

Construction methods in colonial adelaide



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Examine three early construction types/methods in Colonial Adelaide .

Locate local examples, describe and document each construction method, materials used and where these were sourced. What networks of technological dependency and/or economic exchange between this new world and the old did these methods sustain?

When South Australia was first settled in 1837 [Adelaideheritage. net. au, 2018], the settlers relied on locally gathered materials to construct shelter. Up until 1850, Adelaide was seen as a town made up of 99% earth and stone cottages with thatched rooves. Some migrants were lucky enough to arrive with prefabricated timber houses manufactured by Mannings of London which came flat packed in a kit form. [Liveability, 2018] Stone was a predominant material used in the early colonisation of Adelaide and in the census conducted in 1911, it was found that over 62% of the homes at the time were constructed of stone compared to just 8% constructed of stone in the whole of Australia. [Bond and Ramsay, 1978] Only 9% were constructed from timber, compared to 55% nationally. This meant that 71% of Australia's stone homes were located here, in Adelaide. [Bond and Ramsay, 1978]

Construction in early Adelaide was quite different to what it has now come to be today. The early methods used varied. There were substantially different materials used by the rich and poor and all in all they shaped our city to be what it has today become. One of the main materials used to construct the outside façade of homes was limestone, commonly used in early public buildings which still stand today. [Early Bricks and Brickwork in South Australia, 1998] Timber shingle rooves were used by the poor while the rich were able to source other materials from overseas. Rooves in early Adelaide

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were quite different to what they have become today thanks to technology.

People used various materials to form roofs depending on their economic status. [Early Roofing and Roof Materials in South Australia, 1999]

Prefabricated homes and buildings were an alternative to the traditional construction of a timber frame with stone for the very first early settlers in South Australia. Prefabrication was one of the first methods of constructing a home and dates back hundreds of years. The homes were shipped over with the first settlers as they were easily and quickly constructed and did not require a huge number of resources. [Adelaideheritage. net. au, 2018]

Masonry work was one of the key methods in the construction of early Adelaidean buildings. Adelaide sits on a bed of nodular limestone which is located less than two feet below our surface. Making limestone one of the first materials used for construction as it was easy to obtain. [Early Bricks and Brickwork in South Australia, 1998] There are several buildings in Adelaide which are still standing today that are a clear example of this, The Adelaide Gaol, Government House, the Mounted Police Barracks and old Parliament house. [The City of Adelaide, A Thematic History, 2006] The stone for these buildings was sourced from several quarries located along the River Torrens, for example, the limestone used for Government house was quarried on the site now recognised as the Parade Grounds. Private dwellings constructed of limestone were often built with basements which created an escape for the hot summers heat. A great example of this is Nurney house, which is located between Kingston Terrace and Stanley Street dates back to 1846. The limestone was quarried on the Park Lands after

1855 by the Adelaide City Council. This continued throughout the nineteenth century. [Early Bricks and Brickwork in South Australia, 1998]

While limestone was popular for government buildings and the wealthier citizens bricks were also in high demand around this time. There has been a demand for bricks since the very earliest arrival of Europeans when they settled in South Australia. They were carried ashore from ships within the first days of arrival in 1836 and manufactured along the banks of the River Torrens a few months later. [Early Bricks and Brickwork in South Australia, 1998] Economically the cost of a brick was broken down into three parts, manufacturing, transport and bricklaying. Expert bricklayers were able to lay anywhere between two hundred to four hundred bricks on a good day, making the cost of bricklaying quite expensive as it was considered to involve a lot of skilled manual labour. A brick home around this time therefore, cost a lot more than a rubble or stone home. [Early Bricks and Brickwork in South Australia, 1998]

The actual process of making the bricks in Adelaide was also a timely and expensive process. It was actually cheaper to have them shipped in from Europe as the cost of sea freight was very low around this time. Bricks tended to be used in places with surrounding brickworks or nearby transport depots. Aesthetic considerations were however another one of the main contributors to bricks being used within South Australia at this time. Early on the people were not drawn to the patterned look that bricks created, making them less popular than the alternative stones available. [Prest, Round and Fort, 2001]) It was more dignified to build a home in stone than it was to erect a building in brick. Home owners who were constructing their

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house from brick often would use bluestone to create the front façade of the home as it put the icing on the cake. “ *It was like icing a cake; you built a brick cake and put bluestone icing on it* ” Architect Dean Berry [Bond and Ramsay, 1978]

