

# Part Two: Thematic Study

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## 2.0 SCOPE OF THE STUDY

Due to limited resources and the unforeseen magnitude, this study is unable to provide a history of local Indigenous and European people and cultures in relation to the landscapes that the aerodromes and landing grounds identified occupy. The author acknowledges the many layers of history that shape and define Australia's culture and in this instance, has opted to focus on the layer that concerns Australia's air role in the Second World War.

Australia's involvement in the war instigated the formation of the aerodromes and landing grounds recognised in this study and their legacy as cultural landscapes are evidence of this activity. Australia's participation in defending its shores includes the Army, Navy and Air Force but it is of course the Air Force that is of interest here.

The study therefore does not include:

- reference to Aboriginal communities which may have lived on the land occupied by an aerodrome;
- reference to earlier European occupation of the land later occupied by an aerodrome;
- a detailed history of defence or military aviation in Australia; or
- a history of US forces stationed in New South Wales.

The study does provide:

- a brief overview of the formation of the Australian Air Force;
- developments of the Air Force leading up to the war;
- a brief overview of the war in the Pacific;
- an explanation of the Empire Air Training Scheme;

- other forms of training and kindred air organisations;
- a list of all known WWII aerodromes and landing grounds in NSW;
- activities related to aerodromes and landing grounds during the war and post-war;
- types of aerodromes and landing grounds;
- an analysis of findings; and
- recommendations for the heritage protection of aerodromes and landing grounds.

## 2.1 FORMATION OF THE ROYAL AUSTRALIAN AIR FORCE - 1918 TO 1928

Britain formed its Royal Air Force (RAF) in 1918 and as Australia was committed to imperial defence, in the months before the end of the First World War, visionary leaders were discussing and planning the formation of an independent Australian air force. Major-General Legge, Chief of the General Staff, was one who wrote in April 1918 pressing the importance of an air service.<sup>1</sup> It was generally agreed by the authorities that Australia should have its own air defence, although there was no unanimity on the matter and discussions ensued between officials.

The Council of Defence appointed a subcommittee to consider the options and under the Chairmanship of George Swinburne (chairman of the Defence Board of Business Administration), the subcommittee proposed that the most efficient way to establish aviation in Australia was to inaugurate an air force under its own Minister and staff.<sup>2</sup> It was recommended that a temporary body<sup>3</sup> be appointed to work out the details of a new Australian Flying Corps (AFC). In January 1919 the Defence Council agreed on the establishment of a temporary air service for the army and the navy, and a suggestion was received from General Birdwood that two air force stations could provide for the training of civilians.<sup>4</sup>

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<sup>1</sup> Douglas Gillison, *Royal Australian Air Force 1939-1942*, Australian War Memorial, Canberra, 1962, p. 1.

<sup>2</sup> C. D. Coulthard-Clark, *The Third Brother - The Royal Australian Air Force 1919-39*, Allen & Unwin in association with the Royal Australian Air Force, North Sydney, 1991, pp. 2-3.

<sup>3</sup> The temporary body was the Air Service Committee (ASC).

<sup>4</sup> General Birdwood was based at the Australian Imperial Force (AIF) Headquarters in London and included in his responsibilities was that of adviser on air service to the Commonwealth. This suggestion initiated government approval for the establishment of two air force stations in addition to the Central

On 16 December 1920 the Civil Aviation Branch of the Department of Defence was formed with Lieut-Colonel Brinsmead as its first Controller and had the task of coordinating a program for the formation of the new Air Force. The program was to provide headquarters, squadrons, training school, recruit depot, non-technical training centre and a stores depot.<sup>5</sup> At the instance of Lieut-Colonel Williams, it was recommended that the Air Force be formed as of 31 March 1921.<sup>6</sup> It was not until later that the Minister for Defence formally appointed the full name 'Royal Australian Air Force' (RAAF) on that date.<sup>7</sup>

Headquarters of the RAAF were located in Melbourne and No 1 Flying Training School and No 1 Aircraft Depot were at Point Cook. Shortly after their establishment, discussion between Service leaders centred around a union of military participation in civil aviation. The link with civil flying had a political aspect and an Air Defence Bill was introduced to the Senate on 8 April 1921 by George Pearce.<sup>8</sup> He hoped commercial aviation would prosper to provide planes in the event of another war and training for personnel who would join the Citizen Forces. The cause was supported a few years later when the first flight around the Australian continent was completed successfully by Wing Commander Goble and flight Lieutenant McIntyre in a Fairey seaplane from 6 April to 9 May 1924.<sup>9</sup>

The NSW State Government had already established a training school at Richmond, New South Wales. At the recommendation of the Air Board to the Air Council, approval was given in July 1921 to purchase a site at Richmond for No 2 Wing Headquarters and Nos 3 and 4 (aeroplane) Squadrons.<sup>10</sup> Then when approval was given for the establishment of a Naval Air Force for war purposes and a military air force comprising of members of the Citizen Forces, within the first year a headquarters, depot and training school was established in Victoria and in New South Wales, two aeroplane squadrons (one of Citizen Force men)

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Flying School (CFS) at Point Cook. Gillison suggests the two air force stations were probably on Corio Bay and the other near Sydney. Gillison, *op. cit.*, pp. 6-7.

<sup>5</sup> *Ibid.*, p. 15.

<sup>6</sup> *Ibid.*, p. 16.

<sup>7</sup> It was not until July 1921 that the prefix 'Royal' appeared in the Air Board agenda. *Ibid.*, p. 16.

<sup>8</sup> *Ibid.*, p. 17.

<sup>9</sup> *Ibid.*, pp. 24-25.

<sup>10</sup> *Ibid.*, p. 18.

and one seaplane squadron for use on ships of the Royal Australian Navy were formed.

By 1926 the existing air force organisation included: Headquarters in Melbourne; Liaison Office in London; No 1 Flying Training School at Point Cook; No 1 Aircraft Depot at Laverton; No 1 (Composite) Squadron also at Laverton; No 3 (Composite) Squadron and No 101 (Fleet Cooperation) Flight at Richmond; and Experimental Section at Randwick.<sup>11</sup>

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<sup>11</sup> An Experimental Section RAAF was established 14 January 1924 on land and buildings acquired from the RAN to undertake construction of flying-boats, research and experiments on Australian aircraft materials, modifications to equipment, reconditioning and repair of aircraft, the making of small quantities of urgently needed spares and the technical training of newly-enlisted men. Refer n. 8, Gillison p. 27.

## 2.2 DEVELOPMENTS OF THE AIR FORCE - 1928 TO 1939

During 1927 and 1928 applicants for training and development were low. At the end of 1927, 22 were undergoing training for the Permanent Force, which was up from 13 at the beginning of the year. In 1928, there were 250 applicants for only 35 placements. 44 passed the preliminary selection tests and following medical tests and training, only eight passed as fit for flying duties.<sup>12</sup> On 9 June 1928, Air Commander Sir Charles Kingsford-Smith and Flight Lieutenant Commander T. P. Ulm completed the first flight across the Pacific Ocean, adding another achievement to the history of Australian aviation.<sup>13</sup> The feat achieved by Kingsford-Smith and Ulm was inspirational at a time when the development of the Air Force was to be delayed.

