Of the hut I bolted: A preliminary account of prefabricated semi-cylindrical huts in Australia

Prefabricated semi-cylindrical huts have been a familiar element of Australia's architectural landscape. Many of the post-war generation would have slept, eaten, been taught or possibly been conceived in such a hut. Often simply called Nissen Huts, they were common features of military bases, migrant camps, hospitals and educational institutions. However, recent research has shown that not much is known about the huts and their history in Australia and that there is a need for some more precise accounts of their types and variety. The aim of the paper is not to provide a definitive account of the Nissen, Quonset and similar huts, but to make some preliminary comments on the occurrence of the types in Australia.

Introduction

This paper is the result of research that I undertook when requested to assess four small and two large semi-cylindrical huts at the former East Hills Migrant Barracks site near Sydney. Initially, the huts were assumed to be Nissen huts or possibly the American version, the Quonset hut. The research was directed into how to tell one from the other in order to assess their significance as building types. The main difficulty was in finding sufficient information on prefabricated semi-cylindrical huts to enable the hut types to be identified. It was assumed, because of their ubiquitous nature, that there would be a considerable amount of information available in Australia and overseas. A number of likely sources were searched without success. The lack of information about huts was somewhat surprising, as they seemed to be a common item on military bases and other institutions such as hospitals and migrant camps.

The results of the research are presented below as a guide to identifying semi-cylindrical prefabricated huts. The aim of the paper is not to provide a definitive account of the Nissen and the Quonset Huts, but to provide information on the nature of the huts, how to distinguish between the types and some preliminary comments on their use in Australia. It is hoped that this will assist those faced with a semi-cylindrical hut to assess by providing some context for the assessment.

The Nissen hut and its derivatives

One of the difficulties of war has always been the need to accommodate the troops. Often the soldiers were billeted in requisitioned houses, in tents or slept in the open. Campaigns were often limited by the needs of accommodation and had distinct winter phases where troops went into 'winter quarters'. With the advent of mass mobilisation such as occurred in the World War I the demand for accommodation soon outstripped available barracks or what could be requisitioned. Moreover, the demand for accommodation was often not where existing buildings could be readily adapted or erected. Tents were of limited use as they provided little shelter from the elements, particularly in the European winter. So with the age of mass armies and total war came a need for mass accommodation.

It is not surprising then that during the course of World War I a design for a prefabricated, portable multi-purpose hut was developed, in France, by a serving officer. Between 16 and 18 April 1916, Major Peter Nissen of the 29th Company, Royal Engineers, began to experiment with hut designs. Nissen, a middle-aged mining engineer and inventor, constructed three prototype semi-cylindrical huts. The semi-cylindrical shape was derived from the drill-shed roof at Queens University, Kingston, Ontario. Nissen's design was subject to intensive design review by his fellow officers, Lt Colonels Shelly, Sewell, McDonald and General Liddell. After the third prototype was completed, the design was formalised and the Nissen Hut was put into production in August 1916. At least 100,000 were produced in World War I to two basic designs: a 16ft span (often called a 'Bow' hut) and a 24ft span (often called a 'hospital'). There was also a 30ft-span hut in production.

Two factors influenced the ultimate design of the hut. Firstly, the building had to be economic in its usage of materials, especially considering war-time shortages of building material. Secondly, the building had to be portable so that it could easily be moved to where the accommodation was required. This was particularly important in view of the war-time shortages of shipping space. Inevitably this led to a simple form that was prefabricated for ease of erection and removal. The Nissen hut could be packed in a standard British Army wagon and erected by six men in four hours. The world record time for erection was 1 hour, 27 minutes.

In the post-war period Nissen, who had patented the design, attempted to adapt the basic hut design to commercial housing, seeing in the hut the solution to the housing shortage. Despite some initial promise, success was limited.

