

RECORD OF STATE HERITAGE PLACE

Description and notes with respect to a place entered in the South Australian Heritage Register in accordance with the *Heritage Places Act 1993*

NAME: **Former RAAF Gunnery Range**

PLACE NO.: **26312**

ADDRESS: **Old Pirie Road, Port Broughton**

Physical Description

The former Gunnery Range stands on a low coastal sand ridge that runs from north-west to south-east. It was designed to be targeted by aircraft from the north-east, i.e. firing out to sea. It consists of a row of six timber target frames spaced about 30m apart. Beside each target is a large Roman numeral from I to VI, made of sheet metal on a timber frame, angled backwards to be visible from the air. These stand over 2m high and are the most conspicuous elements of the range. At each end of the row of targets is a small concrete booth to provide shelter for attendants. The area surrounding the targets may potentially contain remnant artefacts relating to its wartime use.

Statement of Heritage Significance

The former Gunnery Range is a very rare (perhaps unique) surviving example of the measures adopted for defence training in Australia in the 1940s, and one of the best-preserved wartime RAAF relics 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.***

The former RAAF Gunnery Range at Port Pirie retains significant infrastructure relating to military aviation between 1941 and 1943, which illustrates significant aspects of South Australia's wartime history.

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

The former RAAF Gunnery Range at Port Pirie is significant as the only wartime aviation gunnery range surviving in South Australia.

- (d) *It is an outstanding representative of a particular class of places of cultural significance,***

The former RAAF Gunnery Range at Port Pirie is the only well-preserved military aviation training facility in South Australia.

Extent of Listing

The components that are critical to the heritage significance of the former RAAF Gunnery Range include:

- Row of six timber target frames
- Sheet metal Roman numerals, from I to VI, each mounted on a timber frame
- Two small concrete booths

The extent of listing is shown in the site plan on page 9.

History of the Place

In 1940, the RAAF began to establish flying schools to train large numbers of aircrew. Of the three services, the Air Force had the luxury of being selective about its recruits, as the number of volunteers eager to learn to fly was nearly three times as many as the training facilities could take. At the time, Australia's main aim was to supply crews for RAF aircraft in Europe, under the Empire Air Training School (EATS), but by 1942 most of the graduates would be staying in Australia.

To speed the process, there was a hierarchy of schools with increasing levels of specialisation, and most types were represented in South Australia. Recruits began at an Initial Training School (Mount Breckan) where they were taught mathematics, navigation and radio procedures on the ground. Those who showed aptitude would be sent to an Elementary Flying Training School (Parafield) where they learnt the rudiments of flying in a small single-engined aircraft. The better graduates would go to a Service Flying Training School (Mallala) where they converted their skills to larger military aircraft. Those who qualified as pilots or other aircrew went on to specialist training. Some went to Canada where they learnt to crew state-of-the-art fighters and bombers and were then sent on to the UK. Others trained in Air Observer's Schools (Mount Gambier) or Bombing and Gunnery Schools, which had the delightful acronym of BAGS.

No. 2 Bombing and Gunnery School was established at the newly-built RAAF base south of Port Pirie on 15 June 1941. It was one of three in Australia; the others were at West Sale in Victoria and Evans Head in New South Wales. Port Pirie was the second-largest RAAF base in South Australia with 17 Bellman hangars at its peak, slightly smaller than RAAF Mallala. It was an advanced specialist school where aircrew flying Fairey Battles and Avro Ansons were trained in bombing and gunnery techniques. The location was chosen because aerial bombing and gunnery practice obviously requires a lot of empty space. On the coast of Spencer Gulf between Port Pirie and Port Broughton, the delta of the Broughton River forms a large area of wetlands, merging into grazing land.

Nine bombing and gunnery ranges were established along this coastal strip. (See sketch map in Wordley & Madigan 1982, p. 103) Most have left little physical evidence today. Another gunnery range can be identified on a samphire flat north-west of the junction of Wandearah Road and Lower Broughton Road, about 14km to the north-west of this site. There are two concrete shelters on the site similar to those at the more southerly gunnery range, but aerial photographs also show the circular pockmarks of bomb craters on this bombing range (although they are not apparent from ground level) suggesting that it was a combined gunnery and bombing range.

Much of the gunnery practice was air-to-air, with the gunner firing at a target drogue being towed behind another aircraft. However, there was also training in firing at ground targets, and gunnery ranges were required. This one was set up on a sand ridge about a kilometre west of the old Port Pirie-Port Broughton Road. It was something like an infantry rifle range on a grand scale, with a series of six targets spaced out about 30m apart, each target identified by a large Roman numeral beside it.

