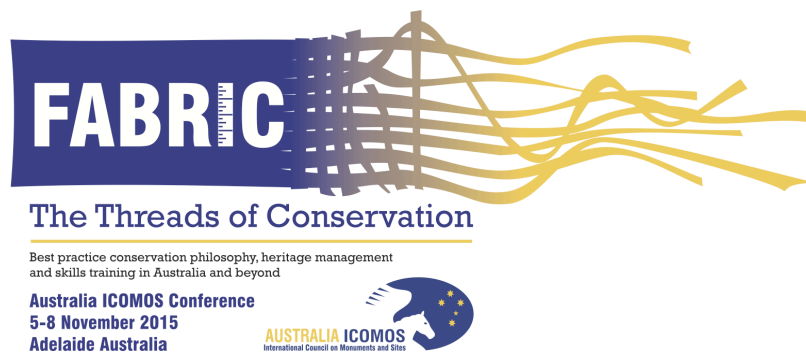


# Hobart Brick Heritage

Sarah Waight

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## **Introduction**

Brick has always been one of Australia's most popular and basic of building materials. From the very first months of the establishment of the colony of New South Wales, which included Van Diemen's Land, bricks and mortar were being made for the fireplaces and chimneys of the settlement's earliest crude shelters. Today, across our Australian cities, towns and streets, we see bricks in chimneys, walls, front fences, houses and industrial buildings. Such is the versatility and usefulness of this material, bricks have dominated home construction particularly heavily during the Federation, Edwardian and the Post-War era. Brick has enjoyed periods of revival and renewed appreciation as well as being much maligned for its spread across the suburbs of Australian cities, especially during the last quarter of the 20<sup>th</sup> century.

## **Early brickmaking**

Initially ten thousand bricks and ten brick moulds were brought with the First Fleet in 1788 to New South Wales and records show that soon after arrival, quantities of bricks were being made in New South Wales. In Van Diemen's Land the earliest reference to the unloading of bricks appears in September 1803 with from the ship Lady Nelson from Port Jackson at Risdon Cove. (Bolt 2004:47) With the arrival of David Collins in 1804 came two male convicts who were brickmakers; Thomas Croft and James Roberts and a limeburner by the name of George Wheeler. They were soon put to good use to make bricks for shelters and build chimneys for the people of early Hobart Town for heating and cooking.

The first report of brick making appears in the diary of the Rev. Robert Knopwood, who notes that on the 1 October 1804, 'This day the brick makers began to make some'. (Nicholls

1977:62) In the following year in April 1805, Knopwood visited the Governor ‘who ordered me some bricks.’ (ibid:81) In the following year in March 1806, Collins offered Knopwood to ‘lend me 4000 bricks and to pay him when Croft made me some.’ (ibid:103) In a despatch to Lord Hobart dated 10 November 1804, Collins stated;

I have the satisfaction of Stating that no where can better or more durable Bricks be found than what are made from the Clay of this Country. I have just had a Kiln containing about 30,000 burnt off, in which I had some Tiles placed as an Experiment and find them turn out as well as the Bricks. By this means we shall have a safer and more expeditious Covering for our Buildings, than Thatch, which we have hitherto had to bring to the Settlement from a distance by Water. (HRA s.III i:287)

The exact location of this early kiln is unclear, however numerous reports indicate that kilns were dotted across Hobart Town in locations where clay was found. The difficulty and cost of transporting bricks meant that they were often made and burnt where they were to be used.



This watercolour which dates to 1806 by G. P. Harris shows a substantial and well built chimney on his own cottage located in Hobart Town (Rex Nan Kivell Collection, National Library of Australia)

In 1819 Englishman, John Bigge accepted an appointment as commissioner of inquiry into the administration of the new colony. He arrived in Van Diemen's Land in 1820 commencing his enquiries including an interview of Major Thomas Bell, who was appointed as Acting Engineer and Inspector of Public Works. He reported that a daily record of the work completed by the convict brickmakers and other tradesmen was kept. Problems with the quality of bricks were also revealed during the inquiry. George Read who had been the Superintendant of the building of the Hospital, Church and Government House reported that the brickwork on the church was 'very bad' with the northern wall being out of plumb by 15 inches. He revealed that the brickwork on the Hospital was also not good 'owing in some measure to the badness of the bricks'. He reported that the moulds at the Government brick kilns had been of different sizes but had since been equalized and went on to say that the bad quality of the bricks was also due, in part, to the clay not being sufficiently tempered. (HRA s.III iii:334-335)

### **The Government Brickfields**

In one hand drawn plan of Hobart Town dating to 1827, a street block, in what is now known as North Hobart, is described as a 'reserve for bricks'. It was later known as the Government Brickfields which had started in about 1816.