During World War II, the Nissen hut was put back into production along with a similar type, the Romney hut, whose history is unclear as yet. According to Francis, the Iris and Romney huts were designed by the British Directorate of Fortifications, at Romney House, London. Production of the Iris was discontinued as the tubing used in its structure proved too flimsy but the Romney was in production throughout the war. The Romney Hut was 35ft wide x 17ft 6in high with ribs at 8ft centres. The normal length was 96 ft. The ribs are described as being 2.5in of square tubular steel with steel angle purlings of 1¾ in x 1¼ in. The exterior was covered with corrugated steel sheeting. There were sliding doors. 10ft 8½in wide and 13ft high, at either or both ends of the building.

Many other types of hut were produced in Britain such as: A, B, X, Y & Z type timber huts, Igloos, sheds, Jane huts, Marston...
sheds, Seco huts, Ctesiphon huts, Quetta huts and various types of concrete and asbestos huts. The Nissen hut was still in use and there are photographs of Nissen huts in use during the Falkland War. A Nissen hut briefly appears in the movie Harry Potter and the Goblet of Fire.

**American huts**

In the USA, the Quonset hut and its derivatives were developed in the 1940s as the threat of war developed. The Quonset hut was designed by George A. Fuller and Co. in March 1941 at the request of Admiral Ben Moreell, Chief of the Navy Yards and Docks. Fullers were given 60 days to deliver the first order. After studying the Nissen hut, they designed a simplified version and first hut was built at Quonset Point, Rhode Island. Possibly this design period was a ruse to get around Nissen’s patent. The design is referred to as being copied by Scott while Rogers comments that ‘the American Navy invented the Quonset hut’. The initial design had two distinguishing features: the ribs were T-shaped, although without the hook bolt, on an 8ft radius at 4ft intervals (i.e. a 16ft span). The curve of the arch commenced at ground level. The first Quonset Hut of this type was shipped to England in June 1941.

A revised design used a unique steel-arched rib and this became the principal distinguishing feature of the Quonset hut designs. The steel arched rib was made of a welded strip steel member 2in by 3/fin. This member was made from two lightweight rolled steel, U-shaped, channels welded together and containing a groove that held nails. The rib was curved to start the inward curve of the structure at 4ft above the ground. The cladding was nailed to the steel rib and an interior lining could also be nailed to the rib. This speeded and simplified assembly. This form of Quonset hut was termed the ‘Quonset redesigned’. The basic dimensions remained at 16ft by 36ft.

Quonset huts came in two sizes: normal, of 20ft span, or Warehouse (sometimes called Elephant or SAAR Hut) of 40ft span. The Warehouse used a slightly different structural system. The main structural ribs were created by thin steel U-shaped section punch-joined and spot-welded to two L-shaped members. These formed a curved rib, 6in deep, which was supported by 18 riveted metal purlins, which were 2in thick. Cross-braces were specified in a 1947 plan for a Type ‘B’ building; these were not apparent on the buildings at East Hills. This formed a basic frame of the building. The ribs were attached to a sill channel plate (forming the wall plate) bolted to concrete foundations. The exterior walls were corrugated iron attached to purlins between the ribs by nails, as for the smaller Quonsets. The ends had provision for a high door, 14ft wide by 13ft 6in.

Production of the huts was initially at the U.S. Navy’s temporary advanced facilities at West Daisville, Rhode Island. Production was later moved to the Stran-Steel Division of the Great Lakes Steel Corporation. Stran-Steel ceased production of the Quonset in 1959.

Some 170,000 huts were constructed and used for any purpose imaginable. They formed part of prefabricated base facilities that could be deployed around the world. For those who recall the T.V. series McHale’s Navy, most of the buildings were Quonset Huts. They were also used in Korea and Vietnam. By the 1970s, the use of the Quonset Hut was being discontinued as stocks ran down.

