

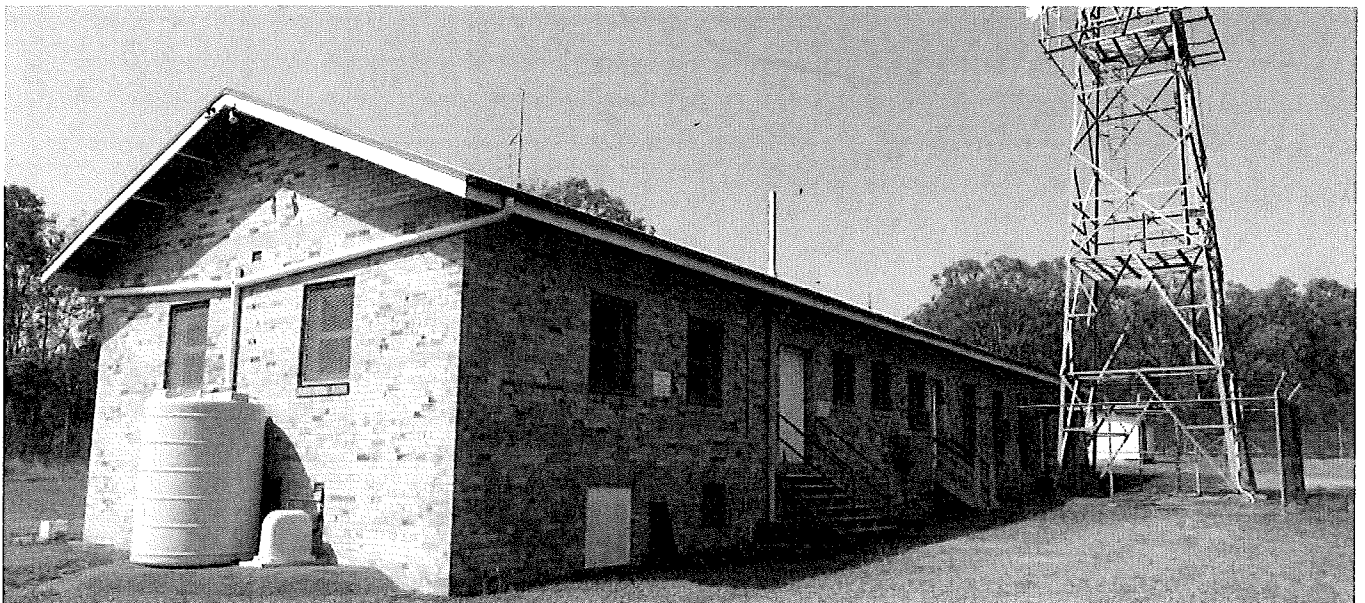
**JACOBS®****Australian Communications and Media Authority  
Facility, Birkdale / Capalaba Receiving Station**

Australian Communications and Media Authority

**Heritage Assessment**

| Final Draft

22 December 2016



**Australian Communications and Media Authority Facility, Birkdale / Capalaba Receiving Station**

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**Document history and status**

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## Executive Summary

### Introduction

The Australian Communications and Media Authority (ACMA) plans to dispose of ACMA property situated at 362-388 Old Cleveland Road East, Birkdale, Queensland, in the Redland City Council area. Jacobs Group (Australia) Pty Limited (Jacobs) has been commissioned to undertake a heritage assessment for the ACMA property to identify potential historic and Indigenous heritage values to meet the requirements of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The ACMA facility, Birkdale is located approximately 18 kilometres (km) east of the Brisbane central business district, Queensland. The property is approximately 62 hectares (ha) in area on Lot 1 RP14143, Lot 2 RP14144 and Lot 2 SP146445, within the Redland City Council Local Government Area (Figure 1.1). The property is bounded by the Howeston Golf Course to the east, the Airservices Australia aircraft navigation centre to the north, Old Cleveland Road East on the eastern boundary, and Tingalpa Creek to the south. The property is not currently listed on any heritage registers. 'The Pines', also known as Willard's Farm, which is immediately adjacent to the ACMA property, is listed on the Redland City Council Heritage Overlay. There are no registered Indigenous heritage sites situated on or within 50 metres of the ACMA property.

### Heritage significance

The ACMA Facility at Birkdale is the site of the Capalaba receiving station which was constructed by the United States Army in 1943 in response to developments during World War 2 (WW2) in the Asia-Pacific region. The site comprises the main receiving station building, a generator shed, a 'guard house', a cattle dip area, a rhombic antenna array and other remnant aerial/antenna infrastructure. Following WW2, the US Army transferred the Capalaba receiving station to the Postmaster-General's Department (subsequently Telecom Australia), and later to ACMA. It remains in operation as a radio receiving station.

The Capalaba receiving station is of historical importance for its role in the US and Australian WW2 collaboration in the Southwest Pacific Area radio communications from 1943. It also demonstrates the ongoing importance of radio communications, with over 70 years of continued use as a frequency monitoring station in support of civil and emergency services to the present day. There are few radio receiving stations remaining extant in Australia which date to the mid-20<sup>th</sup> century, and there appear to be no others in Australia directly related to the US Army. The main receiving station building is assessed as being rare.

While no Indigenous heritage sites were identified during the site inspection, the location of the ridgeline overlooking the Tingalpa Creek and the close proximity to natural resources for food and tool manufacture do make this area a suitable location for Indigenous campsites. Consultation with traditional owners may reveal further cultural significance of the ACMA property.

It is concluded that the site has Commonwealth heritage values, and that these threshold at the State level of significance. The heritage values of the site have not been identified as having 'outstanding' significance to Australia and, therefore, have not met the threshold for National Heritage listing.

### Management recommendations

While the ACMA Facility, Birkdale / Capalaba receiving station has been assessed as having Commonwealth heritage values, it is not recommended for listing on the CHL, because of the proposal to dispose of the property from Commonwealth government ownership. The Capalaba receiving station should however be nominated for entry in the Queensland Heritage Register as part of its disposal. At a minimum this listing should include the Main receiving station building.

It is recommended that a Heritage Management Plan be prepared either as part of the disposal process by ACMA, or as a condition of transfer to the new owner. The Heritage Management Plan would provide an on-going management plan for the conservation and preservation of the Capalaba receiving station site. It would also provide for various recommendations for each of the main elements of the site, and the measures for

managing or mitigating any impacts from the proposed development of the site. For example, as the Main receiving station building is of High significance, the management measure would likely involve the retention and reuse of the building; while for the generator shed or 'guard house' (both of Some significance) an appropriate measure may be to undertake an archival photographic recording of the site before demolition.

## Abbreviations

ACMA	Australian Communications and Media Authority
AIF	Australian Imperial Force
AMP	Australian Mutual Provident
AW	Air Warning
CAC	Corrugated Asbestos Cement
CHL	Commonwealth Heritage List
DATSIP	Department of Aboriginal and Torres Strait Islander Partnerships
Defence	Department of Defence
DEWR	Department of the Environment and Water Resources
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
FRUMEL	Fleet Radio Unit Melbourne
GHQ	General Headquarters
GSV	ground surface visibility
ha	hectare
HAA	Heavy anti-aircraft
HF	High frequency
HF DF	High frequency direction finding
HMP	Heritage Management Plan
Jacobs	Jacobs Group (Australia) Pty Limited
km	kilometre
m	metre
NAA	National Archives of Australia
NHL	National Heritage List
NSW	New South Wales
PMG	Postmaster-General's Department
RAAF	Royal Australian Air Force
SWPA	Southwest Pacific Area
TO	Theatre of Operations



US United States of America

WW2 World War Two

### **Important note about your report**

The sole purpose of this report and the associated services performed by Jacobs Group (Australia) Pty Limited (Jacobs) is to prepare a heritage assessment for the Australian Communications and Media Authority (ACMA) in accordance with the scope of services set out in the contract between Jacobs and ACMA.

In preparing this report, Jacobs has relied upon, and presumed accurate, any information (or confirmation of the absence thereof) provided by ACMA and/or from other sources. Except as otherwise stated in the report, Jacobs has not attempted to verify the accuracy or completeness of any such information. If the information is subsequently determined to be false, inaccurate or incomplete then it is possible that our observations and conclusions as expressed in this report may change.

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## **1. Introduction**

The Australian Communications and Media Authority (ACMA) plans to dispose of ACMA property situated at 362-388 Old Cleveland Road East, Birkdale, Queensland, in the Redland City Council area. Jacobs Group (Australia) Pty Limited (Jacobs) has been commissioned to undertake a heritage assessment for the ACMA property to identify potential historic and Indigenous heritage values to meet the requirements of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

### **1.1 Aim and scope of the assessment**

Under the EPBC Act, ACMA must undertake an assessment process to identify which of the places they own or control have Commonwealth Heritage values, including prior to disposal of such property. The heritage assessment will:

- Identify historic and Indigenous heritage values on the Birkdale property.
- Assess the significance of these values against the Commonwealth Heritage list (CHL) criteria.
- Provide a statement of significance.

### **1.2 Location and description of site**

The ACMA facility, Birkdale is located approximately 18 kilometres (km) east of the Brisbane central business district, Queensland. The property is approximately 62 hectares (ha) in area on Lot 1 RP14143, Lot 2 RP14144 and Lot 2 SP146445, within the Redland City Council Local Government Area (Figure 1.1). The property is bounded by the Howeston Golf Course to the east, the Airservices Australia aircraft navigation centre to the north, Old Cleveland Road East on the eastern boundary, and Tingalpa Creek to the south.

### **1.3 Constraints**

A number of files of archival material were located on site and were examined in the course of the assessment. The material provided general administrative information and a map of the general site layout in 1951 (see Figure 3.2). The on-line catalogue of the National Archives of Australia (NAA) provided some information around the post-war administration and management of the site until the 1980s. Pre-1945 items were few and related to the PMG post-war development, search and acquisition of the property. This material was provided by the ACMA archives in Canberra. No US Army related archive material was available.

It should be noted that the absence of recorded Aboriginal cultural heritage places on the ACMA property reflects a lack of previous cultural heritage surveys in the region. In addition not all Aboriginal sites and objects are reported or recorded and knowledge may remain with the local Aboriginal individuals, communities and organisations. Therefore, the absence of information in the records is not likely to reflect a true picture of the Aboriginal cultural heritage values of the ACMA property.

### **1.4 Authorship of the report**

This report was written by Andrew Wilkinson (Archaeologist, Jacobs). Mapping was prepared by Aneeta Nathan (Spatial Consultant, Jacobs). The current main building plan was prepared by Andrew Wilkinson. Fieldwork was undertaken by Dr Karen Murphy (Technical Leader, Historical Heritage, Jacobs) and Andrew Wilkinson (Archaeologist, Jacobs). All photographs were taken by Andrew Wilkinson and Karen Murphy. A technical review of the report was undertaken by Karen Murphy.

### Site Location

ACMA Birkdale



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Date Published: 20 Dec 2016

## **2. Heritage status and legislative framework**

### **2.1 Environment Protection and Biodiversity Conservation Act 1999**

The EPBC Act includes 'national heritage' as a matter of National Environmental Significance and protects listed places to the fullest extent under the Constitution. It also establishes the National Heritage List (NHL) and the Commonwealth Heritage List (CHL).

For proposed actions situated on Commonwealth land or which may impact on Commonwealth land, the guidelines *Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies (Significant Impact Guidelines 1.2)* apply. The guidelines require the proponent to undertake a self-assessment process to decide whether or not the action is likely to have a significant impact on the environment, including the heritage value of places. If an action is likely to have a significant impact an EPBC Act referral must be prepared and submitted to the Minister for approval.

The following is a description of each of the heritage lists and the protection afforded places listed on them.

#### **2.1.1 Commonwealth Heritage List**

The CHL is established under the EPBC Act. The CHL is a list of properties owned by the Commonwealth that have been assessed as having significant heritage value. If a place is included on the CHL, its Commonwealth owner is required to prepare a heritage management plan in accordance with the Environment Protection and Biodiversity Conservation Regulations 2000, to ensure that activities affecting the place avoid or minimise adverse impacts on the heritage values of the place, and provide ongoing protection of the place in event of sale or transfer. Any proposed actions on CHL places must be assessed for their impact on the heritage values of the place in accordance with *Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies (Significant Impact Guidelines 1.2)*.

#### **2.1.2 National Heritage List**

The NHL is a list of places with outstanding heritage value to Australia, including places overseas. This means that a person cannot take an action that has, will have, or is likely to have, a significant impact on the national heritage values of a national heritage place without the approval of the Commonwealth Minister for the Environment.

#### **2.1.3 Register of the National Estate**

The Register of the National Estate (RNE) was formerly compiled as a record of Australia's natural, cultural and Aboriginal heritage places worthy of protection for future generations. The RNE was frozen on 19 February 2007, which means that no new places have been added or removed since that time. From February 2012 all references to the RNE were removed from the EPBC Act and the *Australian Heritage Commission Act 1975*. The RNE is maintained on a non-statutory basis as a publicly available archive.

### **3. Background**

#### **3.1 Historical context**

##### **3.1.1 Aboriginal context**

There is little information regarding the Aboriginal people of the Tingalpa Creek region, and it is generally accepted that the Quandamooka, Jagera and Turrbul people, occupied the area east of Brisbane for thousands of years prior to European settlement (Neal and Stock 1986). Historical references to Aboriginal people are largely based on oral histories which provide much of what is known, such as the preference for Aboriginal camps on the lower floodplains on the Brisbane side of the Tingalpa Creek rather than the steep embankments on the opposite side (Howells 2001:28). Oral histories also record Aboriginal middens and burials to be found on the Willard's Farm property and that Aboriginal people were camping in the area in general (Howells 2001:28). The name of the adjacent suburb of Capalaba is thought to be derived from the Yugarabul language, meaning place of ring tailed or scrub possum (Watson 1943:73). Tingalpa Creek itself has held various names, with surveyor Robert Dixon naming the creek Turin in 1842, and John Arrowsmith's 1855 map showing the name Tanguiba Creek. Tanguil, a plant used to render fish senseless, has been suggested as a source for the name, however this and other proposed origins remain a matter of debate (Steele 1984:114).

There is no Aboriginal cultural heritage recorded on the Cultural Heritage Database and Register in the study area. Archaeological studies (Guilfoyle 2006: 39) have indicated that Aboriginal cultural sites are commonly found on land rich with resources for making wooden and stone tools, where there is abundant flora and fauna species for food, and where there is access to nearby temporary and permanent water. Studies have also shown that elevated landforms overlooking water ways and travel routes are commonly associated with Aboriginal camping sites.

##### **3.1.2 European settlement**

Europeans had arrived in the region around Birkdale prior to James Warner's 1841 survey, and settlement increased during the 1850s following closure of the Moreton Bay penal settlement in 1839. The land of the region was described as first class pasture and agriculture, and first land sales commenced in 1863 (Howells 2001:29). Following the proclamation of the colony of Queensland in 1859, the region attracted British and German immigrants who took advantage of the various settlement incentive schemes on offer. Jones Road was the upstream limit of the navigable part of Tingalpa Creek, which provided a transport route to and from the region. Saline water is found upstream to Capalaba Bridge with water sources such as bores unsuitable due to the brackish water. In addition, poor quality soils reduced the agricultural development potential of the region. Successful long term settlement along Tingalpa Creek was difficult and property ownership changed hands regularly throughout the late 19<sup>th</sup> century.

