

‘Bricks Without Straw’: Allied Operations at Buna, Gona, and Sanananda, November 1942-January 1943



“Sketch of an Encounter in the Jungle, Sanananda Dec. 42”

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Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university. To the best of the author's knowledge, it contains no material previously published or written by another person, except where due reference is made in the text.

A handwritten signature in black ink, appearing to read 'James Brien', with a stylized flourish at the end.

James Aston Brien

June 2023

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Much like the operations described herein, the completion of this thesis has been a grind to the bitter end requiring persistence and adaptability, but it would not have been possible without the love, support, and assistance of family, friends, colleagues, and a number of institutions. Over the time this thesis has taken to complete I have encountered a range of wonderful people who have contributed in ways great and small.

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Abstract

The Allied operations to destroy the Japanese beachheads in Papua between November 1942 and January 1943 were arguably some of the most difficult of the Second World War. They have become notorious for the ignorance of senior commanders to the challenges faced by forward troops, the grinding brutality of the combat, and heavy casualties. This thesis looks beyond this established narrative. Contrary to the notion that the Allies stubbornly committed to the same clumsy methods and practices, it demonstrates there was a concerted effort to learn and adapt to the unique and challenging conditions of the beachhead operations.

The operations might easily have turned into a military disaster. The Allies poorly understood the environment and the strength and complexity of the Japanese positions. The initial forces themselves were either exhausted or untested, lacked air or naval superiority, possessed limited fire support, and had great difficulty maintaining supply. This begs the important question of how the Allies were able to meet the challenges of conducting a sustained offensive operation against prepared positions in the tropics which they had not anticipated.

A thematic examination of the operations focusing on command and control, leadership, doctrine and training, logistics, and tactics highlights a continual process of learning and adaptation. Across the front, Allied forces faced numerous challenges. Strategic uncertainty, unfamiliarity between coalition partners, and dysfunction among high command placed increased pressure on commanders at all levels and strained command relationships. The training and competence of the units engaged also varied, reflecting an inconsistent approach to preparations for jungle warfare during 1942. Allied logistics were initially unsuited to sustaining a protracted offensive operation and vulnerable. Commanders at lower levels had difficulty applying conventional doctrine and practices to jungle conditions, while infantry forces faced the tactical challenges of dislocating and destroying prepared positions without conventional levels of fire support.

Allied forces gradually adapted tactics and employed their limited resources in economical and innovative ways. In light of the conditions, the Allies' accomplishments are in fact more remarkable. The fact the Allied forces were able to mitigate or overcome many challenges suggests far greater complexity and competence than conventional accounts give credit for. It is clear that leadership, the military competence of individuals and units, accurate and timely information about battlefield conditions, and broader considerations of doctrine determined Allied forces' ability to identify problems, devise solutions, and apply them. Although not always successful, a persistent effort to learn and adapt procedures, organisations, and tactics was a critical factor in the Allies' eventual victory. This addresses a significant phase of the war in the Pacific and highlights the importance of the beachhead operations as a foundation for adapting to war in the theatre.

Abbreviations

5AF	Fifth Air Force
AAF	Allied Air Forces
AAMC	Australian Army Medical Corps
AASC	Australian Army Service Corps
Adv NGF	Advanced New Guinea Force
Adv LHQ	Advanced Land Headquarters
ADVON5AF	Advanced Echelon Fifth Air Force
AIF	Australian Imperial Force/Second Australian Imperial Force
ALF	Allied Land Forces
AMF	Australian Military Forces
ANF	Allied Naval Forces
ANGAU	Australian New Guinea Administrative Unit
BGS	Brigadier General Staff
CE	Chief Engineer
CG	Commanding General
C-in-C	Commander-in-Chief
CO	Commanding Officer
Comd	Command/Commander
COMSOPAC	Commander South Pacific Area
CoS	Chief of Staff
COSC	Combined Operations Services Command
CMF	Citizen Military Forces (Militia)
DCoS	Deputy Chief of Staff
DCGS	Deputy Chief of General Staff
DDST	Deputy Director Supplies and Transport
DMT	Directorate of Military Training
GHQ	General Headquarters
GHQ SWPA	General Headquarters South West Pacific Area
GOC	General Officer Commanding
GSO	General Staff Officer
IGHQ	Imperial General Headquarters (Japan)
IJA	Imperial Japanese Army
IJN	Imperial Japanese Navy
JCS	Joint Chiefs of Staff
LHQ	Land Headquarters

NCO	Non-Commissioned Officer
NGF	New Guinea Force
NOIC	Naval Officer in Charge
OC	Officer Commanding
OIC	Officer in Charge
POA	Pacific Ocean Areas
POL	Petrol, Oil, and Lubricant
RAA	Royal Australian Artillery
RAAF	Royal Australian Air Force
RAE	Royal Australian Engineers
RAN	Royal Australian Navy
RCT	Regimental Combat Team
SSF	South Seas Force
SOPAC	South Pacific Ocean Area
SWPA	Southwest Pacific Area
USAAC	United States Army Air Corps
USAAF	United States Army Air Forces
USAFFE	United States Far East Forces
USAFIA	United States Army Forces in Australia
USAGF	United States Army Ground Forces
USASOS	United States Army Services of Supply
USMC	United States Marine Corps
USN	United States Navy

Formations, Units and Sub-Units:

Div	Division
Bde	Brigade
Regt	Regiment
Bn	Battalion
Coy	Company
Sqn	Squadron
Bty	Battery
Pl	Platoon
Tp	Troop
Sec	Section
Sqd	Squad

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A Note on Terminology, Place Names, and Measurements

This thesis is based on archival records from 1942-1943. In most cases it has adopted terminology and spelling from the time. The language used for military jargon is based on that which is used in records but has been standardised to the dominant force in the situation to account for the differences between British-Commonwealth and American terminology. While this terminology may have contemporary equivalents it has not been used to remain accurate to the source material.

Australian and American militaries followed different practices for designating units. Second AIF and CMF battalions were numbered but were differentiated by the prefix '2/' to denote the continuation of the AIF's volunteer tradition, thus, for example, the 2/16th Battalion (AIF) or the 3rd Battalion (CMF). These were then formed into brigades. American infantry battalions were numbered from one to three in accordance with their parent regiment, such as the First Battalion, 126th Infantry Regiment. This was commonly shortened to I/126th or 1st/126th. This thesis adopts the roman numeral version. American rifle companies were designated sequentially throughout the regiment. Companies A, B, C and D belonged to the first battalion, companies E, F, G and H to the second battalion, and companies I, K, L and M to the third battalion. Companies D, H, and M were Weapons Companies. Therefore, F Company, 126th Regiment belonged to the II/126th. Japanese armies were equivalent to an Allied corps. An area army consisted of two or more armies and was equivalent to an Allied army.

Place names have been standardised in this thesis. Papua was poorly mapped which led to considerable discrepancies between the spellings of place names and even their actual locations. M's and N's, and I's and E's were often used interchangeably: examples include 'Wairope' and 'Wairopi', or 'Simemi Creek' and 'Semini Creek'. For consistency, place names have been standardised throughout the thesis based on the common usage adopted for the Official Histories.

Units of distance in the main text are provided in metric units such as metres or kilometres. However, when quoting directly from sources or making explicit reference to information therein, measurements have been left in imperial units such as feet, yards, miles, pounds, and tons. All ton measurements are provided as American short tons. Units can be converted according to the following table.

Distance		Weight	
Imperial	Metric	Imperial	Metric
1 foot	0.305 metres	1 ounce	28.35 grams
1 yard (3 feet)	0.914 metres	1 lb (16 ounces)	0.454 grams
1 mile (1760 yards)	1609.3 metres	1 ton (2240lbs)	1016.1 kilograms

Introduction

‘Bricks Without Straw’: Literature Review and Approach

I am doubtless a bit mentally tired...As I told Berry[man] the other day the cause of my tiredness is frustration. For weeks and weeks now I have been trying to make bricks without straw, which in itself is bad enough, but which is made even worse when others believe that you have the straw.¹

Major-General George Vasey
GOC 7th Australian Division
Letter to Jessie Vasey
2 January 1943

The Allied operations against the Japanese-held beachheads at Buna, Gona and Sanananda between 16 November 1942 and 22 January 1943 were some of the most challenging of the entire Pacific war. They were the first major offensive operation against prepared positions in the Southwest Pacific Area (SWPA) and represented a significant learning experience for Allied forces. The difficulties of fighting a conventional land campaign in a jungle and littoral environment became fully evident. The Allies achieved a significant strategic victory but were plagued by challenges related to doctrine and training, command, control and leadership, logistics, tactics, and fire support. There was little of the ‘straw’ which Vasey referred to available to solve these problems. This required a concerted effort to learn and adapt to the circumstances, though the limitations imposed by the terrain, resources, and strategic uncertainty were significant.

Overcoming these challenges required a high level of improvisation, flexibility, and adaptability. Contrary to the impression provided in many accounts that commanders at the beachheads lacked imagination and repeatedly committed their forces into costly frontal assaults,

¹ Major-General George Vasey to Jessie Vasey, 2 January 1943, MS3782 Item 3/18, NLA.

Allied forces demonstrated initiative and innovation in adapting their approaches. Adaptations were not uniform, nor did all adaptations lead to success, but Allied forces were generally willing to challenge assumptions about tactics and techniques, the environment, and their enemy to find solutions to vexing operational and tactical problems. This effort to adapt, in conjunction with a highly effective operational air campaign to isolate the battlefield and a herculean effort to improvise and sustain supply contributed to the Allies' victory.

The task of eliminating the Japanese beachheads on the north Papuan coast was complex. The Japanese positions covered a 20km stretch of coastline, with Buna on the eastern flank, Gona to the west, and Sanananda in the centre. The terrain posed significant challenges and greatly favoured the defenders. The coastline was dominated by tidal swamps and streams, dense patches of jungle and scrub, coconut plantations, and wide swathes of kunai grass. The onset of the wet season and endemic tropical diseases created a gruelling operating environment. There were no roads and few tracks. Supply lines relied on air transport over the rugged Owen Stanley Range or insecure shipping from Milne Bay. The Japanese had heavily fortified the beachheads with extensive mutually supporting defensive positions. However, intelligence suggested the beachheads were lightly-held and Allied high command was confident of a swift and decisive victory. The weary Australian 7th Division and inexperienced American 32nd Infantry Division arrived to face positions held by reinforced Japanese forces with orders to hold at all costs.

The operations devolved into concurrent battles for each beachhead. Allied forces came under increasing pressure from high command to conclude rapidly the operations but lacked the resources to assault prepared positions. Allied forces had to devise ways to dislocate and destroy the defences, which necessitated the flexible application of doctrine, tactics, and equipment. Japanese resistance gradually crumbled because of disease, attrition, and the loss of supply. However, they refused to surrender, and the campaign was fought to the bitter end. After 68 days of relentless fighting the Allies eliminated organised Japanese resistance on 22 January 1943 and concluded the Papuan campaign

The beachhead operations remain a poorly understood aspects of the war despite their importance. The typical tactical narrative of the operations focuses on a simplified story of the battles – one of operational disconnect and repeated, unimaginative attacks.² This thesis challenges this assertion through providing an anatomy of the operations, examining the pertinent strategic, operational, and tactical aspects that shaped them. The beachhead operations demonstrate the

² The term tactical narrative is used to describe a specific style of military history narrative which is firmly entrenched in Australian military historiography. The term is explored on pages 6-7.

complexity of campaigning during the early stages of the Pacific War and highlight the Allies' flexible and adaptable approach in achieving the first decisive victory against the Japanese in the SWPA.

Significance of the Beachhead Operations and Key Themes

The beachhead operations provide an excellent case study of the interplay between the strategic, operational, and tactical levels of war. The strategic level is concerned with decision-making at the highest levels of command and the overall context of a conflict.³ The operational level addresses the command and control of campaigns to achieve strategic objectives. It also covers the deployment, coordination, and maintenance of forces. The operational level ultimately determines the effectiveness of military campaigns.⁴ The tactical level is the level at which engagements are planned and fought by units and sub-units of an armed force to achieve specific objectives. It includes the methods and capabilities they employ which determine mobility, protection, and firepower.⁵ By addressing all three levels of war, this thesis moves past the story of what happened, and explains how and why the operations occurred as they did.

The beachhead operations are significant for a number of reasons. The operations included many firsts in the Pacific War.⁶ They represent the first sustained offensive operations against prepared positions by Allied forces in the Pacific theatre. Prior to November 1942, the Allies had been defeated soundly or limited to strategic defensive operations throughout the Pacific. The Australian advance back across the Owen Stanley Range – which culminated in the beachhead operations – and the American landing on Guadalcanal marked the beginning of the Allies' strategic offensive.⁷ The beachheads were also the first operation Australian and American forces fought together on a large scale, and thus present a study in coalition warfare, interoperability, and battlefield cooperation. The operations mark the first time US Army National Guard formations were involved in a major offensive operation, and the 32nd and 41st Infantry Divisions could also claim to

³ Jonathan House, *Combined Arms Warfare in the Twentieth Century* (Lawrence: University Press of Kansas, 2001), 6; Edward Luttwak, "The Operational Level of War," *International Security* 5, no. 3 (1981), 61.

⁴ Luttwak, "Operational Level of War," 61.

⁵ House, *Combined Arms Warfare*, 6; Luttwak, "Operational Level of War, 61.

⁶ The Battle of Buna was selected as one of America's first battles by Charles Heller and William Stofft as a case study in their book *America's First Battles, 1776-1965*. The analysis by Jay Luvaas is, understandably, limited to the American perspective, leaving many aspects of the operation untouched. Charles Heller and William Stofft, *America's First Battles, 1776-1985* (Lawrence: University Press of Kansas, 1986), x.

⁷ Karl James describes the period between mid-September and November as a 'pursuit' rather than an advance. However, the South Seas Force was not defeated and conducted an organised withdrawal, including several delaying actions, with the heaviest fighting occurring at Templeton's Crossing, Eora Creek and Oivi-Gorari, all of which required the Australians to attack defensive positions. Karl James, "On Australia's Doorstep: Kokoda and Milne Bay," in *Australia 1942: In the Shadow of War*, ed. Peter Dean (Port Melbourne: Cambridge University Press, 2013), 212.

be the first American combat formations to defeat the Japanese during the war. The operations also saw significant improvisation in air transportation and supply, as well as the first occasion Australian armoured forces were committed in the theatre. That so much of the campaign was new invites study of how the Allies conducted the operations and addressed challenges not yet faced in the SWPA.

The beachhead operations must also be examined as part of a coalition effort by Australian and American forces to appreciate the roles played by Allied partners.⁸ Nationalist narratives which attribute victory in the Papuan campaign to either American or Australian forces generate a poor understanding of the complexities of coalition warfare in the SWPA. This is important as the outcome cannot be explained adequately without acknowledging the contributions, successes, and failures of both forces. Australian and American forces had little practical understanding or experience of fighting together. The different methods employed by the forces, as well as the relationships between commanders and their perceptions of their Allied partners raises important questions about coalition warfare, command and control, and the interoperability of Australian and American militaries in 1942-43.

Last, the parity of Allied and Japanese forces at this stage is notable as it meant the Allies could not rely on numerical or materiel advantages for victory. The strength of the forces involved were largely comparable at the beginning of the operations. Japanese forces numbered approximately 10,000 Army, Navy, and support personnel during the operations, though many of these units were depleted through casualties and disease.⁹ The Allies' initial strength was comparable – approximately 8,000 combat personnel – though this was reinforced by additional infantry, artillery, armour, and supporting units as the Allies brought more forces to bear.¹⁰ Despite this, Allied forces rarely possessed the 3:1 ratio generally considered a minimum requirement for attacking prepared defences.¹¹ Economy and concentration of force combined with the judicious

⁸ Peter Stanley, "The Green Hole Reconsidered," in *The Foundations of Victory: The Pacific War 1943-1944: The 2003 Chief of Army's Military History Conference*, eds. Peter Dennis and Jeffery Grey (Canberra: Army History Unit, 2004), 206-207.

⁹ For an overview of the Japanese Order of Battle see Appendix 1. Steven Bullard trans., *Japanese Army Operations in the South Pacific Area: New Britain and Papua Campaigns, 1942-43* (Canberra: Australian War Memorial, 2007), 205.

¹⁰ For an overview of the Australian Order of Battle see Appendix 2.

¹¹ The 25th Brigade arrived at Gona with an approximate combat strength of 850 personnel against about 800 Japanese defenders. Meanwhile, the 16th Brigade – numbering about 1,100 personnel – met the bulk of the Japanese forces – about 4,500 personnel – echeloned along the Sanananda Road defences. The Americans' two regiments were widely dispersed and could not concentrate against the 3,000 Japanese defending Buna. The concept of force ratios originates with Frederick Lancaster's quantitative research on warfare and the principle of 'concentration' in 1915-1916. Force ratios provide no hard and fast rule but have generally been used to guide the application of military force in certain situations. Paul K. Davis, *Aggregation, Disaggregation*,

application of tactics and resources were important. The contest for air and naval superiority also had a marked effect on logistics. The Japanese possessed considerable naval power which they could extend against Papua, though this was balanced against the Allies growing ascendancy in air power. The Allies' success interdicting Japanese supply while maintain their own under difficult conditions was a key factor in their success.

Subsequently, this thesis focuses on six main themes related to the operational and tactical levels of warfare. Doctrine and training are significant because they provide the basis for understanding how the Australian and American forces perceived, approached, and conducted the campaign. Allied forces faced the challenge of applying conventional doctrines in an unfamiliar environment. Training and experience prior to the operations did not prepare forces for the task of dislocating and destroying mutually supporting defensive positions in close terrain.

Issues of coalition warfare stemming from little prior experience or mutual understanding between partners directly affected the command and coordination of Allied forces. Recurrent problems related to doctrinal interoperability, familiarity, parochialism, perceptions of favouritism, and the effects of individual personalities presented barriers to cooperation. The Allies had to reconcile differences about command doctrine and organisation, operational approaches, and the tactics employed at lower levels. Without prior experience or training as part of an integrated force, Australian and American forces had to learn to fight together on the battlefield, which produced tension and complications, but also practical solutions and cooperation.

Command, control, and leadership were critical factors which shaped the beachhead operations.¹² Decision-making, assessments of the situation, and control of the operations are examined from GHQ SWPA down to sub-unit level. The problems of multi-national commands, the implications for the command of large formations in jungle environments, and the practical difficulties imposed by terrain, communication, and the character of combat in the jungle for lower-level commanders were significant.

Logistics is a vital factor in military effectiveness, but its influence on how forces fight is often overlooked.¹³ The logistical challenges of the campaign were significant. First, in terms on the

and the 3:1 Rule in Ground Combat (Santa Monica: RAND, 1995), 1; Trevor Dupuy, *Understanding War: History and Theory of Combat* (New York: Paragon House Publishers, 1987), 9, 31.

¹² Martin Van Creveld defines the essence of command as decision-making and the ability to overcome the frictions of war. Command may also be interpreted as the authority and decision-making over the employment of forces towards the attainment of an objective, while control is how that authority is continually exerted through procedures communications, and monitoring to ensure forces work towards their objectives. Martin Van Creveld, *Command in War* (Cambridge: Harvard University Press, 1985), 268-275.

¹³ David Beaumont, "Logistics, Strategy and Tactics: Balancing the Art of War," *Australian Army Journal* 11, no. 2 (2014), 50.

limited transportation capabilities and infrastructure, second, in terms of the operating environment, and third, in meeting the requirements of food, equipment and supplies for ground forces. Understanding the operations' logistics is vital to explaining its outcome.

The employment of combined arms warfare to achieve the effective combination of mobility, firepower, and protection is vital to tactical success.¹⁴ Combined arms warfare is the 'basic idea that different combat arms must be used in concert to maximise the survival and combat effectiveness of others'.¹⁵ While the role of supporting arms in jungle warfare was initially discounted, infantry could only achieve limited success on their own. The employment of combined arms forces incorporating artillery and armour posed many practical challenges in terms of transportation, sustainment, coordination, and tactics, but was a vital factor in Allied success.

Military learning and adaptation is the final major theme of the thesis. Military learning and adaptation refers to the ability of military institutions to recognise issues and problem-solve. Learning and adaptation is affected by an organisation's institutional culture, doctrinal principles, and how its members act and interact within the organisation.¹⁶ The capacity for military forces to challenge their assumptions about operational and tactical circumstances has a significant effect on combat effectiveness because it offers the chance to improvise and adapt to unforeseen challenges.¹⁷ The highlighted factors – the operation's firsts, the Allied effort, and parity of forces – in conjunction with the tactical and operational challenges posed by objectives, terrain, and resources make the beachhead operations an excellent case study for learning and adaptation and for a thematic rather than chronological approach.

Trends in Military Historiography

Most existing studies of the beachhead operations have been shaped by broader trends in Australian and American military historiography. The first trend is the reliance on tactical narratives that focus on the experiences of individuals and groups on the frontlines at the expense of a holistic perspective of operations. The approach was established with C.E.W. Bean's Official Histories of the

¹⁴ Michael Evans, "General Monash's Orchestra: Reaffirming Combined Arms Warfare," in *From Breitenfeld to Baghdad: Perspectives on Combined Arms Warfare, Working Paper No. 122*, eds. Michael Evans and Alan Ryan (Canberra: Land Warfare Studies Centre, 2003), 1-2.

¹⁵ Patrick Armstrong cited in Evans, "General Monash's Orchestra," 2; Thomas Draude et al, "Combined Arms Warfare," *Marine Corps Gazette* 73 (1989), 59; House, *Combined Arms Warfare*, 4-5.

¹⁶ John Nagl, *Counterinsurgency Lessons from Malaya and Vietnam: Learning to Eat Soup with a Knife* (Westport; Praeger, 2002), 4-7.

¹⁷ Russell Hart, *Clash of Arms: How the Allies Won in Normandy* (Boulder: Lynne Rienner Publishers, 2001), 1-2; Nagl, *Learning to Eat Soup with a Knife*, 6.

First AIF and has been an enduring feature of Australian military historiography.¹⁸ Bean believed the purpose of his histories was to provide a detailed account and memorial for the actions of Australian soldiers. This was achieved by describing soldiers' experiences with vivid detail, based on exhaustive first-hand research.¹⁹ His 'democratisation' of military history marked a significant departure from the traditional focus on strategy and generals.²⁰ However, this method tended to neglect broader issues such as strategy, intelligence, command, training, and the roles of non-combat personnel.²¹ While the official history of the Second World War included additional volumes on the Royal Australian Air Force, Royal Australian Navy, medical services and civil organisations, Gavin Long, the general editor, felt compelled to follow Bean's methodology for the army volumes because it appealed to the public.²²

The first consequence of the trend has been a preference for narrative over analytical campaign histories. The adherence to narratives is understandable; the style is popular, easy to follow, and dramatic. This style of history has been termed 'diggerography' by Robert Stevenson, who suggests that, to these historians, a 'good story matters more than the dry facts of how and why'.²³ This trend has been capitalised on by popular historians such as Peter Fitzsimons, Paul Ham and Les Carlyon, whose works have sold widely.²⁴ Fitzsimons, a self-proclaimed 'storian', takes 'poetic license' in his account of the Papuan campaign to colour the details of his story.²⁵ Ham's *Kokoda* takes a similar approach, though it makes greater use of archival sources to inform the narrative.²⁶ The desire to focus on characters and action is typical of the approach but does little to

¹⁸ C.E.W. Bean was general editor and author of the *Official History of Australia in the War of 1914-1918*, a 12 volume collection published between 1921-1942. Peter Stanley, "Introduction," *Revue Internationale d'Histoire Militaire* 72 (1990): viii.

¹⁹ C.E.W. Bean, ed., *Official History of Australia in the War of 1914-1918*, 12 Vols., (Sydney: Angus and Robertson, 1921-1941); C.E.W. Bean, *Anzac to Amiens* (Canberra: Australian War Memorial, 1961), viii.

²⁰ Jeffery Grey, "Cuckoo in the Nest? Australian Military Historiography: The State of the Field," *History Compass* 6 (2008): 456.

²¹ David Horner, "The Evolution of Australian Official War Histories," in *War, Strategy and History: Essays in Honour of Professor Robert O'Neill*, eds. Daniel Marston and Tamara Leahy (Canberra: Australian National University Press: 2016), 74.

²² *Australia in the War of 1939-1945* includes 22 volumes written by 14 different authors, published between 1952-1977. Peter Dennis et al, "Long, Gavin Merrick," in *The Oxford Companion to Australian Military History*. Oxford University Press, 2008.

²³ Robert Stevenson, *The War with Germany* (Melbourne: Oxford University Press, 2015), 12.

²⁴ Joan Beaumont, "The State of Australian History of War," *Australian Historical Studies* 34 (2003): 168; Grey, "Cuckoo in the Nest?", 458. See: Roland Perry, *Pacific 360: Australia's Battle for Survival in World War II* (Sydney: Hachette Australia, 2012); Peter Thompson, *Pacific Fury: How Australia and Her Allies Defeated the Japanese Scourge* (North Sydney: William Heinemann Australia, 2008).

²⁵ Peter Fitzsimons, *Kokoda* (Sydney: Hodder Australia, 2004), 5-6.

²⁶ Paul Ham, *Kokoda* (Pymble: Harper Collins, 2004).

improve our understanding of military operations.²⁷ These accounts rarely veer from the established narratives or explore new issues, which has resulted in a narrow and unbalanced understanding of Australian forces at war.²⁸

The second consequence has been an implicit or explicit focus on commemorating campaigns as national achievements. Focusing on tales of heroism, the characteristics of Australian soldiers, and the conflation of national characteristics with military outcomes has contributed to the mythology of Anzac.²⁹ Craig Stockings and Stevenson argue the Anzac myth has distorted attempts to critically analyse the performance of Australian military forces.³⁰ During the 1990s and 2000s, the Kokoda campaign became the focal point of Australia's commemoration of the Second World War, rivalling Gallipoli in its significance to Australian national identity and history.³¹ This has generated a parochial perspective of the significance of the campaign, and its interpretation has become intimately entwined with nationalist narratives that posit it as the most important engagement of the entire war.³² Meanwhile, the beachhead operations have been subsumed into the Kokoda narrative, despite representing a distinctly different phase of the campaign, or overlooked entirely.³³

American historiography of the beachhead operations has also been shaped by broader trends related to the focus of topics and personalities. Historian Cole Kingseed summarised that

²⁷ Hank Nelson warns against this kind of scholarship relying too heavily on the established narratives of the official histories since new information and sources have become available since their publication. Hank Nelson, "Kokoda: The Track from History to Politics," *Journal of Pacific History* 38 (2003): 109-127.

²⁸ Grey, "Cuckoo in the Nest?," 458; Stanley, "Green Hole Reconsidered", 206-210; Stevenson, *The War with Germany*, 5; 11-12.

²⁹ Wayne Reynolds, "On Writing About Australian Military History After the Second World War: The Need for Integration," *Australian Historical Studies* 34 (2003): 169; Stevenson, *The War with Germany*, 5.

³⁰ The consequences of attempting to debunk or examine the complex narrative of 'Anzac' is interestingly detailed in Martin Crotty and Craig Stockings, "The Minefield of Australian Military History," *Australian Journal of Politics and History* 60 (2014), 580-591; Stevenson, *The War with Germany*; Craig Stockings, *Bardia: Myth, Reality and the Heirs of Anzac* (Sydney: University of New South Wales Press, 2009), 4; Craig Stockings, "There is an Idea that the Australian is a Born Soldier...", in *Zombie Myths of Australian Military History: The 10 Myths That Will Not Die*, ed. Craig Stockings (Sydney: University of New South Wales Press, 2010), 93-115.

³¹ Karl James, "Kokoda: The Immortal Trail," in *Kokoda: Beyond the Legend*, ed. Karl James (Port Melbourne: Cambridge University Press, 2017), 2.

³² Peter Stanley, "The Green Hole: Exploring Our Neglect of the New Guinea Campaigns of 1943-44," *Sabretache: Journal of the Military Historical Society of Australia* 34 (1993): 3-11; Stanley, "The Green Hole Reconsidered," 208; David Horner, "Kokoda: An Epic in Australian History?," in *Kokoda: Beyond the Legend*, ed. Karl James (Port Melbourne: Cambridge University Press, 2017), 288-305; Nelson, "Kokoda," 125-126; Peter Stanley, "Dramatic Myth and Dull Truth: Invasion by Japan in 1942," in *Zombie Myths of Australian Military History: The 10 Myths That Will Not Die*, ed. Craig Stockings (Sydney: University of New South Wales Press, 2010), 140-60; David Stevens, "'Australia's Thermopylae': The Kokoda Trail," in *Zombie Myths of Australian Military History: The 10 Myths That Will Not Die*, ed. Craig Stockings (Sydney: University of New South Wales Press, 2010), 161-162.

³³ For examples of this see Fitzsimons, *Kokoda* and Ham, *Kokoda*. Unlike Fitzsimons and Ham, Peter Brune provides detailed coverage of the beachhead operations, rather than treating them as an epilogue to the Kokoda Trail. Joan Beaumont, "The Pacific War, 1943, and Australian National Memory," in *The Foundations of Victory: The Pacific War 1943-1944: The 2003 Chief of Army's Military History Conference*, eds. Peter Dennis and Jeffery Grey (Canberra: Army History Unit, 2004), 3.

American military historiography regarding the US Army's campaigns in the Pacific was shaped by five factors: the Germany-first strategy, the Pacific as a naval theatre, the cult of personality surrounding MacArthur, unbalanced coverage of the European theatre, and the controversies of race and violence that characterised combat in the Pacific.³⁴ Explaining the complex campaigns of the Pacific is a daunting prospect, but even the SWPA in 1942 has received scant attention compared to other campaigns. American scholarship overlooks the role of Australian and American forces in Papua in favour of the USN and USMC's defence and recapture of Guadalcanal and the subsequent amphibious campaigns in the central Pacific.³⁵ Guadalcanal has been mythologised in a similar way to Kokoda, drawing attention away from other events and issues prevalent in the theatre at the time. This trend is exemplified in Ian Toll's *Conquering Tide* and Ronald Spector's *Eagle Against the Sun*, which devote great detail to the Solomons campaign but not to Papua and New Guinea.³⁶

The narrative of General Douglas MacArthur also influences the treatment of the beachhead operations. MacArthur's desire to return to the Philippines and his leapfrog strategy are well-documented but the Papuan campaign represents an inglorious start to this story. MacArthur was caught off-guard by the Japanese landing at Buna which forced a reactive campaign, and his handling of the beachhead operations marked a low-point in his military career. While the MacArthur myth has been challenged, the prolonged and costly battles at Gona, Buna and Sanananda do not fit with the conventional narrative of MacArthur in the SWPA.³⁷ The relatively small number of American combat forces involved, and their initially poor performance, further discourages critical historical engagement. Last, the confronting nature of fighting in the Pacific – where no quarter was asked nor given – intertwined with racism and brutality, has discouraged deeper analytical examinations of the conduct of American forces in some campaigns.³⁸

³⁴ Cole Kingseed cited in John McManus, *Fire and Fortitude: the US Army in the Pacific War 1941-1943* (New York: Dutton Caliber, 2019), 4.

³⁵ Since 2015 there have been 10 new publications on the Guadalcanal campaign. The latest American account of the beachhead operations was James Campbell's *Ghost Mountain Boys* in 2008.

³⁶ Ian Toll, *The Conquering Tide: War in the Pacific Islands, 1942-1944*, Vol. 2 (New York: W.W. Norton & Co., 2015); Ronald Spector, *Eagle Against the Sun: The American War with Japan* (New York: Free Press, 1984).

³⁷ See for example, Peter Dean, *MacArthur's Coalition: US and Australian Operations in the Southwest Pacific Area, 1942-1945* (Lawrence: Kansas University Press, 2018); William Leary, ed., *MacArthur and the American Century: A Reader* (Lincoln: University of Nebraska Press, 2001).

³⁸ For discussion of these issues see Craig Cameron, "Race and Identity: The Culture of Combat in the Pacific War," *The International History Review* 27 (2005), 550-566; Peter Schrijvers, *The GI War against Japan: American Soldiers in Asia and the Pacific during World War II* (New York: New York University Press, 2002); Peter Schrijvers, *Bloody Pacific: American Soldiers at War with Japan* (Houndsmills: Palgrave MacMillan, 2010).

Japanese perspectives of the campaign are limited, though they offer valuable insights into the Japanese experience.³⁹ Official accounts incorporate documents, recollections, and interviews to form incomplete narratives. They suffer from limitations including the destruction of primary documents, the high casualty rate of participants in the south Pacific, and the unfamiliarity of their authors with historical processes and subject matter. The Japanese Monograph Series are translated operational accounts written by former Imperial Japanese officers, prepared under the guidance of the American occupation forces.⁴⁰ The Monograph Series is complemented by the Japanese official history which is regarded as an 'accurate but disjointed' account.⁴¹ These accounts differ from Australian and American official histories because of their focus on strategy, but they provide information that is not available in Allied records or accounts, such as troop dispositions and operational and strategic intent. Yoshihara Kane's *Southern Cross* is unique as an account written by an officer who served in the theatre.⁴² Kane's account highlights the strategic and operational challenges the Japanese faced balancing commitments to Papua and the Solomons. Conversely, Craig Collie and Hajime Marutani's *The Path of Infinite Sorrow* is valuable for its use of primary source material and oral histories from Japanese soldiers involved in the campaign.⁴³

The Beachhead Operations

These historiographical trends have shaped approaches to the study of the beachhead operations. They have resulted in limited attempts to analyse critically the operations and restricted an appreciation of their strategic, operational, and tactical character. Existing literature can be divided into three groups. The first adheres to the traits of tactical narratives and includes the official histories, popular histories, and unit histories. The second is based on command narratives which focus on relationships and decision-making at higher levels. Last, there are specialist studies which focus on specific elements of the campaign but tend to do so in isolation from other issues. These trends mean few accounts capture the complex interrelationships between factors which explain the outcome of the beachhead operations.

³⁹ For a detailed but dated list of Japanese source material, see the Australian-Japanese Research Project website, and Hank Nelson, "Report on Historical Sources on Australia and Japan at War in Papua and New Guinea, 1942-45," AJRP, 1996.

⁴⁰ Headquarters US Army Japan, *Japanese Monograph Series No. 37: 18th Army Operations*, Vol. I; HQ Far East Command, *Japanese Monograph Series No. 96: Eastern New Guinea Invasion*.

⁴¹ The volume pertaining to the Papuan campaign has been translated into English by Steven Bullard. Bullard, *Japanese Army Operations in the South Pacific Area*; Peter Williams, "The Kokoda Campaign, July-November 1942, An Analysis," (PhD diss. Charles Darwin University, 2008), 21.

⁴² Kane served as CoS of the XVIII Army during the period. Yoshihara Kane, *Southern Cross: Memories of the War in Eastern New Guinea*, trans. Doris Heath (Canberra: Australian War Memorial, 1955).

⁴³ Craig Collie and Hajime Marutani, *The Path of Infinite Sorrow* (Crows Nest: Allen & Unwin, 2012).

Dudley McCarthy's *South West Pacific Area – First Year: Kokoda to Wau*, the fifth volume of *Australia in the 1939-1945 War*, typifies Bean's approach to narrative and commemoration.⁴⁴ The volume addresses the entire Papuan campaign. Like the other official histories, it is primarily concerned with the experiences of Australian frontline troops and provides detailed accounts of action, though it also incorporates the Americans' efforts.⁴⁵ McCarthy acknowledged the limitations Bean's methodology imposed on his work:

Because the story is primarily that of the infantry soldier, I have feared that less than justice might have been done to many other brave and devoted men—gunners, sappers, signallers, staff officers, and the many thousands in the various services which kept the infantryman in the field.⁴⁶

While McCarthy demonstrates awareness of the effect of the strategic context on operations, aspects such as doctrine and training, command and control, logistics, and combat support are addressed superficially. Critical analysis of the battles is also limited by the commemorative purpose of the text.

McCarthy's work is complemented by Samuel Milner's *Victory in Papua*, part of the US Army's Green Book series.⁴⁷ The American official histories differ from the Australian histories as they were produced primarily as military education tools rather than commemorative volumes.⁴⁸ Milner retains a narrative approach but focuses more on unit-level actions and incorporates greater analysis, highlighting lessons and implications from the campaign.⁴⁹ He identifies many of the tactical complications encountered and hints at the processes of learning and adaptation – 'the beginning had been made in developing tactics and techniques...which usually proved effective' – but does not investigate how these developments occurred.⁵⁰ Milner also emphasises time as a '*leitmotiv*' during the operations, which created urgency and pressure to secure victory before the strategic situation changed.⁵¹ Milner's analysis of the 32nd Division must be considered carefully. Major General Edwin Harding, the Commanding General of the division before his relief at Buna, was the Army's Chief of Military History when the official histories were published. Though there is no obvious bias, Milner's assessment of the 32nd Division appears more generous than it should be.

⁴⁴ Dudley McCarthy, *South West Pacific Area – First Year: Kokoda to Wau*, Vol. 5, *Australia in the War of 1939-1945* (Canberra: Australian War Memorial, 1959).

⁴⁵ McCarthy, *Kokoda to Wau*, xi-xii.

⁴⁶ McCarthy, *Kokoda to Wau*, xi-xii.

⁴⁷ Samuel Milner, *United States Army in World War II, The War in the Pacific: Victory in Papua*, 2nd ed. (Washington DC: Centre of Military History United States Army, 1989).

⁴⁸ Milner, *Victory in Papua*, 369; John Wukovits, "World War II in Asia and the Pacific," in *A Companion to American Military History* ed. James C. Bradford (Chichester: Wiley-Blackwell, 2010), 195-196.

⁴⁹ This may be the result of Milner's reliance on battalion and regimental commanders for supplementary information regarding the campaign.

⁵⁰ Milner, *Victory in Papua*, 376.

⁵¹ Milner, *Victory in Papua*, 369-370.

After the official histories, little attention was paid to the beachheads until the 1990s. Raymond Paull's *Retreat from Kokoda* addressed the beachheads as an epilogue to the Kokoda campaign, while E.G. Keogh's *South West Pacific 1941-45* dealt with them in greater detail, highlighting some of the salient features of the campaign as they related to professional military education, such as command, logistics, and fire support.⁵² Lida Mayo's *Bloody Buna* was the first text to focus exclusively on the beachheads.⁵³ It relied on the narrative established by the official histories but lacks their detail and precision. It is unconvincing in its attribution of MacArthur's tactical ignorance to his reliance on his staff officers.⁵⁴ This remained the primary account of the beachheads until 1992 but has frequently been cited as an authoritative source in tactical narratives.

The combination of nationalist commemoration and the ANZAC legacy during the 1990s finally turned attention to the Papuan campaign and led to a wave of popular histories.⁵⁵ These accounts demonstrate the trends in historiography by focusing on advancing a 'national, military narrative' and commemorating servicemen.⁵⁶ The most significant accounts are Lex McAulay's *To the Bitter End* and Peter Brune's *A Bastard of a Place*, which were published during the peak of interest in the Papuan campaign.⁵⁷ While they differ in their focus and assessments of the operations, they adhere to a chronological narrative, focus on detailed recounts of small-group or individual actions, and have an explicit purpose to commemorate and celebrate Australian achievements. McAulay states his work sets out to disprove the notion that American forces were 'responsible for the victories on the north coast of New Guinea', and only deals with the Americans in cursory detail.⁵⁸ However, McAulay's claim is hyperbolic, unattributed, and over-generalised. It is representative of the nationalistic trends which are common in the field. Brune wishes to popularise the narrative of

⁵² Keogh served as a staff officer in the Directorate of Military Training at Advanced Land Headquarters during 1942-43. Outside of the official histories, he was one of the first to write about Australia's campaign in the Pacific. His text became a staple of study at the Royal Military College Duntroon until the 1970s. Raymond Paull, *Retreat from Kokoda* (Melbourne: Heinemann, 1958); E.G. Keogh, *South West Pacific 1941-45* (Melbourne: Grayflower, 1965); Jeffrey Grey, "A Military Intellectual: Colonel E.G. Keogh," in *Shadow Men: The Leaders who Shaped the Australian Army from the Veldt to Vietnam*, ed. Craig Stocking and John Connor (Sydney: NewSouth, 2017), 124-132.

⁵³ Lida Mayo, *Bloody Buna: The Campaign that Halted the Japanese Invasion of Australia* (Canberra: Australian National University Press, 1975), xiv.

⁵⁴ Mayo, *Bloody Buna*, 182-184.

⁵⁵ Grey, "Cuckoo in the Nest?", 458; David Stevens, "'Australia's Thermopylae,'" 163.

⁵⁶ Stevenson, *The War with Germany*, 5.

⁵⁷ McAulay had published *Blood and Iron* a year previous which provided an account of the Kokoda phase of the Papuan campaign and utilised a similar methodology, while Brune's work drew together a range of previously published books into a more comprehensive account of the entire campaign. Lex McAulay, *Blood and Iron: The Battle for Kokoda 1942* (Milsons Point: Hutchinson, 1991); Lex McAulay, *To the Bitter End: The Japanese Defeat at Buna and Gona 1942-43* (Milsons Point: Random House, 1992); Peter Brune, *A Bastard of a Place: The Australians in Papua: Kokoda, Milne Bay, Gona, Buna, Sanananda*, (Crows Nest: Allen & Unwin, 2003).

⁵⁸ McAulay, *To the Bitter End*, 1-2.

the beachhead battles and elevate them to the same status as Kokoda and Milne Bay.⁵⁹ He depicts the Australian infantryman as the hero of the campaign, contrasted with the incompetent American personnel and disconnected senior commanders. However, Brune does highlight some of the key tactical and operational challenges, such as the effect of terrain and the persistent pressure on unit commanders to achieve a quick, decisive result. James Campbell's *The Ghost Mountain Boys* represents an American equivalent.⁶⁰ Campbell focuses on personnel from the 126th Regiment but takes liberties to 'fill out' the thoughts and feelings of the main protagonists. Campbell's assessment of the 32nd Division's command is overly-sympathetic and fails to acknowledge the administrative and leadership failures within the division. Critically, all these accounts focus on either an Australian or American perspective in an effort to perpetuate a partisan narrative which fails to capture the contributions of both forces and simplifies explanations of the complex Allied relationships to a story of heroes and villains.

Unit histories also offer insight into unit's experiences of the beachheads. Unit histories generally offer a democratic history from below, recounting the actions and anecdotes of individuals or small groups based on the recollections of unit members. While approaches vary, they predominantly focus on the experiences of a single unit: its personnel, routines, movements, and roles in battle.⁶¹ These day-to-day details can highlight changes in training, attitudes, tactics, and equipment. All Australian units involved in the operations have published unit histories. Conversely, American histories are written at divisional-level, which provides less-specific details on individual experiences.⁶²

The command narrative field offers insight into decision-making, relationships, and operational and strategic matters. Several command narratives fall into the same traps as the tactical narratives relying on telling the story of the operations and using limited primary research, such as Harry Gailey's *MacArthur Strikes Back* and James Duffy's *War at the End of the World*.⁶³ This limits their analysis of important issues of command, and their ability to connect issues such as logistics, intelligence, and national antagonism to their effect on the operations. In contrast, David Horner's *Crisis of Command* is invaluable in addressing the features of Allied strategy and

⁵⁹ Brune, *A Bastard of a Place*, 4-5; 621-622.