Bombing and gunnery training was hazardous, and about 22 aircrew were killed in accidents near the Port Pirie base. They are buried in the military section of Port Pirie cemetery. No. 2 BAGS operated for two and a half years, until December 1943 when the school was closed and Port Pirie became No. 3 Air Observer's School, which operated until January 1946. RAAF Base Port Pirie was disbanded early in 1947, when 67 accommodation huts were taken to the new Woomera village.

South Australia had four wartime RAAF training airfields: Mount Gambier, Parafield, Mallala and Port Pirie. Of these, Parafield is by far the best preserved. Very little wartime fabric survives at Mount Gambier or Port Pirie, which are now both civil airfields, and Mallala is now a motor racing circuit.

The Port Pirie Gunnery Range is a remarkable survivor, still standing 65 years after it was last used, with most of its fabric intact. Such peripheral facilities are poorly documented in archival sources, although they seem to have been built to standard patterns. Enquiries directed to the Victorian and New South Wales heritage agencies, and queries circulated amongst heritage consultants with experience on wartime Defence sites, has produced no knowledge of similar places interstate. Only on remote wetlands a few kilometres from RAAF Base Townsville, built in 1940, are there two concrete shelters like the ones at the Port Pirie Gunnery Range, although no targets survive. The target frames and numerals standing at Port Pirie seem to be unique in Australia.

The former Gunnery Range target area stands on a low coastal sand ridge that runs from north-west to south-east, roughly parallel to Old Pirie Road about 30km south of Port Pirie, and visible from the road. The target complex is about 300m long, and consists of a row of six timber target frames spaced about 30m apart. Some kind of target must have been attached to these. Beside each target frame is a large Roman numeral from I to VI, made of sheet metal on a timber frame, angled backwards to be visible from the air.

These were presumably intended to allow each gunner to identify an individual target for scoring purposes. The targets were aligned to be fired on by aircraft from the north-east, firing out to sea.

The numerals stand over 2m high and are the most conspicuous elements of the range. They are in only fair condition; the land owners have patched them up when necessary, but decay in the timber frames needs to be addressed or the structures will be lost. Several bullet holes can be seen in the sheet metal numerals.

At each end of the row of targets is a small concrete booth to provide shelter for attendants maintaining the targets. These are based on RAF designs, for similar observation buildings stand at RAF Millom in the UK. There are also two similar booths at the former Port Pirie gunnery and bombing range 14km to the north-west, and another set stands at RAAF Base Townsville in Queensland.

REFERENCES:

This Record has been adapted from the assessment report in:

Bell, P, *et al*, *Twentieth Century Heritage Survey Stage Two (1928-1945)*, Vol 2, 2008

Refer to the survey for a more detailed historical description and a list of references.

SITE RECORD

Former RAAF Gunnery Range
Old Pirie Road, Port Broughton

FILE NO: 26312

FORMER NAME:	No 2 Bombing and Gunnery School	
DESCRIPTION OF PLACE:	A row of six timber target frames each with a large Roman numeral; Two concrete shelters.	
DATE OF COMPLETION:	1942	
SA HERITAGE REGISTER STATUS:	Description:	Provisional Entry
	Date:	8 February 2012
LOCAL HERITAGE STATUS	n/a	
CURRENT USE:	Description:	Sheep paddock
	Dates:	1947+
PREVIOUS USE(S):	Description:	Firing/ Practice Range
	Dates:	1941-1943
ARCHITECT:	Name:	n/a
	Dates:	n/a
BUILDER:	Name:	n/a
	Dates:	n/a
LOCAL GOVERNMENT AREA:	Description:	DC of Barunga West
LOCATION:	Unit No.:	-
	Street No.:	-
	Street Name:	Old Pirie Road
	Town/Suburb:	Port Broughton
	Post Code:	5522
LAND DESCRIPTION:	Title Type:	CT
	Volume:	5883
	Folio:	221
	Lot No.:	n/a
	Section:	1058
	Hundred:	Mundoora