Timber-getting was an important and lucrative early industry for the region and in 1865 licenses were issued to the early pioneers James and Edward Willard. In December 1865, an additional 90 acres, at 302 Old Cleveland Road East, was registered to James Willard and Mark Blundell. This comprised the current ACMA property as well as the adjacent lot on Old Cleveland Road East. The farm house which still remains extant at the site is believed to have been built around 1863, and remains one of the oldest surviving farm houses in the Redland area (Howells 2001:31). The property was also known as 'Cotton Farm' and 'Willard's Farm', with the area of the farm house known as 'The Pines' on account of the tall pine trees planted there. The only remaining portion of the original farm is a small allotment on the corner of the Jones Road and Old Cleveland Road East, immediately adjacent to the ACMA property.

The South Sea Islander labour trade operated in Queensland between 1863 and 1904, providing indentured labour contracts and a cheap workforce for the colony's developing primary industries. Many Aboriginal people and 'Kanakas' worked in the Redland area (Redland Times 1973). Anecdotal evidence suggests that the Willards used South Sea Islander labour on the farm (Eva, in Howells 1996) and features of the farm house construction are similar to Melanesian long house construction (Haan, in Howells 1996). By 1924 the Willard's Farm property was sub-divided into various portions and listed for sale (Telegraph 1924). The farm held dairy cattle until 1926 and by 1939 the 255 acre property had changed ownership to the Cotton family.

### 3.1.3 World War Two (WW2) in the Asia-Pacific region

As early as 1919 fears over the emerging military strength of Japan in the Asia-Pacific region led to recommendations for a British naval presence in the region. Australia was considered as a base, however preference settled for a naval base to be established in Singapore (NAA: B6121, 311J). Tensions were mounting between Britain and Japan and in 1922 the United States of America (US) proposed a limit to naval armament in the Asian-Pacific. The construction of the Singapore naval base was intermittent, marked by delays and periods of halted work (NAA: A981, Sin 1 Part 2). Military tension in the region grew, and in 1923 the Anglo-Japanese Alliance was terminated, although the Japanese government appeared in favour of its renewal (NAA: A981, JAP 96). The Australian government renewed focus on the development of Australia's own naval defences and in 1926 financial contribution to the Singapore naval base ceased (NAA: A5954, 1018/2). In 1931 Japan invaded Manchuria and Australia's naval defence capability began to increase once again with further activity; however, Australia remained under the impression that the Singapore naval base would prevent any movement further south by the Japanese. Defence spending in Australia declined with cuts introduced in response to the onset of the Great Depression in the early 1930s, and in 1934 Japan notified the US that it intended to no longer uphold the Washington Naval Treaty of 1922 (NAA: A664, 522/401/704).

The Great Depression brought about the establishment of volunteer militia units in Australia with the role of the Army being primarily that of the defence of Australian ports and harbours. Japan invaded China in 1937 and the Singapore naval base was finally completed the following year. Unfortunately, there was no British fleet available to occupy it. Defence spending in Australia had begun to recover from 1934 and by 1939 Australia had purchased two more cruisers; two destroyers were being built; development of an aerodrome for the Royal Australian Air Force (RAAF) in Townsville had begun; and planning commenced for an Advanced Operational Base on the Cape York Peninsula (Pearce 2009: 48).

Britain declared war on Germany on 3 September 1939, followed the same day with Prime Minister Robert Menzies' announcement that Australia too was at war with Germany. Australia maintained its focus on the war in Europe and the Middle East while the threat from Japan in the Asia-Pacific increased. Australia eventually responded with the training of more troops, and an increase in its civil defence and volunteer organisations in the northern regions of the country. In December 1940, the 8 Division Australian Imperial Force (AIF) sailed from Sydney to Malaya and Singapore. Military and government records from 1941 showed the concern about the impending Japanese forces; plans and strategies for the defence of Australia and its neighbours; and raised the question of US interests (NAA: A432 1956/3036 Part 1 p 5). A US-led embargo on oil supplies in 1941 forced Japan to seek supplies further south and Japan invaded French Indo-China (Vietnam) in July of that year. On 7 December 1941 Japan simultaneously attacked Pearl Harbour in Hawaii, Thailand, The Philippines and Malaya. The following day, Australia joined the American declaration of war against Japan. Australia was the last bastion in the South West Pacific for launching an attack against Japan and became the preferred base for support of the American forces. The first American troops arrived in Brisbane on 22 December 1941.

Japan's march south continued with the capture of Tarakan Island, Kuala Lumpur and Rabaul. The fall of Rabaul placed the North Queensland town centres well within bombing range. On 15 February 1942 Singapore fell and the Australian 8 Division AIF was captured. The Japanese followed up with the invasion of Timor on 19 February and Darwin was then within striking distance. The threat of a Japanese invasion of Australia was deemed likely at this time (NAA MP1185/8, 1945/2/9).

### 3.1.4 The South West Pacific Area command and communications

Britain considered communications intelligence to be of the utmost importance and a great advantage to the Allies' war effort (Bou 2012:7). On 26 February 1941 the first high frequency direction finding (HF DF) radio station was constructed at Garbutt aerodrome in Townsville, and in January 1942 construction began on the US air command operations and signals building, also at Garbutt. The US proposed the South West Pacific Area (SWPA) of command (Pearce 2009: 29) on 9 March 1942, and General Douglas MacArthur took command of the Allied Forces in the SWPA on 17 March following his forced evacuation from The Philippines. General MacArthur was given command of all Allied land and air forces which included Australia's defence forces. Australian Lieutenant General (Lt Gen) Thomas Blamey was appointed Commander-in-Chief of the Allied Land Forces SWPA following his return from the Middle East (Pearce 2009: 39).

By April 1942 plans were well underway for the RAAF No.1 Wireless Station in Townsville and an experimental air warning (AW) radar station to monitor aircraft movements around the Torres Strait was built on Hammond Island. The Hammond Island AW Radar proved its value soon after installation by providing early warning of Japanese attack aircraft which allowed for the safe evacuation of Allied aircraft shortly before the attack (Pearce 2009: 58).

On 18 April 1942 General MacArthur formally assumed command of Australian forces and established General Headquarters (GHQ) SWPA in Melbourne. On 25 April an intercepted Japanese kana code revealed plans for a carrier-based aircraft raid against targets around Townsville that was to be conducted by 2 May. Landings were planned for Port Moresby and the Solomon Islands. By the end of April, Australian 5 Division troops took up the defence of Townsville and civilians were encouraged to evacuate, many relocating to the southern Australian cities. Preparations were made for a 'scorched earth' retreat and the demolition of vital facilities. The month of May 1942 began with the Townsville heavy anti-aircraft (HAA) batteries opening fire on Japanese reconnaissance aircraft. The Battle of the Coral Sea started on 4 May and culminated with the withdrawal of the Japanese four days later. Any immediate threat of invasion of Australia was finally removed with the defeat of Japan's carrier force at the Battle of Midway on 5 June, although Sydney and Newcastle were shelled by Japanese submarines on 8 June (Pearce 2009: 17).

On 20 July 1942, General MacArthur moved GHQ SWPA from Melbourne to Brisbane in order to improve the communications and military movements in the north of Australia. MacArthur had established his military headquarters in the Australian Mutual Provident (AMP) building in Queen Street, Brisbane (later to be known as MacArthur Chambers). In Australia, two organisations played an important part in the Allied intercept effort. The Fleet Radio Unit Melbourne (FRUMEL) was built from the combined US Navy signals intelligence unit and a Royal Australian Navy unit, while the Central Bureau was based in Brisbane and comprised combined Australian and American army and air force personnel. Although FRUMEL shared information, the Central Bureau was MacArthur's own signals intelligence (Bou 2012: 7). Land was then sought for the erection of a radio communications station to service the Central Bureau somewhere near the Brisbane GHQ SWPA.

The ability to intercept radio communications was seen to be critical function of war intelligence. In fearing that their own Japanese codes had been compromised, Rear Admiral Takaji Yoshima flew to Rabaul in person, on 17 April 1943, to warn Admiral Isoroku Yamamoto not to conduct his tour of inspection. Yamamoto had been responsible for the attack on Pearl Harbour. The advice was ignored, and Yamamoto was killed in 'Operation Vengeance' the next day as a result of radio information intercepts. The Allies were quick to claim that Australian coastal watchers provided the intelligence in order to deflect the fact that the Japanese codes were indeed known. The Japanese even sent a decoy message to test their own theory of the breach and when the Allies did not respond, erroneously then believed their codes were still intact (Bou 2012: 6).

A key factor of radio signal interception was the ability to determine the direction of the signal, and by triangulation of the signal source from several receiving stations, the transmitter's location was then determined. For a receiving station, a site had to be selected that was large enough for a series of direction-based antenna arrays that were well away from sources of interference (ACMA 90/5037/02 QR 1/2/8A/2). The Cotton property at Capalaba (now Birkdale) was obtained under compulsory acquisition, and plans for a radio receiving station there commenced as the natural landform and location was ideal for excellent radio reception. In 1943 orders were received for equipment with six rhombic aerials, six double doublet aerials with transmission lines, and switching facilities required for the radio receiving station. The receiving station maintained a direct cable link to Somerville House in Brisbane, which was initially used by the Australian Army from 1942, but was taken over shortly after by the US Army for use as the communications centre. The Capalaba facility was staffed by Detachment 3 of the 832<sup>nd</sup> Signal Service Company (Dunn 2004). General MacArthur spent considerable time in Brisbane, and it is believed that he may have had a brief stay at the Capalaba receiving station. Local oral history indicates that a local postman recalls riding his bicycle to hand deliver a telegram to MacArthur at the Capalaba receiving station (Barry Kidd, quoted in Wynnum Redlands Herald 1980). Although there is no confirmed documentary evidence, it is likely that the radio station received General MacArthur's telegram from USS Teton of the surrender of the Japanese (Dunn 2004; Howells nd).



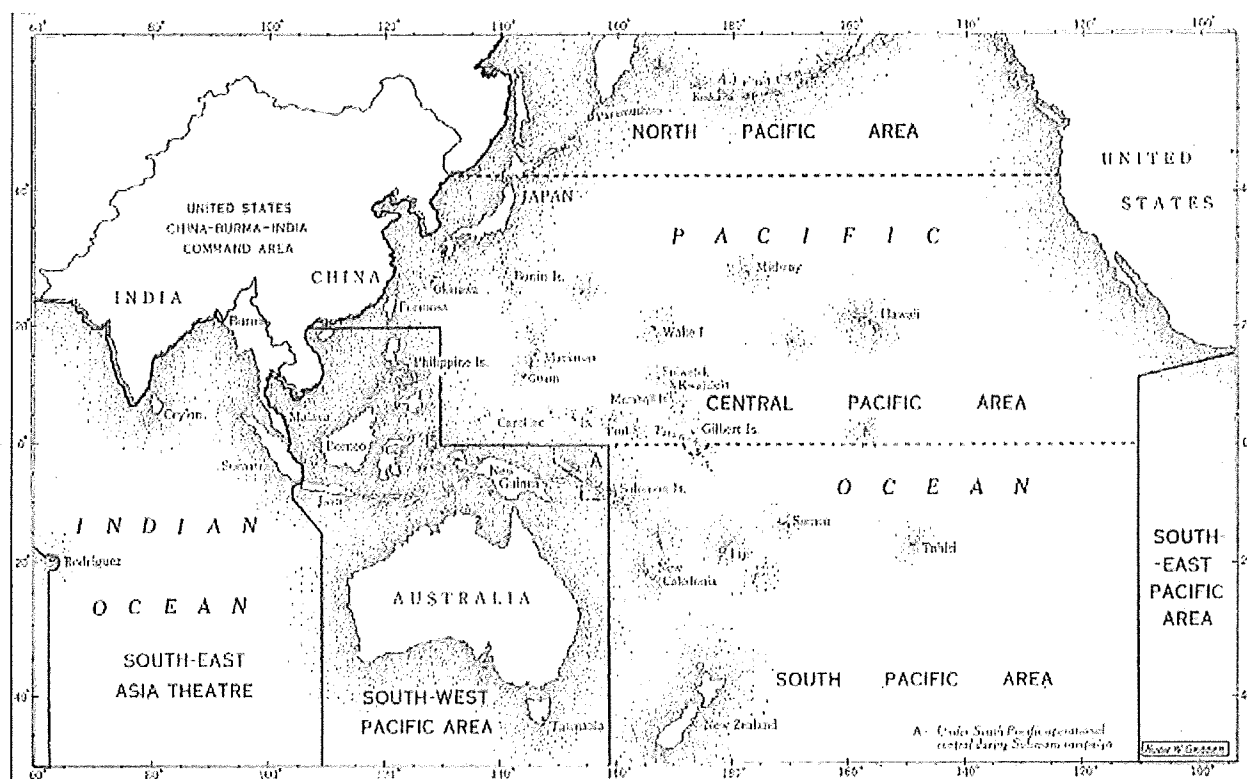


Figure 3.1 : Map of the SWPA. (Source: Dunn (2015)).