**Australian usage**

Australians would have first encountered the Nissen hut in World War I, as numerous examples were used in the British lines in France and in the camps in the United Kingdom in 1917-18. Images from the period while not highlighting Nissen huts do show numerous examples in France. For example, 23 Nissen huts are shown in a photograph of the ANZAC Camp near Dickebush taken on 15 November 1917, while 26 are visible in an image of the Australian Corps Headquarters on 21 November 1917. During World War II, many Australians, particularly those in the RAF and RAAF, would have encountered Nissen huts, which were extensively used to house aircrew on the airfields constructed during this time.

It is often stated or implied that the Nissen huts were erected in Australia during World War II. However there is no evidence that the Nissen hut was imported or manufactured in Australia during this war, although the Australian military erected a considerable number of huts to standardised designs, which included a semi-cylindrical wooden ‘Bow Hut’ and a semi-cylindrical hut made of ‘Fibrolite’. There was also a large 100ft by 60ft semi-cylindrical Armco hut in use. There is a file on the pool of Prefabricated Huts established in Australian Lines of Communication (L of C) during the war. The file commences with the issuing of a memo establishing a ‘pool’ of 200 prefabricated huts in L of C areas in Australia (Quartermaster General to GOC NSW L of C Area, 24/11/1942). Two types of huts were in the pool; a plywood hut 15ft by 12ft and a masonite and/or iron (corrugated or plain) hut 16ft by 12ft. In a subsequent memo Major General Fewtrell, GOC NSW L of C Area, noted that in fact plywood was in short supply and that the masonite hut type was more water-resistant especially if it had a metal roof: ‘It is found that, while masonite stands up reasonably well for walls, for roofs under steamy, wet and dry conditions, it buckles and is not satisfactory’ (14/1/1943). But steel was a strategic material and despite attempts to get steel roofs, the Quartermaster General insisted that masonite roofs be used (23/7/1943). Some 185 huts were manufactured by F.C.W. Powell & Sons in Sydney (in early 1943) and later C. Davis & Sons of Adamstown (NSW) undertook a contract for 1000 to a modified ‘Queensland design’. This was part of a contract of 5000 huts constructed in NSW, Victorian and Queensland in April 1944. Presumably, if Nissen or other hut semi-cylindrical types were available, these would have been used or at least mentioned in this file.

There was an extensive manufacturing program to produce Prefabricated Huts on behalf of the United States Army during World war Two. The Allied Works Council undertook this program with production in New South Wales. There is a detailed history on US prefabrication that contains both written and photographic documentation in the National Archives. The file shows that these buildings were timber-framed with asbestos cement or galvanised iron cladding. There is no evidence of the Nissen or other types being produced in Australia or imported to meet US requirements.

During the War, a large number of new bases were created and existing ones were expanded. For example, camps at Ingleburn and at Greta (NSW) were created in 1939 to house brigade-sized units for the 2nd AIF. Wooden huts were erected to the ‘P-1’ design rather than Nissen huts. Similarly, at the base at Wallgrove (NSW) created in 1942 or at the Bogon Gate (NSW) Ammunition Depot, Nissen huts were not used.
At RAAF Wagga constructed from 1939 onwards, accommodation was provided in 'C' type huts. Nissen huts were only used in the post-war era. In all these cases, if Nissen huts had been available during the War, surely they would have been used, as they were extensively used on similar sites in the United Kingdom. Instead, standard designs using wooden frames and galvanised iron or asbestos cement sheets were used. It is therefore concluded that Nissen and Romney huts were not used in Australia during World War II, as there is no evidence in the specifications for construction on military sites brought into use at that time of these hut types being used.

With the advent of the US military in Australia, it is presumed that the Quonset hut and Warehouses were also erected at US bases; there is evidence from photographs and plans that this is what occurred. This seems however to be limited to Queensland, where at least four huts have been identified.