⁶⁰ James Campbell, *The Ghost Mountain Boys: Their Epic March and the Terrifying Battle for New Guinea – The Forgotten War of the South Pacific* (New York: Crown Publishers, 2007).

⁶¹ Richard Pelvin, "Australian Pacific War Unit Histories," Australian Japanese Research Project.

⁶² Harold W. Blakeley, *The 32d Infantry Division: World War II* (Wisconsin: Thirty-Second Infantry Division History Commission, 1956); William F. McCartney, *The Jungleers: A History of the 41st Infantry Division* (Washington DC: Infantry Journal Press, 1948).

⁶³ Harry Gailey, *MacArthur Strikes Back: Decision at Buna, New Guinea 1942-1943* (Novato: Presidio Press, 2000); James Duffy, *War at the End of the World: Douglas MacArthur and the Forgotten Fight for New Guinea 1942-1945* (New York: NAL Caliber, 2016).

operational command during the Papuan campaign.⁶⁴ Horner highlights the ‘internal friction’ between American and Australian high command and the inefficient command structure as reasons for the operational difficulties during the campaign.⁶⁵ He is particularly critical of high command’s inability to comprehend or acknowledge the issues facing commanders at the front, which placed undue pressure on subordinates.⁶⁶ Horner’s *High Command* also highlights the difficult position of the Australian government and military as the junior coalition partner during 1942-1943.⁶⁷

Peter Dean’s contributions on command and coalition warfare are also notable.⁶⁸ Dean’s major criticisms of the existing accounts are their failure to address adequately the strategic context of the operations and the need to treat the operations as an Allied effort. Failure to address the strategic context has led an over-simplification of the urgency with which the operations were conducted and is often attributed to MacArthur’s personality rather than decision-making.⁶⁹ Additionally, while Australian-American relations at the highest levels were often uneasy, positive relationships were achieved on the battlefield. However, this does not sufficiently address the tactical implications of doctrine and interoperability or answer how the Allied forces fought together.

Command studies are complemented by biographies and autobiographies of the operations’ senior commanders. The complexity of Australian-American relationships, operational difficulties, and persistent pressure to achieve a quick and decisive victory recur as themes throughout these accounts. There is no shortage of books on MacArthur, ranging from ‘unabashed critics’ to ‘unashamed adulation’.⁷⁰ His autobiography *Reminiscences* and the *Reports of General MacArthur*

⁶⁴ David Horner, *Crisis of Command: Australian Generalship and the Japanese Threat, 1941-1943* (Canberra: Australian National University Press, 1978).

⁶⁵ Horner, *Crisis of Command*, xviii.

⁶⁶ Horner, *Crisis of Command*, 261-265.

⁶⁷ David Horner, *High Command: Australia’s Struggle for an Independent War Strategy, 1939-45* (St Leonards: Allen & Unwin, 1992), xix.

⁶⁸ Peter Dean, “Anzacs and Yanks: US and Australian Operations at the Beachhead Battles,” in *Australia 1942: In the Shadow of War*, ed. Peter Dean (Port Melbourne: Cambridge University Press, 2012), 217-239; Peter Dean, “Grinding Out a Victory: Australian and American Commanders During the Beachhead Battles,” in *Kokoda: Beyond the Legend*, ed. Karl James (Port Melbourne: Cambridge University Press, 2017): 164-186; Peter Dean, *MacArthur’s Coalition: US and Australian Operations in the Southwest Pacific Area, 1942-1945* (Lawrence: Kansas University Press, 2018).

⁶⁹ Stephen Hart notes the distorting role commander’s personalities can have in campaign histories. While the influence of personality must be acknowledged, it should not be taken as the determining factor in the conduct of operations. Hart notes that Field Marshal Bernard Montgomery, a polarising figure, has generated accounts that range from hagiographic to vilification, which subsequently affect assessments of his operational capabilities. Much the same could be said of MacArthur. Stephen Hart, *Montgomery and “Colossal Cracks”: The 21st Army Group in Northwest Europe, 1944-45* (Westport: Praeger Publishing, 2000), 3-4.

⁷⁰ For examples of general biographies and those relevant to the Pacific Theatre during the Second World War see; Richard B. Frank, *MacArthur* (New York: Palgrave, 2007); Arthur Herman, *Douglas MacArthur: American Warrior* (New York: Random House, 2016); William Manchester, *American Caesar: Douglas MacArthur, 1880-1964* (New York: Dell, 1978); Geoffrey Perret, *Old Soldiers Never Die: The Life of Douglas MacArthur* (New York:

are tempered by the objective and detailed assessments of D. Clayton James and Gavin Long, which have helped to dispel the enigma surrounding his carefully crafted persona.⁷¹ Horner's biographies of General Thomas Blamey and Major-General George Vasey further contribute to an understanding of the relationships and experiences of senior commanders in the SWPA.⁷² Additionally, studies of and accounts by Lieutenant General George Kenney, Lieutenant-General Edmund Herring, Lieutenant General Robert Eichelberger, Major General Edwin Harding and Major-General Frank Berryman provide a variety of insights into the attitudes of senior officers and the operational handling of the campaign.⁷³

Specialist studies on specific elements of the beachhead operations have filled some of the gaps left by tactical and command narratives on issues like command and leadership, doctrine and training, combat effectiveness, and combined arms warfare. Foremost of these is Jay Luvaas' "Buna 19 November 1942-2 January 1943: A 'Leavenworth Nightmare'".⁷⁴ Luvaas' study diverges from the usual narrative by addressing US Army doctrine and the preparation of the 32nd Infantry Division

Random House, 1996); Mark Perry, *The Most Dangerous Man in America: The Making of Douglas MacArthur* (New York: Basic Books, 2014); Paul P. Rogers, *The Good Years: MacArthur and Sutherland* (New York: Praeger, 1990); Michael Schaller, *Douglas MacArthur: The Far Eastern General* (New York: Oxford University Press, 1989); Charles A. Willoughby and John Chamberlain, *MacArthur, 1941-1951* (New York: McGraw-Hill, 1954); George C. Kenney, *The MacArthur I Knew* (New York: Duell, Sloan and Pearce, 1951).

⁷¹ Also useful is Leary ed., *MacArthur and the American Century*; D. Clayton James, *The Years of MacArthur*, 3 Vols., (Boston: Houghton Mifflin, 1970-1985); Gavin Long, *MacArthur as Military Commander* (Sydney: Angus and Robertson, 1969).

⁷² David Horner, *Blamey: The Commander-in-Chief* (St Leonards: Allen & Unwin, 1998); David Horner, *General Vasey's War* (Melbourne: Melbourne University Press, 1992).

⁷³ On Lieutenant General George Kenney see: Thomas Griffith, *MacArthur's Airman: General George C. Kenney and the War in the Southwest Pacific* (Lawrence: University Press of Kansas, 1998); George Kenney, *General Kenney Reports: A Personal History of the Pacific War* (New York: Duell, Sloane and Pearce, 1949); Herman Wolk, "George C. Kenney: MacArthur's Premier Airman," in *We Shall Return!: MacArthur's Commanders and the Defeat of Japan, 1942-1945*, ed. William Leary (Lexington: University of Kentucky Press, 2004), 88-114. On Lieutenant-General Edmund Herring see: Stuart Sayers, *Ned Herring: A Life of Lieutenant-General the Honourable Sir Edmund Herring* (South Yarra: Hyland House Melbourne, 1980). On Lieutenant General Robert Eichelberger see: Paul Chwialkowski, *In Caesar's Shadow: The Life of General Robert Eichelberger* (Westport: Greenwood Press, 1993); Robert Eichelberger, *Our Jungle Road to Tokyo* (New York: Viking Press, 1950); Jay Luvaas ed., *Dear Miss Em: General Eichelberger's War in the Pacific* (Westport: Greenwood Press, 1972); Jay Luvaas and John Shortal, "Robert L. Eichelberger: MacArthur's Fireman," in *We Shall Return!: MacArthur's Commanders and the Defeat of Japan, 1942-1945*, ed. William Leary (Lexington: University of Kentucky Press, 2004), 155-77; John Shortal, *Forged by Fire: General Robert L. Eichelberger and the Pacific War* (Columbia: University of South Carolina Press, 1987). On Major General Edwin Harding see: Leslie Anders, *Gentle Knight: The Life and Times of Major General Edwin Forrest Harding* (Kent: Kent State University Press, 1985). On Major-General Frank Berryman see: Peter Dean, *The Architect of Victory: The Military Career of Lieutenant General Sir Frank Horton Berryman* (Port Melbourne: Cambridge University Press, 2011). David Horner (ed.) *The Commanders: Australian Military Leadership in the Twentieth Century* (Sydney: George Allen & Unwin, 1984) also features chapters on prominent commanders including Herring, Vasey, and Lieutenant-General Sydney Rowell.

⁷⁴ Jay Luvaas, "Buna, 19 November 1942-2 January 1943: A 'Leavenworth Nightmare'," in *America's First Battles, 1776-1965*, eds. Charles Heller and William Stofft (Lawrence: University Press of Kansas, 1986), 186-225; Charles Heller and William Stofft, "Preface," eds. Charles Heller and Williams Stofft, *America's First Battles, 1776-1965* (Lawrence: University of Kansas Press, 1986), x.

prior to the campaign. He concludes that errors in the application and execution of doctrine in training and combat and deficiencies in command and leadership were the primary reasons for the 32nd Division's poor performance.⁷⁵ However, his work focuses on the American forces at Buna to the exclusion of other sectors and forces. Luvaas' work demonstrates that an assessment of the beachheads cannot ignore command, leadership, doctrine, and training.

Issues of command and leadership at unit-level and below were amplified by jungle conditions, but this area has been sparsely addressed in literature outside of Garth Pratten's *Australian Battalion Commanders in the Second World War*.⁷⁶ Pratten's work is valuable for its assessment of personalities and the exercise of command and control over units.⁷⁷ He clearly identifies the problems caused by terrain, loss of communication and control, the lack of resources, and persistent pressure during the beachhead operations.⁷⁸ However, the study is limited to Australian unit-level commanders, which precludes American perspectives and those of company and platoon leaders.

Matters of coalition warfare, interoperability, and combat effectiveness have also received scant attention. Liam Kane's recent social-military thesis on the 'embattled' Australian-American coalition argues that the relationships and attitudes between Australian and American forces at the beachheads were shaped by clashes in personalities and command responsibilities and the lack of understanding between the two national forces.⁷⁹ However, at lower levels, experiences in combat and cultural perceptions determined cooperation between Australian and American forces. Interoperability and mutual understanding are explored in some detail in Bryce Fraser's comparative study of combat effectiveness in the Papuan campaign, which uses case studies of individual Australian and American infantry units.⁸⁰ While Fraser's study accurately concludes that unfamiliarity with Allies' doctrine led to distorted critiques of each forces' performance, its limited focus does not account for interoperability in other areas like command, logistics, or combined arms warfare.⁸¹

The effect of training and experience is often cited as a major factor in the performance of Allied forces at the beachheads, but few narrative accounts have dealt sufficiently with the matter. While there is a growing body of literature addressing the AMF's doctrine and development during

⁷⁵ Luvaas, "A 'Leavenworth Nightmare'," 224.

⁷⁶ Garth Pratten, *Australian Battalion Commanders in the Second World War* (Port Melbourne: Cambridge University Press, 2009), 10-11.

⁷⁷ Pratten, *Battalion Commanders*, 179.

⁷⁸ Pratten, *Battalion Commanders*, 146, 150, 180.

⁷⁹ Liam Kane, "Embattled Coalition: Australians and Americans at War Against Japan, 1941-1945," (PhD diss., University of New South Wales, 2020).

⁸⁰ Bryce Fraser, "The Combat Effectiveness of Australian and American Infantry Battalions in Papua in 1942-1943," (PhD diss., University of Wollongong, 2013).

⁸¹ Fraser, "Combat Effectiveness," 82.

the Second World War, only a few studies by Pratten, Adrian Threlfall, and Matthew Miller deal explicitly with the beachheads.⁸² Studies of American forces have not been conducted. Doctrine and training are also intrinsically linked to military learning and adaptation. Pratten's study establishes the Papuan campaign as the genesis of the AMF as a learning institution. Threlfall's work acknowledges Australian learning at the beachheads, but it is incorporated as part of a long-term process of doctrinal adjustment.⁸³ One weakness in Threlfall's work is that it does not apply a framework to examine the learning process. The focus on doctrinal development also suggests that learning and adaptation only occurs after operations have been analysed, rather than as an immediate, dynamic process on the battlefield.

Logistics is also frequently cited as a critical factor in the outcome of the operations but is again seldom explicitly addressed in campaign histories. John Moremon's thesis on Australian logistics during the Papuan campaign is the foremost contribution in this area.⁸⁴ Moremon asserts that logistical support for the campaign was severely limited by terrain and available resources. This led to innovation in supply procedures as the operations moved toward the beachheads.⁸⁵ Crucially, Moremon notes that logistical limitations directly affected tactics. However, as the study is primarily concerned with logistical organisations and methods, he does not elaborate on this effect.⁸⁶ Additionally, Jane McLeod's work on the Australian medical services demonstrates how Australian Field Ambulances had to be flexible in their organisation and function to meet logistical and

⁸² Tim Moreman, *The Jungle, the Japanese, and the British Commonwealth Armies at War, 1941-45: Fighting Methods, Doctrine and Training for Jungle Warfare* (London: Frank Cass, 2005); Tim Moreman, "The Jungle, The Japanese and the Australian Army," (Paper presented at Remembering the War in New Guinea Symposium, Australian National University, 2000); John Moremon, "Most Deadly Jungle Fighters?: Australian Infantry in Malaya and Papua, 1941-43," (Honours diss., University of New England, 1992); John Moremon, "No 'Black Magic': Doctrine and Training for Jungle Warfare," in *The Foundations of Victory: The Pacific War 1943-1944: The 2003 Chief of Army's Military History Conference*, ed. Peter Dennis and Jeffery Grey (Canberra: Army History Unit, 2004), 76-85; Garth Pratten, "Papua's Overlooked Legacy: The AMF as a Learning Institution," in *Kokoda: Beyond the Legend*, ed. Karl James (Port Melbourne: Cambridge University Press, 2017): 266-287; Adrian Threlfall, "The Development of Australian Army Jungle Warfare Doctrine and Training, 1941-1945," (PhD diss., Victoria University, 2008); Adrian Threlfall, *Jungle Warriors: From Tobruk to Kokoda and Beyond, How the Australian Army Became the World's Most Deadly Jungle Fighting Force* (Sydney: Allen and Unwin, 2014); Daniel Marston, "Learning and Adapting for Jungle Warfare, 1942-45: The Australian and British Indian Armies," in *Australia 1944-45: Victory in the Pacific*, ed. Peter Dean (Port Melbourne: Cambridge University Press, 2016), 121-144; Matthew E. Miller, "Assault Brigade: The 18th Infantry Brigade's Development as an Assault Formation in the SWPA 1942-45," (PhD diss., University of New South Wales Australian Defence Force Academy, 2019); Albert Palazzo, *The Australian Army: A History of its Organisation from 1901 to 2001* (Melbourne: Oxford University Press, 2001); Albert Palazzo, "Organising for Jungle Warfare," in *The Foundations of Victory: The Pacific War 1943-1944: The 2003 Chief of Army's Military History Conference*, ed. Peter Dennis and Jeffery Grey (Canberra: Army History Unit, 2004), 86-101.

⁸³ Threlfall, "The Development of Australian Army Jungle Warfare Doctrine," 233-247.

⁸⁴ John Moremon, "A Triumph of Improvisation: Australian Army Operational Logistics and the Campaign in Papua, July 1942 to January 1943," (PhD diss., University of New South Wales Australian Defence Force Academy, 2000).

⁸⁵ Moremon, "A Triumph of Improvisation," 348.

⁸⁶ Moremon, "A Triumph of Improvisation," 15.

operational limitations.⁸⁷ This thesis seeks to link logistical issues more cohesively into assessing the conduct of operations.

Several conclusions can be drawn from this literature review. First, that dominant trends in Australian and American historiography have produced works which focus on stories and experiences rather than analysis. Second, that studies have focused on frontline soldiers or high command, which marginalises the operational level and support services. Third, specialist studies have examined specific aspects of the operations in detail, but rarely link them to other elements. The stratification of tactical, command, and specialty studies means the significant factors and complex interrelationships between strategic, operational, and tactical-level issues which determined the character and outcome of the beachhead operations are rarely addressed in a cohesive manner or are addressed only implicitly. As a result of these factors, the anatomy of the beachhead operations is yet to be fully examined.

An Anatomy of a Battle: Sources and Approach

This thesis adopts a significantly different approach to conventional tactical narratives to better demonstrate the complexities of the operations. It examines the anatomy of the beachhead battles through empirical historical research and thematic analysis of critical operational and tactical components. It also integrates an analysis of military learning and adaptation as a crucial factor which contributed to the Allies' success. A thematic approach provides a flexible platform from which to examine key issues and identify the determinants of success or failure in combat operations. This approach is influenced by Rhys Crawley's re-evaluation of the August Offensive at Gallipoli.⁸⁸ His thematic study broke down the offensive to explore aspects such as planning and command, inter-service cooperation, fire support, and logistics which, when examined together, explained the failure of the August Offensive.⁸⁹ The key themes which have been identified as pertinent to the beachhead operations – doctrine and training, coalition warfare, command, control and leadership, logistics, combined arms warfare, and learning and adaptation – form the core components of this thesis.

⁸⁷ Jane McLeod, "'Within Reach, Beyond Care': An Examination of Medical Care during the Papuan (Kokoda) Campaign 1942-43 Through the Lens of the Australian Field Ambulance," (PhD diss., University of Newcastle, 2015); Jane McLeod, *Shadows on the Track: Australia's Medical War in Papua 1942-1943: Kokoda-Milne Bay-the Beachhead Battles* (Newport: Big Sky Publishing, 2019).

⁸⁸ Rhys Crawley, "'Our Second Great [Mis]Adventure': A Critical Re-Evaluation of the August Offensive, Gallipoli, 1915," (PhD diss. University of New South Wales Australian Defence Force Academy, 2010); Rhys Crawley, *Climax at Gallipoli: The Failure of the August Offensive* (Norman: University of Oklahoma Press, 2014).

⁸⁹ Crawley, "'Our Second Great [Mis]Adventure'"; Crawley, *Climax at Gallipoli*.

A framework for learning and adaptation permits the examination of the capacity for Allied forces and commands to adapt operational and tactical approaches. The learning and adaptation process refers to a force's capacity to 'recognise and adapt to the actual conditions of combat' and new tactical, operational, strategic, and political challenges.⁹⁰ Adaptation can occur at all levels of command and at all levels of war, though it may not be uniform or simultaneous.⁹¹ Adaptations may challenge perceptions of how things should be done or result from practical changes necessitated by circumstances. The results may or may not be novel, nor necessarily lead to immediate success. Studies of military learning and adaptation are part of an important and growing body of literature. Williamson Murray argues that studying how militaries identify problems, learn, and adapt is fundamentally important to understanding military effectiveness.⁹² However, Aimee Fox-Godden asserts that studies of military learning and adaptation tend to focus on the outcomes of adaptation, rather than how they come about.⁹³ Identifying the factors which determine the process is therefore important.

John Nagl's seminal study of British and American adaptation to irregular warfare provides a basis for assessing the culture of a military organisation and its capacity to learn and adapt.⁹⁴ Nagl identified five key criteria which determined a military institution's adaptability, derived from its institutional culture:

1. Does the army promote suggestions from the field?
2. Are subordinates encouraged to question superiors and policies?
3. Does the organisation regularly question its basic assumptions?
4. Are high-ranking officers routinely in close contact with those on the ground and open to their suggestions?
5. Are Standard Operating Procedures (SOPs) generated locally and informally or imposed from the centre?⁹⁵

While these criteria are useful for identifying learning organisations, they do not sufficiently address the factors which explain why organisations are able – or unable – to learn and adapt. It is necessary to incorporate an assessment of competence and leadership, the collection and dissemination of information, and doctrine to develop a more complete framework.

The ability of individuals to challenge their assumptions about operational and tactical circumstances, and the capabilities of their own and enemy forces underpins military learning and

⁹⁰ Williamson Murray, *Military Adaptation in War: With Fear of Change* (New York: Cambridge University Press, 2011), 1.

⁹¹ Murray, *Military Adaptation*, 1, 7.

⁹² Murray, *Military Adaptation*, 75.

⁹³ Aimee Fox-Godden, "'Putting Knowledge in Power': Learning and Innovation in the British Army of the First World War," (PhD diss., University of Birmingham, 2015), 1-2.

⁹⁴ Nagl, *Learning to Eat Soup with a Knife*.

⁹⁵ Nagl, *Learning to Eat Soup with a Knife*, 10.

adaptation. However, there is a tendency for militaries to apply pre-conceived assumptions about what should happen to military operations.⁹⁶ Plans are made, and friendly and enemy forces are expected to act in certain ways. However, the information upon which these assumptions are made is often incomplete or sometimes inaccurate. Reconciling the difference between expectations and reality is therefore a primary barrier to learning and adaptation.

Learning and adaptation also depends on the competence and ability of individuals. However, the necessary imagination, leadership, and initiative needed to overcome military problems – through the employment of forces or how forces operate – is rare.⁹⁷ Incompetence may stem from narrow-mindedness, short-sightedness, or rigidity in outlook, and an organisation's culture and structure, or human characteristics, which are exacerbated by the pressure of military command.⁹⁸ This directly relates to individuals' capacity to challenge their assumptions about military matters. Increasing decentralisation means forward commanders are better placed to analyse and assess patterns and lessons from combat and devise tactical adaptations. However, it is difficult for individuals to accurately identify problems, analyse them, and propose solutions under stressful physical and psychological conditions. As Williamson Murray and Barry Watt argue, senior officers are in a critical position to validate or facilitate learning and adaptation, and it is 'impossible for new ways of fighting to take root' without their influence.⁹⁹ Whist Murray and Watt's comment is made in relation to broader organisational changes during peacetime, it is equally applicable to the battlefield. These lessons then need to be conveyed in a clear and concise manner before meaningful conclusions can be made.

Information remains a crucial element in the learning and adaptation process as information shapes assessments and decisions. As higher-level commands are increasingly removed from the battlespace, they must rely on reports from their staff and frontline commands to inform their understanding of conditions. However, the usefulness of this information is determined by its accuracy and timeliness, how it is interpreted, and whether it is accepted as true.¹⁰⁰ This can sometimes cause confronting irregularities between perceptions of a battle and actual conditions. Without accurate knowledge of the battlefield, it is difficult for commanders to understand the effect of the environment, supply, or the circumstances of friendly and enemy forces.

⁹⁶ Murray, *Military Adaptation*, 5.

⁹⁷ Murray, *Military Adaptation*, 24-29.

⁹⁸ Murray, *Military Adaptation*, 7, 24-26.

⁹⁹ Williamson Murray and Barry Watt, "Innovation in Peacetime," in *Military Innovation in the Interwar Period* eds. Williamson Murray and Allan Millett (Cambridge: Cambridge University Press, 1996), 8.

¹⁰⁰ Murray, *Military Adaptation*, 5.

An organisation which recognises the importance of collecting information and possesses a systematic process for analysing and disseminating lessons learned is essential.¹⁰¹ However, this information is only useful if commanders are willing to challenge their assumptions about friendly and enemy forces and the need to adapt methods, and it can be disseminated and accepted throughout the organisation. The transmission of useful information between commands during operations is affected by a number of factors, such as the aforementioned ability to collect relevant information, the administrative and staff resources available for analysing and disseminating such information when day-to-day operational matters are often prioritised, and the dispersal and rotation of forces and loss of knowledge through casualties.¹⁰² Last, the structure of military organisations is a natural barrier to the rapid transmission of information. The hierarchical structure of military organisations is ill-suited for lateral transmission between the units of a formation.¹⁰³ While learning and adaptation takes place during an operation, most reports on lessons learned are prepared post-campaign.¹⁰⁴

Learning and adaptation is also shaped by doctrine, organisation, and training. Russell Hart and Michael Doubler demonstrate the significance of doctrine to military outcomes and adaptation in their respective studies of the European theatre in 1944-45.¹⁰⁵ Doctrine determines adaptability because it provides the conceptual foundations through which militaries view core principles and approaches to strategy, operations, and tactics, and forms part of a military's organisational culture.¹⁰⁶ Doctrine subsequently informs how military forces are organised, how they train, the methods by which they operate, and the resources they employ. In accounting for competence and leadership, the collection and transmission of information, and doctrine it is possible to assess how

¹⁰¹ Richard Downie, *Learning from Conflict: The US Military in Vietnam, El Salvador, and the Drug War* (Westport: Praeger, 1998), 2, 24.

¹⁰² Adv NGF, NGF and Adv LHQ were short-staffed for much of the campaign. Berryman recorded that upon his arrival to NGF headquarters many staff functions were not being performed inadequately, if at all, and that some positions had not been filled among the General Staff. Lieutenant-Colonel W.T. Robertson, "Notes on the General Staff New Guinea Force," 25 February 1943, PR84/370 Item 11, AWM; Dean, *The Architect of Victory*, 171-172, 186; Pratten, "Papua's Legacy," 276. Problems due to rotation and loss of personnel were noted by the US Army in Vietnam, where on a more fluid and mobile battlefield the ability of units to brief a relieving force on the situation was often overlooked and proved costly; 'But the danger of not having a full and free exchange as the relief begins is that the second unit, left uninformed, will at unnecessary cost attack on the same line and repeat the same mistakes made by the first unit. The record shows unmistakably that lessons bought in blood too frequently have to be repurchased'. S.L.A. Marshall, *Vietnam Primer: Lessons Learned* (Washington DC: Headquarters Department of the Army, 1967), 20-22.

¹⁰³ For example, for information to be passed from battalions of different brigades, the information would need to be relayed through five separate headquarters: from the first battalion to its brigade headquarters, then to divisional headquarters, and then down through another brigade headquarters before reaching the intended recipient battalion.

¹⁰⁴ Pratten, "Papua's Legacy," 269, 274-275.

¹⁰⁵ Michael D. Doubler, *Closing with the Enemy: How the GIs Fought the War in Europe, 1944-1945* (Lawrence: University of Kansas Press, 1994), 3-4, 8; Hart, *Clash of Arms*, 1-3.

¹⁰⁶ Nagl, *Learning to Eat Soup with a Knife*, 6.

effective Allied organisations were in perceiving problems and adapting their operational and tactical methods through the interrogation of historical sources.

This thesis' research is based on primary source material from both Australian and American forces. This includes official publications, military records, and personal papers. The doctrinal publications of the Australian and American forces are essential for establishing how the Allied forces prepared for the operations and provides the basis from which adaptations to organisations, establishments, procedures, and methods were made. Unit and formation diaries and journals record the day-to-day activities and communications of commands.¹⁰⁷ These records tell us how each command approached the battle and the information with which it made its decisions. The difficulties of administration during the Papuan campaign means the level of detail and the documents retained varies greatly across these records. The dispersal of forces and breakdown in tactical unity disrupted conventional administration, while some headquarters lost significant portions of their records.¹⁰⁸ Gaps in these accounts have to be addressed by corroborating and cross-checking with the records of other units and formations. Diaries and journals are complemented by after-action reports which provide more cohesive accounts of actions and issues. Significantly, observer reports offer candid assessments and are critical on forces' deficiencies as their purpose was to make suggestions to improve training and combat effectiveness. However, as diaries, journals, and reports had to be approved by senior officers, there is always the risk that they gloss over or omit more controversial aspects.

Personal perspectives are captured by correspondence and oral histories. Official and demi-official correspondence between commanders represents a significant component of primary source material for this thesis. This correspondence reveals the personal attitudes of commanders regarding the operations. However, care must be taken in examining these letters as commands sought to manage information and their reputations. Conversely, informal letters and those to recipients not directly involved in the operations can contain candid statements of the major issues affecting the operations, free from censorship and scrutiny by superiors. Oral histories serve a

¹⁰⁷ Australian formation and units use the term 'War Diary' which usually condense all of a command's administrative and operational records into a collection covering a specific period of time. American units and formations use the term 'Journals', but the records are dispersed by sections such as personnel, intelligence, operations, and logistics, as well as the types of files, meaning that all of the records from a certain period are not located together. This can lead to some gaps and inconsistencies.

¹⁰⁸ There are notable gaps in the records of the Australian 7th Division and American 128th Infantry Regiment for November. Inquiries with the NAA, AWM and Department of Defence Archives failed to locate any copies of the 7th Division War Diary for November 1942. The 128th Regiment's administrative records for the period 10 October-16 November 1942 were lost when the 32nd Division's small shipping was sunk by Japanese aircraft on 16 November 1942. "Certificate of Loss of Records," 20 April 1943, 332INF(128)-0.7, RG407 E427 B8039, NARA.

similar purpose but are often from the perspective of lower ranks.¹⁰⁹ They can offer valuable insights into the experiences and attitudes of service personnel which provide physical and emotional details to complement the accounts of war diaries, journals, and reports. However, oral histories are limited by the knowledge, perspectives, and memory of the interviewee, and the intent of the interviewer. They may also be influenced by broader socio-cultural trends.¹¹⁰ Corroboration between official and unofficial sources and canvassing a range of oral histories helps to mitigate these limitations.

This thesis is structured in four sections which examine the key themes of the operations. The first section provides the context for the operations and later analysis. Chapter One establishes the strategic situation in the Pacific during mid-1942 to early 1943. Perceptions of strategic uncertainty generated by the escalating campaign in the Solomons and underestimation of the Japanese forces in Papua shaped the outlooks and attitudes of senior Allied commanders during the beachhead operations. This explains, but does not excuse, high command's anxiety and haste with which it urged the operations to be concluded. This period also shaped higher-level Australian-American relations, which were characterised by tension and mistrust.

Chapter Two argues that prior training and experience did not sufficiently prepare the Allied forces for the task of assaulting fortified positions in close terrain. While doctrinal principles were sound, jungle terrain challenged their conventional application. The wide disparity in the standards of training and experience across the Allied forces, which were exacerbated by the conditions, set a basis for the types of learning and adaptation which would occur.

Chapter Three provides an overview of the operations to contextualise analysis in subsequent sections. It highlights the distinct phases and problems faced. The fighting in each sector was characterised by a contact phase, when Allied forces made their initial attempts to overcome the Japanese positions, a stalemate phase, as Allied forces grappled with tactical problems, and a breakthrough phase, when the application of adapted tactical methods contributed to success.

The second section addresses operational-level issues of command, coalition warfare, and logistics. Chapter Four demonstrates the effects of internal friction, poor intelligence, inaccurate assumptions about the character of the operations, and tactical interference due to mounting strategic pressures had on operational commands. High command persisted with unrealistic and irrational expectation of the operations which exacerbated tensions between American and Australian forces and placed increased pressure on subordinate commands.

¹⁰⁹ Oral histories have been collected from the Keith Murdoch Sound Archive (KMSA), Australians at War Film Archive (AAWFA), Peter Brune's interviews held at the AWM, the Wisconsin Veterans' Museum, US Army WWII Veteran's Survey, and D. Clayton James' interviews at the MM.

¹¹⁰ This was explored by Alistair Thompson in his study of memory and the First World War. Alistair Thompson, *Anzac Memories: Living with the Legend* (Clayton: Monash University Publishing 2013).

Chapter Five argues logistical adaptations were a critical factor in the operations. Despite commencing the campaign on tenuous supply lines, the Allies were able to overcome continually challenges to air and seaborne supply to sustain the operations. This was underpinned by a pragmatic, flexible and adaptable approach to organisations, procedures, and methods, though despite success, logistics placed fundamental constraints on the resources committed to the operations.

Chapter Six analyses the performance of the tactical formation commanders within the 7th Division under Major-General George Vasey and the 32nd Infantry Division under Major General Edwin Harding and later Lieutenant General Robert Eichelberger. It demonstrates how formation commanders approached the challenges of exercising command and control while translating operational intent into tactical actions. Command organisations, intercommunications, and relationships between divisional and brigade and regimental-level commanders determined the approaches to command, leadership, and tactics in each sector and set the conditions in which learning and adaptation could occur. Senior officers at this level were vital to facilitating and formalising adaptations.

The third section examines tactical issues including unit and sub-unit command, infantry tactics, joint warfare, and combined arms tactics. Chapter Seven highlights the practical issues of command, control and leadership faced by unit and sub-unit commanders. It demonstrates the increasing responsibility assumed by junior leaders and the requirement for high levels of initiative to maintain impetus under dispersed and confused conditions. However, the need for aggression in junior leaders had to be tempered by sound tactical knowledge. The devolution of tactical responsibility was mirrored in the transition towards small sub-unit actions.

Chapter Eight analyses how infantry tactics transformed during the operations. The task of dislocating and destroying the Japanese positions with limited fire support saw a series of adjustments in Allied tactical approaches. Allied forces phased-out organised frontal attacks and adopted tactics which emphasised small-unit attacks, patrolling, and infiltration. In addition, Allied forces developed drills and techniques to deal with specific elements of the Japanese defences. While these attacks and tactics rarely led to immediate or significant gains, they demonstrate the evolution of the Allied approach.

Chapter Nine addresses the role of air and naval forces, arguing air power and the isolation of the battlefield by the Allied Air Forces was a critical factor in the outcome of the operations. However, air power proved ineffective directly support ground forces as it was unable to overcome the practical challenges to coordination, communication, and identification, despite considerable

efforts to improve and adapt organisations, procedures, and methods. Conversely, while the operations occurred in a littoral environment, naval power played a minor role due to misunderstandings regarding capabilities and outlooks between naval and ground commanders.

Chapter Ten demonstrates that combined arms elements in the form of artillery and armour were still necessary in jungle warfare. They were the 'straw' needed to build Vasey's bricks and their employment evolved hand-in-hand with infantry tactics. Jungle conditions required the Allies to learn and adapt in how they employed these resources to overcome practical limitations of observation, coordination, and the suitability of the equipment and ordnance.

The last section assesses the capacity of Allied organisations to learn and adapt during the beachhead operations. Chapter Eleven applies the framework for military learning and adaptation to show how factors of competence and leadership, information, and doctrine determined the ability of Allied commands and forces to meet the criteria for learning organisations. Overwhelmingly, higher commands were reluctant or less able to challenge their conceptions of the operations, and thus were less likely to learn and adapt. Learning and adaptation occurred more readily at lower levels, though it was inconsistent across the Allied forces.

By analysing the anatomy of the beachhead operations, the important interrelationship between strategic, operational, and tactical aspects are fully demonstrated. Furthermore, it challenges the perception that Allied forces stuck rigidly to ineffective approaches. There was a concerted effort to learn and adapt to the unique and challenging conditions of the beachheads. The lack of 'straw' placed a premium on the Allies' ability to learn and adapt to employ the resources available and overcome the difficulties they faced. Learning and adaptation underpinned many of the areas which contributed to the Allies success, particularly in terms of air power, logistics, and lower level tactical adaptations. Conversely, in areas where the Allies' performance was poor, such as the realms of high command's conception and handling of the operations, there was a distinct lack of learning and adaptation. That the Allies were able to achieve their victory and avoid a military disaster suggests far greater complexity than their characterisation as a bloody, grinding collision indicates.

Chapter One

‘Gravest Danger’: The Strategic Context of Papuan Campaign, August 1942-January 1943

It is now necessary to prepare action that must be accomplished beforehand in preparation for possible disaster in the Solomons. If we are defeated in the Solomons, as we must be unless the Navy accepts successfully the challenge of the enemy surface fleet, the entire South West Pacific will be in the gravest danger.¹

**General Douglas MacArthur
Commander-in-Chief SWPA
Message to General George C. Marshall, Chief of Staff US Army
17 October 1942**

Strategic uncertainty and the balance of power between Allied and Japanese forces in the South Pacific Area (SOPAC) and SWPA during late 1942 generated considerable anxiety for Allied high command during the beachhead operations. The Allies’ strategic counter-offensive in the Pacific depended on securing both the north-eastern coast of New Guinea and the Solomon Islands prior to an assault against New Britain. Therefore, success or failure in either area was inherently linked. Allied high command was acutely aware of the risks as the Japanese could bring substantial air, naval, and land capabilities to counter any Allied effort. For General Douglas MacArthur, Commander-in-Chief SWPA (C-in-C SWPA), this necessitated the swift capture of the beachheads before Japanese reinforcements could arrive in Papua, and prior to possible defeat in the Solomons.

The Allies faced a serious strategic threat if the Japanese substantially reinforced the beachheads, succeeded in the Solomons, or counterattacked elsewhere because it would expose their position on the Papuan coast. GHQ’s anxiety over the strategic uncertainty had escalated

¹ #255 General Douglas MacArthur, C-in-C GHQ SWPA, to General George C. Marshall, Chief of Staff US Army, 17 October 1942, RG4 S1 B16 F1, MM.

during August-October. This coloured its perception of the risks of the beachhead operations and contributed to escalating inter-service and national tensions. When the beachhead operations began in November, the outcome of the Solomons campaign was still uncertain and increasing Japanese activity in New Guinea and Timor presented more possible threats to the Allied position in Papua. Peaks in GHQ's concern about the theatre correspond with exhortations to subordinates to attack and interference in their tactical handling of the beachhead battles.

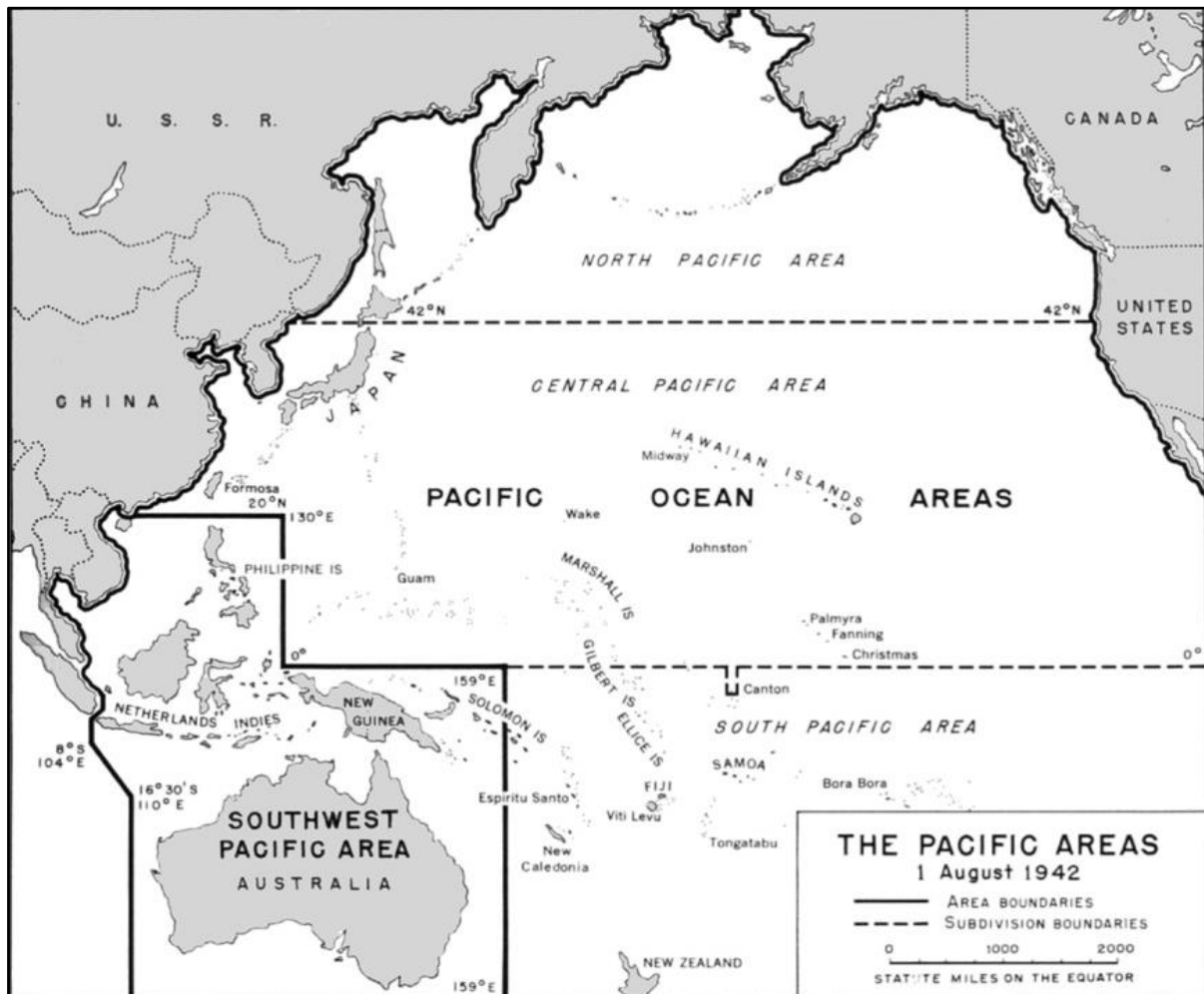
It is therefore fundamentally important to view the beachhead operations in the broader context of events in the Pacific during late 1942 and early 1943. To examine any aspect of the operations in isolation is to invite misinterpretation and misunderstanding. If the beachhead operations are removed from this context, GHQ's persistent exhortations for a quick resolution seem vain, callous, and rash. This does not excuse the unnecessary pressure Allied high command placed on its subordinates as the attempt to capture the beachheads stalled by late November, but it does help to explain it.

