
AN INTRODUCTION TO THE BRIGADE

In order to take on the Japanese Army, with any hope of success, forces must be trained up to high standards of toughness, fighting efficiency, adaptability, discipline and morale.

18th Australian Infantry Brigade, Intelligence Summary¹

Throughout the course of the Pacific War, Australian infantry brigades faced monumental challenges in the SWPA, not only from the terrain and from the enemy but also owing to a rapid evolution of tactics and technologies within these intermediate formations. With time and experience, brigades evolved from rudimentary beginnings into expeditionary forces, incorporating hitherto unfamiliar attached elements, support arms and modes of transportation, all while fighting their way across the SWPA. The Australian infantry brigades adapted from formations established on World War I doctrinal, operational and tactical principles into those using more ‘modern’ organisational techniques and structures. Such an analysis must include a brief examination of the state of these formations at the onset of the war in terms of historical legacies, ‘orders of battle’ and to a limited degree the raw material in terms of manpower represented by Australian brigades at this early stage. One particularly important aspect of this analysis is the key transition of several formations between 1942 and 1945 from ‘standard’ Australian infantry brigades to ‘Infantry Brigade Groups (Jungle)’ and finally to ‘Infantry Brigade Groups (Jungle)’ designated as amphibious ‘Assault Brigades’.²

THE ORIGINS OF THE BRIGADE

Japanese army and naval forces demonstrated a high level of proficiency in expeditionary warfare during their rapid expansion across the SWPA from late 1941. The Australian Army, which had been starved of resources during the interwar period, had a strong tradition and philosophy of citizen soldiery fitting into larger allied organisations as required. Its youth, its hollowness and ageing officer corps placed it in a particularly weak position in 1939 for independent, expeditionary operations. There was history to such weakness. For example, John Moremon noted that 'in August 1914, Australia possessed no military organisation larger than a brigade and when its offer to raise and equip a division was accepted by Britain, the dominion had to create this force from scratch'.³ From this point, the Australian Army only had 25 years of division-level experience before the onset of World War II. Moreover, it was once more a shallow type of peacetime experience.

The part-time officers and men of the interwar Citizen Military Forces may have been ordered to form brigades and divisions, but they certainly never trained as such, even in terms of realistic staff duties, let alone in an operational context. When the 18th Australian Infantry Brigade was raised as part of the 6th Infantry Division in October 1939, it was one of the first three brigades of a second Australian Imperial Force (AIF). Sergeant Owen Curtis, a soldier of the 18th Australian Infantry Brigade who had volunteered at the start of the war and would earn a commission at Buna, commented: 'It was amazing the number of returned men, 1914–1918 war that went away with us.'⁴

In 1939, the average age of an Australian infantry battalion commander was 51, an age many considered too advanced for the rigours of infantry combat. Nevertheless, seniority and longevity led much of the interwar promotion cycle in the Australian Army.⁵ Moreover, senior 2nd AIF officers had considerable influence in promotions: they stuck with men they knew and rewarded old militia connections and friendships. During the interwar period, the regular promotion cycle was officers moving up one position after another until they reached brigade major, an officer who served as the operations officer and supervised the brigade intelligence officer and Intelligence Section. A successful tour as brigade major could lead to a future battalion command. This practice and the ages it tended to engender among CMF commanding officers was at odds with a general belief in both the Australian and United States armies: officers over 50 years old could not handle the rigours of leading line

combat units.⁶ Subsequently, when experiences of battle began to affirm such concerns, both armies actively looked to retire these ageing officers thereby making room for a younger generation.⁷ As the war progressed, promotions for brigade in combat were based on combat proficiency (and often disease-related vacancies), not longevity. One Australian officer in the 18th Brigade recalled after the war an incident in which his company commander was injured during combat. As the senior lieutenant, he took command and led the company through the fight. 'I got through it without being wounded myself,' he recalled, 'so I just kept the company and the next thing I knew I was promoted to captain.'⁸

Garth Pratten argues that the strength of the Australian CMF in the 1930s was in part largely due to the service of World War I veteran officers and non-commissioned officers who had stayed in the force during the interwar period.⁹ This is true in the sense that it maintained the day-to-day organisation and institutional memory of the army. Few of these leaders, however, would prove capable of adapting to the highly complex nature of war in the SWPA. Indeed, most would not maintain their position long enough to have the opportunity. Senior Allied leadership in both the Australian and United States armies shared the same perspective on ageing veterans serving in combat infantry units, and active efforts were made to remove them from leadership positions. General George C. Marshall, US Army Chief of Staff, estimated that he forced out some 600 officers for issues including age before the United States entered World War II.¹⁰ Another common and problematic aspect of interwar service was the lack of career mobility. In the 2/12th Infantry Battalion, for example, some former CMF soldiers had been privates for almost a decade. This was another shared issue between Australian brigades and US regiments, especially those drawn from a 'reserve' status.¹¹

To shift the perspective from manpower to the organisational structure, in the interwar period, both Australia and the United States experienced similar reorganisations of their respective armies. The rapidly evolving field of combined arms operations, which focused on the integration of supporting fire and air support in infantry manoeuvre, was a priority.¹² During this period, however, the Australian Army fell behind other Allied forces with poorly funded and very limited technological advancement. Subsequently, Australian infantry brigades would be forced to pass through two major periods of change on the eve of and during World War II. First was the reorganisation of the infantry brigade to a modern motorised formation.¹³ Second was the integration of infantry,

armour and artillery in close cooperation – for the Australians, a practice that was first tested in North Africa at the Battle of Bardia.¹⁴

In 1938, in response to growing global instability, Major General Ernest Squires, a former British officer and inspector general of the Australian Army, released a report on the Australian Army's 'readiness' to undertake significant military operations.¹⁵ The report identified serious shortcomings and made numerous recommendations, including increasing the size, funding and training of the force as a whole. Thus, and in the context of a rapidly deteriorating international strategic circumstance, the Australian Government doubled the Australian Imperial Force's budget and size of the militia.¹⁶ However, expansion, in and of itself, was not transformative. The actual transformation of the Australian Army would largely happen in the combat experiences and lessons learnt by the infantry brigades that faced the Japanese in the SWPA.

