
No. 202 RADAR STATION, VICTOR HARBOR

C20 15

Place Name and Address: Former RAAF Radar Station
Range Road
Victor Harbor SA 5211

SUMMARY OF HERITAGE VALUE:

Description:

The former Radar Station stands in and near a triangular paddock on the summit of Wilson Hill. Its remains include four substantial vaulted concrete structures which housed operators and diesel generators, the bases of two demolished timber towers which supported the radar aerials, and a pit with a stand for a machine gun to provide anti-aircraft defence.

Statement of Heritage Value:

The former Victor Harbor Radar Station is a rare surviving example of the measures adopted for the defence of Australia in the emergency of 1942, and one of the two best-preserved wartime RAAF radar station sites in South Australia.

Relevant Criteria (Under Section 16 of the *Heritage Places Act 1993*):

- (a) It demonstrates important aspects of the evolution or pattern of the State's history, in retaining significant infrastructure of the defence emergency of 1942 which illustrates significant aspects of South Australia's wartime history.
 - (b) It has rare, uncommon or endangered qualities that are of cultural significance, as being one of only three sites of its kind surviving in South Australia.
 - (d) It is an outstanding representative of a particular class of places of cultural significance, as the best-preserved Advanced Chain Overseas (ACO) radar station site in South Australia.
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RECOMMENDATION:

It is recommended that the former RAAF No. 202 Radar Station, Victor Harbor be provisionally entered in the South Australian Heritage Register.

ASSESSMENT OF HERITAGE VALUE:

(a) It demonstrates important aspects of the evolution or pattern of the State's history.

Australia played an active part in the scientific development of radio direction finding (RDF or radio location as it was then known) during the 1930s, and with the declaration of war in 1939, Australia began training radar operators to strengthen Britain's air defences. The opening of the Pacific War in late 1941 changed the priorities, as most of the opening blows of Japan's offensive were delivered by carrier-borne aircraft. Suddenly, the greatest threat to Australia's security seemed to be Japanese aerial bombing from the sea, and the country's scientific efforts were concentrated on the development of military radar to defend Australia's coasts against the expected enemy attack.

The problem was that Australia had so much coastline, and Japanese aircraft carriers could go anywhere. The RAAF planned a chain of 26 RDF stations around the Australian coast, including South Australian ones at Ceduna, Elliston, Cowell, Whyalla, Victor Harbor and Robe, and work commenced in early 1942. The technology used was based on the Chain Home system (CH) which had been developed urgently in the UK at the outbreak of war for coastal defence, and played a major part in the Battle of Britain. By 1942 it had been developed into the Advanced Chain Overseas (ACO) system for Australian use. The transmitting and receiving antennae consisted of an aerial array draped between two tall wooden towers.

Construction of No. 202 Radar Station was underway in a sheep paddock near Victor Harbor during the early months of 1942. The site chosen was on Range Road at the junction of Wilson Hill Road. It was actually about 8km west of Victor Harbor, and the radar station was sometimes given the placename Waitpinga. (However, some confusion may have crept in here, because the RAN also had a radio signal station near the foot of the Bluff, which was sometimes known by the name Waitpinga. Radar stations were often described as radio stations in wartime correspondence - perhaps for security, perhaps because the terminology was still imprecise - and the name Waitpinga may have become attached to the RAAF radar station in error.)

The two 132 feet (40m) high timber towers were built on the summit of Wilson Hill, the highest peak in the surroundings, 223m above sea level, where they commanded a fine view of Encounter Bay and the southern approaches to Gulf St Vincent. Two concrete splinter-proof shelters were built to house the transmitting and receiving sets, and two smaller ones housed diesel generators. There were living quarters built on Wilson Hill Road about 500m away. At least one circular pit was dug near the towers and fitted with a standing pipe as a mounting for a machine gun, in what must have seemed a rather forlorn gesture toward defending the site against attacking aircraft.