In January 1928, Air Vice-Marshal Sir Geoffrey Salmond was commissioned by the Australian government to investigate the status of the RAAF. The picture he presented was far from flattering. He judged the force as being unfit for war and stated it had many deficiencies.<sup>14</sup> He did however provide suggestions for how the RAAF could be improved and how it could be employed in the event of war. Before these could be undertaken, the world plunged into a Great Depression and this delayed the progress of the RAAF obtaining adequate provisions for air defence requirements. It was not until 1934 that a rebuilding of the defence forces commenced using the Salmond report as a basis for Air Force policy.

During the interwar period, defence personnel at all levels were concerned with the potential threat posed by neighbouring Japan. Apart from northern Australia being an obvious target to invade, it was thought that if Japan was to attack it would be to the western region, between Singapore, Fremantle and Albany, and to the eastern area between Melbourne and Sydney - vital centres of the Commonwealth.<sup>15</sup>

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<sup>12</sup> Ibid., pp. 28-29.

<sup>13</sup> Ibid., pp. 29-30.

<sup>14</sup> Coulthard-Clark, op. cit., p. 99.

<sup>15</sup> David Lowe, 'Australia in the World', in *Australia's War 1914-1918*, Allen and Unwin, St Leonards, 1995, p. 127.

## 2.3 THE WAR IN THE PACIFIC - 1939 TO 1945

On 7 December 1941 when Japan attacked Pearl Harbour and landed in the Philippines and British colonies in Hong Kong and northern Malaya, Australia was geographically amidst a world war. Fears incited in Government and Service leaders 20 years earlier had become a reality. Australia's defences were weak and despite this, the basic strategy to 'beat Hitler first' (in Europe) remained unchallenged. The Australian Imperial Forces (AIF) units available had no combat experience and the RAN were under-resourced.<sup>16</sup> The seriousness of this fragile situation was highlighted when in December two capital ships of the Royal Navy, the *Prince of Wales* and the *Repulse* were sunk off the coast of Malaya. Japan had almost total command of the sea and in the first day of the campaign. Worst of all, it had established control of the air over Malaya.

The strength of the Japanese forces and the closeness of the war to the Australian coastline concerned defence authorities. It was in this context that the Curtin government considered a number of contingency plans in preparation for possible invasion. One of these plans, significant to the formation of large aerodromes in New South Wales, was an 'imaginary and controversial demarcation known as the Brisbane Line'.<sup>17</sup> The build up of defence concentrated on the area south-east of the line would include aerodromes from which to stage bombing attacks and reconnaissance flights to future Japanese positions in northern Australia. Between February and April 1942, the New South Wales government and the Allied Works Council constructed Australia's largest air base, Tocumwal.

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<sup>16</sup> Joan Beaumont, 'Australia's war: Asia and the Pacific', in *Australia's War 1939-45*, Allen and Unwin, St Leonards, 1996, p. 27.

<sup>17</sup> There is dispute regarding whether the Brisbane Line existed and where it ran. Michael Nelmes and The Australian Encyclopaedia claims the Brisbane Line ran from Brisbane to Melbourne. Elwyn Spratt wrote of policy to abandon northern Australia and defend the south-east region defined by an arc from Brisbane to Adelaide. Michael V. Nelmes, *Tocumwal to Tarakan - Australians and the Consolidated B-24 Liberator*, Banner Books, Belconnen, 1994, p. 65. Elwyn Spratt, *Eddie Ward: firebrand of East Sydney*, Rigby Ltd, Adelaide, 1965, p. 95. *The Australian Encyclopaedia*, Volume 2 Bear-Computers, Sixth Edition, Australian Geographic Pty Ltd, Terrey Hills, 1996, p. 339. Also refer Paul Burns, *The Brisbane Line controversy: political opportunism versus national security 1942-45*, Allen & Unwin, St. Leonards, 1998.

During these early stages of the war, the RAAF realised that it needed a substantial aircraft that could carry a large bomb load to distant strategic targets. Australia's aircraft industry was in its infancy and was not sophisticated enough to produce such an aircraft. When Australia and America were trying to push the war further away from the north of Australia, the pursuit of the B-24, being manufactured in the States, began.<sup>18</sup> The base at Tocumwal was designated as the first training centre in the South-West Pacific for Liberators but the number of aircraft required for this purpose had to be doubled to more than a hundred if night training was to be included in the program. Australia's relationship with America deepened in the pursuit of the B-24 and in return, Australia provided the ideal location from which the US could plan their counterattack against the Japanese. From December 1941, Australia accommodated a build up of American troops and air forces and by mid-February 1942, became a strategic responsibility of the United States.

Towards the end of the war, it was apparent that aircraft produced earlier in the war were proving unsuitable. This, together with a shortage of manpower, caused land and air forces to be marginalised.<sup>19</sup> Even before the atomic bombs were dropped on Hiroshima and Nagasaki in August 1945, the war was won by a combination of US land, sea and air power which formed a stranglehold on Japan that it could no longer resist. The RAAF could boast a strong record in terms of losses, however, according to Alan Stephens this result is tinged with the disappointment that the relationship with the US was compromised and that air power was relegated to a subsidiary role in the war in the Pacific.<sup>20</sup>

## **2.4 EMPIRE AIR TRAINING SCHEME (EATS)**

Robert Menzies was Prime Minister in 1939 and had to face the dilemma that in the event of war, should Australian forces be retained to defend its home shores, or should support be given to Britain. Stanley Bruce, Australian High Commissioner in London, suggested Australia's commitment to imperial defence

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<sup>18</sup> Ibid., p. 34. The B-24, also referred to as the Liberator, was America's second in the heavy bomber aircraft category that was produced in any quantity.

<sup>19</sup> Beaumont, *op. cit.*, p. 45.

<sup>20</sup> Ibid., p. 47.

would be demonstrated by training their own aircrew for service in the Royal Air Force at its own expense. In October 1939 Bruce's suggestion was adopted and became known as the Empire Air Training Scheme (EATS).<sup>21</sup>

EATS was designed to provide 50,000 trained aircrew every year as long as there was a need. It was recognised at an early stage in the program that training in Britain alone could not be achieved due to congestion of airfields and frequent bad weather. As a result, the Dominions were also included in the project and estimated numbers from each country included: 22,000 from Britain, 13,000 from Canada, 11,000 from Australia and 3,300 from New Zealand.<sup>22</sup> The RAAF undertook to accept training a total of 923 aircrew in every four weeks of training. A total of 3061 flying instructors alone were needed to meet this commitment and an extensive 'real estate program' had to be implemented just to train aircrew.

When the RAAF was absorbed into the RAF through EATS, it proved to be disastrous for Australia's defence capability. On the one hand the Australian government and Blamey fought to maintain control over the AIF in the Middle East while on the other hand, they were willing to relinquish control of the RAAF to Britain. The organisation of the units so they could be called to Australia's own defence if needed (which did occur in 1941/42) was not possible. No discrete Australian air force existed within this scheme. Although the Agreement stated that aircrew were to be organised into defined units of the Dominions, this did not occur. Of the 'seventeen RAAF squadrons within the RAF ... these did not contain a majority of Australian aircrew'.<sup>23</sup> At the end of 1943 and early 1944 Curtin requested that those squadrons classified as 'Australian' be returned but by this time, the RAF had a surplus. The scheme achieved beyond its expectations and in June 1944 Britain ended the agreement announcing that no further aircrew were required.

