing to paying storage tolls should a bulk handling company be established.
- The Government assents the Bulk Handling of Grain Act, on 7 July.**
- 1956 The first South Australian upcountry storage silo opens at Paskeville.
- A horizontal shed silo is constructed by the South Australian Co-operative of Bulk Handling (SACBH) on the western side of the Brinkworth railway.**
- 1969 A two-cell steel vertical silo is built to the north of the horizontal shed at Brinkworth.**
- 1970 A four-cell concrete vertical silo is constructed at Brinkworth.**
- 1982 Rail passenger services cease at Brinkworth. They are replaced with a road bus.
- 1985 The SACBH silos are serviced by road.
- 1990 The railway station at Brinkworth closes for rail freight.
- December: All railway lines to or through Brinkworth close.
- 1991 The dismantling and removal of rail track components begins. The last piece of the track is removed in 2003.
- 1996 November: The Brinkworth railway station is demolished.
- 2004 AusBulk begins negotiations with Transport SA to acquire the railway siding at Brinkworth.
- 2012 The remaining railway buildings are local heritage listed by the Wakefield Regional Council (Brinkworth Railway Station Complex).
- 2019 The bulk grain handling facility at Brinkworth closes.**

References

Books and Book Chapters

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SITE DETAILS

Brinkworth Bulk Grain Handling Complex

PLACE NO.: 26601

Main Street, Brinkworth SA 5464

DESCRIPTION OF PLACE:	Bulk grain handling complex comprised of a horizontal shed silo, a two-cell steel vertical silo, a four-cell concrete vertical silo, classification office, weighbridge office and weighbridge foundation, lavatory and SACBH metal sign.		
DATE OF CONSTRUCTION:	1956 - 1990		
REGISTER STATUS:	Council identified: 1 March 2024 Provisional entry: 26 June 2025		
CURRENT USE:	Inactive grain storage facility 2019 - present		
PREVIOUS USE(S):	Bulk grain storage facility 1956 - 2019		
LOCAL GOVERNMENT AREA:	Wakefield Regional Council		
LOCATION:	Street No.:	Lot 32	
	Street Name:	Main Street	
	Town/Suburb:	Brinkworth	
	Post Code:	5464	
LAND DESCRIPTION:	Title	CT 6028/47 D77195 A32	
	Reference:		
	Hundred:	Hundred of Hart	

PHOTOS

Brinkworth Bulk Grain Handling Complex
Main Street, Brinkworth SA 5464

PLACE NO.: 26601



Brinkworth Bulk Grain Handling Complex c.1970.

Source: South Australian Bulk Handling Co-operative



Brinkworth's concrete vertical silos with classification office at centre c.1992.

Source: Steve McNicol, *Stations Remembered*, p.19



The classification office at Brinkworth.

Source: DEW Files, March 2025



Northern elevation of the classification office (left) and storage shed (right).

Source: DEW Files, March 2025



Weighbridge office.

Source: DEW Files, March 2025



Interior of the weighbridge office.

Source: DEW Files, March 2025



Southern elevation of concrete vertical silo (left) and receival hopper shed (right).

Source: DEW Files, March 2025



Interior of the concrete vertical silo showing the grain elevator (left) and the railway outloading chute to the silo's western side (right).

Source: DEW Files, March 2025



Steel vertical silo.

Source: DEW Files



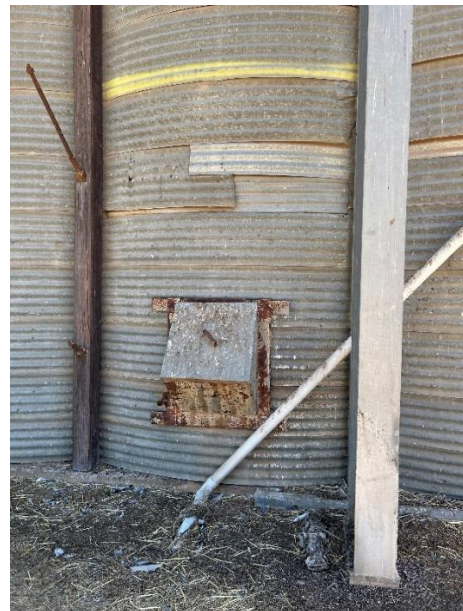
Outloading bin and outloading chute (left) and receive hopper enclosure (right).