TRAINING AND MOBILISATION 1939–41

Later chapters will examine the development and application of advanced infantry and expeditionary capabilities of the Australian infantry brigades from 1942 to 1945. However, to conduct such an analysis, it is important to review the baseline capabilities and training (or lack of training) of the Australian infantry brigade at the point of initial mobilisation before the deployment to North Africa and New Guinea. An examination of the 18th Infantry Brigade's initial training and the training that followed its return from North Africa demonstrates a focus on the immediate task at hand: the defence of the continent against a Japanese invasion.

The 18th Infantry Brigade 'stood up' with the activation of the Second Australian Imperial Force on 13 October 1939. Training was a challenge from the outset, with a lack of proper equipment, stores of the wrong equipment, and doctrine written for another war. On 24 January 1940, the brigade published its second (and first substantive) training memorandum. The document focused heavily on training for company movement based on the World War I experience of its veterans. It stressed a number of standard skills, such as patrolling and defensive positions. It also included instructions for maintaining horses and for conducting 'trench raids'.¹⁷ Ironically, while outwardly anachronistic by focusing on combat experiences from past wars rather than the one at hand, many of the individual soldier skills, such as use of gas masks, digging fighting positions, defence against Armoured Fighting Vehicles (AFV), and even classic trench warfare, would later prove useful. This was also in spite of the

fact that a jungle war in New Guinea could not be further from the Western Front of World War I.¹⁸ Training for 'trench raid', for example, would seem impractical until faced with the complex trench fortifications of the Japanese in late 1942 at Buna.¹⁹

The new recruits and ageing veterans who formed the 18th Infantry Brigade (with considerably fewer former CMF personnel than Army authorities had hoped) that was deployed to Britain and North Africa in January 1941 had all experienced different basic and unit training during their mobilisation in Australia. This is due to the Australian Army's policy of permitting local training units to provide basic training for new recruits.²⁰ This was a practice that later would be found insufficient for modern war.²¹ The 18th Australian Brigade, for example, was activated as part of the 6th Australian Division on 13 October 1939 and consisted of soldiers from Queensland. Its sister brigades within the 6th Division were drawn in the same manner. The 17th Brigade was raised from Victoria and the 16th Brigade from New South Wales.²² With no standardised army-wide basic training program, this meant that troops were competent or incompetent on the basis of their brigade's training program.²³ As the war progressed, losses to disease and combat forced the infantry brigade to take in replacements. Poorly trained replacements, who arrived at the front lines during the early campaigns of New Guinea in 1943, resulted in the demand from battlefield commanders for standardised basic training centrally supervised by Land Headquarters back in Australia.²⁴ As the 18th Infantry Brigade would learn after the Buna campaign, combat formations did not have the time to retrain soldiers in basic skills at the unit level.

In early 1943, complaints from the commanders in New Guinea resulted in an Australian Army review of basic training units across the country, something that would be essential for standardisation of specialty training.²⁵ The review revealed that very few officers or non-commissioned officers then serving within training units had any experience in modern combat tactics or jungle warfare.²⁶ Army authorities decided on two courses of action. First, in November 1943, all recruit training was consolidated at the Australian Recruit Training Centre at Cowra, New South Wales, to ensure a standard level of basic training across the force. For the first time, this consolidation also allowed the army to provide all service members a central aptitude test and assignment to service branches on the basis of their ability.²⁷ Second, the army ordered deployed combat units to send experienced officers and non-commissioned officers back to Australia to serve as instructors.²⁸ As one

would expect, the second initiative was less successful owing to the reluctance of brigade and battalion commanders to reassign their best officers and non-commissioned officers during a campaign. The Directorate of Military Training noted that the difficulty of acquiring experienced and competent combat instructors was not solved until the drawdown in overall army numbers in 1945, which resulted in a surplus of returning officers and non-commissioned officers.²⁹

When the 18th Australian Infantry Brigade arrived in North Africa, it began another phase of reorganisation. Australian infantry brigades reduced the number of subordinate battalions respectively from four to three with the loss of 864 authorised positions.³⁰ The artillery realignment consisted of a move from 'three brigades of four batteries, each with four guns, to three regiments of two batteries each of twelve guns'.³¹ Unlike the infantry brigade who lost guns, the overall number of guns within the division was not therefore reduced. This change in doctrine came from an interwar belief of most modern armies that in the mobile context of a modern war, an infantry commander could effectively manage only three subordinate elements at any given echelon.

AUSTRALIAN ARMY 'JUNGLE' UNITS

The Australian Army's effort to adapt infantry formations to the complex jungle environment represents one of the most significant challenges to infantry organisations in World War II. The lessons learnt in the first jungle campaigns of 1942, although costly, established new tactical and operational requirements for Allied formations that would become jungle doctrine. An analysis of the after-action reports of the 18th Infantry Brigade in the early engagement of Milne Bay reveal this brigade's significant contribution to the development of jungle infantry tactics. It is also clear that Allied generalship in both the Australian and US armies made assumptions about jungle warfare that would prove disastrous for the 18th Infantry Brigade in the hard-won victory at Buna and Sanananda. The value of the 18th Infantry Brigade's contribution to the development of new tactics and doctrine would shine in the striking victories on Shaggy Ridge in 1944 and its amphibious assault on Balikpapan in 1945.

In 1942, Australian Land Force Headquarters initiated the development of jungle divisions. The need for formations capable of operating in jungle terrain was forgone; however, the force structure of these divisions was destined to change with each lesson learnt. A major transition of division organisational structures was a challenge, given that just a year

earlier the same divisions underwent a modernisation along the British division's highly motorised model. Infantry manoeuvre in North Africa was generally mobile, and the majority of the training and exercises at the brigade and division level were for a motorised defence or assault.³² The influence of the British model and North African combat was apparent in the Australian Army's training requirements even after the recall of all but the 9th Division from North Africa in February 1942 to face the Japanese threat.³³

The Australian Army's first foray into the jungle was the hard-fought campaign over the Kokoda Track, which established a baseline for operations in the mountains and jungles of New Guinea. However, it was the 18th Infantry Brigade's after-action reports of the Battle of Milne Bay and the Buna campaign that helped advance the army's long, convoluted path to jungle divisions and subsequently jungle brigades. LHQ decided to reorganise the 5th, 6th, 7th and 11th Divisions into jungle divisions in late 1942 on the basis of thjungleese early experiences in New Guinea.³⁴ First, however, the army needed to draft new 'establishments' for the jungle division. Such establishments outlined in specific terms the authorised personnel and equipment of a given unit or formation during peacetime or war. Before mobilisation, Australian units under Peace Establishments were considerably smaller and less well equipped than that of a unit in 1943 under War Establishments. On 13 February 1943, jungle establishments were published for the Australian Army.