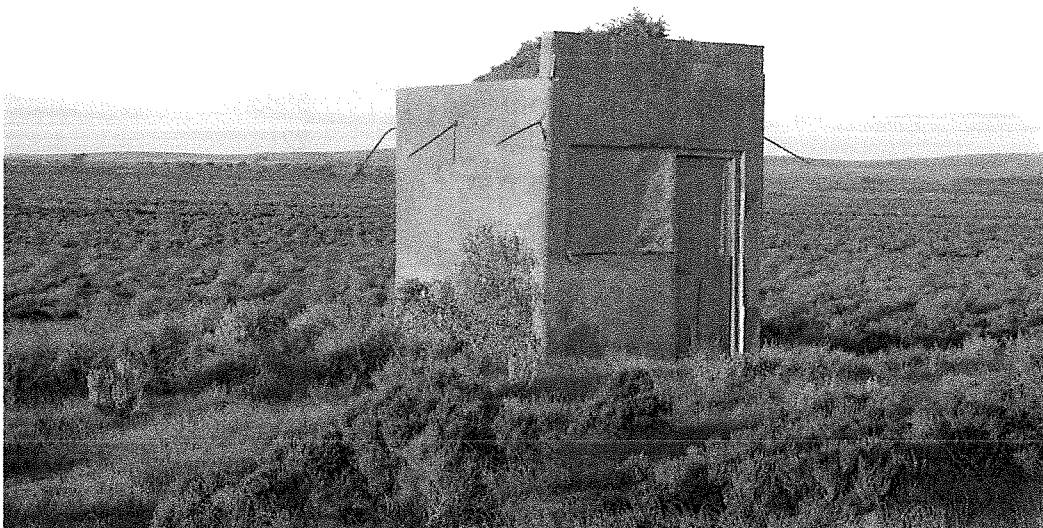
PHOTOS

Former RAAF Gunnery Range
Old Pirie Road, Port Broughton

FILE NO: 26312



General view of Gunnery Range, looking south-east



One of two concrete shelters at Gunnery Range

PHOTOS

Former RAAF Gunnery Range
Old Pirie Road, Port Broughton

FILE NO: 26312



Numeral IV at Gunnery Range, looking south-west

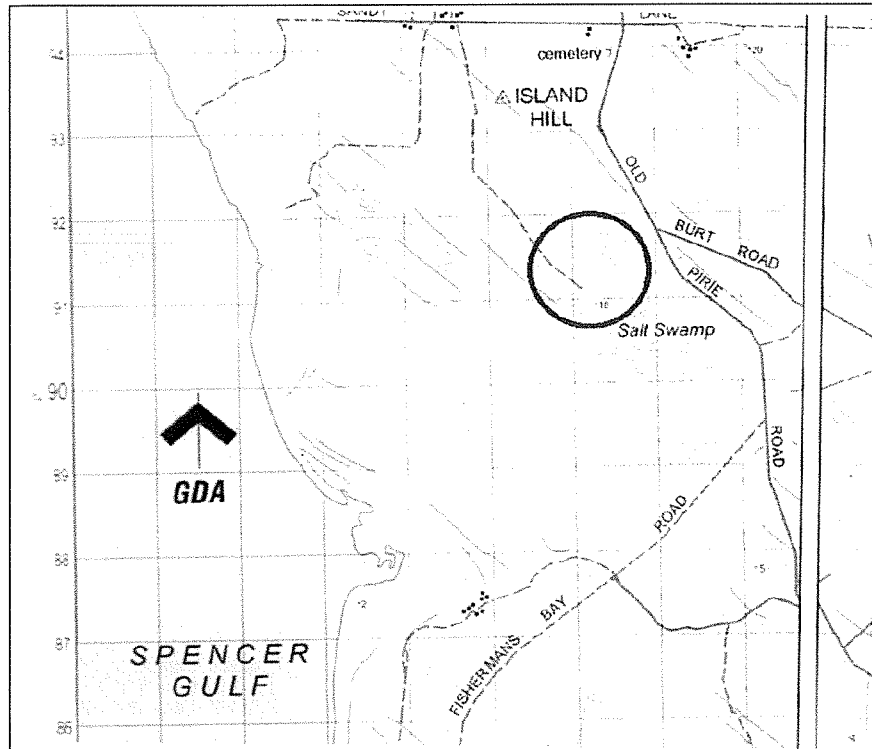


Bullet hole in numeral at Gunnery Range

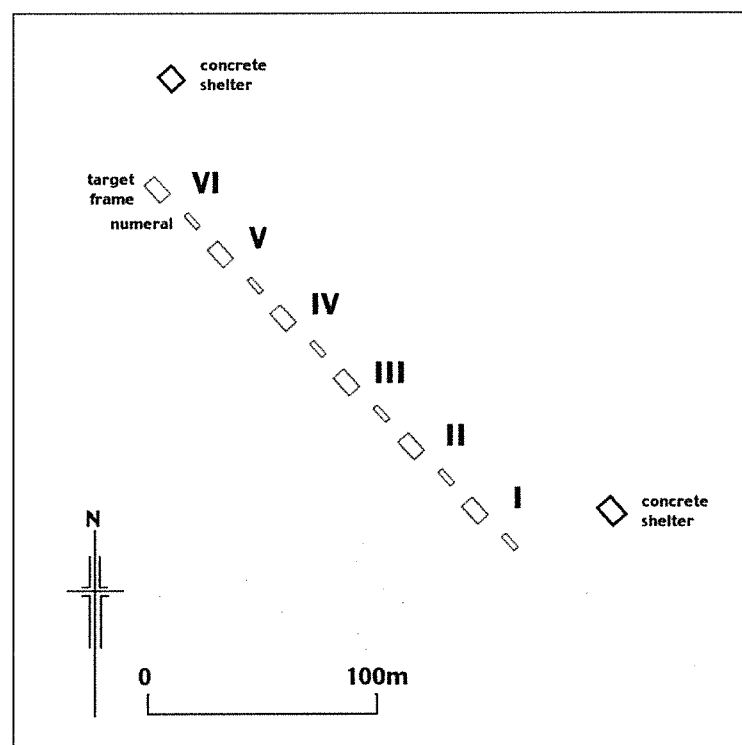
