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International working party for
documentation and conservation
of buildings, sites and neighbourhoods of the
modern movement

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Wp/ref no

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composed by working party of: Australia

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|---|---|---|
| 1 | Identity of building/group of buildings/urban scheme/ landscape/garden | Swedish Prefabricated Houses, Mosman |
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Photograph of ASA (Swedish prefabricated) house at 7 Commonwealth Avenue, Mosman (2003)
Photo: Robertson & Hindmarsh Pty Ltd

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|-----|--------------------------|---|
| 1.1 | current name of building | Former Navy Cottages |
| 1.2 | variant or former name | Navy cottages |
| 1.3 | number & name of street | Middle Head Road (near Cobbittee Street) (5 houses) and 7 Commonwealth Avenue (1 house) |
| 1.4 | town/suburb, city | Mosman, Sydney |

1.5	state	New South Wales
1.6	post code	2088
1.7	country	Australia
1.8	national grid reference	AMG: 3 39 E, 62 55 N
1.9	classification/typology	Single residences
1.10	protection status & date	Mosman Local Environmental Plan

2 History of building

2.1 original brief/purpose **Historical overview - Post-War Prefabricated Houses:**

Following World War 2 Australia experienced a severe shortage of housing and of the materials and labour to erect the required houses. The Commonwealth Government introduced a scheme to "augment the supply of houses from local resources by the utilisation of house components and labour brought from abroad so that a considerable number of additional dwellings can be made available without any additional inroads being made into local resources of labour and materials." According to the Commonwealth Government 1,000 houses were being erected in Australia each week but the demand for houses required 2,000 to be built each week. This was confirmed during a recent interview with Retired Brigadier Owen Magee who stated that probably four thousand prefabricated houses from Britain (Riley-Newsum type) and from Sweden (the "Swedish houses") were constructed throughout Australia for defence personnel by private contractors and army engineers.

In June 1949 the Commonwealth Government announced plans to purchase 1,000 prefabricated houses from Britain or from Scandinavian countries to accommodate civil servants. By this time the Victorian Government Railways had already ordered 1,000 prefabricated houses from Britain for country railworkers. The delay in the Commonwealth Government placing orders was due to the higher cost of imported houses compared to locally-built houses. Tenders were placed in the Commonwealth Government Gazette on 25 August 1949 and again on 15 September 1949 for the supply and shipment of 1,000 single storey pre-cut or prefabricated houses to Fremantle, Adelaide, Melbourne and Sydney. There is no record of the acceptance of this tender.

A differential system of tariffs was introduced allowing materials and buildings from "Empire sources" to be admitted free of tariff and materials from other sources to be admitted on a sliding tariff scale according to the availability within Australia of the material or component. This scheme was modified in April 1950 allowing all prefabricated houses and their fittings to be imported free of any tariff.

In March 1950 a Commonwealth/State delegation toured Britain, Western Europe and Scandinavia for two months examining

prefabricated houses. The members of the Housing Mission, C.N. McKay (Leader of Mission), A.W. Welch, Harold Bartlett, Chris Vandyke and D.C.K. Lawrence (Secretary) represented Commonwealth, State and private procurers and suppliers of houses. The Mission commenced work by sending 1,000 questionnaires to firms throughout Europe to standardise the responses and expressions of interest in supplying, shipping and erecting houses in Australia. The emphasis on the ability to erect houses in Australia limited the responses to the questionnaire to 250. These responses were then short-listed and the Mission set off for Europe from their base in Australia House, London. From April to June 1950 the Mission visited manufacturers in England, Scotland, Switzerland, Austria, Czechoslovakia, Italy, Trieste, France, Holland, Finland, Sweden, Norway, Denmark and Germany. The USA was to be visited on the way home to Australia to investigate site preparation, slum clearance and mortgage insurance schemes. The Mission concluded that, at a conservative estimate during 1951 no more than 20,000 prefabricated houses could be procured from Europe and that, from the end of 1951 it would be possible to procure approximately 40,000 houses per year from Europe. The Mission concluded that the houses from Scandinavia were of the highest quality (after the very expensive houses available from Switzerland) but the Scandinavians had no capacity to erect the houses due to their high rate of employment in those countries. Southern Europe offered the best hope of labour in the form of many unmarried young men. England could supply the bulk of the houses and labour but were restricted by the difficult supply of timber and the English factories had to rely on the use of Scandinavian timber. In April 1951 the Mission visited the Bristol Aircraft (Housing) Ltd works in Weston-super-Mare, the A.W. Hawksley Ltd works in Gloucester and the H. Newsum, Sons and Co Ltd works in Lincoln amongst many others in England and Scotland. In April the Mission also moved to continental Europe and visited the works of Ing. A Sagmeister & Co, Vienna who was later to supply houses to the Housing Commission of NSW. In May 1951 the Mission met with Stex, the organisation representing Swedish prefabricated house manufacturers, and also some of the individual manufacturers including the Amals Sagverks A.B. works in Amal.

