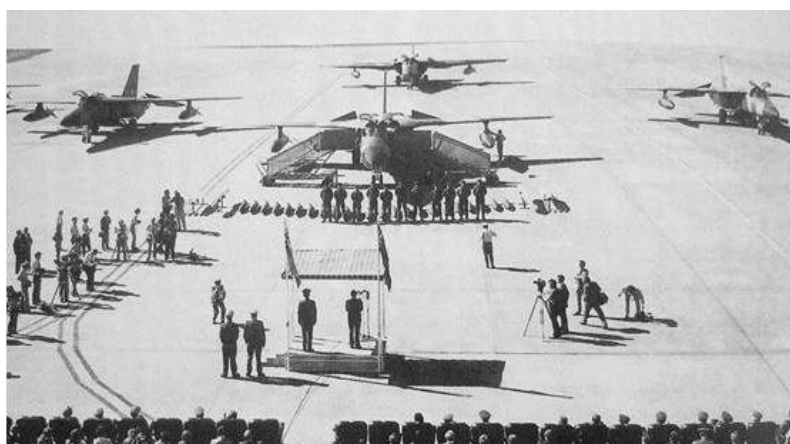


RAAF Base Amberley

Heritage Interpretation Plan, 2016



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Appendix 2	RAAF Base Amberley – Squadrons and Units
Appendix 3	Appendix 3 of <i>Guidelines for Interpreting Cultural Heritage</i> (VicRoads, October 2013)

Executive Summary

RPS has been engaged by RPS Project Management (formerly Point Project Management) on behalf of the Department of Defence to prepare a Heritage Interpretation Plan which meets the requirements of EPBC Act Approval (EPBC 2014/7123) for the removal of 38 heritage buildings located within the Amberley RAAF Base Group included on the Commonwealth Heritage List (CHL).

This Heritage Interpretation Plan for RAAF Base Amberley is in accordance with Condition 3 of the EPBC Act Approval and as such, will focus on the historic development of the airbase and its historic heritage values.

RAAF Base Amberley, established in 1938 was important to the allied commitment to the war in the Pacific in World War II, most significantly through the maintenance, salvage and assembly of new aircraft. Following the cessation of war the base was nominated as Australia's bomber base, it has retained that role ever since. Personnel from the base have played a significant role in the Korean War, the Malayan confrontation, the atomic testing programme at Maralinga, the Vietnam War and more recently Iraq and Afghanistan.

Commonwealth Heritage values in evidence at RAAF Base Amberley include historical, rarity and aesthetic values. Further historic heritage values have been identified in the current Heritage Management Plan (HMP) (Converge, 2012) and include archaeological/research potential, creative or technical value and social value. This Heritage Interpretation Plan will enable the appreciation of all identified historic heritage values.

The history and heritage values of the base have been evaluated to produce five key stories to be conveyed through interpretation:

- (1) The Defence of Australia in World War II;
- (2) Collaboration with other Air Forces;
- (3) Commitment and Loss;
- (4) RAAF Base Amberley Post WWII; and
- (5) Aircraft synonymous with RAAF Base Amberley.

Bearing in mind identified constraints and issues, an interpretation strategy has been formulated and content has been outlined to enable compliance with the EPBC Act Approval (EPBC 2014/7123). The primary interpretive actions in this plan are the production of a public exhibition on the historical development of the base, a book which conveys the heritage values of RAAF Base Amberley and interpretive storyboards throughout the Base.

This report concludes with a plan which identifies the tasks required to develop and implement the interpretation actions with associated deadlines and responsible parties. It is understood that the EPBC Act Approval requires this Heritage Interpretation Plan be implemented as approved.

I.0 Introduction

RPS has been engaged by RPS Project Management (formerly Point Project Management) on behalf of the Department of Defence to prepare a Heritage Interpretation Plan which meets the requirements of Condition 3 attached to the EPBC Act Approval (EPBC 2014/7123) for the removal of 38 heritage buildings at RAAF Base Amberley (**Appendix 1**).

I.1 Background

The Department of Defence has received approval under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for the removal of 38 heritage buildings and associated structures from the southern Flight Line area of RAAF Base Amberley (EPBC 2014/7123). The buildings largely date from the World War II era and occupy premium land adjacent to the runway on the southern part of the flight line area. The requirement to accommodate new aircraft capabilities at RAAF Base Amberley has resulted in increased pressure on the Amberley Flight Line area such that the removal of the buildings and related structures is necessary.

The EPBC Act Approval (EPBC 2014/7123) includes a series of conditions to ensure that the heritage values of RAAF Base Amberley are recorded, communicated and managed. In brief, conditions relevant to this report include requirements to prepare an archival record of the Commonwealth Heritage listed heritage buildings prior to demolition (Condition 2); to prepare a Heritage Interpretation Plan which is met by this report (Condition 3 - described in detail below); to relocate at least one Bellman Hanger, two P-1 type timber huts and at least one starter cartridge store/ explosives locker to a suitable location for adaptive re-use (Condition 4); and, to submit a Heritage Management Plan for the Minister's Approval (Condition 5).

Condition 3 of the EPBC Act Approval requires the preparation of a Heritage Interpretation Plan for RAAF Base Amberley which focuses on the phases of historic development of the airbase and that this is submitted for the Minister's approval. The condition states that the Heritage Interpretation Plan must:

- a. *be prepared in consultation with the Department;*
- b. *identify opportunities to utilise media produced by the archival recording process outlines in Condition 2;*
- c. *identify opportunities to utilise material or moveable items salvaged from the project area where this is practical;*
- d. *include a timeline for the implementation of the interpretation works;*
- e. *include the necessary content and specifications for a public display or exhibition of material that communicates the history of RAAF Base Amberley;*
- f. *include the necessary detail and specifications to enable publication of a book that captures the heritage values of RAAF Base Amberley. The book must:*
 - i. *be available in hard copy;*
 - ii. *be available to view online at no monetary cost, in an easily accessible form, from the State Library of Queensland's John Oxley Library or similar website, for at least the life of the approval;*
 - iii. *be identified by an International Standard Book Number (ISBN);*

- iv. *be published in accordance with Australian Government publishing guidelines including the Style Manual: For Authors, Editors and Printers, 6th Edition, and be publicly accessible through the Commonwealth Library Deposit and Free Issue Schemes; and*
- v. *be prepared with the involvement of relevant publishing professionals for the editorial and design of the book, as well as a historian of RAAF No. 23 Squadron Association and any other relevant historians involved with RAAF Base Amberley for the content material.*

*The **approval holder** must not commence the action until the Heritage Interpretation Plan is approved by the **Minister**. The approved Heritage Interpretation Plan must be implemented.*

This Heritage Interpretation Plan has been prepared to comply with the requirements set out in the above condition.

1.2 Project Area

RAAF Base Amberley is the largest air force base in Australia, employing over 5000 people. Located on the outskirts of Ipswich, it is approximately 40 kilometres south west of the Brisbane CBD. The Project Area encompasses those heritage precincts within RAAF Base Amberley that illustrate the historic development of the base.

The approved removal of 38 heritage buildings will affect two heritage precincts and a sub-precinct within RAAF Base Amberley:

- the WWII precinct;
- the Hangar Precinct; and
- the Command and Administration diamond-shaped sub precinct.

The Precincts collectively are referred to as the Project Area (Figure 1) and the 38 heritage buildings approved for removal are detailed in **Table 1**. The heritage buildings approved for removal are highlighted in **bold** throughout the text in this document.

Table 1 Heritage Items for demolition or removal

Asset Number	Item
076	Hangar
095 - 104	Lysaght hut (10 huts)
255 – 258; 260 – 263; 277 – 280; 340	Bellman hangars (13 hangars)
041	Former Sergeant's Mess
042	Former Airmen's Mess
060	Cinema
061	Former hospital
062	Carport
065	Former School of Instruction
240	Former air base support
242	Former Parade Ground
243	Former hospital ward
246	Former Commanding Officers Support Building
745	Bellman hangar

Asset Number	Item
467	Former air safety building
763	Starter cartridge store
764	Starter cartridge store

1.3 Report Scope

This Heritage Interpretation Plan has been prepared to meet the requirements set out in Condition 3 of the EPBC Act Approval noted above. Consequently, the Plan will focus on the phases of historic development of the airbase. It therefore does not provide detail on the pre-airbase or early settlement of the site or the Aboriginal cultural heritage values of the wider base.

Table 2 below summarises the layout and contents of this Heritage Interpretation Plan.

Table 2 Report Outline

Section	Title	Content
1.0	Introduction	Background and scope of plan
2.0	Historical Overview	Summary of historical phases of RAAF Base Amberley's development
3.0	Significance Assessment and Heritage Inventory	Significance assessment based on the Commonwealth Heritage List (CHL) citation and current HMP; inventory of items approved for removal under the EPBC Act Approval and those that will remain
4.0	Stakeholders and Audience	Identification of audience groups with key traits identified
5.0	Historic Themes and Key Stories	Description of historical themes in evidence at the base and key stories to be conveyed through interpretation
6.0	Constraints and Considerations	Identification of constraints and issues to be taken into account in formulating realistic interpretive proposals
7.0	Interpretation Strategies	Interpretation aims and objectives; available resources to interpret; and locations
8.0	Content Development	Description of interpretive measures and in particular, outline of content and specifications for the required public exhibition and book
9.0	Implementation Plan	Identification of tasks with associated timelines and parties responsible for implementation
10.0	References	List of documents reviewed to inform plan

1.4 Methodology

The Heritage Interpretation Plan is prepared in accordance with the relevant legislation, the EPBC Act. The general philosophy and process adopted is guided by *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS 2013) ("the *Burra Charter*") and the ICOMOS *Ename Charter for the Interpretation and presentation of Cultural Heritage Sites* (2008) ("*Ename Charter*") and the *Australia ICOMOS Practice Note for Interpretation* (Australia ICOMOS 2013).

Heritage interpretation guidance has not been prepared yet at the Queensland State (Qld) or Federal level; however, best practice standards developed in NSW, Victoria and WA are helpful. Notable guidance includes: *Sharing our Stories* (The National Trust (WA) 2007) ; *Interpretation* (State Heritage Office WA 2008); *Heritage Interpretation Policy* (NSW Heritage Council 2005); *Interpreting Heritage Places and Items – Guidelines* (Heritage Office 2005); *Guidelines for Interpreting Cultural Heritage* (VicRoads 2013). These guidelines are used to inform this document and terminology used in this report is consistent with them.

The preparation of an integrated, multi-faceted interpretation plan for a place that has heritage values is normally carried out as a three stage process which has informed the layout of this report. The stages are:

- (1) **Interpretation Strategy:** assessment of the history and heritage values of the site followed by an identification of key themes and stories to be conveyed through heritage interpretation and the development of interpretation policy and implementation strategy which looks at how best to carry out implementation activities;
- (2) **Development of Content:** for the purposes of this Heritage Interpretation Plan, this part of the process will include the identification of opportunities to utilise archival recording information and moveable heritage where practicable; the provision of sufficient content and specifications for the preparation of a public display/exhibition and the publication of a book; and
- (3) **Implementation:** the preparation of a timeline for the implementation of works with a staged summary of tasks, anticipated timing and responsibilities.

1.5 Consultation

The author is grateful for the assistance, knowledge and advice provided by the following:

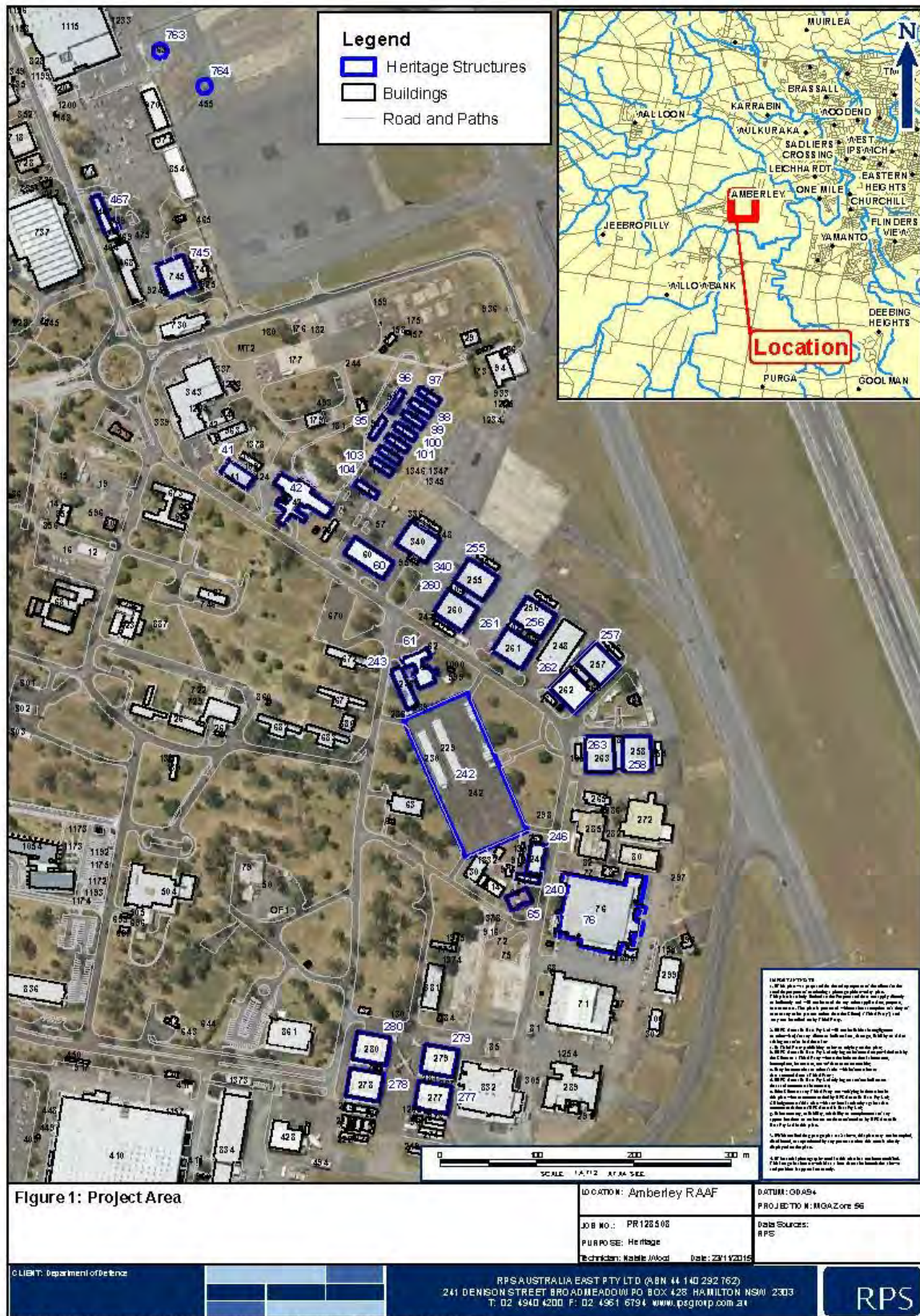
Table 3 Acknowledgements

Name	Position
Linda Oliver	Regional Environment and Sustainability Officer Defence Estate and Infrastructure - Queensland
George Hatchman	Warrant Officer (Retired). Historian. 23 Squadron Association
Nigel Raddie	LAC 23 Squadron Unit History Officer
Dennis Deering	SQNLDR. Officer-in-Charge Displays & Special Events RAAF Amberley Aviation Heritage Centre
Dennis Doggett	Warrant Officer (Retired). 23 Squadron Association
Mick Corkery	Warrant Officer (Retired). Class 2. 2 nd Combat Engineers Regiment Volunteer. Amberley Aviation Heritage Centre
Jim Topping	Volunteer. Amberley Aviation Heritage Centre
Nev Comerford	Flight Sergeant (Retired). Avionics/ Instrument Technician. Volunteer. Amberley Aviation Heritage Centre

1.6 Authorship and acknowledgement

This report has been prepared by Laraine Nelson, RPS Senior Cultural Heritage Consultant and Joanne McAuley, RPS Built Heritage Manager. Invaluable assistance has been provided by Virginia Glyde and David Tranthem of RPS Project Management. The report has been reviewed by Darrell Rigby, Regional Technical Director Cultural Heritage, RPS.

Figure 1 Project Area



2.0 Historical Overview

This historical analysis draws on historical research on the Project Area presented in the following reports:

- GML. 2014 RAAF Base Amberley. Heritage Impact Assessment;
- Converge. 2013 RAAF Base Amberley. Heritage Management Plan;
- Woodhead. 2008 RAAF Base Amberley. Heritage Management Plan;
- Amberley History. n.d. No author;
- Halstead, G. 1994 Story of the RAAF Nursing Service 1940-1990;
- Gillison, D. 1962 Official History of RAAF;
- Eather, S. 2007 Blue Lightning; and
- Commonwealth Heritage Listing: Amberley RAAF Base Group 2004 (CHL).

The Aboriginal ethno-historic and historic development of the Project Area is discussed in detail in other publications. This report will provide a brief background on the development of the Royal Australian Air Force (RAAF) and focus on the development and operation of RAAF Base Amberley. For a full account of the historic background, this report should be read in conjunction with the above heritage reports and publications. The heritage items identified in the historical overview are shown in **Figure 1** and listed in **Table 1**.

2.1 The Royal Australian Air Force

In 1914 the Central Flying School was established at Point Cook, Victoria in recognition of the potential value of flight to the armed services. This foresight was rewarded in WWI when the Australian Flying Corp was added to the capabilities of the Australian Imperial Force (AIF) (Department of Air 1971p.ii). While the Australian Flying Corp was disbanded with cessation of hostilities at the end of WWI, the Central Flying School at Point Cook remained operational (Department of Air 1971:xvi).

The need for an operational air defence capability was justified by the success of the Australian Flying Corps in WWI which led to the Minister for Defence establishing an Air Council to provide advice on the establishment of an air force. The long debate that followed on the process for developing and managing an air defence system led ultimately to a positive outcome when on 31 March 1921, the Australian Air Force was established. The addition of the word 'Royal' and the nomenclature Royal Australian Air Force (RAAF) was adopted following the approval of King George V (Gillison 1962:16).

The new Air Force had 151 members incorporating 21 officers and 130 other ranks. The aircraft included 20 standard trainers (Avro 504-K), 10 scouting planes (Sopwith Pups bought during the war), 6 Fairey seaplanes bought in 1921 and 6 Avro 504-K built in Australia (Gillison 1962:16). The Headquarters were in Melbourne while the No. 1 Flying Training School and No. 1 Aircraft Depot were located at Point Cook (near Melbourne). A liaison office was also established in London.