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<sup>21</sup> EATS, also known as the British Commonwealth Air Training Plan, was formalised on 27 November 1939 in the Ottawa Agreement. It should also be noted that there is some dispute amongst scholars as to whether it was actually Stanly Bruce or Vincent Massey, Canadian High Commissioner in London, who proposed the idea. Ibid., pp. 4, 18 and John McCarthy, *A Last Call of Empire: Australian aircrew, Britain and the Empire Air Training Scheme*, Australian War Memorial, Canberra, 1988, p. 12.

<sup>22</sup> RAAF Station Parkes NSW, RAAF Historical Section, Canberra.

<sup>23</sup> Beaumont, op. cit., p. 18.



## **2.5 TRAINING STATIONS IN NEW SOUTH WALES**

### **2.5.1 Initial Training Schools**

By December 1941, Initial Training Schools (ITS) had been formed in most states and in New South Wales one had been established at Bradfield Park (not an aerodrome).<sup>24</sup> Training at an ITS provided initial instruction in maths, physics, English as well as electrical technology, basic fitting, engineering drawing, aircraft metal work, welding, carpentry, blacksmithing, metal machine work and general service training and character guidance for apprentices. There were four squadrons attached to an ITS: Mechanical Trades Squadron, Clerical and Supply Trades Squadron, Instructional Methods Flight squadron, and the Training Control Squadron which was responsible for planning and regulating the training commitments of the School.<sup>25</sup> After the war, a School of Technical Training was established at RAAF Base Wagga Wagga.

### **2.5.2 Elementary Flying Training Schools**

EATS was the 'parent' scheme that managed the Elementary Flying Training Schools (EFTS). Of the 12 Schools established throughout Australia, in New South Wales five units were formed: No 4 EFTS at Mascot, No 5 EFTS at Narromine, No 6 EFTS at Tamworth, No 8 EFTS at Narrandera and No 10 EFTS at Temora.<sup>26</sup> During 1942/43, RAAF bases at Mascot and Tamworth were redesignated as a communication station and Central Flying School, respectively. This illustrates how quickly the changing needs of the war dictated the function of its RAAF Bases.

### **2.5.3 Service Flying Training Schools**

In some states, more than one Service Flying Training School (SFTS) may have been established. In New South Wales No 2 SFTS at Wagga Wagga, No 5

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<sup>24</sup> Grahame C. Menzies, *The Royal Australian Air Force at Temora, Uranquinty and Deniliquin during World War Two*, State Library of NSW, 1990, p. 34.

<sup>25</sup> *RAAF Base Wagga Information Booklet*, Royal Australian Air Force.

<sup>26</sup> Menzies, *op. cit.*, pp. 34-5.

SFTS at Uranquinty and No 7 SFTS at Deniliquin were in operation by December 1941.<sup>27</sup> Trainee pilots, following initial training at an EFTS, would be assigned to a SFTS to continue their training to 'Wings' standard. At these bases, pilots were trained on Wirraways and Ansons in accordance with the current syllabus to augment the EATS.

#### **2.5.4 Air Observers' Schools**

There were only two Air Observers' Schools (AOS) in Australia in December 1941. No 1 AOS at Cootamundra, NSW (the first of its kind) and No 2 AOS, Mount Gambier, SA.<sup>28</sup> The AOS program was also a training scheme under EATS to provide training in accordance with the syllabus contained in the RAF Standard Syllabus for the training of pilots, air observers and air gunners.

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<sup>27</sup> Ibid., p. 34.

<sup>28</sup> Ibid.

### **2.5.5 Air Navigation Schools**

Two Air Navigation Schools (ANS) were formed by December 1941: No 1 ANS at Parkes, NSW and No 2 ANS at Nhill, Victoria.<sup>29</sup> The School at Parkes was also the first of its kind and included the latest advances in celestial navigation in the syllabus.

### **2.5.6 Wireless Air Gunners Schools**

Parkes was also the location of No 2 Wireless Air Gunners Schools (WAGS), with No 1 WAGS at Ballarat, Victoria and No 3 WAGS at Maryborough, Queensland.<sup>30</sup> The function of No 2 WAGS was to provide wireless training for aircrew assigned to this task. It was disbanded on 12 February 1944 and two officers were awarded the George's Medal for bravery during a campaign off the north of Australia.

### **2.5.7 Bombing and Air Gunnery Schools**

Two Bombing and Air Gunnery Schools (BAGS) were formed by December 1941 with No 1 BAGS at Evans Head, NSW and No 2 BAGS at Port Pirie, SA.<sup>31</sup> It is claimed the School at Evans Head was the largest training base for the RAAF in the Southern Hemisphere under EATS.<sup>32</sup> The observation post for the nearby bombing and gunnery range is now part of the Broadwater National Park Lookout, approximately 8 kms north of Evans Head.

### **2.5.8 Operational Training Units**

Menzies records one Operational Training Unit (OTU), No 1 OTU at Nhill, Victoria.<sup>33</sup>

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<sup>29</sup> Ibid.

<sup>30</sup> Ibid., p. 35.

<sup>31</sup> Ibid.

<sup>32</sup> Jean Houghton-James and Sheila Manley, *Wings at War: RAAF at Evans Head 1939-1945*, Houghton-James & Manley, 1995.

<sup>33</sup> Menzies, op. cit., p. 35.

## 2.5.9 THE CENTRAL FLYING SCHOOL

Camden, NSW is recorded as being the only Central Flying School (CFS) in the country as at December 1941.<sup>34</sup> This seems to be the case as sources claim the CFS moved to Tamworth RAAF Base.<sup>35</sup> Table 1 therefore lists the CFS as the principal function at Tamworth.

## 2.6 YOUTH TRAINING SCHEMES

### 2.6.1 Air Training Corps

The Air Defence Cadet Corps (ADCC) was re-constituted as the Air Training Corps, a youth training scheme which provided recruits to the wartime Royal Air Force. It still continues today. The objective of the ATC was to provide a steady flow of suitable and qualified men as RAAF aircrew and ground staff.<sup>36</sup> Each trained in specialised work according to his qualifications and the development of individual ability. The concept was to train Cadets of 16 to 18 years of age, who would later become recruits in the RAAF and enable them to engage in more advanced training. It was a forum to prepare cadets mentally, physically and technically so that they would be well conditioned to undertake a responsible job upon joining the RAAF. Training included aircraft design and construction details, aircraft recognition, signalling, cockpit drill, instrumentation, etc.

## 2.7 WOMEN'S TRAINING SCHEMES AND FORCES

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<sup>34</sup> Ibid.