Source: DEW Files, March 2025



Northern elevation of horizontal shed silo.

Source: DEW Files, March 2025



Switchboard, grain elevator tower and receival hopper (left) and detail of the curved corrugated steel walls with direct cell outloader (right).

Source: DEW Files, March 2025



Eastern elevation of the horizontal shed silo showing external reinforcement columns.

Source: DEW Files, March 2025



Interior of the horizontal shed silo (left) with grain conveyor (right).

Source: DEW Files, March 2025

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- ¹ Tim Mazzarol, 'They didn't have to sell their shares – the rise and demise of SACBH-ABB Grain,' case study research report, C.E.R.U., (2021), p.3.
- ² 1 metric tonne of wheat equals approximately 37 bushels, making 1,000,000 bushels equivalent to approximately 27,027 metric tonnes.
- ³ Metcalf & Co. Ltd., 'Bulk handing of wheat,' (Adelaide: Government Printer, 1915), p.3.
- ⁴ A.R. Callaghan, A.J. Millington, *The Wheat Industry in Australia* (Sydney: Angus and Robertson, 1956), p.371.
- ⁵ David Thomas, *A Golden Era: Celebrating 5 Years of Bulk Grain Handling in South Australia* (Adelaide: ABB Grain Ltd, 2006), p.17
- ⁶ Max Lamshed, *Grain is better in bulk: the story of South Australian Co-operative Bulk Handling Limited* (Adelaide: South Australian Co-operative Bulk Handling Limited, 1966), p.6.
- ⁷ Metcalf & Co., 'Bulk Handling,' p.3.
- ⁸ Metcalf & Co., 'Bulk Handling,' pp.42-43.
- ⁹ Lamshed, *Grain is better in bulk*, p.6.
- ¹⁰ Callaghan, *The Wheat Industry*, p.350.
- ¹¹ Metcalf & Co., 'Bulk Handling,' p.13.
- ¹² Allen R. Callaghan served as Director of the South Australian Department of Agriculture from 1949 to 1959.
- ¹³ Tim Mazzarol, Elena M. Limnios (eds.) & Richard Simmons, 'To be or not to be a co-operative? The case of Australia's grain co-operatives CBH and ABB Grain,' in Sophie Reboud & Clark Delwyn (eds.) *Research Handbook on Sustainable Co-operative Enterprise* (Edward Elgar Publishing Limited, 2014), p.117.
- ¹⁴ Transcript of the proceedings of the Legislative Council, *Bulk Handling of Grain Bill* (second reading) (SA) 28 June, 1955, p.438.
- ¹⁵ Lamshed, *Grain is better in bulk*, p.7.
- ¹⁶ Thomas, *A Golden Era*, p.20.
- ¹⁷ Thomas, *A Golden Era*, p.20.
- ¹⁸ Mazzarol, 'SACBH-ABB Grain,' 7. And Thomas, *A Golden Era*, p.21.
- ¹⁹ Thomas, *A Golden Era*, p.21.
- ²⁰ Thomas, *A Golden Era*, p.21.
- ²¹ Legislative Council, *Bulk Handling of Grain Bill*, p.433.
- ²² Legislative Council, *Bulk Handling of Grain Bill*, p.434.
- ²³ Thomas, *A Golden Era*, p.24.
- ²⁴ *Bulk Handling of Grain Act 1955*, p.1.
- ²⁵ Kelly, 'Operations and Control Systems,' p.69. And Thomas, *A Golden Era*, p.109.
- ²⁶ Kelly, 'Operations and Control Systems,' p.68.
- ²⁷ Thomas, *A Golden Era*, pp.110-111.
- ²⁸ *Bulk Handling of Grain Act 1955*, p.8.
- ²⁹ Thomas, *A Golden Era*, p.109.
- ³⁰ Kelly, 'Operations and Control Systems,' p.67.
- ³¹ Thomas, *A Golden Era*, p.27.
- ³² Thomas, *A Golden Era*, p.30.
- ³³ *Bulk Handling of Grain Act 1955*, p.8.
- ³⁴ Essential Services Commission of South Australia, 'Inquiry into the South Australian bulk grain export supply chain costs,' (December, 2018), p.21.
- ³⁵ South Australian Co-operative Bulk Handling Limited (1966), *12th Annual Report and Statement of Accounts for the year ended 31 October 1966*.
- ³⁶ Kelly, 'Operations and Control Systems,' p.68.
- ³⁷ Kelly, 'Operations and Control Systems,' p.68.
- ³⁸ Max Lamshed, *Grain and co-operation: the story of South Australian Co-operative Bulk Handling Limited* (Adelaide: South Australian Co-operative Bulk Handling Limited, 1966), p.13.
- ³⁹ Thomas, *A Golden Era*, p.28.