'Divided Effort': The Pacific Theatre, July-August 1942

By August 1942 the Allies faced a difficult proposition in the Pacific theatre. The Japanese expansion into south-east Asia and the central Pacific had overwhelmed Allied forces and resulted in a string of shocking and complete defeats. Allied strategy had to rapidly adapt to the loss of key locations such as the Philippines, Singapore, and key nodes in the Pacific island chains. Australia and America were forced into a coalition that had not been fully considered in the pre-war period.² The establishment of two separate theatres – the SWPA under General Douglas MacArthur and the Pacific Ocean Areas (POA) under Commander-in-Chief Pacific Ocean Areas Admiral Chester Nimitz – divided the Allies' intent and resources, though this had been somewhat reconciled by the Joint Chiefs of Staff (JCS) 2 July Directive that aligned the two theatres' efforts towards the capture of the

² For more details on American pre-war planning and initial responses, see: Charles Brower, *Defeating Japan: The Joint Chiefs of Staff and Strategy in the Pacific War, 1943-1945* (New York: Palgrave MacMillan, 2012); William Hopkins, *The Pacific War: The Strategy, Politics and Players That Won the War* (Minneapolis: Zenith Press, 2008); Brian Linn, *Guardians of Empire: The US Army and the Pacific, 1920-1941* (Chapel Hill: University of North Carolina Press, 1997); Maurice Matloff and Edwin Snell, *The War Department: Strategic Planning for Coalition Warfare, 1941-1942* (Washington DC: Centre of Military History Institute United States Army, 1999); Louis Morton, *The War in the Pacific: Strategy and Command: The First Two Years* (Washington DC: Centre of Military History Institute United States Army, 2000); Steven Ross, *American War Plans 1941-1945: The Test of Battle* (London: Frank Cass & Co. Ltd 1997). For details on Australian pre-war planning and early strategy see; Roger Bell, *Unequal Allies: Australian-American Relations and the Pacific War* (Carlton: Melbourne University Press, 1977); Paul Hasluck, *The Government and the People, 1939-1941*, Volume I (Canberra: Australian War Memorial, 1965); Horner, *High Command*; Gavin Long, *The Six Years War: A Concise History of Australia in the 1939-45 War* (Canberra: The Australian War Memorial and the Australian Government Publishing Service, 1973); Palazzo, *The Australian Army*.

main Japanese base at Rabaul in New Britain.³ The division of the theatre led to competition for resources vital to a maritime theatre, in particular transport shipping, landing craft, and aircraft. However, despite Commander-in-Chief US Fleet and Chief of Naval Operations Admiral Ernest King's plea for the Pacific theatre to be recognised as 'part of a larger whole', it remained under-resourced as materiel was diverted to the invasion of Europe and North Africa.⁴ This led to a critical shipping and aircraft shortage during the period between August-November 1942.



Map 1.1: The Pacific Theatres, 1 August 1942.⁵

The Allies' strategic offensive formalised in the 2 July Directive represented a compromise between Army and Navy priorities. The JCS concluded the Solomon Islands were the first objective enroute to Rabaul.⁶ Task One was the seizure and occupation of Santa Cruz Islands, Tulagi and

³ JCS, "Directive to the Supreme Commander in the Southwest Pacific Area," 30 March 1942, Appendix C, Morton, *Strategy and Command*, 614-616; JCS, "Directive to the Commander in Chief of the Pacific Ocean Areas," 30 March 1942, Appendix D, Morton, *Strategy and Command*, 616-618; JCS, "Joint Directive for Offensive Operations in the Southwest Pacific Area Agreed Upon by the United States Chiefs of Staff," 2 July 1942, Appendix E, Morton, *Strategy and Command*, 619-620.

⁴ Brower, *Defeating Japan*, 17.

⁵ From: Milner, *Victory in Papua*, 49.

⁶ Morton, *Strategy and Command*, 289.

adjacent positions by USN forces, with a tentative date of 1 August 1942.⁷ Task Two called for complete occupation of the Solomon Islands, Lae and Salamaua on the New Guinea coast, and areas in the Huon Peninsula. Task Three set the ultimate objective of occupying Rabaul and adjacent positions in New Guinea-New Britain. All SOPAC and SWPA air, land, and sea resources were to be made available for each task. For the task of securing New Guinea, MacArthur's command comprised the Allied Air Forces (AAF), Allied Naval Forces (ANF), and Allied Land Forces (ALF), which incorporated all Australian and American forces. This was supported by the United States Army Services of Supply (USASOS) SWPA.⁸ Under the JCS's directive, MacArthur was forbidden from commanding any national forces or interfering in their administration.⁹



Figure 1.1: SWPA Command Structure, August 1942.

In light of increasing Japanese activity in the Solomons, MacArthur and Vice Admiral Robert Ghormley, Commander SOPAC (COMSOPAC), agreed on the urgency of commencing Task One. The SWPA loaned its small naval force and submarines to support SOPAC's operation, while the AAF patrolled eastern New Guinea, the Solomons and the Bismarcks. GHQ identified Milne Bay and Buna as the best locations to establish the airfields needed to support SOPAC and neutralise Japanese

⁷ JCS, "Joint Directive for Offensive Operations in the Southwest Pacific Area Agreed Upon by the United States Chiefs of Staff," 2 July 1942, Appendix E, Morton, *Strategy and Command*, 619-620.

⁸ This was originally the US Army Forces in Australia (USAFIA) but was redesignated the United States Army Services of Supply on 20 July 1942.

⁹ This was a significant issue for MacArthur as Australian forces made up the majority of SWPA personnel during 1942.

airfields at Lae and Salamaua for Task Two.¹⁰ Operation Providence – the occupation of the Buna area – was authorised on 15 July.¹¹ The first echelon was expected to arrive via the Kokoda Track between 10-12 August to coincide with SOPAC's landings on Guadalcanal.¹² However, MacArthur's plans were disrupted when the Japanese landed at Buna first.

The Papuan campaign was ultimately fought in response to Japanese strategic initiative. A series of intelligence failures and indecision ceded the Papuan coast to the Japanese and forced the Allies into a difficult six-month campaign to reclaim control of the area. Major-General Tomitaro Horii's South Seas Force (SSF) landed at Buna on the night of 21 July as part of the Japanese XVII Army's MO Operation. Its intention was to capture Port Moresby by marching overland across the Owen Stanley Ranges. Securing Papua was important to the Japanese because its airfields put Allied bombers within range of the main Imperial Japanese Navy (IJN) bases at Rabaul and Truk which were key to operations in the Central Pacific and would sever the lines of communication between Australia and America.¹³ The Imperial Japanese Army (IJA) was committed to the Pacific theatre in increasing numbers to secure these bases. This was envisaged as a precursor to the more ambitious FS Operation, which would have occupied Fiji, Samoa, and New Caledonia.¹⁴ Despite defeats at the Coral Sea and Midway, the IJN and newly-formed XVII Army were committed to the strategic plan.¹⁵ However, the American landings on Guadalcanal committed the XVII Army to simultaneous campaigns in the Solomons and Papua.¹⁶ The result was increasing Allied and Japanese commitments to the theatre and growing strategic uncertainty about the outcome.

¹⁰ Construction of an airfield at Milne Bay was approved on 8 June, but logistical difficulties delayed its completion until 22 July. Reconnaissance of Buna was carried out between 10-11 July, and an area of flat, dry ground at nearby Dobodura was deemed suitable. GHQ SWPA MIS, "Daily Extract of Enemy Intelligence – #105," 6 July 1942, RG3 S2 B26 F1, MM; Horner, *Crisis of Command*, 91; Milner, *Victory in Papua*, 51.

¹¹ GHQ SWPA, "Providence Plan for Occupation and Construction of Airdromes in the Vicinity of Buna Bay," 15 July 1942, USAHEC.

¹² As would become MacArthur's practice, this Task Force was established separate from the ALF and reported directly to MacArthur as C-in-C SWPA. US Army Brigadier General Robert Van Volkenburgh commanded the Task Force. It consisted of four echelons of troops, the first moving overland via Kokoda and then by sea transport. GHQ SWPA, "Providence Plan for Occupation and Construction of Airdromes in the Vicinity of Buna Bay," 15 July 1942, USAHEC.

¹³ Henry Frei, "Why the Japanese were in New Guinea," (paper presented at the Remembering the War in New Guinea Symposium, Australian National University, 2000).

¹⁴ Frei, "Why the Japanese were in New Guinea"; Hiroyuki Shindo, "The Japanese Army's 'Unplanned' Campaign in the South Pacific," in *Australia 1942: In the Shadow of War*, ed. Peter Dean (Port Melbourne: Cambridge University Press, 2012), 113.

¹⁵ Frei, "Why the Japanese were in New Guinea."

¹⁶ Shindo, "The Japanese Army's 'Unplanned' Campaign in the South Pacific," 115.

'This is Urgent': The Papuan and Solomons Operations, August-September 1942

While the Japanese attempt to capture Port Moresby and Milne Bay during August-September was checked, the operations demonstrated several key issues which affected the beachhead operations in November.¹⁷ First, Allied high command developed an intense preoccupation with developments in the Solomons as Guadalcanal became the centre of fighting in the Pacific theatre. It rendered the campaigns in Papua important but secondary priorities for the Allies and the Japanese. Subsequently, the SWPA was required to provide maximum air and naval support to disrupt Japanese operations in the Solomons. Brigadier General Charles Willoughby, MacArthur's Chief of Intelligence, deduced that 'Guadalcanal represents a moral commitment: it may well become a Pacific Verdun'.¹⁸ This was one of Willoughby's more prescient estimates, as the fight for Guadalcanal consumed most of Japan's and the US's resources until February 1943.

Japanese success in the Solomons posed a serious threat to the Allied position in the SWPA. GHQ became increasingly concerned the USN would be defeated in the Solomons, which would 'jeopardise the entire Papua/York Peninsula area'.¹⁹ The back-and-forth between Japanese attempts to capture Guadalcanal and SOPAC's efforts to reinforce and disrupt Japanese operations contributed to the strategic uncertainty and suggested an impending culminating point. The interrelated fates of SOPAC and the SWPA were clear to MacArthur. He frequently warned General George Marshall, Chief of Staff US Army, of the SWPA's vulnerability because it had been stripped of naval assets to assist SOPAC, leaving the sea approaches to Papua largely unopposed.²⁰ He requested more naval forces urgently because the loss of New Guinea would be 'disastrous'.²¹ MacArthur's warnings of impending disaster must be carefully considered. While there were real concerns about the threat to the SWPA, he was also trying to secure as many resources for his own theatre as possible for his ambitious plans.²²

Second, GHQ's Intelligence Section was unable to interpret accurately enemy intent and capabilities. MacArthur was focused on preparations for the New Guinea and New Britain offensive, which made it difficult to accommodate events which did not support this outlook. GHQ initially dismissed intelligence indicating Japanese interest in Buna and was reluctant to acknowledge the

¹⁷ For detailed accounts of this phase of the Papuan Campaign see; McCarthy, *Kokoda to Wau*; Milner, *Victory in Papua*; Brune, *A Bastard of a Place*; Dean, *MacArthur's Coalition* & Horner, *Crisis of Command*. For Japanese perspective see Bullard, *Japanese Army Operations* & Collie & Maruntani, *The Path of Infinite Sorrow*.

¹⁸ GHQ SWPA MIS, "G-2 Daily Summary #190," 28 September 1942, RG3 S2 B26 F3, MM.

¹⁹ GHQ SWPA MIS, "G-2 Daily Summary #148," 17 August 1942, RG3 S2 B26 F2, MM.

²⁰ #211 MacArthur to Marshall, 28 August 1942 & #216 MacArthur to Marshall, 30 August 1942, RG4 S1 B16 F1, MM.

²¹ #225 MacArthur to Marshall, 6 September 1942, RG4 S1 B16 F1, MM.

²² MacArthur's plans for attacking Rabaul initially included acquiring aircraft carriers and USMC landing divisions. Dean, *MacArthur's Coalition*, 111.

threat the Japanese landing posed to Port Moresby because of the difficulty of moving overland via the Owen Stanleys.²³ GHQ and Allied Land Headquarters (LHQ) instead chose to view the Japanese construction of airfields and build-up of supplies and reinforcements as defensive.²⁴ MacArthur and General Thomas Blamey, Commander ALF, hoped the USN's operations against Guadalcanal would encourage the Japanese to withdraw from Buna.²⁵ This led to a piecemeal response.²⁶ Willoughby believed the Japanese could only maintain an offensive in one area at a time.²⁷ Though in practical terms this was correct, the joint IJA-IJN offensive to capture Port Moresby, Milne Bay, and the east Solomons between 24-26 August caught GHQ off-guard.²⁸ On 8 September GHQ finally recognised the situation as 'serious', by which time Australian forces on the Kokoda Track were conducting a desperate fighting withdrawal towards Port Moresby.²⁹

Last, increasing anxiety about the strategic situation rattled GHQ confidence. Fragmentary reports of the fighting from the Kokoda Trail and Milne Bay led to panic within GHQ in Brisbane.³⁰ MacArthur and Major General Richard K. Sutherland, CoS GHQ, demanded constant updates and sought to interfere by ordering aggressive responses.³¹ Major-General George Vasey, then Deputy Chief of General Staff (DCGS) at Adv LHQ, described the unease: '...for GHQ this is their first battle and they are, therefore, like many others, nervous and dwelling on the receipt of frequent messages'.³² General Henry "Hap" Arnold, Chief of the Army Air Forces, visited MacArthur on behalf of the JCS in late September and recorded:

...MacArthur's two-hour talk gives me the impression of a brilliant mind – obsessed by a plan he can't carry out – frustrated – dramatic to the extreme – much more nervous than when I formerly knew him. Hands twitch and tremble – shell shocked.³³

²³ GHQ SWPA MIS, "G-2 Daily Summary #134," 5 August 1942, RG3 S2 B26 F2, MM.

²⁴ Allied Land Headquarters was the headquarters of the Allied Land Forces. Horner, *Crisis of Command*, 133.

²⁵ Horner, *High Command*, 218.

²⁶ For a detailed critique of GHQ SWPA's response, see: Horner, *High Command*, 215-230, and Horner, *Crisis of Command*, 102-105.

²⁷ GHQ SWPA MIS, "G-2 Daily Summary #152," 21 August 1942 & GHQ SWPA MIS, "G-2 Daily Summary #153," 22 August 1942, RG3 S2 B26 F2, MM.

²⁸ The Japanese SSF commenced MO in full, in conjunction with the IJN's RE Operation to secure the Rabi-Milne Bay area on the east Papuan coast. These plans were the product of an IJA-IJN agreement of 28 July for the XIV Army, 8th Fleet and 11th Air Fleet to secure the 'key areas of Port Moresby and Eastern New Guinea'. Bullard, *Japanese Army Operations*, v, 110-112.

²⁹ GHQ SWPA MIS "G-2 Daily Summary #170," 8 September 1942, RG3 S2 B26 F3, MM.

³⁰ Horner, *Crisis of Command*, 135.

³¹ Major General Richard K. Sutherland, CoS GHQ SWPA, to General Thomas A. Blamey, Commander ALF, 28 August 1942, RG4 B6 F2, MM; Blamey to GHQ SWPA, "Operations Milne Bay Area," 30 August 1942, AWM52 1/2/1/2, AWM.

³² Vasey to Lieutenant-General Sydney Rowell, GOC NGF, 28 August 1942, cited in Horner, *Crisis of Command*, 138.

³³ General Henry "Hap" Arnold cited in James, *The Years of MacArthur*, Vol. II, 210.

MacArthur was increasingly concerned about an impending disaster and reluctant to commit too strongly to Papua for fear of 'a duplication of what took place...in Malaya'.³⁴ His career and ego could not afford another setback after the Philippines, so he sought to remove himself from direct responsibility by ordering Blamey to Port Moresby as the senior Allied commander.³⁵

The difficulty of meeting the Japanese advance over the rugged Owen Stanleys and repelling the landing from the swampy coasts of Milne Bay was detrimental to the Americans' perceptions of Australian combat forces. MacArthur expressed doubts about Australian troops to Marshall:

This is the first test of Australian ground troops under my command. The Australians claim that the commander is excellent and rate half of his troops good; the other half...they rate excellent. The strength of the Japanese forces...is not known but I am convinced that it is very much less than that of the Australian combat troops at Milne Bay. With good troops under first class leadership I would view the situation with confidence unless enemy reinforcements are landed but, as I have previously indicated, I am not yet convinced of the efficiency of Australian troops and do not attempt to forecast the result.³⁶

Vasey also noted the opinions expressed by American officers about Australian troops after the initial setback at Milne Bay and the withdrawal over the Owen Stanleys:

By the tone of this morning's conversation with Sutherland, I feel that a wrong impression of our troops has already been created in the minds of the great and it is important for the future that that impression be corrected at the earliest possible moment.³⁷

MacArthur was convinced Australian numerical superiority and light casualties were evidence of a lack of aggression – a belief which misconstrued the reality of combat and supply.³⁸ These views were reinforced by reports from other senior American officers.³⁹ This served to exacerbate tensions between Australian and American officers and set expectations about the capabilities of national forces.

The deterioration in relationships was attributable to GHQ's failure to appreciate the effect of terrain on supply and conducting battle. This contributed to a poor understanding of the conditions faced by subordinate commanders. Major-General Arthur Allen, GOC 7th Division, tried to

³⁴ "#47 Notes on Secraphone Conversation between Curtin and MacArthur," 17 September 1942, *Documents on Australian Foreign Policy*, Vol. 6; Horner, *Crisis of Command*, 167.

³⁵ Blamey's arrival in Port Moresby was interpreted as a show of no-confidence by Lieutenant-General Sydney Rowell, GOC NGF, which led to a series of heated exchanges between the two. This was a major factor in the 'command crisis' and contributed to Rowell's relief. "#47 Notes on Secraphone Conversation between Curtin and MacArthur," 17 September 1942, *Documents on Australian Foreign Policy*, Vol. 6; McCarthy, *Kokoda to Wau*, 229-253; Horner, *Blamey*, 326-338; Horner, *Crisis of Command*, 162-187.

³⁶ #215 MacArthur to Marshall, 30 August 1942, RG4 S1 B16 F1, MM.

³⁷ Vasey to Rowell, 28 August 1942, cited in Horner, *Crisis of Command*, 138.

³⁸ "#47 Notes on Secraphone Conversation between Curtin and MacArthur," 17 September 1942, *Documents on Australian Foreign Policy July 1942-December 1943*, Vol. 6.

³⁹ James, *The Years of MacArthur*, Vol. II, 207-212.

explain the effect terrain, supply, and Japanese rear-guard actions had on his forces to GHQ.⁴⁰ However, these problems were dismissed by MacArthur and Sutherland, who used Blamey to relay their opinion that 'progress on the trail [was] NOT satisfactory'.⁴¹ MacArthur's interference placed Blamey in an awkward position. Blamey could neither side fully with MacArthur and condemn Allen's progress nor defend Allen without alienating his subordinate or his superior, which further complicated the command relationships of the Allied forces.

The above factors culminated in the command crises of September and October when MacArthur exerted pressure to have senior Australian commanders relieved due to perceived poor performance. Lieutenant-General Sydney Rowell, GOC New Guinea Force (GOC NGF) and Allen were both victims. Rowell was replaced by Lieutenant-General Edmund Herring. Blamey trusted Herring to be 'completely loyal' and remove the layer of friction which had occurred between himself and Rowell.⁴² Allen was replaced by Vasey on 28 October, just days before the Australians recaptured Kokoda. Vasey's decisive victory against the Japanese at Oivi-Gorari two weeks later seemed to vindicate MacArthur's decision to force a change in command.

The major implication of the command crises was that operational and tactical difficulties were seen as issues stemming from command and a lack of aggressiveness. This shaped GHQ's assumptions during the beachhead operations. Further, the relief of Ghormley in SOPAC also suggested that no commander was safe. Nimitz and King were gravely disappointed by Ghormley's inability to explain the early failures of the Solomons campaign, and he was replaced by Vice-Admiral William Halsey in October.⁴³ This decision, initiated by King and the JCS, sent a message to MacArthur there was no reason why a command change in the SWPA could not occur should the situation deteriorate as well.⁴⁴ However, by the end of September the Japanese advance against Port Moresby had stalled. Horii received orders to withdraw to Buna. GHQ and LHQ therefore planned a three-axis advance to recapture Buna and cut the SSF off from the coast.

'Gravest Danger': The Papuan and Solomons Operations, October-November 1942

The Allies' immediate situation in Papua improved during October but increasing Japanese commitments to the Solomons continued to pose a serious threat and did little to quell anxiety at

⁴⁰ Major-General Arthur Allen, GOC 7th Division, to Lieutenant-General Edmund Herring, GOC NGF, 6 October 1942, cited in Horner, *Crisis of Command*, 198; Blamey to MacArthur, 13 October, 3DRL/6643 Item 2/47, AWM.

⁴¹ MacArthur to Blamey, 20 October 1942, MacArthur to Blamey, 21 October 1942 & Blamey to Allen, 21 October 1942, 3DRL/6643 Item 2/47, AWM.

⁴² Horner, *Crisis of Command*, 188.

⁴³ Frank, "South Pacific Turning Point," 81.

⁴⁴ Morton, *Strategy and Command*, 343; Horner, *Crisis of Command*, 205-206.

GHQ. Intelligence indicated 65% of Japanese shipping was situated in the Truk-Buin-Faisi-Rabaul area, which suggested another major offensive between 15-20 October.⁴⁵ However, while Japanese naval power in the area had increased, it was countered by the Allies' growing air superiority. Japanese air losses between August-September were estimated at 300 aircraft in SOPAC and 100 in the SWPA, which foretold the 'almost complete collapse of the enemy in the air'.⁴⁶ The showdown between air and naval power had the potential to decide the outcome of land campaigns and alter the strategic balance. Willoughby anticipated the 'slow but irresistible crescendo of the Guadalcanal conflict will develop to a climax, that will profoundly affect the strategic situation of the SWPA and adjacent theatres'.⁴⁷

At the beginning of October GHQ was confident the Buna coast could be secured easily. Willoughby believed Japanese apathy towards repairing the Buna airfield indicated they were likely to 'give up this vulnerable, unprofitable area' to focus on the Solomons.⁴⁸ Willoughby assumed the lack of resistance and abandoned equipment on the Kokoda Trail signalled a 'complete withdrawal' by the Japanese, and without reinforcements, the prospect of capturing Buna quickly was good.⁴⁹ On 2 October MacArthur visited Port Moresby for the first time, where he discussed future operations with Blamey, Herring, and Lieutenant General George Kenney, Commander AAF.⁵⁰ Blamey summarised the situation:

The object of the New Guinea Force is to drive the enemy out of Southeastern New Guinea and Papua.

The capacity of NGF to do this is limited mainly by two considerations —

- (a) communications to permit the movement of the necessary troops.
- (b) supply.

Preparation of adequate communications is a matter involving the making of roads under the most difficult conditions of terrain and requires time. Supply is dependent —

- (i) on the development of communications;
- (ii) on the amount of sea supply which can be made available;
- (iii) on the amount of air supply which can be made available.

For the moment air supply is paramount.⁵¹

However, air transport was already struggling to meet daily requirements.⁵² Blamey's outline was an early indication that supply would be a paramount factor in the beachhead operations.

⁴⁵ GHQ SWPA MIS, "G-2 Daily Summary #190," 28 September 1942 & GHQ SWPA MIS, "G-2 Daily Summary #191," 29 September 1942, RG3 S2 B26 F3, MM.

⁴⁶ GHQ SWPA MIS "G-2 Daily Summary #191," 29 September 1942 & GHQ SWPA MIS, "G-2 Daily Summary #196," 3 October 1942, RG3 S2 B26 F3, MM.

⁴⁷ GHQ SWPA MIS, "G-2 Daily Summary #208," 15 October 1942, RG3 S2 B26 F3, MM.

⁴⁸ GHQ SWPA MIS, "G-2 Daily Summary #198," 5 October 1942, RG3 S2 B26 F3, MM.

⁴⁹ GHQ SWPA MIS, "G-2 Daily Summary #195," 2 October 1942, RG3 S2 B26 F3, MM.

⁵⁰ James, *The Years of MacArthur*, Vol. II, 232-233.

⁵¹ Blamey to MacArthur, 5 October 1942, 3DRL/6634 Item 2/47, AWM.

⁵² "Plan of Commander, Allied Land Forces in New Guinea, as Arranged in Conference," 11 October 1942, 98-GHQ1-3.2, RG407 E427 B573, NARA.

The situation in the Solomons was less promising. Between 11-14 October, the Japanese tried to knock-out Henderson Airfield and landed more troops.⁵³ The temporary loss of land-based aircraft from Henderson Airfield was a major blow. Halsey urgently requested the SWPA increase its air effort and divert submarines to deter further reinforcements.⁵⁴ MacArthur was also pressured by the War Department to lend greater support to SOPAC.⁵⁵ Marshall hoped MacArthur would risk basing his heavy bombers in Papua despite it weakening the SWPA's position because 'the situation in the Solomons is so critical that such action seems imperative'.⁵⁶ MacArthur's response echoed earlier warnings about the risks to the theatre and the great efforts the SWPA had made to support SOPAC, but consented to give immediate priority to SOPAC's requests for reconnaissance and air attack.⁵⁷

MacArthur's greatest concern remained whether the Allies' air and naval power could match the Japanese. GHQ anticipated the Japanese defeating the USN in the Solomons, then turning their full strength against Papua:

The situation anticipated...has now developed. It is now necessary to prepare action that must be accomplished beforehand in preparation for possible disaster in the Solomons. If we are defeated in the Solomons, as we must be unless the Navy accepts successfully the challenge of the enemy surface fleet, the entire Southwest Pacific will be in the gravest danger. Information has already been derived from enemy sources that an attack on Milne Bay and possibly elsewhere in New Guinea is contemplated for mid-November. I urge that the entire resources of the United States be diverted temporarily to meet the critical situation.⁵⁸

The alarming reports from the Pacific forced President Roosevelt to intervene and commit all available resources to hold Guadalcanal.⁵⁹ This was a clear articulation of priorities for the Pacific theatre. The Japanese and US forces committed to the Solomons as the main area of operations, leaving Papua important but secondary.

⁵³ Intelligence estimated that there were on average 5 destroyers carrying approximately 700 troops and supplies landing each night as part of the 'Tokyo Express'. On 11-12 October, a Japanese cruiser force was intercepted and repelled by the USN in the Battle of Cape Esperance, but the following nights Japanese battleships entered the Slot and bombarded Henderson Airfield, almost disabling it. During this build up, it was estimated 10,000 fresh Japanese troops were landed. GHQ SWPA MIS, "G-2 Daily Summary #201," 8 October 1942 & GHQ SWPA MIS, "G-2 Daily Summary #206," 13 October 1942, RG3 S2 B26 F3, MM.

⁵⁴ #116 COMSOPACFOR to COMSOWESPACFOR, 16 October 1942 & #118 COMSOPAC to COMSOWESPACFOR, 17 October 1942, RG4 S1 B10 F2, MM.

⁵⁵ #254 Marshall to MacArthur, 16 October 1942 & #256 Stimson to MacArthur, 17 October 1942, RG4 S1 B16 F1, MM.

⁵⁶ #254 Marshall to MacArthur, 16 October 1942, RG4 S1 B16 F1, MM.

⁵⁷ #255 MacArthur to Marshall, 17 October 1942, RG4 S1 B16 F1, MM.

⁵⁸ #255 MacArthur to Marshall, 17 October 1942, RG4 S1 B16 F1, MM.

⁵⁹ President Franklin D. Roosevelt to Joint Chiefs of Staff, 24 October 1942 cited in Morton, *Strategy and Command*, 344.

The SWPA's materiel disadvantages were exacerbated by SOPAC's priority for resources. Since August, the SWPA had diverted 90 bombers to SOPAC.⁶⁰ MacArthur also loaned a squadron of P-39s to Henderson Airfield and later a squadron of prized P-38s. A USMC regiment which had been considered for the SWPA was diverted to Guadalcanal in early September, while the 25th Infantry Division was reassigned from the SWPA to SOPAC in October.⁶¹ Nimitz had also requested all the SWPA's submarines. The greatest disparities were in shipping and transport vessels which were crucial to supply. Figure 1.2 highlights SOPAC's priority in cargo and reinforcements. MacArthur was left to fight the Papuan campaign with the resources he had, which were not necessarily suited to littoral and maritime environments.

Theatre	SWPA	POA (exc. SOPAC)	SOPAC	Total
Reinforcements	8,300	61,000	36,000	105,300
Cargo (tonnes)	157,000	890,000	310,000	1357,000

Figure 1.2: Allied Shipping to the Pacific Theatre, September-November 1942.⁶²

The renewal of the Japanese Solomons offensive at the end of October further encouraged GHQ and NGF to capture Buna quickly to pre-empt any shift in strategic emphasis.⁶³ The Allies were cautious of the potential links between the Japanese offensive in SOPAC and their strategy in Papua:

The action, in defence of Buna, must be viewed against the background of the Guadalcanal operations, and the enemy's heavy current commitments. With a date, arrogantly set as Nov. 15th, the Buna garrison will fight for 'time'; conversely, Allied pressure must resolve this situation before that date.⁶⁴

This estimation set the timeframe for the beachhead operations, which would need to be concluded prior to the outcome of the next Japanese offensive in order for defensive preparations or a withdrawal to be made. Brigadier General Stephen Chamberlin, GHQ G-3, recognised all plans hinged on Guadalcanal:

...the key to our plan of action lies in the success or failure of the South Pacific in holding Guadalcanal. None of [our]...plans...has a reasonable chance of success if Guadalcanal falls. Their failure will adversely affect the success of our basic and fundamental mission. If Guadalcanal holds, the success of [our] plan is assured.⁶⁵

⁶⁰ James, *The Years of MacArthur*, Vol. II, 220.

⁶¹ James, *The Years of MacArthur*, Vol. II, 222.

⁶² From: James, *The Years of MacArthur*, Vol. II, 222.

⁶³ GHQ SWPA had correctly anticipated the renewed Japanese offensive which began on 23-24 October. GHQ SWPA MIS, "G-2 Daily Summary #215," 22 October 1942, RG3 S2 B26 F3, MM.

⁶⁴ GHQ SWPA MIS, "G-2 Daily Summary #216," 23 October 1942, RG3 S2 B26 F3, MM.

⁶⁵ Brigadier General Stephen J. Chamberlin, GHQ SWPA G-3, to Sutherland, "Plan of Action," 30 October 1942, RG407 E427 B573 98-GHQ1-3.2, NARA.

The Petersburg Plan which made contingencies for the withdrawal of Allied forces from the north and eastern coast of Papua in the event of the USN's defeat is further evidence of GHQ's concerns about the loss of Guadalcanal.⁶⁶

GHQ was also increasingly concerned by Japanese activity in Timor and the Arafura Sea. Intelligence noted the build-up of Japanese forces in Timor during late September.⁶⁷ The reinforcement of Timor and increasing Japanese air raids against Darwin were closely monitored for fear of an attempt to attack Papua or north-western Australia from the Netherlands East Indies. Between 10-17 November intelligence noted a dramatic increase in Japanese activity in Timor.⁶⁸ MacArthur was concerned by the increasing Japanese presence and ordered Blamey to reinforce the garrisons in the Cape York Peninsula and the Allied outpost of Merauke in Netherlands New Guinea.⁶⁹ If the Japanese committed forces from either Rabaul or Timor to further operations in New Guinea or Papua, the Allied forces would be in a precarious position. For the duration of the beachhead operations, strategic uncertainty, and a sense of racing both the clock and the Japanese dictated MacArthur's desire for a swift conclusion to the campaign. The completion of Task One was essential to any future effort in the Pacific, but it would only be possible if the Allies were victorious in both Papua and the Solomons.

Plans for the Occupation of the Buna-Gona Area, October-November 1942

Planning for the advance on the beachheads was influenced by the imperative of time and the mobility offered by air transport. The Allies' expectations regarding the movement and supply of troops and intelligence estimates are addressed in Chapter Four. GHQ adopted Blamey's proposal for a three-axis advance towards the north Papuan coast.⁷⁰ The objectives were to force the SSF towards the coast and secure the Kumusi River. The Allied forces would contain and then capture the beachheads in a double envelopment from Kokoda and along the coast.⁷¹ To achieve this, the Australian 7th Division would advance via Myola-Kokoda-Wairopi, the American 126th Regiment would move via Kapa Kapa-Jaure-Wairopi/Buna, and the American 128th Regiment and Australian

⁶⁶ GHQ SWPA G-3 Section, "Petersburg Plan: Redistribution of Allied Forces, SWPA, In the Event of Japanese Success in the Solomons," 31 October 1942, USAHEC.

⁶⁷ Japanese IGHQ began transferring forces to Timor in late September to counter the prospect of an Allied offensive in the area. MacArthur had rejected the idea in June as there was little appreciable strategic gain from it. This was one of his 'most important...and least known decisions' of 1942. James, *The Years of MacArthur*, Vol. II, 185-186.

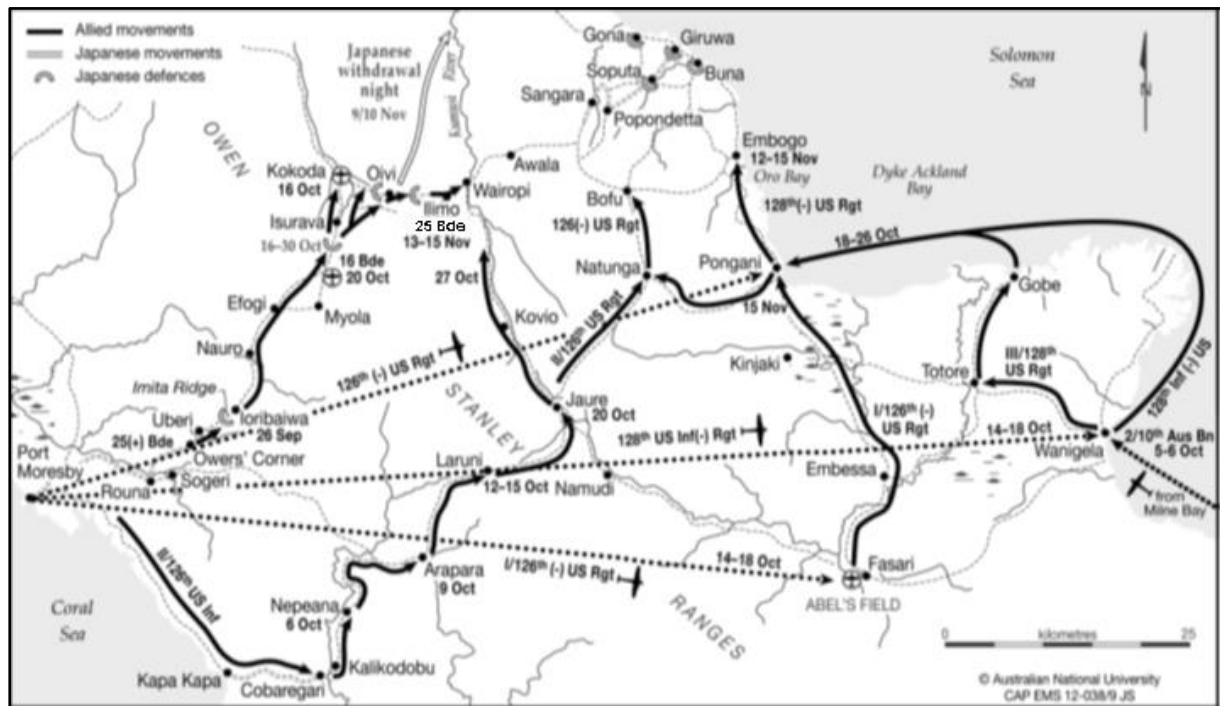
⁶⁸ See GHQ SWPA MIS, "G-2 Daily Summary #223," 10 November 1942 through to GHQ SWPA MIS, "G-2 Daily Summary #230," 17 November 1942, RG3 S2 B27 F2, MM.

⁶⁹ Dean, *MacArthur's Coalition*, 146-149.

⁷⁰ GHQ SWPA, "Operations Instruction No. 19," 1 October 1942, RG3 S3 B175 F1, MM.

⁷¹ GHQ SWPA, "Operations Instruction No. 19," 1 October 1942, RG3 S3 B175 F1, MM.

2/6th Independent Company would be airlifted to Wanigela to advance from Cape Nelson towards Buna.⁷² The advance required new airfields to be established for landing troops and more small ships for coastal transport. Development of an airstrip at Wanigela permitted the airlift of the 128th Regiment on 14 October, while reclaiming Goodenough Island secured the sea route towards Cape Nelson.⁷³



Map 1.2: The Allied Advance, October-November 1942.⁷⁴

Air transport offered great mobility over impractical terrain, but airlifting units dispersed the American 32nd Division. While MacArthur favoured Kapa Kapa-Jaure-Wairopi-Buna as the safest route, the II/126th found it slow, difficult, and unfeasible for a large body of troops.⁷⁵ This forced NGF to investigate alternate routes towards Buna. Harding wrote to Sutherland he was 'impressed (perhaps I might say depressed) by the great difficulty of making any sizable body of troops effective at a reasonably early date on the north slopes of the Owen Stanley Range by land movement' and instead considered landing troops near Jaure.⁷⁶ Blamey then proposed flying the remainder of the

⁷² The third axis had a contingency route of Fasari-Kinjaki-Pongani-Buna if it was not possible to establish an airfield at Pongani. NGF, "Operation Instruction No.34," 29 September 1942, AWM52 1/5/51/18, AWM; NGF, "Operation Instruction No.38," 13 October 1942, AWM52 1/5/51/19, AWM.

⁷³ Brigadier General Kenneth Walker, representing 5AF in Papua at the time, advised that Wanigela could not be supplied by air and would need to be supplied by sea. Walker to Blamey, 2 October 1942, 98-GHQ1-3.2, RG407 E427 B572, NARA; NGF, "Operation Instruction No.39," 17 October 1942, AWM52 1/5/51/19, AWM.

⁷⁴ From: Dean, *MacArthur's Coalition*, 144.

⁷⁵ MacArthur to Blamey, 1 November 1942, 3DRL/6643 Item 2/47, AWM.

⁷⁶ Harding wanted to develop another airstrip near Fasari with the I/126th and III/126th, but Blamey rejected the idea to avoid creating a potentially problematic supply situation and further dispersing the Allies' forces.

126th and 128th Regiments to Pongani. The 126th would march to Wairopi via Bofu, shielded by the Hydrographer's Range, while the 2/6th Independent Company screened the advance of the 128th Regiment on the coast.⁷⁷ However, necessity demanded the quick deployment of the remaining forces. This scattered the American units. The II/126th remained isolated on its march from Jaure, the I/126th was split between airfields at Pongani and Fasari after heavy rain closed Pongani airstrip, while the III/126th and Regimental Headquarters did not arrive at Pongani until 11 November. Meanwhile, the 128th Regiment was spread along the coast from Pongani to Embogo, navigating the swampy coastal tracks towards Buna.⁷⁸

Despite optimism regarding the local situation, GHQ was still hesitant to commit too heavily on the north Papuan coast. MacArthur still feared his forces becoming vulnerable and over-extended. He wanted to first secure the Kumusi River before committing more troops to the advance:

...[the] status in the Solomons...remains indecisive and the immediate availability afloat of enemy reserves creates situation that demands cautious handling of troops on north coast. Under circumstances consider that [five battalions] would be too congested a force to concentrate in Pongani area prior to securing Kumusi River line...Believe original plan to advance down Kokoda Trail assisted by envelopment from Jaure to Wairopi is still safest line of action...⁷⁹

MacArthur believed the 'main thrust' against Buna should come from the Kokoda Trail, and the enveloping American units should not be pushed too far forward.⁸⁰ Blamey concurred but assured him suitable lines of withdrawal were available. The Australians recapture of Kokoda on 2 November, coinciding with the USMC's limited offensive on Guadalcanal, and the destruction of the Japanese forces at Oivi-Gorari between 5-11 November restored GHQ and NGF's confidence as the Allies neared the Kumusi River.⁸¹ MacArthur tentatively set 15 November as the start date to begin the advance on the beachheads.

Major General Edwin Harding, CG 32nd Infantry Division, to Sutherland, 12 October 1942, 98-GHQ1-3.2, RG407 E427 B573, NARA; Milner, *Victory in Papua*, 116-17.

⁷⁷ Blamey to MacArthur, 31 October 1942 & Blamey to MacArthur 2 November 1942, 3DRL/6643 Item 2/47, AWM.

⁷⁸ Two luggers transporting the 128th Regiment were strafed by an American bomber as 5AF was unaware that Allied shipping was operating past around Cape Nelson. There were several casualties as well, notably Lieutenant A.B Fahnestock, who commanded the American Small Ships section of COSC. One of the boats was badly damaged and returned to Milne Bay for repairs Milner, *Victory in Papua*, 108; 107th Quartermaster Battalion, 'Activities of 107th QM Detachment at Hariko & Oro Bay', 23 March 1942, 332-QM-0.3, RG407 E427 B8070, NARA.

⁷⁹ MacArthur to Blamey, 1 November 1942, RG4 S1 B6 F2, MM.

⁸⁰ MacArthur to Blamey, 23 October 1942, RG4 S1 B6 F2, MM.

⁸¹ Horner, *Blamey*, 356.

Japanese Dispositions and Intentions, November 1942

Despite the significant setbacks in the Solomons and Papua, Japanese Imperial General Headquarters (IGHQ) was determined to consolidate its positions in order to continue offensives in each theatre. The growing scale of the operations and a reorganisation of command signalled a strategic commitment to the South Pacific.⁸² On 16 November the Eighth Area Army was formed at Rabaul under Lieutenant-General Hitoshi Imamura. It included the existing XVII Army under Lieutenant-General Harakuchi Hyakutake, which assumed responsibility for operations in the Solomons, and the new XVIII Army under Lieutenant-General Hatazo Adachi, which would command operations in New Guinea and Papua. The Eighth Area Army was bolstered by the newly-formed South East Area Fleet Command, 6th Air Division, and reinforcements from China and Korea for the XVII and XVIII Armies.⁸³ While the Solomons were prioritised for reinforcements, some additional personnel were dispatched to Buna to bolster Japanese strength.⁸⁴ IGHQ directed the XVII Army to 'secure key positions [on Guadalcanal] in preparation for offensive operations, while recovering their strength', while Buna, Lae, and Salamaua were recognised as key areas for future operations against Port Moresby for the XVIII Army.⁸⁵

The strategic situation for IGHQ and the Eighth Area Army was as precarious as the Allies'. The Japanese remained committed to the MO, RE, and FS Operations. However, if they were defeated in the Solomons or Papua it would leave them in a vulnerable salient from which further offensives would be very difficult. Buna provided the logistical base for any further efforts in Papua. IGHQ warned the SSF that 'it [was] essential for the execution of future operations that the Buna area be secured. Our strategic position in the seas will be fundamentally shaken if this area is lost'.⁸⁶ Imamura enacted IGHQ's directive, ordering the XVII Army to capture Guadalcanal and the XVIII Army to consolidate positions at Buna to prepare for future operations.⁸⁷ IGHQ and the Eighth Area Army persisted with the difficult task of sustaining both operations in the face of growing Allied naval and air superiority until mid-December.

⁸² Shindo, "The Japanese Army's 'Unplanned' Campaign in the South Pacific," 116.

⁸³ The XVII Army was reinforced by the 2nd and 38th Divisions, which were both committed to the Solomons. The 38th Division was initially intended to reinforce Papua, but the decision to mount a major offensive against Guadalcanal in November took priority. Only one battalion of the 229th Infantry Regiment would go to Papua. Bullard, *Japanese Army Operations*, 160-165, 190; Morton, *Strategy and Command*, 364.

⁸⁴ On 15 September, fears of an Allied naval landing at Basabua had accelerated the deployment of the Yokosuka 5th Special Naval Landing Party to Buna as reinforcements. This force was commanded by Naval Captain Yasuda, who assumed command of all naval units in the area. Additionally, just prior to the command reorganisation, XVII Army dispatched several echelons of reinforcements, including replacements for the 144th Regiment, and battalions of the 229th Regiment to Buna. Bullard, *Japanese Army Operations*, 157, 177.