<sup>35</sup> Two sources that document the move of the CFS are conflicting. One states it moved to Point Cook, Victoria (Willis) and the other claims it moved to Tamworth, NSW (RAAF Historical). Refer Ian Willis, *Camden at War - Camden Aerodrome 1939-1945 Draft Background Paper*, Camden, October 1992 and *A Brief History of RAAF Station Tamworth, NSW*, RAAF Historical Section, Canberra. The latter source is taken to be true as it is supported by an article in the Northern Daily Leader-Tamworth, dated Friday, 8 May 1998, that states Tamworth will reap the benefits of a contract to train Australian Defence Force pilots at the British Aerospace Flight Training Australia facility. This indicates there must have been a defence presence at Tamworth.

<sup>36</sup> Ron Maslin, *Wings Over Temora - The Story of No 10 EFTS*, R G Maslin, Temora 1990, p. 19.

### 2.7.1 Women's Air Training Corps

Prior to the outbreak of the war, the Australian women's pilot scene was beginning to develop and grow. It was due to the efforts of Margaret Adams, first President of the Australian Women's Flying Club (AWFC) that encouraged many of its early members.<sup>37</sup> The Women's Air Training Corps (WATC) was the successor of the AWFC and in 1940, a unit was formed in each state. The AWFC in New South Wales became the WATC for that state and long before the formation of the Women's Auxiliary Australian Air Force (WAAAF), was participating in war activities.<sup>38</sup> Under the Presidency of Gwen Stark, girls trained in aircraft engine maintenance, navigation and meteorology. Tasks were also extended to drivers, suppliers and signals. They participated in camps on weekends practicing drill and worked in recruiting and finance, using their meagre wages to purchase their own uniforms and pay for all their expenses.

### 2.7.2 Women's Auxiliary Australian Air Force

It was activity of the WATC that was largely responsible for the formation of the Women's Auxiliary Australian Air Force (WAAAF). Authorised by the government in 1941, 'most of the senior officers from the WATC and the AWFC formed the nucleus of the new organisation.'<sup>39</sup> Gwen Stark (mentioned above) became the first servicewomen recruited by the WAAAF in New South Wales. Recruiting for the WAAAF however was cut short when Prime Minister Curtin announced that no more women were to be appointed in the service until all the unemployed men had been absorbed. When the war moved closer to Australia, recruiting re-opened but being a servicewomen was not without its problems. Uniforms were supplied from the RAAF stores and there were many amusing incidences of women trying to fit into men's clothing.<sup>40</sup> Also, accommodation was in low supply and billeting proved difficult because women were hesitant about taking servicewomen into their homes.

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<sup>37</sup> Nancy Bird, *My God! It's a Woman - An Autobiography of Nancy Bird*, Angus & Robertson, 2000, p. 155. The Australian Women Pilots' Association was also a prominent group up until the 1980s.

<sup>38</sup> Ibid.

<sup>39</sup> Ibid., p. 156.

<sup>40</sup> Ibid., p. 157.

## 2.8 KINDRED AIR ORGANISATIONS

Many kindred air organisations were formed prior to and during the war. At least three have been identified and receive only a brief mention here.

- The Women's Junior Air Corps (WJAC) was a British junior air organisation for girls, probably similar to our ADCC.
- When EATS was formed, other Air Cadet organisations were formed in Dominion countries.
- The Australian Air League (AAL) formed in 1933 as the Air Minded Development League. Some 10,000 members served in the Second World War. From it the Civil Air Guard (CAG) and the Air Defence Cadet Corps (ADCC) were formed.
- Volunteer Air Observer Corps (VAOC) were valuable to the RAAF in providing aid to reporting observations of sightings and sounds of planes throughout Australia by control centres. Reports were immediately sent to central control and resulted in saving many lives and aircraft.

## 2.9 AERODROMES AND LANDING GROUNDS - WARTIME

### 2.9.1 Construction of aerodromes and landing grounds

When the construction of aerodromes and landing grounds began in Australia as a direct result of the Second World War, the Works Director, Air Services kept records of their progress, marking them as 'Most Secret'. In a Memorandum, a table was compiled showing with a list of 'Aerodromes and Landing Grounds: Existing and Proposed'.<sup>41</sup> The table was divided into five areas: Western, North-west, North-east, Eastern and Southern. The aerodromes of New South Wales were located within the 'Eastern Area' (which also included aerodromes located

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<sup>41</sup> NAA: A705/1, 163210.

in Queensland). Often there are references to the Eastern area of Australia. This, therefore may therefore include New South Wales or Queensland.

Appendix E illustrates the five areas. In August 1942, 29 aerodromes were either existing or under construction. It is difficult to know how accurate this record is but the number is somewhat marginal to the total number identified in this study.

### **2.9.2 'Order of Aerodromes'**

Until February 1943, each 'area' was to provide RAAF Command Allied Air Forces (RAAF Command AAF) with up to date information concerning the disposition of Squadrons and the associated operational administration, called an 'Order of Battle'. The ongoing construction and occupation of the RAAF at aerodromes and landing grounds precipitated an 'Order of Aerodromes'.<sup>42</sup> The purpose of introducing the order was so operational commanders could have immediate access to vital details concerning aerodromes. This enabled commanders to obtain a complete picture of the status of aerodromes and operational provisioning. When this information was read in conjunction with the 'Order of Battle', it provided all the necessities for planning by any operational commander.

### **2.9.3 Maintenance of aerodromes and landing grounds**

Technical manuals were regularly printed giving guidelines on works, buildings and quarters etc, within an aerodrome or landing ground precinct. At least once a month, depending on local conditions, the commanding officer was responsible for ensuring that regular maintenance checks of aerodromes and landing grounds under his control were made. The inspections were to consider the following matters: surfaces of landing areas; hard-surfaced runways; taxiways and hangar aprons; drains; boundary marks and wind indicators; fences. The inspections of the runways were to detect any defect in the surface whether roughness or unevenness, holes, depressions, bare ground, erosion or drift, boggy patches, softness of the surface, long grass, suckers, stumps or roots showing, sticks, stones and other debris; and if the surface was gravel or

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<sup>42</sup> NAA: A705/1, 7/1/1699.

bitumen, certain defects were to be noted. Similar observations applied to the apron areas.<sup>43</sup>

#### 2.9.4 RAAF and Civil Aerodromes

A number of aerodromes used by the RAAF in the Second World War were originally civil or private airfields. Civil airfields were managed by the Department of Civil Aviation (DCA) and were also used for commercial purposes.<sup>44</sup> Often prior to the RAAF taking over an airfield, a degree of enlarging and re-conditioning was required so it could accommodate larger aircraft. Sometimes, local Councils undertook these works, as in the case of Cessnock.<sup>45</sup> In a letter to the Minister for Defence, the Council expressed the opinion that Cessnock could be extended to accommodate the landing of the larger aircraft. Whether the Council went ahead with the upgrade or not, no evidence was found to confirm this. Cessnock is however listed as a Relief Landing Ground.<sup>46</sup>

There was also the instance when RAAF aerodromes were required for civil use, in the case of distress or real emergency. As early as August 1931, the RAAF recognised this need. Consent of the RAAF allowing the use of its aerodromes was outlined in a booklet entitled *Civil Aviation*.<sup>47</sup> The information provided in this booklet sets out details including: the use of Air Force aerodromes, customs and excise, housing of aircraft in hangars, payment of supplies (in the case of fuel), assistance from commanding officers for forced landings, salvaging of aircraft, the use of service motor transport vehicles for carrying crashed aircraft, repairs or other work on civil aircraft, collection of fees for civil air traffic, disposal of collections and accommodation for civil pilots. Such instructions required approval by the Air Board and were acknowledged by the Crown Solicitor prior to being issued.