The implementation of the 'jungle division' was based on three principles established by LHQ. First, the new divisions would need to be able to add and subtract non-organic or Allied units quickly with limited integration time. The second principle was 'all units, subunits, transportation and equipment which are not essential for general operations in jungle conditions [were to be] eliminated from the jungle organisation'.³⁵ The third principle was the consolidation of transport and support elements at a division level. Restructured in early 1943, these selected units were now officially jungle divisions. However, the effort to develop the perfect combination of personnel and equipment would continue for the duration of World War II.

FIRST PRINCIPLE: FLEXIBLE GROUPING

The infantry's inability to manoeuvre in jungle terrain with heavy equipment was key to the first jungle reorganisation; however, theatre mobility was equally, if not more, important in subsequent reviews. The SWPA

required intermediate Allied combat formations to be able to move quickly, not only in dense jungle but also by sea and air with effective combat power. On 22 October 1942, the 18th Infantry Brigade conducted a battalion-size amphibious landing on Goodenough Island with just a few days notice.³⁶ On 2 October 1942, the 2/10th Battalion of the 18th Brigade was the first Australian infantry battalion wholly airlifted into a combat zone ready to fight on the airstrip if necessary.³⁷ These early, high-mobility combat operations, both of which will be discussed in later chapters, demonstrated that a brigade's ability to move rapidly in theatre would be equally important to its ability to move in dense terrain.³⁸

SECOND PRINCIPLE: ELIMINATION OF NON-ESSENTIALS

Following the Buna campaign, which ran from 16 November 1942 to 22 January 1943, an Australian Army committee of officers and non-commissioned officers reviewed the weapons and equipment table of the Australian infantry jungle division. Its recommendations included the elimination of infantry motorised transportation and all equipment that was not man-portable.³⁹ This problematic recommendation, like many other ill-advised suggestions, was not practical outside the Kokoda Track experience. An infantry brigade could not conduct offensive actions in the jungle only with what it could carry on its back or in a cart. In particular, this recommendation resulted in the stripping of an organic brigade's lift capacity. 'The peculiar condition of the theatre of operations,' LHQ concluded, 'necessitates transport being withdrawn from all units. Sufficient transport for divisional operations in the jungle areas will be held in a divisional pool and re-allocated to units in accordance with availability in forward areas.'⁴⁰ First, LHQ approved a flat 25 per cent reduction in mechanical transport.⁴¹ Following the initial reduction of the weapons and equipment tables, the jungle reorganisation plan then moved Bren Carriers, trucks and other motorised equipment to a division motor pool for use when the terrain permitted.⁴² Such consolidation was, however, a reduction, and the divisions lost a total of 67 drivers and mechanics in the jungle reorganisation.⁴³ This resulted in a large division motor pool with limited staffing. With combat loss and maintenance issues, this invariably left the three subordinate infantry brigades competing for limited division resources.

The 7th Australian Infantry Division, which was ordered to complete its jungle reorganisation no later than 7 April 1943, expressed 'difficulties' with the across-the-board 25 per cent reduction and the consolidation of

vehicles. The 25 per cent reduction left each brigade with a lift capacity of 162 tons, when a brigade's lift requirement was 387 tons.⁴⁴ If forward deployed in complex terrain, such as a jungle or mountainous environment, the demand for heavy vehicles and motor transport was light and manageable. However, the jungle division's consolidated motor pool had a severely limited ability to support rear areas, and even the administrative transport needs of the brigades in their movement from base camps to ranges, assault courses, or in logistical tasks such as rations trucks and ammunition. This significant shortcoming was noted in one review of the jungle scales on 13 February 1943. 'The division in assembly area prior to active jungle operations', the report noted, had only 'a proportion of transport ... for normal and administrative purposes and training'.⁴⁵ The 7th Division requested all AIF divisions have two sets of weapons and equipment tables, one for jungle warfare and one for the rear area – a plan that would be adopted later in the war.⁴⁶

The reorganisation of the division transport also overlooked the transportation support element or 'vehicle workshop' of the infantry brigades. The initial jungle scale previously discussed reduced the brigade transportation assets by a quarter and consolidated many of the other vehicles at the divisional level. There was a failure, however, to restructure the brigade vehicle workshops concurrently. The tropical scales issued in 1943 left each of the battalion workshops intact, leaving the brigade to carry an exorbitant amount of maintenance equipment for vehicles they did not possess. As with many of the recommendations and developments in the jungle formations, improvements came from the lower echelon. In April 1944, the brigades requested the reduction to one workshop per infantry brigade, relieving the brigade of 7 tons of excess equipment and increasing the formation's ability to deploy quicker and lighter.⁴⁷

There were also personnel implications of the jungle restructure with the infantry brigades. Concurrently with organisational transformation, a personnel issue to be resolved 'prior to future deployments' was the 'disposal of non-AIF personnel'.⁴⁸ First Australian Army had published a memorandum in March 1943 to 'direct that all units allotted to the force for combined operations will consist entirely of AIF personnel'.⁴⁹ This was not a large task, yet it was one that took up administrative time and energy. The 7th Australian Division, for example, had only 12 CMF personnel, yet all were required to be redesignated as AIF.⁵⁰ Another jungle transition-related personnel issue was deactivation of the division and brigade defensive and employment platoons in June 1943. These were largely legacy units of World War I, tasked with the physical protection of