⁸⁵ Morton, *Strategy and Command*, 364-365.

⁸⁶ Imperial General Headquarters, "Staff Telegraph Order No. 627," 16 November 1942, cited in Bullard, *Japanese Army Operations*, 178.

⁸⁷ Morton, *Strategy and Command*, 365.

The SSF remained responsible for the defence of the beachheads, though it was greatly weakened as a fighting unit. After the defeat at Oivi-Gorari, Horii was ordered to 'withdraw to Giruwa and facilitate the landing of reinforcement units'.⁸⁸ However, the withdrawal was costly. The flooded Kumusi River presented a formidable obstacle and claimed the lives of many Japanese soldiers, including Horii.⁸⁹ Subsequently, the Japanese defence came under the temporary command of Colonel Yosuke Yokoyama.⁹⁰ The Japanese defence of the beachheads was organised into the three main localities: Giruwa (Soputa-Sanananda), Basabua (Gona), and Buna.⁹¹ The SSF's losses meant the combat forces available to defend the beachheads were less than anticipated, though it possessed a large proportion of construction units. However, the garrison was reinforced and resupplied throughout November, and the deployment of the 21st Independent Mixed Brigade from Rabaul was considered.⁹² The garrison was further bolstered on the nights of 17-18 November when 1,500 troops were landed just as the Allies commenced their attack.⁹³ This brought the Japanese strength in the area to approximately 10,000 personnel, which far exceeded Allied intelligence estimates. A summary of Japanese strengths and reinforcements is provided in Appendix 1. The arrival of Japanese reinforcements shook the confidence of Allied high command and ensured a new wave of anxiety.

'Push Forward at the Greatest Speed': November 1942-January 1943

The beachhead operations coincided with another major engagement in the Solomons and the nadir of Australian-American military relations. SOPAC had begun a limited offensive, but the IJN and IJA had not yet been defeated and retained considerable ground and naval forces at Rabaul. In Papua, the AAF proved ineffective preventing Japanese landings on the north coast, making it vital to capture of the beachheads before further Japanese reinforcements landed or the Solomons operations were decided. While MacArthur had keenly assessed the strategic risks, personal insecurity also motivated his desire for a quick victory.⁹⁴ Failure and relief were not inconceivable to

⁸⁸ Bullard, *Japanese Army Operations*, 174.

⁸⁹ Bullard, *Japanese Army Operations*, 174.

⁹⁰ Bullard, *Japanese Army Operations*, 178.

⁹¹ The Japanese referred to the Gona area as the Basabua area, and the Soputa-Sanananda area as the Giruwa area.

⁹² After discussions between the XVII Army and Navy commanders, it was planned to land the 21st Independent Mixed Brigade at Buna on 23 November and use it to capture Wanigela. Bullard, *Japanese Army Operations*, 171-173.

⁹³ This included the III/229th Infantry Regiment, a company of the 38th Mountain Artillery Regiment, and 700 reinforcements for the 144th Infantry Regiment. Bullard, *Japanese Army Operations*, 177.

⁹⁴ MacArthur's animosity towards Eisenhower, whom he saw as a personal rival, might also have been a factor as Operation Torch commenced in North Africa while the beachhead operations were unfolding. Willoughby,

GHQ; Sutherland warned Kenney 'if anything went wrong, General MacArthur would be sent home'.⁹⁵ This pressure, combined with the command crises and tensions between Australian and American high command created more pressure for subordinate commanders to achieve MacArthur's objectives quickly.⁹⁶

MacArthur's and Blamey's outlooks weighed the advantages of a quick, unsupported advance against the risks of delaying and permitting the Japanese to reinforce. Blamey informed MacArthur the envelopment of Buna-Gona did not 'absolutely commit [the Allies] to a final advance', but delays in preparations would preclude a 'final rapid advance which it appears may be necessary to reap full advantage of victory and early consolidation'.⁹⁷ Despite increasing evidence of the importance of Buna to the Japanese, Willoughby believed they would evacuate or hold – but not reinforce – given their heavy commitment to Guadalcanal.⁹⁸ Commanders were optimistic. Blamey wrote to Frederick Shedden, the Secretary of the Australian Department of Defence, informing him 'the very stiff fighting is over unless the Japanese succeed in landing forces in the next week. We expect...in a few days to sweep through to Buna and Gona'.⁹⁹ In spite, or because of the risks, MacArthur was anxious to 'attack without delay...before the enemy can reinforce'.¹⁰⁰ MacArthur joined Blamey in Port Moresby and opened an advanced headquarters to oversee the operations.

The most serious threat to SOPAC and the SWPA remained Japanese naval capabilities. This gave the Japanese the opportunity to strike or reinforce either operation. At the beginning of November, GHQ's intelligence suggested Japanese naval strength in the Truk-New Britain-Solomons area totalled 8 battleships, 3 carriers, 10 cruisers, 10 light cruisers, 45-50 destroyers and approximately 50 transport vessels.¹⁰¹ The strength of Japanese naval forces, the development of Buin in Bougainville as an advanced base, and the diversion of reinforcements to Rabaul further supported the conclusion the Japanese planned another effort against Guadalcanal, or even a parallel operation elsewhere in the Pacific.¹⁰²

MacArthur 1941-51, 88; James Zobel, "Victory at All Costs: Douglas MacArthur's Papuan Campaign 1942-43," in *Kokoda: Beyond the Legend*, ed. Karl James (Cambridge: Cambridge University Press, 2017), 94.

⁹⁵ Kenney, *Kenney Reports*, 124.

⁹⁶ For a detailed discussion of Australian-American relations on the Australian mainland see; Dean, *MacArthur's Coalition*, 130-137.

⁹⁷ Blamey to MacArthur, 2 November 1942, 98-GHQ1-3.2, RG407 E427 B574, NARA.

⁹⁸ GHQ SWPA MIS, "G-2 Daily Summary #227," 4 November 1942, RG3 S2 B27 F1, MM.

⁹⁹ Blamey to Frederick Shedden, Secretary of the Department of Defence, 14 November 1942, 3DRL/6643 Item 2/104, AWM.

¹⁰⁰ MacArthur to Blamey, 2 November 1942, 98-GHQ1-3.2, RG407 E427 B574, NARA.

¹⁰¹ GHQ SWPA MIS, "G-2 Daily Summary #224," 1 November 1942, RG3 S2 B27 F1, MM.

¹⁰² GHQ SWPA MIS, "G-2 Daily Summary #224," 1 November 1942; "G-2 Daily Summary #228," 5 November 1942 & GHQ SWPA MIS, "G-2 Daily Summary #230," 7 November 1942, RG3 S2 B27 F1, MM; #134 CINCPAC to COMAIRSOPAC and COMSOPAC, 9 November 1942, RG4 S1 B10 F2, MM.

Japanese activity against the Solomons intensified on the eve of the beachhead operations. MacArthur agreed to divert some of the SWPA's air support to daily raids against Japanese shipping at Buin.¹⁰³ When the Japanese commenced their offensive on 12 November, Willoughby believed it heralded the decisive naval engagement of the campaign:

...the struggle for command of the sea in the Solomons has now reached its full intensity, the result of which will probably determine the fate of Guadalcanal and profoundly effect the whole course of future operations in the SWPA.¹⁰⁴

Initial reports of the clash were inconclusive, but by 15 November the main Japanese force had retired.¹⁰⁵ Confirmation of the Japanese defeat was not received in the SWPA until 17 November.¹⁰⁶ While the defeat of the Japanese in the Solomons was welcome news, it then presented the possibility of a Japanese pivot against Papua, where the ANF lacked the naval strength to repel a similar-sized attack.

Assumptions that the beachheads were unlikely to be reinforced had far-reaching implications for the operations. As the operations commenced, Blamey warned Herring there were indications the Japanese were preparing to land troops at Buna, making it 'imperative that our forces push forward at the greatest speed to seize the sea front in the Buna area and destroy any enemy remaining in the region of operations as early as possible'.¹⁰⁷ Allied high command's fears were realised on the nights of 17-18 November, when Japanese destroyers landed two echelons of troops and supplies. Another battalion landed at Basabua on 21 November. With the Solomons operations at a 'lull', it was thought the Japanese might redirect their focus against Papua with the same 'bull-headed tendency'.¹⁰⁸ Increased radio traffic between Rabaul and Buna also suggested a possible shift of emphasis.¹⁰⁹ Each landing coincided with urgings from high command to their subordinates to attack quickly and capture the beachheads. The effect will be assessed in Chapter Four. Japanese reinforcements became Allied high command's most pressing concern.

While the SWPA had made substantial efforts to support SOPAC, it was unable to count on reciprocal support to disrupt Japanese naval reinforcements during this period. The ANF was not

¹⁰³ #135 MacArthur to COMSOPAC, 10 November 1942, RG4 S1 B10 F2, MM

¹⁰⁴ GHQ SWPA MIS, "G-2 Daily Summary #235x," 12 November 1942, RG3 S2 B27 F2, MM.

¹⁰⁵ This engagement became known as the naval battle of Guadalcanal. The IJN was prevented from bombarding Henderson Airfield and troop transports disrupted. It was a major strategic victory for the Americans, though heavy losses were sustained by both sides. Over the four days, the USN lost two light cruisers, seven destroyers and one battleship badly damaged. The IJN lost two battleships, one heavy cruiser, three destroyers and 11 transports. It was the last major Japanese effort to recapture Guadalcanal.

¹⁰⁶ Adv LHQ to GOC NGF, 17 November 1942, 3DRL/6643 Item 2/47, AWM.

¹⁰⁷ Adv LHQ to GOC NGF, 17 November 1942, 3DRL/6643 Item 2/47, AWM.

¹⁰⁸ GHQ SWPA MIS, "G-2 Daily Summary #240," 17 November 1942, RG3 S2 B27 F2, MM.

¹⁰⁹ GHQ SWPA MIS, "G-2 Daily Summary #239," 16 November 1942, "G-2 Daily Summary #240," 17 November 1942 & "G-2 Daily Summary #241," 17 November 1942, RG3 S2 B27 F2, MM; New Guinea Force Headquarters and General (Air) Branch War Diary, 17 November 1942, AWM52 1/5/51/20, AWM.

strong enough to meet Japanese naval forces nor confident in navigating past Cape Nelson on the east Papuan coast, while the AAF was unable to disrupt convoys due to inexperience and poor weather. MacArthur appealed for naval support on the north Papuan coast, warning 'increasing enemy naval pressure may force me to revise my plan of campaign'.¹¹⁰ Halsey was reluctant to risk his forces in the Solomon Sea unless there was a 'major enemy seaborne movement against south coast New Guinea or Australia itself'.¹¹¹ Halsey affirmed that the 2 July Directive set Rabaul as the ultimate objective and New Guinea was only a supporting position. MacArthur would have to rely on his own assets while Halsey strengthened his position and proceeded through the Solomons.¹¹² Against this information and apparent Japanese intentions, MacArthur's early exhortations for speed are understandable, though they were based on a dramatic underestimation of Japanese strengths.

The Japanese reinforcement of the beachheads during November further exacerbated high command's anxiety and made the task of reducing the beachheads harder for tactical commanders. The reinforcements meant that initially, the defenders were equal to the attacking forces. The Japanese employed fast-running destroyers to deliver troops and supplies similar to the 'Tokyo Express' in the Solomons.¹¹³ Willoughby's estimates highlighted the risks. A convoy of five destroyers could land up to 750 troops, which risked tipping the balance of forces well in favour of the Japanese.¹¹⁴ Therefore, the 'interception of these deliveries' became a 'crucial point' in the Allies' plan.¹¹⁵ Timely intelligence and improved attack techniques resulted in the AAF achieving better results against the next series of Japanese convoys. During December attempts to land the 21st Mixed Brigade were thwarted by the AAF. The first echelon was initially repelled but eventually disembarked its troops and supplies near the mouth of the Kumusi River north-west of Gona on 2 December.¹¹⁶ The second echelon was attacked by Allied aircraft as it discharged its cargo at the mouth of the Mambare River on 14 December.¹¹⁷ While this created a potential threat to the Allied left flank, it also complicated Japanese supply and dispersed their forces. By mid-December Allied air

¹¹⁰ #256 MacArthur to Marshall, 22 November 1942, RG4 S1 B16 F1, MM; #149 COMINCH to COMSOPAC, 23 November 1942, #152 CINCSWPA to COMSOPAC, 27 November 1942 & #156 COMSOPAC to MacArthur, 28 November 1942, RG4 S1 B10 F2, MM.

¹¹¹ #156 COMSOPAC to MacArthur, 28 November 1942, RG4 S1 B10 F2, MM.

¹¹² #156 COMSOPAC to MacArthur, 28 November 1942, RG4 S1 B10 F2, MM.

¹¹³ This was the term adopted by the Allies to describe the nightly supply runs made by the Japanese navigating the narrow channels to land troops and supplies after slow daytime convoys using transport ships proved too vulnerable to interdiction. Supplies were stored within or lashed to drums and floated ashore, meaning the ships did not have to stop.

¹¹⁴ GHQ SWPA MIS, "G-2 Daily Summary #254x," 1 December 1942, RG3 S2 B27 F4, MM.

¹¹⁵ GHQ SWPA MIS, "G-2 Daily Summary #250," 26 November 1942 & GHQ SWPA MIS, "G-2 Daily Summary #254," 30 November 1942, RG3 S2 B27 F3, MM.

¹¹⁶ This contained the III/170th Infantry Regiment and I/38th Mountain Artillery Regiment.

¹¹⁷ This echelon contained elements of the I/170th Infantry Regiment, a regimental artillery company and machine-cannon company, and headquarters units of the 21st Mixed Brigade, including Major-General Kensaku Oda, who had been ordered to Buna to assume command of the defence.

superiority forced the Japanese to abandon landing reinforcements and switch to using submarines or barges to ferry supplies along the coast.¹¹⁸ However, the spectre of reinforcements spurred MacArthur and Blamey's insistence on speed throughout the campaign.

By mid-December, Japanese IGHQ, the Eighth Area Army, and its subordinate formations were forced to reconsider the viability of continuing the operations in Papua and the Solomons. The IJN's defeat in the Solomons, increasing Allied air superiority, and interdiction of Japanese shipping made sustaining these operations prohibitively difficult.¹¹⁹ While IGHQ wanted to maintain footholds for offensive operations, it recognised the Eighth Area Army risked complete annihilation if it remained committed in both areas. New Guinea would not be abandoned, but Buna no longer held the same importance. IGHQ's Chief of Operations Colonel Joichiro Sanada informed Imamura:

If Lae, Salamaua, and Madang are firmly secured, then there will be the opportunity to retake Buna later, even if it is now lost. We are currently facing two options: to simply discard Buna; or to support a withdrawal from Buna. If withdrawal is chosen, it must be done now.¹²⁰

This signalled the beginning of the withdrawal from the beachheads. IGHQ issued orders permitting the withdrawal to Salamaua when the situation permitted, but the Eighth Area Army did not immediately initiate evacuations to buy time to secure its bases in New Guinea.¹²¹ Despite increasingly dire conditions being reported from the Buna garrison as the Allies gradually reduced the defences, Eighth Area Army did not fully comprehend the situation.¹²²

Throughout December Allied intelligence still anticipated offensive operations from the Japanese. The concentration of senior Japanese commanders and considerable ground and naval forces at Rabaul was initially predicted as the prelude to yet another effort to seize Guadalcanal.¹²³ Furthermore, intelligence suggested an increasing Japanese intent to make the Allied position in Timor untenable.¹²⁴ Japanese troop movements from Palau to Timor and air activity against Darwin and Merauke, replicating previous patterns preceding Japanese amphibious operations pointed to a

¹¹⁸ SOPAC reports suggested the entire Japanese 2nd Division was landed by infiltration. GHQ SWPA MIS, "G-2 Daily Summary #255," 2 December 1942, RG3 S2 B27 F4, MM.

¹¹⁹ Hiromi Tanaka, "The Pacific War and New Guinea," (Paper presented at the Remembering the War in New Guinea Symposium, Australian National University, 2000).

¹²⁰ Colonel Joichiro Sanada cited in Bullard, *Japanese Army Operations*, 183; IGHQ, "Great Army Instruction No. 1376," 21 December 1942, cited in Bullard, *Japanese Army Operations*, 183-184.

¹²¹ Bullard, *Japanese Army Operations*, 183-184.

¹²² Bullard, *Japanese Army Operations*, 196.

¹²³ GHQ SWPA MIS, "G-2 Daily Summary #265x," 12 December 1942, RG3 S2 B27 F5, MM.

¹²⁴ Timor Force was composed of two Australian Independent Companies and the remnants of the original Australian and Dutch garrison. It operated as a guerrilla force. GHQ SWPA G-3, "Statements on the Timor Situation," 18 November 1942, 98-GHQ1-3.2, RG407 E427 B575, NARA.

possible demonstrative attack against north-west Australia which would draw GHQ's attention away from Papua.¹²⁵

This was contrasted by GHQ's observations of the Eighth Area Army securing positions between Lae-Gasmata-Rabaul. This was the first definitive evidence the offensive was wavering.¹²⁶ The failure of the Japanese offensives to capture the Solomons was thought to have 'shattered' the momentum of Japanese expansion. Despite the shift towards defence-in-depth the Japanese were still expected to support their forces in the Solomons and Papua.¹²⁷ Radio intercepts subsequently confirmed Japanese intentions to consolidate their air bases from Wewak-Madang-Finschhafen rather than relieve the 'hard-pressed Buna garrison'.¹²⁸ On 23 December, Willoughby predicted that without further reinforcements, it was the 'beginning of the end' for the Japanese garrisons in Papua.¹²⁹ Despite the positive situation, the concentration of Japanese forces and increasing shipping tonnages at Rabaul, and high volumes of radio traffic between Japanese headquarters kept GHQ alert.

The operational situation in the Solomons had become static by January 1943 but intelligence still indicated the Eighth Area Army's strong interest in Guadalcanal. However, it was unclear whether this was for further offensives or evacuations. The strategic picture was still shaped by the fact the Japanese fleet had 'not been decisively crippled'.¹³⁰ While it had been defeated in local engagements, it remained a threat. Since the Allies lacked a strong naval presence in the Solomon and Bismarck Seas, neither MacArthur nor Halsey were confident the Japanese would not mount another offensive. However, as Japanese supply in Papua and the Solomons rapidly deteriorated, the Eighth Area Army finally ordered the XVII and XVIII Armies to evacuate their forces on 13 January.¹³¹ Allied intelligence misinterpreted a new 'Tokyo Express' convoy sailing for Guadalcanal as the beginning of the anticipated offensive, rather than the commencement of evacuation operations.¹³² While Japanese intent to evacuate was quickly discovered at Sanananda

¹²⁵ Palau was used as a major staging point for early Japanese operations against Timor. GHQ SWPA MIS, "G-2 Daily Summary #249," 25 November 1942, RG3 S2 B27 F3, MM; GHQ SWPA MIS, "G-2 Daily Summary #255," 2 December 1942, RG3 S2 B27 F4, MM; GHQ SWPA MIS, "G-2 Daily Summary #262x," 9 December 1942, RG3 S2 B27 F4, MM; GHQ SWPA MIS, "G-2 Daily Summary #260x," 7 December 1942, RG3 S2 B27 F4, MM; GHQ SWPA MIS, "G-2 Daily Summary #277," 24 December 1942, RG3 S2 B27 F6, MM.

¹²⁶ This was supported by observations of Japanese landings at Madang, Wewak and Finschhafen. GHQ SWPA MIS, "G-2 Daily Summary #269x," 16 December 1942, RG3 S2 B27 F5, MM.

¹²⁷ GHQ SWPA MIS, "G-2 Daily Summary #272x," 19 December 1942, RG3 S2 B27 F5, MM.

¹²⁸ GHQ SWPA MIS, "G-2 Daily Summary #274x," 21 December 1942, RG3 S2 B27 F6, MM.

¹²⁹ GHQ SWPA MIS, "G-2 Daily Summary #276x," 23 December 1942, RG3 S2 B27 F6, MM.

¹³⁰ GHQ SWPA MIS, "G-2 Daily Summary #286x," 2 January 1943 & GHQ SWPA MIS, "G-2 Daily Summary #287," 3 January 1943, RG3 S2 B27 F7, MM.

¹³¹ Eighth Area Army, "Outline of the Withdrawal of the Buna Detachment," 13 January 1943, cited in Bullard, *Japanese Army Operations*, 199.

¹³² GHQ SWPA MIS, "G-2 Daily Summary #287," 14 January 1943, RG3 S2 B27 F8, MM.

from a prisoner on 14 January, the Allies remained unaware the Japanese were evacuating Guadalcanal until 9 February.¹³³ Uncertainty regarding Japanese intentions towards the Solomons, Timor and New Guinea persisted until the end of the beachhead operations.

Conclusion: The Strategic Context's Effect on the Beachhead Operations

The events of September-October 1942 shaped how GHQ responded to the shocks and setbacks of the beachhead operations. They were conducted within the context of strategic uncertainty and parity of forces between the Allies and the Japanese in the Pacific. This contributed to anxiety among Allied high command, exacerbated tensions between senior Australian and American commanders, and led to tactical interference to accomplish objectives hastily. For both the Allies and the Japanese, the operations on Guadalcanal, against Milne Bay, and Buna-Kokoda were interrelated, although Guadalcanal remained the paramount objective. The contest for Guadalcanal represented a definitive moral, military, and political commitment which neither side could afford to back down from, nor to suffer defeat. For most of 1942, events in the Solomons were of the greatest importance to strategic and operational planning for both the Japanese and the Allies.

The Japanese retained the capacity to determine the centre of gravity in SOPAC and the SWPA until December 1942. The IJN boasted a serious advantage in naval power and did not suffer a serious defeat until mid-November. From its bases at Truk, Rabaul, and Buin it was able to dominate the Bismarck and Solomon Seas. Considerable troop concentrations and ample transport shipping permitted the Japanese to commit to either theatre. As the Allies' naval forces lacked the strength to contest these waters, the efforts of the SWPA's land-based aircraft were crucial to blunting this potential. The battle for aerial superiority was also important, and ultimately won by the Allies through a concerted effort to destroy Japanese air power on the ground. The ebb and flow of the Guadalcanal campaign, and the inability of SOPAC or the SWPA to respond decisively, meant that the strategic outlook was in flux for most of 1942.

Securing the beachheads was essential to the Allied strategic plan laid out on 2 July. The option to bypass them was not viable. Additionally, if the Solomons fell, it was possible the Allies could use the beachheads as a defensive outpost to protect Port Moresby.¹³⁴ However, high command's insistence on speed remains one of the most controversial aspects of the beachhead

¹³³ Frank, *Guadalcanal*, 589-597.

¹³⁴ Adv NGF, "Operation Instruction No. 59," 13 January 1943, AWM52 1/5/51/24, AWM; Adv NGF, "Appendix 3: Suitability of Beaches for Landing Oro Bay-Amboga River," 13 January 1943 (issued with Op Instn No. 59), AWM52 1/5/51/24, AWM.

operations.¹³⁵ While Blamey and MacArthur's emphasis on speed was partially motivated by their desire to protect their reputations as military commanders, it is not the sole explanation. The peaks and troughs of GHQ and NGF's outlook, the periodic exhortations for speed, and the dismissal of casualties or supply concerns correlate to reports and estimates of increased Japanese strength and activity at Rabaul, in the Solomons, and to a lesser extent in Timor. It is against this uncertainty that MacArthur's apparent inability to 'withstand the shocks of war' must be viewed.¹³⁶

MacArthur's concern with broader strategic matters interfered with his ability to appreciate operational and tactical problems in the SWPA. However, after the situation in the Solomons became static by late November, MacArthur persisted in interfering with his tactical commanders. This lends weight to the idea that he was motivated in part to protect his reputation and achieve a victory before his contemporaries. By this point, Blamey had taken a more reasonable view of the situation and sought to protect his subordinates from the worst of MacArthur's interference. The variable strategic situation and balance of power in SOPAC and the SWPA through late 1942 had a profound impact on how the beachhead operations were conducted.

¹³⁵ Dean, *MacArthur's Coalition*, 148-149.

¹³⁶ Horner, *Crisis of Command*, 244.

Chapter Two

‘Intensively Trained’ or ‘Barely Satisfactory’?: Doctrine, Training, and Experience of the Allied Forces in Papua, 1942-43

Troops operating in this theatre require, in addition to their normal tactical training, thorough instruction in forest warfare and Japanese tactics, and training exercises to meet Japanese methods of operation. Such exercises should be conducted over similar terrain to develop familiarity with forest warfare and Japanese methods of fighting under such conditions. Training in night fighting is especially important. A high degree of physical endurance must be developed of the type necessary to secure superior mobility of movement necessary for successful operations in forest warfare.¹

**Brigadier Selwyn Porter
Commander, 30th Infantry Brigade
“Suitable Tactics and Equipment for
Operations Against Japanese Forces”
15 September 1942**

Allied forces were not adequately prepared for the combat they encountered at the beachheads. The battles required a high level of unit and sub-unit coordination, initiative, and tactical proficiency to assault the extensive prepared positions. However, few of the practical issues affecting these aspects had been contemplated or been addressed sufficiently in training. Despite months of operational experience in Papua, the beachheads represented a different type of fighting which had not been expected or prepared for. The extreme demands of the operations exacerbated the relative training disadvantages among CMF and US Army National Guard formations. Even highly experienced AIF units struggled with the conditions of jungle warfare.

¹ Brigadier Selwyn Porter, Commander 30th Infantry Brigade, “Suitable Tactics and Equipment for Operations Against Japanese Forces,” 15 September 1942, AWM54 577/7/28, AWM.

The respective doctrine, training, and experience of the Australian and American forces fundamentally shaped how they engaged in the beachhead operations. However, existing histories have insufficiently addressed these aspects.² Australian and American forces grappled with the application of their established doctrinal principles to unfamiliar operating environments throughout the campaign. While the Allied forces shared doctrinal principles applicable to all battlefields, the positional battle dictated by terrain and Japanese defences denied the Allies the opportunity to employ manoeuvre or conventional levels of firepower and resources, which prevented them from achieving surprise, concentration of force, or conducting sustained attacks. This required serious adaptations to fire support and infantry tactics in attacks at lower levels.

Preparations for the beachhead operations consisted of training immediately prior to deployment and operational experience. The standard of training across AIF, CMF, and Guard formations varied greatly and reflected the limited consideration of jungle warfare by the AMF and US Army prior to 1942. The development and conduct of training within the AMF followed divergent lines between the two strata of the AIF and CMF. AIF formations built upon experience in the Middle East and improvised training in Australia or Ceylon which borrowed heavily from recent lessons against the Japanese in Malaya. Meanwhile, the training of CMF units in Papua was frequently interrupted by labouring responsibilities which led to generally low and inconsistent standards of training. Similarly, the American formations experienced vastly different training. The 32nd Division's training was frequently interrupted and lacked a systematic approach to replicate jungle conditions or recent lessons, while the 41st Division – which was deployed as reinforcements – benefitted from stable training and a comprehensive jungle warfare programme which incorporated recent operational experience. Despite the varied levels of intensity and suitability, none of the programmes adequately prepared Allied forces for combat in Papua.

Operational experience between July and November 1942 bridged some of the gaps in Allied preparations. Training and tactics were not immediately applicable to the sudden meeting engagements typical of the mountainous jungles of the Kokoda Trail or the dense coastal swamps of Milne Bay. However, this experience increased the AMF's appreciation of the effects of terrain on communication and control, small unit tactics, and Japanese tactics. Australian forces learned and adapted to these conditions, though units extracted different lessons regarding tactics, the environment, and their enemy. Unlike the Australian forces, the 32nd Division was unable to draw

² Tactical narratives often state the standard of training was poor within CMF units and note the disruptions caused by labouring responsibilities, but do not detail the actual training undertaken. See McAulay's and Brune's description of the 49th Battalion. These sources also barely address the training of AIF units, though Brune describes some of the 21st Brigade's 'jungle' training in Queensland. McAulay, *To the Bitter End*, 118-119; Brune, *Bastard of a Place*, 117-118, 560-561.

on practical jungle warfare experience before it arrived at Buna, though it experienced a difficult period of deployment and acclimation. However, the brutal lessons learned by the division in its first weeks of combat informed the 41st Division's subsequent preparations. Ultimately, the inadequate level of preparation and failure to anticipate the prospect or the difficulties of attacking prepared positions in jungle terrain required considerable adaptation and improvisation to infantry and combined arms tactics as the operations progressed.

The Importance of Doctrine and Training

Doctrine is fundamentally important to understanding how militaries fight, but few campaign studies acknowledge how doctrine shapes forces' attitudes, organisation, tactical and operational methods, and effectiveness. However, despite its importance, there is no consensus on what defines doctrine.³ Fundamentally, doctrine provides a common set of principles and concepts which determine how militaries conceptualise warfighting and informs their characteristics, capabilities, and missions.⁴ Aaron Jackson broadly describes doctrine as a 'belief system' which governs the way militaries fight.⁵ John Gooch, Russel Hart, and Walter Kretchik liken doctrine to a binding agent which ensures a common approach to military problems and enforces uniformity and purpose in a military's organisation, equipment, personnel, training and tactics.⁶ To ensure a common understanding, doctrine must be endorsed and disseminated throughout an organisation through publications, lectures, and training.⁷ In addition to written doctrine, 'institutional ethos' also shapes a military's approach to war.⁸ Ethos is formed from the socio-cultural values of the institution's members and evolves in an organic manner.⁹ It includes conventions, traditions, and attitudes which usually complement codified principles.¹⁰ This means that while national militaries may share doctrinal principles, there can be variations in their emphasis and application. This raises questions regarding the interoperability between forces in coalitions or even within services.

³ Albert Palazzo, "From Moltke to Bin Laden: The Relevance of Doctrine in the Contemporary Military Environment" (Land Warfare Studies Centre Study Paper 2008), 6; Paul Johnston, "Doctrine is Not Enough: The Effect of Doctrine on the Behaviour of Armies," *Parameters* 30, no. 3 (2000): 30; Aaron Jackson, *The Roots of Military Doctrine: Change and Continuity in the Understanding and Practice of Warfare* (Fort Leavenworth: Combat Studies Institute Press, 2013), 6-7; Walter Kretchik, *US Army Doctrine: From the American Revolution to the War on Terror* (Lawrence: University of Kansas Press, 2011), 5.

⁴ Richard Bushby, 'Educating an Army': *Australian Army Doctrinal Development and Operational Experience in South Vietnam, 1965-72* (Canberra: Strategic and Defence Studies Centre: 1998), 1.

⁵ Jackson, *The Roots of Military Doctrine*, 1, 6.

⁶ John Gooch, "Series Editor Note," in Timothy Harrison-Place, *Military Training in the British Army, 1940-1944: from Dunkirk to D-Day* (London: Frank Cass, 2000), viii; Hart, *Clash of Arms*, 170; Kretchik, *US Army Doctrine*, 2.

⁷ Harrison-Place, *Military Training in the British Army*, 8.

⁸ Palazzo, "Moltke to Bin Laden," 10, 12.

⁹ Palazzo, "Moltke to Bin Laden," 47.

¹⁰ Palazzo, "Moltke to Bin Laden," 47.

Doctrine should not predetermine methods but provide principles to guide action. Doctrine is a cognitive practice which makes it open to varied interpretation and implementation.¹¹ Suitable and well-conceived doctrine can provide an advantage which helps to minimise the inevitable difficulties of warfare. Conversely, flawed doctrine can cripple a military or exacerbate problems.¹² Most importantly, doctrine forms the basis for learning and adaptation. It provides the initial methods and procedures for warfare and the parameters for understanding and overcoming problems. Experiences must constantly be viewed against existing doctrine, and gaps or failures must be acknowledged and addressed. The assumptions which underpin doctrine and methods must also be questioned. This is the key to adaptation.¹³ If doctrine stagnates or remains unquestioned, it risks becoming dogmatic or obsolete, which hinders a military's ability to learn and adapt.

Like doctrine, the training of forces is seldom addressed in campaign histories. Raymond Callahan argues training is not addressed in detail in most military narratives because it is 'not pulse-quickenning'.¹⁴ Training forms the bridge between doctrine and combat, instilling the principles, procedures, and practices of military organisations. It provides the basis for how individuals and groups act and perform in combat.¹⁵ Craig Stockings argues training should be viewed in relative terms, rather than absolute terms, against the opposition encountered and missions undertaken when analysing forces' performances.¹⁶ Training is only useful if it prepares forces to deal with the situations they actually face. This was the major issue for the Allied forces at the beachheads, where neither doctrine nor training anticipated the type of operation that occurred. While the low standard of training in Australian CMF units and the American 32nd Division is frequently cited as a major factor in early tactical failures, it is rarely addressed in detail to establish how the forces' training was deficient.

¹¹ Anthony King, *The Transformation of Europe's Armed Forces: From the Rhine to Afghanistan* (Cambridge: Cambridge University Press, 2011), 9.

¹² An example of this is the French army's dramatic transition to a doctrine of defensive positional warfare in the interwar period which was quickly overwhelmed by German combined arms manoeuvre warfare in May 1940. Michael Evans, "Forward from the Past: The Development of Australian Army Doctrine, 1972-Present" (Land Warfare Studies Centre Study Paper, 1999): 4; Palazzo, "From Moltke to Bin Laden," 1.

¹³ Downie, *Learning from Conflict*, 2.

¹⁴ Raymond Callahan cited in Tim Moreman, *The Jungle, the Japanese and the British Commonwealth Armies*, 8.

¹⁵ J.D. Fletcher and P.R. Chatelier, "An Overview of Military Training," Institute for Defence Analyses, 2000, I-1, II-4.

¹⁶ Stockings warns against using terms like 'well-trained' as an absolute assessment and cites the example of the 'well-trained' AIF in North Africa during 1940-41, which had significant tactical success against Italian forces but faced greater difficulties against German forces. Here, the AIF enjoyed a relative training advantage over the Italian forces, and training parity or disadvantage against German forces. Craig Stockings, "An Abundance of Riches: Training and Sustaining the Second AIF in the First Libyan Campaign, North Africa, 1940-41," in *Raise, Train and Sustain: Delivering Land Combat Power, The 2009 Chief of Army History Conference*, ed. P. Dennis and J. Grey (Australian Military History Publications: Canberra, 2010), 84, 94.

FMs and FSRs: AMF and US Army Doctrine, Interoperability, and Organisation

During the interwar period AMF and US Army doctrine reflected the contemporaneous trend to favour mobility through firepower. Their respective doctrines were heavily influenced by the experiences of the First World War, the focus on continental warfare, and the increasing motorisation of armed forces, which meant they shared similar concepts and tactical principles. The AMF was intended to operate within a larger British force and therefore employed the British three-volume *Field Service Regulations (FSR)*.¹⁷ *FSR* advocated mobility and superior firepower to avoid repeating the positional warfare of 1914-18.¹⁸ This required a high degree of motorisation, lighter infantry formations, and the centralisation of fire support at higher levels. *FSR* was periodically amended but never localised for Australia.¹⁹ The AMF had not seriously considered adapting *FSR* to jungle conditions before 1942, which left it theoretically and practically unprepared for fighting in the Pacific.²⁰ The AMF therefore enjoyed the strengths of British doctrine, such as its emphasis on initiative, flexibility, and technology, but also suffered from its weaknesses, such as inconsistent interpretations of principles and ill-suited force design for unconventional conditions.

The US Army's *FM100* doctrine also borrowed heavily from experiences during the First World War and emphasised similar lessons for future conflicts.²¹ Between 1935 and 1939, the *FM100* series transformed from a defensive, firepower-based doctrine to an offensive, manoeuvre-based doctrine for open warfare.²² The scope of doctrine included new ideas on combined arms integration, fire and manoeuvre, and envelopments through narrow penetrations. The *FM100* series underwent further revisions in 1941 to account for observations from the German campaigns in Europe, the US Army's Louisiana Manoeuvres, and force reorganisations that resulted in increased

¹⁷ Palazzo, *The Australian Army*, 82-84; Bushby, *Educating an Army*, 6; Michael Welburn, *The Development of Australian Army Doctrine 1945-1964* (Canberra: Strategic and Defence Studies Centre, 1994), 2-4.

¹⁸ David French, *Raising Churchill's Army: The British Army and the War Against Germany 1919-1945* (Oxford: Oxford University Press, 2000), 12, 15-16.

¹⁹ War Office, *Field Service Regulations Vol. I: Organisation and Administration 1930* (Melbourne: Wilke & Co, 1940); War Office, *Field Service Regulations Vol. II: Operations – General 1935* (Melbourne: McCarron Bird & Co., 1939); War Office, *Field Service Regulations Vol. III: Operations – Higher Formations 1935* (Melbourne: McCarron Bird & Co., 1939).

²⁰ It was also demonstrative of a broader neglect of what war in the Indian-Pacific area against Japan would look like for the British-Commonwealth. During the initial campaigns in Singapore and Burma, the British-Indian forces faced similar difficulties reconciling doctrine with the actual conditions they faced. Moreman, "The Jungle, the Japanese, and the Australian Army".

²¹ While the American doctrinal series was broadly titled *Field Service Regulations* – same as the British War Office's series – the specific manuals were referred to by their Field Manual (FM) identification numbers. American doctrine included *FSR Field Manual 100-5 Operations*, *Field Manual 100-10 Administration* and *Field Manual 100-15 Large Units*. Between 1905 and 1942, the US War Department issued ten versions of their basic operations manual *Field Service Regulations Field Manual FM100-5*. For comparison, the British War Office published five versions of the equivalent *FSR Vol. II Operations – General* between 1909-1939. Kretchik, *US Army Doctrine*, 132-133.

²² Kretchik, *US Army Doctrine*, 140-142.

motorisation, lighter infantry formations, and the pooling of supporting weapons such as tanks, artillery, and air support at higher levels.²³

Both doctrines sought to establish fundamental principles which could be applied in any setting. *FSR* was governed by a set of 'simple common-sense precepts' which commanders could apply in all situations.²⁴ It recognised the growing complexity of decentralised and dispersed battlefields, the increasing responsibilities of junior commanders, the difficulty of obtaining accurate information, the constant imperative of time, and the 'continual succession of unforeseen incidents and obstacles' which required commanders to remain resolute but flexible in the pursuit of objectives.²⁵ *FSR*'s tactical principles related to how forces should be employed. It stressed surprise, mobility, concentration, economy of force, security, cooperation, and, above all, offensive action to obtain objectives.²⁶ Mobility was achieved through quick, decisive decision-making, good organisation, equipment, discipline, training, and leadership.²⁷ Concentration of 'physical, moral and material' means through manpower and firepower were essential to support movement.²⁸ These principles were primarily intended to keep the enemy off-balance and impose a physical or psychological disadvantage.²⁹

Many of *FM100-5*'s key 'doctrines of combat' were comparable to *FSR*'s.³⁰ *FM100-5* stated:

Whilst the fundamental doctrines of combat operations are neither numerous nor complex, their application is sometimes difficult. Knowledge of these doctrines and experience in their application provide all commanders a firm basis for action in a particular situation.³¹

Commanders were encouraged to remain on the offensive to maintain initiative, freedom of action, and morale.³² Flexibility and adaptability remained imperative, as 'set rules and methods [were to] be avoided' as they restricted imagination and initiative.³³ Battlefield success was achieved using similar principles to *FSR*, though they were more explicitly expressed in terms of fire and movement actions. 'Surprise' could therefore be achieved through fire demonstrations, exploiting covered approaches, or fixing and enveloping the enemy. At least one fire and one movement element were

²³ The Louisiana Manoeuvres were a series of major US Army field exercises during August-September 1941. These were used to test US Army training, doctrine, organisation, and logistics, focusing on large, armoured manoeuvres. Christopher Gabel, *The US Army GHQ Maneuvers of 1941* (Washington DC: The Centre of Military History United States Army, 1992), 115.

²⁴ *FSR Vol. II: Operations 1935*, 22.

²⁵ *FSR Vol. II: Operations 1935*, 22-23.

²⁶ *FSR Vol. II: Operations 1935*, 24.

²⁷ *FSR Vol. II: Operations 1935*, 23-24.

²⁸ *FSR Vol. II: Operations 1935*, 23-24.

²⁹ *FSR Vol. II: Operations 1935*, 23-24.

³⁰ War Department, *Field Manual 100-5 Operations 1941* (Washington DC: United States Government Printing Office, 1941), ii.

³¹ *FM100-5: Operations 1941*, ii.

³² *FM100-5: Operations 1941*, 22.

³³ *FM100-5: Operations 1941*, ii.

to be used in all actions.³⁴ These common principles underpinned how Allied commanders at all levels conceptualised the employment of their forces.

Allied doctrines embraced the concept of combined arms warfare. *FSR* asserted that success in modern warfare could only be achieved through the effective coordination of the various arms available to commanders.³⁵ However, most British-Commonwealth fire support such as artillery and tanks was allocated at or above divisional level, and there was no formal system for the integration and coordination of combined arms forces at lower tactical levels.³⁶ Artillery and tanks would 'cooperate but not integrate' below division-level.³⁷ Conversely, *FM100-5* explicitly outlined the concept of integrated Regimental Combat Teams (RCTs).³⁸ RCTs were tactical combined arms groups which typically consisted of an infantry regiment, an artillery battalion, an engineer company, and could draw on additional units within a division. This gave RCT commanders an independent, versatile, and balanced combined arms force.³⁹

FSR and *FM100-5*'s conceptions of operations reflected the expectation of a large-scale continental war and the experiences of 1914-1918.⁴⁰ Fundamentally, both British-Commonwealth and American doctrines sought to use increasing firepower of different arms at higher levels to overwhelm the enemy and facilitate the movement of smaller, more mobile units. Attacks took the form of envelopments or penetrations to defeat the enemy.⁴¹ Assaults against complex prepared positions were expected to be conducted at corps or army level. These attacks necessitated 'great resources in material' and considerable time and detailed preparations to be successful.⁴² They required the employment of tanks, heavy artillery, and air support to suppress enemy defences and enable infantry to move and capture objectives. However, doctrine did not anticipate positional warfare or sustained attacks against prepared positions in jungle terrain because it would likely occur against unconventional opponents.

There was a high degree of potential interoperability between American and British-Commonwealth forces based on their similar doctrinal principles and concepts of mobility through

³⁴ *FM100-5: Operations 1941*, 23.

³⁵ *FSR Vol. II: Operations 1935*, 1.

³⁶ This was clearly demonstrated with the emergence of improvised 'jock columns' in the Middle East in 1941, which consisted of irregular mixed units of motorised infantry, artillery, anti-tank guns, and armour. French, *Churchill's Army*, 215-216.

³⁷ Christopher Pugsley, "'We Have Been Here Before': The Evolution of the Doctrine of Decentralised Command in the British Army 1905-1989," Sandhurst Occasional Papers No. 9, 2011, 30.

³⁸ *FM100-5 Operations 1941*, 3-4; John McGrath, *The Brigade: A History – Its Organisation and Employment in the US Army* (Fort Leavenworth: Combat Studies Institute Press, 2004), 54.

³⁹ McGrath, *The Brigade: A History*, 54.