This is a portion of the Hobart Town Map by George Frankland, published by J. Cross, London in 1839 showing the open ground of the Brickfields site. (Allport Library and Museum of Fine Arts, Tasmanian Archive and Heritage Office)

The Brickfields operated for many decades coming under scrutiny from authorities from time to time. In 1820, Major Bell reported to the Bigge Inquiry that his brickmakers at the Brickfields made about 6000 bricks per day from the labour of six stools of six men each, noting however this was not a consistent output with work suspended during the winter months. (HRH s.III iii: 42) The bricks from the Brickfields were put to good use and transported by cart to all over Hobart Town.

Over the years, access to the Brickfields site had become free and easy. The site attracted a number of hopefuls aiming to set up a hut or even utilise the equipment to make bricks. A £10 reward was offered in 1819 for information leading to the apprehension of persons who

‘wickedly and maliciously knock down and destroy many thousands of the new-made unburnt Bricks that were standing in the Government Brickfields.’ (The Hobart Town Gazette and Southern Reporter 1819:1) In 1826, a stern warning was issued by the Engineers Office for trespassers living at the Brickfields and those making bricks without authority to quit or face prosecution. In 1833 it was publicly announced that bricks were being intentionally but quietly being ‘dropped off’ at other sites whilst being transported from the Brickfields to their intended destination. Clearly authorities knew more about the practice than was publicly revealed because the same article announced that those who had received the bricks were soon to be identified. (The Hobart Town Courier 1833:2)

In the colony of Van Diemen’s Land, early bricks were hand-moulded using the traditional method of pressing clay into a brick mould one at a time. There are two early brick moulds held in public collections. One at the Tasmanian Museum and Art Gallery is a basic open mould without a base; a brickmaking technique employed in London. The other mould from the Port Arthur Historic Site Management Authority is smaller and has a base plate and is marked ‘BOSTON’ perhaps linked to the sailing vessel ‘Grotius’ from Boston which arrived in 1841 with brick presses on board for sale. These early convict made bricks were stamped with broad arrows and other marks of various types. Initially, all brickmaking was by hand and hard work so the arrival of a brick making press to make ‘solid or hollow bricks, tubes, cornices and other architectural ornaments.’ allowing 3 to 4 men to produce 10-12,000 bricks a day would have revolutionised the process in Hobart Town. (Hobart Town Gazette and Southern Reporter 1824:2) Where this press was in use is not known however it is likely it was located at the Government Brickfields given the advertised sale of brickmaking equipment including ‘superior brick making machine and steam engine with rollers, dies’ in 1858. (The Hobart Town Daily Mercury 1858:4). The work to create an homogenous mix

ready for the brickmakers to press into the moulds was done by hand, so the arrival of a pug mill in 1834 would also have been seen as a boon to industry. (Colonial Times 1834:1)

Bricks were a commodity of value in Hobart Town. Obviously, the theft of bricks would have been a difficult crime to conceal, but it did not deter some. In 1823, convicts George Clements and William Cooley were sentenced to return to the Government works and receive 100 and 50 lashes respectively for stealing 500 bricks. (Hobart Town Gazette and Van Diemen's Land Advertiser 1823:2) In the following year convict James Gerruston was found guilty in the Magistrates Court of stealing 3080 bricks from a kiln near Sandy Bay Creek on private property. For his crime, his sentence was harsh: 50 lashes and transportation to Macquarie Harbour for the term of five years. (Hobart Town Gazette and Van Diemen's Land Advertiser 1822:2)

### **Mechanised brickmaking**

News of developments in the brickmaking process reached Hobart Town during the 1840s and 1850s, especially equipment to expedite the making of bricks. After the Great Exhibition in London in 1851, various brickmaking devices arrived by ship. One was the Clayton's patent brickmaking machine realised by Henry Clayton of London. Highly regarded in England, the Clayton's machine of 1859 could make on average between 20,000 to 25,000 bricks a day and were a big commercial success. One appeared on the wharf of Hobart Town in 1854 as:

Clayton's Improved Patent Clay-preparing Solid and Hollow Brickmaking Machine, Pug Mill, Rollers; together with a selection of the most useful Dies for making bricks; draining, flooring and corrugated roofing tiles; spouting, flues and piping, A portable 3-

horse Steam Engine, with gearing complete, to work this machinery, is also ordered.