By 1926 the RAAF had grown and also included No. 1 Aircraft Depot, Laverton; No. 1 (Composite) Squadron, Laverton; No. 3 (Composite) Squadron; No. 101 (Fleet Cooperation) Flight, at Richmond; and, an Experimental Section 3 at Randwick, New South Wales (Gillison 1962:27).

In 1928 the Marshal of the Royal Air Force, Sir John Salmond, reviewed the Air Force and the resulting report recommended the expansion of air defence over nine years. The impetus to expand was tempered by the economic depression of the 1930s; however by 1934, growing tensions in Europe saw the Australian

government implementing the recommendations of the Salmond Report. By 1936 the number of RAAF personnel had increased to 1,365 including 138 officers, 61 cadets and 1,166 aviators and the need for aircraft led to the establishment of the Commonwealth Aircraft Corporation. The first plane produced for the RAAF, the Wirraway, made its maiden flight in March 1939. In addition, construction of the Beaufort Bomber and D. H. Tiger Moths were planned with Lockheed Hudsons ordered from the U.S. and Sunderland Flying Boats purchased from the United Kingdom (Department of Air 1971:9-11).

It was during this period of expansion that the need for a base in Queensland was recognised. While a number of locations had been considered, on 22 December 1938, the Commonwealth Gazette reported that 882 acres had been purchased at Amberley, south west of Brisbane. An amount of £12,500,000 was set aside for the construction of what was to become RAAF Base Amberley (Woodhead 2008:40).

2.2 RAAF Base, Amberley

Amberley, 45 kilometres south-west of Brisbane and in close proximity to Ipswich, was a logical choice for the establishment of an air force base. In the event of war, while there was a recognised need to provide defence for the region's coal mines and railway workshops, it was important to be a sufficient distance from the major population base of Brisbane (Amberley History n.d.)

The design of the new base was in keeping with pre-World War II air force planning and construction with the plan and layout for RAAF Base Amberley also conforming to inter war British design (CHL 2004:2). The centre of the base was the diamond-shaped **Parade Ground** (Asset 242) that incorporated a saluting station and was to be flanked by the administrative and operational buildings of the base.

While the construction of the new base had commenced by early 1939, the rate of construction was slow. By September 1939, the only buildings in place were a guardhouse, **Hangar 76** (Asset 076), a hospital and an Air Traffic Control Tower. One of the factors in the slow rate of building was the desire for substantial well-designed buildings constructed in brick. **Hangar 76** (Asset 076) fulfilled this criterion. It was designed and built using a RAF 'C' style post World War I hangar as a template. The imposing eastern entrance was constructed in 'fairface' brickwork with ornate glass detailing and was described in 1939 as resembling the entrance to a hotel (CHL 2004:8). The main fabric of the building was constructed in steel with a saw tooth roof and was welded without the use of a single bolt (Marks 1994:170).

The declaration of war in Europe on 3 September 1939 gave the impetus to make the base functional as quickly as possible and led to an abandonment of brick as the main component for building construction and the adoption of timber and fibro and pre-fabricated structures (Amberley History n.d.:4).

Constructed between 1939 and 1940 and reflecting the change in urgency for new buildings is the **Air Base Headquarters** (later the School of Instruction) (Asset 065). Built of timber with weatherboard cladding on brick foundations with a gable roof, the building has a south facing entrance porch.



Plate 1 Parade Ground saluting station (Source: Amberley History n.d. 129)



Plate 2 Hangar 76 (Source: Amberley History n.d.: 4)



Plate 3 Air Base Headquarters (Source: Amberley History n.d.: 4)



Plate 4 RAAF Base Amberley 1941 – outline of the diamond parade ground is evident centre plate with Hangar 76 (Asset 076) to the left top and Air Base Headquarters (Asset 065) immediately below (Source: Department of Defence)



Plate 5 RAAF Base Amberley 1942 – the changes to the base are evident - diamond parade ground is centre with the Bellman Hangars on the left (Source: Amberley History n.d.:28)

2.2.1 1940 – 1945 (World War II)

The establishment of Station Headquarters on 17 June 1940 marked the commencement of Amberley operations. On 17 July 1940, His Excellency Air Commodore the Right Honourable Sir Leslie Orme Wilson CGST, GCMG, GCIE, DSO, Governor of Queensland, officially inspected the base. This was followed by an inspection by the Minister for Defence J. V Fairburn on 22 July 1940 (Amberley History n.d.:10).

The first squadron assigned to the base was No 24 Squadron; however, by October of the same year that squadron had departed for Townsville. The commencement of the No 3 Service Flying Training School (No 3 SFTS) and No 3 Recruit Depot in October 1940 saw RAAF Base Amberley's role in pilot training and the recruiting of personnel established, a role it maintained during the initial stages of WWII. The Units formed as part of the Empire Air Training Scheme (EATS) initially had thirty-six trainees with Wirraway and Anson used as trainee aircraft. In the early years operations at the base were hampered by the lack of serviceability of the runways during heavy rain. This made the construction of an all weather runway and the construction of hangars a priority (Amberley Airfield during WWII).

Prior to the war RAAF pilots graduated at a rate of around 50 per annum. This increased dramatically with the advent of war when Australia committed to provide 10,000 aircrew per year under the Empire Air Training Scheme. The ultimate destination in most instances was the UK (Amberley History n.d.:12). The trainees spent the first two months in the Intermediate Training Squadron before moving onto the Advanced Training Squadron. A rigorous training schedule concluded with a parade and a presentation of 'wings' and the air crew commencing duty either in Australia or overseas.



Plate 6 No 3 SFTS Trainee air crew - twelve members were later killed in action (Source: Australian War Memorial)

The base's role in the training of aircrew changed rapidly following the bombing of Pearl Harbour in December 1941 and the subsequent declaration of war between Japan and the United States. The US needed a base to support their operations in the western Pacific and RAAF Base Amberley was chosen as an important part of those operations.

In late December 1941 Amberley saw the arrival of 4,600 National Guard troops from the Pensacola Convoy together with USAAF members of the 88th Reconnaissance Squadron and the 7th Bombardment Squadron. The Convoy also carried crates containing 18 P-40 Kittyhawk and 52 A-24 Dauntless aircraft (Amberley History n.d.:10). The primary focus of the base for the remainder of the war was the assembly, maintenance and salvage of aircraft (CHL 2004:6). Assisting the USAAF in assembling the P-40 Kittyhawk and 52 A-24

Dauntless aircraft were the RAAF No. 3 SFTS. The assembly work for the aircraft was conducted by three teams of nine people taking two to three days to assemble each aircraft (Amberley History n.d.:33).



Plate 7 Crates containing aircraft with a P-39 being unpacked. To the left is Hangar 76 centre top is Station Headquarters (Asset 065) [Amberley n.d.:36 sourced from US National Archives]

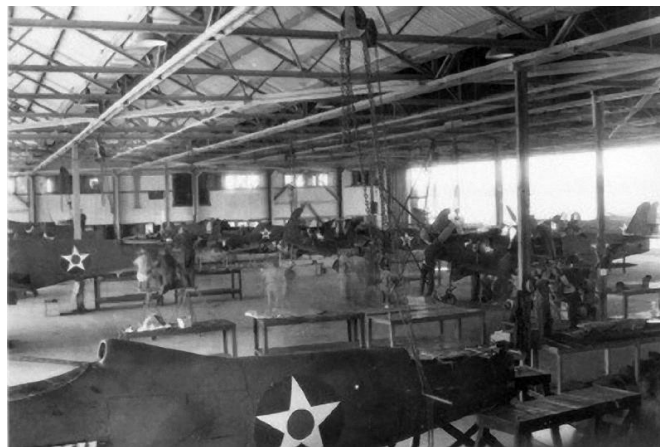


Plate 8 Hangar 76 and the assembly line for P-39 (Amberley History n.d.:37)



Plate 9 RAAF Base Amberley runway with Kittyhawk n.d. (Source: Department of Defence)



Plate 10 RAAF Base Amberley re-fuelling Kittyhawk with Bellman Hangar in background (Source J. Nelson)

The huge commitment to the assembly of aircraft required a substantial increase in the construction of facilities. This can be seen by comparing the aerial photographs taken in 1941 and 1942 (Plate 4 & Plate 5). The construction of **14 Bellman hangars** (Asset 255 – 258; 260 – 263; 277 – 280; 340) built in pairs in a C shaped formation near the runway (Amberley History n.d. p.10) was the most significant component of the works. The hangars were crucial to the maintenance and construction of aircraft for the remainder of World War II and were closely linked to the US involvement at the base (CHL 2004:2).



Plate 11 Station Headquarters with camouflage painted roof (Amberley History n.d.:48)



Plate 12 Hospital building (Amberley History n.d.:4)

Initially the USAAF were housed with the No.3 SFTS and then with the No. 3 Recruit Depot. The numbers rapidly outgrew the available accommodation and US personnel were also housed in tents erected on the base by the US Army (Amberley History n.d.:31).

Amberley was crucial to the US war effort in the Pacific. Further US air force personnel arrived in February 1942 with the USAAF's 38th bomber group arriving by truck convoy to assist with the assembly of the Cobras (P-39) and Kittyhawk (P-40) (Amberley History n.d.:34).

Other USAAF teams that worked at RAAF Base Amberley included the:

- 22nd Bomber group together with the B-26 (Martin Marauder) bombers (Amberley History n.d.:39);
- 68th Pursuit Squadron ground crews, these became part of the team assembling Cobras (P-39) and Kittyhawk (P-40) (Amberley History n.d. p.39). The 68th Pursuit Squadron later became the 68th Fighter Squadron; based in Tonga they flew the aircraft assembled at Amberley;
- 49th Pursuit Squadron conducting the assemblage of their Kittyhawk (P-40) (Amberley History n.d.:43);
- The USAAF 39th Fighter Squadron assembled their Cobras (P-39) at Amberley before proceeding to New Guinea. They later returned to Amberley and were provided with Lightning (P-38) aircraft (Amberley History n.d.:43); and
- Other US forces based at Amberley by 1942 included United States Army Forces in Australia (USAFIA), the USAFIA Ferry Division of Air Transport, the US Army Airways Communication Service and the 5th Air Force- 22nd Service Group.

The role of No. 3 SFTS was significant. The USAAF were responsible for assembling the aircraft whilst No. 3 SFTS were responsible for transferring the aircraft to Darwin. They also conducted training for Kittyhawk pilots in specifics such as air gunnery, night flying and dive bombing (Woodhead 2008:43).

Another important role for RAAF Base Amberley was as a staging post for US troops heading to the war zone (CHL 2004:6). In September 1942, General Macarthur, in collaboration with the RAAF and the Australian Government, introduced a strategy whereby every 24 hours 600 American troops were flown from the United States. The first touchdown after the Pacific crossing was Amberley where the troops were given a health check before being lodged in nearby Ipswich (Marks 1994:175). From Amberley they were transferred to the frontline in New Guinea (Halstead 1994:141). Known as the Trans Pacific Ferry Service this was an extensive freight and ferry service and a link between the US and the war in the Pacific. Furthermore, substantial numbers of US forces were stationed at and moved through the base during the peak war years and up to 2,000 Australian and British forces were also stationed there (Woodhead 2008:43). RAAF Base Amberley remained the location for the South West Pacific Area operations until 1943 when it moved to Townsville. The move was largely a result of the unsuitability of the Amberley runways for repeated heavy load landings (Marks 1994:176).

With regard RAAF personnel at the base during World War II; No. 3SFTS established at Amberley in mid 1940 was disbanded on 22 April 1942. The No. 3SFTS had more than 500 trainees flying Avro Ansons pass through the school prior to moving onto to the Advanced Flying Training Phase. Following closure of the school the responsibility for instruction moved to Point Cook, Victoria and Mallala, South Australia (Amberley History n.d.:33). The disbandment of the No. 3SFTS was followed by the formation of the No. 3 Aircraft Depot (3AD) and the re-establishment of Station Headquarters. The role of the 3AD was the assembly, repair and salvage of aircraft and when established included 1 officer and 106 airmen (Amberley History n.d.:35).



Plate 13 RAAF Base Amberley 1941 - showing Parade Ground; hospital and ward on lower right of diamond [Amberley History n.d.:11 (Source: from National Library of Australia)]



Plate 14 RAAF Base Amberley 1942 - showing the Bellman hangars on right (Amberley History n.d.:28)

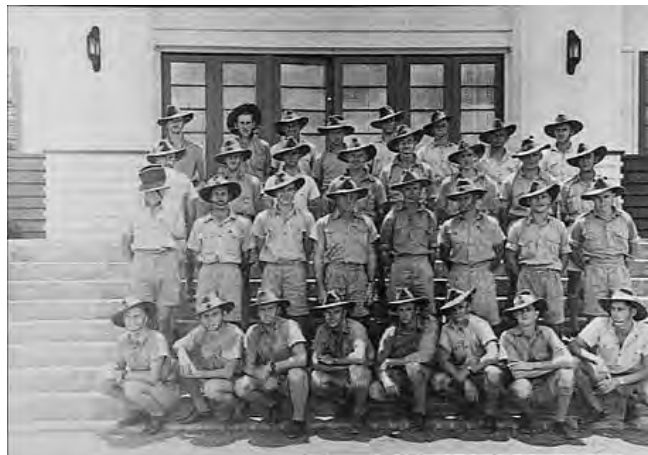


Plate 15 No 3 SFTS (No. 4 Course) on graduation on the steps of the Astra Cinema (Source: Amberley History n.d. 13)

The number of Australian men enlisted for the war effort was substantial and the need to draw on additional labour resources resulted in the recruitment of women. Prior to World War II the service had been exclusively for males; however, the formation of the Women's Auxiliary Australian Air Force (WAAAF) resulted in women being employed at Amberley (Amberley History n.d.:179). The WAAAF personnel assumed more than 70 roles including radar operators, parachute packers, instrument repairers and drivers but they were not permitted to join the flying crews (RAAF Museum. Point Cook). At Amberley, by 1943 the number of WAAAF at the base numbered 1856 (Marks 1994:177).



Plate 16 Hon. A S Drakeford, Minister for Air with Squadron Officer Mary Rawlings inspecting the WAAAF parade at Amberley (Amberley History n.d.:64)



Plate 17 WAAAF – 3AD typists (Amberley History n.d.:65)

Another role allocated to RAAF Base Amberley was a meteorological base for producing specialist forecasts relayed in code and used throughout the south-west Pacific regions (Halstead 1994:141).

Little written information on the social life at Amberley is available; however, the **Astra Cinema (Asset 060)** was constructed during the war. Showing films twice a week with a nominal charge for entry the Cinema was also important to the local community who were given access to the base to visit it. In May 1945 Wing Commander J W Kingsford-Smith arrived with cinema technicians to film the *Life of Kingsford-Smith* (Amberley Airfield during WWII). Dances were also held in the building referred to as the Gymnasium which in World War II was known as the **Airmen's Mess (Asset 042)**.



Plate 18 Astra Cinema under construction in 1941 (Amberley History n.d.:5)



Plate 19 3AD Dance Band at Amberley in the 1940's (Amberley History n.d.:71)

By the end of the World War II RAAF Base Amberley had housed a range of aircraft types including the Wirraway, Hudson, Martin Marauder, Kittyhawk, Vultee Vengeance, Aerocobra, Lancer, Boston, Hamilton, De Havilland and Curtis Electric. Toward the end of the war, the RAF Spitfires and B24J Liberator arrived (Woodhead 2008:45). In November 1944, the veteran bomber "G" for George arrived at the base for inspection before it left for a promotional tour of Australia. The bomber was subsequently restored and is now on display at the Australian War Memorial, Canberra (Amberley Airfield during WWII).

The building phase from 1939 to 1943 included the construction of the **Station Headquarters** (Asset 065), the **Parade Ground** (Asset 242), the **Sergeant's Mess** (Asset 041), **Airmen's Mess** (Asset 042), the **Astra Cinema** (Asset 060), the **Hospital** (Asset 061), the **Hospital Ward** (Asset 243), the **Air Base Support building** (Asset 240); and, the **Commanding Officer's Support Building** (Asset 246).

2.2.2 1946 – 1965

The end of World War II and the demobilisation of forces saw a dramatic reduction in base personnel. In post war Australia there was little motivation to reinvent and invest in the Air Force with the country at the time committed to the repatriation of service personnel and addressing economic issues (Eather 2007).

In March 1945 the No 85 (Heavy/Bomber) Wing Headquarters was formed at RAAF Base Amberley under the control of Headquarters Eastern Area. Its purpose was the administration, maintenance and operational control of several units, namely the No 31 Air Stores Park, No 85 Operational Base Unit, No 12 Heavy Bomber Squadron and No 99 Heavy Bomber Squadron.

The post war role for the base was consolidated in February 1948 when it was designated as the RAAF's major base for bomber aircraft in addition to maintaining its capability for aircraft maintenance. During this period the operational units were renamed:

- No 12 Heavy Bomber Squadron to No 1 Bomber Squadron;
- No 21 Heavy Bomber Squadron to No 2 Bomber Squadron;
- No 23 Heavy Bomber Squadron to No 6 Bomber Squadron; and
- No 82 Heavy Bomber Wing to No 82 Bomber Wing.

The No 3 AD remained with a commitment to the maintenance and overhaul of Lincoln aircraft and the Rolls Royce Merlin engines for Lincolns, Mustang and Mosquito aircraft (Amberley History n.d.:94).

The No 23 Squadron, stationed at the base intermittently between 1942 to 1954 was finally assigned to Amberley as a permanent home in September 1955 (Amberley History n.d.:45).

In 1950 the escalation of conflict in Korea led to the need for a capable air force and Amberley's role was bomber base with the assignment of Canberra and Lincoln bombers. International tensions escalated further in 1950 with the rise of Communist insurgency in Malaya.

In response, the Amberley based No 1 Squadron was deployed to Malaya to conduct bombing raids against communist insurgents. As the conflicts escalated the No 6 Squadron began conversion training for the 82 Bomber Wing (Eather 2007:118).

In December 1953 the last Lincoln mission was flown and the crews were transferred to the Canberra jet bombers (Eather 2007:121). The introduction of new aircraft led to a realignment of the main runway and taxiway and construction of a new control tower, the original control tower was located on the north eastern corner of brick facade of **Hangar 76**.



Plate 20 Canberra Bombers at Amberley 1954 (Source: Amberley History n.d. 125)



Plate 21 Lincoln bombers over Base in 1950's (Source: Amberley History n.d.:113)

In the early 1950s compulsory military training was introduced in Australia. This led to a substantial increase in force numbers and the consequent need for accommodation at bases such as Amberley (Woodhead 2008:45). The construction of new facilities led to the conversion of the **Airmen's Mess** (Asset 042) for use as a gymnasium (Woodhead 2008:45).