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<sup>43</sup> NAA: A705/1, 7/1/2082.

<sup>44</sup> Commercial aviation showed signs in 1919 when a group of businessmen proposed to register a commercial airline company called Aerial Transport Limited. The Government approved the proposal which planned to operate passenger, freight and mail services within the Commonwealth, train pilots and place the whole organisation in the Government's disposal in the event of war. Gillison, op. cit., p. 8.

<sup>45</sup> NAA: A705/1, 7/1/448.

<sup>46</sup> *RAAF and USAAF Airfields in Australia and SWPA During World War Two, Part I, Sections NT - WA - SA - VIC - TAS - ACT - NSW*, Australian War Memorial, Canberra.

<sup>47</sup> NAA: A705/1, 8/1/185.



## 2.10 AERODROMES AND LANDING GROUNDS - POST-WAR

While it was not until in September that the Japanese surrendered, therefore ending the war in the Pacific, post-war policy had begun three months prior.<sup>48</sup> In a Minute Paper dated 4 June 1945, the Department of Air submitted that policy should be initiated regarding the retention of aerodromes in Australia and perimeter islands. A policy drafted in October 1943 outlined the following:

'That, where extensive constructional work has been undertaken and permanent assets, in the form of hard-surfaced runways, buildings, etc. have been created, the aerodromes should be retained by the Commonwealth and fenced off, with a minimum loss of land to the original owners, and the adjoining land be returned, providing always that they necessary easements for the provision of drainage, access roads, etc. are retained'.<sup>49</sup>

The majority of land that was occupied by the RAAF was acquired under National Security (General) Regulations. It was proposed that when the Regulations were repealed, the land as acquired would either be reverted to the original owners, or, if the RAAF decided, it would purchase or lease the land. There was occasion when the DCA expressed interest in some airfields and if it suited their requirements, would apply to take it over.

Post-war planning had to include all three forces in terms of their future development and consideration was to be given with Australian commitments for Air Bases in the World Security Organisation.<sup>50</sup> The Department of Air was interested in the strategic location of aerodromes for future defence of not only Australia but perimeter islands. Air routes, civil aviation requirements and post-

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<sup>48</sup> A succession of incidents that occurred in the first half of the year provide some indication of the changing defence context. On 12 April President Roosevelt died and Adolf Hitler died on 30 April. VE-Day was declared on 8 May, signifying the end of the war in Europe and on 5 July, Prime Minister Curtin died.

<sup>49</sup> Op. cit., NAA: A705/1, 8/1/185.

<sup>50</sup> NAA: A1196/6, 42/501/230 PT1.

war training requirements were key factors in this process and the Department called for recommendations for post-war policy.

Once drafted, the forces were contacted with the proposed post-war policy and the Department of Works and Building was instructed to cost the acquisition of aerodromes in an initial review (provided in Air Board Agendum No 6799 dated October 1945).<sup>51</sup> On 12 February 1946, the Directorate of Air Staff Policy reported an estimated cost of approximately £50,000, and subsequent to this estimate, a further review was conducted.<sup>52</sup> A summary of the review is below (only WWII RAAF airfields in NSW are included):

a) Introduction

It was proposed the RAAF form two organisations with one, the Mobile Task Force (MTF), designated for peace-time operations and the other, Home Defence Force (HDF), for war.<sup>53</sup>

b) Object

The object of the review was to consider present airfields held by RAAF and determine their ultimate use or disposal in accordance with current planning.

c) Composition of the Force

The MTF, the HDF and miscellaneous units.

d) Strategic Air Routes

The RAAF were to use normal civil airfields and attendant facilities where no RAAF airfield was available.

e) Assumptions

It was assumed that airfields were selected on the basis of the disposition of one Wing [Commander] per airfield where possible; and that the airfield is located at or in the close vicinity of a Stores Depot.

f) Airfields

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<sup>51</sup> Ibid.

<sup>52</sup> Ibid.

<sup>53</sup> The MTF would comprise permanent air force units. At the outbreak of war, the units would form an Air Expeditionary Force and during peace-time, the units would be located at airfields situated in the South East region of Australia. The HDF would include Citizen Air Force (CAF) squadrons and be the home defence force for the Commonwealth and, in time of war, proceed to the islands. The CAF would largely be a training organisation during peace-time and be located adjacent to main areas of population. Many airfields constructed in 1942-45 would not be required for use by the Post-War Air Force and surplus airfields were to be submitted for disposal.

Based on the above, a tentative list was proposed:

- i) for the MTF included Parkes and Schofields; and
  - ii) for HDF: Bankstown, Rathmines, Richmond and Williamtown.
- g) **Miscellaneous Airfields**  
In addition to the above, it was deemed necessary to retain and maintain certain airfields for purposes of training, strategic reasons, stores depots and aircraft depots. The New South Wales airfields included:
- i) for training: Uranquinty, Forest Hill and Williamtown
  - ii) for general reconnaissance: Richmond
  - iii) for VHB operations: Sydney-Brisbane area
  - iv) for stores depots: Dubbo or Richmond
  - v) for aircraft depots: Richmond
- h) **Airfields to be retained but not maintained**  
New South Wales airfields included: Bulga, Dubbo, Fleur, Hoxton Park, Jervis Bay, Marsden Park, Narromine and Nowra.
- i) **Final Selection of Airfields**  
The review stipulates that prior to final selection a detailed survey of each airfield was to be carried out.
- j) **Airfields for Disposal**  
The remaining airfields after the above selection process has been achieved, were subject to disposal to their original owners, by sale or to the DCA as appropriate.
- i) Airfields not being used by RAAF, not required for future use and subject to immediate disposal include:  
[Allandale, Bradley, Wandook (Deniliquin)], [Blowclear, Goobang East, Tichbourne (Parkes)], [Combaning, Pucawan, Young Road, Junee Road (Temora)], [Coolamon Road, Tootool, Yarrangundry (Uranquinty)], [Cudjello, Bundidjarie, Lake Coolah (Narrandera)], [Dandaloo, Burroway, Trangie (Narromine)], [Pitt Town, Castlereagh (Richmond)], [Woy Woy (Schofields)], Albion Park, Bargo, Broke, Clairville (Camden), Coffs Harbour, Cordeaux, Corowa, Dungog, Glendon, Gouldburn, Hexham, Mascot, Menangle, Mittagong, Moruya, Nabiac, North Bourke, Raglan, Roto, St Georges Basin, Strowan, The Oaks, Tuggerah, Wallgrove, Wanganella, Warkworth.