In May of 1838, the brickworks located along the River Torrens were given notice from the South Australian government to quit and forced to close their doors. A few of these were able to move into their offices or warehouses where they were storing equipment, some moved further out into suburbs such as Norwood, Kensington and North Adelaide. [Early Bricks and Brickwork in South Australia, 1998] A clear example of this is one of the brickmakers who moved into Lower North Adelaide as the clay beds at the time made up Melbourne street and Jerningham street and using bricks from his backyard was able to construct several dwellings in the area such as Buffalo Cottage in Finniss street and several other cottages along Margaret, Stanley and Sussex streets. [Bond and Ramsay, 1978]

The roofing style and design is a clear reflection of culture, time and place. When South Australian was very first settled, people had to make do with what was readily available, which was not much. Materials were extremely limited and while the wealthy had clear access to many more materials the poor made do with whatever was cheap. [Early Roofing and Roof Materials in South Australia, 1999] The wealthy imported materials such as Slate, Zine tiles and lead which was all sourced from England.

The poor used Timber Shingling, Thatch and sometimes even Bark. The timber shingle rooves were cut from local timber and are still very evident on

older cottages throughout the suburbs of Adelaide. While interstate, timber was used extensively within the entire construction of a home, timber was considered scarce in South Australia, with only 9% of homes being made from wood, with 55% used nationally. While timber was extensively used interstate, local timber was scarce in South Australia. There were “standard” sizes available at the time in South Australia, 460mm by 200mm and 750mm by 170mm. These were cut from common local trees. The shingle rooves lasted anywhere between twenty to thirty years, however galvanised corrugated iron was placed over the top of the original shingle rooves in many cases as it was a clear later improvement. In South Australia, the roofing style was often a simple hipped roof (shown in image one) or a gable style roof without cutters (shown in image two). Shingling lasted into around the 1890s in rural areas but ceased in 1858 in suburban Adelaide when the City of Adelaide put a ban on the use of flammable roofing materials.

South Australia first imported rolled galvanised iron from Britain in about the 1850s. It became quickly popular because of its low cost, versatility, large size and the fact that they were relatively fast and easy to construct. People often laid the iron over pre-existing single rooves. Much like shingle rooves, there was a standard length of a galvanised iron roof, and it was extremely durable to all conditions, contributing to its popularity. It's in fact extremely common to notice houses within the Norwood area that have original shingle rooves underneath corrugated iron rooves, (those that have not been newly renovated or knocked down). Around a similar time, there was an extremely limited range of ancillary products which were also constructed from sheet

galvanised iron. This included flashings, gutters, downpipes and ridge and hip cappings.

Half round gutters were used as they were available in various sizes and iron could be easily curved. This later then lead to the beginning of curved verandah rooves. Decorations made from cast iron were occasionally used on the exterior of verandahs depending on the wealth of the owners at the time. The great thing about galvanised steel was that if taken care of, it was able to last for some decades with its main problem being rust. Up until the late 60s steel came in standard and short lengths which required overlapping of sheets on roof tops which was one of the main contributions to the rust. Today, we are lucky to have the resources to create longer sheets at all kinds of dimensions which eliminates that issue.

Slate was also a commonly used roofing material in South Australia after it was discovered in 1840. This resulted in slate rooves being affordable, and they became quickly popular shortly after this. It was known to be a common roofing material used in Britain and throughout Europe, which meant there were a supply of tradespeople who were able to lay slate rooves. While it was considered to be slightly more expensive than a timber shingle roof, slate became quickly popular as it could be laied in various patterns and colours. People were impressed with the asthetic of the tiles which resulted in cost not being such a big contributing factor in some cases. There were the usual traditional sizes such as the Duchess, Countess, Ladies and Viscountess and the most common size in South Australia was 550x300mm. Commonly, parapets and were flashed into brick joints. Most of the buildings, such as Bonython Hall and St. Peter's Cathedral featured the mid grey colour

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slate that was found in South Australia from Willunga. Some was also imported from quarries in Wales and England and imitation slate was introduced from overseas in the 1920s. Today, real slate is very rarely used as it is considered much more expensive in comparison to its alternatives.