Huts for the immigration program

At the end of World War II, Australia embarked on an ambitious program of immigration. In 1947 the Minister for Immigration, Arthur Calwell announced an intake of 70,000 immigrants per year. Between 1947 and 1951 some 310,000 assisted settlers arrived comprising 165,000 Displaced Persons and 120,000 British immigrants, as well 160,000 self-funded immigrants. One of the practical problems was where to house them (especially considering the widespread housing shortage of the immediate post-war period). Military bases were a convenient solution as they had accommodation and were owned by the Commonwealth. Although some bases were located near capital cities where immigrants would hope to settle, most of the larger bases were located for strategic reasons in North Queensland. As well, some accommodation was in tents, which were clearly unsuitable. As a result, new camps had to be constructed and existing ones enlarged.

It was recognised at the highest levels that some form of temporary accommodation was necessary and it seems that the Commonwealth Government, through the High Commissioner in London, began negotiations to obtain stocks of Nissen huts. Two sources were investigated: purchase of second-hand huts from dealers and purchase of new huts through the British Ministry of Works. Mr W. P. Brown a technical representative of the Commonwealth Experimental Building Station was based at Australia House, London, and he was involved in the purchase negotiations.

Brown noted that 'the usual procedure is for dealers in this country to buy blocks of the huts as they stand all over the country. After dismantling them and sorting out all the pieces capable of repair from those which have to be discarded, the dealers then recondition the pieces and rearrange them in hut sets for sale' (Memo dated 22 April 1949, to the High Commissioner). The British Ministry of Works controlled new huts, and after some Australian approaches (seemingly involving the Prime Minister), the Ministry of Works offered Australia, 660 new 36ft x 16ft Nissen huts at £90 each. They also offered 200 60ft x 24ft Nissen huts for £147 and 100 Romney huts, 96ft x 35ft, at £430 (Memo dated 22 April 1949, to the Director General, Works and Housing). Subsequently Brown noted that 'new' actually meant 'unissued' and that 'some [of] the material has been in stock for a considerable time'. Some of the components were rusted and would require treatment or possible replacement. The British Ministry of Works agreed to supply 5% additional corrugated iron sheets to cover defective sheets (Memo dated 27 May 1949, to the Director General of the Department of Works). Brown also requested advice from Australia on whether fittings such as dormer windows and extra ventilators were required. It is not clear whether these were supplied.

It is commonly stated that the huts used in Migrant Centres were acquired from ex-Australian Army stocks made surplus after the conclusion of the war. This is not true for the Nissen, Romney and both types of Quonset huts; they were imported along with the immigrants. There is no doubt that other Army huts such as the wooden 'P' type huts were used for immigrant housing but these were infrastructure already in place on existing bases (e.g. Greta, Wallgrove). The Migrant Centre at East Hills, although on Commonwealth land, was a new construction that utilised SAAR Huts and Quonset huts for the administration buildings and Nissen huts for migrant accommodation. This seems to have been a relatively common practice, with the Romney and larger Nissen huts perhaps replacing the SAAR huts as they were of similar size.

Apart from obtaining immigrant Nissen and Romney huts from the United Kingdom, two types of Quonset Huts were salvaged from United States bases in Manus Island and shipped to Australia. These were 100ft x 40ft warehouse huts (later referred to as SAAR Huts) and 56ft x 20ft huts. The smaller Quonset huts are referred to in the files as being Type A and Type E (however the drawings in the files refer to Types B and C).

In a memorandum dated 18 January 1950 the following information was given regarding available hut types.

<table>
<thead>
<tr>
<th>Available hut types January 1950</th>
<th>Ordered</th>
<th>Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nissen Huts 36' x 16'</td>
<td>330</td>
<td>245</td>
</tr>
<tr>
<td>Ex Ministry of Works</td>
<td>165</td>
<td>110</td>
</tr>
<tr>
<td>Ex A.J. Anderson and Co</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nissen Huts 96' x 24'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ex Ministry of Works</td>
<td>50</td>
<td>20</td>
</tr>
<tr>
<td>Ex A.J. Anderson and Co</td>
<td>85</td>
<td>0</td>
</tr>
<tr>
<td>Romney Huts 96' x 35'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ex Ministry of Works</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Quonset Huts 56' x 20'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ex Manus Island</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>SAAR Huts 100' x 40'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ex Manus Island</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

However, it is not clear whether these figures refer to shipments Australia-wide or only to South Australia.