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However, the Victor Harbor Radar Station was to play no role in defending South Australia. By the time of the Japanese defeat at the battle of Midway in June 1942 it was apparent that Japanese naval air power would never stretch to South Australian waters, and half of the planned radar stations were never begun. The timber towers and concrete operators' shelters had been built at Cowell and Victor Harbor by the time the emergency passed, but they were apparently never equipped with their expensive electronic radar equipment. The Victor Harbor radar station sat mothballed for the remainder of the war.

It was not the end of defence radar on the Fleurieu Peninsula; another radar station was built at Yankalilla, 30km to the west, for a different purpose the following year. All the coastal radar stations were finally disbanded in November 1945 and their property was disposed of. One of the timber towers was still standing at Victor Harbor until at least 1949, but was eventually demolished for building materials or firewood.

(b) It has rare, uncommon or endangered qualities that are of cultural significance

(d) It is an outstanding representative of a particular class of places of cultural significance.

The former Radar Station remains stand in a sheep paddock on top of Wilson Hill, with a superb view over the Fleurieu Peninsula and the Southern Ocean. The structures remaining in the paddock are the two transmitting and receiving buildings, which are vaulted concrete structures built to an RAF design described as "splinter-proof". The concrete and steel footings of the timber towers stand beside them. No archival drawings have been found for the Victor Harbor Radar Station, but its layout was nearly identical to the radar station built at Cowell, for which some drawings survive.

There are two generator buildings, one in the paddock near the tower bases, the other hidden among trees immediately beside the south side of Wilson Hill Road about 200m east of the radar site. This generator building is also recommended for entry in the South Australian Heritage Register. The concrete building foundations and other remains of the residential camp are on the north side of the road another 300m east. The camp remains are unremarkable, have been disturbed in recent decades, and are not recommended for entry in the Register.

There were five coastal radar stations built in South Australia during the Second World War, and remains of all of them survive. Of the three ACO stations built in 1942, very little other than the concrete protective structures survives at either Robe, which is on a coastal dune, or Cowell, where they stand in a ploughed grain field. The stations planned for Ceduna, Elliston and Whyalla were never begun. Victor Harbor is by far the best-preserved of these stations, with enough of its evidence intact to tell part of the story of the great wartime defence emergency.

REFERENCES:

- Louis Brown, *Technical & Military Imperatives*, 1999
Maurice Fenton, *Radar Country Sketchbook*, 1994
Maurice Fenton, *10 Radar Yankalilla & Other Radars*, 1999
RAAF Historical Section, *Units of the RAAF*, Vol. 5, 1995
David Mellor, *Role of Science and Industry*, 1958
John Ross, *History of Radio in SA*, 1978
Smith & Simmonds, *RAAF Radar in World War II*, 1992
Sean Swords, *Technical History of the Beginnings of Radar*, 1986
NAA files
Notes compiled by Terry Arnott and Shirley McLean

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SITE RECORD:

FORMER NAME: (Incorrectly) Waitpinga Radar Station

DESCRIPTION OF PLACE: Four concrete shelters, the bases of two demolished towers, and a gun pit

DATE OF COMPLETION: 1942

REGISTER STATUS: **Description:** n/a

CURRENT USE: **Description:** Sheep paddock
Dates: 1946+

PREVIOUS USE(S): **Description:** Radar Station
Dates: 1942-1945

ARCHITECT: **Name:** n/a
Dates: n/a

BUILDER: **Name:** n/a
Dates: n/a

SUBJECT INDEXING: **Group:** Military
Category: Radar Station

LOCAL GOVERNMENT AREA: **Description:** DC of Victor Harbor

LOCATION: **Unit No.:** -
Street No.: -
Street Name: Range Road
Town/Suburb: Victor Harbor
Post Code: 5211
Region No.: 4
Region: Fleurieu Peninsula

LAND DESCRIPTION: **Title Type:** CT
Volume: 5394
Folio: 553
Lot No.: 1
Section: 649
Hundred: Encounter Bay

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SITE RECORD (Cont.):