Prefabricated homes date back to circa 43AD when the romans were using prefabricated building elements to construct forts in Britain. The peak of imported prefabricated buildings into Australia was 1835 when several hundred arrived from Liverpool, Boston and Singapore. By 1624 this style of construction had spread around the world, from new settlements to British colonies. An excellent early example of a prefabricated home is located here, in Adelaide. Known as the Friends Meeting House, it was constructed in 1839 and still stands today. Shipped in from England, the Prefabricated timber building included sixty-nine different packages. Complete with wooden sections and iron pillars. It arrived in early February 1840 and was the first of its kind. It is seen to be one of the most sophisticated prefabricated buildings of its time, as it was so far ahead of the then modern technology, hence its international importance.

Another example of a prefabricated home in early South Australia can be found in the Barossa. Also originally manufactured in London by master carpenter Henry Manning. The single roomed buildings manufactured by Manning are today recognised as the beginning of pre-fabrication and set the standard for the industry. This particular home stands on Gerlad Roberts Road at Seppeltsfield and is the only one of its kind located in the outer region of Adelaide. The main structure of the home consists of four walls and four triangular roof trusses, very common with prefabricated homes

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manufactured by manning as this was generally all that technology at the time would allow for him to create. Prefabricated homes and renovations are considered to be that way of the future and using the advanced technology that was have access to prefabricated homes can be built with minimal waste and minimal cost.

Today, construction methods and materials might seem extremely varied in comparison to these methods discussed, but the fact is there is not that much variation when it comes down to the construction of homes. While technology enables us to create homes faster, more cost efficiently and out of a wider range of materials, the general aspects of homes can remain the same. While some homes are now generally constructed from steel over timber and roofing is more commonly a modernised colour bond steel, both of these tie back into the original way homes were constructed when settlers first moved into South Australia.

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Preserving Historic Adelaide - Edited By Colin Bond and Hamish Ramsay

Accessed at the State Library of South Australia

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- The cottages were simply planned, functionally finished and solidly built. The typical home was a single-storeyed cream stone rectangular box with brick dressings to the openings and corners, a symmetrical arrangement of doors, windows and chimneys, and with a wide neat cast-iron verandah stretched across the long street face.

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- Weather and white ants rapidly eroded these pioneer buildings (Manning Houses), and as the artisans arrived, more permanent buildings were erected.
- The artisans were almost entirely Englishmen, and the houses they built were copies of the house they knew, and had built in England, with certain compromises and changes due to the materials available, local conditions and, one assumes onsite compromise between artisans from different regional traditions.
- The material that came to hand for building was stone. Adelaide has had a variety and abundance of stone readily available for building from the early days to the present, but it has never had native timber suitable for building, nor was there cheap fuel in the last century for large scale brickmaking.

- Quite often the Stone would be literally and immediately to hand as it was removed from the cellar and footing excavations.
- The limestone rubble walls were built from this excavated material, with roundish rocks set in a mortar which was usually not much better than mud.

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- Bricks became available due to Brickworks being established in 1837, however to build an entire house from bricks was unusual, and the bricks were normally used to form the corners of the building, and to form the edges of doors and window openings.
- Other kinds of stone surpassed limestone rubble including bluestone

Building Techniques in South Australia

D. W. Berry and S. H. Gilbert

Accessed at the University of Adelaide Library

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- In 1840 slate suitable for roofing and paving was discovered in the foothills near Willunga; the Delabole quarry being best known.
- Slates for roofing were used extensively throughout South Australia and were used extensively throughout South Australia and were exported to NSW and Vic

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- The Archives Department of the State Library of South Australia possesses a series of letters written in 1838-43 by Henry Watson to relatives and friends in England. These reveal that the timber house, though well-constructed, was unsuitable of heat and cold in Adelaide.
- Extended the accommodation over the original verandah and enveloped the whole in an envelope of brick
- Meeting house of the Society of friends

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- Its ornamental brick parapet demonstrates the determination of the pioneers to recreate, as quickly as possible, some of the atmosphere of the homeland in which they had been nurtured.

Building South Australia CELEBRATING 125 YEARS

By Rosemary Cadden

Accessed through the University of Adelaide Library

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- The Master Builders Association of SA was established in 1884 at the peak of a spectacular building boom in Adelaide. In nearly 50 years the population had grown from a mere 300 residents to more than 300, 000

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- At the 1911 census, more than 62% of SA homes were of stone including Auburn bluestone, Tantanoola dolomite, sawn Mount Gambier limestone and most notably Adelaide bluestone, compared with 8% nationally.
- While timber was extensively used interstate, local timber was scarce in South Australia. Only 9% of homes were made of wood, compared to 55% nationally.
- Lime was used for mortar, slate for the floors and limestone for the footings