Plate 22 Airmen's Mess (Asset 042) (Source: Amberley History n.d. 141)

In the early 1950s RAAF Base Amberley played an important role during the testing of nuclear devices by the British Government in Australia. The programme commenced at Monte Bello (1952) and later at Maralinga (1956 to 1963). RAAF Base Amberley assisted in the testing program with Canberra and Lincoln bombers monitoring and tracking the fallout from the atomic clouds formed from those blasts. The aircraft flown by 6 Squadron were fitted with under wing canisters to collect dust samples. In 1954, a decontamination centre was constructed at the base to house the aircraft used in the program (Woodhead 2008:46). **Two starter cartridge Stores** (Asset 763 & 764) are associated with the testing program (GML 2014 :41). The testing program ceased in the mid 1960s.



Plate 23 Canberra bomber trailing a drone used to collect atomic dust samples (Source: Amberley History n.d. 101)

During the period 1946 to 1965 another significant project carried out at Amberley was the assembly of Bell B-47G Sioux helicopters in Hangar 76. In November 1960 the 3 AD began assembly of the first Sioux helicopter hangar and when constructed they were handed over to the 16 Army Light Aircraft Squadron for training of Army pilots.

Army aviation was established at RAAF Base Amberley in December 1960 when the No 16 Army Light Aircraft (ALA) Squadron was formed. The 16 ALA Squadron equipped with new Cessna 180A and the Bell 47 Sioux played a role in supporting the Army throughout Australia. In 1962 the first overseas deployment for the 16 ALA Sqn occurred when it was dispatched as part of a United Nations Temporary Executive Authority (UNTEA). As part of a humanitarian mission the 16 ALA was tasked with providing air support to combat a cholera outbreak in western New Guinea.

In July 1965 the increase of hostility in Vietnam led to the 161 Reconnaissance Flight (161 Recce Flt) being raised from 16 ALA Sqn at RAAF Base Amberley in support of 1st Australian Task Force (Army Aviation in Australia 1970 -2015).



Plate 24 Bell B-47G Sioux helicopters following assemblage in Hangar 76 (Source: Amberley History n.d. 134)

RAAF Base Amberley played an important role in the establishment of civil aviation in Australia. In 1947 Dakota (DC3) aircraft, serviced and test flown by the 3AD, were supplied by the Australian Government to establish what was to become Trans Australian Airways (TAA) (Amberley History n.d.87).

In May 1957 the Mayor of Brisbane presented the No 23 Squadron with a Charter that consolidated the links between the City and the Squadron which was then known as the No 23 (City of Brisbane) Fighter Squadron (Royal Australian Air Force. 1996:3).

The heritage structures constructed during this era include the two **Starter Cartridge Stores** (Asset 763 & 764) and the **former Air Safety Building** (Asset 467).

2.2.3 1966 – 1980

Major changes to RAAF Base Amberley were guided by a Master Plan developed between 1966 and 1969. As Australia's largest base for bomber aircraft it had hosted the B-24 Liberator, the Lincoln and later the Canberra bombers. The ageing bomber fleet, political factors and the advent of the Cold War as well as changing strategic circumstances in South East Asia in 1963 led to the decision to replace the existing bomber fleet with the American built F-111 (Lax 2010:2). While the first F-111 did not arrive at Amberley until June 1973 it was ultimately to remain in service at the base until December 2010 (Lax 2010:238).

In the mid 1960s RAAF Base Amberley was home to:

- No. 1 (Bomber) Operational Conversion Unit;
- No. 482 (Maintenance) Squadron;
- No. 3 Aircraft Depot;
- No. 23 (City of Brisbane) (Auxiliary) Squadron;
- No. 16 Army Light Aircraft Squadron; and
- No. 114 Mobile Control and Reporting Unit.

The base grew rapidly from the late 1960s as a result of upgrade works for the new F-111 and the training of Canberra bomber crews for service with No. 2 Squadron in Vietnam. The base population grew from 1295 in 1965 to 1875 in 1968 and 2747 by 1970 (Stephens 1995:393).

Works to the base during this period, particularly to house the new F-111, were the most expensive refurbishments in RAAF history and cost \$10.53 million. Fifty buildings were moved to make way for the new facilities (Amberley History n.d.:143). Changes to the base included twenty five new technical and administrative buildings, a maintenance hangar, an armament workshop, a new headquarters building, officers' mess and Women's Royal Australian Air Force (WRAAF) accommodation. Equipment including a flight simulator for training on the F-111 were also constructed and/or installed (Amberley History n.d.:143). Works also included the extension of the runway together with associated taxiways and hardstands.

An important outcome of the introduction of the F-111 was the decision to conduct all maintenance on the F-111 Pratt and Whitney TF-30 engines on the base. **Hanger 76**, the original base hangar, was extensively modified for the purpose [(Amberley History n.d.:145) and (Lax 2010)]. Staff from No 3AD was sent to the United States in 1967 for training on maintenance of the engines (Amberley History n.d.:145).

The introduction of the F-111 as the new strike aircraft for the 82 Bomber Wing based at Amberley was extremely important as the RAAF Official Historian Dr Alan Stephens noted:

The F-111 is the most significant aircraft in the RAAF's history. When it finally arrived in 1973 after ten years of controversy it gave Australia for the first time a genuine,

independent strategic strike capacity. More than any other weapon system, the F-111 has underwritten the notion of defence self reliance and the strategy of controlling the air-sea gap (Blue light: 144).

The F-111, Australia's primary defence deterrent, was to remain at the base until its retirement in 2010.



Plate 25 Official welcoming ceremony for F-111 – 1 June 1973 (Lax 2010:110)



Plate 26 F-111 (Source: Amberley Heritage n.d.:259)

From 1966 there was increased commitment to the Vietnam War and the RAAF No 2 Squadron and eight Canberra bombers were redeployed to the war zone in 1967. The squadron was integrated into the 35th Tactical Fighter Wing. Restrictions associated with the capability of the Canberra bomber led to it being used as Sky Spot, where the plane is guided to the location by radar and the bombs dropped on request (Amberley History n.d.:139). At the same time, the No. 6 Squadron acted as an operational conversion unit

transferring newly trained crews to South Vietnam (Amberley History n.d. p.140). The No. 9 Squadron was established at the base following its return from duty in Vietnam in 1971 (Amberley History n.d.:178).

The 1st Aviation Regiment was formed at Amberley during this period to support Army activities and provide training for Army pilots and ground staff. The **Lysaght Huts** (Assets 095 - 104) known as 'Silver City' were constructed in 1967 – 1968 to accommodate the Army Helicopter and Fixed Wing Training Area to support Vietnam War operations (CHL 2004:7). The regiment was also supplied with the Pilatus PC-6 Porter; a Swiss designed and built aircraft, with 19 Porters in service with Australian Army from 1968 to 1992.

Mick Corkery, Warrant Officer (Retired) 2nd Combat Engineers Regiment remembers the Pilatus first arriving having been flown by Swiss pilots from Europe. The aircraft were sporting civilian colours as Switzerland was a neutral country and it was necessary to fly over potential hot spots. The Pilatus was considered to be the first 'decent' aircraft the unit had and quite an amazing aircraft, largely for its ability to take off and land in only twice its own length (Mick Corkery. Oral History Recording, September 2015).

In 1973 the Army Aviation School was relocated away from the base and from then on the **Lysaght Huts** (Asset 95-104) have been used mainly for storage.



Plate 27 Winjeel with 'Silver City' in background (Courtesy: Mick Corkery. Warrant Officer (retired) 2nd Combat Regiment Engineers)



Plate 28 Pilatus PC-6 Porter with Silver City in the background (Amberley History n.d.:188)

Australia's involvement in the Vietnam War included US personnel stationed at the base with the old WWII operations centre used as a secret US communications base.

In May 1973 the No. 2 Squadron in recognition of its service was presented with the US Air Force Outstanding Unit Award for exceptionally meritorious service in Vietnam 1971 (Amberley History n.d.: 144).

After 1978 extensive new facilities constructed at Amberley included a new Group Headquarters and Communications Centre, accommodation for the RAAF Fire and Security School and the realignment and development of base roads (Woodhead 2008:48).

The **Parade Ground** (Asset 242) ceased to be used for its original purpose around this time. It had been at the heart of the early base with passing out parades held when trainees received their 'wings'. Mick Corkery (Oral Recording, September 2015) related that a Base Parade was held on the first Monday of each month. The Parade included Air Force, Army and Naval personnel.

The heritage buildings constructed during this era include the **Lysaght Huts (Assets 76 - 104)**.

2.2.4 1981 – Present day

The Amberley Primary School was moved during 1981, the school building and teachers residence were adaptively re-used as a training facility and they now form the School Heritage Precinct.

In 1990, the decision to retain the upgraded F-111 and purchase additional F-111 cemented Amberley's role as RAAF's major strike bomber base. Additional works included a new Base Medical Station while a number of aircraft maintenance buildings were refurbished (Woodhead 2008 :49).

The redeployment of a Chinook helicopter squadron in 1989 led to the relocation of a Transport Squadron together with Caribou aircraft to Amberley in 1991 (CHL 2004:7).

In December 1992 a Defence Force strategy aimed at increasing the number of personnel in northern Australia saw No. 38 Squadron re-located to Amberley from Richmond. No. 38 Squadron flew the Caribou aircraft in support of the Australian Army (Amberley History n.d.:228).

In 1995 ex-USAF Strategic Air Command F-111 aircraft were purchased to extend the life of the type in RAAF Service, primarily the responsibility of No 6 Squadron. In 1996, the reconnaissance fleet transferred to No 1 Squadron leaving No 6 Squadron dedicated to strike operations (Point Cook RAAF Museum. No 6 Squadron).

In 1997 an impetus to introduce commercialisation to the RAAF led to the introduction of contractors. In 1999 Tasman Aviation Enterprises (TAE) was the successful contractor for the Wings Workshop Business contract and provides electroplating, metal machining, welding, GSE maintenance and carpentry and joinery (Amberley History n.d.:245). TAE currently occupies **Hangar 76**.

In 2000 Boeing was awarded the contract for the Amberley Weapons Systems Business Unit, the Block Upgrade and the life-of-type support for the F-111 (Lax 2010:223). By 2000, Australia was the only country still flying the F-111 and consequently the maintenance of the aircraft for the RAAF had to be wholly self reliant. In 2010 the F-111 was retired and in 2013 the last F-111 left Amberley departed as freight destined for Hawaii (ABC News 5 Sept 2013).

In 2000 Stage 1 of the RAAF Base Amberley Development Plan saw a new Combat Support Unit Headquarters and No. 82 Wing Headquarters constructed. Stage 2 of the Plan, completed in 2008, saw construction of facilities for the No. 33 Squadron and 9FSB and a base infrastructure upgrade. Stage 3 commenced in 2008 and included refurbishment and upgrades of existing buildings including the construction of facilities for the C-17 Heavy Air Lift aircraft (Woodhead 2008 p.49).

From October 2008 No 6 Squadron became the sole operator of the F-111 with No 1 Squadron preparing for the introduction of the F/A-18F Super Hornet. When the F-111 fleet was retired in December 2010 No 6 Squadron was re-equipped with the F/A-18F.

On 1 July 2010 No 23 (City of Brisbane) Squadron was transferred to Combat Support Group and is now responsible for Fixed Base Management at Amberley. At that time there were approximately 70 RAAF Active Reserve and 100 Permanent Air Force personnel employed at the base (Point Cook RAAF Museum. No 23 Squadron).

In 2014 overseas deployments included an Air Traffic Control detachment from Amberley assisting in re-establishing Baghdad International Airport as an operational facility.



Plate 29 F-111 30th anniversary fly past (Source: Air Force. F-111 Special Tribute)



Plate 30 Former RAAF pilots Peter Growder (left) and Bob Sivyer in front of an F-111 jet at RAAF Base Amberley (Source: ABC News 5 Sept 2013).

Other notable events in Amberley's recent history include:

- Providing a climax for the closing ceremony of the Sydney Olympic Games 2000 with F-111 doing a 'dump-burn' display;
- Regular participation in the City of Brisbane 'River of Fire Festival' with two F/A-18F Super Hornets from No.6 Squadron, RAAF Base Amberley in the flypast;
- RAAF Base Amberley was a Space Shuttle Emergency Landing Site during the US Space Shuttle program (Global Security);
- In October 2008 RAAF Base Amberley was the location for the Defence Force Air Show, a major event it attracted 90,000 visitors over two days; and
- In November 2014 with the G20 Summit of world leaders in Brisbane, Air Force One carrying President Obama landed at RAAF Base Amberley.



Plate 31 F-111 display at Sydney Olympics 2000 (Source: F-111 Air Shows)

2.2.5 RAAF Base Amberley - Present day

The present day landscape of RAAF Base Amberley reflects the growth and development of the base to meet the dynamic needs of technology and the changing role of the RAAF since its inception at Amberley in 1939. The primary function of the base has changed from its role in WWII in the assembly and maintenance of aircraft for the war in the Pacific to its current primary role as a significant Defence establishment in South East Queensland providing a major capability role of the Base encompassing Air Force and Army.

In 2013 the Australian Government released the Defence White Paper: Air Combat Capability. The primary commitment from this was the purchase of the EA-18G Growler. This is an airborne electronic attack aircraft capable of providing force level electronic warfare support by disrupting, deceiving or denying a broad range of military electronic systems, including radars and communications (Department of Defence Press Release).

A Census was conducted in May 2015. RAAF Base Amberley currently has approximately 5774 military personnel and contractors on or deployed from the base. Those personnel comprise 51 different Groups, Wings, Squadrons, Units and Sub-Units with 25 Non-Defence Civilian Organisations also represented.

The base is now predominantly occupied by the Royal Australian Air Force with the FA-18 Super Hornet, KC30A Multi Role Tanker Transport and C-17 Globemaster aircraft. Army units include the 9th Force Support Battalion and the 6th Engineer Support Regiment. Joint Logistics Unit - South Queensland is stationed at the base and comprises a Tri-Service Australian Defence Force Unit. RAAF Base Amberley is home to the air forces strategic airlift capabilities and the headquarters for the air forces Combat support elements (pers. comm. Nigel Raddie).

Forward strategies will see the 12 EA-18G Growlers based at RAAF Base Amberley. The \$1.5 billion EA-18G Growler purchase includes the aircraft, required mission and support systems, training and ongoing support to effectively develop and operate a Growler capability. Defence plans to achieve Initial Operational Capability (IOC) in 2018 (RAAF Technology).

The commitment to new aircraft and technologies will result in significant changes to the base including the loss of the physical evidence of the early base that remain in the Hangar and World War II Heritage Precincts.

2.2.6 Conclusion

Since 1939, when RAAF Base Amberley was first planned, to the present day, there have been enormous changes in aircraft technology. This is evident in comparison with the first plane assembled on the base the P-40 Kittyhawk and 52 A-24 Dauntless and the new EA-18G Growlers.



Plate 32 Curtiss P-40 Kittyhawk (Source: ADF Gallery – Kittyhawk)



Plate 33 EA-18G Growler (Source: RAAF website)

During World War II the base changed dramatically (Amberley History n.d.:42). By the end of WWII, an additional 150 buildings had been constructed; those buildings included a large number of the structures included in Section 3.0. The runways had been redeveloped and the base had been the home for thousands of service personnel both from Australia and overseas, including most significantly the US.

In the post World War II era RAAF Base Amberley has played a significant role in conflicts in Korea, Malaya, Vietnam, Iraq and Afghanistan.

One of the most important stories of RAAF Base Amberley is the human story. In the early years it was the commitment of so many personnel to making a difference to the war effort. That commitment came at an enormous cost in terms of lives. Many of the aircrew who trained on the base or transited through it lost their lives during service abroad. In addition, the need to train large numbers of men to assemble maintain and fly, which were in today's terms rudimentary aircraft meant crashes and loss of life were inevitable. It is estimated at the Amberley location alone there were 23 crashes between March 1941 and September 1945 (Oz at War. Military Air Crashes in Queensland in WWII). In just two months in 1945 nine lives were lost when on 16 August 1945 a Liberator bomber crashed at the end of the runway with four lives lost and on the 14 September 1945 another Liberator crashed near the base with loss of a further five lives. The greatest loss of life occurred when on 19 February 1948 a Lincoln A73-11 returning from Laverton crashed at the base killing all 16 personnel on board. The crash was the first of an Australian made Lincoln and at the time was one of the worst in Australia's history.

A Wall of Remembrance at RAAF Base Amberley is in honour of personnel from the base that died while serving. The Wall was dedicated on 16 November 2000 by his Excellency Major General Peter Arnison AO Queensland Governor and blessed by the Amberley Chaplains (Amberley History n.d.:248).

While RAAF Base Amberley is large enough to operate as a settlement in its own right, it has always maintained close links with the City of Ipswich. From the earliest period when local contractors and workers were involved in clearing the land for the airfield Ipswich and base have maintained a close association. Development at the base has had a flow on effect for the community and the value to the local economy has

been substantial (The Ipswich Adviser 23.5.1963:1). Street parades are held to welcome contingents arriving home after posting abroad as part of Air Force Week. The City of Ipswich has also accorded the base the honour of awarding the keys of the city on a number of occasions.

The base has undergone a number of major development phases including the: re-alignment of the NE-SW runway and parallel taxiways in the early 1950s; changes in the layout of precincts; replacement of redundant buildings; and, the addition of new buildings. In 1964 the RAAF Master Plan saw the construction of: a new hangar, training centre, brick sleeping quarters, general engineering section, storage facilities, instrument, electroplating and engineer repair workshops, operations, communications and meteorological centre and officers mess in addition to around fifty temporary buildings were removed (CHL 2004:7).

The Hangar Precinct and the WWII Precinct (incorporating the Command and Administration diamond-shaped sub precinct) remain as one of the few surviving examples of pre World War II Air Force planning and construction under British influence (CHL 2004 p.2).

3.0 Significance Assessment & Heritage Inventory

3.1 Heritage Significance Assessment

This section describes the historical heritage values of RAAF Base Amberley as acknowledged in its inclusion in the Commonwealth Heritage List (CHL). It is noted that EPBC Act Approval (EPBC 2014/7123) Condition 3 requires the Heritage Interpretation Plan to “focus on the phases of historical development of the airbase”. Consequently the heritage significance assessment in this section will not consider Indigenous cultural heritage values although this is recognised in the current base HMP (Converge, 2012).