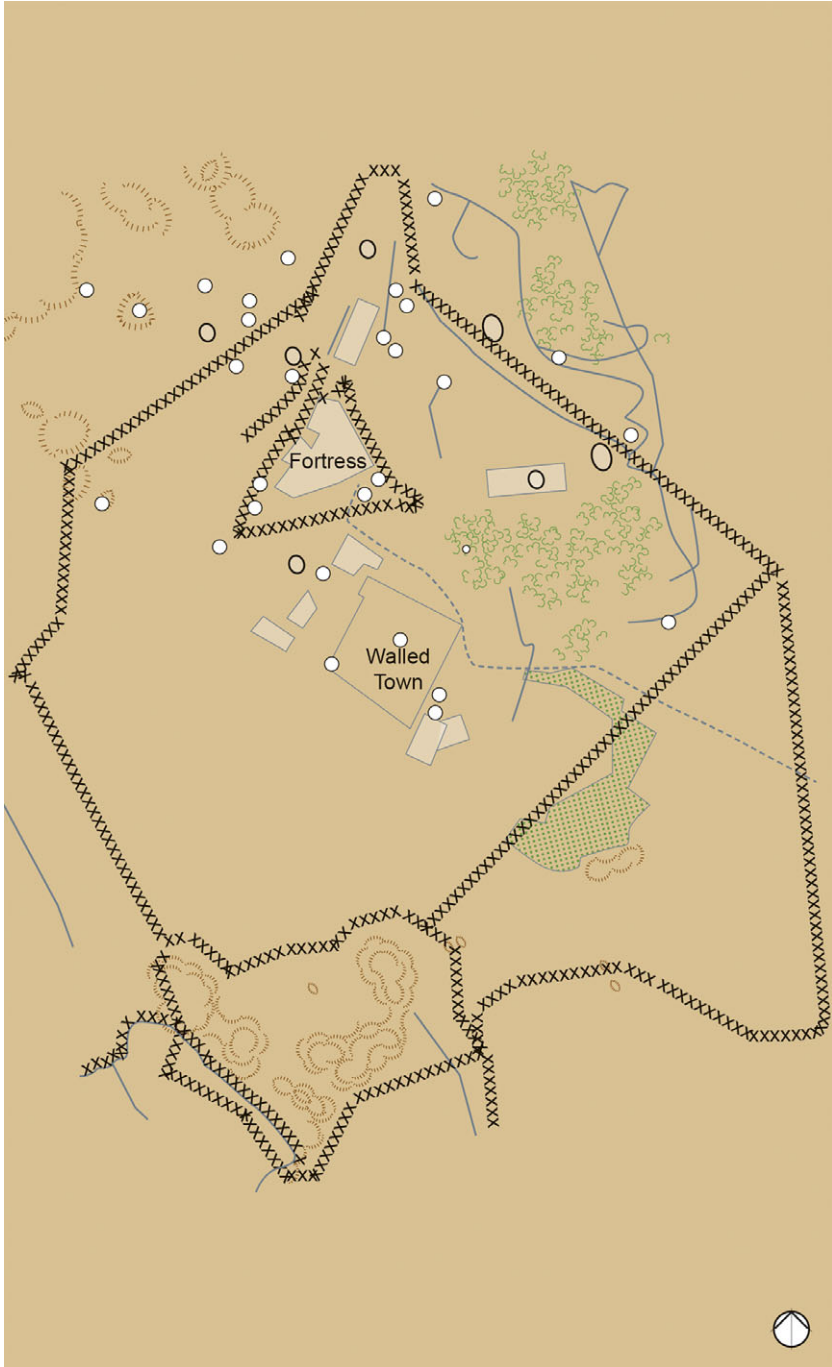
headquarters and the organisation and construction of field fortifications and trench networks. The Australian Army's efforts to embrace manoeuvre in the SWPA made these units obsolete.

As a consequence of the restructures, the infantry brigades also had to manage a surplus of non-commissioned officers and warrant officers from units and subunits disbanded. The divisions and brigade handled this largely by stopping promotions in high-density or obsolete enlisted occupational specialties and transferring the personnel to unit vacancies elsewhere in the brigade. Surplus non-commissioned officers and warrant officers in the brigade were absorbed into one of the various training positions or held as overstrength until vacant positions could be identified elsewhere in the AIF. The jungle reorganisation also displaced many junior and inexperienced enlisted soldiers who were 'consolidated' at a division overstrength unit until they could be retested and assigned to new occupational specialties.⁵¹