- ii) Airfields occupied by the RAAF or Allied Forces, or airfields which were required by forced returned or returning from operational areas include: Broke, Camden, Cootamundra, Deniliquin, Evans Head (possibly armament training camp), Mt Druitt, Narrandera, Tocumwal, Tamworth and Temora.

## **2.11 TYPES OF AERODROMES AND LANDING GROUNDS**

### **2.11.1 Definition of 'aerodromes' and 'landing grounds'**

Sources referenced for this study referred to 'aerodromes' and 'landing grounds' and in respect of a RAAF unit, includes the 'parent aerodrome and satellite aerodromes, relief landing grounds, forced landing grounds and any ancillary landing grounds, under the control of the RAAF, and normally used in the activities of a unit'.<sup>54</sup> Some definitions are given:

#### **Parent Aerodrome:**

This indicates it is a major operational aerodrome. A 'parent' may have a number of satellite aerodromes or landing grounds, or it may just be a major base.

#### **Satellite Aerodrome:**

Normally associated with a major operational airfield, and used to relieve the congestion in the circuit area. Most training airfields also had at least two.

#### **Advanced Operational Base:**

These were mostly created in the early part of the war on mainly unused civilian airfields, which had facilities of water and phone, as well as stocks of fuel and ammunition, but were mostly not staffed with permanent RAAF ground crew.

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<sup>54</sup> Op. cit., NAA A705/1, 7/1/2082.

### **Emergency Landing Ground:**

An area of land which has been prepared for use by aircraft, but not on a regular basis, such as paddocks, homesteads and small towns, etc.

### **Relief Landing Ground:**

An area of land which has been prepared for regular use by service aircraft.

### **Dispersal:**

These were attached to an Aircraft Depot, Aircraft Park or Operational Base, and consisted of landing ground with revetted areas for open storage of aircraft against possible air attack, and with the minimum of services and no permanent hangars or buildings.

### **Aircraft Depot:**

An Aircraft Depot was an aerodrome where large numbers of aircraft were stored and maintained. In some cases the aircraft were used for training purposes.

### **Aircraft Park:**

An Aircraft Park was an aerodrome where large numbers of aircraft were parked, like a carpark. The aircraft was used for operational and training purposes.

## **2.12 WORLD WAR II AERODROMES AND LANDING GROUNDS IN NSW**

**Appendix F** provides a list of all known aerodromes and landing grounds identified in New South Wales. Not surprisingly, the majority of aerodromes are in the Sydney region with a total of **23**. The Murrumbidgee region has the second largest number, totalling **21**. Next, the Darling Plains and Murray regions each have a total of **17** and **16** respectively. None were identified in Monaro or Lord Howe regions, and only one each was located in Manning River and South Coast.

From this list it was determined that they fall into three categories: Operational, Training and Maintenance. The category denotes the principal former function of the aerodrome and is referred to as its 'type' or 'use'.

### **2.12.1 Operational Aerodromes**

Operational Aerodromes were mostly created in the early part of the war on mainly unused civilian airfields, which had water and phone facilities as well as stocks of fuel and ammunition. Generally, they were not staffed with permanent RAAF ground crew. Squadrons were often assigned to the bases and came and went depending on the circumstances of war and requirements of the RAAF. In this study, Operational Aerodromes include those designated as a Station, Satellite or Ferry.

### **2.12.2 Training Aerodromes**

Training Aerodromes are those where any form of training took place. Various kinds of training schools were based at aerodromes to meet the needs of the RAAF and these have been described at section [2.5](#).

### **2.12.3 Maintenance Aerodromes**

Maintenance Aerodromes include those where either a stores depot is attached to it, or where a Repair and Salvage Unit (RSU) operated. These were few in number but they had an essential role in providing servicing, equipment and supplies to the bases.

### **2.12.4 Summary of Aerodromes and Landing Grounds Identified**

The complete list of known aerodromes provided in [Appendix F](#) have been divided into two tables according to their 'type' and these are included at [Appendix G](#).

## **2.13 ANALYSIS OF FINDINGS**

### **2.13.1 Parent Aerodromes**

Whether an aerodrome was a 'parent' or not does not seem to have a bearing on its primary function during WWII. The functions of the 'parents' considered in this study are quite diverse. They include Elementary Flying Training Schools, Service Flying Training Schools, Aircraft Depots, Central Flying Schools, Wireless/Bombing and Gunnery Schools, Stations for the USN FAA, Communications, US FERRY, Air Observers Schools, Operational, Repairs and Stores Depots.



As there seems to be no definite pattern to the formation of the 'parents' in terms of their principal function, it must be assumed that the bases were formed at the discretion of defence leaders, depending on the requirement as the war progressed and urgent wartime expansion requirements arose. The majority were formed during 1940 indicating that very early into the war, RAAF and EATS requirements were being addressed. Prior to the formation of aerodromes, the sites had to be surveyed for suitability. As this would have taken place in the second half of 1939, the formation of the aerodromes indicates their significance in relation to the European war and being able to provide trained pilots for combat.

From the histories contained in the SHI forms, it appears the RAAF presence was mainly for the duration of the war. Even during this time, construction plans were constantly being revised, delayed, or abandoned depending on the status of the war at the time. When the South-West Pacific Area campaign began and the northern part of Australia was bombed, many plans were changed as a direct result.

From the plans at [Appendix H, J and K](#), of the Operational, Training and Maintenance Bases, some patterns do emerge. The Operational Bases do not appear to be located at any obvious large town centre. Apart from the Communications centre at Mascot, there was a Station at Nowra, a US staging ground at North Bourke, and two Operational units at Bulga and Albion Park. These are quite discrete locations which would suit their purpose to be hidden from view of any enemy aircraft. Also, at least three of these sites, Mascot, North Bourke and Nowra, had existing airfields which would have had basic facilities and could easily be taken over. That they were pre-existing airfields would also indicate that they were suitably located in terms of the topography. Airfields are not located near hills or mountains for obvious reasons.

Refer [Appendix H, J and K](#) for locations of 'parent' aerodromes according to their principal former function as listed in Table 1 ([Annexure G](#)).

### **2.13.2 Distribution of Satellite Aerodromes**

As mentioned earlier, satellite aerodromes were constructed to alleviate congestion at 'parent' aerodromes. The degree of congestion at any of the 'parents' could be indicated by the number of satellites. For instance, in Western Sydney between Blacktown and Penrith (at the foot of the Blue Mountains), Fleur had five satellites. Fleur was a Station for the United States Navy Fleet Air Arm (USN FAA). As Australia needed the assistance of the US with its extensive defence assets, the government considered it appropriate to provide any necessary infrastructure from which the US fleet could base itself in the southern hemisphere. It was an objective of the US Navy to have one 'parent' and six dispersal airfields in the Sydney region and Fleur met this requirement. The presence of the US in the State and at its aerodromes is obviously significant due to their success in the South-West Pacific Area campaign.

Apart from Fleur Station, Narromine RAAF Base dominates the Darling Plains region with seven satellites and the four satellites of Parkes monopolised the whole Lachlan region. Narrandera and Uranquinty occupied the Murrumbidgee region, while Deniliquin and Tocumwal the Murray region. Interestingly, all these aerodromes were principal training centres: EFTS, WAGS, EFTS and SFTS respectively.