The base is included in the CHL for its historic, rarity and aesthetic heritage values. The current and former HMPs for the site also flag the existence of other heritage values including historical archaeological value, creative or technical value and community or social value. The following section draws from the CHL citation and the current HMP (Converge, 2012) to identify all heritage values embodied by the historical heritage resource at RAAF Base Amberley.

3.1.1 Summary Statement of Significance

The following is an extract from the CHL Summary Statement of Significance for Amberley RAAF Base Group. The items approved for removal are highlighted in **bold** type.

Amberley RAAF Base is important for its association with the development of an Australian Air Force under the Lyons government in 1938, in response to renewed hostilities in Europe prior to the onset of World War Two. The strategic location of the base in Australia's northern areas during World War Two, saw it serve as the major departure point for traffic to and from the United States and major Pacific ports, to theatres of war in the Pacific and as a major depot for the maintenance, salvage and assembly of new aircraft. This major role continued when the base played a significant role in the Korean War, atomic testing at Maralinga, in South Australia, and during Australia's involvement in the Vietnam War. Amberley RAAF Base is now the home of Australia's Strike Reconnaissance Group and the associated Command and Training Units. The base was involved in the establishment of the Trans-Australian Airline (TAA) through the transfer and maintenance of Dakota DC3s from the RAAF in the post-war period (Criterion A.4).

These historical processes and events are associated with individual structures, alignments and precincts from the pre-war, World War Two and post war periods.

The pre, and early, World War Two facilities are important in demonstrating the design and operation of pre-World War Two air force bases under British influences. Amberley RAAF Base is one of the few surviving examples of pre World War Two Air Force planning and construction under British influence. A key planning feature is the diamond-shaped command and administration area, which is linked to the Guardhouse (21) by the original access road, which separated the hangars and airstrip from the other areas of the base. The diamond-shaped precinct includes the **301 Air Base HQ (Asset 065)**, the **Base Medical Flight building (Assets 061 & 243)**, the **Air Base support building (Asset 246)** and the **parade ground (Asset 242)** and associated landscaping, including mature Norfolk Island Pines and Fig trees. **Hangar 76 (Asset 076)**, the largest hangar of the period, is closely linked to the Air Base HQ. Other structures important in illustrating the wartime functional layout of the base include the Emergency Power Generator building (20), **the Cinema (Asset 60)**, **Airmen's Mess (Asset 042)** and **Sergeants Mess (Asset 041)**. The Guardhouse (21), identifying the original base

entrance, illustrates the operational context of the base during World War Two and is linked both visually and by road with the command precinct (Criterion A.4 and Criterion B.2).

Individual structures within the pre and early World War Two facilities important for their ability to demonstrate the principal characteristics of their type include: the **301 Air Base HQ (Asset 65)**; the **Air Base support building (Asset 246)**; **Hangar 76 (Asset 076)**; and the Guardhouse (21). Both Buildings 246 and 65 illustrate the use of the prevailing vernacular timber style favoured for utilitarian and functional buildings such as Buildings 41, 42 and 60. Building 240 is an example of the P1 type hut, **Building 65 (Asset 065)** is an interpretation of a standard design with camera obscura for training Bombing crews. **Hangar 76 (Asset 076)**, the **Base Medical Flight Building (Assets 061 & 61, 243)** and the Guardhouse (21) characteristically display the use of fairface brick and the use of the Art Deco style employed for permanent structures in the lead up to the Second World War and the use of standard design solutions. Building 84, Flammable Liquids Store, in brick is representative of the smaller, permanent stores of the wartime period (Criteria D.2 and E.1).

The **Bellman hangars (Assets 340, 255-258, 260-263 and 277-280)** are important in demonstrating the adaptation of existing manufacturing techniques to air defence infrastructure in Australia, following the involvement of the United States in the Second World War in 1942 and the subsequent widespread use of prefabrication. As a group, the **13 hangers** are important in illustrating the primary function of the base for maintenance and repair during World War Two and the operational layout of the base. Bellman hangar 744, part of the Air Movements Building, is essentially intact and can be regarded as a particularly good example of its type (Criterion A.4 and Criterion D.2).

Building 467 (Asset 467), the Air Safety Building, used for drying and packing parachutes, is important in illustrating the design of utilitarian structures during the Korean War period and a rare example of its type. (Criteria A.4, B.2 and D.2)

The **former Army Helicopter and Fixed Wing training area (Assets 095-104)** (Lysaght Huts) known as '**Silver City**' is significant for its association with the Vietnam War era. Structures erected specifically for the Vietnam War are regarded as rare (Criterion A.4 and Criterion B.2).

Additional heritage values not acknowledged in the CHL citation in relation to the base's historical heritage resource are summarised below. This information is based on findings within the current HMP (Converge, 2012).

- Archaeological/research potential value: the historical archaeological resource has the potential to yield information on the development of early settlement patterns and localised agricultural, industrial and commercial activities;
- Creative or technical value: it is understood that the galvanised steel panelling of the **Lysaght huts** (Asset Nos 95-104) is of interest as a building material that was only manufactured under licence from the Behlen Manufacturing Company, Nebraska, USA for a short period of time in Australia in the 1960s. The rarity value of the material is based on the fact that it can be used as a structural member as well as a cladding sheet such that it can form completely frameless structures; and
- Community or social value: there is evidence to suggest that RAAF Base Amberley has special value to and association with a number of community groups including former servicemen, particularly those who served during WWII; current servicemen and the local community who used the base's recreational facilities, in particular, the former cinema; and, members of the local community and aviation enthusiasts who visit the base in large numbers during open days and air shows, particularly associated with the F-111 aircraft at Amberley.

3.2 Heritage Inventory of Heritage Buildings approved for removal

The heritage buildings on the base are included within three Heritage Precincts and one Sub-Precinct (Figure 2), those Precincts are the:

- School Precinct;
- Hangar Precinct;
- WWII Precinct; and
- the Command & Administration (Sub-Precinct).

The Precincts and Sub-Precinct impacted by the EPBC Act Approval (EPBC 2014/7123) are the Hangar Precinct; the WWII Precinct; and the Command & Administration (Sub-Precinct). All heritage buildings within the Hangar Precinct and the majority of buildings in the WWII Precinct will be removed under the approved action.

The information to populate **Table 4** has been drawn from Woodhead (2008) and Converge Heritage (2012).

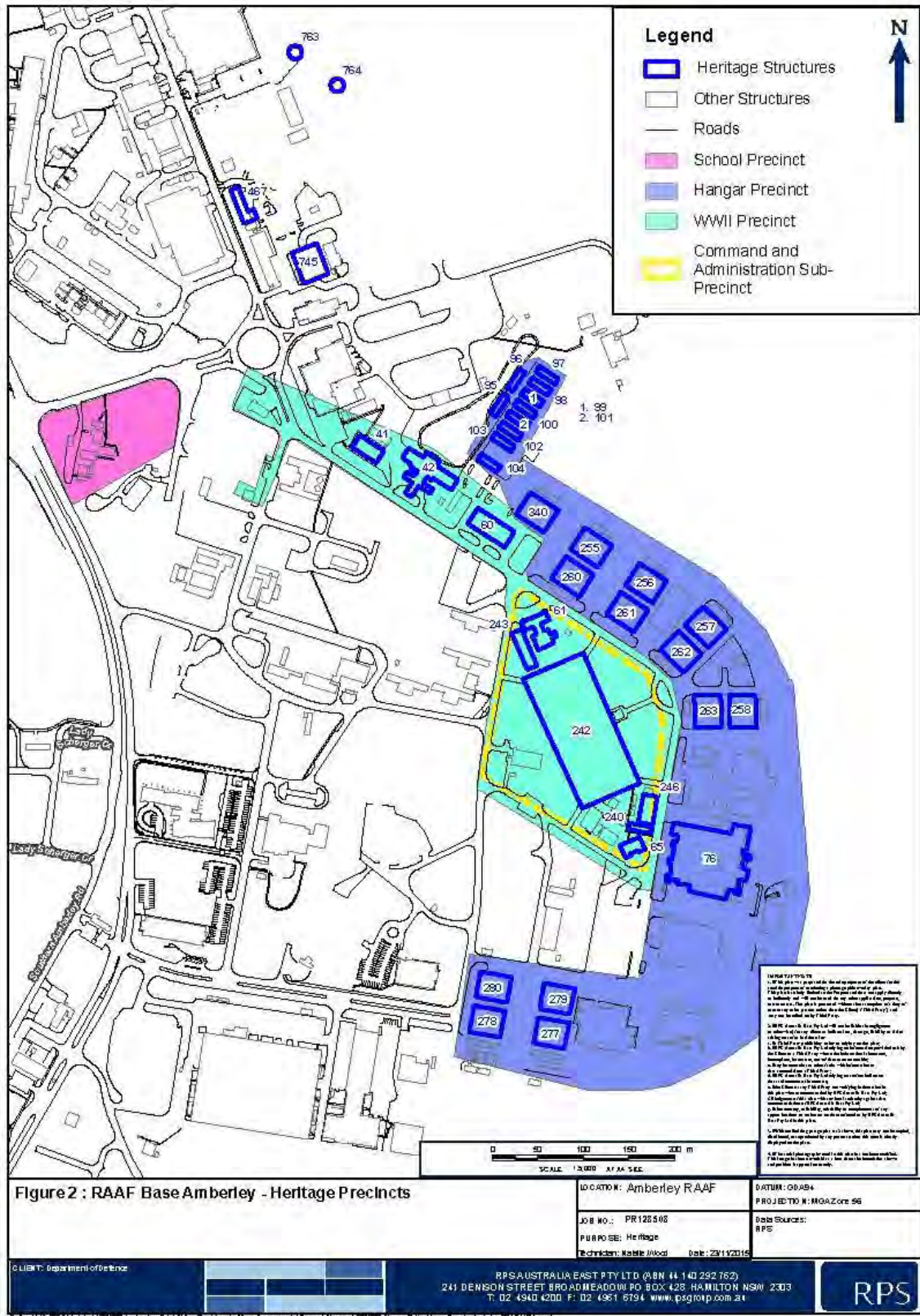
Table 4 Heritage Items for demolition or removal with heritage significance

Item Number	Item	Relevant information	Criterion	Heritage Value	
Precinct: Hangar					
076	Hangar	Constructed in 1939. Substantial well designed building reflecting the ethos of pre-WWII construction. Significant for association with: F-III activities at the base; Maintenance of the Canberra bombers used at Maralinga; Bombers deployed to Malaya.	A (Historic) E (Aesthetics)	High	
095 - 104	Lysaght hut (10 huts)	Erected in 1967-68 the huts' construction was a direct result of the development and activities of the Vietnam War.	A (Historic) B (Rarity)	High	
255 - 258 260 - 263 277 - 280 340	Bellman hangars (13 hangars)	The hangars, constructed between 1942 and 1943, were a direct result of the development and activities of WWII. The hangars were constructed in pairs along the eastern edge of the pre-WWII runway. The hangars were constructed to the 1936 design of N.S. Bellman with the intent of being erected or dismantled by unskilled labour with simple tools and to be easily transportable.	A (Historic) D (Representative) E (Aesthetics)	High	

Item Number	Item	Relevant information	Criterion	Heritage Value	
Precinct: WW II					
041	Former Sergeant Mess	Constructed in 1940 part of rare surviving group of WWII airmen's amenities. Part of WWII group of buildings. Demonstrates social hierarchy of base.	A (Historic) B (Rarity)	High	
042	Former Airmen's Mess				
060	Cinema	Constructed in 1940 part of rare surviving group of WWII airmen's amenities. Part of WWII group of buildings and built in the same style as #041 and #042.	A (Historic) B (Rarity)	High	
Precinct: WW II. Sub Precinct: Command and Administration diamond-shaped					
061	Former hospital	Pre WWII Art Deco design in brick. A key building of the base with its location and axial symmetry reflecting the hierarchal planning of the pre-WWII era. Linked to the USAF period of base.	A (Historic) B (Rarity) E (Aesthetics)	High	
062	Carport	Associated with Former Hospital			
065	Former School of Instruction	Constructed in 1939 reflects the original design of the site with the location and axial symmetry reflecting the hierarchal planning of the pre-WWII era. The building is intact and in use. A two storey section at the rear of the building was used for parachute drying and packing.	A (Historic) B (Rarity) E (Aesthetics)	High	
240	Former air base support	Built between 1940 and 1941 this a relatively intact example of a P1 type hut. In original location and in continuous use.	B (Rarity) D (Representative)	High	
242	Former Parade Ground	Part of the ceremonial and pre-WWII layout of the base. Context lost through use as parking area. Two plinths of the Saluting Station remain at the eastern end of the ground.	A (Historic) E (Aesthetics)	High	

Item Number	Item	Relevant information	Criterion	Heritage Value	
243	Former hospital ward	Prefabricated timber building.	A (Historic) D (Representative)	Mod	
246	Former Command Officers Support Building	Built 1940-1941 one of the earliest buildings constructed but has no distinguishing features.	A (Historic)	Mod (Woodhead) High (Converge)	
Precinct : Outside the Heritage Areas					
745	Bellman hangar	Outside the Hangar Precinct is an additional Bellman Hangar. The hangars, constructed between 1942 and 1943, were a direct result of the development and activities of WWII. The hangars were to the 1936 design of N.S. Bellman with the intent of being erected or dismantled by unskilled labour with simple tools and to be easily transportable.	A (Historic) D (Representative) E (Aesthetics)	High	
467	Former air safety building	Constructed 1954-55 as a modified P1 hut. Associated with the Korean War. Unique on the base for its design for the drying, packing and storage of parachutes and repair life rafts.	A (Historic) B (Rarity) D (Representative)	High	
763	Starter cartridge store	Constructed in 1950s. Associated with the British govt. atomic bomb testing program at Maralinga, SA.	A (Historic) B (Rarity)	Mod	
764	Starter cartridge store				

Figure 2 Heritage Precincts



3.3 Inventory of Heritage Buildings to remain

Heritage buildings that will remain following the completion of the works associated with the approved action (EPBC 2014/7123) including those within the School Precinct are listed in below (**Table 5**).

As part of the approved action, a number of buildings will be relocated to ensure that they remain on the base. They include one Bellman Hangar (Asset 260), a double P1 type hut (Asset 467) and a Starter Cartridge store/Explosives Locker (Asset 763).

Table 5 Heritage Items to be retained

Item No. & Name	Precinct	Relevant Information/CHL Extract	Criterion/Heritage Value
20. Power generator	World War II	Important as part of group of buildings illustrating the wartime functional layout of the base (CHL citation).	High significance (2012 HMP)
21. former Guardhouse	World War II	Identifying the original base entrance, the former Guardhouse is important as part of group of buildings illustrating the wartime functional layout of the base; represents an illustrative example of its type and, displays the use of fairfaced brick and the use of Art Deco styling employed for permanent structures in the lead up to WWII (CHL citation).	High significance (2012 HMP)
30 & 31 former Amberley School Building & Teacher's Residence	School	The buildings illustrate the history of settlement and the origins of the name Amberley once a focus for the rural community, on Old Toowoomba Road. Erected in 1903, the buildings are important in demonstrating the design and construction of government designed school buildings in the early twentieth century (CHL citation).	High significance (2012 HMP)
AP6-26 & 27 Riley Newsum houses	Outside	Important examples of the Commonwealth Government's response in the 1950s to post-war shortages of building materials and the decline of the housing construction industry during the war years 1939-1945 (CHL citation)	High significance (2012 HMP)
AP1-1 former Operations Building	Outside	The strategically located former semi subterranean operations building (FAC AP1-1) of 1942 illustrates the need to separate strategic command functions during wartime operations and was directly associated with American forces, as a communication base, during the Vietnam War (CHL citation).	High significance (2012 HMP)
718 & 728 former Armament Handling Equipment Workshop & Store	Outside	Buildings not specifically mentioned in CHL citation. Group of three timber workshops built in 1959.	Low significance (2012 HMP)
Nos. 139, 346, 555, 556, 584 & 898 P1 Type Huts	Various	Buildings not specifically mentioned in CHL citation. Single storey P1 type huts of typical construction and subject to varying levels of modification.	"Various" levels of significance (2012 HMP): Nos. 139, 346, 555, 556 & 584 – Low No. 898 – unknown
AP6-11 The Chapel of St George St Michael (P1 type structure)	Outside	Building not specifically mentioned in CHL citation. P1 type huts of standard construction and substantially intact apart from the roof (powder coated corrugated metal sheeting). Described as a 'U' shaped structure comprising three or more P1 type huts (pers. comm. Linda Oliver RAAF Base Amberley).	Moderate significance (2012 HMP)

Item No. & Name	Precinct	Relevant Information/CHL Extract	Criterion/Heritage Value
RABC1 Bowls Club (P1 type structure)	Outside	Building not specifically mentioned in CHL citation. P1 type hut with intact form and windows and altered walls (entirely weatherboarded) and roof (powder coated corrugated metal sheeting).	Low significance (2012 HMP)

Figure 3 Heritage items to remain



4.0 Stakeholders and Audience

The aim of the interpretation exercise is to effectively engage with an identified audience and to inform and develop their interest in the history of the base. The audience may include groups with an existing interest as well as groups who may develop an interest once exposed to RAAF Base Amberley's history and stories. The primary themes and key stories for the interpretation material should therefore reflect both the interest of the primary audience and acknowledge constraints. The anticipated primary and associated audience groups are outlined below.

4.1.1 Primary stakeholders and audience

The primary stakeholders are the Department of Defence encompassing:

- Past, present and future members of the Royal Australian Air Force based at RAAF Base, Amberley;
- Amberley Aviation Heritage Centre;
- Visitors from other arms of service including army and navy; and
- RAAF museum curators and staff.

There is an obvious and direct association between the above stakeholders and RAAF Base Amberley. Consultation carried out as part of the archival recording exercise and in particular, the oral history recording component, confirmed that retired servicemen have a strong interest in the base's history and associated built fabric.

4.1.2 Associated Stakeholders and audience

Other associated stakeholders are members of the general public and include:

- Residents of Ipswich and the surrounding area including civilian base staff and those with other connections to the base;
- Specialist State and local government staff such as the Department of Environment and Heritage Protection (DEHP) and Ipswich City Council planning and heritage staff;
- Amberley Consultative Working Group;
- People with a family connection to the base including relatives of USAAF stationed at the base during WWII;
- Special interest groups including Ipswich Historical Society and RAAF and aviation enthusiasts; and
- Professional stakeholders may include heritage professionals and specialists in heritage interpretation.