In a memo to the Secretary of Treasury dated 6 April 1950, the Director General of Works notes that 'when the first stage of the construction program for accommodating Displaced Person migrants is completed approximately 1000 Nissen and 45 Romney huts will be available for the second stage, which will provide accommodation for British unsponsored migrants and their families.'
The memo continues to advise that, while in the first stage there were ten persons to a Nissen Hut, in the second stage it was envisaged that 'one migrant, his wife and their dependants' would be allocated to a small Nissen Hut (presumably a 30' x 16' one as this was the smallest type). The Romney huts were mainly used for recreation purposes. It was estimated that 'at least' 1500 more Nissen Huts and 50 Romney Huts would be required. The British Ministry of Works could supply the lot for about £20,261.5. It was proposed to allocate 300 Nissens and 30 Romneys to NSW, 400 Nissens and 20 Romneys to Victoria and 300 Nissens to South Australia.

However, it seems that prices were checked and better prices and delivery were offered by second-hand building dealers, notably Universal Supplies (Belvedere) Ltd, A.J. Anderson & Co Pty Ltd and Utility Buildings, Perth. In a further Memorandum (dated 12 July 1950) the following quotations to supply buildings were accepted.

This information, although incomplete to some degree, gives an indication of the size of the huts-for-immigrants program during the late 1940s.

### Table 2

**Accepted quotes for supply of prefabricated huts**

<table>
<thead>
<tr>
<th>Accepted Quotation</th>
<th>Cost (per hut)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal Supplies (Belvedere) Ltd 1000 Nissen huts 36' x 16' with outer lining of</td>
<td>£118.0.0</td>
</tr>
<tr>
<td>new corrugated iron and inner lining of second hand iron</td>
<td></td>
</tr>
<tr>
<td>A.J. Anderson &amp; Co Pty Ltd 470 Nissen Huts 36' x 16' with outer lining of second</td>
<td>£82.10.0</td>
</tr>
<tr>
<td>hand corrugated iron and without inner lining</td>
<td></td>
</tr>
<tr>
<td>65 Nissen Huts 60' x 24' with outer lining of 24' gauge aluminium sheeting and</td>
<td>£293.0.0</td>
</tr>
<tr>
<td>without inner lining</td>
<td></td>
</tr>
<tr>
<td>Utility Buildings, Perth 400 Nissen Huts 36' x 16' with outer lining of 24' gauge</td>
<td>£113.0.0</td>
</tr>
<tr>
<td>aluminium sheeting and without inner lining</td>
<td></td>
</tr>
<tr>
<td>137 Nissen Huts 60' x 24' with outer lining of second hand corrugated iron and</td>
<td>£245.0.0</td>
</tr>
<tr>
<td>without inner lining</td>
<td></td>
</tr>
</tbody>
</table>

By 1952-53 however, it is apparent that there were surplus huts. In September 1953 the Department of Works in South Australia advertised the sale of material to make 357 Nissen huts 30' x 16' wide and 78 Nissen Huts 60' x 24', as surplus to requirements. As well, the components to make incomplete versions of 16 Quonset huts and 1 SAAR were put up for sale. These huts lacked material to make ends or lining. Without going into specific details all the huts sold at well below their 'book value', for example 36' x 16' huts sold on average for £76, almost half of the 'book value' of £150.

Many Commonwealth Departments received their Nissen huts around this time including the Army and the RAAF. Huts were also sold as the immigration program wound down and as the Commonwealth Government began to provide better-quality accommodation. Huts began to find civilian uses typically as farm buildings or as garages. Establishing the full range of uses and adaptations of the huts is an interesting challenge for the future and an added dimension for heritage assessment.