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- ⁴⁰ South Australian Co-operative Bulk Handling Limited, *Bulk Handling in South Australia*. Glenelg: Smedley Press, 1971.
- ⁴¹ SACBH, *Bulk Handling*, 1971.
- ⁴² SACBH, *Bulk Handling*, 1971. Thomas, *A Golden Era*, p.38.
- ⁴³ SACBH, *Bulk Handling*, 1971.
- ⁴⁴ SACBH, *12th Annual Report*. Thomas, *A Golden Era*, 35. Richard Fewster, *A silver milestone: the 25 year history of South Australian Co-operative Bulk Handling Limited* (Adelaide: South Australian Co-operative Bulk Handling Limited, 1980), p.15.
- ⁴⁵ South Australia Co-operative Bulk Handling Limited (1980). *26th Annual Report and Statement of Accounts for the year ended 31st Oct. 1980*.
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- ⁴⁷ Mazzarol, 'SACBH-ABB Grain,' p.7.
- ⁴⁸ Mazzarol, 'SACBH-ABB Grain,' p.11.
- ⁴⁹ Thomas, *A Golden Era*, p.106.
- ⁵⁰ Mazzarol, 'SACBH-ABB Grain,' p.12.
- ⁵¹ Mazzarol, 'SACBH-ABB Grain,' p.13.
- ⁵² Mazzarol, 'SACBH-ABB Grain,' p.15.
- ⁵³ Mazzarol, 'SACBH-ABB Grain,' p.16.
- ⁵⁴ John Mannion, 'Mid North,' *The Wakefield Companion to South Australian History*, ed. Wilfred Prest (Kent Town: Wakefield Press), p.350.
- ⁵⁵ Mannion, 'Mid North,' *Wakefield Companion*, p.351.
- ⁵⁶ Lewis Yerloburka O'Brien and Many Paul, 'Kaurna People,' SA History Hub, History Trust of South Australia (accessed 24 February 2025), <https://sahistoryhub.history.sa.gov.au/subjects/kaurna-people/>.
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- ⁵⁹ State Library of South Australia, 'Aboriginal people of South Australia: Kaurna,' South Australian Aboriginal people and languages (accessed 24 February 2025), https://guides.slsa.sa.gov.au/Aboriginal_peopleSA/Kaurna; Knowledge Project, 'Modern History,' (accessed 24 February 2025), <https://knowledgeproject.com.au/modern-history>.
- ⁶⁰ 'Kaurna People,' SA History Hub.
- ⁶¹ *The Areas' Express*, 'Advertising,' 28 October 1892, p.2.
- ⁶² *The Areas' Express*, 'Advertising,' 28 October 1892, p.2.
- ⁶³ Steve McNicol, *Stations Remembered: SAR Blyth & Brinkworth* (Elizabeth, S.A.: Railmac Publications, 2021), p.3.
- ⁶⁴ *Port Lincoln Times*, 'Bulk Handling Plans for E.P.,' 23 August 1956, p.1.
- ⁶⁵ Compared to those located in Pingrup and Wubin, Western Australia; Thomas, *A Golden Era*, p.28.
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