The stakeholders/audience groups noted above are largely made up of individuals who are not located at RAAF Base Amberley and as such, there are issues around security and access that need to be addressed if any site-based interpretive actions are to be implemented.

Priority 5 "Improved access to Defence Heritage places" in The Defence Heritage Strategy (Department of Defence, undated) seeks to enable connections with the wider community through open days and public access to a museum or visitor centre at a Defence base. Important considerations for this program include security, public health and safety, and insurance issues.

The large numbers who attend the open days and airshows that are held at Amberley illustrate the local and specialist interest in the base, its operation and history.

4.1.3 General conclusions on potential audience

- Knowledgeable: the stakeholder and audience groups identified are largely made up of those with an existing appreciation of the base, its fabric and history. The identified 'specialist' audience will have technical knowledge of various aspects of the site's history, operation and fabric;
- Personal and family connections: RAAF Base Amberley currently supports a population of approximately 5,200 permanent personnel and 860 non-permanent personnel (GML, August 2014) and has close connections with the City of Ipswich. Furthermore, its rich history during WWII and beyond means that there are many retired servicemen and women and their families who have a strong connection with the base;
- Access: The majority of those in the associated audience groups are members of the general public who do not have ready access to the base and as such, any interpretive actions on the base will need to consider security, public health and safety and insurance issues; and
- Strong public interest: The high level of attendance at open days and air shows held at RAAF Base Amberley indicate the strong public interest in the base's history, operation and fabric.

5.0 Historic Themes and Key Stories

5.1 Themes

In developing the key themes for RAAF Base Amberley, the intention is to relate to the audience the physical characteristics of the place as well as its history and heritage values. The overarching theme is the role of RAAF Base Amberley as part of the Australian defence forces.

The significance and history of a heritage place is often multi-faceted and complex and it is generally impractical to communicate every aspect to avoid overwhelming the audience. In preparing to interpret a place it is important to present the past in an informative, interesting and accessible manner that is appropriate to the potential audience(s). The themes presented below have been derived from the historical overview presented in Section 2.0 and from previous heritage assessments.

In 2001 a national framework of historic themes was developed by the Australian Heritage Commission. The Australian Historic Themes Framework aims to:

“assist in structuring research and to emphasise the historical values of a place to reverse the prevalence of fabric-based assessment by identifying historical processes that might be used in assessing and interpreting heritage significance.”

The Australian Historic Themes Framework at the National level is most relevant to the Project Area (**Table 6**). The Australian Theme of Governing Australia is complemented by the Sub-theme: Defending Australia. While other themes such as 4) *Building, Settlements towns and Cities* and 8) *Developing Australia's Cultural Life* may be broadly applicable, the sole intention of the establishment and maintenance of RAAF Base Amberley is the defence of Australia.

It is noted that the Queensland thematic framework (as contained within *Assessing cultural heritage significance*, DEHP, August 2013) includes the theme of 'Maintaining Order' with a sub-theme of 'defending the country' which is in line with the national historic themes framework.

Table 6 National Historic Theme

Australian Theme	Sub-theme	Local application	Physical Evidence
Theme 7 Governing	Defending Australia	RAAF Base Amberley	Building, structures, moveable items included in RAAF Base Amberley

5.2 Key Stories

Storytelling is an important dimension of interpretation and the key stories for RAAF Base Amberley have been developed through an analysis of Theme 7 (**Table 6**). With the loss of the physical evidence embodied in the buildings, other crucial components in relating the story include physical and documentary evidence such as historic photographs, maps, plans, texts, oral histories and movable heritage. Key stories are identified through an analytical approach to the history of the Base (**Section 2.0**).

The key themes for RAAF Base Amberley are the defence of Australia and the provision of support for its neighbours and allies in theatres of war. Subsequent to this are factors which have impacted on RAAF Base Amberley in its present day role as Australia's largest air force base.

In focussing on these stories the intention is to prompt the audience to consider what has happened in the past, RAAF's role in it, the importance of that story to RAAF Base Amberley and how that story has shaped the base today. The intention is to provide a method of telling each story in a way that will benefit and enlighten future generations and show respect to past generations. In the following section each theme is

identified and a single highlighted sentence is provided followed by a few paragraphs which describe the theme.

5.2.1 Story I: The defence of Australia in World War II

RAAF Base Amberley played a significant role in the defence of Australia during WWII, initially through the training of aircrew for service and later in supporting the air transport chain required for the war effort in the Pacific.

The establishment of the No 3 SFTS resulted in Amberley playing a crucial role in training and supplying aircrew for service in the RAAF in Australia and for the RAF in the UK. The number of trained aircrew needed was enormous in relation to the population base of Australia (10,000 per annum).

The outbreak of hostilities in the Pacific in World War II saw RAAF Base Amberley play a key role in the defence of Australia through the assembly and maintenance of aircraft for service in the western Pacific.

The base was instrumental in the establishment and operation of the United States Trans Pacific Ferry Service until 1943. The freight service was established by the US to ensure rapid and consistent movement of not only aircraft and supplies but also troops to the war front. The numbers were large with an estimated 600 troops arriving at the base, given a medical and then transited through every 24 hours for assignment to the front line.



Plate 34 Presentation of wings at graduation ceremony (Amberley History n.d.:24)



Plate 35 Amberley 7 November 1942 (Amberley History n.d.:55)

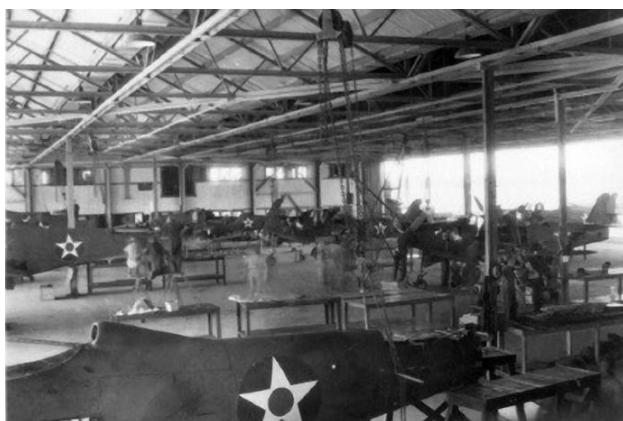


Plate 36 Assembly line of P-39's (Amberley History n.d.:37)



Plate 37 Amberley A-A machine gun post – 1942 (Amberley History n.d.:49)

5.2.2 Story 2: Collaboration with other Air Forces – USAAF (later USAF) and RAF

RAAF Base Amberley has played a significant role in fostering collaboration with Australia's allies in times of peace and war.

Following the bombing of Pearl Harbour in World War II, US personnel injured in the raid arrived at RAAF Base Amberley on a Flying Fortress for treatment. The war time role of Amberley rapidly escalated with the commencement of war in the Pacific through collaboration with the United States. The USAAF needed a base for the assembly of aircraft transported by ship in 'kit form' to Australia for use in the western Pacific. Accompanying the aircraft were American servicemen skilled in their assembly, RAAF Base Amberley personnel worked in conjunction with the US forces for the remainder of the war.

Cooperation with the US continued during the Vietnam War and US personnel established a secret US communications base at RAAF Base Amberley. In May 1973, the No. 2 Squadron was presented with the US Air Force Outstanding Unit Award for exceptionally meritorious service in Vietnam.

Links with the RAF extend from the earliest period of RAAF Base Amberley's development with the training of flight crews for redeployment to Britain during World War II. The British Nuclear Test Program carried out between 1952 and 1963 at Monte Bello and Maralinga was supported by the RAAF Base Amberley. Ten Lincoln bombers and two Dakota, whose home base was Amberley, were used in the sampling and monitoring of the resulting cloud (Department of Veteran Affairs).



Plate 38 A letter of appreciation to RAAF Base Amberley from President Bush 1992 (Amberley n.d.:40)



Plate 39 Bell P-39 Airacobras of the 39th Pursuit Squadron, Michigan 1941 waiting transfer to. Amberley (Amberley n.d.:44)



Plate 40 RAF Vulcan – Amberley 1973 (Amberley History n.d.:183)



Plate 41 RAAF Base Amberley aircraft participated in D Day Commemoration Omaha Beach, 1994 (Amberley History n.d.:232)

5.2.3 Story 3: Commitment and loss

The activities and structures at Amberley reflect the commitment of the RAAF to the defence of Australia and the inevitable loss of life and injury that occurs with that commitment. Personnel from RAAF Base Amberley have made sacrifices in wartime and in peace, with pilots, crew and passengers killed and injured both overseas and in Australia. Past generations of personnel of RAAF Base Amberley many of whom gave their lives would have spent time on the base working and socialising. Each of the buildings proposed for removal provide tangible and intangible links to those personnel and form part of the story of commitment and loss.

The importance of Amberley to serving personnel is not just restricted to base personnel. The commitment made by others serving in the Australian armed forces was demonstrated in 1945 at the base. On 17 September 1945 the first prisoners of war liberated from the Japanese camps were flown to Amberley. On their first touch-down on Australian soil they were housed in the Station Sick Quarters where they were cared for by volunteer Red Cross workers.

Service at the base for some personnel has resulted in a personal toll in terms of physical health. Those who worked at the base during the nuclear tests at Maralinga and Monte Bello have reported illnesses related to radiation exposure.

Memorial groves, stones and plaques have been established at the base and in its vicinity in the past to honour the memory of those who served and gave their lives at RAAF Base Amberley.



Plate 42 Wreckage of RAAF B-24J Liberator crashed killing all five crew Sept. 1945 (Amberley History n.d.:81)



Plate 43 Bill Belford (trained at RAAF Base Amberley, posted to RAF) in Singapore prior to Japanese invasion (Amberley History n.d.:19)

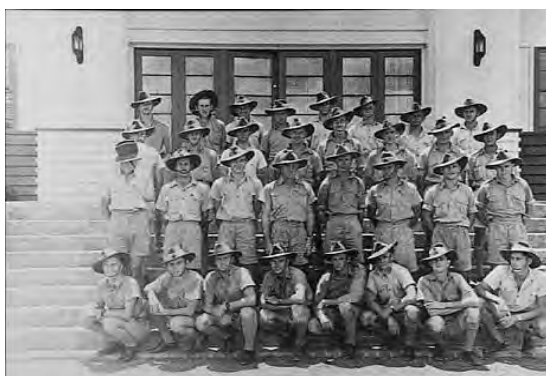


Plate 44 No 3 SFTS on graduation, several of the men were later killed in action (Amberley History n.d.:13)



Plate 45 No 12 SQN Chinook crashed resulting in death of an RAF exchange officer Feb. 1985 (Amberley History n.d.:212)

5.2.4 Story 4: RAAF Base Amberley Post World War II

RAAF Base Amberley has played a significant role in world conflicts since World War II most significantly through its role as the RAAF major bomber unit. With the cessation of hostilities following WWII, RAAF Base Amberley was tasked with the role of the major bomber unit for the RAAF when the No 85 (Heavy/Bomber) Wing Headquarters was formed.

Squadrons from the base have participated in conflicts in Korea, Malaya, Vietnam, Afghanistan and Iraq. In 1948 the No. 23 Squadron was renumbered the No 6 Squadron and assigned to Amberley and together with the 1 and 2 Squadrons formed the 82 Bomber Wing (Eather 2007:116). The Korean War in 1950, followed shortly by the Malaya conflict led to a renewed impetus to develop Amberley as Australia's RAAF bomber base. In 1965, with the increase of hostility in Vietnam, the 161 Reconnaissance Flight was raised from 16 ALA Sqn. In addition, Canberra bomber crews were trained for service with No. 2 Squadron in Vietnam, with No. 6 Squadron acted as an operational conversion unit transferring newly trained crews to South Vietnam.

The 1st Aviation Regiment was formed at Amberley during this period to support Army activities and to train Army pilots and ground staff. The Lysaght Huts, constructed in 1967 – 1968 and collectively known as 'Silver City', accommodated the Army Helicopter and Fixed Wing Training Area for Vietnam War operations.

In 1990 No 1 Squadron and F-111 were deployed to East Timor for a short period in support of peacekeeping forces (Lax 2010:218). In 2014 overseas deployments included an Air Traffic Control detachment from Amberley who helped re-establish Baghdad International Airport as an operational facility and in the conflict present day in Syria and Iraq.



Plate 46 A course on booby traps used by the Viet Cong (Amberley n.d.:133)



Plate 47 Capt. James Campbell served in Vietnam, awarded the Distinguished Flying Cross (Ford, J. Australian War Memorial)



Plate 48 Queensland Times. 1 October 2004:2



Plate 49 RAAF Base Amberley C-17 Globemaster supporting the effort to combat Daesh in Syria and Iraq (Australian Aviation 4.11.2015)

5.2.5 Story 5: Aircraft synonymous with RAAF Base Amberley

Fundamental to an air force base are the aircraft. RAAF Base Amberley's role has not only been the housing of aircraft but also their maintenance and in its early years the base played a significant role in assemblage and salvage. The ongoing development of skills set has resulted in Amberley achieving the capacity to maintain and develop technologies required for operating modern day jet aircraft.

The base has seen significant changes in the capacity and technology of aircraft since the first RAAF aircraft, a Moth Minor, landed in June 1940. The base has played a greater role than just housing the aircraft from the declaration of war in the Pacific with the influx of Kittyhawk, Aerocobras and Dauntless there developed a highly skilled team with the capacity to assemble, maintain, rehabilitate and salvage aircraft. The evidence of the close link between personnel and aircraft is reflected in the dedicated volunteers of the Amberley Aviation Heritage Centre.

While there have been many aircraft over the years the aircraft that has become synonymous with the base is the F-111. The arrival of the F-111 is recorded as being a turning point in modern RAAF history, as the RAAF Official Historian Dr Alan Stephens noted:

The F-111 is the most significant aircraft in the RAAF's history. When it finally arrived in 1973 after ten years of controversy it gave Australia for the first time a genuine, independent strategic strike capacity. More than any other weapon system, the F-111 has underwritten the notion of defence self reliance and the strategy of controlling the air-sea gap (Eather 2007:144).

A new era for RAAF Base Amberley is emerging with the assignment of the new 12 EA-18G Growlers to the base that includes mission and support systems, training, and ongoing support to effectively develop and operate a Growler capability with Initial Operational Capability in 2018.



Plate 50 Kittyhawk for re-assembly (Amberley History n.d.:31)



Plate 51 6 SQN Lincolns over RAAF Base Amberley (6 SQN History:23)



Plate 52 F-111 (Amberley History n.d.:259)



Plate 53 Engine Rectifications (Source: 6 SQN History:60)

6.0 Constraints and considerations

6.1 Introduction

Before decisions on future interpretation can be made, it is important to understand the physical and practical constraints that may impact on implementation. The following section highlights the constraints and considerations that come into play when considering interpretive options at RAAF Base Amberley. They will in turn inform the interpretation strategies and actions outlined in Sections 7.0 and 8.0 of this report.

6.2 Constraints and considerations

Condition 3 of the EPBC Act Approval (EPBC 2014/7123) for the removal of 38 heritage buildings at RAAF Base Amberley requires the preparation of a Heritage Interpretation Plan and specified actions leading from this including a public display or exhibition and the publication of a book.

In order to comply with Condition 3, there are several constraints and considerations that place limitations on the interpretative proposals that are achievable:

- RAAF Base Amberley is an operational defence facility. The proposed measures must not interfere with this primary function;
- The core business of RAAF Base Amberley is defence. Any proposed measures must be cost effective and not unduly impact on defence activities;
- The identified target audience is diverse. It is also divided between those serving on the Base who have access and members of the interested public who do not have ready access. The interested public includes those interested in past family members previously stationed at the Base and residents of Ipswich;
- The ability to interpret and tell the story or stories is bound by the resources available. This includes historic photographs; documents; and, personal stories that will vary and provide different aspects of the RAAF Base Amberley's history. A full archival record has also been prepared of the 38 heritage buildings approved for removal which will provide a means of interpretation in the absence of built fabric;
- Any external displays will need to be robust given the placement in outdoor unsupervised areas;
- External displays should be physically and visually unobtrusive to ensure they are discreet and do not impede the functionality of spaces or buildings;
- It is anticipated that the required public display or exhibition will be one that travels and is not permanently based at Amberley. As such, its design will have to allow for longevity, robustness as well as ease of construction and packing, and appropriate insurances;
- A coherent design approach needs to be taken to ensure that the interpretive media and any future media presents as part of a collective, well-designed whole;
- The EPBC Act Approval (EPBC 2014/7123) entails the removal of the Bellman hangars which currently house the RAAF Amberley Aviation Heritage Centre; and
- Displays outside of the RAAF Base Amberley, could be targeted to the general public and be held at cities such as Ipswich or Brisbane or be directed toward those with a special interest and be held at venues such as the RAAF Museum at Point Cook.

7.0 Interpretation Strategies

7.1 Interpretive Aims and Objectives

There are several aims and objectives that the interpretive actions seek to fulfil and they are listed below.

- (1) The primary aim of this plan is to comply with the requirements set out in Condition 3 of the EPBC Act Approval (EPBC 2014/7123), namely that the Heritage Interpretation Plan:
 - *Be prepared in consultation with the Department;*
 - *Identify opportunities to utilise media produced by the archival recording process outlined as part of Condition 2;*
 - *Identify opportunities to utilise material and moveable items salvaged from the project area where this is practical;*
 - *Include a timeline for the implementation of the interpretation works;*
 - *Include necessary content and specifications for a public display or exhibition of material that communicate the history of RAAF Base Amberley; and*
 - *Include the necessary detail and specifications to enable publication of a book that captures the heritage values of RAAF Base Amberley.*
- (2) In general, the key aim of interpretive measures is to make connections with the history and heritage values of a place, thereby allowing the audience to have a better understanding of the heritage significance embodied there.
- (3) The presentation of information should be in a format that reflects the nature of the RAAF and RAAF Base Amberley.
- (4) Measures presented should be practical and achievable based on the fact that RAAF Base Amberley is an operational Defence facility.
- (5) Measures should be tailored to the identified audience and stakeholder groups and take account of their level of knowledge and interest as well as practical issues such as access.
- (6) Measures should be based on a long-term perspective with regard to the longevity of the interpretation material and the proposed development at the Base.

7.2 Interpretive Resources

In order to interpret the heritage significance of RAAF Base Amberley, a key step is to identify resource materials; actual and documented that can be employed to inform and produce the interpretive media.

Available interpretive resources for RAAF Base Amberley fall into three main categories: retained and relocated heritage buildings; Secondary sources on the history and heritage values of the base; and, the results of the archival recording exercise. The resources are described more fully below.