These regions are concentrated in the south-west of the State, furthest from the coast and closest to the 'Brisbane Line' mentioned earlier. This made them safe from a seaborne invasion but were strategically located in the event of the Brisbane Line policy being activated.

The other important element to remember is the Strategic Land Corridors mentioned earlier. If one imagines the route that traverses between Bourke and Sydney, Sydney and Melbourne via Albury, and Bourke to Melbourne, these bases are located within that principle triangle and, importantly, connected to the major Stores Depot at Dubbo. This last factor has some relevance with the Brisbane Line. If it did run from Brisbane area to Melbourne, this places Dubbo just outside the Line and in a most strategic location to service the nearby aerodromes that may have been called upon for defence of the south-east area. If, however, it was a line or arc from Brisbane to Adelaide, it places Dubbo in the centre, a location that could also be perceived as advantageous.

### 2.13.3 Geographic Distribution of Aerodromes in General

The location of the aerodromes, whether parent, dispersal or otherwise, depended upon at least one crucial factor, the purpose or function of the aerodrome. Depending on whether the purpose of the aerodrome was for training, operational or maintenance, this factor determined where the aerodrome would be located. For instance, with the commencement of the war and the rapid increase in the requirements of the RAAF, training bases were fundamental to ensuring that it could provide the skilled personnel in air combat.

With the formation of the Elementary Flying Training School (EFTS), centres were set up at aerodromes and often works had to be done to improve an existing aerodrome which may have been just a large cleared paddock. RAAF Base Narromine was just one of these. When the existing aerodrome was surveyed in November 1939, some basic structures were present and when it was decided that the location of the aerodrome at Narromine was a suitable site for an EFTS, the site needed to be expanded upon.

Narromine is located about 40kms west of Dubbo. The actual aerodrome is located in an area bounded by the Macquarie River to the East and a main road leading to Narromine township on its South-west side. These two landmarks would have made navigation easier for the trainee pilots and the main road was of course imperative for road access to the Base but the River would also have been important for recreational purposes for the personnel stationed at this base. This inland area was unlikely to be bombarded by enemy aircraft compared with if it was located on the coast. It was also favourable as the climate was considered healthy and had suitable weather conditions for flying operations. The proximity to the township was also an advantage for recreational purposes. A population of 1800, it provided a supportive infrastructure such as sporting facilities including swimming hole in the River and swimming pool in the town, tennis courts, cricket and football grounds, golf course and bowling club.<sup>55</sup>

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<sup>55</sup> Murray Moore, *History of RAAF Narromine*, RAAF Historical Section, Canberra, 1991.

Another example is Temora which was chosen because it was comparatively fog free, compared with Cootamundra and Wagga Wagga.<sup>56</sup> The airfield was located on fairly flat land and had low, undulating hills in the distance. This topography was highly desirable for a training base with young trainee pilots to reduce the possibility of accidents.

The western region of New South Wales was ideal for locating aerodromes, especially for training. The land was flat, there were no nearby mountains to cause risk of accidents and fatalities and they were protected from attack. Weather conditions were also less difficult than in other areas, particularly near the coast and the ground proved suitable for heavy aircraft traffic.

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<sup>56</sup> Maslin, *op. cit.*, p. 11.

#### 2.13.4 Associated Sites and Structures

It should be mentioned that at least two 'parent' aerodromes have associated structures that have important affiliations with the aerodrome. Although these structures have not been considered in any detail in this study, they are mentioned in the SHI Forms attached and add to the significance of the aerodrome sites. Dubbo has a Stores Depot which was ancillary to the aerodrome. The Depot, now in the centre of the city, has many original buildings, roadways and hangars in situ. It is a very large and substantial World War II site and the future management of the site would require careful consideration. The site has been assessed by Graham Brooks as having State heritage significance.<sup>57</sup>

Evans Head has a number of buildings that are located at different sites around the village. The Mandalay Flats provided accommodation to personnel; the Scout Hall was an all-purpose building; Jo Woodsford Holiday/Backpacker Accommodation has links with personnel including nurses; huts at Camp Koinonia and Blue Pool were used for recreation purposes; adjacent to Blue Pool is a bomb dump that housed bombs; Broadwater Lookout contains remnants of an observation site. The Evans Head Lookout and War Cemetery also have important social associations to the local community.

Of considerable interest is the bunker at Bankstown. Considered to be the largest underground installation, the secret Air Defence Control Centre was a huge building the size of a three-storey hotel built in 1942.<sup>58</sup> There was a large operations room from which all RAAF wartime missions were directed and the complex included many facilities. The bunker has since been built over yet the burn-out remains, the result of earlier vandalism, remains in situ beneath the central park which is a feature of the housing estate.

One important feature at many aerodromes that deserves a mention are the original Bellman Hangars. Around the State some still exist at Evans Head

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<sup>57</sup> Graham Brooks and Associates Pty Ltd, *RAAF Stores Depot, Dubbo*, Heritage Analysis, May 1999, p. 142.

<sup>58</sup> Brian and Barbara Kennedy, *Subterranean Sydney: the real underworld of Sydney Town*, Reed Books Pty Ltd, Frenchs Forest, 1986, p. 77.

Aerodrome, Dubbo Stores Depot, and Tocumwal Aerodrome, although this list is not exhaustive. The significance of the Bellman Hangar is that it is an example of the earliest prefabrication techniques. Steel was an essential source for armaments and munitions and was in short supply, and although available for buildings, it remained the preferred material for larger structures. The Australian building industry therefore had to find alternatives for the construction of hangars for wartime operations.

The solution was found in unseasoned Australian hardwood. The reason this was so suitable for hangars was because the material was able to be extended the great lengths of the wide spans of hangars.<sup>59</sup> The new technique of fabricating the gable-shaped trusses with shear connectors and steel plate joints features in the main hangars at Tocumwal, which were the first large structures to use unseasoned green timber. They are unique examples of the first recorded long-span trusses that used timber as tension web members and are the longest clear span gable-shaped truss buildings known in Australia.<sup>60</sup> In addition, the erection method of the hangars is also an important factor. The size of the hangars were beyond the reach of the rudimentary cranes of the time and the trusses had to be raised using a pole and cable to swing them into position.

The aerodromes identified in New South Wales do have important structures on site. Also, the aerodromes cannot be considered in isolation, as there are instances where important ancillary and associates sites exist and contribute to the significance of the aerodrome it is associated with. These sites should be given due consideration in the assessment of the aerodromes.

#### **2.13.5 Archaeological and Movable Heritage**

This study is unable to investigate and address in any detail the built structures, potential archaeological remains and any movable heritage associated with the aerodromes identified. It is highly recommended that this be undertaken at a future date and is mentioned in the table that addresses Further Areas of Study.

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<sup>59</sup> Gregory Nolan, 'Australian Timber Buildings of the Second World War', SAHANZ, Launceston and Hobart, 1999. Gregory Nolan is of the Timber Research Unit, School of Architecture, The University of Tasmania. Also refer <http://oak.arch.utas.edu.au/projects/retro/war/wari17.html>.