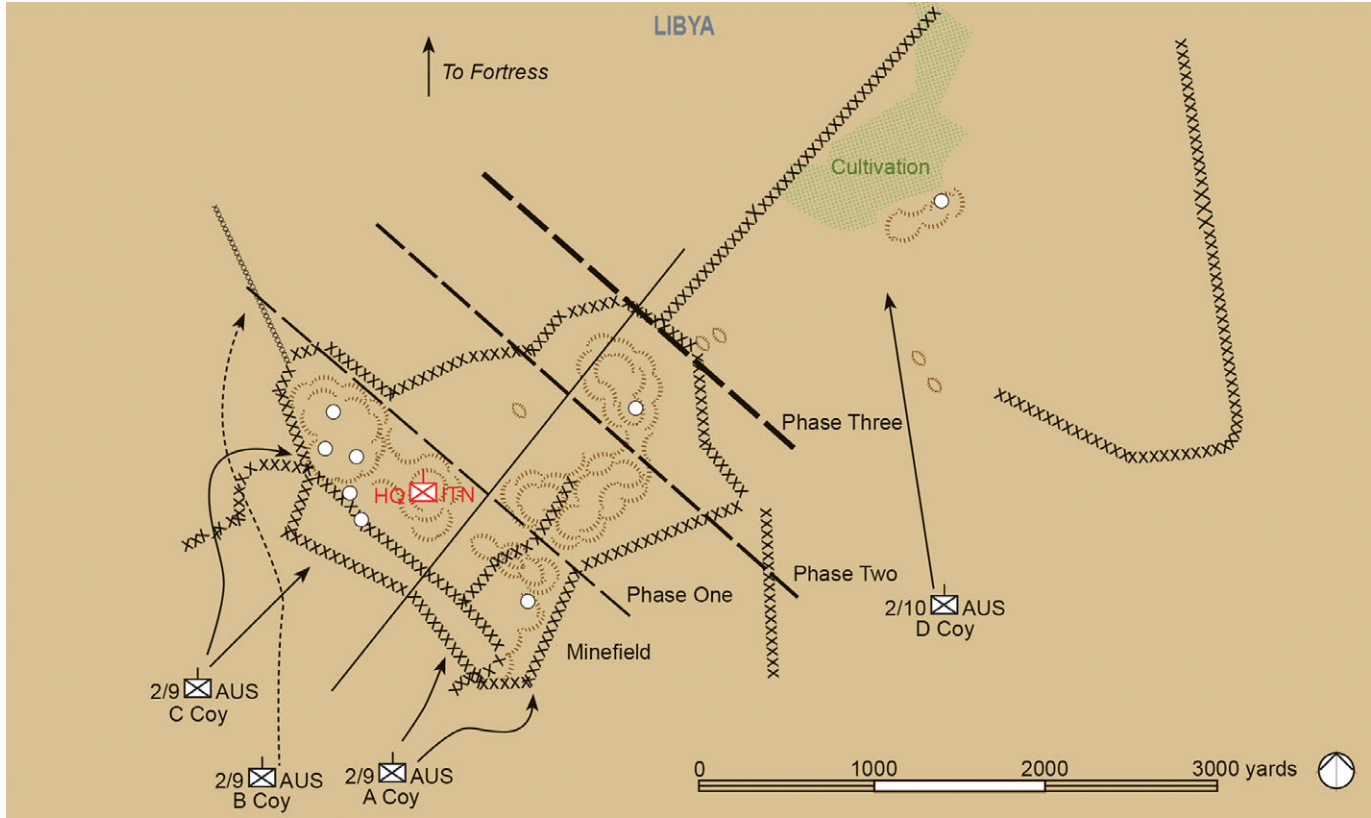
THIRD PRINCIPLE: CONSOLIDATION AT THE DIVISION LEVEL

The jungle reorganisation was not simply the act of discarding what could not be taken into a jungle environment. First and arguably foremost, it was a consolidation of support elements at higher echelons. The major reorganisation occurred at the division level in the creation of a consolidated motor pool and field artillery regiment. The lower echelons, to lesser degrees, experienced similar reorganisation. For example, machine-gun squads at the company level were reorganised into machine-gun platoons at the battalion level. The initial substance of the transition to tropical or jungle scales was the realisation or belief that many of the vehicles and heavy support weapons simply could not be employed effectively in jungle terrain. However, as previously mentioned, the transition was never as simple as leaving things that were too heavy behind, and recommendations and reconfigurations were constant.

One of the first restructuring challenges at the brigade level was the elimination of anti-aircraft and carrier platoons. As a counter-balance, the battalions gained Vickers Machine Gun Platoons, which would prove essential in the close-quarter engagements with the Japanese army.⁵² Each of these machine-gun platoons represented a consolidation at the battalion level composed of one officer and 31 other ranks divided into four machine-gun teams.⁵³ The light anti-aircraft capability with the division and brigade was eliminated on the premise that the Japanese



Map I.1 Italian defences at the village of Giarabub, December 1940



Map I.2 The assault on Giarabub, 19 March 1940

would not be able to attack infantry effectively in the jungle with aviation assets and that Allied jungle divisions would likely have air superiority in the SWPA.⁵⁴ Additionally, battalions were required to provide one officer and 15 other ranks to the divisional carrier companies. These carrier companies would soon be found redundant and disbanded as well.⁵⁵ The newly established machine-gun platoons absorbed and retrained the balance of personnel from the battalion carrier and anti-aircraft platoons.⁵⁶

The transition to a 'jungle brigade' came late for the 18th Infantry Brigade, which had primarily engaged in training and exercises for a motorised anti-armour defence until the day of embarkation for the defence of Milne Bay on 5 August 1942.⁵⁷ The 18th Infantry Brigade effectively fought its first SWPA battle at Milne Bay without any jungle training. Captain George Suthers from the 2/12th Battalion noted in an interview that 'we knew we didn't have the faintest idea what it [i.e. jungle warfare] was going to be like' before deployment.⁵⁸ However, this first campaign in New Guinea led to recommendations to its higher headquarters for the new jungle scales based on the early trial-and-error form of jungle combat. One of the first recommendations was that carriers and stretcher-bearers who carried wounded troops away from the front be rearmed with Owen guns instead of rifles. In addition, the poorly equipped battalion 'pioneer' companies, which would later prove their worth in jungle combat, were rearmed with the same weapons as infantry companies since the Japanese regularly attempted to infiltrate rear areas.⁵⁹ The 18th Infantry Brigade's War Diary acknowledged that its own efforts to conduct the jungle reorganisations began on 14 March 1943, while elements of the brigade were still at sea returning from the campaigns of Buna and Sanananda. By 27 March 1943 at Ravenshoe, Queensland, the combat-weary brigade had completed the reorganisation to the new tropical warfare establishment.⁶⁰

Another important element of the jungle division reorganisation was the consolidation of divisional field artillery. As noted, at the onset of the war, the AIF reorganised the structure of the brigade from four to three battalions. This further jungle reorganisation included a restructure of field artillery from four brigades of three batteries to three regiments of two batteries each.⁶¹ The three field artillery regiments were reorganised into one single regiment at the division level under the new jungle establishment.⁶² The commander of this single field regiment would also serve as the artillery adviser to the division commander.⁶³ This reduction in field artillery available to a jungle division by some two-thirds would

present significant challenges, in particular (as will be discussed in later chapters) when the Australian infantry confronted well-established Japanese fortifications in the jungle. The consolidation of artillery left the brigades with the same problems experienced with the establishment of a consolidated division motor pool: brigade commanders would be forced to compete for the limited field artillery available at the division.

In March 1944, the 7th Australian Division recommended a revision to the jungle division, requesting an increase in field artillery from one back-up to two regiments, and one survey battery.⁶⁴ In complex terrain, a single field artillery regiment simply could not support two manoeuvre brigades during an offensive action. Additionally, if the third reserve brigade was committed, it was highly probable that terrain and logistics in such areas as the Ramu Valley would restrict the ability to shift fire in support of that reserve. The losses suffered by the infantry in early SWPA campaigns, with shocking casualty rates of more than 80 per cent against fortified Japanese positions, resulted in sharp demands for increased artillery.⁶⁵ The role of field artillery within the Australian Army in close terrain, which was once thought by both senior Australian and US general officers to be of little use in the jungle, grew at the behest of the infantry brigade commanders, who increasingly embraced a modern version of combined arms manoeuvre. In 1943, Land Forces Headquarters in Australia assessed that 'It may be suggested that the number of guns (artillery) employed in some of the island campaigns was excessive but the fact remains that the operations were successful and that casualties were few.'⁶⁶

The jungle realignment was not solely focused on equipment or capability. There were overall reductions in personnel strength as well, with the standard Australian infantry battalion losing one officer and 105 other ranks, resulting in a battalion of 34 officers and 769 other ranks for a total of 803 personnel. This was down from the pre-jungle, standard battalion of 35 officers and 875 other ranks.⁶⁷ In April 1943, the 18th Brigade established Warrant Officer Class 1 positions at the company level, removing the old Warrant Officer Class 2 sergeant major position.⁶⁸ This warrant officer position was consistent with the previous duties of the sergeant major to include maintenance of the rear area, administration, reserve and working parties. It is likely that the impetus of this change was battles like Buna, where the battalion and brigade rear areas were far from the front, vulnerable to infiltration, and in need of skilled management.