⁴⁰ *FSR Vol. II: Operations 1935*, 161.

⁴¹ *FSR Vol. II: Operations 1935*, 110; *FM100-5 Operations 1941*, 99.

⁴² *FSR Vol. II: Operations 1935*, 166.

firepower. The main differences were in the technical application of these principles. The doctrinal similarities meant that when Australian and American forces came to fight alongside one another, it was a matter of working out how to fight together – rather than how to fight – which presented the biggest challenge. This stemmed from differing ethos and attitudes relating to command and control and the application of fire and manoeuvre. This required a period of familiarisation between Australian and American forces. However, the process was hampered by the fact that no Australian and American forces had trained together prior to the beachhead operations, resulting in a lack of cross-institutional understanding. This was epitomised by GHQ's attempts to establish separate American combat commands in the theatre.

The main difference between American and British-Commonwealth doctrine was the emphases on centralisation in command. American doctrine was more detailed and methodical in outlining the application of principles and methods. This reflected a centralised system of command and execution, whereas British-Commonwealth doctrine favoured centralised intent and decentralised execution which permitted commanders and their subordinates more freedom to pursue objectives.⁴³ This posed challenges for commands comprising both Australian and American elements. A detailed examination of command doctrine is undertaken in Chapter Four, and its effects on command, control, and tactics are explored throughout the thesis.

Allied doctrine addressed jungle warfare in cursory detail, but nonetheless offered some useful insights into the potential character of jungle operations. British-Commonwealth doctrine reflected the relative unimportance of jungle fighting and the expectation it would occur against an unconventional opponent.⁴⁴ *FSR* stressed the principles of warfare remained constant but the 'method of their application to fighting...will need modification' and that 'new problems not covered by past experience' were likely to arise.⁴⁵ American jungle warfare doctrine – developed further in *FM31-20 Jungle Warfare 1941* – drew on experiences in the Philippines and Panama and reached similar conclusions as *FSR*.⁴⁶ Jungle warfare was framed as a combination of night fighting and fighting in wooded terrain which exacerbated the difficulties of both.⁴⁷ It also stressed the need to acclimatise troops to the conditions. *FM100-5* and *FM31-20* correctly assumed that jungle fighting

⁴³ *FM100-5: Operations 1941*, 22-24; *FSR Vol. III: Higher Formations 1935*, 9, 30.

⁴⁴ Ideas were briefly summarised in a small section on 'Bush and Forest Warfare' and in the supplementary manual *Notes on Training in Bush Warfare*. Operations in different types of terrain such as mountains, desert, urban environments, and jungles were grouped under the chapter 'Special Types of Warfare', which constituted 13 pages of the entire manual. *FSR Vol. II: Operations 1935*; 176-189, 183; War Office, *Notes on Training in Bush Warfare 1930* (London: HMSO, 1930).

⁴⁵ *FSR Vol. II: Operations 1935*, 176

⁴⁶ *FM31-20* was more thorough than British-Commonwealth jungle manuals. It was designed to introduce servicemen to jungle environments, junglecraft, and tropical hygiene. War Department, *FM31-20 Basic Field Manual: Jungle Warfare 1941* (Washington DC: United States Government Printing Office, 1941).

⁴⁷ *FM100-5: Operations 1941*, 235.

would occur at close quarters and at lower levels, emphasising patrolling, ambushes, and small-unit actions.⁴⁸ Doctrine also warned of the loss of control over sub-units as they dispersed to deploy fire more quickly in close terrain.⁴⁹ British-Commonwealth and American doctrine emphasised the need for higher standards of training, initiative, leadership, and intelligence in jungle warfare.⁵⁰ They also recognised numerical superiority did not necessarily equate to an advantage in jungle conditions. These observations provided sound recommendations for training.

Despite helpful tactical observations, doctrine regarding the conduct of jungle operations was deficient. The beachhead operations presented the problems of both jungle warfare and positional warfare, which required a fusion of both methods to ensure sufficient planning and resources to achieve objectives. Doctrine accurately identified difficulties such as the effect of infrastructure on logistics and mobility, the need for local labour, limitations in communications and observation, and the increased importance of tracks, river crossings and jungle clearings as objectives.⁵¹ However, the most significant weakness of both doctrines was their blindness to fighting conventional opponents by conventional means. Critically, the employment of fire support – the basis of the Allied tactical approaches – was deemed largely unnecessary. Artillery and armour would rarely be employed because of the terrain, logistics, and potential opponents. *FM100-5* dismissed the value of conventional fire support, stating supporting weapons had ‘limited application’ because of the difficulties in observing fire, while suggesting combat aviation could compensate for the lack of artillery despite facing similar difficulties regarding observation.

Another issue was how doctrinal principles had shaped force organisations which were ill-suited to jungle terrain. The division was the basic tactical and administrative formation of both the AMF and US Army as it possessed capabilities to conduct operations independently, though they were still intended to fight as part of larger formations. Divisions consisted primarily of infantry, engineer and artillery combat elements, but required a high degree of motorisation for transport.⁵² Armour and heavy artillery remained under corps or army control in both forces.⁵³ Divisions derived

⁴⁸ *FM100-5: Operations 1941*, 235-236.

⁴⁹ *FM31-20: Jungle Warfare 1941*, 39.

⁵⁰ *FSR Vol. II: Operations 1935*, 184; *FM100-5: Operations 1941*, 235.

⁵¹ *FSR Vol. II: Operations 1935*, 184.

⁵² AIF formations converted to the British 1938 pattern in the Middle East during 1940, but CMF formations only began converting at the end of 1941. American Army and National Guard divisions had completed their conversion by early 1942. Palazzo, *The Australian Army*, 140-153; John Sayen Jr., *Battle Orders: US Army Infantry Divisions 1942-43* (West Way: Osprey Publishing, 2006), 8; Ken Greenfield, Robert Palmer and Bell Wiley, *The Army Ground Forces: The Organisation of Ground Combat Troops* (Washington DC: Centre of Military History Institute United States Army, 1987), 12.

⁵³ British-Commonwealth divisions retained a greater component of service, transport, and maintenance units. American divisions were stripped of anti-aircraft, anti-tank, and service units to allow easier transportation overseas. French, *Raising Churchill's Army*, 37-41; Sayen, *US Army Infantry Divisions*, 8.

most of their fire support from their artillery, organised as shown in Figure 2.1. While Australian divisions possessed more guns, American divisions possessed guns capable of delivering a heavier weight of fire due to their large-calibre howitzers. There were three significant implications from this organisation in jungle warfare. First, it often proved impractical or impossible for formations to deploy in their entirety due to terrain and logistics. Second, they could not move units and equipment as intended due to lack of infrastructure and motor transport. Third, infantry units often reduced their organic supporting weapons such as mortars and machineguns to increase their mobility.⁵⁴ As most of the engagements in Papua were fought at lower levels, this meant infantry units were severely disadvantaged by limited organic firepower and lacked divisional artillery support.⁵⁵

Division	Units	Equipment	Total Guns
Australian	3 x Field Regiments	24 x 25-pdr guns	72
American	3 x Field Artillery Battalion 1 x Medium Field Artillery Battalion	36 x 105mm howitzers 12 x 155mm howitzers	48

Figure 2.1: Australian and American Divisional Artillery Organisation and Equipment, 1942.

Below the division, subordinate units and sub-units were organised on a similar basis between British-Commonwealth and American forces. Australian brigades and American regiments were equivalent commands.⁵⁶ Supporting units could be attached to a brigade group but these were not permanent fixtures compared to the RCT organisation of American regiments. Battalions were the primary tactical units of Australian and American forces. Battalions were composed of companies, and companies composed of platoons (Figure 2.2). Platoons were made up of squads or sections.⁵⁷ These were the smallest sub-units and considered to be the largest group of men that a single leader could command.⁵⁸ Squads and sections were based around a light machinegun and could perform basic fire and movement functions. These similarities meant mixed groups of Australian and American forces could be formed at most levels.

⁵⁴ The AIF and British Army's experiences in the Middle East highlighted the battalion's lack of long-range firepower, which led to the reintroduction of medium machineguns and heavy mortars during 1942. Some of these changes occurred *ad hoc* and were not represented in official war establishments. Pratten, *Battalion Commanders*, 114; French, *Raising Churchill's Army*, 27-30.

⁵⁵ French, *Raising Churchill's Army*, 27-30.

⁵⁶ In the British-Commonwealth armies, a brigade was a tactical and administrative command comprised three battalions. In the American Army, a brigade consisted of two regiments, each composed of two battalions. Brigades were considered an administrative command, while regiments were considered tactical commands. However, brigades were phased out during with the triangularisation of US Army formations during 1941-42 and regiments adopted as the principal formation. McGrath, *The Brigade*, 47-48.

⁵⁷ British-Commonwealth forces used the term section, while the US Army used the term squad. In the US Army, a section referred to a sub-group with a specific function, such as a light machinegun section.

⁵⁸ War Office, *Infantry Training: Training and War 1937* (Melbourne: H.J. Green Govt. Printers, 1937), 1.

	Australian	American
Unit	Weapons & Strength	Weapons & Strength
Section/Squad	1 x Bren LMG 1 x Rifle Grenade Launcher <i>10 Men</i>	1 x Browning Automatic Rifle 1 x Rifle Grenade Launcher <i>12 Men</i>
Platoon	Headquarters Section 1 x 2" Mortar 3 x Section <i>1 Officer, 35 Men</i>	Headquarters Squad 3 x Squad <i>1 Officer, 45 Men</i>
Company	Headquarters 3 x Platoon <i>5 Officers, 115 Men</i>	Headquarters 3 x Platoon 1 x Weapons Platoon (2 x LMG & 3 x 60mm Mortars) <i>6 Officers, 192 Men</i>
Battalion	HQ Company: - Company HQ - Signal Platoon - AA Platoon (4 x LMGs) - Mortar Platoon (6 x 3" Mortars) - MG Platoon (4 x MMGs) - Carrier Platoon (13 LMGs) - AT Platoon (8 x 2pdr Guns) - Administrative Platoon 4 x Rifle Company <i>36 Officers, 746 Men</i>	HQ Company: - Company HQ Section - Communications Platoon - Ammunition and Pioneer Platoon - AT Platoon (4 x 37mm Guns) 3 x Rifle Company 1 x Heavy Weapons Company (8 x MMG, 6 x 81mm Mortar) <i>32 Officers, 884 Men</i>

Figure 2.2: Australian and American Battalion Organisation and Equipment, 1942.

The main difference between Australian and American force organisation was the integration of organic supporting weapons within units and sub-units. American infantry regiments included a light artillery company which provided additional close-range fire support for regimental commanders.⁵⁹ In addition, weapons sub-units supported rifle sub-units at all levels. The inclusion of designated weapons sub-units with machineguns and mortars at company and platoon level enabled the development of bases of fire for manoeuvre without relying on higher-echelon fire support.⁶⁰ Greater levels of supporting weapons in American infantry units led to an emphasis on firepower to destroy an enemy, whereas Australian tactics placed more emphasis on using fire to close with an

⁵⁹ A cannon company was equipped with six 75mm pack howitzers or short-barrelled 105mm howitzers which gave the regimental commander immediate access to fire support. While the guns were intended to be towed, they were capable of being man-handled over rough terrain. John MacDonald, "The Cannon Company: A World War II Solution to the Close Support Problem of the 1990s," School of Advanced Military Studies United States Army Command and General Staff College Fort Leavenworth, Kansas (1988), 9; Sayen, *US Army Infantry Divisions 1942-43*, 15-18.

⁶⁰ Sayen, *American Infantry Divisions*, 12-13.

enemy. However, the 32nd Division deployed to Papua without guns for its cannon companies or the usual complements of mortars and machineguns for weapons sub-units. Terrain also made it difficult to form and fight cohesively at battalion or even company level, which further undermined the principle of weapons integration.

The principles established in *FSR* and *FM100* were applicable to all battlefields but their application to jungle fighting was not straightforward. The jungle was seen as terrain to be moved through rather than fought in because the conditions hindered mobility and undermined the concentration of force and firepower, observation, communication, and control. Prolonged offensive operations against prepared positions were not anticipated which left a serious void in Allied considerations for the campaign. While doctrine indicated many of challenges the Allies were to face in Papua, the difficulty establishing suitable training locations, hasty development of training programmes, and reactive escalation of the Papuan campaign meant few commanders at any level had much opportunity to experiment with apply doctrinal principles in training situations, negating any possible advantage doctrine might have provided. Allied doctrinal conceptions of jungle warfare and assaults against prepared positions presented a paradoxical challenge because neither approach would succeed against the other. Jungle fighting required the dispersal of smaller forces reliant on their own weapons, initiative, and improvisation to fight miniature battles which would struggle to succeed against well-prepared defences, whereas attacking prepared positions required detailed intelligence and methodical planning, the concentration of high levels of firepower from combined arms, and the coordination of multiple groups of forces which proved prohibitively difficult in the jungle. The successful approach was to be found somewhere in between.

‘Something Completely Different’: AIF Preparations Prior to the Papuan Campaign

The AIF formations readying for war in the Pacific acknowledged it would require considerable preparations and adjustments for a new theatre and a new enemy. An Australian I Corps conference on 16 February 1942 noted ‘with respect to the training necessary for jungle warfare and... to counter...the enemy we have a lot to learn and the sooner we learn it the better’.⁶¹ However, the AMF lacked a centralised approach to coordinate training. Decentralised training systems permitted brigade commanders to set training syllabi within divisional guidelines, but there could be considerable latitude between the training conducted by battalions, companies, or sections.⁶² The type and quality of training was highly dependent on the thoroughness and

⁶¹ I Australian Corps, “Notes of Conference held 16 Feb at 2100hrs,” 16 February 1942, cited in Moremon, “No Black Magic,” 77.

⁶² Threlfall, *Jungle Warriors*, 76.

imagination of individual commanders.⁶³ The system also served as a barrier to the systematic collation and dissemination of information and training approaches throughout the AMF.

AIF preparations drew upon two years of experience in the Middle East, a sudden outpouring of material on jungle warfare, and guesswork to devise training programmes for the jungle.⁶⁴ A member of the 2/10th Battalion recalled 'there was little indeed about jungle fighting in any of the text-books, and that little was quite indefinite'.⁶⁵ Commanders had to abstract jungle warfare without firsthand knowledge of the environment and conceptualise the application of *FSR* and *Infantry Training's* principles and tactics.⁶⁶ More information became available after the capitulation of Allied forces in Singapore and the Philippines. *Notes on Japanese Tactics in Malaya* by Major-General Gordon Bennett, GOC Australian 8th Division, focused on dispelling myths about the Japanese soldier and formed the basis of *Army Training Memorandum (ATM) No. 10* in May 1942.⁶⁷ However, its contents remained highly generalised. An interview with Lieutenant-Colonel Ian Stewart, CO 2nd Argyll and Sutherland Highlanders, was of considerably more value because his unit had conducted extensive jungle training and enjoyed relative success against the Japanese.⁶⁸ These reports informed early conceptions of jungle warfare, though the general applicability of these lessons to Papua was questionable as the terrain and operations differed greatly. However, the key message was that jungle training and acclimatisation had to be conducted in the jungle.

AIF units made a keen effort to incorporate recent lessons into training programmes. The 7th Division's "Warfare in Thick Country" memorandum, issued in March 1942, was based on Stewart's interview. It demonstrated the conflict between known principles and a 'new' type of warfare:

...a wise man profits by the experience of others. To derive profit from the experience of others it is vital to know and understand the *basic reasons* for what happens...Action based on precedent alone will almost invariably fail, as the real conditions to be met are always different. Jungle warfare, or warfare in thick country, against a well-trained enemy, is new to

⁶³ Welburn, *Australian Army Doctrine*, 7.

⁶⁴ Moremon, "Black Magic," 77.

⁶⁵ Frank Allchin, *Purple and Blue: The History of the 2/10th Battalion AIF (The Adelaide Rifles) 1939-1945*, (Adelaide: Griffin Press, 1958), 231.

⁶⁶ Moremon, "No Black Magic", 76.

⁶⁷ III Australian Corps, *Notes on Japanese Tactics in Malaya and Elsewhere and Tactics to Counter Attack and Destroy the Enemy* (Melbourne: III Australian Corps, 1942); General Staff GHQ Australia, "Army Training Memorandum (War) (Australia) No. 10: Notes on Japanese Tactics in Malaya and Elsewhere and Tactics to Counter Attack and Destroy the Enemy", May 1942, in *Army Training Memorandum (War) Australia Nos. 10-20* (Melbourne: F.J. Hilton & Co., 1942); Russell Parkin, "The Sources of the Australian Tradition In irregular Warfare, 1942-1974," *Small Wars and Insurgencies* 20, no. 1 (2009): 121, 139.

⁶⁸ "Operations in Malaya: Dec 41 - Feb 42," 20 May 1942, AWM54 553/3/2, AWM; Berryman Diary, 16 February 1942, PR84/370 Item 2, AWM; Moremon, "No Black Magic," 78; Moreman, "The Jungle, the Japanese, and the Australian Army"; Moreman, *The Jungle, the Japanese, and the British Commonwealth Armies*, 15-23.

practically the whole civilized world. The training manuals do not deal with it specifically. These notes are sent out to assist commanders to think for themselves the methods to be used and the reasons for them.⁶⁹

The memorandum emphasised the dynamic nature of jungle fighting. However, tactical ideas were primarily based on actions specific to Malaya, which proved of limited value in Papua due to the vast differences in terrain and the character of the campaign.⁷⁰ Training needed to replicate the physical and mental demands of jungle fighting, and personnel had to become comfortable in jungle environments.

Preliminary preparations reflected the priorities of physical fitness and discipline. The 7th Division was initially based in South Australia and prioritised physical and mental conditioning through drill, marches, and exercise.⁷¹ During May the division relocated to northern NSW and southern Queensland. However, the semi-dense, temperate woodlands did not accurately simulate jungle terrain. Units had to apply their expectations of jungle conditions to theoretical exercises.⁷² Lieutenant-General Sydney Rowell, later GOC NGF, commented that ‘training was solid and realistic for our task of operating in relatively open country...what was lacking...was work in the jungle conditions that were to follow’.⁷³ Meanwhile, the 16th and 17th Brigades of the 6th Division were diverted to Ceylon.⁷⁴ This permitted the development of a more accurate understanding of jungle conditions and experimentation with small-unit training in Ceylon’s rubber plantations.⁷⁵ The 16th Brigade concluded it was ‘confronted with something completely different, both as regards country

⁶⁹ 7th Division, “Warfare in Thick Country”, 2 March 1942, Appendix T1, AWM52 1/5/14/18, AWM.

⁷⁰ The memorandum indicated that roads were ‘the only...feature which counts’ and focused on tactical lessons such as holding actions and wide encircling manoeuvres being employed by both sides. 7th Division, “Warfare in Thick Country”, 2 March 1942, Appendix T1, AWM52 1/5/14/18.

⁷¹ 7th Division, “TRG Programmes,” 31 May 1942, AWM52 1/5/14/18; 18th Infantry Brigade, “18 AUST INF BDE TRNG INSTN No. 23,” 20 March 1942, Appendix A, AWM52 8/2/18/17, AWM; 21st Infantry Brigade, “21st AUST INF BDE Training Instruction No. 28,” 26 March 1942, Appendix 19, AWM52 8/2/21/14, AWM; 25th Infantry Brigade, “Australian Imperial Force 25 AUST INF BDE TNG INSTN No. 10,” 16 March 1942, Appendix C, AWM52 8/2/25/10, AWM.

⁷² 2/14th Infantry Battalion, “Company Tactical Exercise: The Deliberate Attack,” undated, AWM52 8/3/14/49; 2/16th Infantry Battalion, “2/16 Aust Inf Bn Tng Instn No. 1,” 29 March 1942, AWM 52 8/3/16/17, AWM.

⁷³ Sydney Rowell, *Full Circle* (Melbourne: Melbourne University Press, 1974), 110.

⁷⁴ Only the 16th Brigade would take part in the beachhead operations. After the 18th Brigade had been committed to Buna, the 17th was the only AIF Brigade in New Guinea not directly employed and was kept in reserve at Milne Bay in case of a reversal. It was airlifted to defend Wau airfield in January 1943. The other 6th Division Brigade, the 19th, remained in Australia at Darwin.

⁷⁵ The first 16th Brigade training syllabus was based on “Military Training Pamphlet No. 9 Precis” and Lieutenant Colonel Francis G. Brink’s *Tactical Methods of Japanese Operations*. Brink was a US Army officer who had been an observer in Singapore during the Japanese invasion. His *Tactical Methods* was one of the better summaries of Japanese operations, but it was not widely available to Australian forces. Headquarters 6th Division in Ceylon sent copies back to Australia for reproduction, but it does not seem to have been disseminated widely throughout other units. Moremon, “Most Deadly Jungle Fighters?,” 38; 16th Infantry Brigade, “Notes on CO’s Conference 28 Mar 42,” 28 March 1942, Appendix H, AWM52 8/2/16/13, AWM.

over which we will operate and the methods to be employed', though rubber plantations still failed to reflect Papua's jungle conditions.⁷⁶

During June training shifted to focus on specific issues related to jungle warfare.⁷⁷ The 7th Division's brigades experimented with tactics, techniques, and equipment for close terrain, such as 'snapshooting' ranges with automatic weapons and offensive-defensive unit exercises.⁷⁸ These indicated some of the future challenges, such as the unreliability of wireless sets in close terrain, and that small, isolated pockets of resistance would be difficult to locate and could inflict disproportionate casualties on an attacking force.⁷⁹ Exercises with artillery under 'jungle' conditions also indicated that methods for identifying targets, requesting fire, and observation were 'hardly orthodox' and did not adhere to conventional doctrine.⁸⁰ In Ceylon, brigades conducted exercises with bicycles and Bren Carriers which were heavily influenced by the Malayan campaign. These demonstrated the difficulties of armoured operations in tropical conditions. A Carrier driver with the 2/5th Battalion noted 'everywhere we went we got bogged or bellied on the logs and stumps', while the 2/1st Battalion's experiments proved Carriers were horribly vulnerable to infantry anti-tank attacks.⁸¹ The most valuable training and experience was gained from practicing patrolling, contact drills, jungle marksmanship, and jungle craft.⁸² The value of patrolling was asserted in June's *ATM No. 11*.⁸³

Exercises also identified the loss of control in close terrain as a significant issue. Command and control diminished as sub-units became dispersed and lost visual or verbal contact. This demonstrated the need for a high degree of leadership and initiative among junior leaders and clear objectives. 'Punch and drive' were essential at all levels of command, especially in company leaders

⁷⁶ 16th Infantry Brigade War Diary, 11-26 March 1942, AWM52 8/2/16/13, AWM.

⁷⁷ First Australian Army, "TNG Inst No. 3: Jungle Warfare," 3 May 1942, AWM54 937/3/18, AWM.

⁷⁸ 21st Infantry Brigade, "Preliminary Report on Bde Test Exercise 24-30 June 1942," Appendix 5, AWM52 8/2/21/15, AWM; 2/14th Infantry Battalion, Appendix 4, "TSMG & Pistol Practice – 30 Yd Range," 4 May 1942, AWM52 8/3/14/51, AWM.

⁷⁹ 21st Infantry Brigade, "Preliminary Report on Bde Test Exercise 24-30 June 1942," Appendix 5, AWM52 8/2/21/15, AWM; 2/27th Infantry Battalion, "C Company: Syllabus", 18 May 1942, AWM52 8/3/27/42, AWM; 25th Infantry Brigade, "Experiments in Jungle Warfare," 21 June 1942, AWM52 8/2/25/12, AWM.

⁸⁰ 2/5th Field Regiment War Diary, 15 May 1942, AWM52 4/2/5/15, AWM.

⁸¹ Cam Bennett, *Rough Infantry: Tales of World War II* (Melbourne: Warrnambool Institute Press, 1985), 136; 2/1st Infantry Battalion, "Report on Unit G (R) Training Period 7 May 42 – 6 Jun 42," 5 June 1942, AWM52 8/3/1/22, AWM.

⁸² E.C. Giveny, *The First at War: The Story of the 2/1st Australian Infantry Battalion – The City of Sydney Regiment* (Wangi: Editorial Committee, The First Battalion Association, 2010), 235; Headquarters 2/2nd Australian Infantry Battalion, "Re: Range Practice," 2 May 1942, AWM52 8/3/2/29, AWM.

⁸³ General Staff GHQ, "Army Training Memorandum (War) (Australia) No. 11: Operations in Malaya and Notes on Warfare Experiences Against Japanese," June 1942, 35-48.

as this motivated sub-units to maintain initiative and pursue objectives.⁸⁴ The 21st Brigade concluded battalion and company commanders had to be prepared to move forward and personally take control. Additionally, formations were revised which placed one element forward and two in support, which increased control and located battalion and company commanders further forward.⁸⁵ These findings led the 7th Division to develop leadership and initiative in sub-units to allow them to act independently for short periods of time.⁸⁶ The 16th Brigade deduced similar lessons about the loss of control in close terrain and the need to instill intent and initiative in sub-units:

...in close country and semi-jungle fighting, it is apparent that the fight will be even more a section or a group fight. It is suggested, therefore, that even more time should be devoted to [section] training.⁸⁷

The importance of lower-level training and leadership was a significant lesson of the Papuan campaign.

The final stages of training coincided with the AMF's efforts to develop a more cohesive jungle warfare training system. During August the 25th Brigade undertook exercises organised by LHQ to demonstrate the most recent approaches to jungle warfare and training.⁸⁸ The exercises were successful but focused on operations typical of the Malayan campaign such as mobile defence.⁸⁹ However, further training was disrupted when the first elements of the 7th Division were transported to Port Moresby and the 6th Division brigades in Ceylon returned to Australia. The physical training conducted prior to deployment had toughened AIF personnel, but outside the 16th and 17th Brigades, no personnel had trained in jungle conditions. The newly arrived units needed time to acclimate to the environment, but there was little chance to train in the jungle as the Japanese advance demanded their presence in the forward areas almost immediately.

⁸⁴ 21st Infantry Brigade, "Preliminary Report on Bde Test Exercise 24-30 June 1942," Appendix 5, AWM52 8/2/21/15, AWM.

⁸⁵ 25th Infantry Brigade, "25 AUST INF BDE: TNG INSTN No. 19," 5 July 1942, Appendix B, AWM52 8/2/25/13, AWM.

⁸⁶ 7th Division, "TNG Objectives to 31 Jul 42," 2 June 1942, AWM52, 1/5/14/24, AWM.

⁸⁷ 16th Infantry Brigade, "Information for Australia," 21 May 1942, Appendix C, AWM52 8/2/16/14, AWM.

⁸⁸ These exercises were conducted under the supervision of Lieutenant-Colonel John R. Wolfenden, who had recently been appointed by Blamey to share jungle training lessons throughout the First and Second Armies. Wolfenden was part of the III Australian Corps and had no personal experience of jungle warfare. His exercises and lectures were based on Bennett's teachings on Japanese tactics. Moremon, "Most Deadly Jungle Fighters?," 44; Threlfall, *Jungle Warriors*, 91.

⁸⁹ 25th Infantry Brigade, "Demonstrations – 25 AUST INF BDE – 30 Aug 42: Report by Lt-Col J.R. Wolfenden," 31 August 1942, AWM52 8/2/25/13, AWM.

'No Single Purpose': CMF Preparations Prior to the Papuan Campaign

The preparation of the CMF for jungle warfare reflected both the generally poor progress of CMF training and the uncertain situation facing Allied commanders regarding Papua. The CMF's training was hindered by high personnel turnover, discontinuous training periods, and their employment as labour forces. This meant the standard of unit and sub-unit tactical training was well below their AIF counterparts. At the beginning of 1942 the CMF was in a poor state of preparedness.⁹⁰ Most CMF units were below establishment and few units had completed complex unit training due to the discontinuous induction cycles and low standard of individual training.⁹¹ Some personnel might have seen up to 318 days service, whereas those accepted most recently had only 42 days of service.⁹² Fraser estimates it took approximately 21 weeks of continuous training for AIF battalions in the Middle East to reach a satisfactory standard of discipline, cohesion, and tactical efficiency, and a further 18 weeks of training to operate efficiently at brigade and division levels.⁹³ On this basis, it would have taken uninterrupted training until August 1942 for CMF battalions to achieve a satisfactory standard of training for open warfare, let alone the additional specialised training required for jungle operations.

Leadership was also identified as an issue in CMF units. Many CMF commands were given to older officers to raise and train the units, rather than lead them.⁹⁴ A combination of obsolete, unimaginative, and outdated training exercises and lack of enthusiasm prevented many CMF units from developing the leadership and competency to meet a potential Japanese invasion.⁹⁵ It was decided to overhaul CMF appointments and transfer younger AIF officers with recent experience into CMF units.⁹⁶ However, the time needed to implement new training programmes and develop leadership and cohesion within units was cut-short by their operational deployment. The decision to send CMF units to defend Port Moresby has drawn criticism as the units were clearly not well

⁹⁰ At the end of 1941, GOC-in-C Home Forces Lieutenant-General Iven Mackay had hoped that 'real battle training' would begin soon. Lieutenant-General Iven MacKay, GOC-in-C Home Forces, cited in Pratten, *Battalion Commanders*, 169; Paul Hasluck, *The Government and the People, 1939–1941, Volume I* (Canberra: Australian War Memorial, 1965), 18-19; Jeffrey Grey, *A Military History of Australia*, 3rd ed. (Cambridge: Cambridge University Press, 2008), 168.

⁹¹ Albert Palazzo, "The Overlooked Mission: Australia and Home Defence," in *Australia 1942: In the Shadow of War*, ed. Peter J. Dean (Cambridge: Cambridge University Press, 2013), 62-63.

⁹² Fraser, "Combat Effectiveness," 65.

⁹³ Fraser, "Combat Effectiveness," 63-65.

⁹⁴ Pratten, *Battalion Commanders*, 166-167.

⁹⁵ Pratten, *Battalion Commanders*, 169.

⁹⁶ Between February to August 1942, 27 of 52 CMF battalion commanders were relieved. Four CMF battalions deployed to Papua received new COs. These were the 36th, 39th, and 55th Battalions, while the 3rd Battalion's CO was replaced after he was unable to make the climb into the Owen Stanleys. Pratten, *Battalion Commanders*, 172-175; First Australian Army, "Disposal of Over-age and Unfit Personnel", 27 April 1942, AWM52 1/3/10/1, AWM.

prepared.⁹⁷ However, Peter Dean argues this decision must be viewed in the context of strategic uncertainty and the possibility of losing Papua.⁹⁸ The deployment of CMF units may have been a calculated risk as Australia could not afford to lose further AIF units.

The extensive labouring responsibilities of the CMF battalions in Port Moresby prevented them from conducting the training required to form effective fighting units. As more personnel arrived in Papua, the labouring requirements of CMF units expanded as they unloaded more supplies and constructed more facilities.⁹⁹ The 49th Battalion spent only five days training during April, while the 3rd Battalion lost 30% of its personnel to labouring tasks each day during June.¹⁰⁰ Insufficient training opportunities exacerbated deficiencies in basic training. Shortages of qualified instructors hampered the development of basic individual, small-unit, and weapons training. Sergeant Keith Irwin, 53rd Battalion, recalled that many new personnel had never handled a rifle.¹⁰¹ Training syllabi introduced by transferred AIF officers often 'proved far too advanced' while training above platoon-level was usually for defensive purposes only.¹⁰² The CMF units in Papua were also unable to benefit from the practice of attaching training cadres to AIF units which occurred in Australia.¹⁰³ Discipline and cohesion were also issues for some CMF units which contributed to poor attitudes to training. The young average age of personnel, paucity of equipment, and frequent disruptions resulted in 'bitterness and resentment' which were major impediments to building *esprit de corps* within units like the 53rd Battalion.¹⁰⁴ Porter, upon assuming command of the 30th Brigade, noted there was 'no single purpose about [the 30th Brigade]...There was no unity, and none of the confidence which characterised the [AIF]'.¹⁰⁵

Revitalising training and leadership within the CMF units in Papua required intense work at all levels. CMF training did not display the same level of intellectual engagement with doctrinal and training materials, nor attempts to experiment and problem-solve which was seen in AIF units in

⁹⁷ The 49th Battalion's history notes: 'with hindsight, it is unbelievable that army commanders or a government could have allowed troops as inadequately prepared as the 49th to move to a war zone'. Frederick Cranston, *Always Faithful: A History of the 49th Australian Infantry Battalion 1916–1982* (Brisbane: Boolarong Publications, 1983), 168.

⁹⁸ Dean, *MacArthur's Coalition*, 152.

⁹⁹ 30th Infantry Brigade, "May 42," Appendix V, AWM52 8/2/30/5, AWM.

¹⁰⁰ 49th Infantry Battalion War Diary, 1–29 April 1942, AWM52 8/3/88/5, AWM; 49th Infantry Battalion War Diary, 29–30 April 1942, AWM52 8/3/88/6, AWM; 3rd Infantry Battalion War Diary, 2 June 1942, AWM52 8/3/39/1, AWM.

¹⁰¹ Sergeant Keith Irwin, 55/53rd Infantry Battalion, #17, AAWFA.

¹⁰² Peter Brune, *Those Ragged Bloody Heroes: From the Kokoda Trail to Gona Beach, 1942* (Sydney: Allen & Unwin, 1991), 9–10; Porter, "Australia Expects – Notes on 30 Bde," PR00527 Item 22, AWM; 36th Infantry Battalion War Diary, 22 & 29 June 1942, AWM52 8/3/75/2, AWM.

¹⁰³ Threlfall, *Jungle Warriors*, 90–91.

¹⁰⁴ Brune, *Those Ragged Bloody Heroes*, 12–13.

¹⁰⁵ Porter, "Australia Expects – Notes on 30 Bde," PR00527 Item 22, AWM.

Australia and Ceylon.¹⁰⁶ Porter, who had commanded an AIF battalion in the Middle East, initially noted: '[Training] in this Bde has NOT yet reached a satisfactory standard and a more energetic attitude must be adopted by all Officers and NCOs'.¹⁰⁷ The poor standard was attributed to labouring requirements and junior leaders' failure to appreciate their responsibilities for training.¹⁰⁸

Observations of an exercise revealed a lax attitude among some CMF members:

...realism was entirely forfeited in the interests of a happy, noisy gathering in a "sand-bagged" grandstand... "We must practice now what we expect to do in war". If junior leaders cannot control the "picnic-party" tendencies of younger men...how can they hope to control the "fear of the unknown", without practice.¹⁰⁹

Appropriate training environments had not been used effectively for small-unit drills and training. The 30th Brigade's subsequent training syllabi reflected Porter's desire to improve junior leadership, discipline, and realism in training, and lectures on recent lessons, training, and tactics were delivered to platoon and section leaders.¹¹⁰ However, the lacklustre training of the 14th Brigade was summarised simply as 'range practice, recce patrols, and general hardening' and 'general training' during July-August.¹¹¹

The piecemeal deployment of CMF units to face the Japanese disrupted the final opportunities for concerted training. The 30th Brigade was unable conduct unit-level exercises after the 39th Battalion deployed to contest the Japanese advance against Kokoda. The 39th Battalion, which proved the most effective CMF unit in Papua at the time, noted that company-level training continued as the unit moved forward and was 'shaping up well'.¹¹² Training was thereafter continually disrupted as CMF units moved forward into the Owen Stanleys during August. Organisations were frequently changed as units came under different operational and administrative commands as the situation developed.¹¹³ Some CMF units like the 3rd and 39th Battalions complemented training with valuable operational experience on the Kokoda Trail. However, most CMF battalions were retained for patrolling the approaches to Port Moresby and for labouring,

¹⁰⁶ 30th Infantry Brigade, "Report on T.N.G – 30 INF BDE," 16 April 1942, AWM52 8/2/30/4, AWM.

¹⁰⁷ 30th Infantry Brigade, "Report on T.N.G – 30 INF BDE," 16 April 1942, AWM52 8/2/30/4, AWM.

¹⁰⁸ 30th Infantry Brigade, "Report on T.N.G – 30 INF BDE," 16 April 1942, AWM52 8/2/30/4, AWM.

¹⁰⁹ 30th Infantry Brigade, "Comments on Training Serial 7 – Firing MMGs – Dokuna," AWM52 8/2/30/6, AWM.

¹¹⁰ Lectures took place between 23-29 June. 30th Infantry Brigade, "Notes for Instruction of NCOs: To be Delivered in Conjunction with Visit to Bde HQ," Appendix F, AWM52 8/2/30/6, AWM; 30th Infantry Brigade War Diary, 11 & 13 July 1942, AWM52 8/2/30/7, AWM.

¹¹¹ 14th Infantry Brigade War Diary, "July – General," AWM52 8/2/14/3, AWM.

¹¹² 30th Infantry Brigade, "Training Instructions Nos. 11-13: Battalion Exercise No. 1", 4 & 13 July 1942, AWM52 8/2/30/7, AWM; 39th Infantry Battalion War Diary, 4 July 1942, AWM52 8/3/78/4, AWM.

¹¹³ The 39th, 49th, and 53rd Battalions fell under the administrative and training command of the 14th Brigade, but the operational command of 7th Division after Porter temporarily became GOC Maroubra Force in August. The 30th Brigade simultaneously had the 39th Battalion detached and fighting near Kokoda, the 49th Battalion on defensive duties in Port Moresby, and the 53rd Battalion training and serving as Maroubra Force's reserve. 30th Infantry Brigade War Diary, 31 August, AWM52 8/2/30/7, AWM.

further disrupting the training required to develop competency in small-unit tactics.¹¹⁴ Despite Blamey's claim the CMF units in Papua were 'intensively trained', serious relative training deficiencies would become apparent at Sanananda in December.¹¹⁵

'Wide-Eyed Sightseers': American Preparations Prior to the Beachheads

The preparations of the 32nd and 41st Infantry Divisions offer two differing case studies in training and learning from operational experiences. While the divisions' initial formation and training were similar, their preparations upon reaching Australia diverged significantly. The 32nd Division's preparations were frequently interrupted, lacked rigorous training programmes, did not engage with intellectual material on jungle warfare, and failed to address deficiencies in vital areas like leadership, patrolling, and small-unit tactics. While the 32nd Division was also the victim of uncontrollable operational circumstances, its level of preparation imposed significant difficulties when it entered combat. In contrast, the 41st Division demonstrated a more comprehensive and adaptive approach to preparations. Training was more systematic and incorporated the latest ideas and lessons from jungle fighting. When the division entered operations it was better informed of the challenges of jungle fighting, and more adequately trained to overcome them.

The 32nd and 41st Division's formation in the US demonstrated broader issues with National Guard mobilisation, training, and reorganisation.¹¹⁶ The National Guard was a state-based part-time reserve force distinct from the regular professional Army. Initial training lacked intensity and realism as personnel anticipated returning home after the 12-month call-up ended in August 1941 and reflected the expectation that Guard formations would not reach combat.¹¹⁷ Sergeant Paul Lutjens, II/126th, recalled 'no matter how much...officers and [NCOs] talked about combat, we couldn't help but think they were talking about someone else'.¹¹⁸ Training focused on physical conditioning, basic individual skills, and some large-unit exercises. While morale and enthusiasm were high, exercises continually indicated a low standard of leadership and discipline.¹¹⁹ Despite this, the 41st Division

¹¹⁴ During September the 36th Battalion patrolled the Uberi area, to the rear of the Allied pursuit of the Japanese, while the 49th and 55th Battalions were left to patrol the Goldie River approaches. The 49th Battalion lost between 150 to 210 men every day to wharf duties and engineering work around Moresby. 49th Infantry Battalion War Diary, 11-19 August 1942, AWM52 8/3/88/6, AWM; 55/53rd Infantry Battalion War Diary, 30 July, AWM52 8/3/91/6, AWM.

¹¹⁵ Blamey to John Curtin, Prime Minister, 4 December 1942, 3DRL/6643 Item 2/11, AWM.

¹¹⁶ Greenfield, Palmer and Wiley, *The Organisation of Ground Combat Troops*, 12.

¹¹⁷ McCartney, *Jungleers*, 5; Corporal Stanley Jastrzembski, II/126th, cited in Campbell, *Ghost Mountain Boys*, 22.

¹¹⁸ Sergeant Paul Lutjens, II/126th, cited in Campbell, *Ghost Mountain Boys*, 25.

¹¹⁹ Gabel, *The US Army GHQ Maneuvers of 1941*, 115; Colonel John B. Johnson, "Special Inspection of the 32d Division, 106th Cavalry, and 46th Field Artillery Brigade at Camp Livingstone, La.," 7 April 1941, 333.1 32nd Division, RG337 E57 B56, NARA.

was regarded as one of the best divisions in the US Army, and the 32nd Division's 128th Regiment's performance during the Carolina Manoeuvres was of the 'highest order'.¹²⁰

Lax training was exacerbated by high personnel turnover and rapidly changing assignments which disrupted preparations and cohesion. Between 1941-1942, National Guard formations underwent reorganisations which forced high personnel turnover and created streams of personnel with varying levels of training within formations.¹²¹ Before leaving the US, the 32nd Division took on 3,000 new draftees, some of whom had not completed basic training, which damaged the cohesion of existing units.¹²² Many officers within the formations were transferred, reassigned, or retired, and both divisions took on new Commanding Generals (CGs) – Major General Edwin Harding in the 32nd Division and Major General Horace Fuller in the 41st Division.¹²³ Further disruption to cohesion and training was caused by the decision to send the divisions to the Pacific, rather than the European theatre for which they had been preparing.¹²⁴ An inspection of the formations prior to their departure noted the detrimental effect these interruptions had on preparations.¹²⁵ The 32nd Division alone required at least four months of uninterrupted training to recoup its standard of readiness.¹²⁶

The formations' initial training after arriving in Australia focused on physical conditioning, constructing camp facilities, and defensive preparations. The divisions arrived between April-May

¹²⁰ The Carolina Manoeuvres followed the Louisiana Manoeuvres as an attempt to craft a head-on battle between two Army-sized forces, one of which was primarily infantry and the other heavily motorised and armoured. Gabel, *The US Army GHQ Maneuvers of 1941*, 133-134; Martin Kidston, *From Poplar to Papua: Montana's 163rd Infantry Regiment in World War II* (Helena: Farcountry Press, 2004), 13; Blakeley, *32d Infantry Division*, 24.

¹²¹ When the 32nd Division was called up it required approximately 8,000 new personnel: about 46% of its establishment. Only four other division required more draftees than the 32nd Division. The 41st was comparatively lucky and required only 4,300 new personnel. The enactment of the *Selective Services and Training Act* (1940) and triangularisation of infantry divisions saw further changes to establishments. Luvaas, "A 'Leavenworth Nightmare'," 191; Michael Doubler, *Civilian in Peace, Soldier in War: The Army National Guard 1636-2000* (Lawrence: University of Kansas Press, 2003), 173-175; Greenfield, Palmer and Wiley, *The Organisation of Ground Combat Troops*, 12.

