The radar at Beacon Hill was vital for the defence of Sydney.

John Morcombe, Manly Daily
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Halfway up the ridge between the Brookvale and Dee Why valleys, the rocky knoll called Beacon Hill commands expansive views of the coastline.

With such a commanding aspect over the approaches to Sydney, it was probably inevitable that Beacon Hill would one day by used for military purposes.

The hill takes its name from the trigonometrical beacon, called Manly Trig Station, that was established on its crown by the Lands Department in 1881.

The first military use of Beacon Hill was in the early days of World War II. An observation post was established as part of Sydney Fortress, the city's coastal defence system on which work had begun in the mid-1930s in response to the rising tide of Japanese militarism.

The fortress was based around batteries of 9.2-inch guns at North Head and Cape Banks, along with six-inch batteries at Middle Head, South Head and Signal Hill.

To detect and track enemy shipping observation, posts needed to be fitted with telescopic position finders, so posts were established at Beacon Hill, Dover Heights and North Head.

The information from the observation posts was transmitted to plotting rooms and data was then transmitted to the guns. But darkness or bad weather made for poor observation, so the newly invented radar was introduced as soon as it became available.

The first land-based radar set up in Australia was installed at Dover Heights in June 1940, followed by one atop Beacon Hill in January 1941. Both were built and installed by the Radio Physics Laboratory of the CSIRO, with army personnel manning the stations.
Because each radar was able to measure the distance between itself and the target, it was possible to compute the precise location of the target by triangulation.

The Beacon Hill post comprised a hut right on top of the hill, with a 3m sq antenna mounted on it.

There was also a concrete pillbox for visual equipment and a modest suburban cottage for the group of 13 to 15 men – members of the newly formed radar section – who manned the establishment.

The station was later upgraded with a concrete structure for the radar and a concrete engine room.

A similar radar station was also established in Collaroy Plateau in 1942.

By 1944, the threat to Sydney had diminished and the radar post was scaled down and manned by personnel from the volunteer defence corps for the remainder of its short life.

Official policy on radar floundered after the end of World War II and it was not until Australia felt the chill of the Cold War in the early 1950s that a new system of home defence brought radar back to Beacon Hill.

But it was not the army that brought radar back – it was the air force – and the site it chose was further up the ridge near the intersection of Warringah Rd and Jones St.

The radars were for detecting planes, not ships, and were the first elements of a network for early warning and tracking of aircraft along the eastern seaboard.

The American-made radars were the most advanced types of ground radar introduced by the RAAF after World War II, comprising a high-powered searcher-finder that rotated horizontally and a "nodding" height-finder.

The search radar and height-finder were installed on the site in 1955, along with control, communication and ancillary equipment.

The unit operating the radars, designated No. 1 Control and Reporting Unit, was officially formed on June 6, 1955, under Flight-Lieutenant R.R. Howe.

But technology and defence policy were changing rapidly and the Beacon Hill radars were eventually superseded by mobile radars of the same type and subsequently by better radars.

With its equipment becoming increasingly obsolete, the radar establishment at Beacon Hill was finally closed in October 1973.
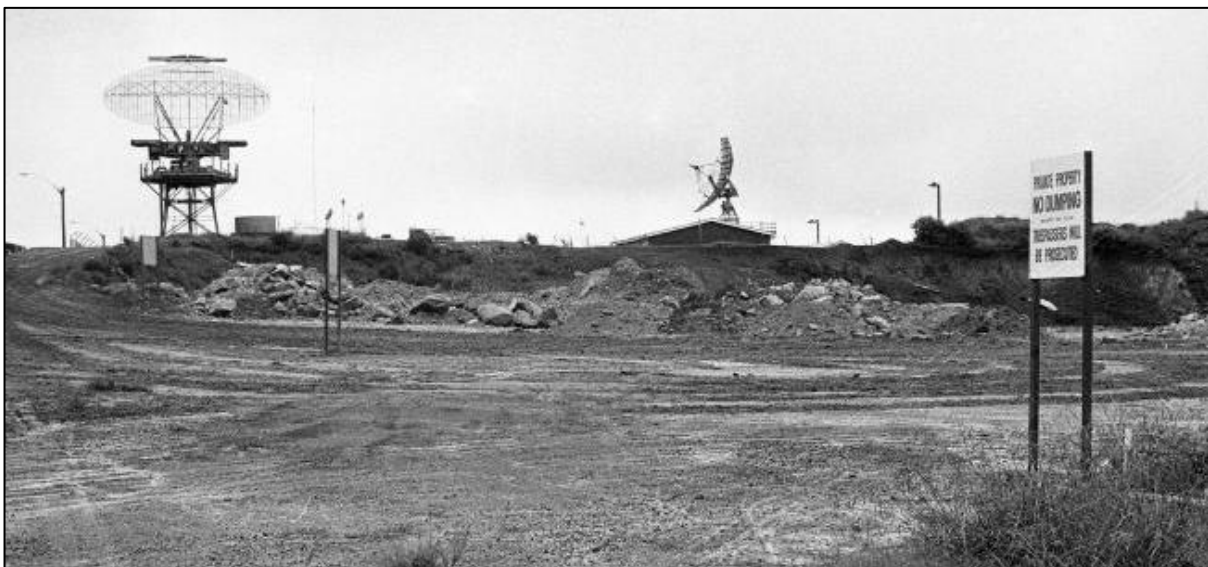
But its presence had ensured no tall buildings were built nearby because they would have interfered with the radars' ability to operate to their optimal capacity.

The radars were removed in February 1974. The area was handed over to Warringah Council in 1977 and used as headquarters by the local State Emergency Service, Volunteer Coastal Patrol and Manly-Warringah Radio Club.

The council sold the land in 1982 to the Australian Fixed Company, which already owned surrounding industrial land.

The volunteer groups that were based at Beacon Hill moved to Terrey Hills, along with the Warringah Shire Bush Fire Brigade.

Undeveloped land near the radar dishes in 1973