From November 1950 to December 1952 the Commonwealth Government Gazette records the acceptance of tenders for the construction of at least 1,600 prefabricated houses of the following types: Hawksley, Riley-Newsum and Riley-Newsum CA4. The two largest contracts were for 300 pre-cut houses on the South Coast Coalfields of NSW and approximately 300 houses in Central South Australia (location not specified but possibly for the testing of the British atomic bombs at Maralinga). In the same period (1950-1952) the tenders called and tenders accepted in the Commonwealth Government Gazette make no reference to Swedish houses or to Åmåls Sägverks Aktiebolag houses. However, in June 1950 the Commonwealth Government announced that, of the 1,500 prefabricated houses to be imported at a cost of £4,500,000, 500 were to be from Britain (to be erected in Canberra) and the other 1,000 were to be from Sweden and were to be equally divided between Victoria and New South Wales. The 500 British houses from H. Newsum Sons and Co were to cost £625,000 and the 1,000

Swedish houses were to cost between £2,255 and £2,700 each.

In July 1950 the Minister for National Development, R.G. Casey, announced that the armed forces would receive 2,000 prefabricated houses because of the increased requirements flowing from the increased National Service scheme and in September of the same year the army was promised 1,200 prefabricated houses for married instructional staff near army camps at Seymour and Puckapunyal (Vic), Ingleburn (NSW), Woodside (SA, Wacol (Qld) and Swanbourne (WA). One month later the Minister for the Army, Mr J. Francis, stated that between 5,000 and 6,000 houses would be built at army camps for married regular soldiers and for National Service instructors. The houses were to be of aluminium and timber and were to be sourced from Britain and Sweden. In addition to the army bases mentioned above the houses were also to be located at Brighton (Tasmania) and in 1951 the Australian representative of a Swedish construction company stated that his firm had already supplied 400 houses to Australia and that another 480 were on the water.

10,000 prefabricated houses were imported into Australia in 1951, another 20,000 were on order and there were agents from most British and European prefabricated house manufacturers in every state.

The houses at Middle Head/Georges Heights closely resemble a design for a prefabricated house prepared by the Melbourne Head Office of the Commonwealth Department of Works and Housing which was illustrated as one of series of 14 prefabricated houses for use in various regions of Australia and New Guinea. The house was known as "Housing for Commonwealth Employees: 3 Bedroom Type" and its drawing of origin was listed as HA1497. In the same series of drawings of prefabricated houses was the Riley-Newsum CA1 (drawing of origin ACT19750) and the Åmåls Sågverks Aktiebolag (drawing of origin A5493).

The Commonwealth Department of Works and Housing HA1497 house is identical to the Åmåls Sågverks Aktiebolag house excepting that the plan arrangement is mirror-reversed and the dimensions vary slightly. The Commonwealth house has the Living Room to the left of the front door and is 44'8" (13614 mm) long by 22'8" (6909 mm) wide with 8' (2400 mm) ceilings whereas the Åmåls Sågverks Aktiebolag house has the Living Room to the right of the front door and is 45'0¹/₄" (13722 mm) long by 22'10" (6960 mm) wide with 9' (2700mm) ceilings.