¹²² The 32nd Division's CoS noted: 'We drew over 3,000 [infantry] at last minute at [Port of Embarkation]. This is a slug. Men do not know officers and vice versa'. Colonel William Hones, CoS 32nd Infantry Division, cited in Robert Palmer, Bell Wiley and William Keast, *The Army Ground Forces: The Procurement and Training of Ground Combat Troops* (Washington DC: Centre of Military History Institute United States Army, 1991), 571-573.

¹²³ Luvaas, "A 'Leavenworth Nightmare'," 192; 32d 'Red Arrow' Veteran Association, "The 32d Infantry Division in World War II – The 'Red Arrow': Mobilisation, Training and Deployment to Australia."

¹²⁴ The 32nd Division's engineer unit – the 107th Engineer Battalion – had already embarked for Europe, so the newly formed 114th Engineer Combat Battalion from New England was hastily assigned. The division also shipped without its full establishment of 105mm and 155mm artillery pieces. Palmer, Wiley & Keast, *The Procurement and Training of Ground Combat Troops*, 573.

¹²⁵ War Department Office of the Inspector General, "Special Inspection of the 41st Division," 11 March 1942, 333.1 41st Division, RG337 E57 B56, NARA.

¹²⁶ Palmer, Wiley & Keast, *The Procurement and Training of Ground Combat Troops*, 573.

and went into camp in South Australia like the returning AIF formations. The 41st Division instituted detailed six-week division-wide training programmes to address key areas such as physical fitness, junior officer and NCO leadership, and 'perfecting' small-unit training in increments by the end of May.¹²⁷ Conversely, the 32nd Division had only finished camp preparations by that time. A routine of camp maintenance and construction, close-order drill, hiking, and range training was established but many felt like 'wide-eyed sightseers' in their new environment.¹²⁸ Harding initially instituted division-wide training programmes, but after 25 May opted for a decentralised training system which indicated broad training objectives and allowed regimental commanders to determine schedules and specific activities.¹²⁹ However, without experienced and competent officers, this led to uneven standards of training and discipline across units.

The relocation of both divisions to Queensland in July was intended to accelerate jungle training preparations but produced different outcomes. The 32nd Division moved to Mount Tambourine in southern Queensland, but the construction of new camp and training facilities again required considerable time away from training.¹³⁰ While the location was suited for jungle training and was close to the site the AMF selected for the Jungle Warfare Training Centre at Canungra, the formation did not capitalise on the opportunity to experiment with the effects of jungle conditions on training and tactics. Training remained largely focused on physical fitness and marksmanship.¹³¹ The 32nd Division had little opportunity to develop infantry-artillery rapport while training in Australia. While some live-fire exercises were conducted, Harding claimed GHQ quickly put a stop to practice with live rounds to limit ammunition expenditure.¹³² This precluded infantry from developing confidence working with artillery. Meanwhile, the 41st Division moved to Rockhampton in mid-north Queensland. This was an excellent location to prepare the troops for their eventual deployment to Papua. The division began conducting exercises in the tropical rainforests, river

¹²⁷ 41st Infantry Division, "Training Memorandum No. 15: Training Program," 18 April 1942, 41st Inf Div Trng Memo 1942-45, RG338 E37042 B3994, NARA.

¹²⁸ Clarence Jungwirth, *Diary of a National Guardsman in World War II, 1940-45* (Oshkosh: C. Jungwirth, 1991), 45; 126th Infantry Regiment Journal, 22-24 June 1942, 332-INF (126)-0.7, RG407 E427 B8000, NARA; Campbell, *Ghost Mountain Boys*, 43.

¹²⁹ 32nd Infantry Division, "Training Memorandum No. 75: Master Training Schedule For Period 30 March, 1942, to 2 May, 1942," 21 March 1942, 32nd Inf Div Training Memos 1942, RG338 E37042 B3913, NARA.

¹³⁰ The move was conducted by road, rail, and sea but took almost a month to complete. The 126th Infantry Regiment's move took 5 days between 28 July-2 August 1942, the 127th Infantry Regiment took 5 days between 1-6 August 1942, and the 128th Infantry Regiment took 7 days from 3-10 August 1942. 32d 'Red Arrow' Veteran Association, "The 32d Infantry Division in World War II – The 'Red Arrow': Mobilisation, Training and Deployment to Australia."

¹³¹ Jungwirth, *Diary of a National Guardsman*, 46; Private Wellington Homminga, III/126th, cited in Kelli Brockschmidt, "The New Guinea Campaign: A New Perspective Through the Use of Oral Histories," *McNair Scholars Journal* 9, no. 1 (2005): 26.

¹³² Harding to Samuel Milner, US Army Historian, 24 July 1951, Harding Interviews, RG319 E53 B4, NARA; Brigadier General Albert Waldron, 32nd Infantry Division Artillery, to Major General Orlando Ward, Chief of Military History, 5 March 1951, Interviews, RG319 E53 B5, NARA.

crossings, and amphibious landings at the Combined (Operations) Training Centre at Toorbul Point in October.¹³³

The training programmes of each division represented each commander's different approach to training and jungle warfare. Harding's decentralised system was similar to the Australian system but lacked experienced officers or engagement with published materials to make it successful. Harding was aware of *FM31-20* but believed it was 'old stuff – based on old campaigns' and of little use in training.¹³⁴ Additional information on jungle warfare was made available through Adv LHQ's "Training Notes – Tropical and Jungle Warfare No. 2" and "Lessons from Operations No.1" which were based on experiences in Papua.¹³⁵ However, few training memoranda referred to this material. There were some instances of cross-institutional learning where the division benefited from the AMF's attempt to systematise learning and training for jungle warfare. Officers of the 32nd Division attended an LHQ lecture on Japanese tactics and the 25th Brigade's exercises in August.¹³⁶ Joint Australian-American schools also passed on the latest information, such as a lecture by Australian officers describing Japanese tree-top snipers at Milne Bay. When the Americans encountered tree-top snipers at Buna, it was not unexpected, but no contingencies had been made.¹³⁷ Divisional training memorandums emphasised developing 'individual initiative and aggression' and identified areas for training which were highly applicable to jungle warfare such as small-unit fire and manoeuvre, 'rush' training, infiltration, unorthodox procedures, a live-fire range, and commando-style tactics.¹³⁸ However, there was little consideration of how these activities would be adapted to jungle conditions until September, just prior to the 126th Regiment's deployment to Papua. During September and October, the 32nd Division units still in Australia were pushed through more cross-country marches, and while jungle combat and night training were to be prioritised, little of this was achieved before they were deployed.¹³⁹

¹³³ 41st Infantry Division, "Training Memorandum No. 35," 21 October 1942, 41st Inf Div Trng Memo 1942-45, RG338 E37042 B3994, NARA.

¹³⁴ Harding cited in Luvaas, "A 'Leavenworth Nightmare'," 192.

¹³⁵ Allied Land Forces LHQ, "Lessons from Operations No.1", 6 October 1942; Allied Land Forces LHQ, "Trng Notes – Tropical and Jungle Warfare," 12 October 1942, 353 HQ I Corps Training, RG338 E339 B282, NARA.

¹³⁶ 32nd Infantry Division, "Training Memorandum No. 124: Personnel to Attend Second Australian Army Corps Exercise on Jap Tactics," 28 August 1942, 32nd Inf Div Training Memos 1942, RG338 E37042 B3913, NARA.

¹³⁷ Private Stephen Janicki cited in Brockschmidt, "The New Guinea Campaign," 27.

¹³⁸ 32nd Infantry Division, "Training Memorandum No. 84: Training Directive May 25, 1942 to July 18, 1942," 17 May 1942; 32nd Infantry Division, "Training Memorandum No. 110: Training Directive July 15, 1942 to September 15, 1942," 7 July 1942; 32nd Infantry Division, "Training Memorandum No. 132: Training Directive 15 September 1942 to 15 October 1942," 12 September 1942, 32nd Inf Div Training Memos 1942, RG338, E37042, B3913, NARA; Anders, *Gentle Knight*, 221.

¹³⁹ 32nd Infantry Division, "Training Memorandum No. 133: Night Training," 14 September 1942, 32nd Inf Div Training Memos 1942, RG338 E37042 B3913, NARA.

In contrast, the 41st Division's Training Bulletins explicitly stated the need to incorporate the latest information on Japanese tactics and Allied experiences into training. Bennett's *Notes on Japanese Tactics in Malaya*, lessons from Bataan, LHQ training notes, and an extensive report by Richard Hardwick of the Allied Geographical Section were made available to all personnel.¹⁴⁰ Australian LHQ Training Teams also worked with US I Corps and the 41st Division during November.¹⁴¹ The 41st Division commenced a two-month jungle training programme to 'gain the highest possible degree of proficiency in amphibious, jungle and mountainous operations'.¹⁴² Particular attention was paid to developing individual initiative, resilience, and confidence in jungle combat situations. NCOs were put through officer schools in preparation for them having to replace junior officer casualties in the field. Some of these personnel were even transferred into the 32nd Division. This kind of forward thinking differentiated the preparation of the 41st Division from the 32nd Division.

While the 32nd Division's preparations were cut short by its deployment to Papua, the 41st Division continued to implement the latest information from the theatre into training. Reports from Buna through I Corps Headquarters provided direct access to information which informed training. The 41st Division readily included the most important lessons into preparations. Reports highlighted Japanese tactics such as treetop snipers, first contact drills, the importance of patrolling, and practical advice for moving and maintaining troops in the jungle. The most important report was from Warren Force which outlined many of the 32nd Division's critical problems in the early stages, such as leadership, poor patrolling and night activity, and techniques for approaching bunkers.¹⁴³ Practical changes to organisation and equipment were also made to reflect emerging trends from Buna. The 163rd Regiment's 81mm mortar platoons were reorganised into batteries with additional officers included as observers mirroring developments at Buna to bolster firepower.¹⁴⁴ Last minute adaptations were made until the 163rd Regiment deployed to Papua. More realistic and better-

¹⁴⁰ Hardwick was a District Officer and Surveyor who had spent 36 years in New Guinea. 41st Infantry Division, "Training Bulletin No. 2," 25 April 1942; 41st Infantry Division, "Training Bulletin No. 3," 3 May 1942; 41st Infantry Division, "Training Bulletin No. 9: Training Notes – Tropical and Jungle Warfare No. 1," 3 October 1942; 41st Infantry Division, "Training Bulletin No. 13: Jungle in Relation to Military Operations," 13 October 1942, 41st Inf Div Trng Bulletins 1942, RG338 E37042 B3991, NARA.

¹⁴¹ Advanced Land Headquarters (G Branch), "Advanced Land Headquarters Information Letter No. 37," 14 November 1942, Appendix 34, AWM52 1/2/1/5, AWM.

¹⁴² 41st Infantry Division, "Training Memorandum No. 34: Training Program," 21 October 1942, 41st Inf Div Trng Bulletins 1942, RG338 E37042 B3994, NARA.

¹⁴³ This report was authored by Lieutenant Colonel Emil F. Klinke and Major W.B. Parker and of GHQ SWPA's Office of Engineers. 41st Infantry Division, "Training Bulletin No. 15: Observations of Combat Operations of US Troops in the Buna Area of New Guinea," 11 December 1942, 41st Inf Div Trng Bulletin 1942, RG338 E37042 B3991, NARA.

¹⁴⁴ Private Hugh Reynolds, 163rd Infantry Regiment, cited in 41st Infantry Division, "Training in Australia: 163 Infantry Regiment D Company Bulletin Board."

informed training gave the 163rd Regiment a distinct advantage when it arrived at Sanananda in January, but it still needed to acclimatise to the conditions and experience combat to become effective.

'Aggressive Leadership Seems Lacking': Combat Efficiency Assessments, June-December 1942

Combat efficiency assessments for Allied formations prior to the Papuan campaign reveal considerable disparities in the levels of preparations. In April 1942 LHQ introduced a system to rate the preparation of formations for combat.¹⁴⁵ Formations were subjectively assessed by their commanders, which reflected the decentralised system and standards of training. However, these ratings must be understood as a measure against prior experiences and warfare in open terrain. They did not accurately anticipate the standard of training required for offensive operations in jungle terrain. Figure 2.3 indicates a high level of proficiency among AIF formations, and drastically lower levels in CMF formations. However, ratings for American formations do not align with GHQ's and US I Corps' assessments during this period, which suggested a much a lower level of preparation. In May 1942, Lieutenant Colonel David Larr, Deputy G-3 GHQ SWPA, reported many junior leaders in the 41st Division:

...lack the comprehension...of either the immediate urgency of preparing to actually fight or the nature of the terrain in which they will be called upon to function. The division commander and his staff are keenly alive to this situation and are exerting themselves to the utmost to correct it. They are faced with a problem of changing a mass state of mind, and progress is slow.¹⁴⁶

Larr was critical of the 'vaguest conception' of the war for which the formation was preparing and recommended four months of additional unit training with live ammunition before starting jungle training.¹⁴⁷ However, Fuller's approach to training paid dividends. Lieutenant-General John Lavarack, GOC First Australian Army, observed the division on exercises in September and noted that despite an 'indifferent performance' and general deficiencies resulting from inexperience, the formation displayed excellent enthusiasm and its men and officers would 'undoubtedly do well'.¹⁴⁸

In contrast, the 32nd Division's training had not adequately addressed problems with leadership and command. On 6 September, Eichelberger informed GHQ the division's combat

¹⁴⁵ Horner, *Crisis of Command*, 86.

¹⁴⁶ Lieutenant Colonel David Larr, Deputy GHQ SWPA G-3, to Chamberlin, 21 May 1942, RG41 B1 F1 MM.

¹⁴⁷ Larr to Chamberlin, 21 May 1942, RG41 B1 F1 MM.

¹⁴⁸ First Army – General Officer Commanding and Army Commander War Diary, 1 September 1942, AWM52 1/3/1/1, AWM.

readiness was 'barely satisfactory'.¹⁴⁹ While the fitness and morale of the troops was high, observers noted personnel had no 'definite idea of immediate employment in combat'.¹⁵⁰ Training had frequently been disrupted and confused.¹⁵¹ Infantry required additional training with artillery, while engineers had been employed in construction rather than combat training. Patrolling and scouting skills were deemed substandard. Crucially, Eichelberger noted 'aggressive leadership seems lacking and...resulting deficiencies in small-unit training...observed'.¹⁵² Eichelberger was troubled that little jungle training had been attempted and that troops had been given 'more of the same thing they had had back home'.¹⁵³ He proposed assigning I Corps officers to oversee an intensified small-unit training programme designed to improve leadership at junior levels and emphasise the responsibilities of every man in the chain of command, but this was unable to be implemented before the division moved to Papua.¹⁵⁴

Given Eichelberger's assessment of the 32nd Division, its deployment to Papua is questionable. However, the selection of the 32nd Division over the 41st Division may have been one of administrative expediency.¹⁵⁵ I Corps intended to co-locate both American divisions in Rockhampton, but operational circumstances necessitated the deployment of a new Allied formation to Papua. While the 41st Division was already encamped and undertaking serious jungle training, the 32nd Division was again preparing to move.¹⁵⁶ Rather than disrupt the training of the 41st Division, it appeared prudent to reroute the 32nd Division.¹⁵⁷ This meant the 41st Division was able to continue with more appropriate training programmes, while the 32nd Division was forced to learn in-theatre. Unsurprisingly, the gulf between preparations and reality was vast.

¹⁴⁹ Lieutenant General Robert L. Eichelberger, CG US I Corps, to Sutherland, "Memorandum," 6 September 1942, RG30 S2 B25 F8, MM.

¹⁵⁰ Eichelberger to Sutherland, "Memorandum," 6 September 1942, RG30 S2 B25 F8, MM.

¹⁵¹ Eichelberger, *Jungle Road*, 7.

¹⁵² Eichelberger to Sutherland, "Memorandum," 6 September 1942, RG30 S2 B25 F8, MM.

¹⁵³ Eichelberger, *Jungle Road*, 11.

¹⁵⁴ Leadership, responsibility, and the chain of command were frequent themes in Eichelberger's addresses to US I Corps. In a speech to the 41st Division on 5 October 1942, the importance of this was stressed to officers and NCOs, and that successful soldiers were built from 'hard training'. Eichelberger to Sutherland, "Memorandum," 6 September 1942, RG30 S2 B25 F8, MM; Eichelberger, "Address to 41st Division," 5 October 1942, RG41 B1 F2, MM.

¹⁵⁵ Dean, *MacArthur's Coalition*, 156.

¹⁵⁶ Luvaas, "A 'Leavenworth Nightmare'," 192-193; Milner, *Victory in Papua*, 191-192.

¹⁵⁷ Alternative reasons have been suggested. Brigadier General Clovis Byers, CoS US I Corps, states that he and Eichelberger recommended the 41st Division be sent instead but were overruled by GHQ SWPA. They believed the 41st Division was better prepared, and the staff and leaders had a higher standard of leadership and competence. Conversely, Harding believed the two divisions were comparably prepared at this stage. Harding believed Eichelberger's relationship with Fuller was strained at the time. Eichelberger may have opted for Harding as a more cooperative subordinate. Byers Interview, RG49 B1 F1, MM; Dean, *MacArthur's Coalition*, 156; Harding cited in Luvaas, "A 'Leavenworth Nightmare'," 192-193.

Formation	Date	Leadership	Rating	Recent Training
14th Brigade	June 42	NA	E	Preparing for Training
30th Brigade	June 42	NA	F	Preparing for Training
16th Brigade*	NA	NA	NA	NA
18th Brigade	June 42	Good**	A	Individual Unit
21st Brigade	June 42	Good	A	Unit Brigade
25th Brigade	June 42	Good	A	Unit Brigade Specialised Training
2/7th Cavalry	June 42	Good	A	Small Arms Dismounted Reconnaissance
126th Regiment	June 42	NA	C	Relocating
127th Regiment	Nov 42	Generally high, lacking experience	B	Unit RCT
128th Regiment	June 42	NA	C	Relocating
163rd Regiment	Dec 42	Excellent	C	Unit RCT Jungle Training

Figure 2.3: Combat Efficiency Ratings for Allied Formations, June-December 1942.¹⁵⁸

Ratings:

A = Efficient and experienced in mobile offensive operations
B = Efficient as a formation for mobile offensive operations, but not experienced
C = Individual brigades are efficient for mobile offensive operations, but higher training had NOT been completed
D = Individual brigades are efficient in a static role, additional brigade and higher training is required
E = Units have completed training. A considerable amount of brigade and higher training is required
F = Unit training is not yet complete

¹⁵⁸ Ratings were recorded on the 20th of each month and compiled in a report released one month later. The proforma for information varied between reports. Ratings were not recorded once formations entered operations. This table indicates the last record before the formations were committed in Papua. Headquarters First Australian Army, "Combat Efficiency Report," 4 July 1942, MP729/6 42/401/142, NAA; Advanced Headquarters Allied Land Forces, "Combat Efficiency Reports," 16 November 1942, "Combat Efficiency Reports," 15 December 1942 & "Combat Efficiency Reports," 13 January 1943, AWM54 305/2/1, AWM.

* The 16th Brigade was in Ceylon until August 1942.

** The assessment of the 18th Brigade noted the NCOs of the 2/12th Battalion were of a lower standard than the rest of the brigade.

'We Knew Absolutely Nothing': The AMF's Operational Experiences

AMF units quickly found that training had not accurately prepared them for jungle warfare in Papua. Between July and November 1942, operational learning – or 'improvisation and on-the-job training' – occurred as units developed their own responses to jungle fighting.¹⁵⁹ However, developments were not uniform as fighting during the different stages on the Kokoda Trail and at Milne Bay generated diverse lessons about terrain, tactics, and the Japanese. Many troops were still not comfortable in jungle environments or sufficiently jungle-minded.¹⁶⁰ The close and sudden nature of contact, the loss of command and control, and the difficulty of moving and navigating presented difficulties which had been acknowledged but not adequately addressed in training. Many useful lessons were learned about the Japanese and jungle fighting during this period, but many more had to be discovered overcoming the Japanese defences at the beachheads.

The South Seas Force had the training, familiarity and confidence to operate within jungle environments. The units comprising the SSF had operational experience in Guam, Rabaul, China and Malaya, and undertook a period of training in Rabaul and Lae which included amphibious landings, night operations, and manoeuvres in jungle terrain prior to deploying to Papua.¹⁶¹ Japanese soldiers were highly disciplined, physically hardened, and conditioned to operate with limited logistical support. The Japanese preference for night attacks, infiltration, and envelopments exploited the concealment of the jungle to close with the enemy and inflict surprise while retaining mobility and initiative.¹⁶² Their training provided a considerable advantage over the raw Australian troops which exacerbated the perceived difficulties of jungle fighting.

Initial experiences demonstrated that while the challenges of jungle fighting had been anticipated in Australia, training had not accurately reflected jungle conditions. Newly deployed AIF formations needed time to acclimate and familiarise themselves with the environment. However, circumstances required their hasty deployment to operational areas. The 18th Brigade reinforced Milne Bay in mid-August and soon learned it 'knew absolutely nothing about that end of New Guinea'.¹⁶³ Less than two weeks later, it defended Milne Bay against a Japanese amphibious landing. While the engagement was short, it proved the conditions in Papua were 'so different to what [the

¹⁵⁹ Moreman, "The Jungle, the Japanese, and the Australian Army."

¹⁶⁰ Captain H.E. Dickenson, 2/14th Battalion, "Report on Operations in New Guinea," 28 September 1942, AWM52 8/3/14/57, AWM.

¹⁶¹ The 144th Regiment had been involved in operations against Guam and Rabaul, and occupied Lae and Salamaua. The 41st Regiment had seen combat in China and participated in amphibious operations in Malaya. Williams, *Kokoda: Myth and Reality*, 35-46.

¹⁶² Edward Drea, "Making Japanese Soldiers," in *Kokoda: Beyond the Legend*, ed. Karl James (Port Melbourne: Cambridge University Press, 2017), 194.

¹⁶³ Captain Angus Suthers, 2/12th Infantry Battalion, #399, AAWFA.

AIF had] been used to' in the Middle East.¹⁶⁴ Terrain's effect on cohesion, communication, and security was sharply noted. The brigade also began recognising specific Japanese tactics which would later prove useful at the beachheads. Personnel began looking for palm fronds at the base of trees as an indication of Japanese tree-top snipers.¹⁶⁵ The significance of narrow, low-cut firing lanes was quickly acknowledged as an indicator of concealed positions.¹⁶⁶ Personnel became adept at moving through thick country and ensuring every Japanese soldier they passed was truly dead.¹⁶⁷ The terrain at Milne Bay bore some similarities to conditions they would face at Buna, though: 'Milne Bay wasn't actually jungle, Buna certainly was...Milne Bay was all swamps and palm trees'.¹⁶⁸

Formation	Situation	Notes
14th Brigade	Uberi Goldie River	Patrolling Only
30th Brigade	Kokoda-Deniki Isurava First Eora Creek	39th Battalion Only 39th and 53rd Battalion 39th Battalion
16th Brigade	Second Eora Creek Oivi-Gorari	3rd Battalion attached to 16th Brigade
18th Brigade	Milne Bay Goodenough Island	2/12th Battalion Only
21st Brigade	Isurava First Eora Creek Efogi-Menari Ioribaiwa	3rd Battalion attached to 21st Brigade
25th Brigade	Ioribaiwa Second Eora Creek Oivi-Gorari	

Figure 2.4: Operational Experience of AMF Formations in Papua, July-November 1942.

¹⁶⁴ Corporal Paul Hope, 2/12th Infantry Battalion, S00529, KMSA.

¹⁶⁵ Clive Baker and Greg Knight, *Milne Bay 1942* (Loftus: Baker-Knight Publications, 1991), 220; Peter Brune and Neil McDonald, *200 Shots: Damien Parer and George Silk with the Australians at War in New Guinea* (Crows Nest: Allen & Unwin, 2004), 128-129.

¹⁶⁶ 2/12th Infantry Battalion, "COs Report and Comments on Month, 31 Aug 1942," AWM52 8/3/12/8, AWM.

¹⁶⁷ Personnel of the 2/12th Battalion received direct orders to make sure all Japanese troops lying on the ground were dead after relieving the 2/9th Battalion, who had suffered several casualties from Japanese soldiers feigning death or 'lying doggo' and shooting Australian troops after they had passed by. Corporal Geoffrey Holmes, 2/12th Infantry Battalion, S00540, KMSA.

¹⁶⁸ Sergeant Peter Gibson, 2/5th Field Regiment, #12, AAWFA.

The 18th Brigade collated its battalions' observations to inform future practices.¹⁶⁹ Useful lessons were noted such as screening an advance to draw fire, the Japanese refusal to withdraw after encirclement, the need for close coordination with supporting arms, and tactics to clear snipers from trees.¹⁷⁰ However, the report warned that the lessons might only apply to the specifics of the Milne Bay engagement, rather than having general application to all jungle fighting.¹⁷¹ Training during September-October incorporated recent lessons and emphasised patrolling, occupation of defensive positions, and night work.¹⁷² However, the brigade's ability to thoroughly integrate experiences into training programmes was hampered by commitments to wharf labour, construction, and preparations for new operations.¹⁷³ The 18th Brigade arrived at Buna with a brief but useful introduction to Papua's coastal conditions and common Japanese tactics.

AMF units on the Kokoda Trail experienced a different kind of jungle warfare and thus derived different lessons. While there were similarities in Japanese tactics, mountainous jungle terrain and operational circumstances emphasised different issues. The recently arrived AIF units had little time to acclimatise or collect information about the new environment. The 21st Brigade was immediately committed to operations and underwent 'urgent preparation' to experiment with what equipment would be taken into the Owen Stanleys.¹⁷⁴ The 25th Brigade was committed to action the day after arriving in Port Moresby, while the 16th Brigade had several days to attend lectures and discuss current operations before moving forward. Personnel were fit but heavy loads, harsh terrain, and the debilitating climate caused considerable fatigue.¹⁷⁵ The 21st Brigade's battalions only took one 3" mortar and no medium machineguns to improve mobility and supply. However, this severely disadvantaged Australian units when they met Japanese forces supported by

¹⁶⁹ Lieutenant-Colonel Clement J. Cummings, CO 2/9th Battalion, "Tactical and Other Lessons from Fighting Milne Bay," 10 September 1942; Lieutenant-Colonel James Dobbs, CO 2/10th Battalion, "Report on Japanese Tactics – Milne Bay," 6 September 1942; Lieutenant-Colonel Arthur Arnold, CO 2/12th Battalion, "Report on Operations 2/12 Aust Inf Bn Aug 31 to Sept 6 1942," September 1942, AWM52 8/2/18/21, AWM.

¹⁷⁰ The report noted the leading battalion had the support of an entire battery of artillery and readily available air support over a frontage of a few hundred metres, which was highly unlikely to occur elsewhere. 18th Infantry Brigade, "Points Noted and Lessons Learnt in Recent Ops," 16 September 1942, AWM52 8/2/18/20, AWM.

¹⁷¹ 18th Infantry Brigade, "War Diary Notes on Milne Bay Ops 26 Aug-8 Sep 42," AWM52 8/2/18/20; 18th Australian Brigade, "Points Noted and Lessons Learnt in Recent Ops," 16 September 1942, AWM52 8/2/18/20, AWM.

¹⁷² For example, see; 2/10th Infantry Battalion, "Training Syllabus," 13 September 1942 & "Addenda to TNG Syllabus Week Ending 3 Oct 42," 27 September 1942, AWM52 8/3/10/24, AWM.

¹⁷³ During October, the brigade was involved in Operation Hatrack – the occupation of Wanigela – and Operation Drake – the recapture of Goodenough Island – which dispersed the brigade along the Papuan coastline. 18th Infantry Brigade, "TNG," 16 October 1942, AWM52 8/2/18/28, AWM.

¹⁷⁴ Pratten, *Battalion Commanders*, 180; William B. Russell, *The Second Fourteenth Battalion: A History of an Australian Infantry Battalion in the Second World War* (Sydney: Angus and Robertson, 1948), 122; Malcom Uren, *A Thousand Men at War: The Story of the 2/16th Battalion, AIF* (Melbourne: Heinemann, 1959), 134.

¹⁷⁵ Despite decisions to reduce the amount of individual equipment, it was still common for men to carry more than 30kgs of weapons, rations, and ammunition. Major Charles A.W. Sims, 2/27th Battalion, S00789, KMSA.

heavy and medium machineguns, mortars, and mountain artillery.¹⁷⁶ It became clear that machineguns could be used for area fire even without line of sight in the jungle, and mortars could be employed where there was sufficient clearance, though observation of fire was difficult.¹⁷⁷ Subsequent brigades took a greater proportion of their supporting weapons forward.

The tactical lessons derived on the Kokoda Trail generally related to the Japanese in attack and meeting engagements, though there were some indications of Japanese defensive tendencies during the pursuit. The consensus was that the Japanese troops were clever, well-trained, and disciplined, if tactically predictable.¹⁷⁸ Japanese attacks confirmed many of the observations from the Malayan campaign where tracks and roads skirted by jungle were the primary tactical feature.¹⁷⁹ The jungle appeared to favour the attacker, though defensive positions could inflict heavy casualties if they were not identified in advance. However, distinguishing these positions presented a major challenge.¹⁸⁰

Training exercises had anticipated close and sudden encounters, but the surprise and pace of these engagements developed with created greater dispersion and loss of control. In these circumstances, sub-units had to operate individually, and commanders had to trust their subordinates.¹⁸¹ The 16th and 25th Brigades instituted battle drills to overcome the initial shock and inertia of contact. These became standard tactical procedures, but there was a risk of running into a larger enemy force by reflexively enacting these drills without reconnaissance.¹⁸² While this period

¹⁷⁶ Lieutenant R.W.T. Cowan, IO 21st Infantry Brigade, "Notes on Jap Tactics," 8 October 1942, AWM54 923/2/25, AWM; 21st Infantry Brigade, "Report of Operations – Owen Stanley Range 15 Aug-20 Sep 1942," AWM54 577/7/3, AWM.

¹⁷⁷ Reconnaissance flights over the Owen Stanleys had identified areas where mortars could be used. This was outlined in a report by Captain Max Bidstrup, 39th Battalion, to then-NGF commander Major-General Basil Morris, but the suggestion was dismissed. This influenced the 21st Brigade's decision not to take more 3" mortars into battle. Brune, *Ragged Bloody Heroes*, 47; Adrian Threlfall, "The Utterly Unknown: How the Australian Army Adapted to Jungle Warfare 1941-1945," in *The 2017 Chief of Army Military History Conference The Skill of Adaptability: The Learning Curve in Combat*, ed. Peter Dennis (Sydney: Big Sky Publications, 2018), 123.

¹⁷⁸ For example, see 7th Division, "General Notes on Recent Ops in the Kokoda-Alola Area," 15 September 1942, AWM52 1/5/14/7, AWM; "Observations on Japanese Tactics Kokoda Front 1942," AWM54 577/7/27, AWM; Captain S.H. Buckler, 2/14th Battalion, "Ops Report by Capt. S.H. Buckler, A Coy 2/14 Aust Inf Bn, Att 126 Regt USF – 12 October 1942," 12 October 1942, AWM54 577/7/20; Porter, "Notes on Japanese Tactics etc, and Lessons Learnt Kokoda-Alola Area," AWM54 577/7/28, AWM.

¹⁷⁹ Porter, "Notes on Japanese Tactics," AWM54 577/7/28, AWM.

¹⁸⁰ Porter, "Notes on Japanese Tactics," AWM54 577/7/28, AWM.

¹⁸¹ 25th Infantry Brigade, "25 Australian Infantry Brigade: Some Notes on the New Guinea Campaign, 11 September to 4 December 1942," AWM54 577/7/31, AWM; 21st Infantry Brigade, "21 Australian Infantry Brigade, Report on Operations in the Owen Stanley Range, 15 August - 20 September 1942," AWM54 577/7/3, AWM.

¹⁸² 16th Infantry Brigade, "Report on Operations in New Guinea, 16 Australian Infantry Brigade", AWM54 577/7/29 [15], AWM; 25th Infantry Brigade, "Some Notes on the New Guinea Campaign," AWM54 577/7/31, AWM.

of familiarisation with the Japanese and the jungle was advantageous for Australian units, not all lessons applied to the beachheads because the terrain and type of combat differed greatly.

The experiences of CMF units on the Kokoda Trail demonstrated vast gulfs in preparation and leadership between units. While the 39th Battalion earned a 'very high reputation as a fighting unit' at Isurava, the 53rd Battalion 'failed in battle'.¹⁸³ Major-General Arthur Allen, GOC 7th Division, was 'by no means impressed with [the 53rd Battalion's] efficiency and general standard of training'.¹⁸⁴ Subsequent performances confirmed senior commanders' low opinions of CMF forces. Rowell and Blamey proposed retaining the three best CMF battalions and disbanding the remainder.¹⁸⁵ Peter Brune argues the allocation of AIF officers to CMF battalions was a critical determinant of performance on the Kokoda Trail.¹⁸⁶ In the 30th Brigade, the 39th Battalion received 16 officers, the 49th Battalion twelve, and the 53rd Battalion eight.¹⁸⁷ While there were some excellent leaders within the 53rd Battalion, the overall standard of leadership, cohesion, and training was insufficient for jungle fighting. The battalion was amalgamated with the 55th Battalion shortly after its return to Port Moresby.

There was little opportunity to collate, disseminate, and incorporate recent lessons into preparations prior to the beachheads given the continuous nature of the campaign. The desperation of the fighting during September-October, frequent reorganisation of formations, and dire need for reserves during the beachhead operations denied formations the opportunity to use new information to prepare.¹⁸⁸ The 21st Brigade was the only AIF formation to have a prolonged period of rest during the campaign. After returning to Port Moresby in late September, its officers lectured the 16th Brigade, recently arrived American units, and Adv LHQ Training Teams on jungle conditions and tactics.¹⁸⁹ Training between October and November focused on basic jungle warfare concepts but did not highlight specific lessons or observations.¹⁹⁰ However, a series of tactical discussions examined the problems of visibility, supporting fire, and initiative in attack through close terrain.¹⁹¹ Training was disrupted by preparations to move forward again during November.¹⁹² Similarly, the 30th Brigade's November training syllabus drew heavily on recent experiences in close terrain, but

¹⁸³ Adv LHQ, "Notes from Conference C-in-C & GOC NG Force," 13 September 1942, AWM52 1/2/1/3, AWM.

¹⁸⁴ Allen cited in Horner, *Crisis of Command*, 141-142.

¹⁸⁵ Adv LHQ, "Notes from Conference C-in-C & GOC NG Force," 13 September 1942, AWM52 1/2/1/3, AWM.

¹⁸⁶ Brune, *Bastard of a Place*, 164-167.

¹⁸⁷ Brune, *Bastard of a Place*, 166.

¹⁸⁸ Pratten, "The AMF as a Learning Institution," 274-275.

¹⁸⁹ 21st Infantry Brigade War Diary, 23 September 1942, AWM52 8/2/21/17, AWM.

¹⁹⁰ 21st Infantry Brigade, "21 Aust Inf Bde TNG Instn No. 1," 10 October 1942, AWM52 8/2/21/17, AWM.

¹⁹¹ 21st Infantry Brigade, "Notes on Some Tactical Instn by Bde Comd," undated, Appendix L, AWM52 8/2/21/18, AWM.

¹⁹² 21st Infantry Brigade, "Training for Week Ending 29 Nov 42," undated, Appendix N, AWM52 8/2/21/18, AWM.

the brigade was 'unable to benefit by them' after being recommitted to action at the end of the month.¹⁹³

Limited opportunities for training also made commanders wary of incorporating inexperienced reinforcements with limited jungle knowledge despite the heavy losses. The 39th Battalion's CO described the reinforcements his battalion received after withdrawing from the Kokoda Trail as 'completely untrained troops from an employment company' who would take an extra two months to train.¹⁹⁴ The 21st Brigade also refused to incorporate reinforcements before redeploying to the beachheads despite requiring over 1,100 replacements because Brigadier Ivan Dougherty 'knew what they would be like'.¹⁹⁵ These personnel were retained in training cadres in Port Moresby for the duration of the operations. The 18th Brigade was the only Allied formation to incorporate reinforcements during the beachhead operations.¹⁹⁶ However, they made a mixed impression. While their arrival improved morale, aspects of their specialist and unit training 'left much to be desired'.¹⁹⁷ Many reinforcements were unfamiliar with basic communications techniques and had 'no real collective training', and as such 'could not be said to be fully competent to take their place as members of a section in battle'.¹⁹⁸ The 18th Brigade found it difficult to teach and train reinforcements mid-operation.¹⁹⁹

Significantly, the AMF's successes on the Kokoda Trail and at Milne Bay broke the myth of the Japanese superman and provide valuable lessons in jungle fighting and Japanese tactics. The lessons learned during this period were significant to the AMF's development as a learning organisation. However, experiences between units varied greatly, and the situations encountered at Milne Bay and on the Kokoda Trail did not foreshadow the difficulties of attacking prepared defensive positions in jungles and swamps, nor provide the chance to work with supporting arms or

¹⁹³ 30th Infantry Brigade, "General – November 1942," AWM52 8/2/30/80, AWM.

¹⁹⁴ Lieutenant-Colonel Ralph H. Honner, CO 39th Battalion, "The 39th at Gona," AWM67 Item 3/170, AWM; Victor Austin, *To Kokoda and Beyond: The Story of the 39th Battalion 1941–1943* (Melbourne: Melbourne University Press, 1988), 178.

¹⁹⁵ Brigadier Ivan Dougherty, Commander 21st Infantry Brigade, cited in Moremon, "No Black Magic," 82; Dougherty, "Combat Efficiency Report of 21 Aust Inf Bde as at 14 Nov 42," 14 November 1942, AWM52 8/2/21/18, AWM.

¹⁹⁶ The 18th Brigade received 1,026 reinforcements after completing operations at Buna. Lieutenant-General Iven G. Mackay, GOC NGF, "18 Aust Inf Bde Report on Operations Cape Endaiadere-Buna-Sanananda 14 Dec 42 to 22 Jan 43," 22 February 1943, AWM54 581/7/31 [1], AWM.

¹⁹⁷ 18th Infantry Brigade, "18 Aust Inf Bde Report on Operations Cape Endaiadere-Buna-Sanananda 14 Dec 42 to 22 Jan 43," 22 February 1943, AWM54 581/7/31 [1], AWM.

¹⁹⁸ 18th Infantry Brigade, "18 Aust Inf Bde Report on Operations Cape Endaiadere-Buna-Sanananda," 22 February 1943, AWM54 581/7/31 [1], AWM.

¹⁹⁹ Mackay cited the 18th Brigade's battlefield success despite suffering 96% losses to its original strength as proof that 'efficient, battle experienced units could quickly absorb large reinforcements and still maintain their fighting efficiency'. The brigade suffered 863 at Buna over 15 days and a further 426 battle casualties at Sanananda over 12 days, which does not support Mackay's claim. Mackay, "18 Aust Inf Bde Report on Operations Cape Endaiadere-Buna-Sanananda," 22 February 1943, AWM54 581/7/31 [1], AWM.

coordinate coalition forces. These issues had to be addressed while the Allies tried to capture the beachheads.

'A Green Hell': The US Army's Operational Experiences

US Army forces in Papua could not draw upon contemporary combat experiences before they reached the beachheads. Buna posed a daunting challenge for a first battle for the 32nd Division and demonstrated relative disadvantages in acclimation, training, and leadership. The incremental and dispersed deployment of the formation meant units had different experiences with jungle conditions before combat. Acclimatisation to the environment was a shock. Lutjens compared stepping off the plane into Port Moresby's heat to entering 'the lower story of hell'.²⁰⁰ Operational necessities required troops to be committed to further construction work or move forward, which left little chance for training in the new environment, though some basic patrolling of the surrounding areas allowed the troops to exercise in Papua's jungles.²⁰¹

The scattered deployment of the 32nd Division exposed it to Papua's rigorous and debilitating conditions, which came at the expense of the health of personnel. The II/126th's march over the Kapa-Kapa Trail proved a brutal introduction to Papua's 'green hell'.²⁰² The lead patrol's commander noted 'marching, living and fighting in the jungle requires special training and special equipment. The regiment had neither'.²⁰³ The strength and morale of the unit was greatly depleted without adequate supply and medical care. Many personnel abandoned equipment like entrenching tools, tents, and helmets which they would need at Buna.²⁰⁴ Experiences of jungle warfare were limited to patrolling and some indecisive skirmishes.²⁰⁵ The venture demonstrated the need to prepare personnel mentally and physically for jungle conditions. The advance of the remainder of 126th and 128th Regiments from Wanigela and Pongani led American forces through highly malarial coastal environments.²⁰⁶ While it gave American troops a chance to experience country similar to Buna, it came at the expense of illnesses and fitness, and prevented units from taking many of their supporting weapons. Personnel lacked adequate hygiene and anti-malarial measures. Progress was

²⁰⁰ Sergeant Paul Lutjens cited in Campbell, *Ghost Mountain Boys*, 79.

²⁰¹ 32nd Infantry Division, "Buna Patrol Reports," 332-2.11, RG407 E427 B7877, NARA; 126th Infantry Regiment, "Along the Kalamazoo-Jaure Trail," 332-INF(126)-2.11 RG407 E427 B8008, NARA.

²⁰² 32nd Infantry Division G-3 Section, "Basic Report – G-3 32nd Inf Div," 332-0.3, RG407 E427 B7793, NARA.

²⁰³ Major Alfred Medendorp, Assistant S-4 126th Infantry Regiment, "The March and Operations of Antitank and Cannon Companies 126th Infantry (32d Infantry Division) in the Attack on Wairopi 4 October-28 November 1942 (Papuan Campaign) (Personal Experience of a Patrol Commander)," 1948, USAHEC.

²⁰⁴ Blakeley, *32d Infantry Division*, 46-49.

²⁰⁵ The patrol engaged in several indecisive skirmishes in the vicinity of the Kumusi River around 10 November. This was the only combat experience gained by the 32nd Division before commencing operations at Buna.

²⁰⁶ 32nd Infantry Division G-3 Section, "Basic Report – G-3 32nd Inf Div," 332-0.3, RG407 E427 B7793, NARA

slow as tracks disappeared or were made impracticable due to flooded swamps and rivers. Poor supply led to further weakening of these forces. By 5 November, the 128th Regiment's 25-bed hospital had over 70 patients.²⁰⁷ The initial exposure to tropical conditions had a deleterious effect on the health and morale of the American troops before they reached the beachheads.

American reserve formations were afforded little opportunity to test themselves in the jungle before being committed to action. However, they benefited from the lessons immediately derived from the first weeks at Buna. The 127th Regiment's preparations in Port Moresby did not differ markedly from the other regiments and within ten days it went into action.²⁰⁸ However, Urbana Force's Commander, Colonel John Grose, dispatched a brief training programme for units as they formed up in the rear areas.²⁰⁹ This allowed some units to make additional preparations to account for major tactical adaptations such as counter-sniper programmes. The 163rd Regiment experienced a similar rapid transition from Port Moresby to combat soon after its arrival. Initial preparations were limited to taking on new equipment and jungle-issue uniforms.²¹⁰ The leading elements of the formation were flown to Popondetta and two days later were on the front lines at Sanananda. While these units benefitted from reports and training suggestions derived from the experiences of the 126th and 128th Regiments, there was still little chance to reconcile this information with the realities of the jungle and before going into action against the Japanese.