7.2.1 Retained and relocated heritage buildings

As listed in the heritage inventory in Section 3.3, several heritage buildings will remain following the implementation of the EPBC Act Approval including relocated buildings/structures. Indeed, it has been determined that the remaining heritage resource at RAAF Base Amberley is of sufficient merit for the site to remain on the Commonwealth Heritage List.

The remaining heritage buildings represent an important interpretive resource, particularly those which help to illustrate the historic themes and key stories identified for interpretation and described in Section 5.0. For instance, there is a requirement to relocate at least one Starter Cartridge store/Explosives Locker and these structures illustrate post-WWII stories related to the Vietnam War and the Maralinga testing program.

7.2.2 Secondary sources on the base's history and heritage values

There is a wealth of existing information on the history and heritage values of RAAF Base Amberley including:

- Historic maps, plans and photographs;
- Historical resources in library and archival collections including photographic collections, publications, newspaper articles and websites;
- Previous historical research and heritage reports; and
- Research collections compiled by relevant museums.

An extensive literature review has been carried out to inform this report (refer to Section 11.0 References) and in particular, identify the most relevant and appropriate themes and stories to be conveyed through interpretation.

7.2.3 Archival recording results

A comprehensive archival recording exercise, as required by the EPBC Act Approval (EPBC 2014/7123), was carried out in September and October 2015. The exercise included:

- A photographic record of the 38 heritage buildings to be removed including images of interiors, exteriors, building details and features as well as building groups in context. Over 1500 photographs were taken and they provide a thorough visual record of the heritage buildings and precincts covered;
- An up-to-date aerial image of the entire base using an Unmanned Aerial Vehicle (UAV);
- A complete 3D terrestrial scan of all 38 buildings approved for removal including interiors, exteriors, key spaces and groups in context. The information obtained can be used to generate virtual models of the place;
- Accurate scale drawings of the 38 buildings including floor plans, elevation plans and roof plans; and
- Oral history recording comprising the video recording of oral accounts by five individuals comprising retired servicemen and a heritage centre volunteer.

The archival recording exercise has provided a wealth of information, both in terms of visual and documentary evidence, to inform and contribute to interpretive media.

7.3 Interpretive Media and Locations

This section outlines the types of interpretive actions or media that can be used to convey the themes and stories of RAAF Base Amberley. A key feature should be a theme or story and while every item should be capable of being understood and appreciated in isolation it is important that on the whole there is an identifiable thread that links the story.

The interpretation will adapt to differing physical locations: internal and external. Design consideration must be given to the robustness, installation, longevity and maintenance of any proposed measures. Locations need to be considered in terms of their effectiveness of communication, accuracy, relationships, visibility and constraints of the location and space.

7.3.1 Locations

The location for interpretative media, principally the required public display or exhibition, is dependent on a number of factors with the primary ones being the intended scope of the exhibition, whether it will be permanent or temporary/travelling and the identified audience (**Table 7**). A number of suggested media locations are listed below and these will be confirmed once this plan has been formally approved.

Table 7 Suggested Media Locations based on identified audience

Intended Audience	Location
RAAF Base Amberley	Amberley Aviation Heritage Centre (until the Bellman Hangars in which it is located are removed) Base Squadron Headquarters – foyers or similar suitable locations Conference Room/s (e.g. Spurgeon Room)
Service personnel & special interest groups	Point Cook Aviation Museum Australian Flying Museum Oakey Fleet Air Arm Museum, Nowra
General Audience	Ipswich - Ipswich Art Gallery; RSL Museum; Railway Workshop Museum Brisbane for example - Queensland Museum & Science Centre Australian War Museum Aviation Museums - Queensland Air Museum; Temora Aviation Museum; Historical Aircraft Restoration Society, Wollongong;

8.0 Content Development

In compliance with Condition 3 of the EPBC Act Approval (EPBC 2014/7123), interpretive actions will primarily consist of enabling the development of a public display/exhibition and the publication of a book about the history and heritage significance of RAAF Base Amberley. The required public display/exhibition and book are discussed in Sections 8.2 and 8.3 respectively.

Other related requirements in Condition 3 include identifying opportunities to utilise media produced by the archival recording process and to utilise material or moveable items salvaged from the project area where this is practical. These requirements are discussed in Sections 8.1 and 8.2 below.

8.1 Opportunity to utilise salvaged material and moveable items and media produced by the archival recording process

8.1.1 Opportunity to reuse salvaged material

The majority of the 38 buildings approved for removal are functional in form and design having been constructed in many cases as a matter of urgency to meet a wartime need, whether WWII in the case of the Bellman hangars or the Vietnam War in the case of the Lysaght huts. Furthermore, the physical interest of these structures lies in their overall form and construction and not component parts.

The opportunity to use material and moveable items salvaged from the project area is considered to be limited because of the utilitarian nature of many of buildings and because the majority have been mothballed and stripped of fittings and features.

A smaller proportion of buildings approved for removal were 'built to last' and are of architectural merit. They include the former Sergeant's Mess (Asset 041) and Airmen's Mess (Asset 042), the Astra Cinema (Asset 060), the former hospital (Asset 061) and ward (Asset 243), the former Base Headquarters (Asset 065) and Hangar 76 (Asset 076). The former Base Headquarters (Asset 065) and Hangar 76 (Asset 076) are the only buildings that remain in use and have not been stripped of their fittings and features and mothballed. An exception is the Astra Cinema where projection equipment (not original), a Wormald steel fire door and the original freestanding painted metal sign remain.

Under Condition 4 (EPBC Act Approval) there is a requirement to relocate one Bellman Hangar, two P1 type huts/ a double P1 type hut and a Starter Cartridge store/Explosives Locker. For example, the Bellman Hangar to be relocated within the base (Asset no. 260) will be refurbished for use by Air Force Cadets. No heritage values exist at the relocation site. In addition it is understood that Defence are offering the hangars in part or as a whole to interested parties such as aviation heritage organisations. The relocated heritage assets will enable the ongoing appreciation of RAAF Base Amberley's heritage significance; particularly as relocated structures will have fixed signage which will explain their provenance (refer to Section 8.4).

The potential for reusing salvaged building fabric and fittings in interpretive media is considered to be limited given the fragmentary nature of the resource and the primary interpretation actions proposed (a public display (assumed travelling), a book and storyboards throughout the Base). Nonetheless, heritage professionals will be engaged to inspect the seven buildings 'built to last' and identified above (asset nos. 041, 042, 060, 061, 243, 065 and 076) prior to their demolition to determine parts that are of sufficient value and are practical to salvage. Any fittings/components salvaged from these buildings will be offered to appropriate entities including the Amberley Aviation Heritage Centre. The assessment methodology to be employed in identifying opportunities for the salvage of material or moveable items including the practicality of such an exercise is outlined below.

8.1.1.1 Assessment Methodology in relation to salvage material/moveable items

As noted above, heritage professionals will be engaged by Defence to determine the heritage value and practicality of salvaging material or moveable items from a number of heritage buildings prior to their demolition. The buildings are the former Sergeant's Mess (Asset 041) and Airmen's Mess (Asset 042), the Astra Cinema (Asset 060), the former hospital (Asset 061) and ward (Asset 243), the former Base Headquarters (Asset 065) and Hangar 76 (Asset 076).

Best practice guidance is not available for identifying fabric or moveable items for salvage purposes so a project specific methodology has been developed for this HIP. Generally speaking, decision-making about salvaging items should be based on an assessment of the heritage value of the fabric/item or building component with a focus on how the fabric communicates the heritage values of the building/place. Consideration also needs to be given to whether the item/component can be removed and remain intact.

The following methodology will be employed to determine which fabric/moveable items will be salvaged from the seven heritage buildings listed above:

- Identify items/components with potential heritage value. This would entail identifying the building elements and features forming part of each building that are legible in isolation such as doors, joinery fittings, equipment and signage;
- Assess the heritage value/significance of the items/components. This would entail considering the heritage values embodied by the building in question and in turn, whether these values are embodied by the item/component. For instance, does the component demonstrate the aesthetic/architectural value of the building?;
- Assign a ranking to the items/components – nominally either high, moderate or limited heritage significance. This should be tabulated with summary explanations. In determining the heritage ranking, consideration will be given to the rarity and representativeness of the item in question as well as level of intactness/integrity;
- Consider practical issues surrounding the salvage of items/components ranked as high heritage. Consideration would be given to:
 - the size, weight and condition of the item/component;
 - whether hazardous materials are present;
 - whether the item/component can be removed intact and undamaged (this may entail obtaining specialist structural advice);
 - the desirability of the item/component for display purposes;
 - how the items/components would enable the heritage values of the heritage building/place to be interpreted;
 - identify recipients for the salvaged items/components and offer the items/components to them.

The heritage consultant will provide Defence with documentation that details the application of the methodology outlined above.

8.1.2 Opportunity to use media from archival recording exercise

All the media obtained from and documents prepared for the archival recording exercise can be used for interpretive purposes including:

- the main archival report which provides a summary history of the development of the Base, the CHL statement of significance, technical descriptions of heritage buildings, an inventory of archival documents and references;
- the archival photography report and photography comprising internal and external shots of the 38 heritage buildings approved for removal;
- measured drawings of the 38 heritage buildings including floor, elevation and roof plans;
- 3D scanning information in the form of model extracts which in turn can be used to generate virtual models;
- An aerial photographic record using a UAV to capture a comprehensive and accurate aerial image of the Base; and,
- the oral history recordings of five retired servicemen (video recording and transcripts).

All interpretive material, including signage/storyboards, the exhibition (refer to Section 8.2) and the book (refer to Section 8.3), will utilise the media and documentation obtained from the archival recording exercise. This is described further in the following sections. Furthermore, the archival material and this report will be hosted on part of Defence's public website.

8.2 Public display or exhibition on the history of RAAF Base Amberley

Condition 3e of the EPBC Act Approval (EPBC 2014/7123) requires this interpretation plan to "include the necessary content and specifications for a public display or exhibition of material that communicates the history of RAAF Base Amberley".

On the basis that the Bellman Hangars which currently house the Amberley Aviation Heritage Centre is approved for removal and may not be able to provide a location in the longer term, it is anticipated that the public display/exhibition will be a temporary or travelling one. Defence has made no formal decisions about relocating the aviation heritage centre. As new developments progress through the southern flight line area, Defence will begin to develop certainty around viable planning options for the heritage centre. This may take several years. When it occurs, it will involve a process of careful consideration by Defence senior managers and any substantial funding requirements would require approval by the Government.

An outline of the contents and specifications for the exhibition is provided below.

8.2.1 Exhibition content

The exhibition is required to convey the history of RAAF Base Amberley. With regard to content, the exhibition will have three main components:

- (1) Storyboards with text and supporting graphics (refer to **Figure 4** for a comparable example). The methodology to be followed in the development of storyboards is provided in Section 8.4.1;

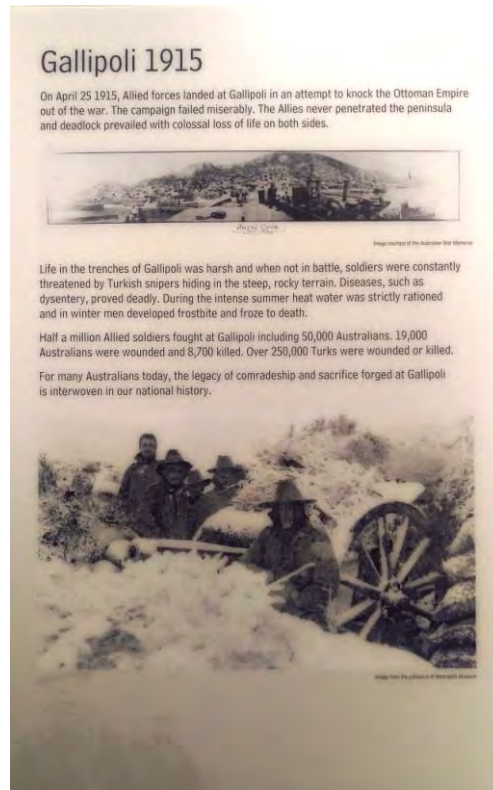


Figure 4 Example of Storyboard (RPS 2015)

- (2) The video recordings of the oral history accounts (refer to **Figure 5** below); and,



Figure 5 Still of oral history recording held at Amberley Aviation Heritage Centre (RPS 2015)

- (3) A virtual model of the base (prior to the removal of the 38 heritage buildings) (refer to **Figure 6** showing images from 3D scanning exercise as part of archival recording exercise).



Figure 6 Image of 3D terrestrial scan of former Base Headquarters (RPS 2015)

Section 2.0 of this plan provides a comprehensive historical overview of the base which has been refined further to provide a series of five stories in Section 5.0 which encompass key historical phases and events. Identified key stories to form the content of the public exhibition are described below; it is noted that as a minimum one display storyboard would be produced for each story.

- (1) The defence of Australia in World War II: RAAF Base Amberley played a significant role in the defence of Australia during WWII, initially through the training of aircrew for service and later in supporting the air transport chain required for the war effort in the Pacific.
- (2) Collaboration with other Air Forces – USAAF (later USAF) and RAF: RAAF Base Amberley has played a significant role in fostering collaboration with Australia's allies in times of peace and war.
- (3) Commitment and loss: Commitment to the defence of Australia and the inevitable loss of life and injury that occurs with that commitment is a fundamental theme of any military force. Personnel from RAAF Base Amberley have made sacrifices in wartime and in peace, with pilots, crew and passengers killed and injured both overseas and in Australia.
- (4) RAAF Base Amberley Post World War II: RAAF Base Amberley has played a significant role in world conflicts following World War II. This has been largely linked to its role as the RAAF major bomber unit. Personnel from the base have seen service in a number of conflict zones including Korea, Malaya, Vietnam, East Timor, Syria and Iraq. The base had a close association with the Maralinga nuclear testing program.
- (5) Aircraft synonymous with RAAF Base Amberley: Fundamental to an air force base are the aircraft, RAAF Base Amberley's role has not only been the housing of aircraft but also their maintenance, while in addition in the early years there was a significant role in assemblage and salvage. The base is perhaps most synonymous with the F-111 aircraft. A new era for RAAF Base Amberley is emerging with the assignment of the new 12 EA-18G Growlers to the base.

8.2.2 Exhibition specification

The following table of specifications for the required exhibition is based on a model brief prepared by Museums Australia (Victoria) and outlines the form and objectives of the exhibition.

Table 8 Exhibition Specifications

Exhibition Brief	Specifications
Objective(s)	To produce a public exhibition that communicates the history of RAAF Base Amberley
Themes & topics	As per Section 5.0 of this report, the identified 5 themes or stories have been selected to be conveyed in exhibition media, they are repeated in Section 8.2.1 above.
Scale & objects	The scale of the physical components of the exhibition will be determined by the exhibition designers. It will be a temporary or 'travelling' exhibition the components of which will be easily assembled and stored. It is proposed that the exhibition will have three main components: ▪ Storyboards (x 5 as a minimum); ▪ Video recordings of oral history accounts; ▪ Virtual models of the heritage precincts affected by the EPBC Act Approval using existing scanned information. Further investigation required to determine how digital technologies can be best employed.
Target audience	As per Section 4.0, the identified target audience includes: ▪ Primary: the RAAF Base Amberley community comprising past, present and future members of RAAF stationed there as well as those associated with the RAAF Amberley Aviation Heritage Centre. ▪ Associated/secondary: largely comprising local residents, special interest groups (professionals and enthusiasts) and those with a family connection.
Publications & merchandise	A direct link between the public exhibition and the book (refer to Section 8.3 below) would have obvious synergy; however, this is dependent on the timing of implementation.
Public programs	Whether the exhibition can be accompanied by a public program including, for example, floor talks and education programs will depend on the selected venue(s) for the exhibition.
Collaborations with other museums	There is an opportunity to collaborate with local museums/galleries and specialist museums further afield to house the exhibition. This needs to be investigated further to produce a realistic list of possible venues; however, a preliminary list is provided in Table 7.
Exhibition management	The exhibition will be Amberley-based and managed.
Potential venues	Local and national venues to be investigated (refer to Table 7).

8.3 Publication of a book on the heritage values of RAAF Base Amberley

The following section provides an outline of the necessary content and specifications required for the publication of a book as required by Condition 3 of the EPBC Act Approval (EPBC 2014/7123). It is noted that the condition itself requires that the book captures the historic heritage values of RAAF Base Amberley as opposed to its historical development alone. The condition also contains several specifications which are provided in Section 8.3.2 below.

8.3.1 Outline of book content

The EPBC Act Approval requires the book to capture the heritage values of the base and as such, it needs to take a holistic look at the base's heritage significance rather than focus on its historical development. This will entail providing information in an accessible way on the heritage values evident at the base including but not limited to the aesthetic and rarity values of the building stock and the social significance attached to the place. This information can be interwoven into a chronological discussion of RAAF Base Amberley's development from first establishment to the present day.

An initial outline of the book's contents to be fleshed out and modified through further research, site investigation and consultation is provided below.

Chapter 1: The RAAF early years

The development of the RAAF from the Australian Flying Corps; The decisions around the development of an air force base in Queensland; The choice of Amberley as a location; Insert map of location; photographs prior to ground works.

Chapter 2: WWII (1939 – 1945)

Construction works prior to WWII; Advent of WWII; The role of RAAF Base Amberley; Overseas deployment; The collaboration with the USAAF; Development of major role in aircraft building, maintenance and repair; Base administration; Operational Units; Personnel; The aircraft; Photographs, maps and plans where appropriate.

Chapter 3: Post War II (1946 – 1965)

RAAF Base Amberley designated as major base for Bombers; Overseas deployment; Maralinga and Monte Bello. The collaboration with the British; Continuing role as maintenance base; Development of capability in restoring aircraft (TAA; G for George); Base administration; Operational Units; Personnel; The aircraft; Photographs, maps and plans where appropriate.

Chapter 4: The era of the F-111 (1966 – 1980)

The redevelopment of the base to accommodate the introduction of the F-111; Development of maintenance facilities for the F-111 Pratt and Whitney TF-30 engines; Overseas deployment; The USAAF on base; The Base administration; Operational Units; Personnel; The aircraft; Photographs, maps and plans where appropriate.

Chapter 5: Modern Amberley (1981 – to present day)

Confirmation of role as major bomber base; Extension of life of the F-111; Construction of new buildings; Overseas deployment; Base administration; Operational Units; Personnel; The aircraft; Battlefield Airlifter and Growler Facilities Projects; Photographs, maps and plans where appropriate.