The prefabricated houses at Georges Heights are incorrectly listed in the *Register of the National Estate* as being of the Riley-Newsum type, which was a type of house designed in Australia by Melbourne architect, A. (Tony) B. Anderson, and fabricated in Britain by H. Newsum Sons and Co (under the direction of Mr James Riley) from Scandinavian timber. However, as drawing NA5173A shows, the houses at Middle Head/Georges Heights are of the Commonwealth Department of Works and Housing/Åmåls Sågverks Aktiebolag type and not the Riley-Newsum CA1 type. Despite this, the strong similarity of the planning of the Riley-Newsum CA1 type and the

Commonwealth Department of Works and Housing/Åmåls Sågverks Aktiebolag type would suggest a common design source. In the absence of any documentary evidence it is the writer's opinion that A.B. Armstrong designed the plan layout of both the Riley-Newsum and the Commonwealth Department of Works and Housing/Åmåls Sågverks Aktiebolag types of house and that the differences in the plan arrangement and elevations were caused by the different modules and set-up used in the British and Swedish factories.

Another theory that the Commonwealth copied the Åmåls Sågverks Aktiebolag design and mirror-reversed it to avoid copyright problems is not sustainable when examination of the Commonwealth Department of Works and Housing houses at Middle Head/Georges Heights clearly demonstrates their origin of manufacture to be Sweden. In addition, in responding to a request for information about the Åmåls Sågverks Aktiebolag houses, Professor Caldenby of Chalmers University in Stockholm made the observation that the houses did not appear to be very Swedish in their design which supports the writer's theory that the houses were Australian-designed and Swedish-made.

In addition to materials, the design of the kitchen indicates a European origin for the detailed fitments in the houses. The Swedish prefabricated houses of the day placed great importance on the pivotal nature of the kitchen within the modern home. A visiting Swedish architect, Mr Thorsten Bratt, who came to Australia in 1950 as part of his firm's tendering process to supply 2,000 prefabricated houses to the NSW Housing Commission, stated that "Most Swedish householders are working class families who eat as well as cook in their kitchens. Our architects have realised that the kitchen is the focal room and are now making it almost as large as the living room. All cupboards are built in and light colours give an illusion of space...".

Whilst the floor plans of the Riley-Newsum and the "Swedish" houses were almost indistinguishable to the lay person (and to those preparing the listing proposals for the *Register of the National Estate*) there were differences which perhaps expressed the difference between the set-up of the British and Swedish manufacturers and perhaps a difference of approach and systems.

The plan of the Commonwealth Department of Works and Housing/Åmåls Sågverks Aktiebolag houses is based on a 1250 mm module whereas the Riley-Newsum CA1 houses are based on a smaller module of 3'4" (1016 mm). The Commonwealth Department of Works and Housing/Åmåls Sågverks Aktiebolag houses are more strictly organised around the central corridor running along the length of the house. In contrast, the rectilinearity of the Riley-Newsum house is broken by the truncation of the corridor in order to accommodate the L-shaped Living Room (which has become such a standard feature of builder-designed project homes in Australia since the 1950s). The L-shaped Living/Dining Room of the Riley-Newsum CA1 house allowed for cross ventilation of that room, something which could only occur in the Commonwealth Department of Works and Housing/Åmåls Sågverks Aktiebolag houses if the dividing door between those rooms were left open.

The positioning of the fireplace on the exterior wall of the Commonwealth Department of Works and Housing/Åmåls Sågverks Aktiebolag houses is typically Australian and is not a common practice in European houses because of heat loss through the rear wall of the fireplace. Even the Riley-Newsum type of house has a centrally-placed fireplace which radiates all of its radiant heat within the house.

Retired Brigadier Owen Magee lived in one of the "Swedish" houses at Holsworthy army base in Sydney and his house is the only one remaining of the hundreds constructed there. In Sydney, Magee stated that others were constructed at Voyager Point on the Georges River opposite East Hills adjacent to the sewerage farm and at Chatham Village at the School of Military Engineering. Inspection of these two publicly-accessible sites on 31 May 2003 revealed that all of the prefabricated timber houses have been demolished. Voyager Point is now the site of a widely-marketed private residential development and the Chatham Village area only has brick accommodation buildings remaining in amongst areas leased to private firms for truck storage, etc. In Western Australia the Swedish houses were constructed at Swanbourne Barracks and Kalgoorlie and in Queensland at Wacol Camp and at Amberley Air Force Base. Like at Holsworthy (and Voyager Point and Chatham Village), Magee doubts that many are left still standing on Defence establishments and probably none are intact because of changes made to them to bring them up to the changing standards of Defence Service housing. One of the changes made to the "Swedish" houses at Kalgoorlie by Magee was the construction of a separate roof over the entire building acting as an umbrella. This umbrella roof resulted in a reduction of the temperature inside the houses at Kalgoorlie from 120⁰F to around 100⁰F.