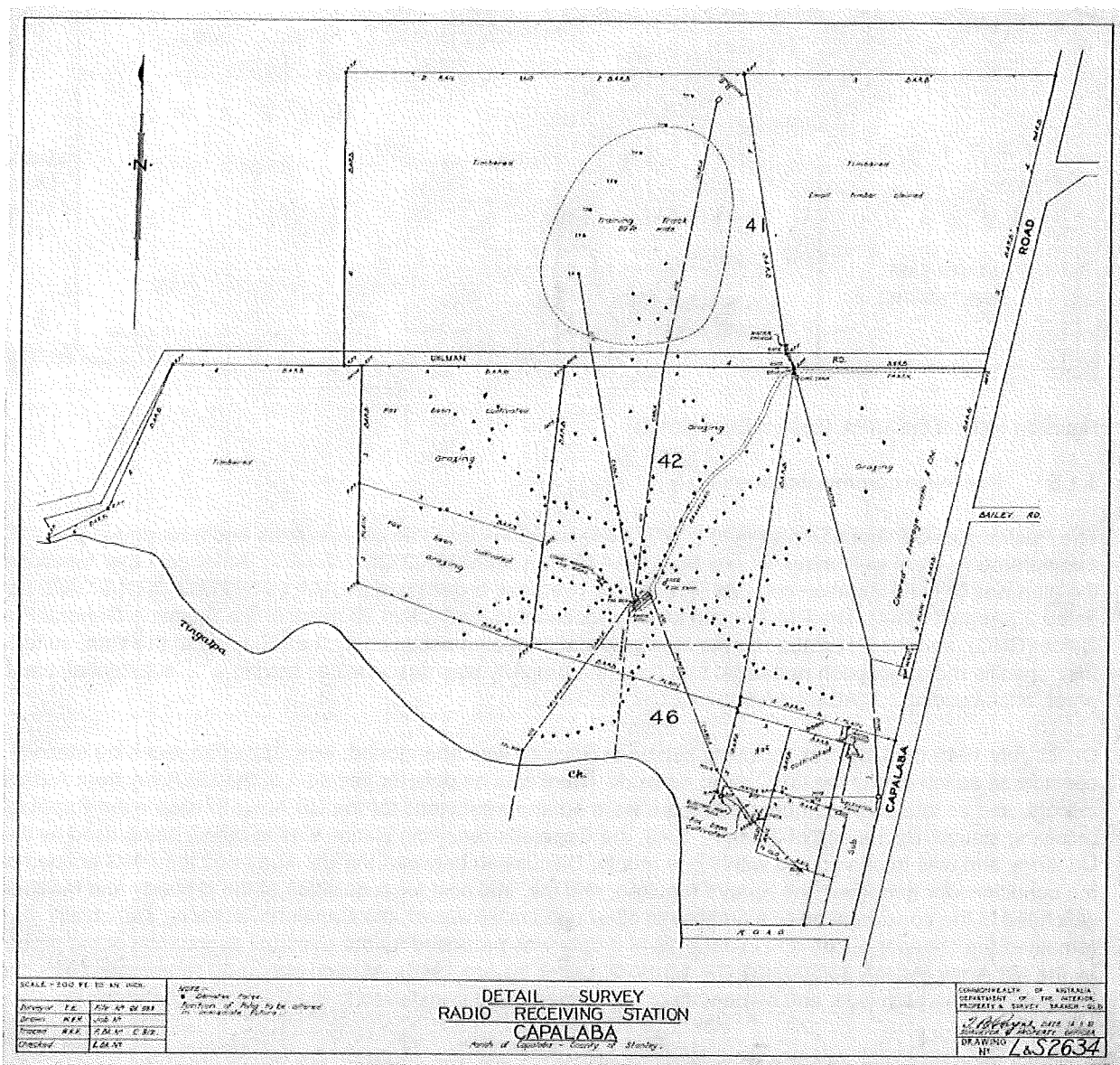
### 3.1.5 Post-war communications

The Postmaster-General's Department (PMG) post-war plans for radio observations and frequency measurements were well under way by May 1944 (ACMA 90/5037/02 QR 1/2/8A/2). Amongst other functions the plan was to build a station capable of receiving overseas broadcasts (ACMA 90/5037/02 QR 1/2/8A/2: Letter dated 23 August 1944). The PMG began looking for suitable land within 20 miles of the Brisbane General Post Office (GPO), and the Capalaba remote receiving station, being occupied by the US Army at the time, suited their specific radio reception needs. At that time, the property was described as having a "...substantial, blast proof, brick building..." (ACMA 90/5037/02 QR 1/2/8A/2).

On 23 July 1945 the US Army receiving station at Rocklea was abandoned, with Capalaba receiving station considered as integral to the GHQ radio network. There was no date for vacation of the US Army from Australia in sight, and as late as December 1945 there were no apparent plans for the US Army to vacate the Capalaba receiving station. By the end of January 1946, the Capalaba receiving station was to cease being used by the US Army and was to be vacated within one month. Discussion between the US Army and the PMG ensued over the conditions for handover, the repairs required, and the final cost for acquisition of the property and facilities, which led to the consideration of a number of other options. However, the Capalaba receiving station still remained the cheaper option and in June 1946 a date was proposed for the eventual evacuation of the property by the US Army (ACMA 90/5037/02 QR 1/2/8A/2: Letter 30 Jun 1946). At midnight on 30 November 1946, the US Army left the premises, and ownership of the property was transferred to the PMG who then took up residency.

A survey of the property in 1951 (Figure 3.2), shows the Capalaba receiving station in relation to the property north of Uhlman road, and property allotments in the southeast of the property, such as Willard's farm. Structures shown on the survey map include: the main building, generator shed, the antenna locations for various arrays, and the transmission poles. References to other buildings such as those found in the list of buildings on the property (ACMA Q90/5037/1 1/2/8A/1). Of note in the survey map is the reference to a training track, possibly associated with the use of the facility by the US Army stationed there during WW2.

In December 1975, the PMG was abolished with telephone services, and radio and television broadcast licensing being transferred to Telecom Australia (Estreich 2008). In 2005, the merger of the Australian Broadcasting Authority and the Australian Communications Authority brought about the ACMA for the control of radio and television broadcast communications. The ownership of the property on which the Capalaba receiving station is situated, currently remains with ACMA.



**Figure 3.2 : Capalaba remote receiving station survey 1951 (Source: NAA J1018, LS2634).**

## **3.2 Heritage context**

### **3.2.1 Previous heritage studies**

#### **3.2.1.1 Willard's Farm**

Willard's Farm now comprises a small allotment of land near the corner of Jones Road and Old Cleveland East Road, adjacent to the ACMA property. It is only considered in this report for historical context of the ACMA property. Three unpublished heritage studies on the Willard's Farm have previously been conducted (Macnaughton 2015):

- A study for the National Trust of Australia (Queensland branch) was carried out in 1980. 'Willard's Farm' was deemed not to meet the criterion for inclusion in the Register of National Trust Queensland.
- A local heritage study was carried out by the Redland Shire Council in 1995. Willard's Farm was not recommended for listing in the Local Register.
- A local heritage study was carried out by Redland Shire Council in 2000. Willard's Farm was not recommended for listing in the Local Register or State Register.

Public interest in Willard's Farm arose following a proposed development of the ACMA property and nearby land (Macnaughton 2015). Reassessment of Willard's Farm has led to it subsequently being included on the Redland Planning Scheme Heritage Place and Character Precinct Overlay.

#### **3.2.1.2 Capalaba Receiving Station**

No known previous heritage studies have been undertaken of the Capalaba receiving station at the ACMA Facility.

### **3.2.2 Register results**

A search of the following heritage registers and databases was undertaken by Andrew Wilkinson (Archaeologist, Jacobs) for the ACMA Facility, Birkdale and its surrounds on 27 October 2016:

- Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP) Indigenous Cultural Heritage Database and Register
- Heritage Place and Character Precinct Overlay of the Redland City Council
- Queensland Heritage Register
- RNE
- CHL
- NHL
- World Heritage List (WHL)

The heritage places which are situated within or immediately adjacent to the ACMA facility are presented in Table 3.1. The ACMA Facility is not listed on any heritage registers. The adjacent property 'The Pines' (also known as Willard's Farm), is listed on the Redland City Council Heritage Place and Character Precinct Overlay. There are no registered Indigenous cultural heritage sites within a 50 m buffer of the ACMA Facility.

Table 3.1 : Heritage places within or immediately adjacent to the study area.

Heritage place name	Register	Number	Location	Location to study area
The Pines', 'Birkdale Homestead' or 'Willard's Farm'	Redlands Planning Scheme Heritage Place and Character Precinct Overlay	-	Lot 2 on RP211270 302 Old Cleveland road East, Birkdale	Adjacent

## **4. Site inspection**

### **4.1 Introduction and method**

An inspection of the ACMA property was undertaken by Andrew Wilkinson (Archaeologist, Jacobs) and Dr Karen Murphy (Senior Historical Archaeologist, Jacobs) on 10 November 2016 to identify any historic and Indigenous heritage values. A record of details of its description, condition and potential impacts from the proposed disposal were made during the site inspection. All photographs taken during the site inspection are presented in Appendix A.

For Aboriginal archaeological investigation the effectiveness of archaeological field survey is generally related to the conspicuous nature of the sites being looked for and the characteristics of the ground surface visibility (GSV). Ground surface visibility is a measure of the bare ground that is visible to the archaeologist during the survey. The predominant factors that affect the surface of the ground that is visible are the type and amount of vegetation and ground litter; the degree of recent sedimentary deposition; and the level of visual interference from surface gravels. Due to the size of the property it was only possible to achieve approximately 5 per cent survey coverage of the site. The results of the survey were largely affected by GSV which was around 0-1 per cent across the property due to dense vegetation cover.

### **4.2 Results**

During the site inspection it was evident that the property in general was well maintained with primarily new growth (less than 50 years old) tall canopy trees. Shrubs and taller grass were found across the entire property. A few old growth trees greater than 50 years old were seen towards the fringes of the property to the north and south. Where operational infrastructure was constructed, the vegetation was cleared to allow for access for inspection and maintenance as well as to reduce the inherent fire hazards (Figure A.42).

#### **4.2.1 Aboriginal heritage**

The ACMA property is highly modified from pastoral, agricultural and industrial practices with significant ground surface disturbance found throughout the entire Project site (Figure A.39). Tracks, transmission line easement clearance and radio antenna works have resulted in moderate ground disturbance and vegetation clearance (Figure 4.1).

The elevated ground that forms the northern bank of the Tingalpa Creek was inspected for evidence of Aboriginal occupation. The embankment was steep, with a drop of approximately 5 m, and was heavily vegetated. An area of ground disturbance along the ridge line, approximately 20 m long and extending 5 m inland from the ridgeline, was examined for Aboriginal cultural material. This area was found to be significantly disturbed from access and the use of a rope swing over the creek and from other social activity. The ground was a silty clay soil with very few stones within its matrix.

No Aboriginal cultural materials were recorded during the survey. The property has been subject to moderate ground disturbance through pastoral, agricultural and industrial uses.

#### **4.2.2 Historical heritage**

The main receiving station building, the generator shed, and the 'guardhouse' were recorded in detail during the site inspection. Within the building, radio transmission and receiving equipment can still be found installed within the communications room. Photographs were also taken of remnant structures found around the property. A description is provided in Section 5 below.



Figure 4.1 : Powerline easement and fence posts, facing north.

## 5. Site description

### 5.1 General environment

An overview of the site and the locations of the key elements is presented in Figure 5.1. The highest elevation of the property is to the north which forms a natural low area in the centre before meeting a ridgeline in the south that follows Tingalpa Creek and drops sharply to the water way and associated floodplain.

The property comprises cleared land with areas of dense woodland of remnant and new growth vegetation. These areas of woodland are found in the higher elevation of the northeast and west of the property, and along the Tingalpa Creek ridgeline. Grass and shrubs are kept low throughout the centre of the property through maintenance and grazing practices, where the remaining antennae and building structures can be found.

Three buildings and a number of structures on the site relate to radio and teletype communications operations and equipment maintenance that has been in continual use, more or less, since WW2. Buildings and structures found on and adjacent to the property relate to late 1800s settlement and a continuation of pastoral and agricultural farming practices through to recent times.

The main building is located towards the centre of the property and is accessed via a sealed road that runs southerly from what was formerly known as Uhlman Road. This building is a gabled roof, single story brick building mounted on brick foundations. A short distance, northeast, of the main building is a generator shed with galvanised iron walls and skillion roof. East of the main building, near the eastern boundary of the property lies the 'guard house'. This is a timber framed structure with fibre sheet pyramid style roof.

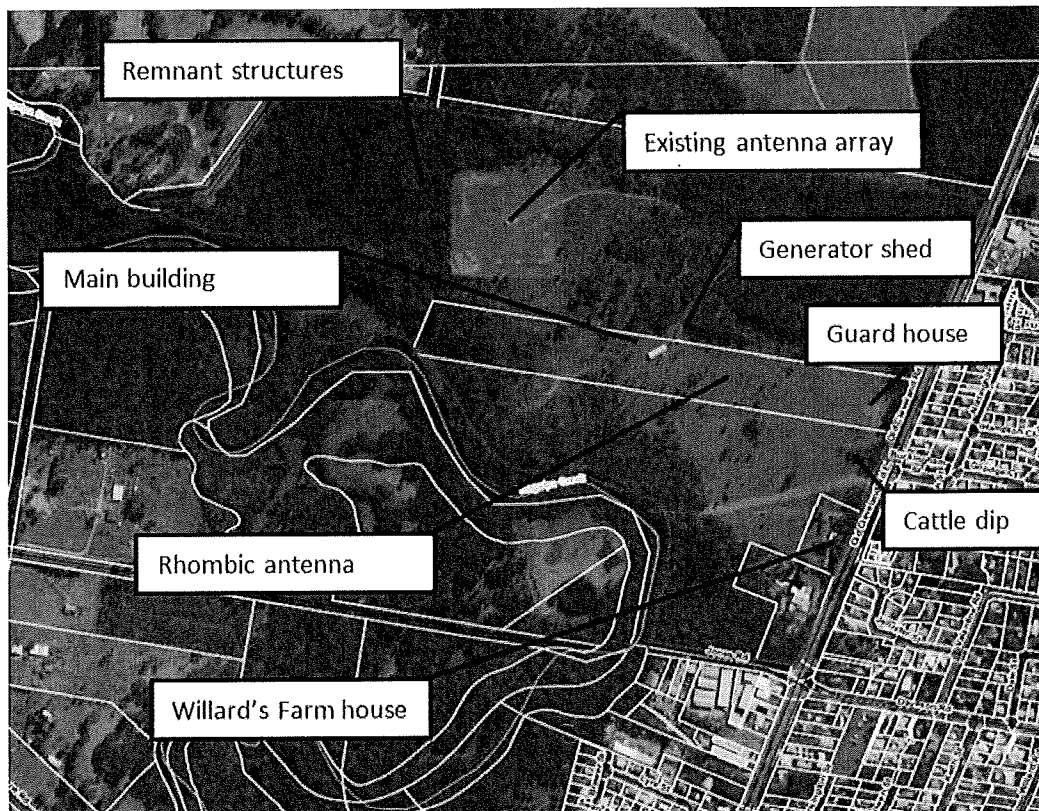


Figure 5.1 : Site plan of ACMA Facility, Birkdale.

## 5.2 Main receiving station building

The main receiving station building is located just east of centre of the ACMA property and is accessed via a sealed road that runs in a south west direction from what was formerly known as Uhlman Road, on the northern boundary of the property. The 1946 plan of the building is shown in Figure 5.2, and the current building plan is shown in Figure 5.3. This building is a single story, brick building, approximately 10 metres (m) wide and 30 m long, mounted on brick foundations with a gabled roof clad in galvanised corrugated iron. The exterior bricks range from beige to red in colour, laid in a common bond pattern (one row of header, three rows of stretcher). Red earthenware air vents measuring one brick length by two in height (Figure A.6) are in all exterior walls except the south east wall. A large air vent has been recently cut into each of the northwest and southeast walls, revealing the thickness of the foundation walls to be approximately 30 cm. The lintels across the doors and windows are concrete, and are unpainted. The doors, windows and frames, rake, and fascia boards are of timber and are painted white. The windows are barred on the inside with further security mesh added to the exterior windows (Figure A.17). Galvanised guttering on the long sides of the building and drip edges are dark green in colour. A feature of the building construction is a concrete cap of single piece that runs across the top of the brickwork underneath the eaves around the entirety of the building (Figure A.12).

Entry to the building is gained through a single door in the northeast end of the building where a large access way (garage door), now bricked up, can be seen (Figure A.14). It is likely this feature of the building was bricked up at some time in the 1980s (pers. comm., Greg Sherwood, 10 November 2016). Three further access doors can be found on the southeast side of the building; two single doors leading into the workshop and accommodation areas; and a double door leading into the communications room. Wooden exterior steps lead up to the two single doors, with metal steps leading to the double doors. Windows feature in all walls of the building except for that of the north east where the workshop rooms are situated. Three window types can be found in the building and appear to be in position to suit the ventilation and lighting requirements of the associated rooms. Louvre windows are found in the northwest wall for the ablutions area. Sash windows are found in the southern section of the building where the accommodation facilities and communications room are located. One window in the southeast wall of one accommodation room has a window-mounted air conditioner (Figure A.10). The workshops, storage rooms and current communications room in the northern half of the building have casement windows. In this northern section all except two windows have been covered with wood fibre sheeting. Three of these windows, on the south east wall have window mounted air conditioning. An additional feature of the windows in the north section of the building on the south east wall is that they are all the dimensions of full height single doors (Figure A.9).