SITE PLAN

Former RAAF Gunnery Range
Old Pirie Road, Port Broughton

FILE NO: 26312



Location of former RAAF Gunnery Range (CFS map book region 4)

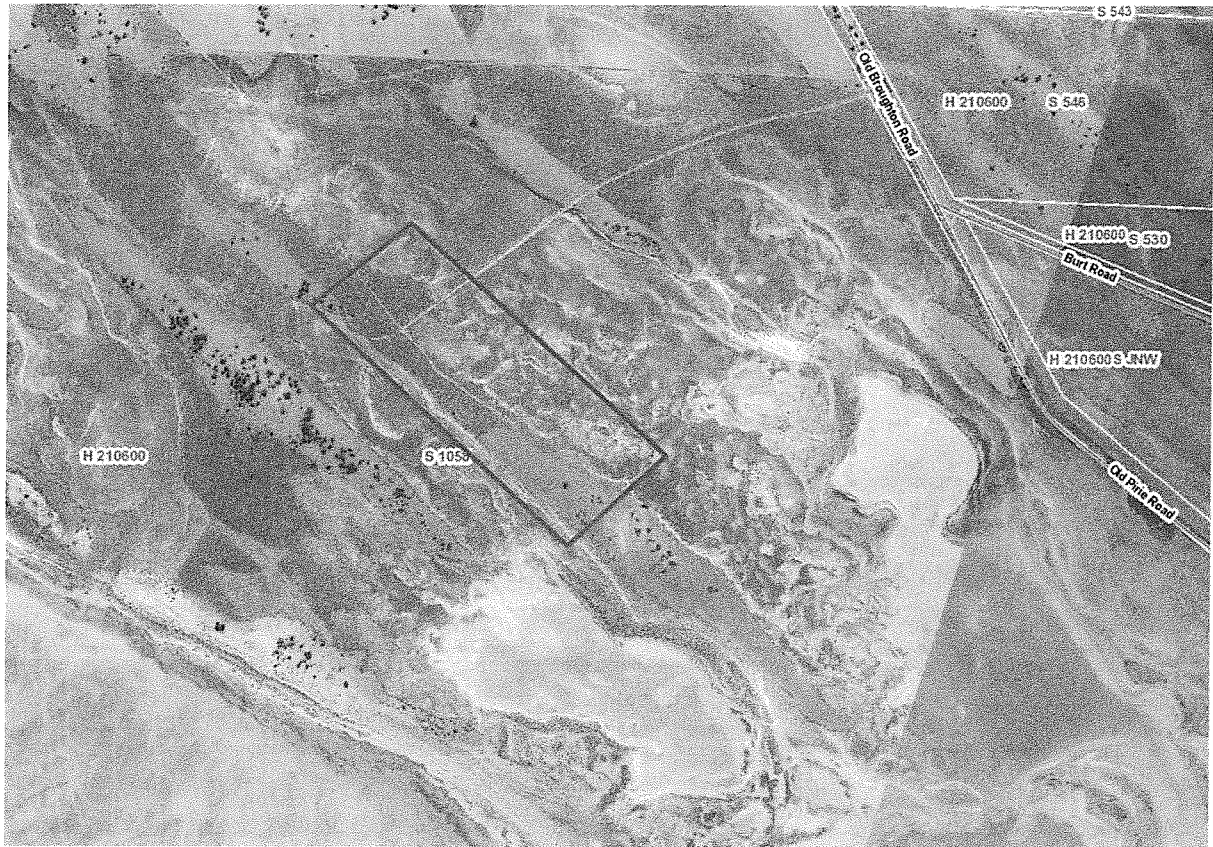


Sketch Plan of Surviving Historic Structures at RAAF Gunnery Range

SITE PLAN

Former RAAF Gunnery Range
Old Pirie Road, Port Broughton

FILE NO: 26312



Location of former RAAF Gunnery Range approx 30 km south of Port Pirie (extent of listing indicated by red outline)