Conclusion: Neither 'Intensively Trained' nor 'Barely Satisfactory'

The Allied forces approaching the beachheads collectively demonstrated a vast scope of training, experience, and preparation for combat, but were still largely unprepared for the task facing them. The reality was that they were neither 'intensively trained' nor 'barely satisfactory' in their preparations as Blamey and Eichelberger had respectively claimed, but rather had not prepared for the type of fighting that would be required. The period of preparation and operational experience preceding the beachhead battles demonstrated some fundamental challenges for the Allied forces. The first was that the application of conventional doctrine and principles to jungle terrain required considerable thought and practice in the jungle. Second, training had failed to accurately replicate jungle warfare conditions. Training needed to be ambitious, rigorous, and engage with intellectual material, but also needed to be conducted in realistic terrain and climate.

²⁰⁷ 32nd Infantry Division G-3 Section, "Basic Report – G-3 32nd Inf Div," 332-0.3, RG407 E427 B7793, NARA

²⁰⁸ It took two weeks to concentrate the 127th Regiment in Port Moresby. 127th Infantry Regiment, "Tactical History – 127th Infantry Combat Team," 332-INF(127)-0, RG407 E427 B8014, NARA.

²⁰⁹ 127th Infantry Regiment, "Tactical History – 127th Infantry Combat Team," 332-INF(127)-0, RG407 E427 B8014, NARA.

²¹⁰ 163rd Infantry Regiment Journal, 28-29 December 1942, 341-INF(163)-0.3, RG407 E427 B9085, NARA.

This meant that almost all Allied forces faced a relative disadvantage until they became acclimatised and familiar with the effects of jungle terrain on equipment, command and control, and tactics. Third, operational experience was a costly way of developing the necessary knowledge and skills which had been overlooked in training. Australian forces had more opportunities to develop this experience, but this came at the cost of heavy casualties. However, the lessons learned by units varied greatly dependent on the terrain and situation they experienced. For the Americans, the lessons had to be learnt in action at Buna.

While Allied forces derived a range of experience and on-the-job learning from operations to supplement training, positional warfare and assaulting prepared positions in the jungle had not been anticipated. Neither training preparations nor Allied estimates predicted prolonged siege-like operations in the Pacific. Furthermore, new considerations would be introduced, such as attacking strongpoints, working with supporting arms in close terrain, and operating as a coalition force. This meant that when Allied forces encountered the Japanese at the beachheads, a new round of learning and adaptation from operational experience had to occur to develop tactics, techniques and procedures to overcome the defences.

Chapter Three

‘A New Form of Campaign’: The Beachhead Operations, 15 November 1942-22 January 1943

Our losses in the Papuan campaign have now been compiled and are low. As compared to the enemy they are less than half that of his ground force losses...These figures reverse the usual results of a ground offensive campaign, especially against prepared positions defended to the last...Two factors contributed to this result: First, there was no necessity to hurry the attack because the time element in this case was of little importance; and second, for this reason no attempt was made to rush the positions by mass and unprepared assaults. The utmost care was taken for the conservation of our forces with the result that probably no campaign in history against a thoroughly prepared and trained army produced such complete and decisive results with a lower expenditure of life and resource.¹

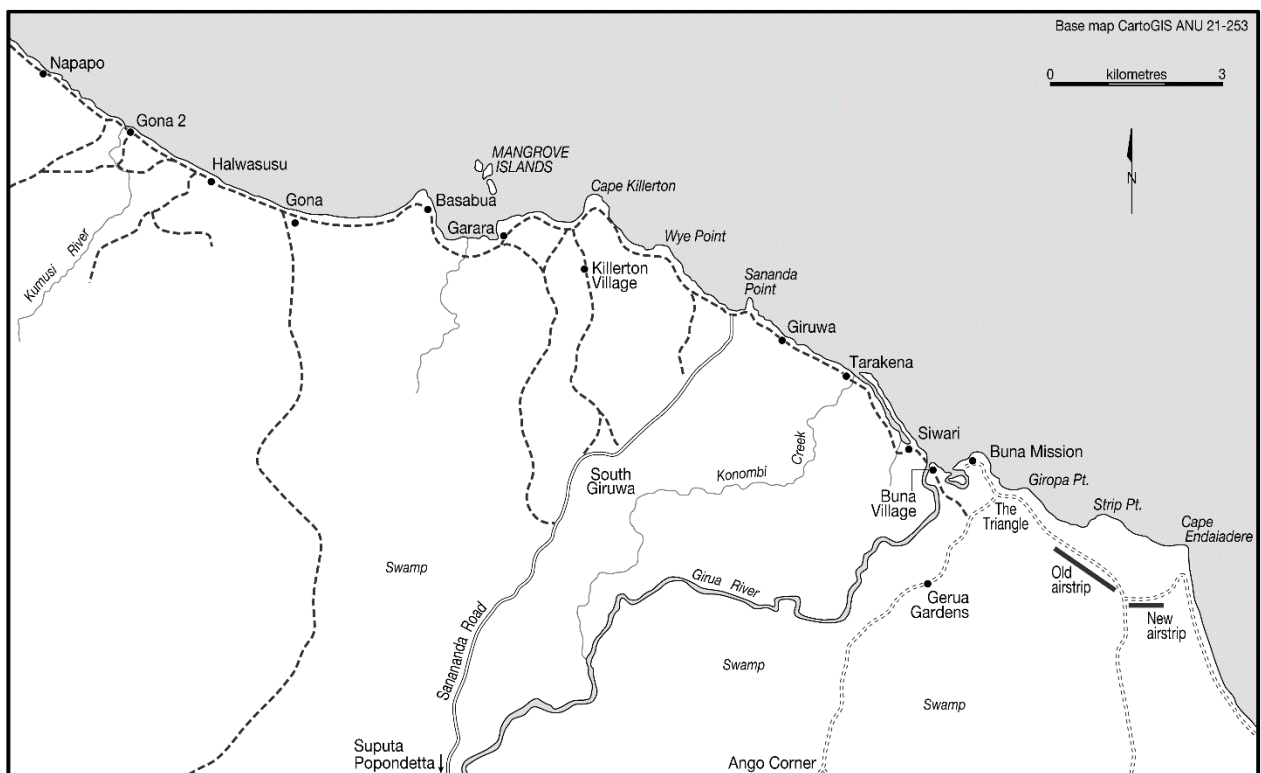
**GHQ SWPA
Communique #291
28 January 1943**

The beachhead operations were a series of complex, disjointed, and prolonged battles for control of the Japanese positions at Buna, Gona and Sanananda, which occurred from mid-November 1942 to late-January 1943. Contrary to MacArthur’s communique, haste played a significant role in how the campaign was conducted, nor was it necessarily ‘decisive’.² What optimistically began as a clean-up operation turned into a bloody two-month campaign against well-organised defensive positions, determined Japanese troops, and the environment. Allied losses were severe. Gradually, tactical approaches developed to meet the situation and available military resources were applied in new or innovative ways, leading to the capture of the beachheads.

¹ Colonel L.A. Diller, GHQ SWPA Public Relations Officer, “GHQ SWPA Communique #291,” 28 January 1943, RG4 S5 B47 F3, MM.

² Diller, “GHQ SWPA Communique #291,” 28 January 1943, RG4 S5 B47 F3, MM.

This chapter provides an overview of the battles as context for later chapters dealing with specific operational and tactical issues. The narrative of the operations has been divided into four sectors and three distinct phases to highlight key developments. Terrain naturally divided the operation into four smaller, concurrent battles which did not share a contiguous front. These were Gona to the west, the Killerton Junction-Sanananda area in the centre, Urbana sector which encompassed Buna Village and Mission, and Warren sector which included the eastern Buna coastline and airstrips. These battles developed individually but rarely had a direct effect on other sectors. The nature of the Japanese defences and the terrain shaped Allied approaches and objectives in each area. At Buna, the eastern sector containing airstrips and plentiful coconut plantations differed greatly to the western sector, which was dominated by the defences in the Triangle and Buna Mission. At Sanananda, the main tactical feature was the Killerton Junction and the Sanananda-Soputa road, which were bounded by swamps. Each locality had unique conditions and challenges which did not necessarily apply to the entire front.



Map 3.1: The Beachheads Area

The fighting in each sector developed in distinct phases as tactical and operational circumstances evolved. The contact phase refers to the initial period of the advance and culminates with the Allied realisations that the Japanese defences were far stronger than anticipated. The stalemate phase covers the period Allied forces grappled with the challenges of each sector and began implementing new tactics and techniques. The breakthrough phase addresses the period of major adaptation which allowed the Allies to dislocate and destroy the Japanese defences.

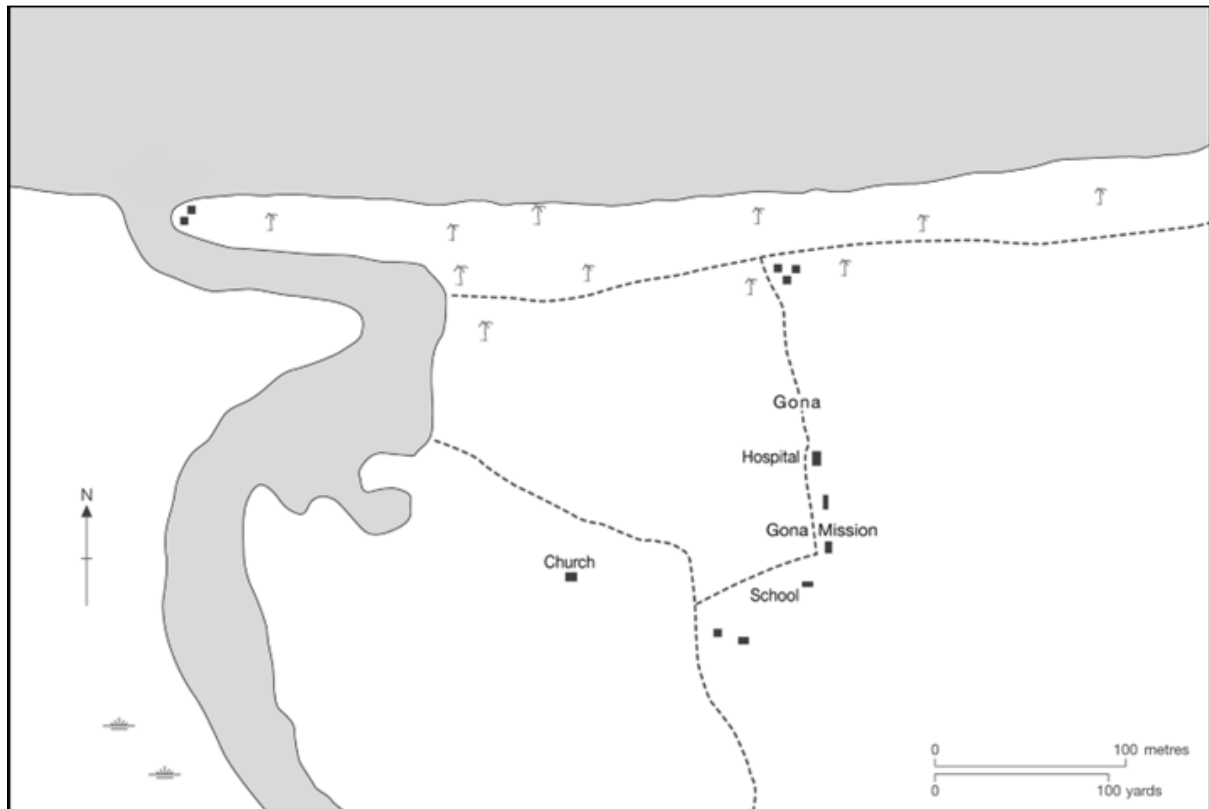
The Beachhead Environment

Terrain was a critical influence in the campaign. The coastal area held by the Japanese encompassed a variety of terrain features which impeded movement, communications, supply, and the employment of firepower. The Allies' approaches to the beachhead were canalised by the few roads and tracks. The coastal plains were relatively flat but impassable features such as creeks, rivers, and swamps prevented lateral movement between sectors. The area was hyper-malarial and tropical disease was endemic. The operations commenced at the beginning of the wet season, with an average of 15-25 rainy days per month.³ Rain usually fell as heavy afternoon downpours which flooded low-lying ground. Temperatures remained between 30-32°C with high humidity, but in the sun or dense kunai grass exceeded 40°C. These environmental factors were 'not conducive to mental activity and physical health' and had a deleterious effect on health and morale after prolonged exposure.⁴

The Gona sector (Map 3.2) was the smallest defended locality. Its western flank was protected by Gona Creek. A narrow track ran through a belt of thick jungle into Gona Village from the south, while the areas to the east and south-east were covered by large patches of kunai grass. A corridor of coconut palms ran along a narrow beach east towards Small Creek. Gona was strongly fortified but lacked the depth of the other Japanese positions. Bunkers ran along the beach east of the village, while the village itself was ringed by positions facing south and east. Another line of positions held the ground between the track and Gona Creek. Gona was therefore defended against all possible approaches.

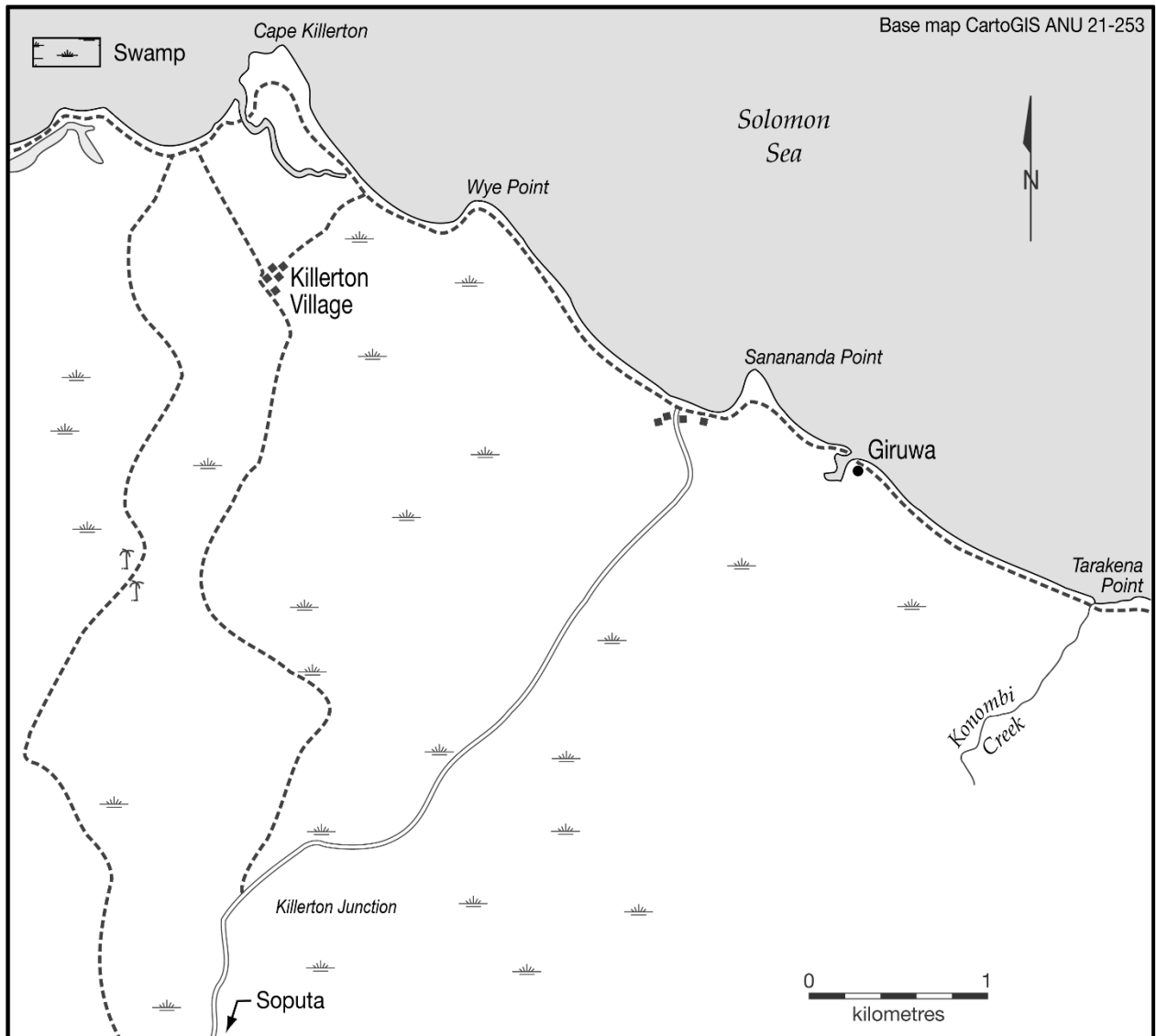
³ Allied Geographical Section SWPA, "Terrain Study No. 27: Area Study of Buna and Northern Plains Division, Papua Buna and Northern Papua," 18 October 1942, RG3 S2 B44 F4, MM.

⁴ Allied Geographical Section SWPA, "Terrain Study No. 27: Area Study of Buna and Northern Plains Division, Papua Buna and Northern Papua," 18 October 1942, RG3 S2 B44 F4, MM.



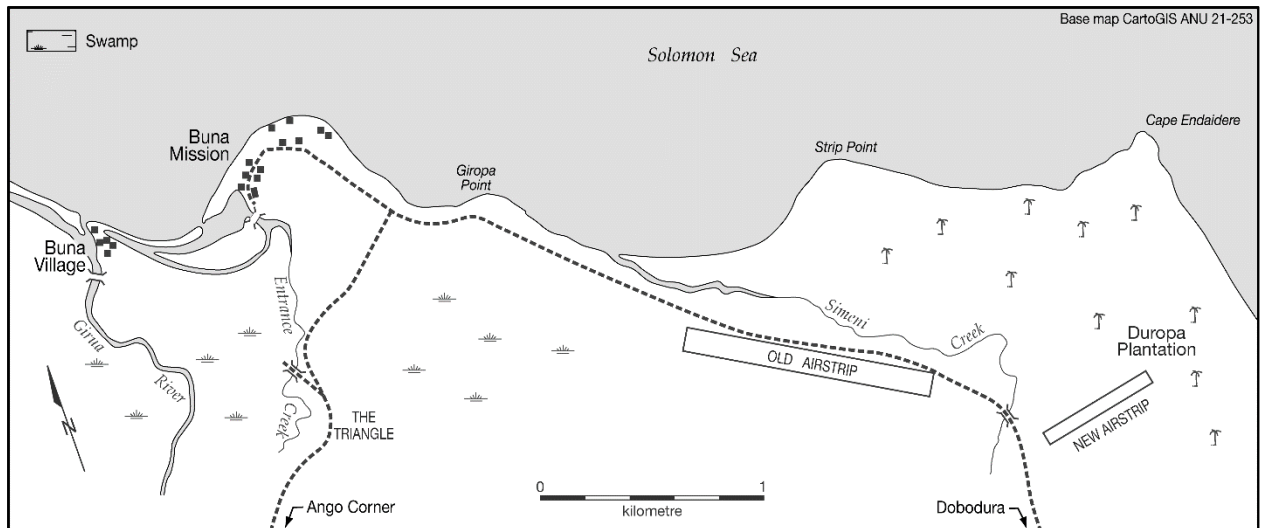
Map 3.2: The Gona Village Area

The Japanese positions at Sanananda (Map 3.3) were focused on defending the Sanananda-Soputa Road. It was not possible for the Allies to approach Sanananda from the flanks as the Japanese controlled the route from Buna at Tarakena while the Basabua-Wye Point track from the west dissolved into tidal swamps. The road was therefore the Allies' only practicable approach. Flood-prone swamps controlled the ground either side of the road which restricted movement. The road forked at the Killerton Junction, about 5km from the coast. The junction was the primary tactical feature. Extensive mutually-supporting fortifications ran north-south along the road and centred on the junction. A network of positions dominated the lightly wooded area south of the junction and another network controlled the junction itself. There were two successive defensive systems further north along the road. Fighting therefore focused on gaining control of the Killerton Junction to reach the coast.



Map 3.3: The Sanananda-Killerton Junction Area

At Buna (Map 3.4), the Japanese held a continuous strip of coast from the Girua River east to Cape Endaiadere which could not be flanked. An impenetrable swamp divided the Buna area into two distinct sectors: Buna Mission-Buna Village to the west and Buna Strip-Duropa Plantation to the east. These would become Urbana and Warren sectors respectively. The western flank of Buna Village was protected by the Girua River. Entrance Creek separated Buna Village from Buna Mission. Buna Mission was approached by a sole track from Ango, which diverged at a junction – nicknamed the Triangle – 1km from the coast. The Triangle was protected by an extensive network of interlocking positions. The terrain east of the Triangle was predominantly swamp, but closer to the coast the ground was drier and included large patches of kunai grass and coconut plantations. This approach forced the American advance into the heart of the Japanese defences.



Map 3.4: The Buna Area

The Buna Strip-Duropa Plantation area protected the Japanese eastern flank. Coconut plantations along the coast offered firmer ground, but the interior section south-east of the airstrips was part of the impassable swamp which divided the Buna area. The airstrips were surrounded by cleared kunai patches which gave way to dense jungle. The deep and swampy Simemi Creek was a formidable natural obstacle. A bridge between the airstrips offered the only crossing, but it was defended by bunkers on both banks. Duropa Plantation, Cape Endaiadere and Giropa Point were defended by successive lines of bunkers among the coconut plantations. There was no way around the Japanese positions. It was necessary to break through the defences or find gaps through which to infiltrate.

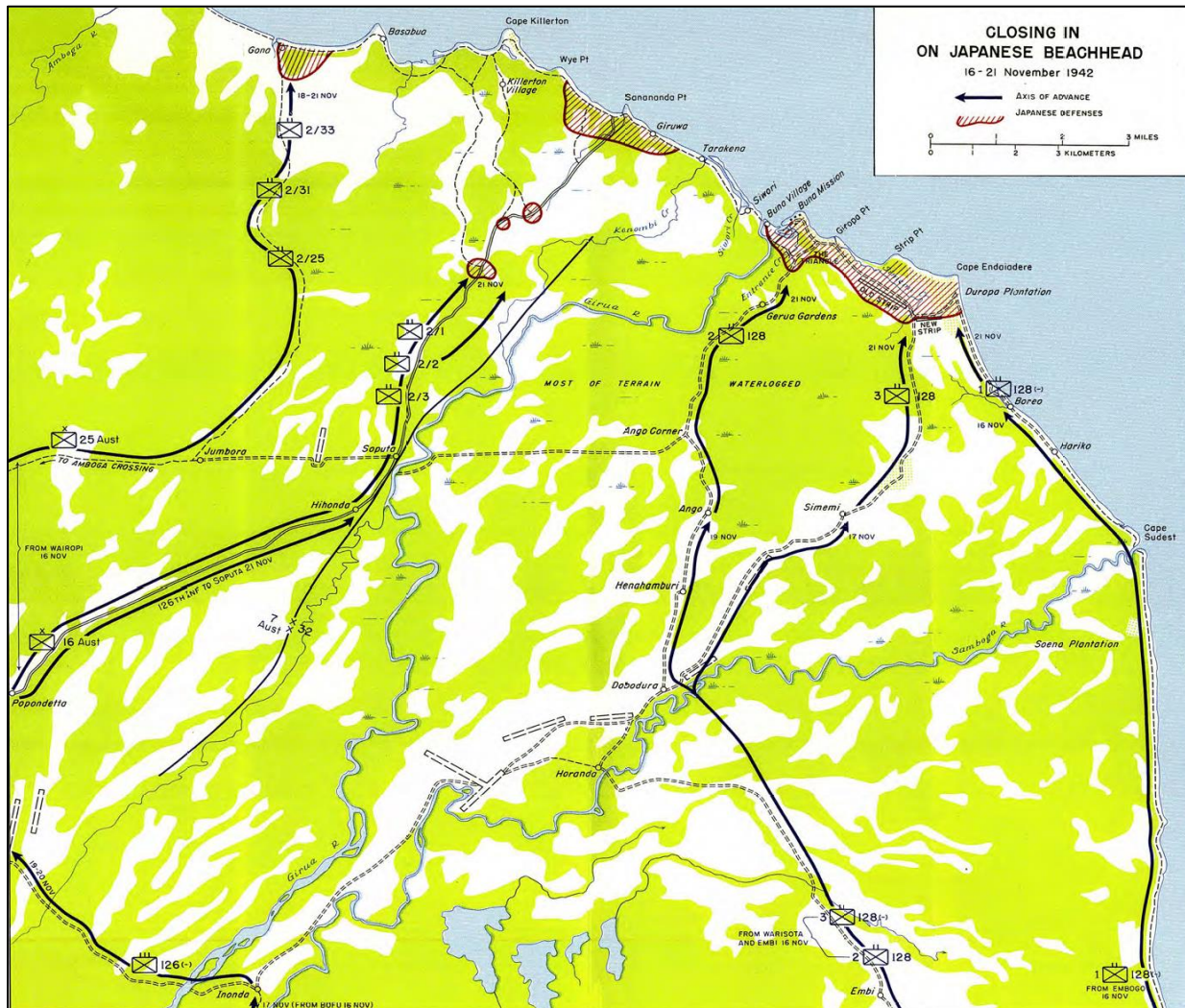
The Advance on the Beachheads

Optimism about an easy victory and the necessity of pre-empting Japanese reinforcements had dispersed the Allies' three-axis advance on the beachheads (Map 3.5). The start of the operation was tentatively set for 15 November.⁵ Only limited artillery support – three mountain howitzers and a troop of 25-pdrs – was assigned to support the entire advance because of transportation limitations and the expectation of scarce resistance. Major-General George Vasey's 7th Australian Division, comprising the 16th and 25th Brigades, approached Gona and Sanananda via Kokoda-Wairopi. The 7th Division rested briefly before crossing the flooded Kumusi River at Wairopi between 13-15 November.⁶ The 25th Brigade advanced on Gona via Amboga Crossing-Jumbora

⁵ Personnel at all levels within the 32nd Division felt this delay prevented them from delivering the decisive blow at Buna on their own. Milner, *Victory in Papua*, 137-139.

⁶ The wire bridge crossing had been destroyed by the Allied Air Force and reported as 'completely unserviceable'. 25th Infantry Brigade War Diary, 9 November 1942, AWM52 8/2/25/15, AWM.

while the 16th Brigade and 7th Division Headquarters advanced to Sanananda via Popondetta-Soputa.⁷ However, heavy rains had washed away tracks and flooded streams which slowed progress. The advance was further hindered by the reliance on carriers from Kokoda or airdropping for supply. Poor supply and the exertions of the march left the two brigades exhausted when they neared their objectives.



Map 3.5: Closing in on the Beachheads, 16-21 November 1942.⁸

Meanwhile, Major General Edwin Harding's 32nd American Infantry Division had become badly dispersed during its advance on Buna.⁹ The 32nd Division had split into two columns: the 126th Regiment moved via inland tracks to Dobodura and the 128th Regiment along the coast via Duropa Plantation, which hindered its concentration on Buna.¹⁰ On 16 November, the I/126th was

⁷ 16th Infantry Brigade War Diary, 11 November 1942, AWM52 8/2/16/21, AWM; 25th Infantry Brigade War Diary, 11 November 1942, AWM52 8/2/25/15, AWM.

⁸ From Milner, *Victory in Papua*, Map V.

⁹ NGF, "Operation Instruction No. 42," 14 November 1942, AWM54 581/4/5.

¹⁰ 32nd Infantry Division, "32nd Inf Div – Report of Action Papuan Campaign, Sep 42-28 Mar 43," 332-0.3, RG407 E427 B7793. NARA.

scattered between Pongani and Abel's Field, the II/126th at Bofu, and the regimental headquarters and III/126th at Natunga. The regiment was ordered to consolidate at Dobodura. Meanwhile, the 128th Regiment was spread along the coast between Oro Bay-Cape Sudest-Simemi. Coordination, concentration, and supply was further complicated by the loss of the division's small shipping between 16-17 November and the redirection of the 126th Regiment to support the 7th Division at Soputa.¹¹ This required the II/128th to march from the coast and take the place of what was supposed to be an entire regiment on the Ango-Buna track. This left only part of the I/126th as the reserve for the entire coastal advance.¹² These events left the 32nd Division confused and scattered.

The two exhausted Australian brigades and two green American regiments were believed to be sufficient to capture the beachheads.¹³ However, first contact with the Japanese positions between 18-21 November signified a much tougher task than anticipated. The Allies had not expected to find the beachheads extensively fortified, nor accounted for the logistics and fire support necessary to conduct a prolonged operation. The contact phase demonstrated many of the difficulties the Allies would have to overcome to achieve their objectives.

Gona: Contact Phase, 18-26 November 1942

The contact phase at Gona demonstrated the frailty of Allied logistics and the difficulties for infantry attacking prepared positions without fire support and intelligence. The first task of the 25th Brigade, commanded by Brigadier Kenneth Eather, was to establish a dropping ground at Jumbora to facilitate air dropping as the brigade had reached the limits of supply by carriers.¹⁴ Strong patrols were also sent to reconnoitre Gona and occupy it if possible. However, the patrols met heavy resistance on Gona's outskirts. The 2/31st Battalion attacked but was forced to withdraw due to food and ammunition shortages. Eather halted the advance until supplies could be dropped, but poor weather prevented airdropping until 21 November.¹⁵ This delay deprived the Australians of a chance to catch the Japanese by surprise, as the Japanese reorganised and reinforced their defences.¹⁶ After being resupplied Eather initiated a two-battalion attack on 22 November. The 2/33rd Battalion's advance along the main track was held up, but one company of Chaforce – a

¹¹ 32nd Infantry Division, "32nd Inf Div – Report of Action Papuan Campaign, Sep 42-28 Mar 43," 332-0.3, RG407 E427 B7793, NARA.

¹² 32nd Infantry Division, "32nd Inf Div – Report of Action Papuan Campaign, Sep 42-28 Mar 43," 332-0.3, RG407 E427 B7793, NARA.

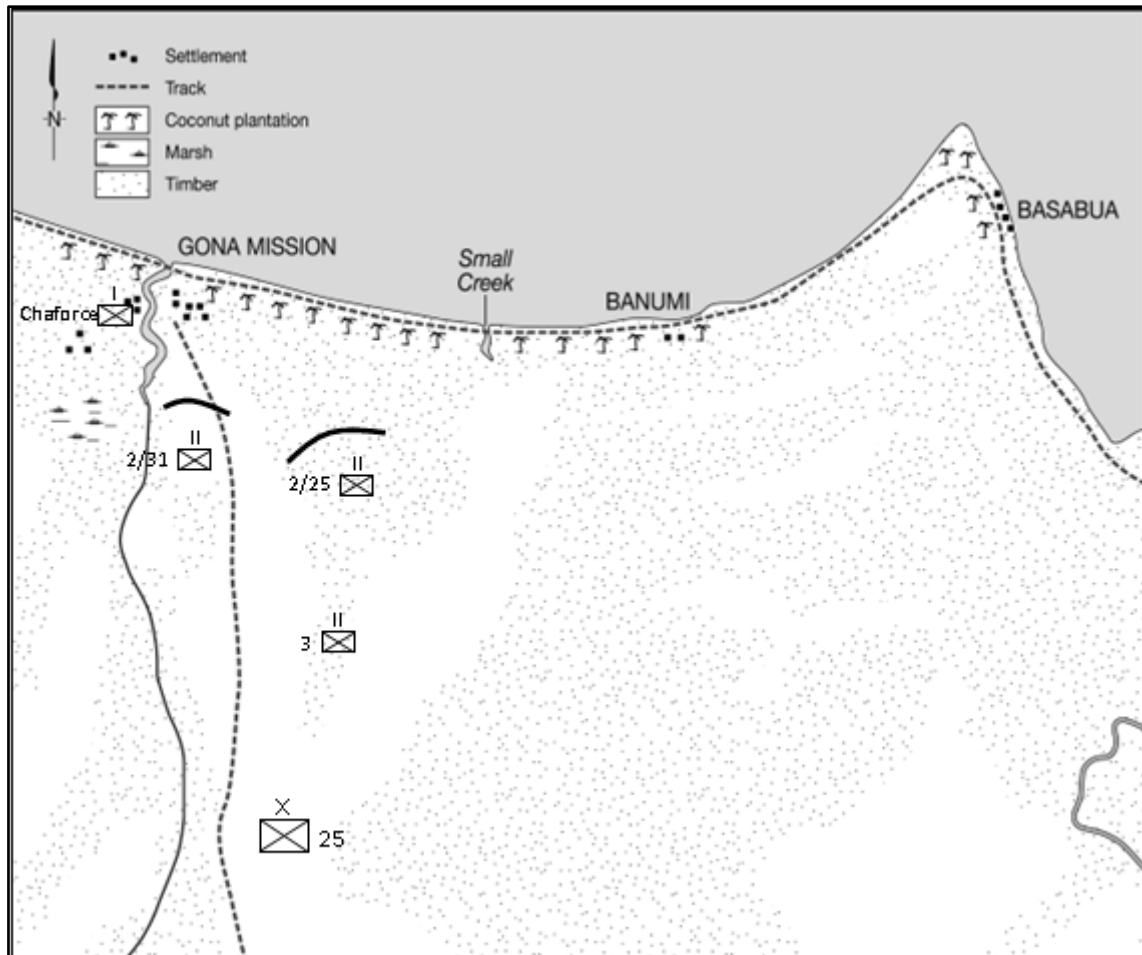
¹³ NGF, "Operation Instruction No. 43," 15 November 1942, AWM54 581/4/5, AWM.

¹⁴ 25th Infantry Brigade War Diary, 17-18 November 1942, AWM52 8/2/25/15, AWM.

¹⁵ 25th Infantry Brigade War Diary, 18-21 November 1942, AWM52 8/2/25/15, AWM.

¹⁶ On the night of 20-21 November barges, trucks, and movement was heard on Gona beach. 25th Infantry Brigade War Diary, 21 November 1942, AWM52 8/2/25/15, AWM.

composite unit formed from elements of the 21st Brigade and attached to the 25th Brigade – established a position on the western bank of Gona Creek which could observe into Gona village. Subsequent attacks by the 2/25th Battalion to the east reached the defences but could not capture them. The Australians were forced to withdraw to reorganise and form a perimeter.¹⁷



Map 3.6: Gona, 18-26 November 1942

The 25th Brigade continued to attack along the main track and through the kunai east of Gona without result. The attacking infantry lacked the strength to consolidate ground and the brigade rapidly became ineffective due to casualties, sickness, and exhaustion.¹⁸ It was reinforced by the 3rd Battalion on 23 November, but this unit was only 180-men strong.¹⁹ The next attack on 24 November employed artillery which had recently arrived at Soputa and ‘most intense’ air support, but while the air support was accurate, the attack only managed to capture some first line positions.²⁰ At this point, Vasey requested the 21st Brigade and advised its commander, Brigadier

¹⁷ 25th Infantry Brigade War Diary, 22 November 1942, AWM52 8/2/25/15, AWM.

¹⁸ 25th Infantry Brigade War Diary, 22 November 1942, AWM52 8/2/25/15, AWM.

¹⁹ 25th Infantry Brigade War Diary, 23 November 1942, AWM52 8/2/25/15, AWM.

²⁰ 25th Infantry Brigade War Diary, 23-24 November 1942, AWM52 8/2/25/15, AWM.

Ivan Dougherty, to discuss with Eather how the 21st Brigade could be employed to overcome the Japanese positions.²¹

Buna: Contact Phase, 19-25 November 1942

The 32nd Division's first contact at Buna revealed the strength of the Japanese defences and deficiencies in the division's leadership, preparations, and fire support. Disruptions to the advance meant there were only three and a half battalions rather than two regiments for the intended attack. However, it is unlikely that greater strength would have led to materially different outcomes during the first week. The 32nd Division launched its first substantial attack against Buna on 19 November.²² The I/128th attacked northward along the coast towards Duropa Plantation and made sustained contact with the Japanese 1.5km south of Cape Endaiadere. Concurrently, the III/128th advanced inland towards the bridge across the Simemi Creek, but it was stopped when it reached a small clearing just south of the airstrips. The attacking companies became disorganised in the jungle and demoralised by heavy fire from positions they could not identify. The initial failure intensified GHQ's anxiety as the Japanese had landed two echelons of reinforcements just prior to the attacks. MacArthur issued instructions to Blamey and directly to Harding that Buna was to be captured regardless of losses on 21 November.²³

The attack on 21 November demonstrated the difficulties of providing close air support in jungle terrain and the consequences of pressure and poor coordination. Battalions did not receive their orders until after the first wave of air support had arrived, while subsequent air support hit friendly positions or failed to appear. The eventual late-afternoon attack gained little.²⁴ The day was damaging to American morale and senior commanders' outlooks for the operation. However, the opening of Dobodura airstrip on 21 November improved supply for the Americans, which had been jeopardised by the earlier shipping losses. Meanwhile, the II/128th approached Buna Village along the narrow Ango-Buna trail.²⁵ The battalion reached the heavily defended junction at the Triangle

²¹ Major-General George A. Vasey, GOC 7th Australian Division, "Account of Operations by 7 Aus Div from Kokoda to Markham", undated, AWM54 519/6/46.

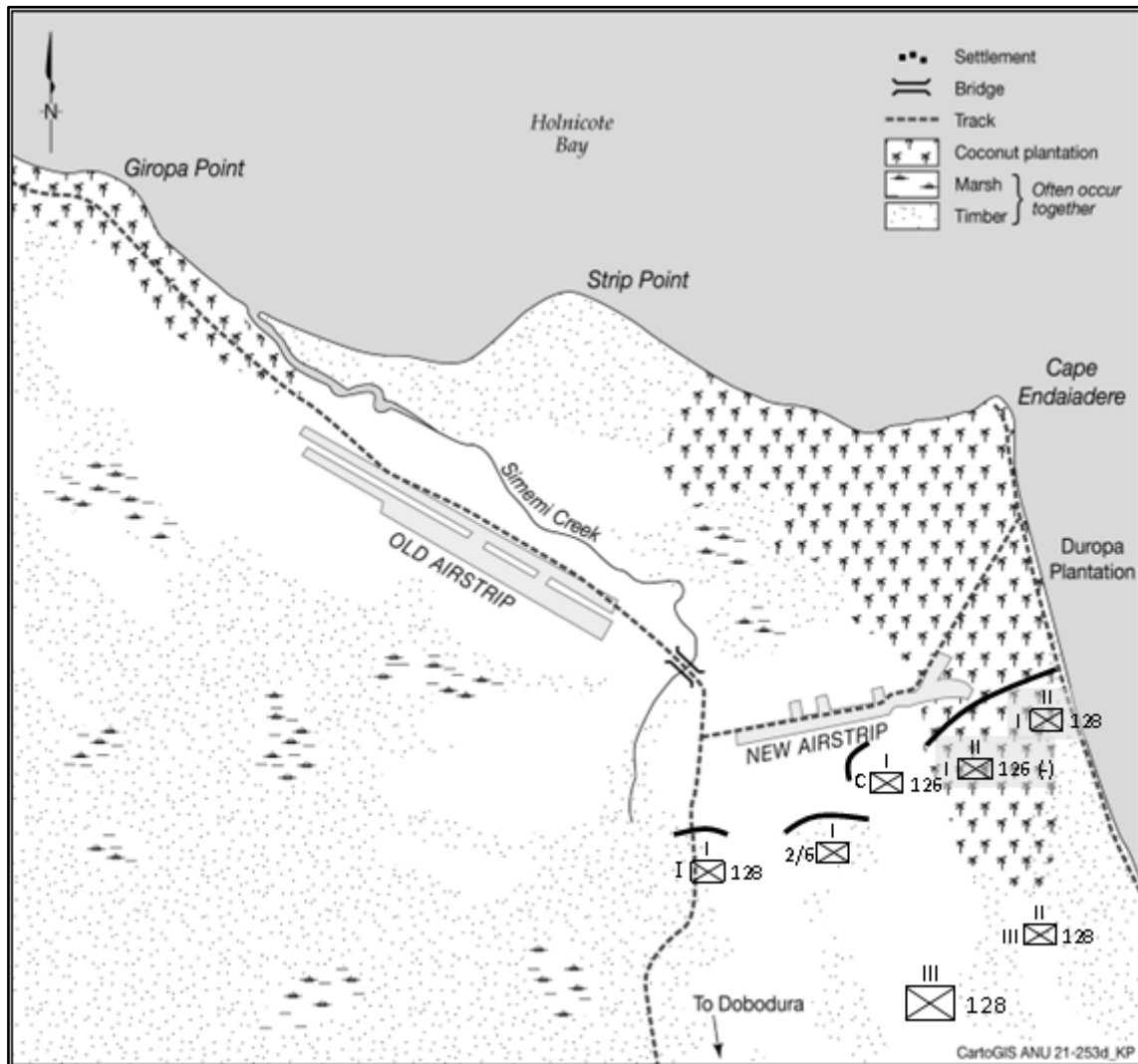
²² 32nd Infantry Division G-2 & G-3 Journal, 18-19 November 1942, RG407 E427 B7796, NARA.

²³ New Guinea Force Headquarters and General (Air) War Diary, 21 November 1942, AWM52 1/5/51/20, AWM.

²⁴ 32nd Infantry Division G-2 & G-3 Journal, 21 November 1942, 332-0.7, RG407 E427 B7796, NARA; 128th Infantry Regiment Journal, 21 November 1942, 332-INF(128)-0.7, RG407 E427 B8039, NARA.