The roof is corrugated sheet metal with a corrugated ridge capping. The eaves of the roof extend beyond the dimensions of the building by approximately 0.5 m. The roof cladding and fasteners have been bonded and earthed with a large copper strip to reduce radio signal interference (Figure A.11).

The interior of the building is divided into two main sections incorporating workshops and store rooms in the northern half, and accommodation, living facilities and a communications room in the southern half (Figure 5.3). A brick interior wall that extends to the roof line divides these two sections (Figure 5.3 and Figure A.24), linked by a small hallway and a single fire door. The interior walls throughout the northern area are of wood frame construction with asbestos fibreboard and Masonite. The northern section of the building is divided into six areas of three workshops, a workshop/store room, an undesignated room with utilities panels, and a communications workstation. The interior walls of the southern area are of wood frame construction with timber tongue and groove panelling. The southern half of the building is divided into two accommodation quarters, kitchen and dining room, toilets and showers facility, and a large communications room.

The ceiling throughout the building is of a timber batten and panel construction except in the accommodation quarters where the roof space is exposed revealing the framing technique (Figure A.24). The interior roof space is uninsulated with joists and rafters fastened with bolts and nails. The flooring of the building is concrete with lino covering throughout. Wooden trap doors in the floor of the building reveal conduit channels in the concrete sub-floor for the installation of electrical wiring and other services. A concrete path, with ceramic drain pipe running north west to south east (Figure A.13) extends for a short distance from the north east end of the building. No concrete path surrounds the building, however a short stretch abuts the south east wall to the first door and steps.



The communications room contains the remains of some of the original radio equipment. Towards the western wall the equipment rack installation can be seen Figure A.20, in a similar location to the proposed equipment rack identified on the 1946 plan (Figure 5.2). The 1946 plan provides a list of the equipment to be placed in each bank of the rack, and included: aerial and antenna receiver patching bay, diversity receivers bay, two general receiver bays, the line termination bay and the power distribution bay. Although much of the radio equipment has been removed Figure A.18 shows a number of receivers and ancillary equipment stored in the communications room.

The plan of the main building from 1946 (Figure 5.2) indicates there have been few changes to the layout of the interior since construction. Two notable exceptions include a walled hallway into the communications room from the outside, and the separated workshops and current operating room in the north of the building as a single workshop (compare Figure 5.2 and Figure 5.3). Features of the construction such as the timber framing suggest a commonality with the standard designs of many American WW2 buildings (Garner 1993), although no available documents discuss additional features such as a brick wall as shown in Figure 5.2. It is likely that the interior construction is made from local materials as the US Army found the Australian local timbers to be superior in strength (Pearce 2009: 73).

### 5.3 Generator shed

The generator shed is located approximately 22 metres northeast of the main building. The building is a wooden frame construction on a brick foundation, clad in a modern white coloured Colorbond® Trimdek® style sheeting with a corrugated iron skillion roof. The shed is approximately 4.5 m by 3.6 m. Wooden double doors allow access to the generator from the southwest side. Small louvre air vents span the length of the northwest wall under the roof eaves (Figure A.33), and a full height louvre vent is on the southern half of the southeast wall (Figure A.34). Three concrete plinths, metal pipe and metalwork set into the ground, approximately 4 m to the south east of the shed, are all that remains of the fuel tank originally associated with the generator.

### 5.4 'Guard house'

The 'guard house' is located on the eastern boundary of the property along Old Cleveland East Road, approximately 350 m from the main building. Construction is of timber frame set on concrete plinths with a pyramid-shaped roof. The building is approximately 7 m long and 5 m wide. The roof is corrugated asbestos fibre cement with galvanised metal gutters and downpipes. The exterior walls are weatherboard on the bottom half with fibre cement sheeting on the upper portion. The interior walls are fibre cement throughout with the ceiling comprising timber batten and fibre sheet panels.

Access to the building is via wooden steps and through a double timber frame and panel door in the east wall. Two sash windows are situated towards the centre of the west wall while the north and south walls have a single sash window each (Figure A.36 and Figure A.38).

The building is a single room with wooden floor boards. Although removed now, some evidence of the felt-backed lino tiles that once covered the floor remain. Electricity and telephone wires are still connected to the building, and a water pipe is attached to a timber framed panel on the outside of the north wall. Insulators and a bell arrangement are found under the eaves on the west wall. The walls, windows, door and ceiling of the building has suffered substantial damage in recent times.

There is some difficulty in establishing the likely origin and function of the 'guard house'. Archive records for the transfer of assets from the US Army to the PMG lists four buildings:

- a prefabricated building measuring 20 feet x 36 feet (6 m by 11 m)
- a portable hut measuring 10 feet by 12 feet (3m by 3.6 m)
- two Sentry Boxes measuring 4 feet by 6 feet (1.2 m by 1.8 m) (ACMA: 90/5037/02 QR 1/2/8A/2).

None of these buildings match the dimensions of the building now referred to as the 'guard house'. No maps indicate the locations of these buildings, with only the main building and the generator shed shown (see Figure 3.2).

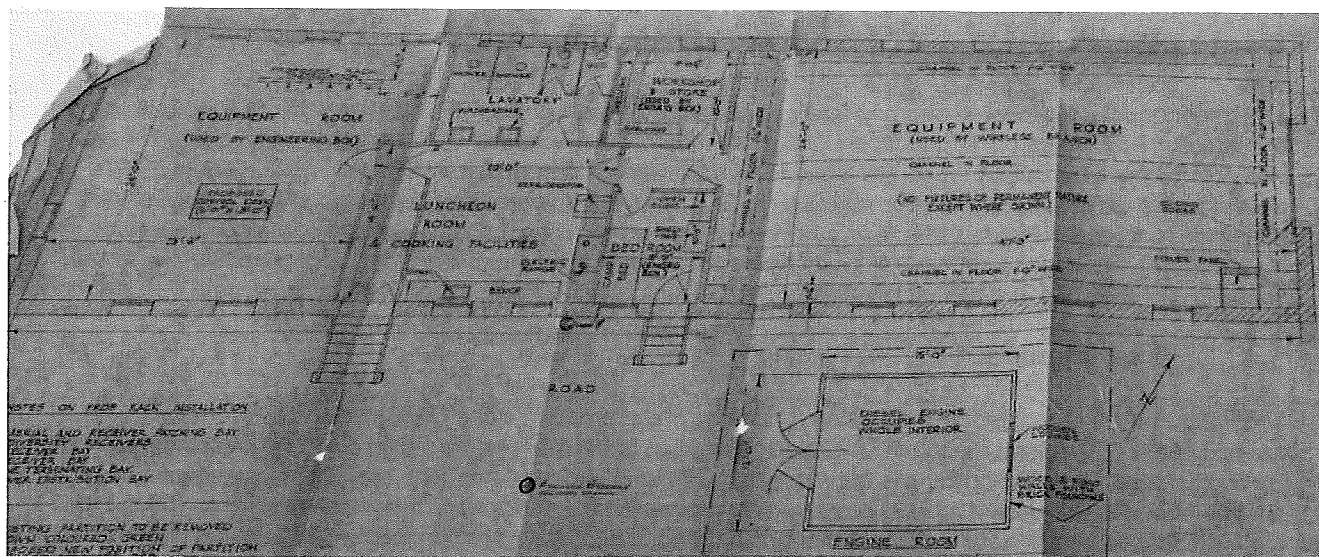
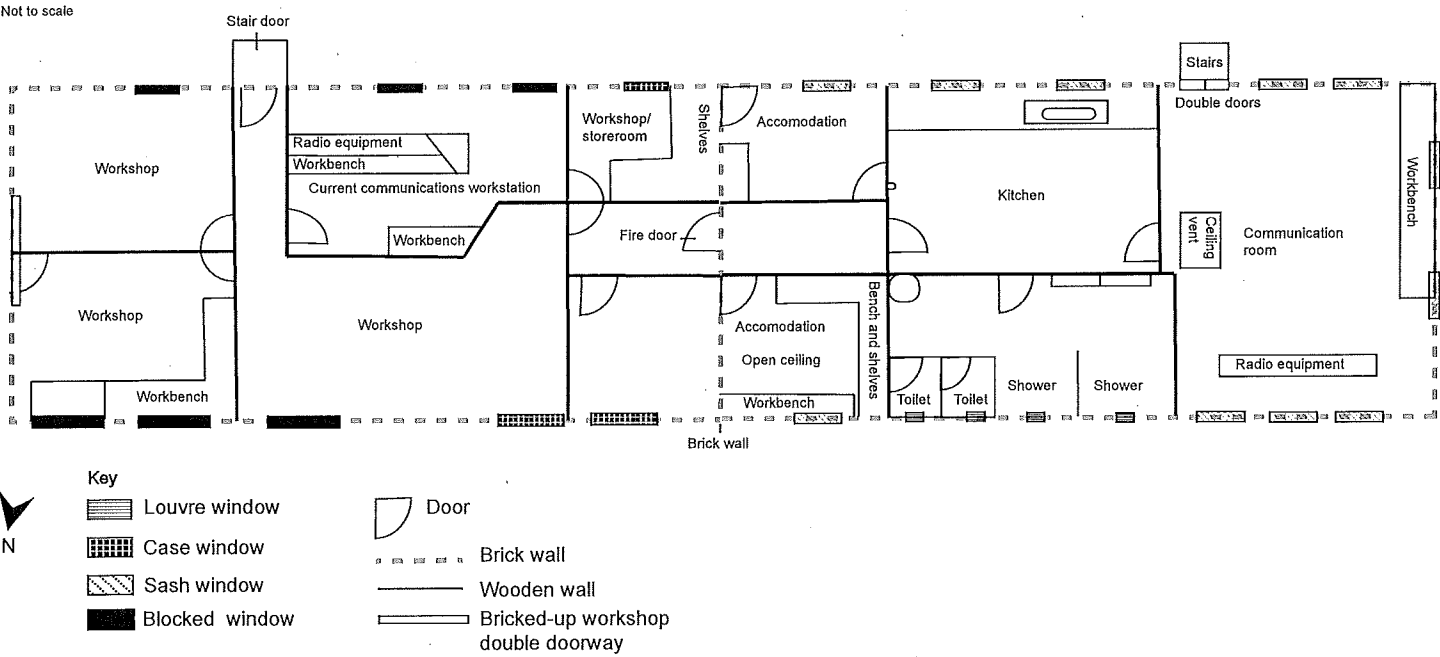


Figure 5.2 : ACMA Facility, Birkdale Main Building 1946 plan. (Source: ACMA: 90/5037/02 QR 1/2/8A/2).

Figure 5.3 : ACMA Facility, Birkdale, Main Building plan, 2016.

ACMA Birkdale Radio receiving station  
Plan: Andrew Wilkinson  
10 November 2016



## **5.5 Cattle dip**

The cattle dip is a depressed area approximately 15 m south of the present location of the 'guardhouse' on the eastern boundary of the property. The rectangular area measures approximately 22 m by 50 m and is currently heavily vegetated. The area has been scheduled for contaminated soil removal and ground rehabilitation.

## **5.6 Rhombic antenna array**

Rhombic antennae arrays were invented by Edmond Bruce and Harald Friis at Bell Telephone Laboratories in the US in 1931. They comprise long-wire antennae of four conductors joined in a rhombus or diamond configuration (Figure 5.4). They are widely used for long-distance, high frequency transmission and reception, and are useful for point-to-point communications. The rhombic antenna was one of the most popular point-to-point high frequency antenna arrays prior to WW2, however more complex types of arrays began to replace the technology for shortwave broadcasting following WW2 (Integrated Publishing nd).

The remaining Rhombic antenna array at Capalaba receiving station is located in the cleared grass area east of the main receiving station building (Figure A.39 to Figure A.46). It comprises four antennae approximately 200 m apart in the northwest to southeast alignment, and 80 m apart in the southwest to northeast alignment. The eastern most antenna is approximately 250 m east of the main building. Only one Rhombic antenna array remains on the site. Each antenna is supported by three sets of two metal stays anchored by concrete blocks in a Y configuration around the central pole.

## **5.7 Other remnant aerial/antenna infrastructure**

A few functioning antenna arrays remain in situ on the property. Other associated remnant structures, such as transmission poles and concrete plinths used for anchoring stay wires, were also found, particularly around the existing antenna array to the northwest of the main building. Many remnant structures had been removed from their original locations (Figure A.43), and some of these poles, and others now found on the ground, maintain their cable and stay fixtures and fittings (Figure A.47). A number of upright transmission poles extending radially from the main building can be found throughout the property and in some cases are found in similar locations to those on the 1951 site survey map (Figure 3.2).

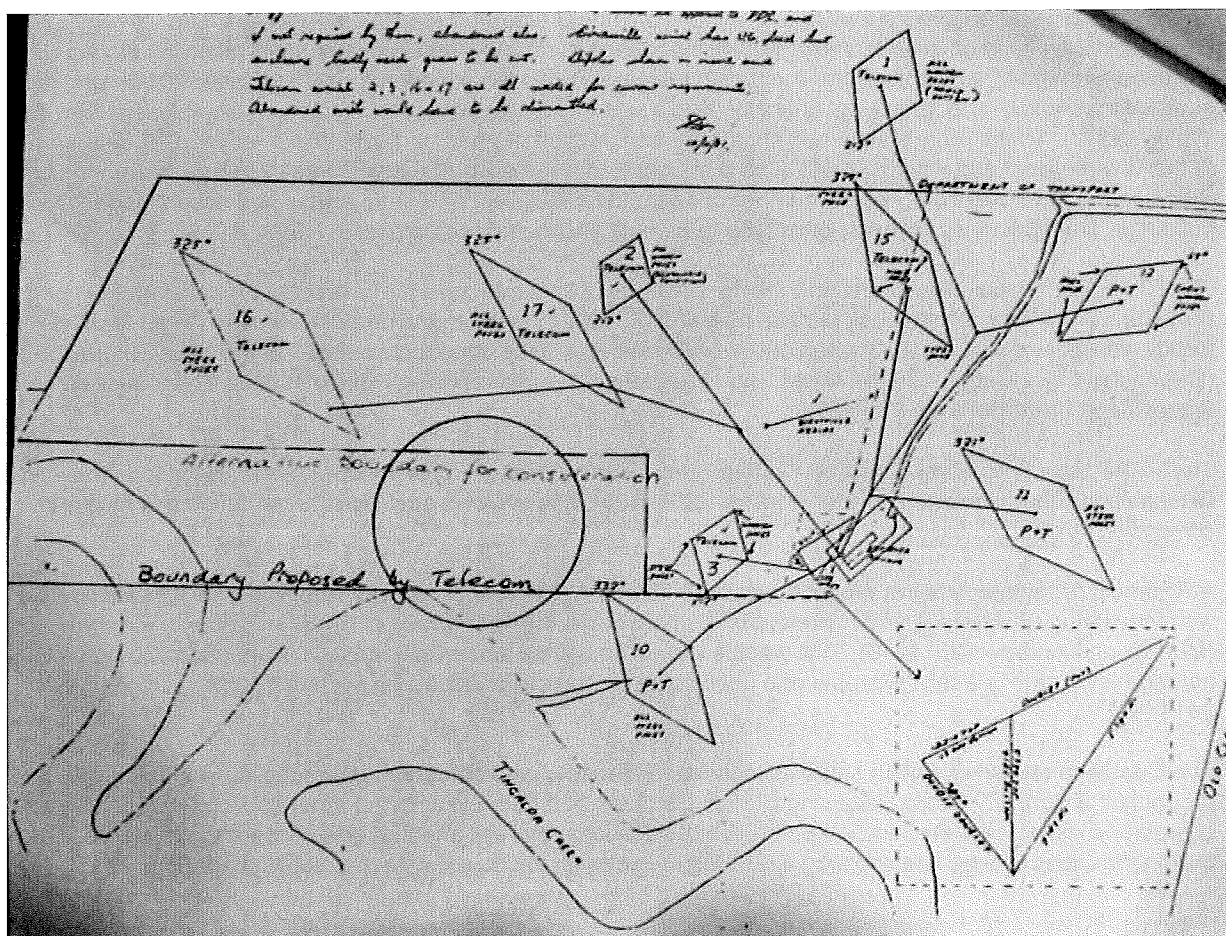


Figure 5.4 : ACMA Facility, Birkdale Rhombic antenna array 1971. (Source: ACMA: Q90/5037/1 1/2/8A/1).