RAAF GUNNERY RANGE, PORT PIRIE

C20 17

Place Name and Address: Former RAAF Gunnery Range
Old Pirie Road
Port Broughton SA 5522

SUMMARY OF HERITAGE VALUE:

Description:

The former Gunnery Range stands on a low coastal sand ridge that runs from north-west to south-east. It was designed to be targeted by aircraft from the north-east, i.e. firing out to sea. It consists of a row of six timber target frames spaced about 30m apart. Beside each target is a large Roman numeral from I to VI, made of sheetmetal on a timber frame, angled backwards to be visible from the air. These stand over 2m high and are the most conspicuous elements of the range. At each end of the row of targets is a small concrete booth to provide shelter for attendants.

Statement of Heritage Value:

The former Gunnery Range is a very rare (perhaps unique) surviving example of the measures adopted for defence training in Australia in the 1940s, and one of the best-preserved wartime RAAF relics 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 military aviation between 1941 and 1943 which illustrates significant aspects of South Australia's wartime history.
- (b) It has rare, uncommon or endangered qualities that are of cultural significance, as probably the only wartime aviation gunnery range surviving in Australia.
- (d) It is an outstanding representative of a particular class of places of cultural significance, as the only well-preserved military aviation training facility in South Australia.

RECOMMENDATION:

It is recommended that the former RAAF Gunnery Range, Port Pirie 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.**

In 1940, the RAAF began to establish flying schools to train large numbers of aircrew. Of the three services, the Air Force had the luxury of being selective about its recruits, as the number of volunteers eager to learn to fly was nearly three times as many as the training facilities could take. At the time, Australia's main aim was to supply crews for RAF aircraft in Europe, under the Empire Air Training School (EATS), but by 1942 most of the graduates would be staying in Australia.

To speed the process, there was a hierarchy of schools with increasing levels of specialisation, and most types were represented in South Australia. Recruits began at an Initial Training School (Mount Breckan) where they were taught mathematics, navigation and radio procedures on the ground. Those who showed aptitude would be sent to an Elementary Flying Training School (Parafield) where they learnt the rudiments of flying in a small single-engined aircraft. The better graduates would go to a Service Flying Training School (Mallala) where they converted their skills to larger military aircraft. Those who qualified as pilots or other aircrew went on to specialist training. Some went to Canada where they learnt to crew state-of-the-art fighters and bombers and were then sent on to the UK. Others trained in Air Observer's Schools (Mount Gambier) or Bombing and Gunnery Schools, which had the delightful acronym of BAGS.

No. 2 Bombing and Gunnery School was established at the newly-built RAAF base south of Port Pirie on 15 June 1941. It was one of three in Australia; the others were at West Sale in Victoria and Evans Head in New South Wales. Port Pirie was the second-largest RAAF base in South Australia with 17 Bellman hangars at its peak, slightly smaller than RAAF Mallala. It was an advanced specialist school where aircrew flying Fairey Battles and Avro Ansons were trained in bombing and gunnery techniques. The location was chosen because aerial bombing and gunnery practice obviously requires a lot of empty space. On the coast of Spencer Gulf between Port Pirie and Port Broughton, the delta of the Broughton River forms a large area of wetlands, merging into marginal grazing land.

Nine bombing and gunnery ranges were established along this desolate coastal strip. (See sketch map in Wordley & Madigan 1982, p. 103) Most have left little physical evidence today. Another gunnery range can be identified on a samphire flat north-west of the junction of Wandearah Road and Lower Broughton Road, about 14km to the north-west of this site. There are two concrete shelters on the site similar to those at the more southerly gunnery range, but aerial photographs also show the circular pockmarks of bomb craters on this bombing range (although they are not apparent from ground level) suggesting that it was a combined gunnery and bombing range.