<sup>60</sup> *Tocumwal Historic Aerodrome Museum Nomination*, Tocumwal, 2001.

### **2.13.6 Design of Runways**

The importance of an aerodrome during wartime can be determined by the number, length and design of the runways. If an aerodrome had three lengthy sealed runways that formed a triangle, it has far more significance than an aerodrome that has one short airstrip in a field.

Of the 'parent' aerodromes, Parkes had two sealed runways that intercepted and had extensive taxiways linking them. Tocumwal had three sealed runways which indicates that the base was considered important and given higher priority over other bases. The presence of the USAAF and operation of the B-24 Liberators undoubtedly contributed to its high standards.

Of the other satellite and landing grounds from the information discovered, the design and condition of the runways varied. At Dandaloo one runway was reported to be usable and in reasonable condition but was very dusty in dry weather and better in the wet. Moruya had three gravel runways, Clairville had one sealed and Napiac four, although the surface is unknown.

It can be concluded that runway design and condition of runways are important indicators of the importance of a particular aerodrome. The higher the number of runways and the better the finish on the surface signified an aerodrome that had a heavy use and consequently, probably had more infrastructure, personnel, aircraft and degree of importance in the war effort.

### **2.13.7 Social Significance of Aerodromes**

The social significance of the aerodromes is another important factor. In Evans Head, Dubbo and Tocumwal, for example, there are strong community links with the aerodrome. People who served in the war still live in the area and are concerned about the future of these sites. At Tocumwal one person bought a couple of the Bellman Hangars to ensure that they were not demolished.

In addition, the aerodromes are places where celebrations are held, anniversaries of important events take place and aviation enthusiasts visit. At Evans Head an active committee organises yearly 'fly-ins' where aviators from all parts of the country fly their planes to Evans Head. It is also a place where the WAAAF meet on a regular basis. This year, the event was in conjunction with the 'fly-in'. It is held over a weekend and former servicemen and servicewomen travel from as far as Sydney to participate.



WWII aerodromes are valued by ex-service men and women and successive generations. The study and eventual heritage protection of these sites may help to maintain these social values, particularly beyond the life of the men and women who served in the war and at these locations. Although war has many negative associations, it is nevertheless a part of our social history that should receive acknowledgement and analysis.

## **2.14 RECOMMENDATIONS FOR HERITAGE PROTECTION**

The recommendations are in two sections: one addresses the 'parent' aerodromes and the other Satellite and Landing Grounds. The following are put forward as proposals only. Whether they are adopted or not is up to the discretion of the Heritage Council.

The recommendations are based on the information provided in this study. It is suggested that in order to proceed the heritage protection of the sites, the draft SHI forms for the 'parent' aerodromes be completed fully and that forms are completed for other sites, if recommended for listing on the State Heritage Register.

It is also suggested that prior to making a recommendation to the Heritage Council for consideration for listing, the Heritage Office engages with the respective local council and community representatives, and involves the local heritage adviser if one has been appointed to the area. The aim is not to dictate what will be listed but to build on relations and provide the right level of conservation for these significant sites.

### **2.14.1 Recommendations for Listing on the State Heritage Register**

Due to the important role that 'parent' aerodromes had in the events of the RAAF in the Second World War, it is recommended that all 'parent' aerodromes listed in Table 1 ([Appendix G](#)) be considered for listing on the State Heritage Register.

As each aerodrome has its own unique circumstances, they will need to be investigated individually, using the Criteria for Listing on the SHR and the State themes. If the aerodrome is active, such as Richmond, the Heritage Office will need to consider exemptions from requirements for Heritage Council approval so it can continue to operate as a RAAF Base but receive the recognition as an important site to the people of the State of New South Wales. It will also be necessary for each site to have a Conservation Management Plan prepared which should include recommended management practices and policies that address current activities while considering the heritage value.

#### **2.14.2 Recommendations for listing on a Local Environmental Plan**

Satellite aerodromes had a meaningful role in RAAF operations during the war by being ancillary to 'parent' aerodromes. It is therefore recommended that all satellite aerodromes identified in Table 2 ([Appendix G](#)) be considered for listing on the respective local council's Local Environmental Plan (LEP). As the completed list was compiled during the analysis of this study, it would be necessary to first check the Heritage Office database for current listing status. It can be presumed that almost none of these aerodromes will be listed already as it appears that generally local councils have not yet recognised the heritage value of the major aerodromes let alone all the minor ones. A sample test search of the State Heritage Inventory for satellite aerodromes for each parent aerodrome has confirmed the lack of LEP listings.

It is possible, with further investigation, that some of these satellite aerodromes may reach the threshold for listing on the State Heritage Register. This should be considered for the larger, more active sites.

#### **2.14.3 Recommendations for Landing Grounds**

It is recommended that the remainder landing grounds also be considered for listing on an LEP. If any of these items do not meet the threshold for LEP listing, then it is recommended that the details of these sites be recorded in the form of a photographic recording. The Heritage Office can provide guidelines on this process.

## **2.15 FURTHER AREAS OF STUDY**

The study of aerodromes is one element of many under the topic of defence. In relation to aerodromes, below is a list of suggested topics that would complement this study:

Associated sites and structures	Description
Airfield Buildings	<p>Airfield sites comprised many buildings including: watch offices and towers, hangars, living and communal, administration, recreation, stores, ablutions, transport, quarters, sheds and posts.</p> <p>Midland Publishing Limited have published a pocket series of British Airfield Buildings of the Second World War, Expansion and Interwar Period.</p>
Construction Methods	<p>Bellman Hangars are significant structures at airfields.</p> <p>(eg Tocumwal, Evans Head)</p>
Factory Buildings	<p>Factories were purpose built for the production of goods needed to support war activity.</p> <p>(eg industrial site in Camellia which made aluminium sheeting for aircraft was considered of prime strategic importance)</p>
RAAF Radar Stations	<p>Radar Stations were important in locating enemy forces.</p> <p>(eg Kiama)</p>
Stores Depots	<p>Stores depots were ancillary to aerodromes and played a key role in the development of defence services.</p> <p>(eg No 2 Stores Depot Detachment D and No 6 Stores Depot, Dubbo)</p>

<b>Associated sites and structures</b>	<b>Description</b>
Underground Installations	Structures were constructed below ground where wartime missions took place.  (eg Bankstown; Keswick Estate, 1.6kms due east of Dubbo; Dubbo airforce stores depot site)
Wireless Air Gunners School and Transmitting Stations	Radar operators had a key role in air defence and were sometimes selected for training in Lancasters.  (eg Wireless air Gunners School Ballarat, Victoria)

## 2.16 CONCLUSIONS

There is no doubt that compared with literature written on the army and the second AIF, and considering the vital contribution of air power in operations during World War II, airfields have received little acknowledgement. This may be due to the complicated beginnings of the RAAF, its absorption into the Royal Air Force and the domination of the US forces.

The number of aerodromes and landing grounds identified in this study has reached numbers far beyond what was at first thought. It is hoped that this study has answered a need and if the recommendations are followed, then it will have achieved its objective and help recognise and conserve significant items of the State's heritage.



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