## 5.8 Comparative analysis

To determine whether the physical evidence on a particular site is rare or representative it is useful to conduct a comparative analysis of similar sites and structures. In this regard, comparative material needs to be available and must be comparable in type. The Capalaba receiving station began as imported American infrastructure in support of the WW2 SWPA war effort and showed shared construction technique between imported and local design and in continued operation as a radio monitoring station.

There is only a limited amount of available material on US Theatre of Operations (TO) buildings, and very little on US WW2 remote receiving stations. No systematic heritage study of radio receiving stations has been undertaken; however investigation reveals that there are several WW2-era radio stations situated around Australia. Much of the material that is available refers to transmission stations or communications centres in general. From the limited available information concerning the Central Bureau, and other organisations that supported the communications network during WW2; it is unlikely information is readily available in the public domain, due to the sensitive military nature at the time. The limited historical material that is available on receiving stations; however, indicates there were many similarities to the antenna array types and layouts. Direction finding antenna arrays were established during the First World War and were found crucial in establishing the position of enemy forces. Following the development of the rhombic array in 1931 the technology found itself in operation across the globe, largely in part due to its relative simplicity and convenience in design, coupled with the advantages of a high gain with directional capabilities over a wide range of frequencies.

There appear to be no other surviving US WW2-era remote receiving stations in Australia. The Queensland Government website of Queensland WWII Historic Places lists only the Capalaba radio receiving station (Government 2014). A search of the Australian Heritage Database conducted on 27 October 2016 using the search terms 'radio' and 'receiving' only identified the Bringelly Radio Receiving Station Complex, in New South Wales (NSW). These radio station buildings were constructed in 1950 and commissioned in 1951 (Department of the Environment and Energy 2016). The Bringelly Radio Receiving Station Complex is listed as an Indicative Place on the RNE and comprises a number of operational facilities, antennae arrays and accommodation buildings. The station was the last of its type to be built and the last remaining in NSW.

The RAAF High Frequency Direction Finding Station at Julia Creek was a round concrete building equipped with four vertical Marconi-Adcock aerials, built around 1942. This antenna array has limited range and the facility was closed around 1943 when other similar facilities were constructed closer to the New Guinea front (Queensland Government 2014). RAAF High Frequency Direction Finding Station at Julia Creek is listed on the Queensland State Heritage Register.

The RAAF High Frequency Direction Finding Station, Shead Road, Tolga, in Queensland is listed in the Queensland State Heritage Register (Pearce 2009: 105); however, no specific information on this facility is currently available.

A Rhombic Antennae Array at Woomera dates to the early 1950s and had a distinct Defence role associated with the testing of weapons and rockets, and demonstrates the importance of communication in a remote area (Murphy and Andrews 2014: 46). This was assessed as having some heritage significance at a Commonwealth heritage level, and is a rare example of a once common telecommunications system (Murphy and Andrews 2014: 46).

The Capalaba receiving station shares similar characteristics with contemporary receiving stations, and probably the Bringelly Radio Receiving Station Complex and rhombic antenna array at Woomera. These shared characteristics relate to the function of the communications network and the radio reception of the time. The building facilities seem to be substantially different in design and function to that at Capalaba.

## 6. Cultural heritage significance

### 6.1 Basis for assessment

The concept of cultural heritage significance helps in estimating the value of places. Places which are likely to be significant are those which 'help an understanding of the past or enrich the present, and which will be of value to future generations' (Australia ICOMOS 2000:12). In Australia, the significance of a place is generally assessed according to the following values:

- Aesthetic value
- Historic value
- Scientific value
- Social value

Under Section 341D of the EPBC Act, a place is deemed to have Commonwealth heritage value only if it meets one or more of the Commonwealth Heritage Criteria. Nine Commonwealth Heritage Criteria for identifying, evaluating and assessing the Commonwealth heritage values of a place are specified in EPBC Regulation 10.03A. Table 6.1 lists the criteria for assessing Commonwealth heritage values. One or more of the heritage values listed in Table 6.1 is required to meet the threshold for inclusion on the Commonwealth Heritage List.

Table 6.1 : Commonwealth Heritage Criteria

Criterion	Description
A - Historic	The place has significant heritage value because of the place's importance in the course, or pattern, of Australia's natural or cultural history.
B - Rarity	The place has significant heritage value because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history.
C -Scientific	The place has significant heritage value because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history.
D - Representative	The place has significant heritage value because of the place's importance in demonstrating the principal characteristics of: (i) a class of Australia's natural or cultural places; or (ii) a class of Australia's natural or cultural environments.
E - Aesthetic	The place has significant heritage value because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group.
F – Creative/Technical	The place has significant heritage value because of the place's importance in demonstrating a high degree of creative or technical achievement at a particular period.
G - Social	The place has significant heritage value because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.
H - Associative	The place has significant heritage value because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history.
I - Indigenous	The place has significant heritage value because of the place's importance as part of indigenous tradition.

## **6.2 National Heritage List criteria**

The criteria for identifying, evaluating and assessing for National Heritage values are the same as for the Commonwealth heritage values (Department of the Environment and Water Resources 2007). The threshold for the National Heritage List is that a place must have 'outstanding' heritage values for Australia (Department of the Environment and Water Resources 2007).

## **6.3 Heritage values of the Capalaba receiving station**

### **6.3.1 Criterion A – Historic**

The City of Brisbane and surrounds featured significantly in Australia's involvement in WW2. The US joined the war in 1941, and in 1942 General Macarthur moved his GHQ SWPA from Melbourne to Brisbane to improve the timely delivery of critical correspondence between operational centres. A critical element of this was the establishment of communications centres and AW installations and radio transmitting and receiving stations. Receiving stations, in particular were crucial to pinpointing enemy unit movements, and interception enemy transmissions. Established in 1942-43, the Capalaba receiving station demonstrates this key aspect of communications during WW2. It also demonstrates the ongoing important role of telecommunications in relation to civil emergency response and public broadcasting. The Capalaba receiving station has continually delivered radio telecommunications for over 70 years.

### **6.3.2 Criterion B – Rarity**

US Army TO temporary buildings of WW2 were designed and constructed to a series of standard designs, and were predominately wooden framed and panelled (Garner 1993: 33). Later versions introduced cement fibre panelling, however few were made of brick (Garner 1993). Little has been published of the construction of more permanent buildings in US advance bases such as those used for communications, and it is known that for control centres and headquarters these were often sourced from existing local dwellings. In this regard, the main building at the Capalaba receiving station appears to be a rare example of a brick construction with the favoured prefabricated wood interior of temporary buildings. Although the origin of the bricks, believed to have been imported by the US Army (pers comm, Greg Sherwood, 10 November 2016), cannot be substantiated, the specific architectural features of the main building show similarities with prefabricated temporary building designs, and exhibits extremely well-made construction techniques. It is likely that the interior construction is made from local materials, as the US Army found the Australian local woods to be superior in strength (Pearce 2009: 73). There are few radio receiving stations remaining extant in Australia which date to WW2, and there appear to be no others in Australia directly related to the US Army.

The building referred to as a 'guard house' reflects the design and construction details typical of WW2 US Army standard prefabricated temporary buildings, with additional fabric modifications suited for use in a radio communications environment, such as the CAC roofing to reduce interference from signal reflections. The purpose of the building is unclear and appears to have been removed from its original location. Its recent usage cannot be determined, however telephone, electricity and water has been connected to the building. In addition the dimensions of the buildings listed on the property inventory for transference to the PMG in 1946 do not match the dimensions of the current building. It is therefore difficult to determine the purpose of the building, nor its original location.

The design and layout of the aerials are similar to a number of other radio receiving stations constructed at the time and, therefore, cannot be considered as rare. Likewise the equipment in the communications building are typical of the type commonly found in radio communications facilities, however further investigation would be required to determine how many examples of this equipment still exist, and importantly in working order. As much of the original radio equipment has been removed, the remaining components are unlikely to contribute to the site's rarity overall.



**6.3.3 Criterion C – Scientific**

In its entirety, the site does not provide information that will contribute to an understanding of Australia's cultural history. While some of the original radio receiver equipment is still within the main building, given it is not intact and multiple components have been removed it is unlikely to meet this criterion.

**6.3.4 Criterion D – Representative**

The Capalaba receiving station is representative of large HF DF radio receiving stations constructed in Australia as it demonstrates the principal characteristics of these stations. It is still possible to identify many of the features of the site, including the existing antenna array, cables to and from the aerials, and the original receiving station building. The scale and nature of these features demonstrate how the receiving station was constructed and operated from inception to its current use.

The main building also demonstrates the principal characteristics of a receiving station dating to WW2, including a communications room, and accommodation spaces for the operators. The dimensions of the brick walls used in construction reflect the need for protection from enemy attack, while providing additional protection from signals interference. The Capalaba receiving station meets this criterion.

**6.3.5 Criterion E – Aesthetic**

The Capalaba receiving station does not demonstrate any particular aesthetic characteristics.

**6.3.6 Criterion F – Creative/Technical**

There is no evidence that the Capalaba receiving station was particularly innovative or used new technology.

**6.3.7 Criterion G – Social**

The Capalaba receiving station does not meet this criterion as there is insufficient evidence to indicate any attachment to the site from past serving Australian or US defence personnel, or past or current post-war employees.

**6.3.8 Criterion H – Associative**

The ACMA Facility, Birkdale is associated with the direct communications link to GHQ, SWPA in Brisbane. The site's association with the establishment of the 'Ultra Secret' Central Bureau 'Nyrambla' (Japanese signal interception and decryption centre), and the communications from Macarthur (USS Teton) signaling the surrender of the Japanese 2 September 1945 cannot be substantiated with currently available documents. There is also insufficient evidence to support the anecdotal claim that General Douglas Macarthur had a brief stay at the site. The Capalaba receiving station does not meet this criterion.

**6.3.9 Criterion I – Indigenous**

Archaeological studies indicate that elevated landforms overlooking waterways and travel routes are commonly associated with Aboriginal camping sites. This is supported for the ACMA property by oral histories recording the likelihood of Aboriginal middens and burials to be found on the property and camping in the area in general. However, this contrasts with other oral histories stating that the Aboriginal people in the area preferred the lower floodplains of the Brisbane side of the creek rather than negotiate the steep embankment opposite, such as on the bank within the ACMA property.

There have been no known anthropological or archaeological investigations conducted on the ACMA property, and no Aboriginal cultural heritage has been recorded for the study area. The location of the ridgeline overlooking the Tingalpa Creek and the close proximity to natural resources for food and tool manufacture do make this area a suitable location for campsites. No Aboriginal sites or artefacts were identified during the survey. There is the potential for Indigenous values for the ACMA property, and further investigation including consultation with the relevant traditional owners would provide more information.

## 6.4 Grading of significance

The contribution to heritage value of a place may vary based upon the significance of various components. This significance may be diminished by the condition or loss of integrity. It may also be useful to assess the significance of components in relation to others. To assist in quantifying the degree to which these components contribute to the heritage value of a site a ranking system can be applied. Table 6.2 presents the ranking system used for the Capalaba receiving station. The ranking of the components of the Capalaba receiving station are presented in Table 6.3.

Table 6.2 : Significance ranking based on *Defence Guidelines on Assessing Significance* (Godden Mackay Logan 2009)

Level significance	Definition
A	Element of <b>outstanding/exceptional</b> significance – embodies Commonwealth heritage values or State heritage significance in its own right and makes an irreplaceable contribution to the significance/heritage value of the place as a whole. National Heritage Value.
B	Element of <b>high</b> significance or heritage value – embodies Commonwealth heritage value or State Significance in its own right and makes an irreplaceable contribution to the significance/heritage value of the place as a whole. Commonwealth or State Heritage Value.
C	Element of <b>moderate</b> significance or heritage value – embodies Commonwealth/Regional/State heritage values in its own right and makes a significant contribution to the values of the place as a whole. Commonwealth or State Heritage Value.
D	Element of <b>some</b> significance that make a contribution to the overall Commonwealth Heritage values of the place as a whole. Local Heritage Value.
E	Element which is <b>neutral</b> , with little or no heritage value. Does not have Commonwealth, State or local heritage value on its own merit.
F	<b>Intrusive</b> element which detracts, or has the potential to detract, from the significance of the place.

Table 6.3 : Ranking of components of Capalaba receiving station

Component	Significance	Components embodying heritage values
Main receiving station building	High	The main building contributes to the overall Commonwealth heritage values of the site under Criterion A (historical significance), Criterion B (rarity), and Criterion D (representativeness). The main building is of significance in its own right at a Commonwealth level and makes an irreplaceable contribution to the heritage values of the place as a whole.
Generator shed	Some	The generator shed does not have Commonwealth heritage values in its own right, but makes some contribution to the overall heritage values of the site, for Criterion D (representativeness).
'Guard house'	Some	The 'guard house' does not have Commonwealth heritage values in its own right, but makes some contribution to the overall heritage values of the site, for Criterion D (representativeness) This 'guard house' has recently suffered severe damage and therefore has sustained a loss in integrity. Additionally, it is unclear whether it is in its

Component	Significance	Components embodying heritage values
		original position.
Cattle dip	Neutral	The cattle dip has little or no heritage value, and does not contribute to the overall significance of the site.
Rhombic antenna array	Some	The HF DF Rhombic Antenna array does not have Commonwealth heritage values in its own right, but makes some contribution to the overall heritage values of the site, for Criterion D (representativeness).
Other remnant aerial/antenna infrastructure	Some	The other remnant aerial/antennae infrastructure does not have Commonwealth heritage values in its own right, but makes some contribution to the overall heritage values of the site, for Criterion D (representativeness).

## 6.5 Summary Statement of Heritage Values

The Capalaba receiving station is of historical importance for its role in the US and Australian WW2 collaboration in the Southwest Pacific Area radio communications from 1943. It also demonstrates the ongoing importance of radio communications, with over 70 years of continued use as a frequency monitoring station in support of civil and emergency services to the present day. The main receiving station building is to be one of the earliest remaining US Army radio receiving stations in Australia. There are few radio receiving stations remaining extant in Australia which date to the mid-20<sup>th</sup> century, and there appear to be no others in Australia directly related to the US Army. The main receiving station building is assessed as being rare.