![Figure 3 Details of Nissen Hut construction; note the curved T-shaped rib and the timber flooring. (I. Stuart)](image3.png)
Table 3 Distinguishing features between hut types

<table>
<thead>
<tr>
<th>Hut Type</th>
<th>Span</th>
<th>Distance between ribs</th>
<th>Nature of ribs</th>
<th>Attachment of cladding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nissan</td>
<td>16 ft</td>
<td>6ft 0.5&quot;</td>
<td>Steel T shape</td>
<td>Hook bolt to wooden purlins</td>
</tr>
<tr>
<td></td>
<td>24 ft</td>
<td>6ft 0.5&quot;</td>
<td>Steel T shape</td>
<td>Hook bolt to wooden purlins</td>
</tr>
<tr>
<td>Quonset</td>
<td>16ft</td>
<td>4ft</td>
<td>Steel T shape, 2in by 2? in</td>
<td>Nailed onto wooden purlins (no hook bolts)</td>
</tr>
<tr>
<td></td>
<td>16ft</td>
<td>4ft</td>
<td>Lightweight Steel</td>
<td>Wooden studs are placed between the ribs and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>two channels welded together 2in x 3? in.</td>
<td>sheets nailed to them.</td>
</tr>
<tr>
<td></td>
<td>20ft</td>
<td>4ft</td>
<td></td>
<td>Three metal purlins,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>wooden studs are placed between the ribs and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sheets nailed to them.</td>
</tr>
<tr>
<td>Romney</td>
<td>35ft</td>
<td>8ft</td>
<td>2.5in square tubular ribs</td>
<td>Not sure, bolts or screws?</td>
</tr>
<tr>
<td>SAAR/Quonset warehouse</td>
<td>40ft</td>
<td>4ft centres</td>
<td>Lightweight steel section with two 'L' shaped pieces welded to top and bottom, 6 in</td>
<td>18 purlins, galvanised iron nails through galvanised iron into metal purlins</td>
</tr>
</tbody>
</table>

Distinguishing between hut types

The key issues in differentiating between the various types are:

- Overall dimensions (in particular the width, span or diameter). The length should be in a multiple of the space between ribs, which was different in each hut type.
- The shape of the building cross-section.
- Nature of the rib system, including rib shape and spacing.
- How the galvanised iron cladding was attached to the ribs and purlins

These are set out in Table 3.* (above)

The early Quonset was different in that the inward curve of the arch commenced at ground level rather than about one foot from the ground in the later Quonsets.

**Figure 4** Interior rib of a Quonset Hut at East Hills; note marks where the ribs have been welded; a subsequent re-cladding has resulted in the corrugated iron being screwed, not nailed, into the rib. (I. Stuart)

**Figure 5** Interior detail of the rib of a Quonset warehouse; it is of a different form to the Quonset Hut. (I. Stuart)
Remains

As time passes, the huts gradually disappear or rust away. Typically, the galvanised iron cladding rusts leaving the frames. Simple maintenance such as keeping the hut painted, making sure there is no soil build-up over the base and adequate drainage, helps prevent rust damage.

There are still a number of huts surviving although no comprehensive overall count of huts has been undertaken. However, I know of about 20 Nissen and Quonset Huts surviving in NSW and Victoria, at least 10 Quonset Warehouses and 1-2 Romney Huts. Nissen huts have been noted near Stawell (Vic), at Villawood (NSW), in the Yarramalong Valley (NSW), Grenfell (NSW), Wee Jasper (NSW) and around Dapto (NSW). A common adaptation has been to mount the hut on solid wooden stumps, raising it four to six feet off the ground, to create a working area underneath.