As discussed, not all the recommendations for changes to the jungle division weapons, equipment and staffing were positive or practical. One

recommendation 'strongly' recommended the addition of pigeon-handlers to the jungle division headquarters. The suggestion cited the apparent successes of using pigeons in the New Guinea campaigns in 1942. More than two years had since passed without successful pigeon communications.⁶⁹ Indeed, since 1943, the deployment of modern wired and wireless communications radios had made the pigeon a less practical option for operations in the SWPA. None of the combat after-action reports of the Australian infantry brigades from 1943 to 1945 recommended an increase in the use of pigeons.

In March 1944, a year after the initial implementation of the jungle divisions, a review of formation was ordered. The conference on the status of jungle formations took place at LHQ in Australia on 18 April 1944.⁷⁰ The outcome of this conference included a review of the brigade establishments offering refinements that would consolidate the Australian Infantry Brigade (Jungle) as the smallest combined arms force in the SWPA. Although the majority of adjustments and consolidation would happen at the division level, these changes consolidated the infantry brigade as the smallest combined-arms manoeuvre formation in the SWPA. The 'jungle scales' consolidation of heavy equipment and vehicles at the division inadvertently relegated the division to almost rear-echelon support base status for the manoeuvre brigades because the division was now too 'heavy' for combat manoeuvre in dense jungles and mountains.

As noted earlier, a limited comparison of the US regiments is necessary for the analysis of the Australian brigade. The relationship with the US Army and the extensive use of artillery and close air support in coordination with infantry influenced the Australian jungle formations. The importance of effective combined arms support was embraced by the 18th Infantry Brigade, which had already established forward observer training down to the line company in 1943.⁷¹ A year later in 1944, LHQ recognised the value of forward observer training in the infantry – a skill previously the purview of the artillery officer. The LHQ jungle formation conference observed: 'Operations have shown the value of infantry officers in forward positions being able to call for and direct artillery fires. It is suggested that all officers, company commander and below, be trained in elementary observation and control of fire.'⁷² By necessity, the infantry brigades had already recommended or implemented training in other non-traditional skills, such as intelligence, photo interpretation and close air support, long before they were mandated in formal LHQ training memoranda.⁷³

The April 1944 LHQ conference also adjusted the firepower available to formations in the SWPA. First, the jungle division's armoured force was

doubled by adding a second tank regiment. This was a significant adjustment since generals – Australian and US – had hitherto assigned little value to the tank in the jungle and hence made less than optimal use of it.⁷⁴ A US observer in the Buna campaign noted that there was ‘no infantry–artillery or infantry–tank team’ in the SWPA, with each of the manoeuvre elements operating independently against the same objective.⁷⁵ In terms of artillery, at Buna, the infantry battalions were forced to use their anti-tank guns in a dual support role against fortifications since the artillery was with the division on the other side of the mountains.⁷⁶ Early LHQ planners had all but eliminated field artillery regiments on the basis of their estimation of mountain terrain in the Kokoda campaign. Conversely, the campaigns of New Guinea required field artillery in the jungle as a necessity in breaching Japanese field fortifications. The 1944 conference accepted the ground commander’s recommendations to increase the field artillery regiments to two per division, doubling support to the infantry brigades.⁷⁷

The conference also reinstated a cavalry capability within the AIF jungle divisions with the addition of a cavalry regiment with three squadrons in each jungle division.⁷⁸ Early in the New Guinea campaigns, cavalry units were at a loss for a mission, having been set up in 1940 to serve as mechanised reconnaissance units in North Africa and the Middle East.⁷⁹ In January 1943, the 2/7th Cavalry Regiment was a highly mechanised unit on a jungle island. Subsequently, this regiment was stripped of its Bren Carriers and sent to the Sanananda area as reinforcements attached to the 18th Infantry Brigade. As a cavalry element without vehicles, the unit was used as a quasi-infantry formation in the reserve, or as a holding force for areas taken by the infantry battalions.⁸⁰ Following Sanananda, the divisional cavalry regiments were reorganised as ‘independent companies’ and then later ‘commando squadrons’, to provide ground reconnaissance for infantry brigade groups throughout the rest of the Pacific War.⁸¹ Likewise, the demand for pioneer units in the jungle and amphibious environment resulted in an LHQ conference decision that jungle divisions would have a pioneer battalion attached instead of pioneers consolidated at the corps level.⁸²

By 1944, 18th Brigade had completed numerous combat tours, concluded an initial and subsequent jungle reorganisation and reached the final force structure that would take it through the rest of the war: the Infantry Brigade Group (Jungle). The brigade consisted of three infantry (rifle) battalions: the 2/9th, 2/10th and 2/12th. These subordinate battalions were key to the brigade’s ability to conduct combat manoeuvre

against the Japanese. The subordinate battalions were each organised in a flat five-company structure with a headquarters company and four rifle companies designated A, B, C and D.⁸³

The brigade was commanded by a brigadier and was managed by the brigade staff consisting of the brigade major who served as the operations officer and supervised the brigade intelligence officer and Intelligence Section. The staff captain was administratively responsible for all additional Staff Section chiefs. The Staff Section chiefs included the brigade Australian Army Service Corps officer, who managed supply, transportation and a light aid section for vehicle maintenance; the Australian Army Ordnance Corps warrant officer responsible for the Ordnance Detachment; the Australian Army Medical Corps officer and field ambulance company; the signal corps officer and Signal Section; the three chaplains; and the officer designated 'staff officer native labour' who rounded out staff functions at the brigade headquarters.⁸⁴