The Capalaba receiving station is representative of large HF DF radio receiving stations constructed in Australia as it demonstrates the principal characteristics of these stations. The main building also demonstrates the principal characteristics of a receiving station dating to WW2, including a communications room, and accommodation spaces for the operators. The dimensions of the brick walls used in construction reflect the need for protection from enemy attack, while providing additional protection from signals interference.

While no Indigenous heritage sites were identified during the site inspection, the location of the ridgeline overlooking the Tingalpa Creek and the close proximity to natural resources for food and tool manufacture do make this area a suitable location for campsites. Consultation with traditional owners may reveal further cultural significance of the ACMA property.

It is concluded that the site has Commonwealth heritage values, and that these threshold at the State level of significance. The heritage values of the site have not been identified as having 'outstanding' significance to Australia and, therefore, have not met the threshold for National Heritage listing.

## **7. Conclusion and recommendations**

While the ACMA Facility, Birkdale / Capalaba receiving station has been assessed as having Commonwealth heritage values, it is not recommended for listing on the CHL, because of the proposal to dispose of the property from Commonwealth government ownership. The Capalaba receiving station should however be considered for nomination for entry in the Queensland Heritage Register as part of its disposal. At a minimum this heritage listing boundary should include the Main receiving station building.

It is recommended that a Heritage Management Plan be prepared either as part of the disposal process by ACMA, or as a condition of transfer to the new owner. The Heritage Management Plan would provide an on-going management plan for the conservation and preservation of the Capalaba receiving station site. It would also provide for various recommendations for each of the main elements of the site, and the measures for managing or mitigation any impacts from the proposed development of the site. For example, as the Main receiving station building is of High significance, the management measure would likely involve the retention and reuse of the building; while for the generator shed or 'guard house' (both of Some significance) an appropriate measure may be to undertake an archival photographic recording of the site before demolition.

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## **8.2 Historical documents**

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NAA International Naval Conference. Japanese denunciation of Washington Naval Treaty A664, 522/401/704.

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NAA Singapore Naval base. II A981, Sin 1 Part 2.

## **8.3 Personal communications**

Greg Sherwood, ACMA Facility Manager, Birkdale, ACMA, 10 November 2016.

## Appendix A. Photographs of ACMA Facility

### A.1 Main building exterior



Figure A.1 : ACMA Facility main building facing south.

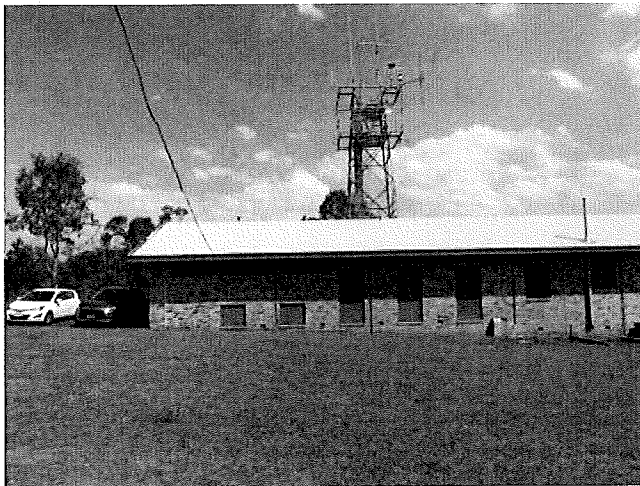


Figure A.2 : ACMA Facility main building northern end facing south east.

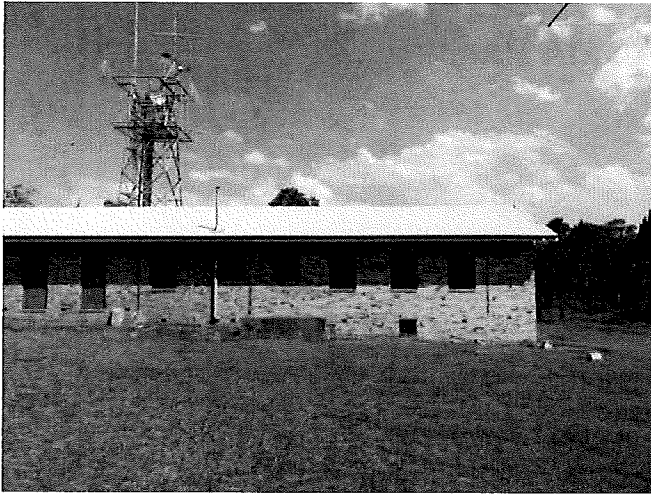


Figure A.3 : ACMA Facility main building southern end facing south east.

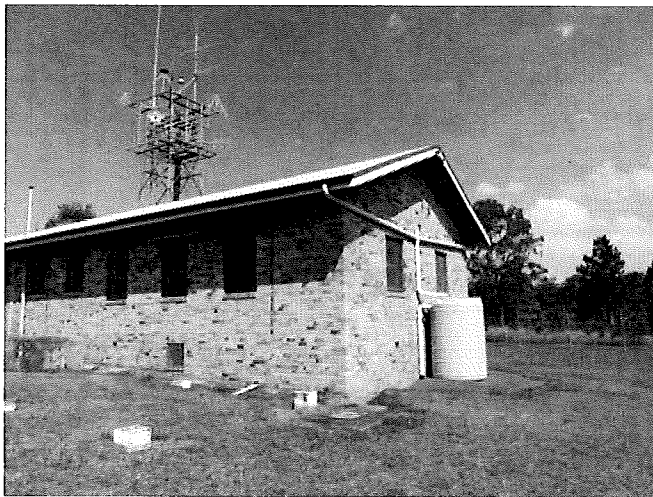


Figure A.4 : ACMA Facility main building west corner facing east.



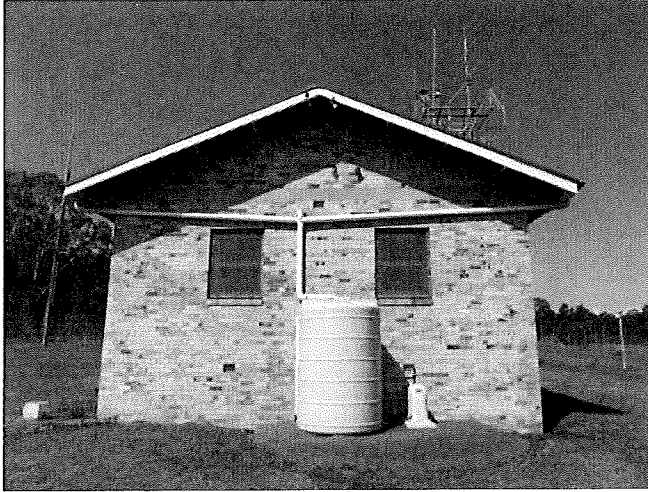


Figure A.5 : ACMA Facility main building south west wall.



Figure A.6 : ACMA Facility main building air vent and brick bond detail south west wall.

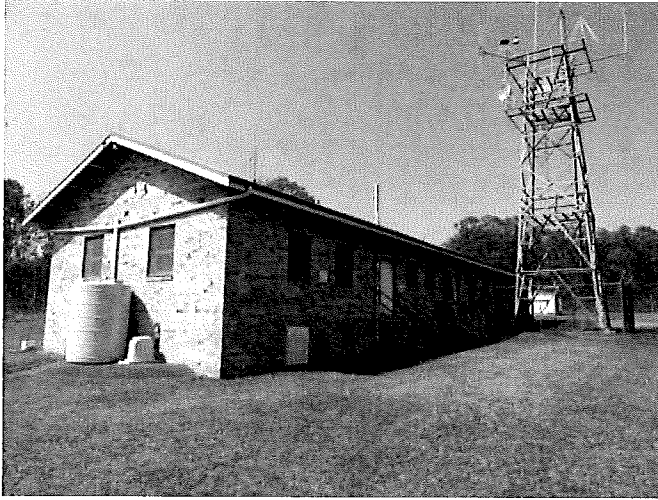


Figure A.7 : ACMA Facility main building southern corner facing north.

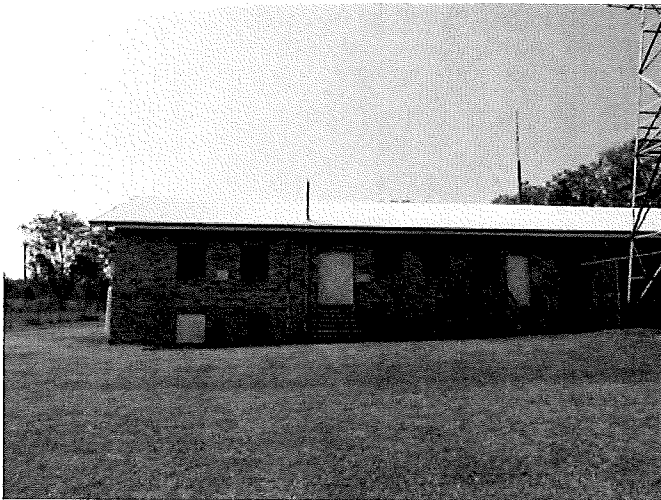


Figure A.8 : ACMA Facility main building south east side southern end.

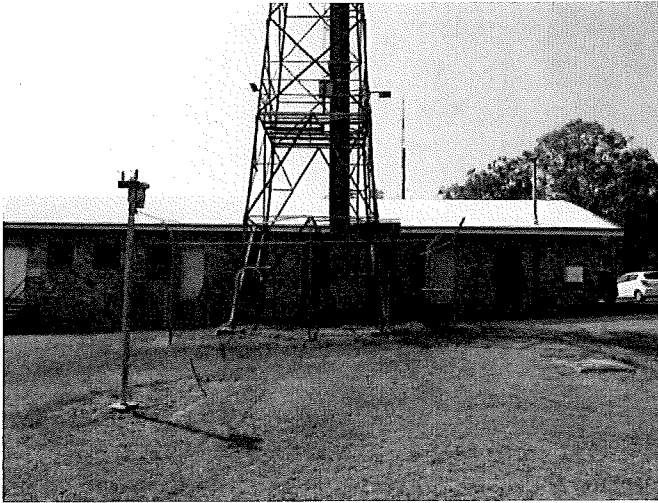


Figure A.9 : ACMA Facility main building south east side northern end.

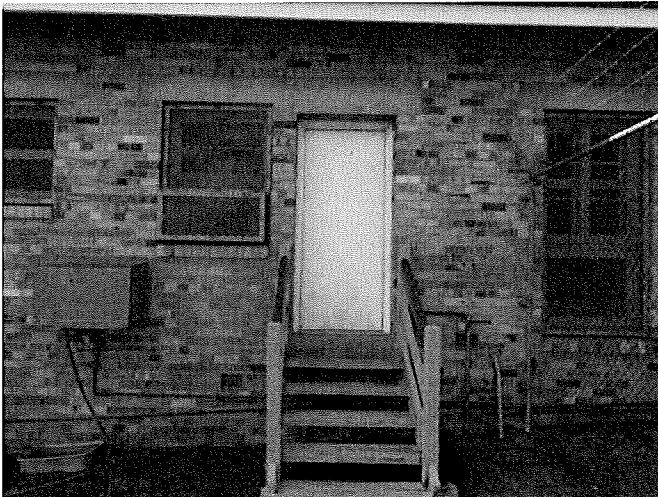


Figure A.10 : ACMA Facility main building central door, steps and external window detail south east side.

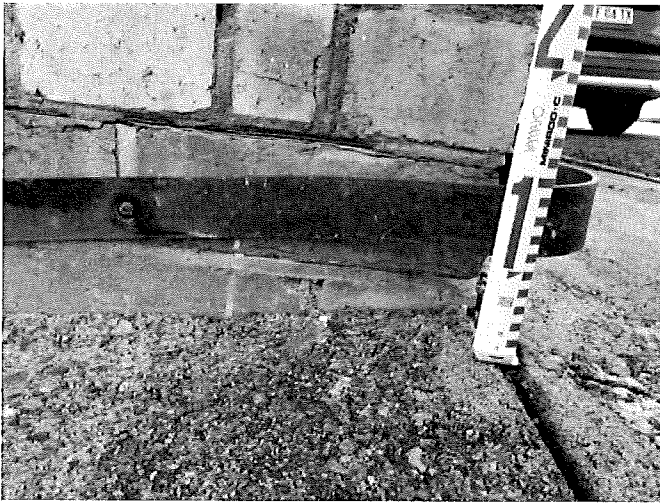


Figure A.11 : ACMA Facility main building Roof bonding earth strap detail.



Figure A.12 : ACMA Facility main building concrete lintel detail.

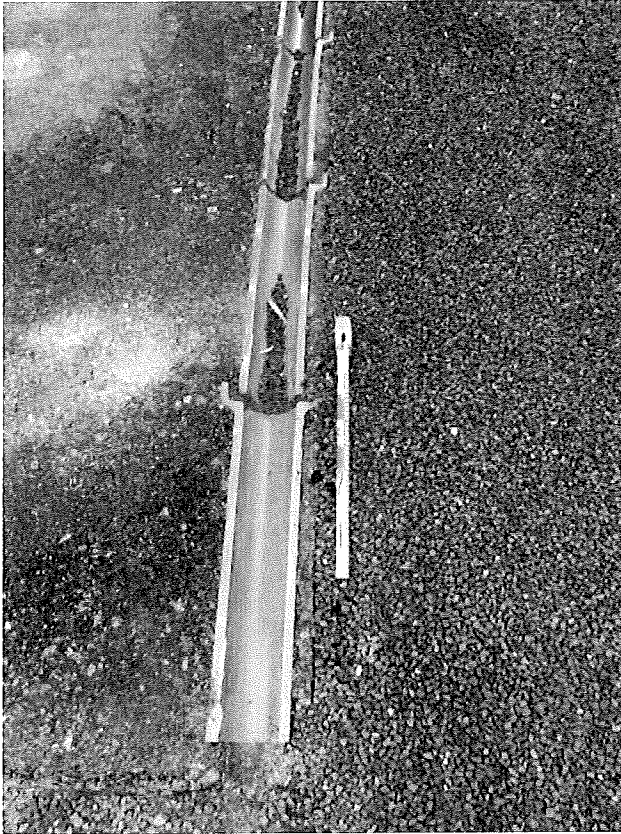


Figure A.13 : ACMA Facility main building ceramic drain pipes detail north east end.

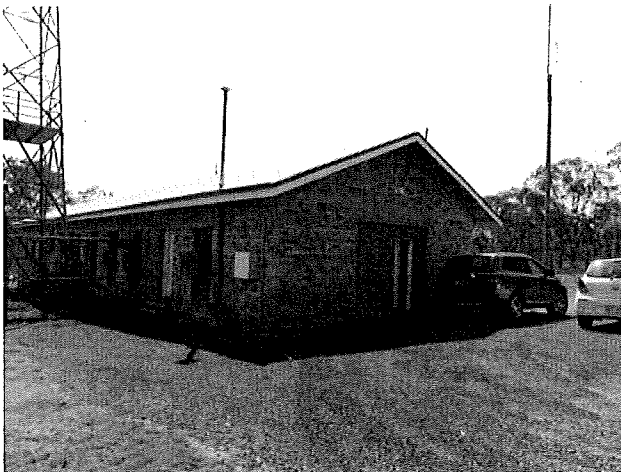


Figure A.14 : ACMA Facility main building north east corner facing west.