8.3.2 Book specifications

To comply with Condition 3f of the EPBC Act Approval, the book should be:

- available in hard copy;
- available online at no monetary cost for at least the life of the approval;
- be identified by an International Standard Book Number (ISBN);
- be published in accordance with Australian Government publishing guidelines and publicly accessible through the Commonwealth Library Deposit and Free Issue Schemes; and
- be prepared with the involvement of relevant publishing professionals for the editorial and design of the book, as well as a historian of RAFF No. 23 Squadron Association and any other relevant historians involved with the base for the content of the book.

In addition to the EPBC Act Approval requirements above, the following table sets out further specifications for the book based on design brief guidance provided by the Department of Defence Corporate Graphics who will be responsible for its publication (**Table 9**).

Table 9 Book Specifications/Design Brief

Brief requirements	Specifications
Short description	A book which captures the historic heritage values of RAAF Base Amberley which will encompass values identified in the current CHL citation and additional values noted in the current HMP (Converge, 2012). This includes historical, rarity, aesthetic, creative/technical and social values. A title is to be agreed.
Audience	As per Section 4.0, the identified target audience includes: - Primary: the RAAF Base Amberley community including past, present and future servicemen; and, - Associated/secondary: groups with an acknowledged interest including local residents, families of servicemen and specialists (professional and enthusiasts).
Use of publication	It is anticipated that the publication will be a reference book which is well illustrated in colour throughout and demonstrates academic rigour. The identified audience groups are knowledgeable in the main include individuals with personal knowledge of the base or specialist knowledge on aspects of its history and significance. In addition to the archival record, the book will provide an important record of the base.
First impression	As above, an accessible and well-illustrated reference book with colour images throughout including the cover.
If for sale	Hard copies to be available for sale; however, an online version is to be available online at no additional cost to comply with Condition 3f. Part ii.

Several books and documents have been reviewed to help determine the approach to the contents and general appearance of the required book on the heritage values of Amberley. Images of the front covers of books which deal with comparable heritage places and describe their history and heritage value in a chronological fashion are provided in **Figure 7** and **Figure 8** below.

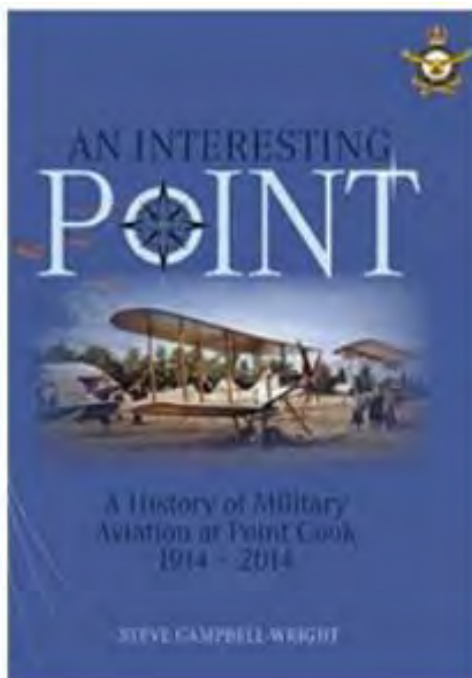
**Figure 7 Recent publication on Point Cook RAAF Base**



Figure 8 Recent book on the history of Chatham Garrison UK (English Heritage)

8.4 Interpretive Displays and Signage throughout the Base

Interpretive signage will be provided for the heritage buildings to be relocated under the EPBC Act Approval (EPBC 2014/7123). This includes one Bellman Hangar (Asset 260), a double P1-type timber hut (Asset 467) and a Starter Cartridge store/Explosives Locker (Asset 763). The signage would be fixed to the building/structure in a discreet way, internally or externally, such that function and safety are unaffected.

Interpretative media/storyboards will be placed at no less than six locations around the Base. Locations and content for storyboards are identified below:

1. Storyboards on the general history of the Base as well as the Astra Cinema (currently used as a courtroom and briefing room) located in the large breezeways of the new Base briefing room and court room (refers to key story 1 provided in section 5.2.1);
2. Storyboards on the hospitals and attached wards in the medical centre (refers to key stories 1 and 3 in sections 5.2.1 and 5.2.3);
3. Storyboards on the messes to be removed to the new combined mess (refers to key story 1 in section 5.2.1);
4. Storyboards on the general history of the Base as well as the information associated with aircraft types and maintenance located at the squadron buildings (refers to key stories 1 and 5 in sections 5.2.1 and 5.2.5);
5. Storyboards on the general history of the Base as well as the information on the aircraft types associated with the Base in the common rooms for the new transit accommodation blocks (refers to key stories 1 and 5 in sections 5.2.1 and 5.2.5);
6. Storyboard(s) on the lysaght huts at the new welfare facilities (refers to key stories 1 and 4 in sections 5.2.1 and 5.2.4);

7. Storyboards on the general history of the Base as well as commemoration and loss etc at the Base command buildings (e.g. 23SQN and HQCGS) (refers to key stories 1 and 3 in sections 5.2.1 and 5.2.3);
8. Outdoor signage near the F111 aircraft displayed near the entrance to the Base to provide information on the history of F111s at the Base. Information on the general history of the Base as well as the 'commemoration and loss' story could also be shared at this location (refers to key stories 1, 3, 4 and 5 in sections 5.2.1, 5.2.3, 5.2.4 and 5.2.5); and
9. Outdoor signage near the Canberra Bomber displayed near the old front entrance to the Base to provide information on the history of the Base, the history of the Canberra's involvement at Amberley and the conflicts etc where the aircraft was used (refers to key stories 1, 2, 4 and 5 in sections 5.2.1, 5.2.2, 5.2.4 and 5.2.5).

The presentation of interpretive media/storyboards in well used and accessible locations throughout the Base, as noted above, will ensure that a wide audience will be able to view the material.

8.4.1 Methodology for Storyboard Preparation

With regard to methodology, Defence will employ heritage professionals to prepare the interpretive signage/storyboards guided by best practice guidance and in particular, *Guidelines for Interpreting Cultural Heritage* (VicRoads, 2013).

Appendix D of *Guidelines for Interpreting Cultural Heritage* provides guidance on the development of interpretive signs and panels etc. (refer to Appendix 3) and will be followed in the development of the interpretive storyboards and signage for RAAF Base Amberley. The key points in the guidelines are summarised below:

- Graphic design: use of graphic design expertise is recommended to ensure effective design and a professional layout;
- Images: careful selection and referencing of images advised to ensure appropriate consents obtained and that the most useful and engaging images are employed;
- Text/copy: recommended use of a clearly differentiated hierarchy of headings; and careful consideration of typeface type, size, colour and spacing;
- Content: ensure stories and information are communicated clearly and ensure that content is enjoyable, relevant and structured;
- Vocabulary: specific guidance includes the need to use text that 9-12 year olds can understand, address the reader in the first person and use comparisons and humour to engage the audience;
- Positioning: consideration of position and orientation in relation to the level of likely sun/weather exposure and the need to ensure that signage is noticed but not visually obtrusive.
- Ergonomics: height should consider the range of people in potential audience. Specific heights are provided for freestanding signs (centred not above 1500mm) and mid height signs (centred between 1000mm and 1200mm);
- Materials & methods: a range of materials for outdoor panel materials are described ranging from metal to polycarbonate as well as methods of applying signage including digital print, cast metal and

etched signage. The guidance recommends seeking advice from manufacturers on the most appropriate materials and methods suited to the site/location.

9.0 Implementation Plan

The following table provides an implementation plan for the actions arising from this interpretation plan. A deadline is provided for each task with the group responsible for the completion of the action identified. Condition 3 of the EPBC Act Approval (EPBC 2014/7123) requires a timeline for the implementation of the interpretation works and notes that the approved Heritage Interpretation Plan must be implemented. Please note that where the 'project team' is stated below this will include appropriately qualified professionals with a heritage and/or museums background yet to be procured by Defence.

Table 10 Implementation Plan with timeline

Task	Group Responsible	Deadline (final end dates)
Public exhibition and displays throughout Base		
Confirm themes and stories to be interpreted	Project team Defence	30 July 2016
Finalise plans, text, maps and images to use in storyboards	Project team Defence	30 September 2016
Prepare digital media content including virtual model	Project team Defence	31 October 2016
Obtain permissions to use images	Defence	31 October 2016
Fabrication	Project team, interior design/museum consultant and/or film/digital media consultant	31 March 2017
Production and publication of book		
Confirm outline of book contents	Project team Defence	31 March 2016
Confirm process for development including consultation with relevant historians	Project team Defence Stakeholder group (assumed primarily base historians)	Feb 2016 (ongoing)
Draft text, maps and images (incl. permission to use images) and submit for approval	Project team Defence	31 July 2016
Finalise Draft for review	Project team Defence	31 August 2016
Provide revised draft for approval	Project team Defence	30 September 2016
Publisher for format and layout	Defence Corporate Graphics	30 November 2016
Publication	Defence Defence Corporate Graphics	31 March 2017
Interpretive signage throughout the Base		
Agree on content and fabrication	Project team Defence	31 August 2016
Production and installation	Project team Defence	30 November 2016 – to be determined by work program

9.1 Annual compliance reporting

Condition 9 of the EPBC Act Approval (EPBC 2014/7123) requires Defence to undertake annual compliance reporting by publishing a report on its website which addresses condition compliance, including implementation of any management plans and strategies required by condition. As part of this reporting process Defence will provide:

- Information about where the exhibition has appeared during the previous 12 month period; and
- An update on decisions made or actions undertaken regarding the future of the Amberley Aviation Heritage Centre.

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Appendix I

Approval EPBC Act 2014/7123: Removal of heritage buildings at RAAF
Base Amberley near Ipswich, Queensland



Australian Government
Department of the Environment

Approval

**Removal of heritage buildings at RAAF Base Amberley near Ipswich, Queensland
(EPBC 2014/7123)**

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Approved action

person to whom the approval is granted Department of Defence

proponent's ABN 68 706 814 312

proposed action Removal of heritage buildings at RAAF Base Amberley near Ipswich, Queensland [See EPBC Act referral 2014/7123].

Approval decision

Controlling Provision	Decision
Commonwealth action (section 28)	Approved

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 31 December 2025

Decision-maker

name and position Deb Callister
Assistant Secretary
Queensland and Sea Dumping Assessment Branch

signature

date of decision

9 June 2015

Conditions attached to the approval

1. The **approval holder** must not demolish any **heritage buildings**, or parts thereof, except as indicated in the **project area**.
2. To ensure that information on the heritage-listed buildings on the Amberley RAAF Base Group Commonwealth heritage listed site is retained, prior to **commencement** of the **action** the **approval holder** must undertake archival recording of all **heritage buildings** in the **project area**. This recording must:
 - a. be in accordance with the guidelines set out in the Queensland Department of Environment and Heritage *Archival Recording of Heritage Places* (2013);
 - b. include an archival photographic record of the **heritage buildings** within the **project area**. This must be undertaken by a photographer with experience in compilation of archival records and include satellite imagery or photography from an aircraft to capture aerial images of the base;
 - c. include a technical description of the precincts, buildings and operations, as well as oral accounts with people associated with the airbase;
 - d. include a description of the equipment and techniques employed in compilation of the record;
 - e. include a catalogue of all images, referenced to location plans;
 - f. include measured drawings, comprising floor plans, elevations of each building element and roof plans. These must include a description of the measurement techniques employed to produce the drawings;
 - g. include 3D digital recording of the assets in their current context in order to generate virtual models of the place;
 - h. be lodged with the National Archives of Australia, the State Library of Queensland's John Oxley Library and the Ipswich Central Library; and
 - i. be available to view online at no monetary cost, in an easily accessible form, from the State Library of Queensland's John Oxley Library or similar website, for at least the life of the approval.
3. Prior to the **commencement** of the **action**, the **approval holder** must submit for the **Minister's** approval a Heritage Interpretation Plan for RAAF Base Amberley with a focus on the phases of historic development of the airbase. The Heritage Interpretation Plan must:
 - a. be prepared in consultation with the **Department**;
 - b. identify opportunities to utilise media produced by the archival recording process outlined in Condition 2;
 - c. identify opportunities to utilise material or moveable items salvaged from the **project area** where this is practical;
 - d. include a timeline for the implementation of the interpretation works;

- e. include the necessary content and specifications for a public display or exhibition of material that communicates the history of RAAF Base Amberley;
- f. include the necessary detail and specifications to enable publication of a book that captures the heritage values of RAAF Base Amberley. The book must:
 - i. be available in hard copy;
 - ii. be available to view online at no monetary cost, in an easily accessible form, from the State Library of Queensland's John Oxley Library or similar website, for at least the life of the approval;
 - iii. be identified by an International Standard Book Number (ISBN);
 - iv. be published in accordance with Australian Government publishing guidelines including the *Style Manual: For Authors, Editors and Printers, 6th Edition*, and be publicly accessible through the Commonwealth Library Deposit and Free Issue Schemes; and
 - v. be prepared with the involvement of relevant publishing professionals for the editorial and design of the book, as well as a historian of RAAF No.23 Squadron Association and any other relevant historians involved with RAAF base Amberley for the content material.

The **approval holder** must not commence the **action** until the Heritage Interpretation Plan is approved by the **Minister**. The approved Heritage Interpretation Plan must be implemented.

- 4. To minimise the impacts to heritage values resulting from the **action**, within three years of the **commencement** of the **action**, the **approval holder** must:
 - a. relocate at least one Bellman Hangar, at least two P1-type timber huts and at least one Starter Cartridge store/Explosives Locker to a suitable location for adaptive re-use on the site of RAAF Base Amberley. The **approval holder** must ensure that relocation of these buildings will not impact upon any existing heritage values at the relocation site;
 - b. salvage components of demolished Bellman Hangars to support the maintenance of other retained Bellman Hangars where this is practical; and
 - c. offer surplus Bellman Hangars and P1 timber huts to aviation history organisations for removal and relocation.
- 5. To ensure the ongoing protection of heritage values following the **action**, the **approval holder** must submit a Heritage Management Plan for the **Minister's** approval within twenty four months of the **commencement** of the **action**. The Heritage Management Plan must:
 - a. outline guidance for the management and promotion of heritage values at RAAF Base Amberley; and
 - b. include an assessment report of Commonwealth Heritage values that remain at RAAF Base Amberley. The assessment report must be undertaken in accordance with the **Department's** *Commonwealth Heritage List Historic Heritage Assessment Guidelines* and submitted to the **Department** upon completion.

The approved Heritage Management Plan must be implemented.

6. To avoid and mitigate impacts to any **Koalas** within the **project area**, the **approval holder** must undertake management measures including but not limited to:
 - a. the development and implementation of a plan for **relocation activities**;
 - b. engagement of a **qualified fauna spotter-catcher** to undertake surveys prior to **commencement of the action**; and
 - c. if koalas are found in the **project area**, any handling of **Koalas** required to relocate or otherwise protect them prior to and during the **action** in accordance with the plan for **relocation activities**.
7. Within 30 days after the commencement of the action, the **approval holder** must advise the **Department** in writing of the actual date of commencement.
8. The **approval holder** must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the plans and strategies required by this approval, and make them available upon request to the **Department**. Such records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits may be posted on the **Department's** website. The results of audits may also be publicised through the general media.
9. By 1 October of each year after the **commencement of the action**, **approval holder** must publish a report on its website addressing compliance with the conditions of this approval over the previous 12 months, including implementation of any management plans and strategies as specified in the conditions. The **Approval Holder** may discontinue publishing annual compliance reports with the written agreement of the **Minister**.
10. Non-compliance with any of the conditions of this approval must be reported to the **Department** within 48 hours of discovery by the **approval holder**.
11. If the **approval holder** wishes to carry out any activity otherwise than in accordance with the plans and strategies specified in the conditions, the **approval holder** must submit to the **Department** for the Minister's written approval a revised version of that plan or strategy. The **approval holder** must not commence the varied activity until the **Minister** has approved the varied plan or strategy in writing. The **Minister** will not approve a varied plan or strategy unless the revised plan or strategy would result in an equivalent or improved environmental outcome over time. If the **Minister** approves the revised plan or strategy, the **approval holder** must implement that plan or strategy in place of the plan or strategy previously approved.
12. If the **Minister** believes that it is necessary or convenient for the protection of the environment to do so, the Minister may request that the person taking the action make specified revisions to the plans and strategies specified in the conditions and submit the revised plan or strategy for the Minister's written approval. The person taking the action must comply with any such request. The **approval holder** must implement the revised approved plan or strategy. Unless the **Minister** has approved the revised plan or strategy, then the revised approved plan or strategy must continue to implement the plan or strategy previously approved, as specified in the conditions.

13. If, at any time after 7 years from the date of this approval, the **approval holder** has not substantially commenced the action, then the **approval holder** must not commence the action without the written agreement of the **Minister**.
14. Unless otherwise agreed to in writing by the **Minister**, the **approval holder** must publish all plans and strategies referred to in these conditions of approval on its website. Each plan and strategy must be published on the website within 1 month of being approved and must remain published for the life of the approval.
15. Unless otherwise agreed to in writing by the **Minister**, the **approval holder** must provide a copy of each approved plan and strategy referred to in these conditions of approval to members of the public upon request. Copies must be provided within a reasonable time of the request.

Definitions:

Action – the removal of heritage buildings in the **project area** at RAAF base Amberley near Ipswich, Queensland.

Approval holder – the person to whom the approval is granted, or to whom the approval is transferred under s145B of the EPBC Act.

Commencement – the demolition of any part of **heritage buildings**.

Department – The Australian Government Department administering the EPBC Act.

EPBC Act – the *Environment Protection and Biodiversity Conservation Act 1999*.

Heritage Buildings – all existing Commonwealth heritage listed buildings and structures at RAAF Base Amberley within the **project area** in Figure 1.

Koala – *Phascolarctos cinereus* (combined populations of Qld, NSW and the ACT) the listed threatened species under the EPBC Act.

Minister - The Minister administering the EPBC Act or a delegate of the Minister.

Project area – the flight line area at RAAF Base Amberley near Ipswich, Queensland, within the line designated as the flight line boundary at Figure 1.

Qualified fauna spotter-catcher – a natural person who carries a valid Spotter Catcher Endorsed Rehabilitation Permit issued by the Queensland Department of Environment and Heritage Protection and who has at least five years experience in relation to the Koala.

Relocation Activities – any human-mediated activity involved in the capture of Koalas from the project area and release into suitable koala habitat, including trapping, handling, holding in captivity, veterinary treatment, transportation and release.