RAAF GUNNERY RANGE, PORT PIRIE

C20 17

Much of the gunnery practice was air-to-air, with the gunner firing at a target drogue being towed behind another aircraft (preferably a long way behind!). However, there was also training in firing at ground targets, and gunnery ranges were required. This one was set up on a sand ridge about a kilometre west of the old Port Pirie-Port Broughton Road. It was something like an infantry rifle range on a grand scale, with a series of six targets spaced out about 30m apart, each target identified by a large Roman numeral beside it.

Bombing and gunnery training was hazardous, and about 22 aircrew were killed in accidents near the Port Pirie base. They are buried in the military section of Port Pirie cemetery. No. 2 BAGS operated for two and a half years, until December 1943 when the school was closed and Port Pirie became No. 3 Air Observer's School, which operated until January 1946. RAAF Base Port Pirie was disbanded early in 1947, when 67 accommodation huts were taken to the new Woomera village.

- (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.**

South Australia had four wartime RAAF training airfields: Mount Gambier, Parafield, Mallala and Port Pirie. Of these, Parafield is by far the best preserved. Very little wartime fabric survives at Mount Gambier or Port Pirie, which are now both civil airfields, and Mallala is now a motor racing circuit.

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The former Gunnery Range target area stands on a low coastal sand ridge that runs from north-west to south-east, roughly parallel to Old Pirie Road about 30km south of Port Pirie, and visible from the road. The target complex is about 300m long, and consists of a row of six timber target frames spaced about 30m apart. Some kind of target must have been attached to these - perhaps a bullseye painted on canvas or plywood. Beside each target frame is a large Roman numeral from I to VI, made of sheetmetal on a timber frame, angled backwards to be visible from the air. These were presumably intended to allow each gunner to identify an individual target for scoring purposes. The targets were aligned to be fired on by aircraft from the north-east, firing out to sea.

The numerals stand over 2m high and are the most conspicuous elements of the range. They are in only fair condition; the land owners have patched them up when necessary, but decay in the timber frames needs to be addressed or the structures will be lost. A brief inspection showed several bullet holes in the sheetmetal numerals, although none were observed in the target frames.

At each end of the row of targets is a small concrete booth to provide shelter for attendants maintaining the targets. There are based on RAF designs, for similar observation buildings stand at RAF Millom in the UK. There are also two similar booths at the former Port Pirie gunnery and bombing range 14km to the north-west, and another set stands at RAAF Base Townsville in Queensland.

REFERENCES:

- Gavin Long, *Six Years War*, 1973, pp. 25-27
RAAF Historical Section, *Units of the RAAF*, Vol. 8, 1995, pp. 8, 11-12
NAA files
RAF Gunnery ranges website
<<http://www.users.globalnet.co.uk/~rwbarnes/defence/ranges.htm#brg>>
Townsville Air Gunnery Range website
<<http://home.st.net.au/~dunn/bunkers/towncommonbunkers.htm>>
Wordley & Madigan, *Port Pirie Remembers*, 1982

RAAF GUNNERY RANGE, PORT PIRIE

C20 17

SITE RECORD:

FORMER NAME:	No. 2 Bombing and Gunnery School	
DESCRIPTION OF PLACE:	Row of six timber target frames, each with a large Roman numeral; two concrete shelters	
DATE OF COMPLETION:	1942	
REGISTER STATUS:	Description:	n/a
CURRENT USE:	Description:	Sheep paddock
	Dates:	1947+
PREVIOUS USE(S):	Description:	Firing/Practice Range
	Dates:	1941-1943
ARCHITECT:	Name:	n/a
	Dates:	n/a
BUILDER:	Name:	n/a
	Dates:	n/a
SUBJECT INDEXING:	Group:	Military
	Category:	Firing/Practice Range
LOCAL GOVERNMENT AREA:	Description:	DC of Barunga West
LOCATION:	Unit No.:	-
	Street No.:	-
	Street Name:	Old Pirie Road
	Town/Suburb:	Port Broughton
	Post Code:	5522
	Region No.:	8
	Region:	Lower North
LAND DESCRIPTION:	Title Type:	CT
	Volume:	5883
	Folio:	221
	Lot No.:	n/a
	Section:	1058
	Hundred:	Mundoora

RAAF GUNNERY RANGE, PORT PIRIE

C20 17

SITE RECORD (Cont.):