Figure A.15 : ACMA Facility main building north east wall.

**A.2 Main building interior**

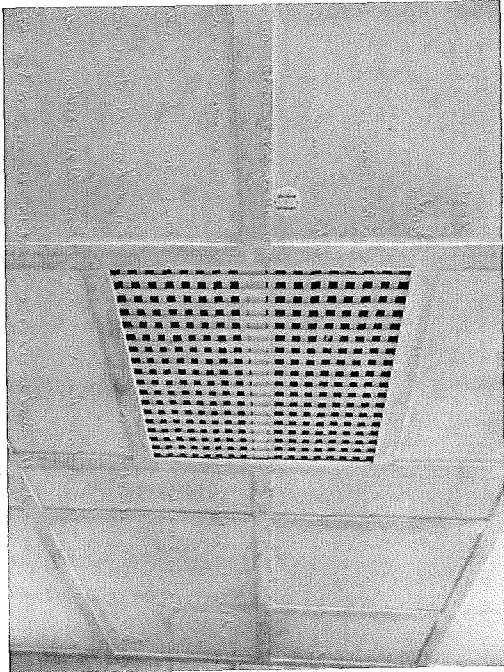


Figure A.16 : ACMA Facility Main Building interior wood frame and panel ceiling with air vent.

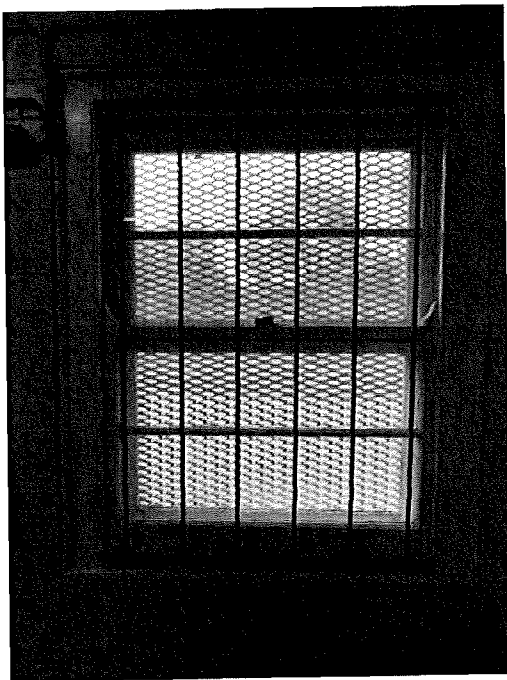


Figure A.17 : ACMA Facility Main Building interior sash window with interior and exterior bars.

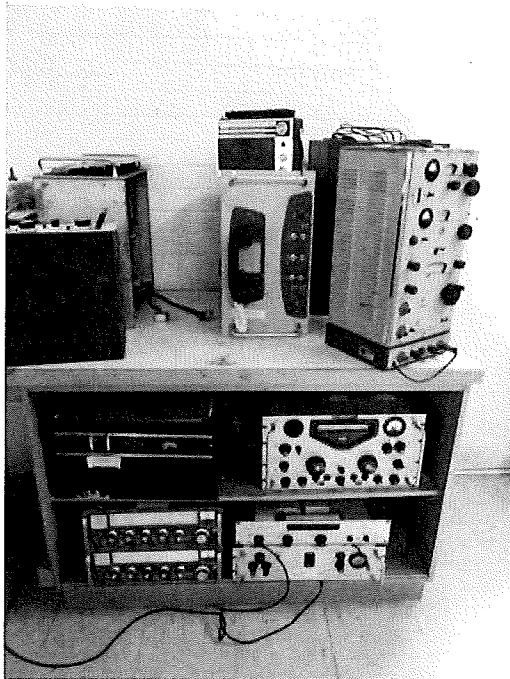


Figure A.18 : ACMA Facility Main Building equipment.





Figure A.19 : ACMA Facility Main Building interior communications room double doors.

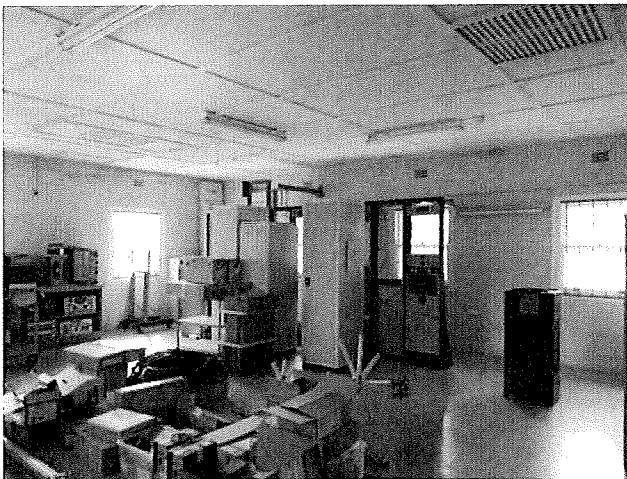


Figure A.20 : ACMA Facility Main Building interior communications room.

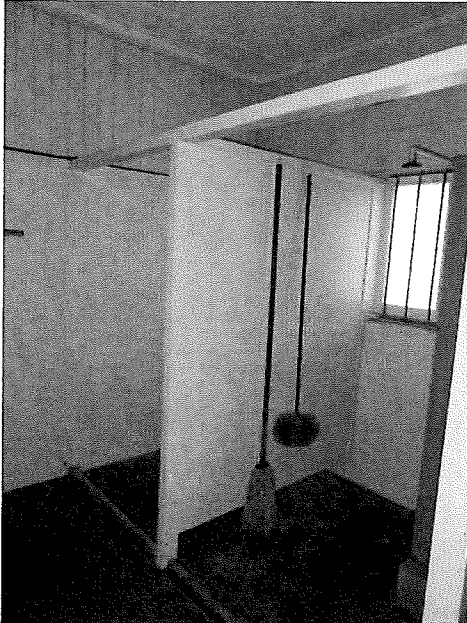


Figure A.21 : ACMA Facility Main Building interior shower cubical.

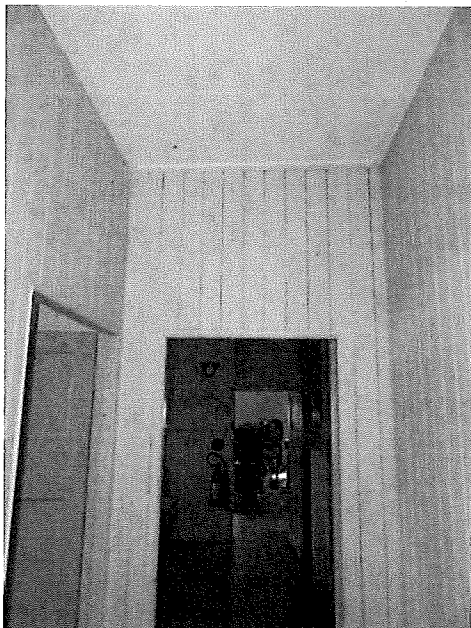


Figure A.22 : ACMA Facility Main Building interior hallway leading to accommodation (left) and kitchen.



Figure A.23 : ACMA Facility Main Building interior accommodation wood panelling and open ceiling.

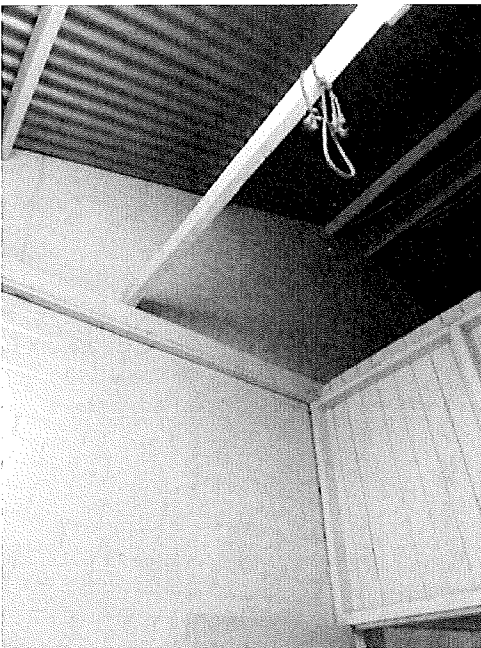


Figure A.24 : ACMA Facility Main Building interior roof space and internal brick wall.

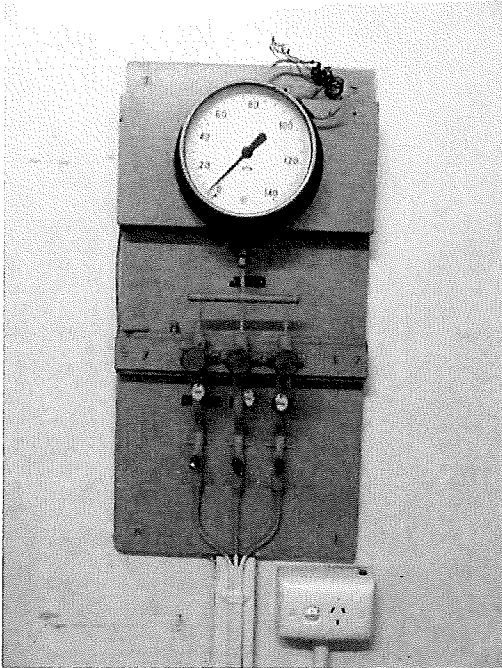


Figure A.25 : ACMA Facility Main Building interior pressure pipes and gauge.

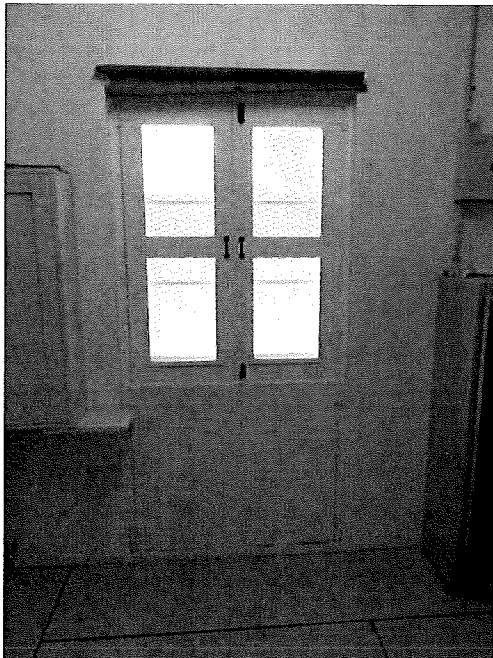


Figure A.26 : ACMA Facility Main Building interior casement window and optional door way.

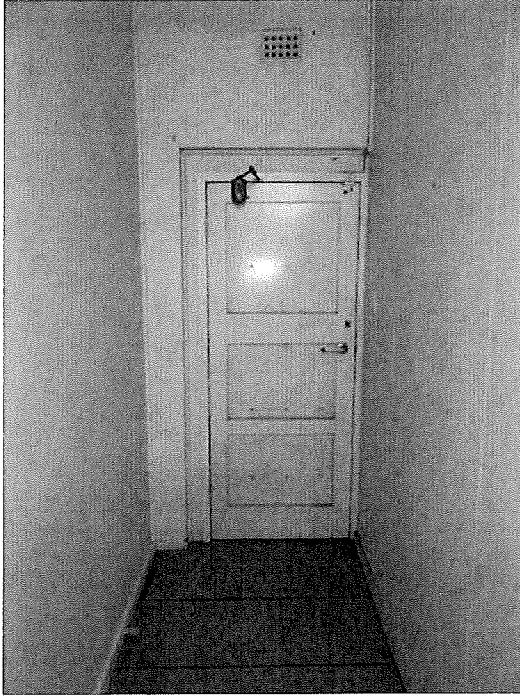


Figure A.27 : ACMA Facility Main Building interior hallway and exit door.

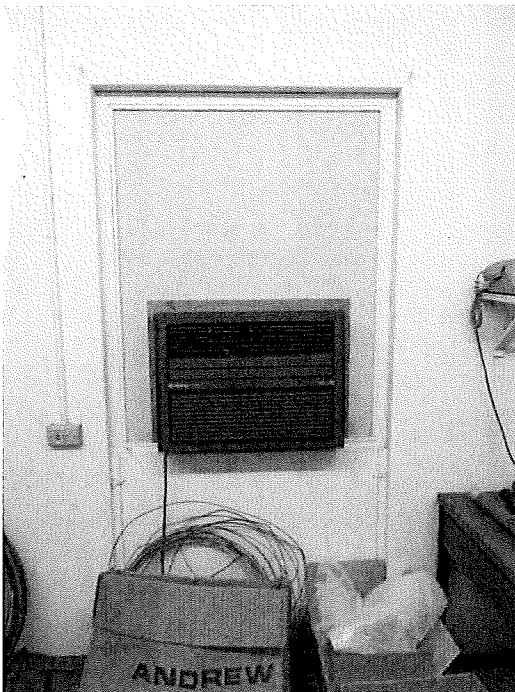


Figure A.28 : ACMA Facility Main Building interior covered window/door and air-conditioner.

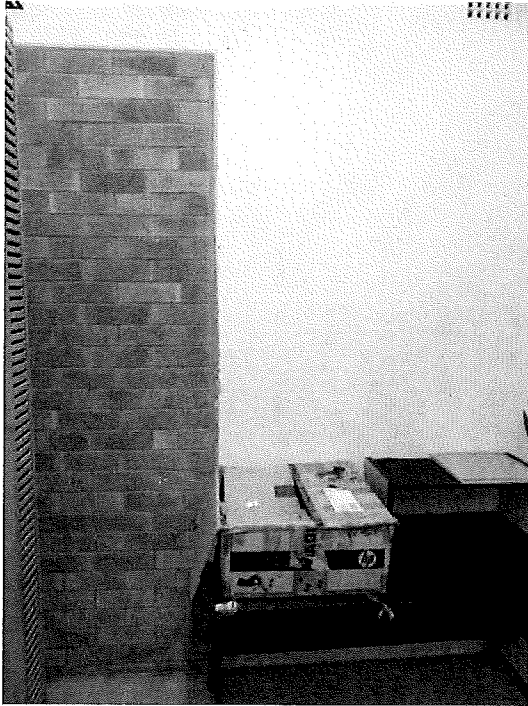


Figure A.29 : ACMA Facility Main Building interior bricked up access.