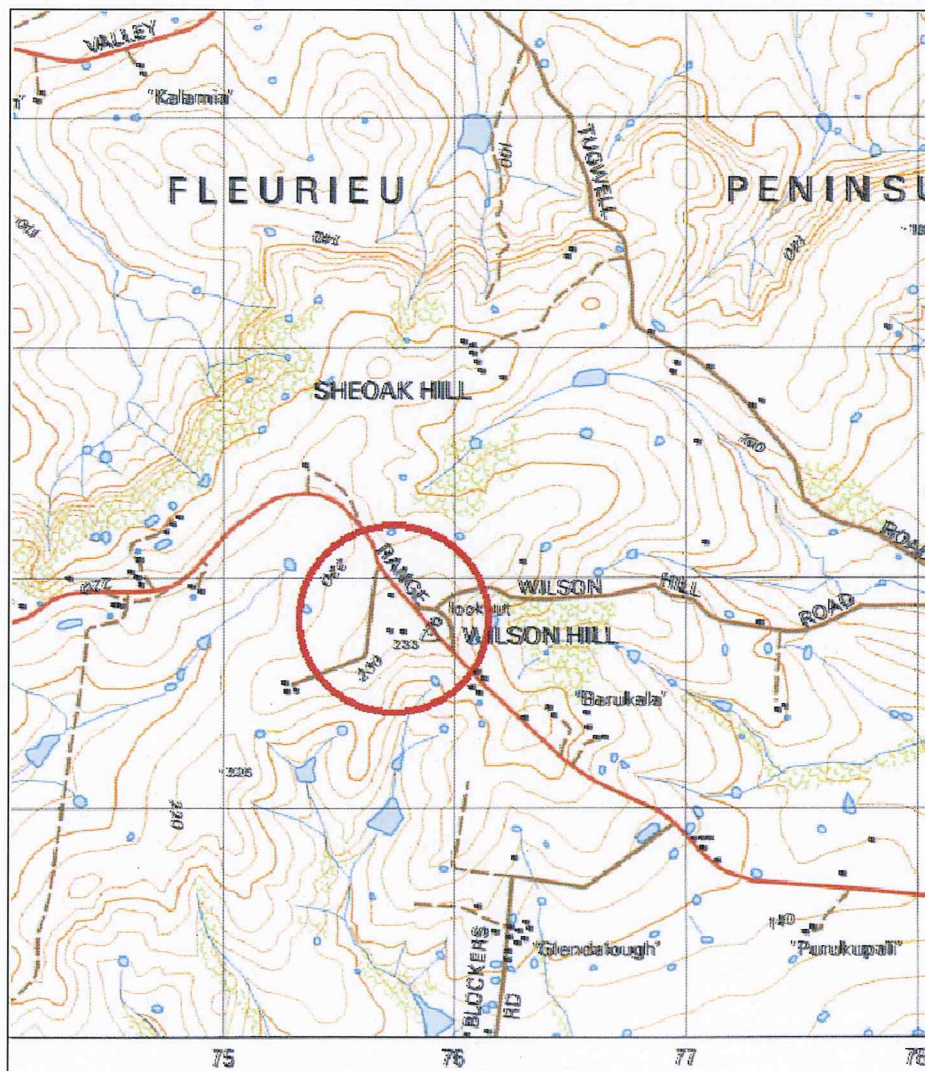
AMG REFERENCE:

Zone: 54
Easting: 0275720
Northing: 6061770
Map Sheet: 6626 Encounter
Map Scale: 1:100,000

OWNER:

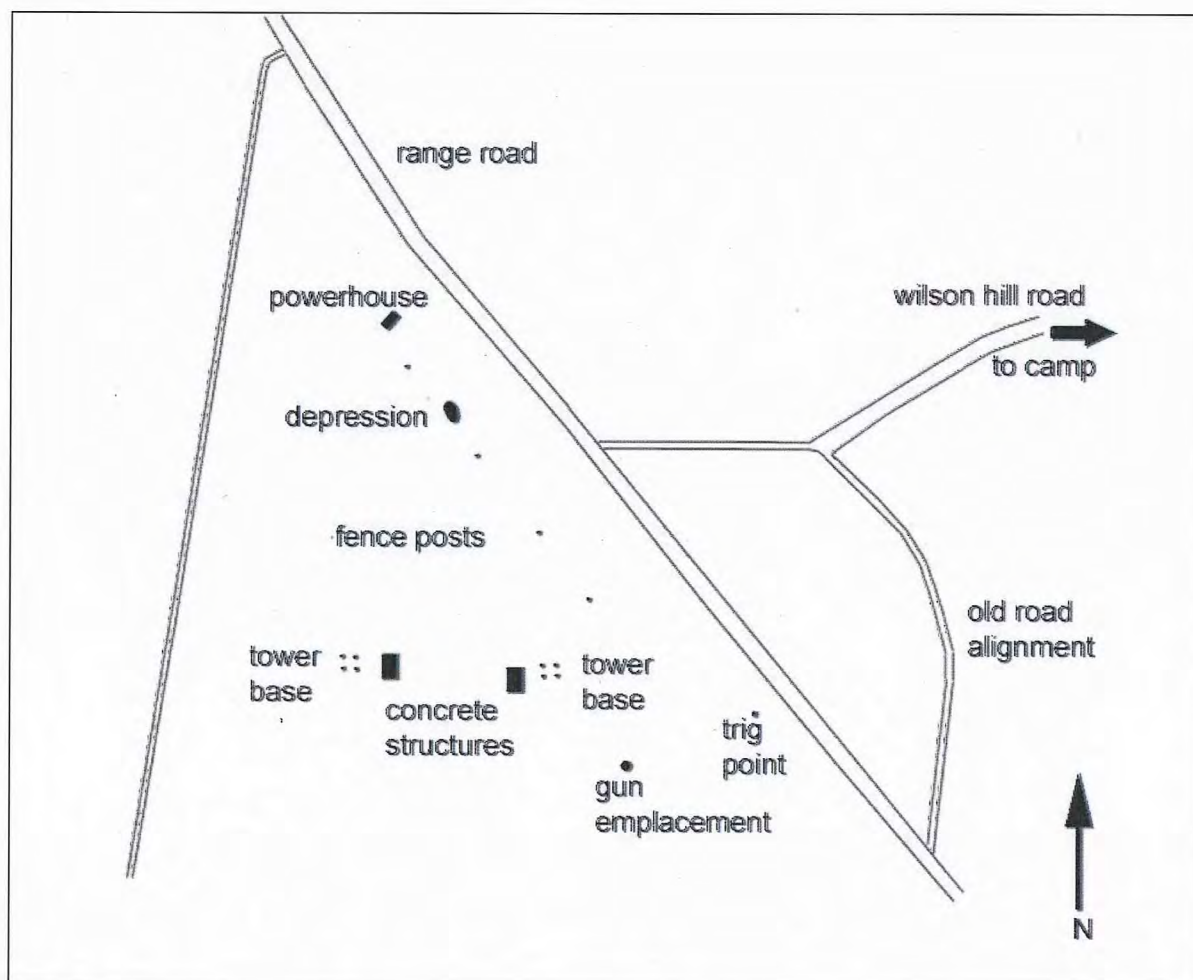
Name: Barry David Wicker
Address: PO Box 277
Town/Suburb: Victor Harbor
Post Code: 5211