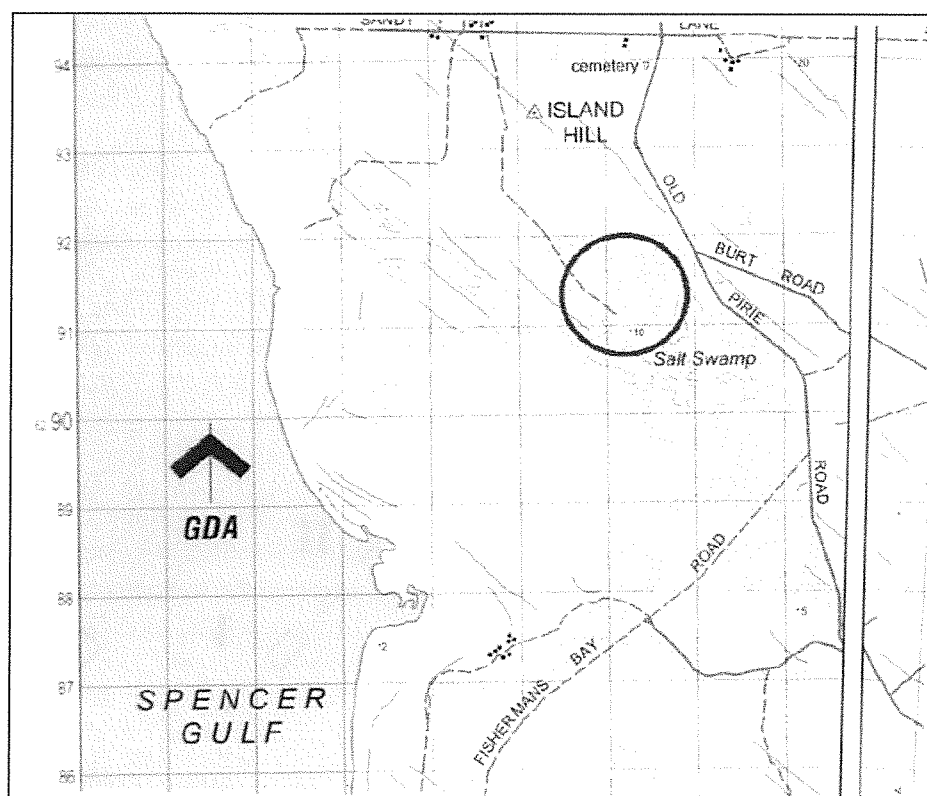
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Zone: 53
Easting: 0775670
Northing: 6291490
Map Sheet: 6431 Whyalla
Map Scale: 1:100,000

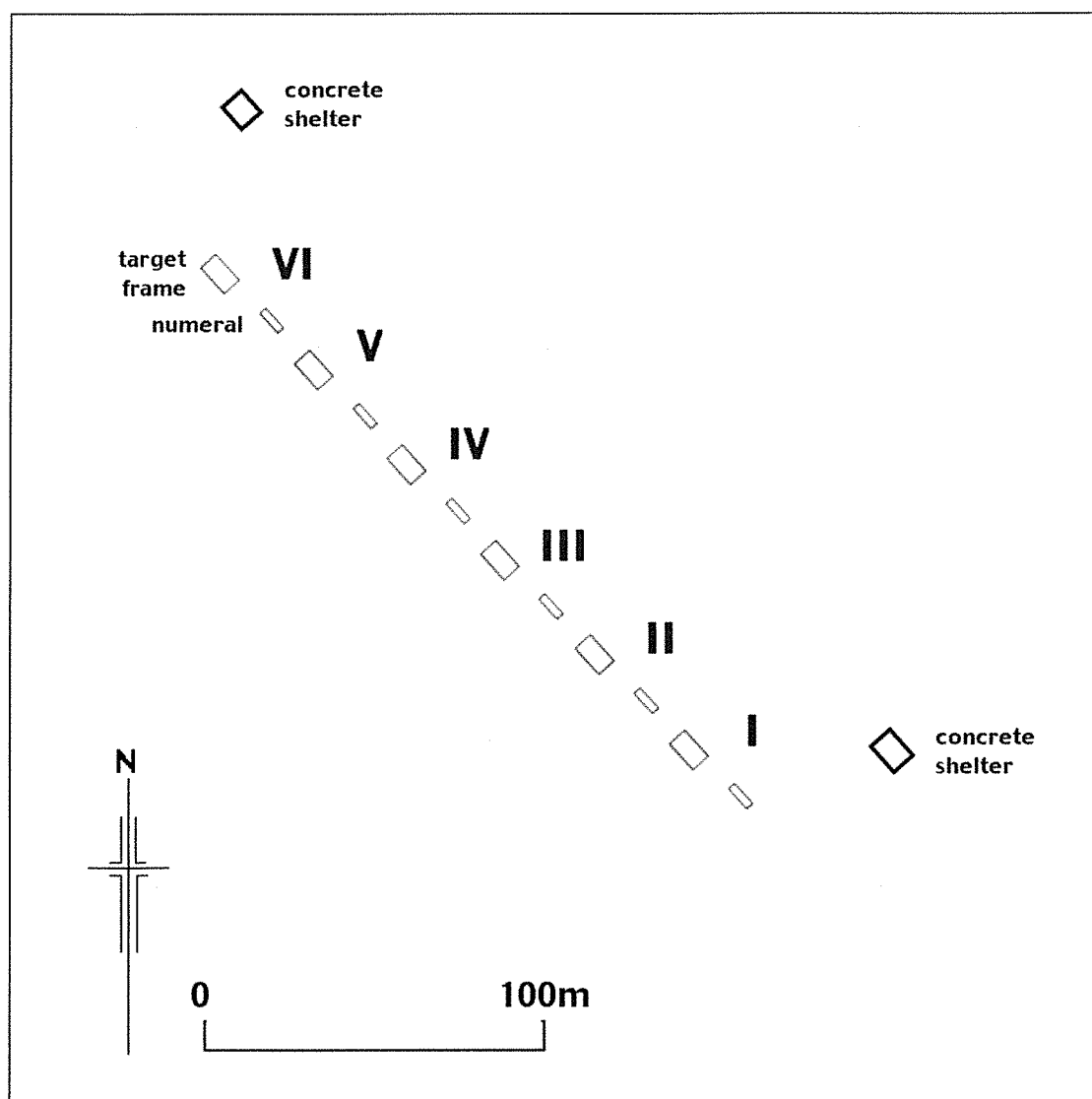
OWNER:

Name: Gary & Glenys Collins
Address: RSD 58
Town/Suburb: Wandearah West
Post Code: 5523

Location Map



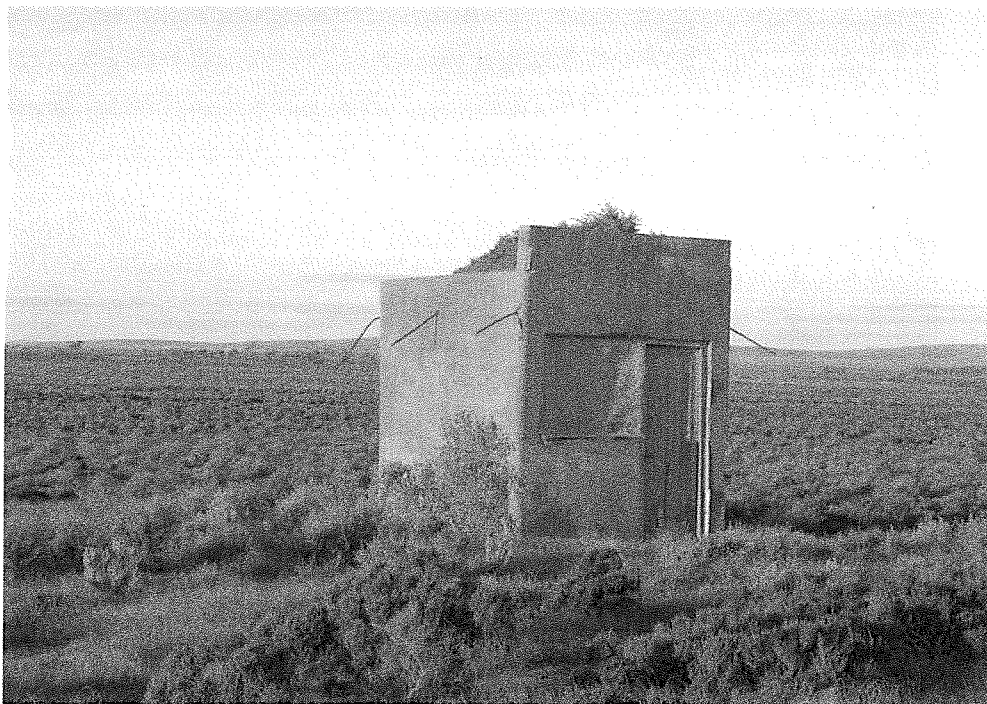
Location of former RAAF Gunnery Range (CFS map book region 4)



Sketch Plan of Surviving Historic Structures at RAAF Gunnery Range



General view of Gunnery Range, looking south-east



One of two concrete shelters at Gunnery Range



Numeral IV at Gunnery Range, looking south-west



Bullet hole in numeral at Gunnery Range