Additionally, the brigade had several organic combat and support units, which included a light aid detachment, a protection company, a postal detachment, a field cash office, the field artillery battery and a company of field engineers.⁸⁵ Under the 1944 jungle warfare establishments, the designation as a 'brigade group' and 'jungle' denoted that the brigade had assumed control of non-organic attached units. A machine-gun battalion, a commando squadron, a divisional carrier company, a light anti-aircraft battery, additional artillery and a company from a Papuan Infantry Battalion were common additions for a forward deployed infantry brigade group.⁸⁶

As previously discussed, the SWPA offered two major environmental challenges: the jungle and the sea. While developing jungle divisions and brigades, the Australian Army had to plan and train simultaneously for amphibious warfare. As the campaigns in the SWPA became increasingly amphibious, Australian brigades selected for amphibious operations embraced new doctrine and tactics, largely supported by the US Navy. The Australian Army would build a close relationship with the US Navy's 7th Amphibious Force, which began as a piecemeal fleet assigned to support General Douglas MacArthur's early campaigns in the SWPA. By the end of the New Guinea campaign, which concluded with the amphibious landing on the Indonesian island of Morotai, the US Navy's 7th Amphibious Force had moved 1520 miles, conducted 13 major amphibious landings, and successfully landed approximately 200 000 Australian and US soldiers.⁸⁷

On 1 July 1945, the 18th Australian Infantry Brigade Group (Jungle) was designated the assault brigade for the amphibious assault on

Balikpapan, code-named Operation Oboe II. As the assault brigade for this operation, the 18th Infantry Brigade Group would become one of the most complex brigade formations of the Australian Army in World War II. As with all amphibious warfare, the 18th Brigade would be required to travel by sea to an objective and launch an assault on an enemy shore from the sea.⁸⁸ The scope of the assault brigade's responsibility and capabilities were staggering. For example, when the 18th Australian Infantry Brigade Group spearheaded the amphibious landing at Balikpapan in July 1945, the amphibious task force comprised more than 200 ships. The success of the entire task force rested, at least in the initial phase, solely on the ability of the assault brigade to land, seize and secure the beachhead for the division landing.

The notion of an assault brigade was not, however, a standing formation in the AIF. Rather, 'assault' was a doctrinal term used by Allied infantry formations at any echelon to designate the spearhead of an amphibious landing.⁸⁹ The term 'assault' was also used to define the equipment scales and attachments for a formation in an amphibious landing. An example of an assault brigade would be an Australian infantry brigade group with command over Australian, US and other Allied attachments such as naval gunfire liaisons, air liaison teams, and beach groups or battalions, configured on assault (amphibious) scales, and designated as the breach element of an amphibious landing.

The idea of the assault brigade, with its size and complexity, demonstrates some of the largest challenges faced by the Australian Army in the SWPA. Training an infantry formation for amphibious warfare is a large, difficult undertaking even for longstanding experienced units. The assault brigade needed not only to achieve a high level of infantry and amphibious proficiency but also to integrate a multitude of attached units, which often arrived with deficiencies in combat skills and amphibious training.⁹⁰ To appreciate fully the challenge of the assault brigade, it must be recognised that the brigade might have command over five or more attached battalions of various functions and possibly a dozen separate companies and detachments.⁹¹ The integration of these attachments in training, exercises and effective staff planning was the key to success or failure by the 18th Australian Infantry Brigade Group in the amphibious assault at Balikpapan.

The amphibious successes of the SWPA did not come easily to any of the Australian infantry formations. Amphibious doctrine had been largely ignored by the Australian Army following its experience at Gallipoli in 1915, which became a national day of remembrance, not a case study for future war. Conversely, the US Army and Marine Corps had studied and

conducted numerous exercises based on the Gallipoli campaign throughout the interwar period. These created volumes of lessons learnt, recommendations and new doctrine, which became the foundation of the Allied amphibious campaigns of the SWPA. Australian amphibious warfare doctrine of World War II, on the other hand, evolved slowly from an amalgamation of training orders, memos and combat experience in the SWPA.

Largely due to the US control of amphibious training in the SWPA and the preponderance of the US Navy 7th Amphibious Force, which was predominantly American, the Australian Army was not deeply involved in the development of amphibious warfare doctrine even after the Pacific War began. The Australian Army's first modern amphibious or expeditionary warfare manual was a publication entitled *Combined Operations: Planning on the Brigade and Unit Levels with Special Reference to Landing Tables and Tonnage Tables*. This collection of training orders, instructions, and weapons and equipment tables, bound together under a single title, was the Australian equivalent to the US Army *Field Manual 31-5 Landing Operations on Hostile Shores* of 1941. For example, Australian documents within this collection included single-subject documents, such as the 1st Australian Corps Training Instruction Number 10, which offered notes on brigade staff planning for amphibious operations and emphasised the importance of designating the assault brigade early to ensure that the planning for the brigade and attachments was conducted on proper 'assault', 'light (jungle)' or 'normal' scales.⁹² In spite of the lack of participation in the development of amphibious doctrine, the 18th Brigade staff became highly skilled amphibious planners due to the brigade's combat experience, extremely short amphibious planning timelines, and the need to compensate for planning failures at the division level.

The US and British armies used a similar amphibious terminology. The US Army *Field Manual 31-5 Landing Operations on Hostile Shores* employed the term 'assault combat teams' as the designation for the landing element that would conduct the breach of the beachhead when the force could not be landed in its entirety. The designation of the assault element was essential and needed to be determined early to ensure proper planning and combat embarkation.⁹³ The British *Combined Operations Staff Notebook 1945* used the terms 'assault brigade' and 'assault brigade group' in much the same way as the Australians and Americans used 'Assault Formations, which are tactically organised and equipped to carry out the initial attack on an enemy coast'.