Location Map

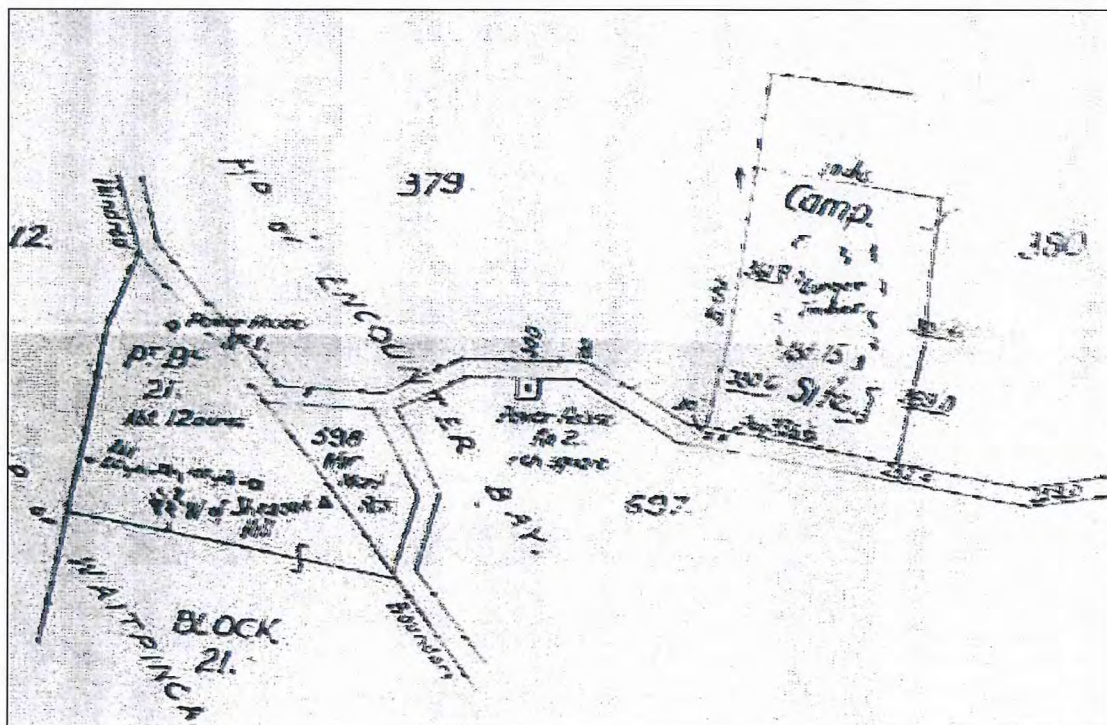


Location of former Radar Station, Victor Harbor (CFS map book region 1)