(The Courier 1854:3)



This wire cut brick was produced by the Hobart Town Patent Brickwork. A Clayton's double action machine and pressed brick machine were in use at the Hobart Town Patent Brickworks in New Town which was up for sale in 1857. (Photos courtesy of K. Bone)

In spite of the arrival of this new equipment, a scarcity of good quality building materials especially bricks continued and consequently there was a shortage of good housing and cottages. In 1878, the Tasmanian Mail reported that bricks were not available for any reasonable price, with the only supply being from the demolition of 'old and decayed premises from which the bricks can be taken to be re-erected elsewhere'. The same report claimed that there were no brickyards of any size or importance in Hobart despite brickmaking machines now being readily availability which could turn out bricks at a much lower cost. Contractors, it claimed, were missing the opportunity to build up a viable



enterprise for the benefit of all, in particular, the community for all the cheap and healthy homesteads that could be built. (The Tasmanian Mail 1878:12)

But by the mid-1880s there were four larger brickyards in Hobart. One was a brickyard owned and managed by Rippon Shield, a well known builder from the 1880s. His operation is described in clear and precise detail on land located on Knocklofty in Hobart. Determined to be independent of the uncertain supply of bricks from other sources, he invested in infrastructure to speed up the brickmaking and brick burning process and had three kilns cut into the solid rock with a fire box at the front, each holding 26,000, 35,000 and 60,000 bricks. He employed up to 12 men producing up to 20,000 bricks per week and used some of the latest equipment in substantial sheds. A roller mill and pug mill driven by two horses were on site and the rough material was emptied into the hopper and passed between two rollers, only a short distance apart. The indurated clay was then passed down into the horse drawn pug mill where it was worked ready for the moulders working at three tables. This part of the operation was then ‘performed by hand, in the old fashioned style’. (The Mercury 1883:3)

Not satisfied with the operation, Shield invested in more equipment including a steam engine, a brick moulding machine and grinding mills to develop an even more substantial business with greater output. He also invested in a hand stamping press which he sourced from engineering and blacksmith firm W. H. Jenkins in George Street, Fitzroy, Melbourne. Rippon Shield ownership of the brickyards ended with its sale of the venture to William Henry Cheverton, a prominent local builder (better known as W.H. Cheverton).

Another brickfield was that belonging to Robert Parkinson Brooke who worked a site in New Town in a gully at the foot of Augusta and Pottery Roads. According to newspaper reports,

Brooke had been making bricks at this site called Colebrook since the mid 1870s, a venture that was still operating in 1907. Mr Brooke's kilns and brickyard were offered for sale in June 1884 and were described as:

A Brick Yard, with six newly erected first-class Brick Sheds, capable of holding 300,000 bricks, two Pug Mills, two Box Kilns for Pottery, etc. There are magnificent beds of very superior clay, and a large number of both burnt and unburnt bricks, also quantity of timber. (Tasmanian News 1884:4)

The third and fourth brickyards were located in South Hobart and operated by Thomas Cheeseman and Robert Warrior and in total, these four brickyards employed 60 men and produced over 100,000 bricks per week.

In late 1882, the New Town Clay Works, later known as Waller and Co, announced it could provide building bricks in any quantity. Situated on two acres of land between the railway line and main road opposite the New Town Showground, this site was later known as the Brickfields, Bishop's Glebe. The managing partner was George Waller who had previously worked at the Lough Allen Clay Works in Ireland. He employed about a total of 30 men and boys at the works. A newspaper article reported that a number of skilled men had been brought out from Ireland some of whom were engaged digging clay from a quarry close to the railway line while the foreman was a man with over 40 years experience in the potteries of Staffordshire.

At the quarry, the dug clay was allowed to weather and then mixed with water. A steam powered brick moulding machine imported from the Lough Allen Clay Works in Ireland where Waller had previously worked had been installed at the plant. This machine could turn out 1200 bricks per hour when operated continually. A cutting machine delivered the final

bricks which were then gathered by young boys pushing barrows to the drying sheds or open ground where the bricks were covered with long grass or rushes. Two kilns operated from this location, a simple down draft operation and the other described as a Hoffman kiln with a third kiln proposed to be of the beehive type specifically for the firing of terracotta and pottery items. All kilns used firewood delivered by rail and road. Waller and Co also supplied a range of other clay and pottery products including chimney pots, arch and culvert splayed bricks, pressed and moulded bricks of various ornamental patterns, flooring tiles and garden pottery of all descriptions. (The Mercury 1883:2)

In 1885 Waller and Co became known as The New Town Brick and Pottery Company still under the management of Waller. In 1888 a new company was proposed to take over his lease of ground and raise capital for new machinery increasing the weekly output of bricks to 50,000. By 1891, Waller, a civil engineer, had moved on to the lure of mining wealth on the West Coast of Tasmania and away from the brick making industry.

### **Mechanised brickmaking and Hobart's suburbs**

Brickmaking during the 1890s entered a new phase of expansion, growth and mechanisation with most of the activity occurring at Knocklofty and New Town in Hobart.