SAAR huts seem to have a higher level of survival, presumably due to their size, which makes them readily adaptable to a variety of uses. Interestingly those that the author has inspected have all shown evidence of twisting stresses in the ribs suggesting the ribs are on the borderline of being too light. Examples of SAAR huts can be found on former migrant hostels such as Villawood, Mayfield (NSW), Scone (NSW), the University of Wollongong (now added to the NSW State Heritage Register), as well as Currimbah (NSW), Footscray (Vic) and in the video clip for Killing Heid’s ‘Live Without It’. Romney huts apparently survive at the former Ingleburn Army Camp, NSW, and at least one exists in Townsville, Qld.

It would seem useful for an attempt to be made to conserve at least one of each type along with an archive of plans and specifications. To date in New South Wales there have been limited attempts at preservation and none that rest solely on the huts as examples of a unique type of building. Mind you, how many examples are required of identical buildings that were produced in their thousands?

Conclusion

The prefabricated semi-cylindrical hut story is of interest as they are familiar artefacts, so familiar and embedded in the landscape and memory that they are gently fading away as they rust or are demolished. This paper is at least a beginning of a history of the huts that were bolted together.

Acknowledgments

The work from which this paper derives was undertaken while I was at HLA-Envirosciences Pty. Ltd. An earlier form of the paper was presented at the 2001 ASHA Conference in Canberra and copies have been supplied to a number of architects and historians interested in hut types. Staffs at the various offices of the National Archives were helpful in responding to my inquiries. Specific thanks are due to Jane Cummins-Stuart, Brian Eglolf, Lauren Cook, Pete Kriz, Tony Brasil, Samantha Mackay and my poor old cat Skerrick.

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Williams, C. 2003 Identification Guide to ‘Quonset’ Arched Building Types, Farbanks, USA: Northern Land Use Research Inc.


National Archives of Australia (NAA):

Hostel for Migrants Conversion of 42’x 16’ Nissen Hut to sleeping accommodation Drawing No. VA 2575 13/9/1948.

Prefabricated Portable Huts, SP 459/1 (NAA 420/83/379).

Prefabricated Huts, Provision of Quonset and other Hut types for New Australian’s and Storage Purposes (NAA D156/122, 1955/277).

Preliminary Notes for a History of the Allied Works Council - U.S. Prefabrication (NAA B5601/1, 5).

Purchase of Nissen and Romney Huts (NAA D618, IM 25).

Quonset Huts (NAA B3712/0 Folded of Construction drawings, numerical series; Drawer 230- folder 8 (Part 2), Quonset Hut, 1850-1978).

Specifications and drawings of types of prefabricated buildings and houses, Department of Works Melbourne (NAA A9716/1, 1840).
Endnotes

2. Prefabricated buildings using corrugated iron are known from the nineteenth century (e.g. Lewis 1985).
3. What is also surprising is that the Germans didn’t develop an equivalent building.
4. Nissen patented his design. During the War Nissen donated his royalties to the war effort.
9. Prefabricated Huts... (NAA).
11. For a good summary history, see Williams 2003.
13. Rogers n.d.
15. Quonset Huts (NAA).
22. Ibid.
24. Ibid.
27. There has been no detailed study of such structures although see Nolan n.d. and Pullar 1997.
28. I am willing to be proven wrong. Acceptable proof should be documentary, either paper or datable images, rather than anecdotal.
32. Purchase of Nissen and Romney Huts (NAA D618, IM 25).
33. Ibid.
34. Ibid.
35. E.g., references in Martin 1987: 66.
37. Why what appears to be the Quonset Warehouse is called the SAAR hut is unclear. Any advice on this would be gratefully received.
38. Prefabricated Huts (NAA).
39. Ibid.
40. Purchase of Nissen and Romney Huts (NAA)
41. Ibid.
42. Ibid.
43. Prefabricated Huts (NAA).
44. Table 3 is based on Engineer in Chief (Army) 1966; Naval Historical Centre 1998; U.S. Navy 1972; Williams 2003; as well as plans in specifications in the NAA files already cited.