Figure 1

AECOM



Appendix 2

RAAF Base Amberley – Squadrons and Units

The following list is an extract from Amberley Airfield, Qld during World War II (Oz at War. Airfields)

Squadron / Unit	Start	Finish	Role
Station Headquarters Amberley	17/06/40	21/10/40	
No 24 Squadron	17/06/40	11/10/40	
No 3 Recruit Depot	1/07/40	3/04/42	Run recruit drill courses.
No 3 Service Flying Training Squadron	21/10/40	20/04/42	Pilot training. Assisted the USAC initially assemble Kittyhawk and Dauntless. Disbanded 30 March 1942 after training >500 air crew.
RAAF Station Sandgate (Station Headquarters)	16/12/40	18/04/41	
(No 3 Initial Training School) (No 3 Embarkation Depot)			
*Units of US Army Air Corps (various)	15/12/41		
Station Headquarters Amberley	16/03/42	31/07/42	
No 3 Aircraft Depot (3AD)	16/03/42	1/04/92	Assumed control of Station and all aerodrome maintenance personnel
Units of National Defence Corps	1943	1/04/92	
Garrison Battalion	1943		Guard duties
Units of Volunteer Defence Corps	1946		Guard duties
Units of Australian Army Service Corps	1946		
6th Anti-Aircraft Battery AMF	1946		
No 3 Medical Clearing Station	1/05/42		
No 23 (F) Squadron	6/05/42	6/06/42	
No 1 Air Liaison Section (Home Forces)	12/05/42		
No 10 Repair and Salvage Unit	15/05/42	1/09/42	
No 6 Recruit Depot	24/08/42	1/12/42	Recruit training
*US Army Airway Communication Service			
*USAFIA Ferry Div Air Transport Command	10/09/42	5/07/45	
22nd Service Group (5th Air Force)	25/11/42		
No 71 Squadron (Detached Flight)	26/01/43	2/02/43	
No 77 Squadron (Air Echelon)	2/02/43	15/02/43	
No 6 Aircraft Depot	14/10/43		
No 77 Wing Headquarters	22/11/43	17/01/44	
No 10 Replenishing Centre	22/11/43	9/01/44	
No 3 Central Recovery Depot	11/01/44	31/08/46	
No 24 Air Stores Park	25/08/44	27/10/44	
No 21 Squadron (Air Echelon)	17/11/44	21/01/45	
No 300 Wing (RAF)	4/02/45	23/02/45	
No 85 Operational Base Unit	8/03/45	25/05/45	
No 85 (H/B) Wing Headquarters	10/03/45	6/06/45	
No 31 Air Stores Park	11/03/45	1/09/45	

Squadron / Unit	Start	Finish	Role
No 23 Squadron (Air Echelon)	16/03/45	6/04/45	
No12 Squadron (Air Echelon)	20/04/45		
No 1 Squadron (Air Echelon)	21/05/45	31/07/45	
*Royal Navy Fleet Air Arm Detachment	1/08/45	30/10/45	
No 99 Squadron (Air Echelon)	7/08/45	19/09/45	
Air Defence Headquarters	5/11/45	22/11/46	
No 12 Squadron	5/02/46	23/02/48	
No 23 Squadron	12/04/46	23/02/48	
No 82 (B) Wing Headquarters	18/04/46	1/02/74	
No 21 Squadron	24/04/46	23/02/48	
No 482 Maintenance Squadron	10/05/46	1/04/92	
Headquarters RAAF Station Amberley	15/08/47	30/04/52	
No 82 Bomber Wing	22/02/48		
No 1 Bomber Squadron	22/02/48		
No 2 Bomber Squadron	22/02/48		
No 6 Bomber Squadron	22/02/48		
No 23 Squadron	?/09/55		
16 Army Light Aircraft Squadron	1/12/60		
No 9 Squadron	20/12/71		Based in Amberley following Vietnam provided support to various departments
No 12 Squadron	1/09/73		For the introduction of the Boeing Vertol Ch-47C Chinook aircraft
Air Base Wing	1/07/94		
No 3 Airfield Defence Squadron (3AFDS)	?/03/95		
Air Combat Group	?/01/02		Combined Strike Reconnaissance Group and Tactical Fighter Group

*indicates overseas deployments to RAAF Base Amberley.

Present day RAAF Base Amberley (RAAF Queensland Bases)

The Royal Australian Air Force's RAAF Base Amberley is Australia's largest air force base, employing over 5000 people. It is 40kms south-west of Brisbane on the outskirts of Ipswich. A large number of units call Amberley home:

- Combat Support Group, Headquarters;
- No 95 Wing, Headquarters;
- No 382 Squadron - Contingency Response;
- No 295 Squadron - Training and Standards;
- No 1 Combat Communication Squadron Detachment Amberley;
- No 2 Security Forces Squadron, Headquarters;
- No 96 Wing, Headquarters;
- No 23 (City of Brisbane) Squadron - Airbase Operations;

- Health Services Wing, Headquarters;
- No 1 Expeditionary Health Squadron, Headquarters;
- No 3 Aero-medical Evacuation Squadron Detachment Amberley; and
- Health Operational Conversion Unit.

Appendix 3

*Appendix 3 of Guidelines for Interpreting Cultural Heritage (VicRoads,
October 2013)*

Appendix D – Interpretive Text and Signage

The following guidance is specifically provided for developing interpretation in the form of panels, signs or similar. These may be stand-alone installations or may accompany other interpretive items/structures such as a sculpture.

Interpretive boards/signs may also incorporate other ancillary items on the board itself such as audio recordings, lift the flap features, sealed Perspex specimen boxes, sniff boxes, tactile elements or other such elements to encourage learning and interest. Aim to cater for different learning styles and for varying levels of English and abilities.

All interpretive designs must be endorsed by Landscape and Urban Design, Environmental Strategy group, Communications and Stakeholder Engagement, Metropolitan Operations or Regional Operations (depending on the location) and other relevant stakeholders (e.g. a Registered Aboriginal Party). The relevant Executive Director (Metropolitan Operations or Regional Operations) must approve the final interpretive design prior to production.

Graphic design

It is important to use a graphic designer, even if only for minor input at each stage of Step 3 (Develop Interpretive Concept and Design), to develop an effective design and professional layout.

VicRoads is developing a standard format for interpretive signs to be used where possible. Communications and Stakeholder Engagement will advise on whether this style of signage is required for your project. The standard design is being developed to be adaptable to a wide range of interpretive themes while presenting the VicRoads brand in a consistent way.

Connections

through country



This area has been travelled for thousands of years by Aboriginal people. It is the traditional country of the Wurundjeri and remains an important place of connection for many Indigenous peoples today.

The Anthony's Cutting Realignment Alliance worked closely with the Wurundjeri people to manage Aboriginal heritage during the 2011 realignment of the Western Highway.

THE WURUNDJERI PEOPLE AND CULTURE

Traditionally, the Wurundjeri lived a semi-nomadic life, moving all their needs from materials obtained from Country.

Wurundjeri Country encompasses a geographically diverse region that includes both urban and rural landscapes. It includes Melbourne's CBD and covers a vast area of south central Victoria that stretches from Mount Baw Baw in the north east to Mount Macedon in the north west, south west to the Wimmera River and south east to Mandilar Creek.

You may have heard Wurundjeri people making spear heads near Mt Baw Baw, collecting medicinal plants from Wombat Gorge, trapping eels in the creeks and rivers, or on a traditional journey leaving law from the elders under the direction of the Nanyangapi (Chief).

Tangible evidence of the lives of the Wurundjeri ancestors such as artifacts and ancient trees, together with the natural and spiritual elements of the landscape, have significant cultural value. There is a special connection that exists between the heritage and contemporary Wurundjeri people.

AN IMPORTANT TRANSPORT ROUTE

This area has been an important travelling route for many different people over thousands of years.

Just as the Wurundjeri people travelled through this area, so too did early colonial settlers and gold prospectors in the nineteenth century. The single-arched stone bridge you can see here across Dismal Creek was constructed in 1850/51 following the increased use of the route by prospectors headed for the Ballarat Goldfields.

The development of this road has culminated in the 2011 Anthony's Cutting Realignment which involved the construction of a new five-lane highway connection from Malton West to just east of Bacchus Marsh, south of the old Western Highway.





Source: VicRoads

This is the draft interpretive panel template currently being developed by VicRoads Studio Design.

Images

- **Signed consent must always be obtained from all people whose photographs are agreed to be used;** permission must be gained for use of images– copyright approval may be required for some images.
- The source of images and photographs should be acknowledged where appropriate.
- Generally, images should depict something that cannot already be seen at the site
- Visuals clearly relate to your text.
- Visuals are clearly labelled if appropriate.
- Maps are clearly designed and only contain information that visitors need to know – sometimes hand drawn maps are easier to understand as most people have trouble with complex maps.
- Only historic photographs of good quality should be used.
- When using photos and images relating to Aboriginal communities, ask about appropriate protocols first as communities may not allow depiction and naming of deceased people (note that nor should such photographs be presented during consultation).

Text/Copy

Structure

Where an interpretive board is being developed, all text should be clearly structured into 'layers' so the theme and key messages are readily communicated to the audience. Different fonts and colours can help accentuate the structure. Use up to four layers:

- 1 Catchy title to grab interest and indicate theme
- 2 Subtitles to develop theme
- 3 Introductory text to convey key messages
- 4 Further text to provide more detail (can include bullet points)

Typeface, typesize, spacing and colour

VicRoads style and visual identity guides should be used when choosing fonts and dominant colours. Difficult to read fonts should be avoided and the number of fonts used should be kept to two or three. The smallest lettering should be at least 7mm in height when produced. Avoid upper case lettering.

The VicRoads design team can assist in setting out draft signage to scale to develop the right amount of text for the size of the sign and in setting the spacing between lines of text as well as other graphic elements of the sign.

Content/subject matter

While there will be many stories and interesting points to make for your heritage site, the key to good interpretation is to limit the information provided so the audience does not lose interest. Interpret what can be seen, experienced or imagined at the site. Remember the key points for successful interpretation:

- communicate clearly
- make it enjoyable
- make it relevant
- make it structured.

People are usually standing up when reading interpretive signs, so make text punchy, crisp and short. Use only short sentences and paragraphs. Each sentence should only contain one idea. A better rhythm is achieved by using varying sentence length.

Always be aware of potential sensitivities in the content presented. Remember, cultural heritage is often controversial in nature. Always ask stakeholders if you are unsure what content is appropriate.

Vocabulary

Key points to apply when drafting interpretive boards include:

- Text should be written in language that 9 - 12 year olds would understand; avoid technical terms.
- Address the reader in the first person i.e. refer to them as 'you' and use conversational language.
- Use active, rather than passive verbs e.g. 'The Wurundjeri used this tree to make canoes' rather than 'This tree was used to make canoes by the local Aboriginal community'.
- Use metaphors, comparisons and humour and ask questions to engage the imagination e.g. Can you imagine what life would have been like here 200 years ago?
- Aboriginal names for items and places should be used where possible, followed by the English translation. Always check Aboriginal words with the relevant community to make sure you have the correct language for the area.
- Aboriginal culture should be presented in the present tense.
- Avoid gender-specific wording.

Position

- Consider position and orientation within the agreed location – south-facing installations will be least affected by glare and weathering from the sun.
- Design the height and position to be accessible to most without obstructing views or important elements at the site.
- Is the position where it will be noticed in the environment i.e. will people realise it is there?

Ergonomics

The height of interpretive panels should consider a wide range of people as the potential audience including children and disabled persons. Free-standing interpretive signs should not be centred above 1500mm. Mid-height signs such as lectern style angled panels should be centred between 1000mm to 1200mm.

Materials and methods

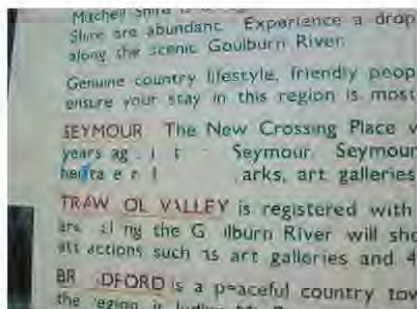
Outdoor panels and signage can be manufactured from any number of materials. The more common materials used are:

- metal – aluminium is the most common signage material being low-cost, highly recyclable, lightweight and has a strong resistance to corrosion; steel can be galvanised, stainless or treated with a rust inhibitor product to give rusted effect
- glass – resilient to chemical and solvent damage
- wood – recycled timber has minimal shrinkage and movement compared to new timbers
- recycled plastic – plastic from waste streams can be moulded into recycled plastic products with good surface finishes and structural integrity
- stone – for sign panels or bases, provides stability and integration with landscapes
- polycarbonate – designs are printed onto paper and ‘sandwiched’ between sheets of high impact polycarbonate (acrylic is not recommended for outdoor use due to expansion and contraction issues and it becoming ‘milky’ after prolonged exposure to the sun).

The interpretive information can be applied to the sign using a variety of methods. The following more common methods are described further in Colquhoun (2005).

- digital prints – can be used for full colour graphics and images, printed directly from a digital file; seal with a protective layer so it cannot be damaged
- screen printing on vinyl or direct to aluminium – vinyl decals are inexpensive but should be applied to the rear of a polycarbonate or glass sheet or sealed with a protective layer so it cannot be damaged
- baked enamel and stoved screen prints – text and images are painted or screen printed onto sheet metal which is enamelled for protection; can be guaranteed for 25 years
- anodised images on aluminium/stainless steel – more durable than digital prints
- cast metal – durable but expensive
- laser engraving – engraving onto most substrates such as glass, rock, metal
- art forms – mosaics, stone, stencils, pottery
- routed or etched signs – etched stainless steel monochrome artwork is photographed and the image chemically etched into the steel.

Seek advice from potential manufacturers to determine which materials and methods will meet the needs of your installation. Remember to request details of warranties when seeking information on options from manufacturers.



Source: VicRoads.

Vinyl lettering can be prone to vandalism and deterioration from exposure to the elements.

Examples

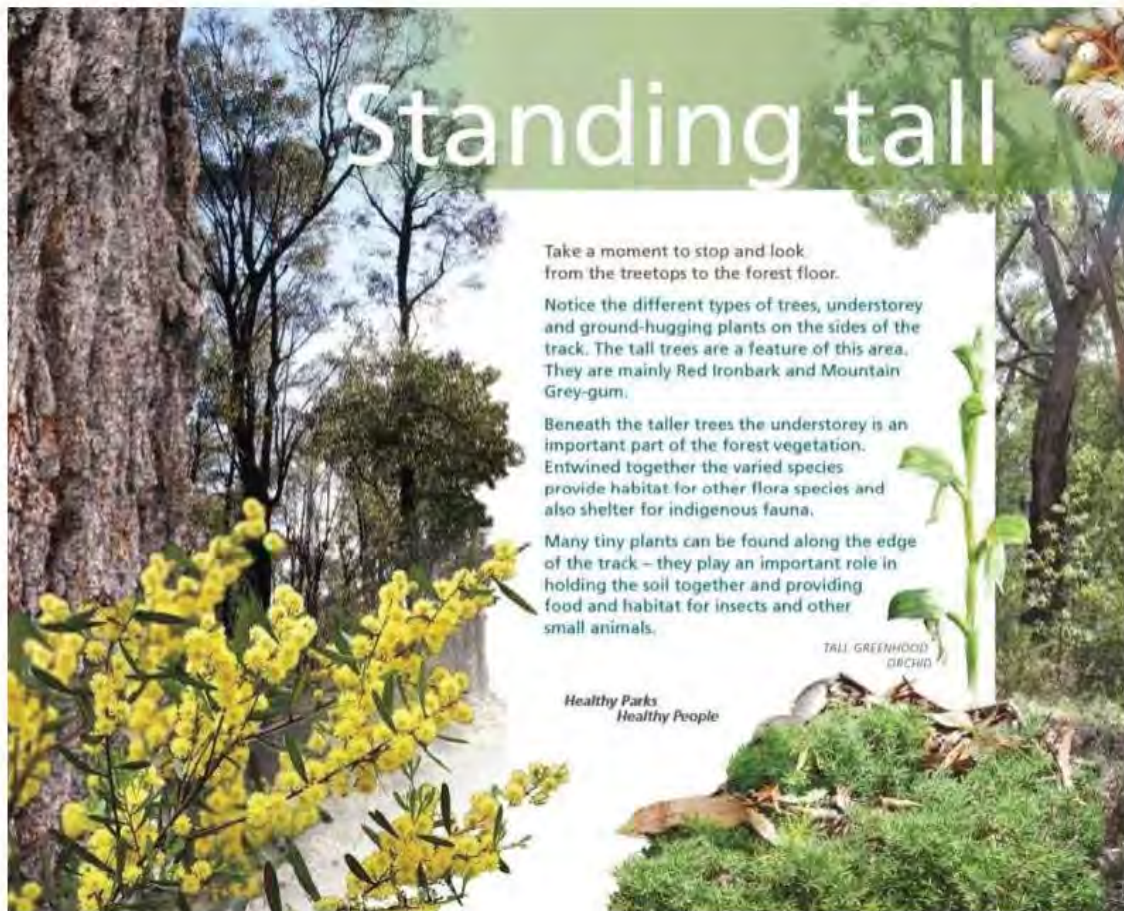
Parks Victoria's critiques of the following interpretive signs demonstrate the above points in practice:

Triplet Falls



Source: Parks Victoria

- Has a catchy and an active title – visitors are attracted to signs with intentionally intriguing titles.
- Good sectioning of text. Can read just one section including the heading and understand what the sign is about. Can read on if the reader is interested in learning more.
- Very good use of active verbs – use of words like take a moment to, you makes the reader feel included – good interpretive signs use language as though it were part of a conversation.
- The sign has followed one central message – to stop, listen and look.
- Short sentences – Visitors prefer and are more likely to read signs with fewer words.
- Has avoided using scientific terms or jargon.
- This sign has used several photos which can sometimes be confusing. In this instance featuring a large photo of the snail is memorable and hints that the snail is a key part to the story.
- Includes a park message and an action that visitors can take to help the park.

Standing Tall

Source: Parks Victoria

- Catchy title – visitors are attracted to signs with intriguing titles.
- Good sectioning of text. Can read just one section and understand what the sign is about.
- Use of active verbs – Take a moment to stop...makes the reader feel included – good interpretive signs use language as though it were part of a conversation.
- Has followed one central theme – which is stated in the introduction
- Short sentences – most sentences are less than 15 words long - Visitors prefer and are more likely to read signs with fewer words.
- Avoiding using scientific terms or jargon.
- Several photos are visually pleasing but can sometimes detract and confuse the central message. In this instance it is appropriate as the theme is about the diversity of plants that live in the forest.