The term "Swedish" house appears to have been applied loosely in the 1950s. Dic Zehender states in his *Memories of Woomera* that two of the housing types being constructed at Woomera in 1952/53 were Hawkesly (sic) and Riley-Newsum which "were of Swedish design and instead of verandahs they had snow catcher overhangs on the roof".

Historical overview - Navy cottages at Georges Heights:

A housing proposal for the site was first shown on a drawing in June 1950 in which the Sydney Branch Office of the Commonwealth Department of Works and Housing illustrated a subdivision of the site for nine houses arranged along Middle Head Road and around a cul-de-sac running north parallel to Cobbittee Street. At the northern end of the subdivision there was a proposed park and also a right of way running from Middle Head Road to Cobbittee Street along the boundary with the "Naval barracks" (HMAS Penguin). The houses were proposed as married quarters for the Department of Army. Seven of the houses were L-shaped and two were rectangular in plan with a protruding front porches. The scheme did not proceed.

In 1951 the Department of Works and Housing drew up plans for another subdivision of the site into 8 house allotments and a large

triangular "Park & Play Area" at the south end where Middle Head Road narrows to enter the narrower bitumen road of the military reserve. The outline of the houses on the site and the sketch outline plan indicates the plan of the houses as being identical to the plan of the houses on the site (ie the Commonwealth Department of Works and Housing/Åmåls Sågverks Aktiebolag type of prefabricated house). The siting of the houses as built differs from that shown on the drawing, one of the houses having been constructed for the Navy above Chowder Bay, thus leaving seven houses for erection on Middle Head Road.

Construction of the cottages took place after May 1951 as the May 1951 aerial photograph of the peninsula shows that no development had taken place on the site of the Navy Cottages.

2.2	dates: commission/completion	c.1951
2.3	architectural designers	Sydney Branch Office of the Commonwealth Department of Works and Housing (design architect [possibly A.B. Anderson who was also responsible for the English-built Riley Newsum prefabricated house]).
2.4	others associated with building	Åmåls Sågverks Aktiebolag, Åmål, Sweden
2.5	significant alterations with dates	<p>Cottage 5 in Middle Head Road is the most intact of the cottages. It retains its original kitchen, all the original internal and external doors, the Swedish door hinges and door handles, the Caneite ceilings and Masonite wall sheeting.</p> <p>All the Middle Head Road houses have been oversheeted with asbestos cement planks (date unknown).</p> <p>With the exception of Cottage 5 in Middle Head Road, all the original kitchens have been removed and replaced with modern kitchens (date unknown).</p> <p>The house at 7 Commonwealth Avenue has had a timber deck added to its south façade (date unknown).</p> <p>Cottage 1 has had most of its internal walls removed by the Department of Defence to function as an exhibition centre (1990s).</p> <p>Two houses in Middle Head Road were demolished by the Sydney Harbour Federation Trust in 2004.</p>
	current use	Unoccupied
	current condition	The buildings is in fair to poor condition due to lack of maintenance by both the Department of Defence and the Sydney Harbour Federation Trust.

3.0 Description

3.1 general description

The six remaining cottages are timber framed; sheeted internally with Masonite wall sheeting (with the exception of the bathroom and laundry which are sheeted in asbestos cement), Caneite ceiling sheeting and timber floor boards. The exterior vertical timber wall cladding of the five remaining cottages in Middle Head Road has been oversheeted with asbestos cement planks but the original boards remain under the later sheeting. The original exterior cladding of the cottage at 7 Commonwealth Avenue still remains visible as the primary cladding. The roofs of the five cottages in Middle Head Road are sheeted with profiled steel roofing (with squared corrugations) and the cottage at 7 Commonwealth Avenue has a roof sheeting consisting of corrugated steel.