The Australian Army first used the term 'assault brigade' in reference to the Infantry Brigade Group in 1944 with the 1st Australian Corps Training Instruction Number 6. This instruction outlined the 6th Australian Infantry Division's amphibious landing exercises at San Remo Beach and used the term 'assault brigade group' for the lead infantry brigade(s) of the exercise.⁹⁴ The 18th Australian Infantry Brigade referred to itself as the 'assault brigade' numerous times with some pride in its after-action review of the landing at Balikpapan.⁹⁵

The designation as an 'assault brigade' represented a significant increase in responsibility for the commanders and staffs. As the assault brigade staff, they assumed responsibility for the development of amphibious load and landing plans, coordinated combined arms support, and individual combat manoeuvre onto objectives at the brigade and battalion levels.⁹⁶ Indirect fire represents an excellent example of this increase in both responsibility and capability. In the early campaigns of New Guinea, the Australian battalion commanders had to rely on a division or brigade artillery officer, in competition with other battalions, for the limited artillery support available. By comparison, when the 18th Infantry Brigade Group landed at Balikpapan as the amphibious task force's assault brigade, each of the three battalion commanders, in addition to his assigned field artillery, had his own dedicated US destroyer assigned for naval gunfire support.⁹⁷

In terms of structure as well, the designation of the 18th Australian Infantry Brigade Group as the 'assault brigade' for the amphibious assault on Balikpapan deserves careful examination. The brigade headquarters was expanded to meet the task of amphibious staff planning, as well as the ground campaign that would follow a successful landing. This headquarters now had the following units under its direct command: 2/9th, 2/10th and 2/12th Infantry Battalions; 1st Squadron, 1st Armed Regiment (less two troops); 2/4th Field Company; 18th Brigade Signal Section; one detachment of 2/42nd Cipher Section; 6th Platoon, Bravo Company; 2/1st GD Regiment; one section of the 2/47th Light Aid Detachment (Type J) and one detachment of the 2/54th Light Aid Detachment (Type G); Field Support Section; an Allied Translator and Interpreter (ATIS) Detachment; a detachment of the 2/2nd Anti-Tank Regiment; one company from the 2/1st Machine Gun Battalion; and the 2/8th Transport Platoon.⁹⁸

As addressed in detail in later chapters, the wide assortment of attached units offered manoeuvre options to the 18th Australian Infantry Brigade Group for the amphibious assault on Balikpapan. The brigade and battalion staffs integrated attached units into the brigade landing tables, ship assignments and movement ashore, all of which had

to be facilitated by the subordinate infantry battalions. For Operation Oboe II, these attached units included: detachments from 2nd Operations Report Team; the Directorate of Public Affairs; 4th Armoured Brigade Reconnaissance Squadron; 2/25th Field PK Company; 1st Armoured Regiment Signal Troop; 2nd Engineer Signal Section; 2/125th Brigade Workshop; 1st Regimental Workshop; 209 Light Aid Detachment (Type H) and Bravo Signal Section (7th Division); the 2/5th Field Ambulance (with Surgical Team); one section of the 2/6th Dental Unit; one section of the 7th Division Protection Company; the 7th Field Military History Section LHQ; elements of A Troop, 1st Naval Bombardment Group; the 5th Air Support Party; the 5th, 6th and 7th Air Liaison Parties; and elements of the US Army 672 and 727 Amphibious Tractor Battalions.⁹⁹

US ARMY REGIMENTS OF THE SWPA

The defeat of the Japanese forces in the SWPA simply required more manpower than the Australian Army could muster. The US national leadership was committed to the defence of Australia and the defeat of the Japanese in the Pacific to the extent that the US Army deployed two National Guard divisions to Australia with great haste. Unfortunately, this meant that these US Army divisions deployed without the benefit of the modern training provided to divisions assigned to Europe.¹⁰⁰ The US regiments, like the Australian brigades, did not have any amphibious or jungle warfare training. Additionally, the US regiments lacked the combat experience – arguably the most important factor in warfare – that Australia had gained in North Africa.

The first two American divisions that joined the Australian Army in New Guinea, the US Army 32nd and 41st National Guard Infantry Divisions, were called to federal service on 15 October 1940, more than a year before the Japanese attack on Pearl Harbor.¹⁰¹ Of these, the 41st Infantry Division would be one of the first to arrive in New Guinea.¹⁰² Many of these National Guard units would not return home until the defeat of the Japanese in 1945.

These American divisions mobilised as square divisions with four regiments. The US Army 32nd Infantry Division transitioned to the triangular model following a major series of exercises known as the Louisiana Maneuvers.¹⁰³ The 1941 Louisiana Maneuvers were the largest peacetime manoeuvres in American history.¹⁰⁴ The transition to the triangular division configuration resulted in the US 32nd Infantry Division deploying to Australia with three infantry regiments: the 126th, 127th and 128th.

The US 41st and 32nd Divisions arrived in Australia in September 1942.¹⁰⁵ The two National Guard divisions had been rushed through training and deployed in a state of readiness described by General Robert Eichelberger, the commander of US Army I Corps in Australia, as 'barely satisfactory'.¹⁰⁶ Yet US planners were not initially concerned with the deployment of the poorly trained 41st and 32nd Divisions because they were intended to serve in a defensive role if Japanese forces invaded Australia.¹⁰⁷

For all this, the US regiments that joined the fight in the SWPA were not well prepared. Samuel Milner, author of the US Army's official history of the New Guinea campaigns, noted that the 32nd Infantry Division had been moved from training site to training site so often that it drastically cut its regiments' training schedule before deployment.¹⁰⁸ According to the 32nd Infantry Division's own commanding general, the division never had the opportunity to complete a systematic training program before deployment in New Guinea.¹⁰⁹

Once in Australia, the US regiments were immediately ordered to increase their standard of physical fitness and infantry training, and to initiate a program of training for jungle warfare; however, the 126th and 128th Regiments of the 32nd Division were sent forward into New Guinea in November 1942 before they received any jungle training.¹¹⁰ So lacking was the 32nd Division's training program that one soldier told Eichelberger that during the entire 20 months since mobilisation, they had conducted only one night training exercise.¹¹¹ Regardless of the two regiments' lack of offensive or jungle training, they were sent forward. General Edwin Harding, commander of the US Army 32nd Infantry Division, who would later be relieved of command in combat, addressed the regiments in a highly confident yet nonsensical manner calling the 126th Regiment the 'spearhead of the spearhead of the spearhead'.¹¹²

The designation of the Australian Infantry Brigade Group (Jungle) as an assault brigade for an amphibious assault was the pinnacle of evolution and Allied cooperation in the SWPA, where the Australian infantry brigade had proven a highly adaptive formation. In five years, it transitioned from a light infantry role focused on territorial defence to the motorised infantry of North Africa, then to its most dynamic evolution and focus of this research: an amphibious infantry brigade group (jungle). The combination of Australian combat experience, its partnership with the US Army and Navy, and the embrace of new tactics and technologies would make it possible for the 18th Australian Infantry Brigade to recover from the catastrophically costly victory at Buna and go on to striking victories at Shaggy Ridge and Balikpapan.