From small beginnings, one operation owned by brickmaker Robert Duff in New Town, evolved into the most significant brickfield with the greatest longevity in Hobart, eventually closing in 2012. At a meeting in 1905 a new entity, called the Hobart Brick Co. Ltd, was created. The group was concerned by the monopoly situation and control of brick supplies and prices by prominent builder W. H. Cheverton owner of the brickworks located at

Knocklofty, later to become Crisp and Gunn. The meeting was told by Robert Henry Stabb (also a brickmaker from Mornington) that Robert Duff's operation was available to purchase.

By the start of World War I, the brickmaking industry was firmly in the hands of two operators; Crisp and Gunn and the Hobart Brick Co. The businesses were tightly organised, each business closely protecting and fighting to keep their own market share. Business tussles, including legal challenges continued over the next six decades as both businesses worked to secure important contracts and negotiate industry change. It was a period of fierce rivalry, dubbed the Brick Wars, in which advertising worked hard to win over the consumer.

In the meantime World War I changed the climate in which the business operated and there was a general downturn in construction and stocks at the Hobart Brick Co. starting to accumulate. (Graeme-Evans 2002:97-100) Over the ensuing decades, building strength waxed and waned, but in 1916 the Lands and Works Minister of the Liberal Government, stepped in to ensure that the production of bricks remained strong by authorising the order of bricks for all new public buildings. Not willing to favour one company of the other he specifically requested that the orders be divided equally between the two brickmaking companies. (The Mercury 1916:4) As demand for bricks grew the Directors of the Hobart Brick Co. sought to enlarge their Hoffman kiln in 1923 to match the Hoffman kilns on the Crisp and Gunn site.



Two Hoffman style kilns were built at the Knocklofty site on the hills of Hobart. Here the second kiln is under construction in about 1913 under the ownership of Crisp and Gunn.

Plans were floated for a third kiln, but it was never realised.

(Collection: Tasmanian Museum and Art Gallery)

However, in 1965, Crisp and Gunn undercut K&D (previously the Hobart Brick Co.) on the supply of bricks for a large job resulting in Crisp and Gunn being unable to supply other jobs with select quality. Without investment in plant and equipment at the Knocklofty site, Crisp and Gunn had struggled to remain competitive and produce a product matching the fashionable K&D Extrudex brick, that was widely seen as representing the future of brick building. Having invested in plant and equipment, K&D had correctly read the future market needs and set themselves apart from their competitors. Crisp and Gunn's Knocklofty site had become obsolete and in 1965 it became clear that Crisp and Gunn were ready to sell the Knocklofty brickworks site. K&D stepped in, purchased it in a shut-down state and demolished the buildings in 1968. (Graeme-Evans 2002:267)

### **Limekilns and limeburning**

The building of Hobart's brick buildings is not complete without lime for mortar and it was an invaluable product in the building of the new colonial settlement. It was used to bind

together stones, rock, rubble and moulded bricks into walls and chimneys and ovens for heating and cooking. The earliest references to the making of lime appear in the diaries the Rev. Robert Knopwood which reveal that a kiln was operating in 1807 on the shores of Ralph's Bay across the river from the settlement of Hobart Town. Here the abundant shells were gathered by convicts from beaches and middens and burnt in kilns or small pits. (Nicholls 1977:137)

In 1820, the Bigge Inquiry was told that another source of natural limestone had been found in West Hobart by two convicts who were rewarded with a conditional pardon. In 1816 a limestone quarry was in operation a mile and a half out of Hobart Town with the resultant mortar being extremely good for masons while the shell lime being was found to be ideal for plasterers use. (Hobart Town Gazette and Southern Reporter 1816:2)

The first importation to Hobart Town of natural and Roman cement was in 1825 in a consignment from Sydney and Portland cement, with all its superior qualities was first imported in about the mid 1850s. Nonetheless, lime was cheaper to produce and continued to be readily available in Hobart into the 1920s. Wilson Bros emerged as a commercially focussed enterprise and a major player in the lime market in and around Hobart for many years.



This building in central Hobart was built in 1914 by builder T. Bennett at a cost of £10 000 for Dehle, Bennison and Co. wholesalers and merchants. (Sarah Waight)

## **Conclusion**

The brickmaking, bricklaying and limeburning industries have shaped the city of Hobart.

Whilst better known as a city of iconic sandstone buildings, many talented and skilled bricklayers have created beautiful structures, effects and patterns with the humble brick.

From individual buildings to streetscapes and suburbs of Californian bungalows and Federation style homes, Hobart is just as much as city of brick as it is of stone. The making and use of brick in Hobart can be differentiated from other places, by its early convict labour force, free settlers, immigrant brickmakers and layers and the revolution in brick making with the latest of brickmaking machines from England. The solid strong red brick represents Hobart's suburbs and identity.

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