All six cottages have identical floor plans with the exception of Cottage 1 in Middle Head Road which was modified to act as an exhibition building for a previous Department of Defence proposal for Middle Head/Georges Heights and the cottage at 7 Commonwealth Avenue which has had a timber deck added on the harbour side of the main bedroom (with the associated removal of a window and insertion of French doors to gain access to the deck). 7 Commonwealth Avenue also has an asbestos cement garage located to the rear of the house.

The six cottages have been identified as being Swedish prefabricated cottages manufactured by Åmåls Sågverks Aktiebolag (the Amal Sawmilling Company) which were part of the large post-World War 2 importation of prefabricated houses (and workmen to erect them) from Britain, Sweden, Finland, Norway, the Netherlands, Germany and Austria.

3.2 construction

Floors: Timber: Australian hardwood bearers and joists on brick support piers with Swedish softwood floor boards

Walls: Prefabricated timber panels consisting of vertical boards in a type of shiplap boarding on softwood timber frame with Masonite interior linings.

Roofs: Profiled steel roofing on prefabricated timber trusses.

Windows and external doors: Timber framed double hung windows. Vertical timber boarding on the two external solid core timber doors.

3.3 context

The site of the houses forms part of the former Middle Head - Georges Heights military complex and is located on the Middle Head/Georges Head peninsula separating Sydney Harbour (Port Jackson) from Middle Harbour.

The former Navy Cottages are located on two sites; originally seven of the cottages (known as Cottages 1 to 7 inclusive) were located on the west side of Middle Head Road north of its intersection with Cobbittee Road and one cottage (known as SHFT Building number 20104) is located at 7 Commonwealth Avenue, Georges Heights which is on the south side of the peninsula off Suakin Drive.

The sites are currently owned by the Commonwealth Government of Australia. The administration of the five remaining cottages in Middle Head Road and the 7 Commonwealth Avenue cottage is vested in the Sydney Harbour Federation Trust.

4 Evaluation

4.1

The buildings are of Technical Significance:

technical

They are important in illustrating the use of standardised designs and prefabrication in the immediate post-War years of the 1940s and early 1950s to meet the post-War shortages of materials and labour in Australia.

The buildings are of Social Significance:

They are extremely rare survivors of their type, there being only one other group listed on the Register of the National Estate; Ingleburn Village, Sydney.

4.2 social

They are important in being physical representations of the National Service Scheme which trained Defence Force Reserve personnel in the early years of the Cold War by being the married officers' accommodation for National Service instructors working at the adjacent Naval base, HMAS Penguin.

4.3 cultural & aesthetic

The building is of Aesthetic Significance:

They are important in representing the post-War aesthetic face of Modernism in low cost housing.

4.4 Iconic/canonical

NA

4.5 general assessment

The Åmåls Sågverks Aktiebolag prefabricated cottages at Georges Heights are culturally significant because they are extremely rare survivors of their type, there being only one other group listed on the Register of the National Estate; Ingleburn Village, Sydney. They are important in illustrating the use of standardised designs and prefabrication in the immediate post-War years of the 1940s and early 1950s to meet the post-War shortages of materials and labour in Australia and they are important in being physical representations of the National Service Scheme which trained Defence Force Reserve personnel in the early years of the Cold War by being the married officers' accommodation for National Service instructors working at the adjacent Naval base, HMAS Penguin. They are important in representing the post-War aesthetic face of Modernism in low cost housing.

5 Documentation

Written Sources

Robertson & Hindmarsh Pty Ltd, 2003, *Heritage Assessment of Former Navy Cottages, Georges Heights, Mosman*, for Sydney Harbour Federation Trust (SHFT), unpublished report located in the library of the SHFT.

Australian Housing Mission, 1950, *Report to the Right Honorable R.G. Casey, C.H., M.C., M.P. Minister for National Development*, Canberra, ACT

5.1 principal references

Photo archives

Photos of houses: Robertson & Hindmarsh Pty Ltd, Architects and the library of the Sydney Harbour Federation Trust.

Aerial photos: Sydney, 3422, 6 March 1930 and Sydney, Run 12, Frame 467-122, May 1951

5.2 visual material attached

5.3 rapporteur/date

Scott Robertson, September 2004