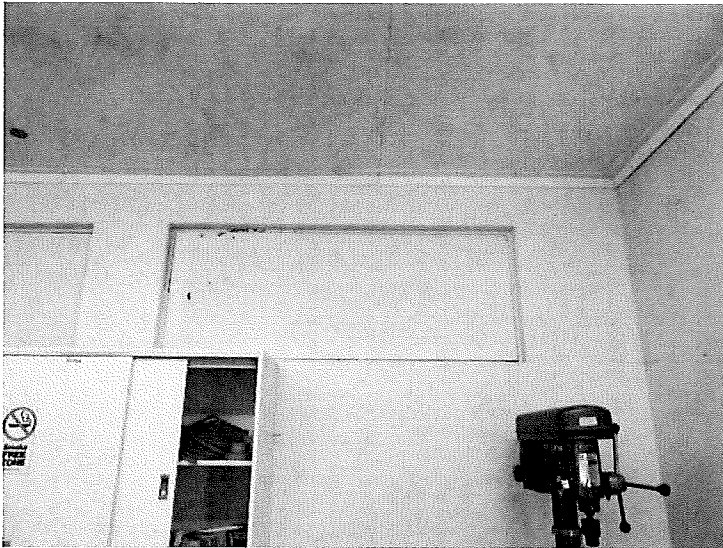


Figure A.30 : ACMA Facility Main Building interior workshop covered windows

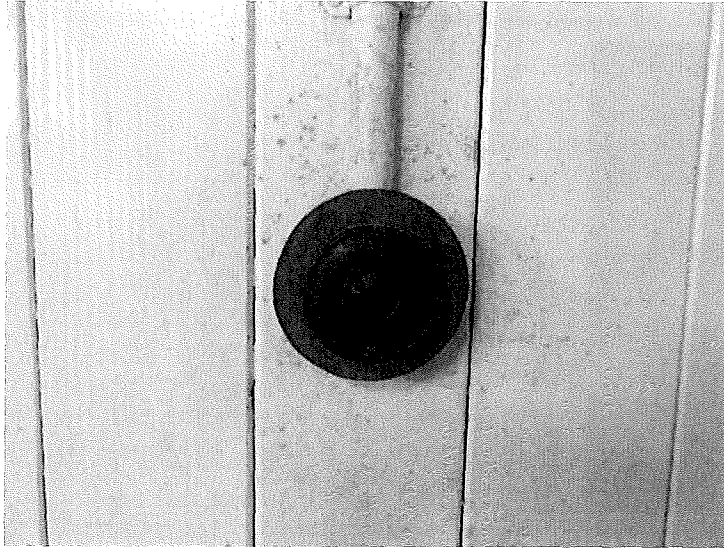


Figure A.31 : ACMA Facility Main Building interior light switch.



### A.3 Generator shed

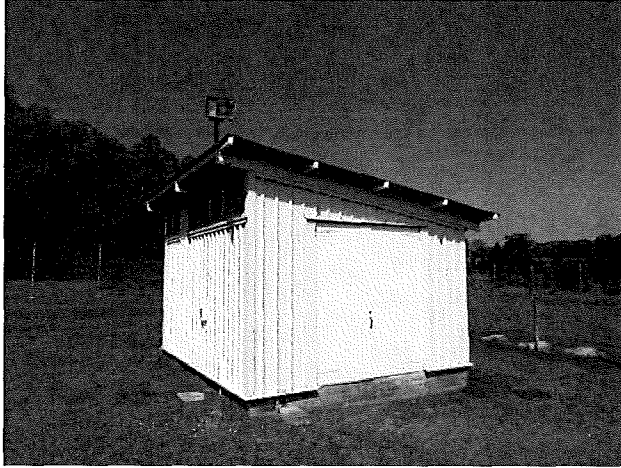


Figure A.32 : ACMA Facility, Birkdale Generator shed, facing north east.



Figure A.33 : ACMA Facility, Birkdale Generator shed west elevation, louvre vents.



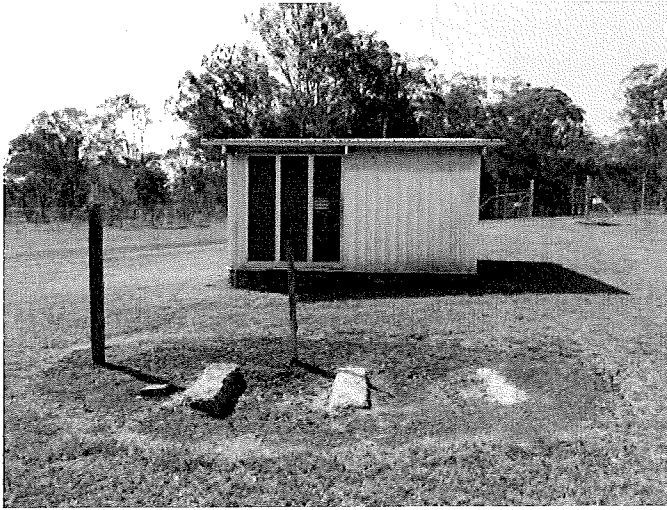


Figure A.34 : ACMA Facility, Birkdale Generator shed fuel tank remnant structures, facing north west.

#### A.4 Guard house



Figure A.35 : Guard house exterior, facing northeast.

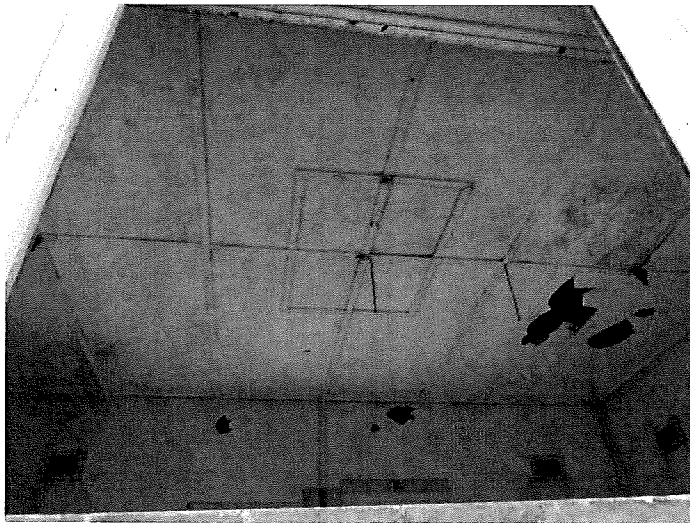


Figure A.36 : Guard house interior ceiling, facing west.



Figure A.37 : Guard house interior flooring and remnant linoleum backing , facing west.



Figure A.38 : Guard house interior north wall and sash window.

## A.5 Rhombic antenna array

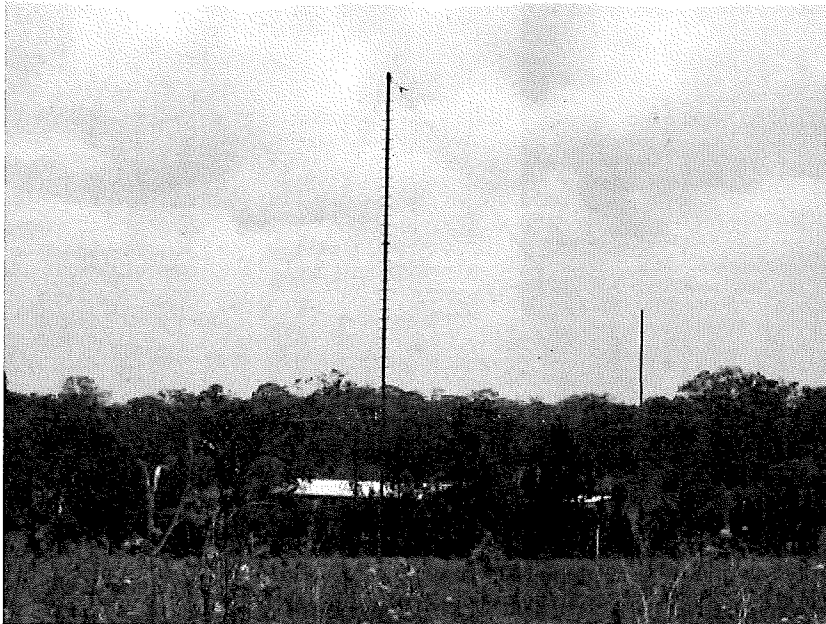


Figure A.39 : Eastern rhombic antenna, facing west.

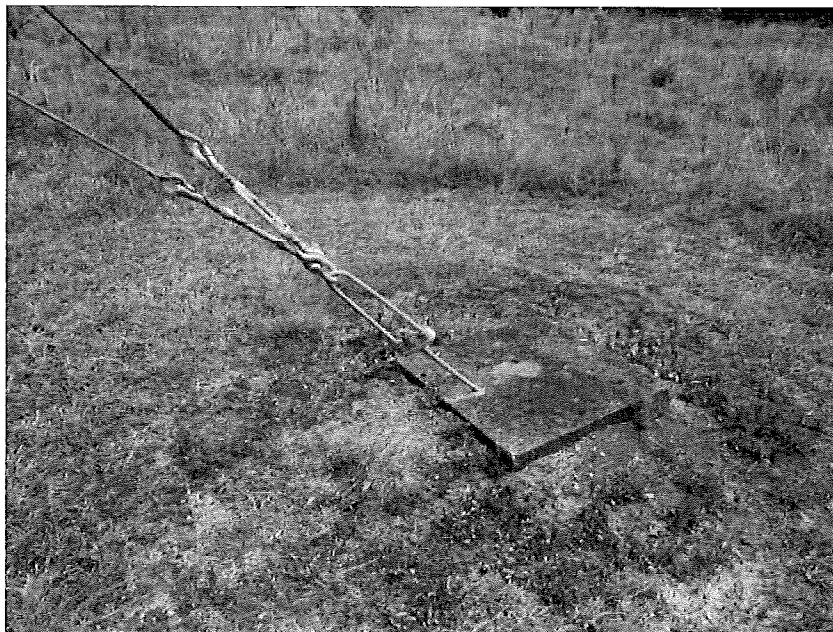


Figure A.40 : Eastern rhombic antenna stays and southern anchor attachment detail.

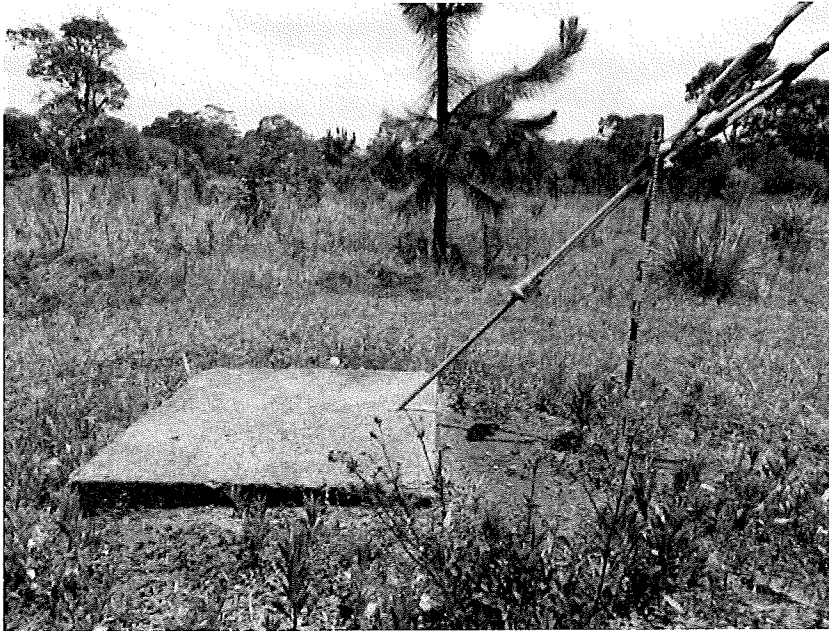


Figure A.41 : Eastern rhombic antenna stays and eastern anchor attachment detail.

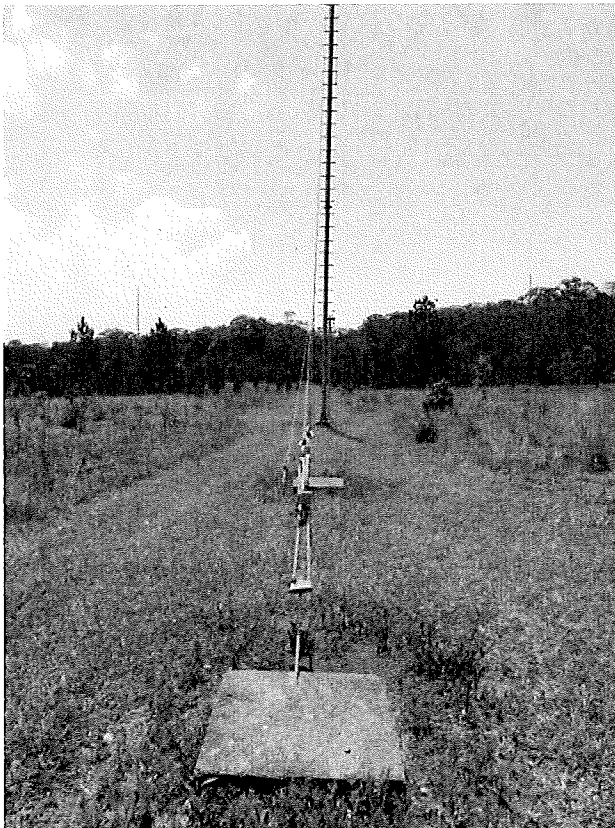


Figure A.42 : Eastern rhombic antenna, stay and vegetation clearance.

## A.6 Antenna array remnant structures



Figure A.43 : Concrete anchors removed from original positons in the ground.



Figure A.44 : Concrete anchor and stay attachment detail.





Figure A.45 : Concrete anchor and stay attachment removed from original position in ground.



Figure A.46 : Antenna stay anchor attachment.

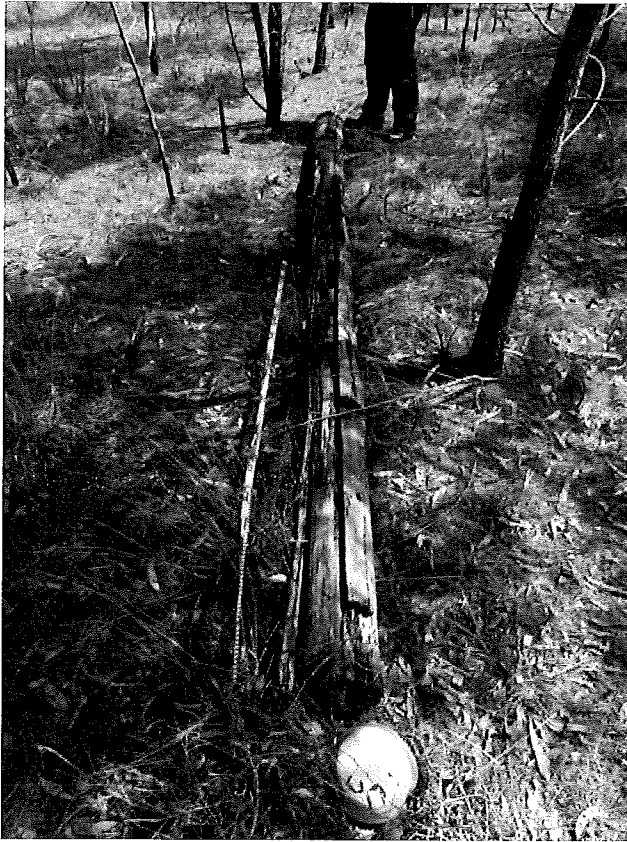


Figure A.47 : Transmission pole and cap removed due to termite damage, north of main building.





Figure A.48 : 1940s era concrete culvert with stone lined drain, north of main building.



Figure A.49 : Stone lined drain alongside access road, north of main building. Concrete culvert left of image.

**A.7 Willard's Farm**



Figure A.50 : Willard's farm house, west aspect.