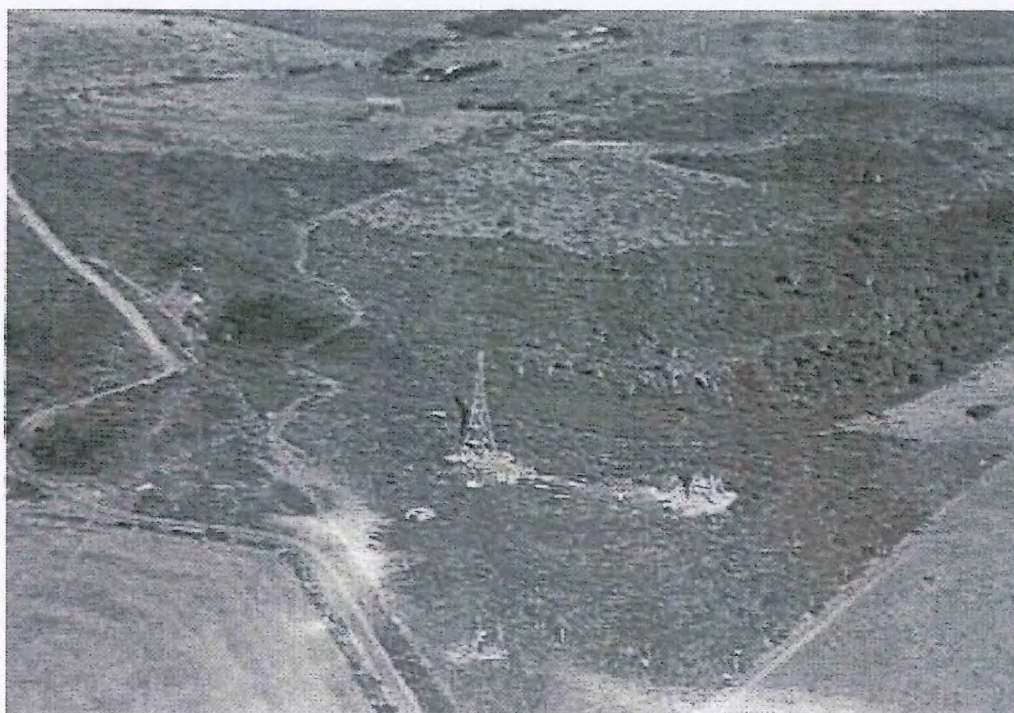
Site Plan



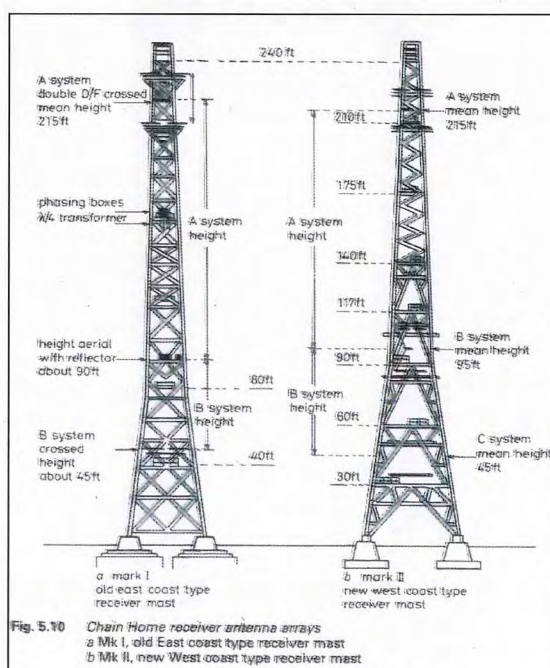
Plan of former Victor Harbor Radar Station Site, 2007



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Aerial view of Victor Harbor Radar Station, looking south-east, 1949
(NAA SP110/5 78)



Chain Home radar towers as built in the UK in 1940 (Swords 1986, p. 206)

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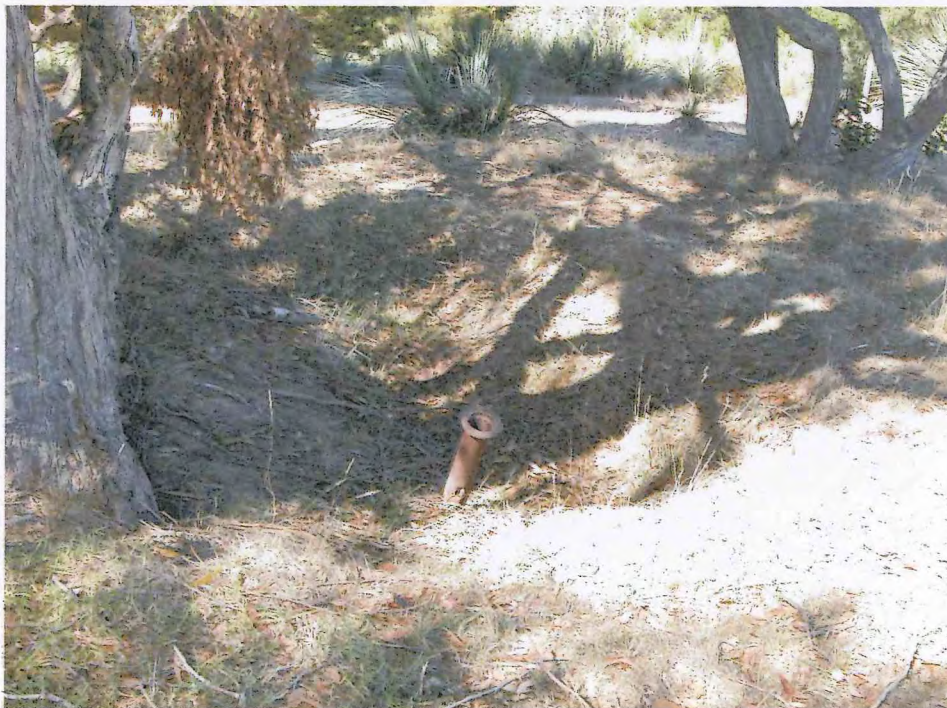
Radar transmitter and receiver buildings, tower base at right



Generator building, Victor Harbor Radar Station



Footing of demolished timber tower at Radar Station



Anti-aircraft machine gun pit, Victor Harbor Radar Station