²⁵ II/128th Infantry Battalion Journal, 19-21 November 1942, 332-INF(128)-7-0.7, RG407 E427 B8062, NARA.

and was forced into the swamps either side of the trail. The battalion was pushed deeper into the swamps after miscommunications with Harding's headquarters.²⁶



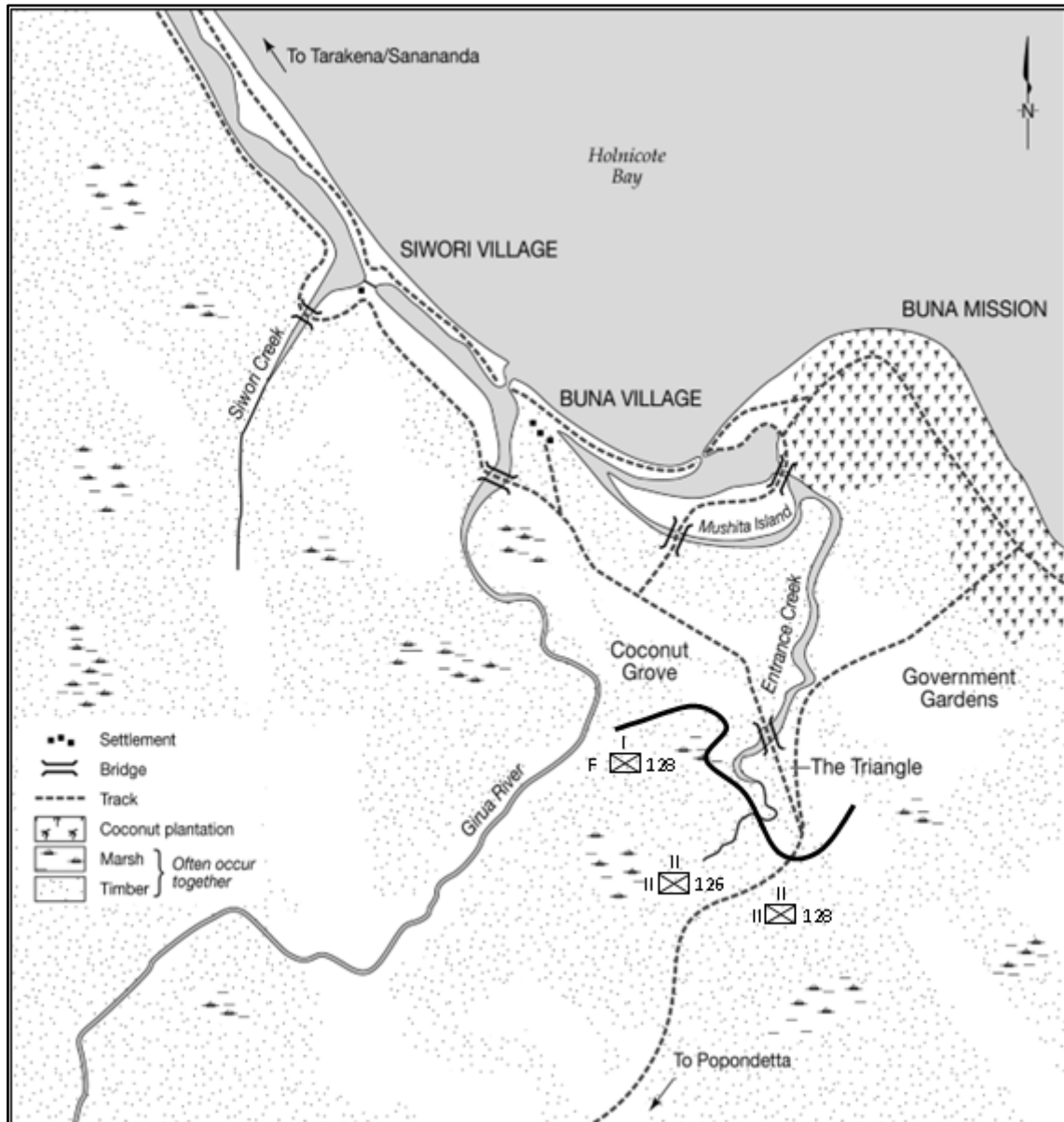
Map 3.7: Warren Sector, 16-25 November 1942

The 32nd Division reorganised between 22-25 November and prepared to attack again. The reorganisation included designating each axis of the advance as separate task forces. The coastal advance under Brigadier General Hanford MacNider, a GHQ officer attached to the division, became known as Warren Force. Colonel Tracey J. Hale, Commander 128th Infantry Regiment, assumed command after MacNider was wounded on 23 November.²⁷ Inland, the advance on Buna Village was reinforced by the II/126th which came under the command of Lieutenant Colonel Herbert A. Smith. Smith's force attacked Buna Village on 24 November. Air-ground coordination remained problematic

²⁶ 32nd Infantry Division G-2 & G-3 Journal, 21 November 1942, 332-0.7, RG407 E427 B7796, NARA; II/128th Infantry Battalion Journal, 19-21 November 1942, 332-INF(128)-7-0.7, RG407 E427 B8062, NARA.

²⁷ Headquarters 32nd Infantry Division, "32nd Inf Div – Report of Action Papuan Campaign, Sep 42-28 Mar 43," 332-0.3, RG407 E427 B7793, NARA.

as aircraft strafed the American troops instead.²⁸ The Americans advanced through the swamps and astride the track but were lured into a heavy ambush which resulted in several sub-units breaking and abandoning their weapons. The Triangles' defences could not be attacked frontally nor flanked through the swamps, which encouraged the Americans to look for a crossing over Entrance Creek to the west. On 27 November Harding sent his CoS Colonel John Mott to take command of the Buna Village sector and designated it Urbana Force.²⁹ However, reports of the 32nd Division's struggles reached GHQ and caused further consternation.



Map 3.8: Urbana Sector, 16-25 November 1942

²⁸ II/128th Infantry Battalion Journal, 24 November 1942, 332-INF(128)-7-0.7, RG407 E427 B8062, NARA.

²⁹ 32nd Infantry Division, "32nd Inf Div – Report of Action Papuan Campaign, Sep 42-28 Mar 43," 332-0.3, RG407 E427 B7793, NARA.

Sanananda: Contact Phase, 19-30 November 1942

Capturing Sanananda proved the toughest challenge for the Allies because of the depth of the Japanese defences and the terrain which restricted the Allied forces to attacking along the road or manoeuvring through deep swamps either side of the road. The advance on Sanananda was spearheaded by Brigadier John Lloyd's 16th Brigade. Like the 25th Brigade, the 16th Brigade's advance was slowed by bad weather and poor supply.³⁰ The brigade was without rations for two days until it established landing strips at Soputa and Popondetta on 19 November.³¹ The completion of Popondetta airstrip on 22 November improved supply and support as a troop of Australian 25-pdrs were landed and supplies could be unloaded rather than dropped. The 16th Brigade resumed its advance on 20 November but encountered Japanese positions and artillery near the Killerton Junction.³² The brigade maintained frontal pressure along the track while a detachment under Captain Basil Catterns conducted a wide enveloping manoeuvre. Catterns' force surprised the Japanese and established a roadblock about 3.5km behind the front line, which forced the Japanese to withdraw from their forward and secondary positions south of the junction.³³ However, the small force found itself in the centre of the main Japanese defences around the Killerton Junction and had to withdraw. While this manoeuvre was tactically successful, it demonstrated the Allies' poor understanding of the enemy positions and the limitations of small-scale envelopments.

The Killerton Junction became the primary objective for the Allies as it offered an alternative route to the coast to flank the Japanese. Subsequent Allied attacks attempted to establish similar roadblocks behind the main positions. The 7th Division was initially bolstered by the promise of Colonel Clarence Tomlinson's 126th Regiment, but changing priorities resulted in only part of the regiment being made available.³⁴ Nevertheless, Vasey and Tomlinson sought to use it in a double envelopment against the Killerton junction as the depleted 16th Brigade moved into holding positions. The manoeuvre began on 22 November and slowly penetrated the swamps and jungles west of the road.³⁵ However, the pace of the manoeuvre drew criticism about the Americans' attitude. Vasey and Herring became increasingly concerned by what they perceived as a lack of

³⁰ 16th Infantry Brigade War Diary, 17-18 November 1942, AWM52 8/2/16/20, AWM.

³¹ 16th Infantry Brigade War Diary, 19 November 1942, AWM52 8/2/16/20, AWM.

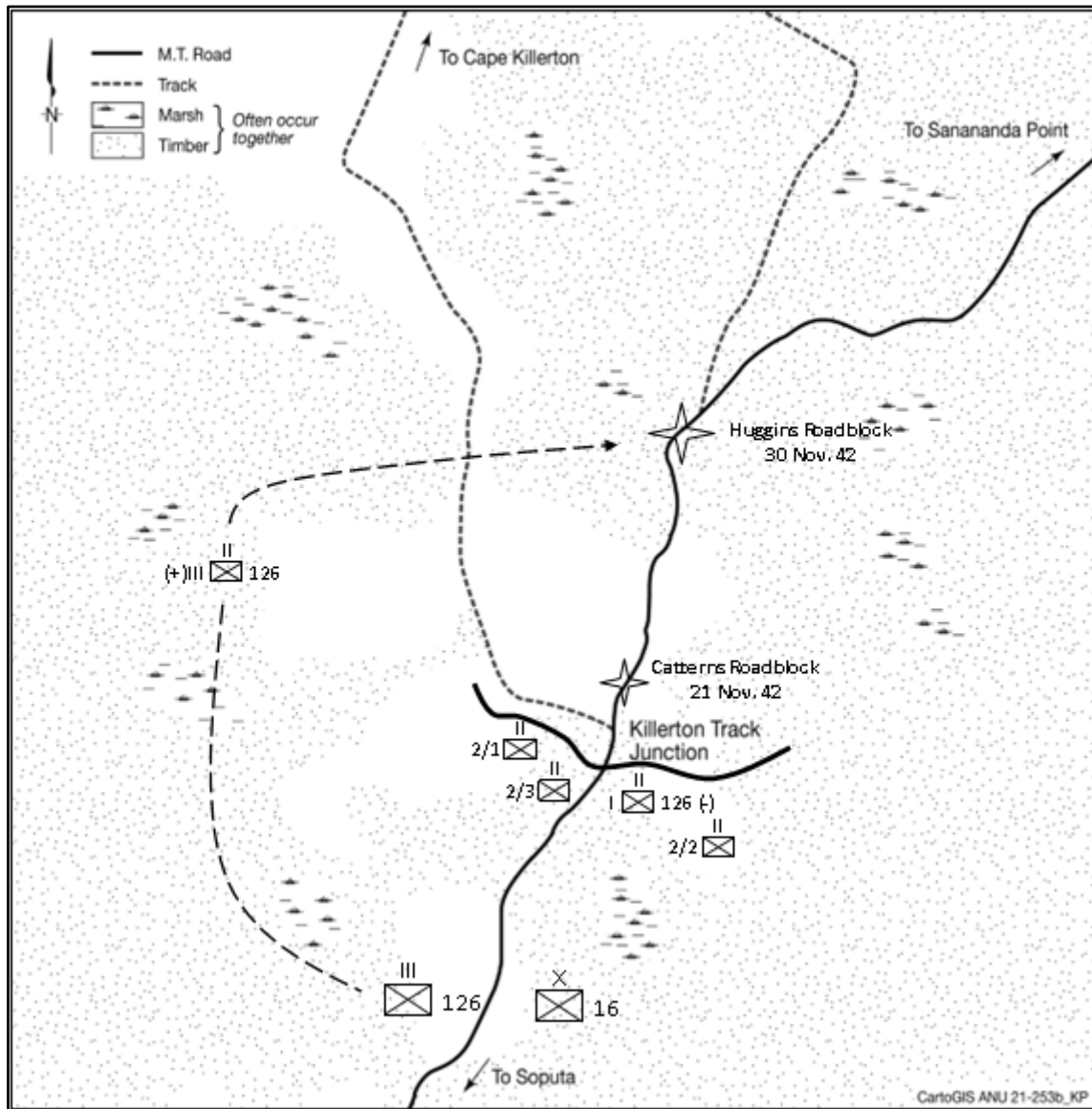
³² 16th Infantry Brigade War Diary, 20 November 1942, AWM52 8/3/16/20, AWM.

³³ 2/1st Infantry Battalion War Diary, 20-21 November 1942, AWM52 8/3/1/28, AWM; 2/1st Infantry Battalion, "Narrative of New Guinea Campaign Across the Owen Stanley Ranges – 8th October, 1942 to 18th December, 1942," AWM52 8/3/1/27, AWM.

³⁴ The 126th had been released back to the 32nd Division to strengthen the western flank at Buna. Two companies and one platoon of the 126th were at Soputa while the remainder of the unit was part of Warren Force. The regiment's cannon and anti-tank companies were still enroute to Wairopi. New Guinea Force Headquarters and General (Air) War Diary, 19 November 1942, AWM52 1/5/51/20, AWM.

³⁵ 126th Infantry Regiment Journal, 20-22 November 1942, 332-INF(126)-0.7, RG407 E427 B8001, NARA.

aggression in the American forces.³⁶ These issues were raised with GHQ, which exacerbated tensions among senior Australian and American officers and contributed to the command crisis at the end of November.³⁷



Map 3.9: Sanananda-Killerton Junction, 19-30 November 1942.

Small advances were made along the track and on the eastern flank while the envelopment continued. Meanwhile, the envelopment was reinforced by two more companies prior to the main attack. A group led by Captain John Shirley attacked the Sanananda Road on 30 November.³⁸ The attack established a roadblock on the Sanananda road north of the Killerton Junction. However, the Allies' inability to break through to the roadblock meant they were unable to exploit the position, nor was the roadblock manned in sufficient strength to force the Japanese to withdraw. The

³⁶ Horner, *Crisis of Command*, 227, 230.

³⁷ Horner, *Crisis of Command*, 227.

³⁸ 126th Infantry Regiment Journal, 26-30 November 1942, 332-INF(126)-0.7, RG407 E427 B8001, NARA.

position, soon known as Huggins Roadblock, became a vital tactical feature for the Allies, though a stalemate developed as attempts to exploit or link with it proved difficult and costly.³⁹

Gona: Stalemate Phase, 27 November-3 December 1942

By late November the situation at Gona had reached a stalemate. This phase of the battle was characterised by repeated attacks over the same ground before tactical approaches were gradually adapted in early December. The 25th Brigade was relieved by the 21st Brigade which shifted the emphasis of the attack to Gona's eastern flank. The brigade concentrated in the area between 26-28 November and tentatively planned its first attack for 30 November, but this was hastily brought forward to 29 November after NGF warned of another Japanese reinforcement attempt.⁴⁰ However, the 2/14th Battalion encountered unexpected defences as it moved into preparatory positions near Small Creek and suffered heavy losses.⁴¹ On 29 November the 2/14th Battalion attempted to clear Small Creek while the 2/27th Battalion mounted the main attack against Gona Village. However, poor coordination caused delays which meant the air support missions were not immediately followed up and their effect lost, and the attack again proved ineffective.⁴²

During December larger organised attacks were phased out and there was a shift towards aggressive patrolling and small-unit attacks supported by observed artillery fire.⁴³ This came after problems with coordination and communication when the 3rd Battalion failed to link with the 2/27th Battalion during an attack on 1 December. The 2/27th Battalion continued unsupported, but only a small group reached Gona Village before withdrawing due to casualties and Allied artillery fire falling too close. Additionally, the presence of Japanese at the mouth of the Kumusi River created another problem which threatened the Allies' western flank.⁴⁴ A reinforced company was sent to patrol near the Amboga River and established a position – nicknamed Haddy's Village – about 2-3km

³⁹ Shirley was killed on 1 December. Captain Meredith Huggins, who led a ration party to the roadblock that day, assumed command of the position.

⁴⁰ Dougherty, "Of the Doings of 21 Aust Inf Bde 25 Nov 1942 till 14 Jan 1943 (Notes by Brigadier I.N. Dougherty)," AWM67 Item 3/109 [3], AWM; New Guinea Force Headquarters and General (Air) War Diary, 28 November 1942, AWM52 1/5/51/20, AWM.

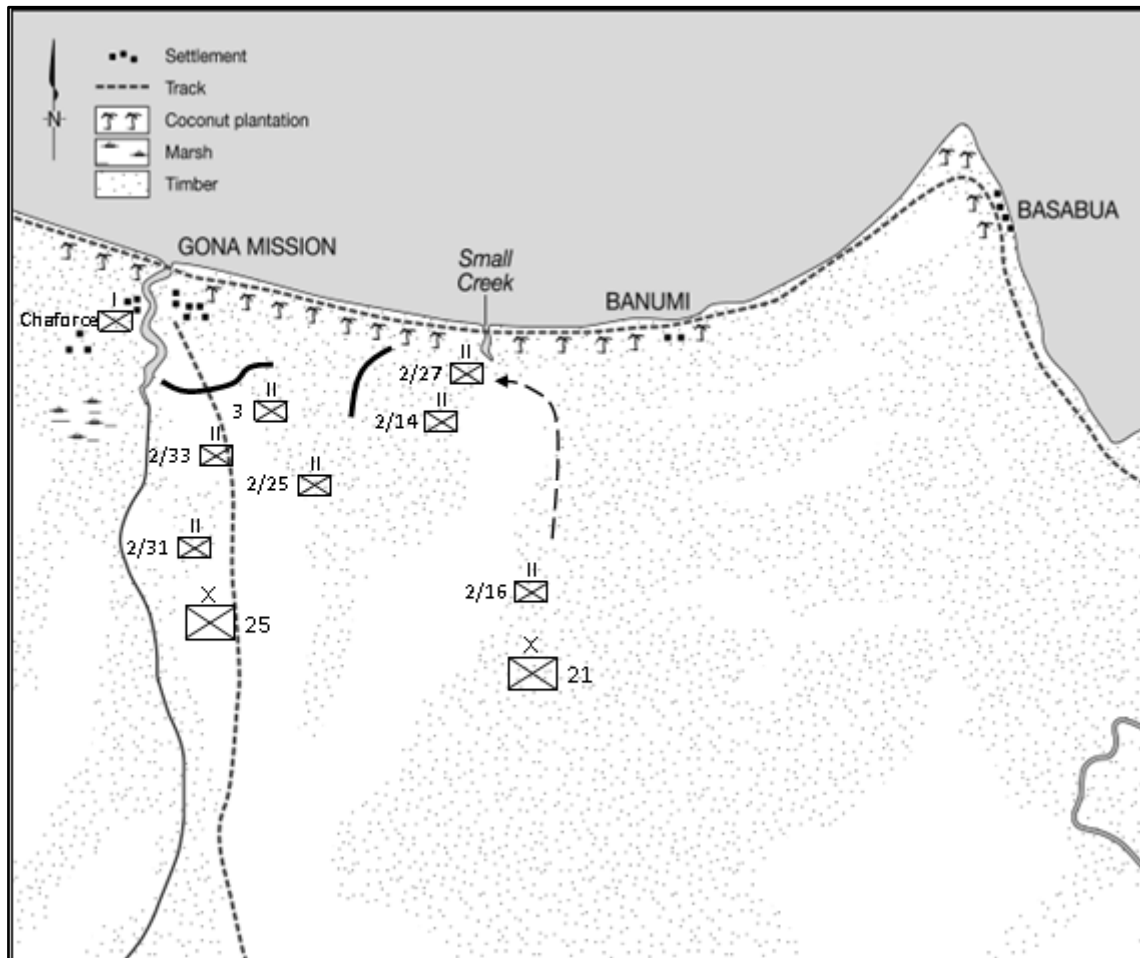
⁴¹ 21st Infantry Brigade War Diary, 28 November 1942, AWM52 8/2/21/18, AWM.

⁴² The main delay was caused by the 2/27th Battalion waiting for an artillery observer who had missed their rendezvous. There are some differences between the accounts of the 21st Brigade and 2/27th Battalion about the reasons and length of the delays. 21st Brigade records that the observer did not meet with the battalion until 1140. 21st Infantry Brigade War Diary, 29 November 1942, AWM52 8/2/21/18, AWM; 2/27th Infantry Battalion War Diary, 29 November, AWM52 8/3/27/50, AWM.

⁴³ 21st Infantry Brigade War Diary, 29-30 November 1942, AWM52 8/2/21/18, AWM.

⁴⁴ These were initially stragglers from the South Seas Force who had followed the Kumusi River to the coast after Oivi-Gorari, but they were bolstered by reinforcements who were prevented from landing directly in the Gona-Sanananda-Buna area on 2 and 14 December.

west of Gona Village on 30 November. This marked the beginning of an extensive and important patrol war in the area.



Map 3.10: Gona, 27 November-3 December 1942.

The failure of the 1 December attack and Japanese presence to the west caused Vasey to reassess operations against Gona.⁴⁵ Vasey considered containing Gona and turning the rest of his forces against Sanananda, but patrols were unable to locate a practicable route against Sanananda's western flank. Dougherty subsequently resolved to keep pressure on Gona but not to make any large-scale attacks until reinforced by the 39th Battalion.⁴⁶ While attrition was wearing the Japanese forces down, a breakthrough would require innovative thinking and boldness from the 39th Battalion.

⁴⁵ 21st Infantry Brigade War Diary, 1 December 1942, AWM52 8/2/21/18, AWM; Dougherty, "Of the Doings of 21 Aust Inf Bde 25 Nov 1942 till 14 Jan 1943," AWM67 Item 3/109 [3], AWM; 7th Division General Staff Branch War Diary, 1 December 1942, AWM52 1/5/14/38, AWM.

⁴⁶ 7th Division General Staff Branch War Diary, 2-3 December 1942, AWM52 1/5/14/38, AWM; 30th Infantry Brigade War Diary, General – December & 1 December 1942, AWM52 8/2/30/9, AWM.

Warren Sector: Stalemate Phase, 26 November-17 December

By the end of November pressure was mounting on the 32nd Division to break through at Buna. Harding's relationship with NGF and GHQ was deteriorating while his forces struggled with poor supply and tactical dilemmas. In Warren Sector, the strong defences near the airstrips channelled the American attack into Duropa Plantation. After reorganising, Warren Force attacked on 26 November with all available air, artillery, and mortar support. Despite this firepower, the attack again failed as the I/128th only made small gains along the coast while the I/126th became badly disorientated.⁴⁷ The 32nd Division reorganised again to launch simultaneous attacks in each sector on 30 November.⁴⁸ Warren Force attacked on a new axis westward across New Strip. The attack revealed the extent of the defences, which consisted of a network of bunkers and supporting positions running from the coast through Duropa Plantation to the north-east end of New Strip. This controlled the coastal route and the airstrips. Any advance in Warren Sector had to penetrate these positions. The American lines remained unchanged until armour arrived in mid-December.

The failure to take Buna and disappointing reports about American troops precipitated the command crisis of the beachhead operations. Harding felt he lacked sufficient supply and support from NGF.⁴⁹ Conversely, Herring felt Harding had enough resources but was not in control of the situation. Representatives from GHQ and NGF – including Sutherland and Herring – visited Harding but remained unconvinced of the leadership, aggression, and command of the 32nd Division.⁵⁰ On 30 November MacArthur instructed Lieutenant General Robert Eichelberger, CG US I Corps, to take control of the situation and 'go get Buna'.⁵¹ Eichelberger observed the conditions at Buna and relieved Harding on 2 December, and appointed Brigadier General Albert Waldron in his place.⁵² This saw wholesale changes to command, procedures, and tactics as I Corps revitalised the formation.⁵³

⁴⁷ 32nd Infantry Division G-2 & G-3 Journal, 26 November 1942, 332-0.3, RG407 E427 B7797, NARA; 128th Infantry Regiment Journal, 26 November 1942, 332-INF(128)-0.7, RG407 E427 B8039, NARA; I/128th Infantry Battalion Journal, 26 November 1942, 332-INF(128)-0.7-7, RG407 E427 B8058, NARA.

⁴⁸ 32nd Infantry Division G-2 & G-3 Journal, 29-30 November 1942, 332-0.3, RG407 E427 B7797, NARA; 128th Infantry Regiment Journal, 29-30 November 1942, 332-INF(128)-0.7, RG407 E427 B8039, NARA; II/128th Infantry Battalion Journal, 29-30 November 1942, 332-INF(128)-0.7-7, RG407 E427 B8062, NARA.

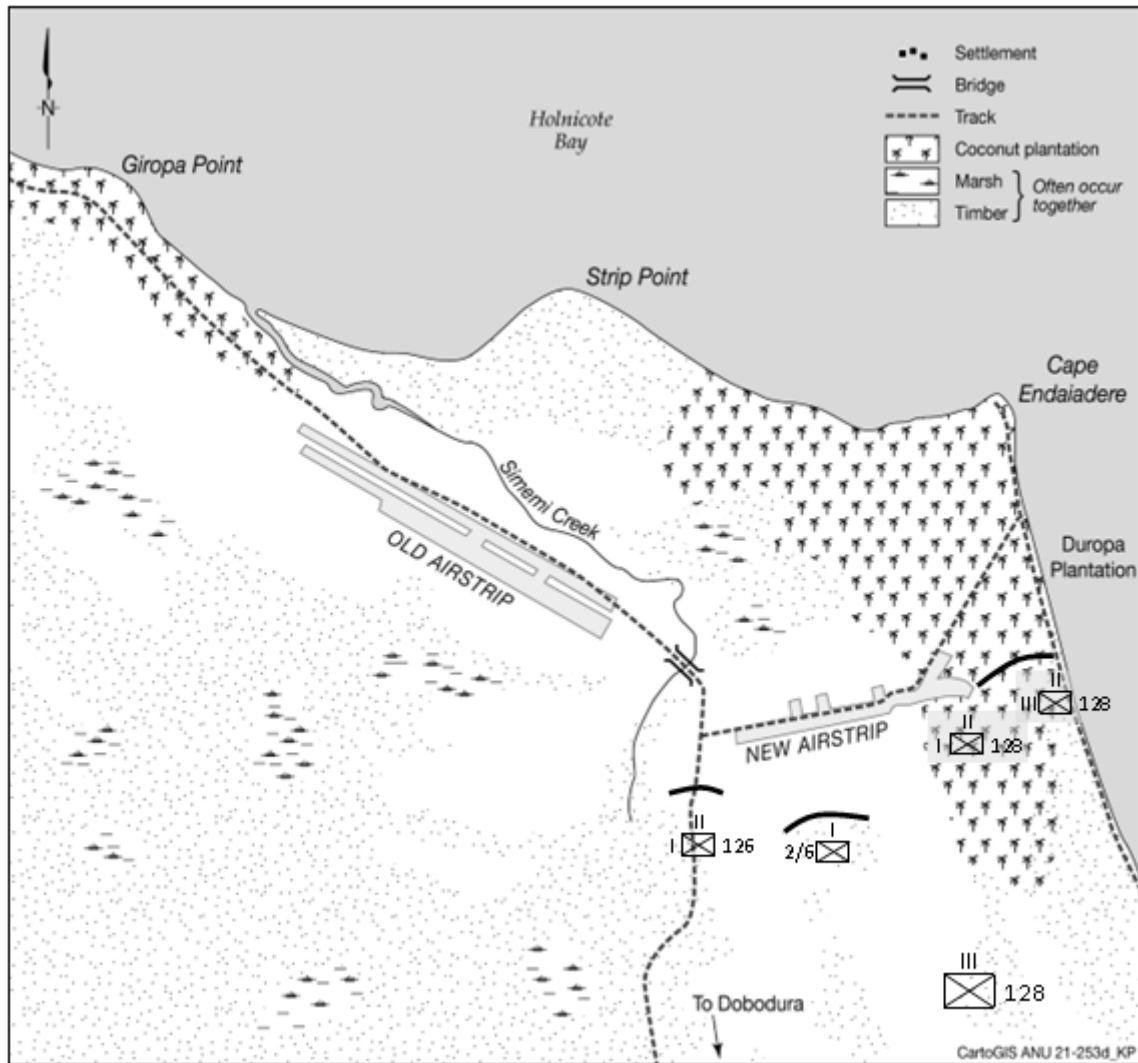
⁴⁹ Harding to Herring, 28 November 1942, HQ I Corps G-3, RG338 E330 B198, NARA.

⁵⁰ Harding Diary, 28-30 November 1942, Harding Diary, RG319 E53 B3, NARA; Sutherland Diary, 28-30 November 1942, General Office Diary 1942, RG30 B26 F15, MM; Milner, *Victory in Papua*, 202-203.

⁵¹ Kenney Diary, 30 November 1942, RG54 B1 VIII, MM.

⁵² Eichelberger Diary, 30 November-3 December 1942, Robert L. Eichelberger Papers, Diary I B2, USAHEC.

⁵³ The amalgamation of 32nd Division Headquarters and I US Corps Headquarters resulted in the creation of a combined American Buna Forces Headquarters. Major William D. Hawkins, G-2 32nd Infantry Division, "Report of Action, Papuan Campaign, From 2 October 1942 to 24 January 1943," 332-2, RG407 E427 B7819, NARA.



Map 3.11: Warren Sector, 26 November-17 December 1942.

Eichelberger immediately took measures to improve supply and morale through rest, rations, and reorganisation. Colonel Clarence Martin, G-3 I Corps, assumed command of Warren Force. Waldron ordered a new attack on 5 December which employed lightly armoured Bren Carriers recently shipped from Milne Bay as armoured support. All of Warren Force was committed: the carriers supported the III/128th through Duropa Plantation, the I/128th attacked the eastern edge of New Strip, and the I/126th attacked the bridge between the airstrips.⁵⁴ However, the attacks again achieved little and the vulnerable carriers were quickly disabled, though some ground was gained near the bridge which allowed the Australian 2/6th Independent Company to infiltrate behind the airstrips.⁵⁵

⁵⁴ 128th Infantry Regiment Journal, 5 December 1942, 332-INF(128)-0.7, RG407 E427 B8039, NARA.

⁵⁵ Buna Forces G-3 Journal, 5 December 1942, 332-3.2, RG407 E427 B7885.

Warren Force's tactics changed as commanders initiated patrolling and small-unit attacks against isolated defences.⁵⁶ Despite the lack of offensive momentum, NGF noted an improvement in the morale and proficiency of American troops during this time but Warren Force was unlikely to break through without greater fire support. However, Warren Sector offered the most suitable terrain to employ armour to achieve a decisive result. Blamey decided to deploy Brigadier George Wootten's 18th Brigade with M3 Light Tanks of the Australian 2/6th Armoured Regiment as a new task force to achieve a breakthrough.⁵⁷ The first elements assembled south of Cape Endaiadere on 16 December in preparation for a major attack two days later.

Urbana Sector: Stalemate Phase, 26 November-22 December 1942

The Triangle continued to hold Urbana Force at bay for much of December. Its two battalions occupied the surrounding swamps but were not strong enough to eliminate the Triangle's formidable network of bunkers. Mott therefore directed exploration of the western flank to establish a bridgehead over Entrance Creek from which to attack Buna Village.⁵⁸ Harding insisted on a night attack against Buna Village, but it proved difficult to coordinate and demonstrated the division's lack of night training.⁵⁹ Delays resulted in most attacks being made the next morning with some successes. One company of the II/128th occupied Siwori Village and severed the link between Buna and Sanananda, while other sub-units consolidated on the edge of Buna Village. The village was attacked again on 1 December, but the advancing companies withdrew shortly after supporting artillery fire ceased.⁶⁰

While Urbana Force had made some gains, the condition of its personnel was deteriorating rapidly. This was a factor in Eichelberger's decision to relieve Mott and place Colonel John Grose, I Corps Inspector-General, in temporary command. Eichelberger and Grose sought to improve wellbeing and morale by providing rest and resupply. Grose simplified the disposition of his forces by concentrating the II/126th on the western side of the Ango-Buna track, and the II/128th on the eastern side. Urbana Force gained an appropriate headquarters after the 126th Regimental

⁵⁶ Luvaas, "A 'Leavenworth Nightmare'," 213-216.

⁵⁷ Blamey to MacArthur, 8 December 1942, 3DRL/6643 Item 2/47, AWM; Blamey to Herring, 9 December 1942, 3DRL/6643 Item 2/135, AWM; New Guinea Force Headquarters and General (Air) War Diary, 1 December 1942, AWM52 1/5/51/21, AWM; 18th Infantry Brigade War Diary, 10-14 December 1942, AWM52 8/2/18/32, AWM.

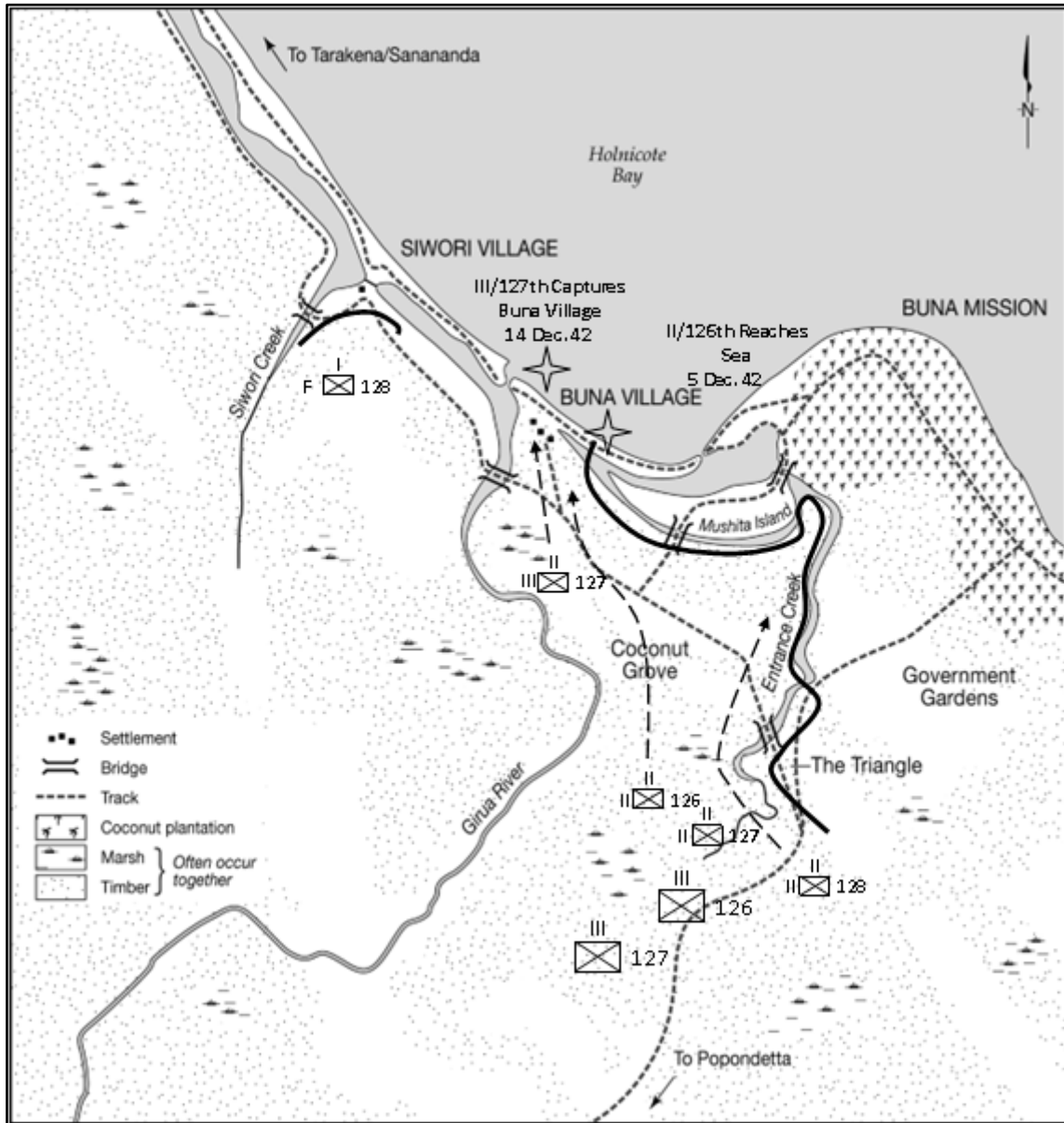
⁵⁸ II/128th Infantry Battalion Journal, 27 November 1942, 332-INF(128)-0.7-7, RG407 E427 B8062, NARA.

⁵⁹ II/128th Infantry Battalion Journal, 28-30 November 1942, 332-INF(128)-0.7-7, RG407 E427 B8062, NARA.

⁶⁰ Colonel John W. Mott, CoS 32nd Infantry Division, "Memo – Col John W. Mott," 10 December 1942, Memorandum - Col. John Mott, RG319 E53 B4, NARA; Milner, *Victory in Papua*, 206.

Headquarters arrived on 4 December, whereafter Tomlinson assumed command of the sector.⁶¹

Eichelberger was also granted the 127th Infantry Regiment to reinforce Urbana sector.⁶²



Map 3.12: Urbana Sector, 26 November-22 December 1942

Urbana Force prepared to attack again on 5 December. The II/126th was tasked with capturing Buna Village, while the II/128th tried to control the western bank of Entrance Creek. The II/126th did not capture the village, but a platoon established a position on the beach which effectively separated it from Buna Mission.⁶³ The II/128th also captured the bank of Entrance Creek near the Coconut Grove. This prompted Eichelberger to shift the offensive emphasis from Warren

⁶¹ Buna Forces G-3 Journal, 4 December 1942, 332-3.2, RG407 E427 B7885, NARA; 126th Infantry Regiment Journal, 4 December 1942, 332-INF(126)-0.7, RG407 E427 B8001, NARA.

⁶² Eichelberger to Sutherland, 1 December 1942, RG41 B1 F2, MM.

⁶³ II/128th Infantry Battalion Journal, 5 December 1942, 332-INF(128)-0.7-7, RG407 E427 B8062, NARA; II/126th Infantry Battalion Journal, 5 December 1942, 332-INF(126)-0.7-7, RG407 E427 B8010, NARA.

sector to Urbana. However, follow-up attacks could not capture the village and exhausted the American forces.⁶⁴ Patrols and small-unit attacks with artillery support wore away isolated defences until the arrival of the 127th Regiment. The regiment's first attack against Buna Village on 14 December found it unoccupied.⁶⁵ While Buna village was not tactically important, it provided a significant morale-boost for the Americans.

Further attacks on Buna Mission still had to contend with the Japanese defences in the Triangle and Coconut Grove on Urbana Force's eastern flank. The depleted II/126th and II/128th launched a series of attacks between 15-20 December which cleared the Coconut Grove but could not overcome the Triangle, which still threatened Urbana Force's lines of communication.⁶⁶ Another costly attack on 20 December convinced Grose, who then relieved Tomlinson, to abandon the axis and instead attack across Entrance Creek and north from the Coconut Grove. This required establishing a bridgehead over Entrance Creek under the Japanese defences on Mushita Island and Buna Mission, which was achieved under difficult conditions by the II/127th and III/127th on the nights of 21-22 December.⁶⁷ This finally allowed the Americans to bypass the Triangle, but also saw the renewal of large-scale deliberate frontal attacks to capture Buna Mission.

Sanananda: Stalemate Phase, 1 December 1942-11 January 1943

The establishment of Huggins Roadblock created a stalemate around the Killerton Junction. The Japanese refused to withdraw while the Allies could not exploit the position. Subsequently, maintenance and wastage became major considerations for the Allies. By December, the 16th Brigade was incapable of offensive action and the 126th Regiment was widely scattered and exhausted.⁶⁸ The two battalions of the 30th Brigade – the 49th and 55/53rd – under the command of Brigadier Selwyn Porter, relieved the 16th Brigade to recommence offensive action.⁶⁹ The CMF battalions deployed on either side of the track in preparation for an attack on 7 December. The 49th Battalion advanced on the eastern side of the road to attack the Killerton Junction frontally, but enfilading fire from west of the road inflicted heavy casualties. The loss of junior leaders, poor

⁶⁴ Buna Forces G-3 Journal, 8 December 1942, 332-3.2, RG407 E427 B7885, NARA.

⁶⁵ Buna Forces G-3 Journal, 14 December 1942, 332-3.2, RG407 E427 B7886, NARA; 127th Infantry Regiment Journal, 14 December 1942, 332INF(127)-0.7, RG407 E427 B8015, NARA.

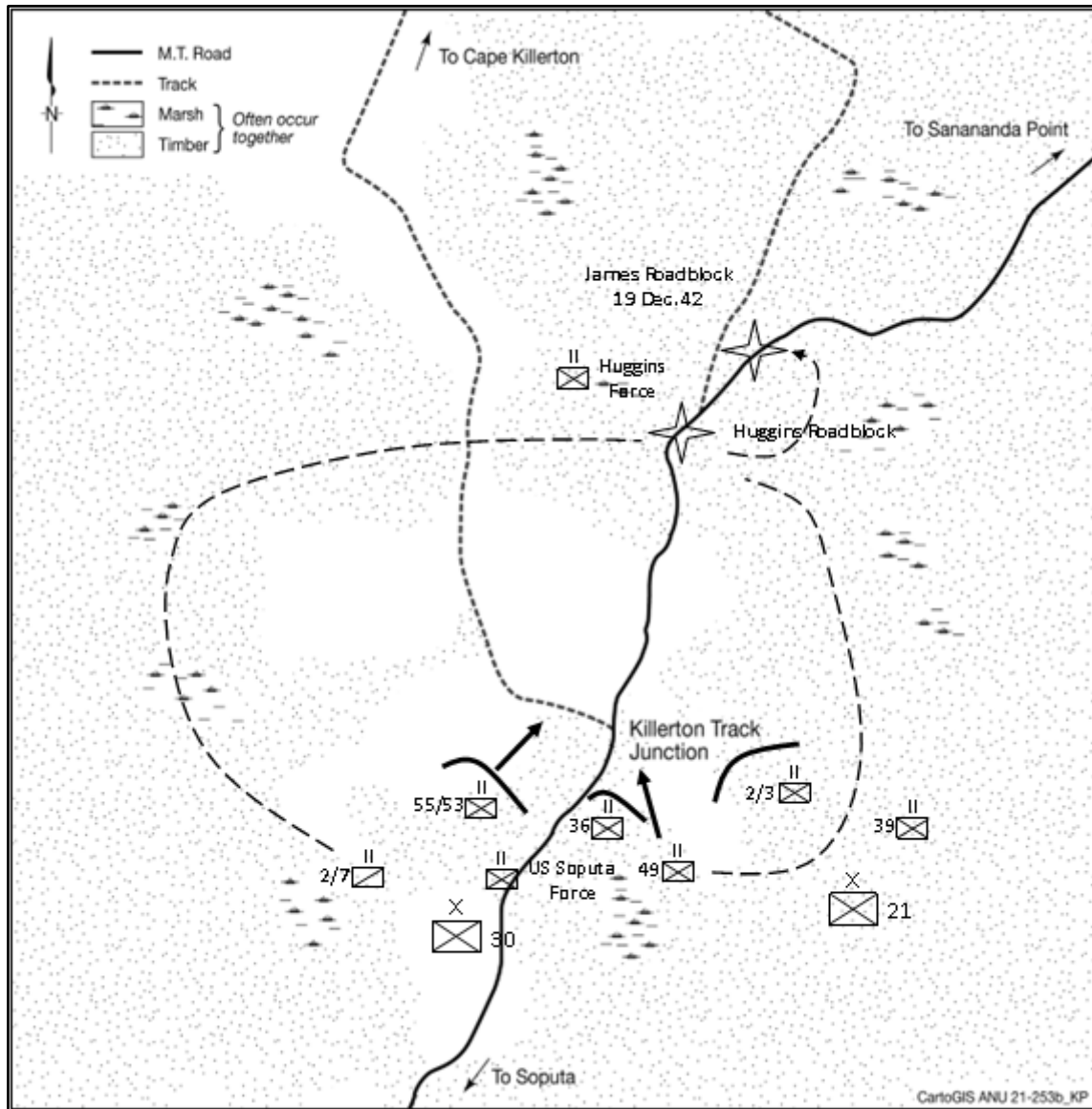
⁶⁶ 126th Infantry Regiment Journal, 15-20 December 1942, 332-INF(126)-0.7, RG407 E427 B8001, NARA.

⁶⁷ 127th Infantry Regiment Journal, 20-22 December 1942, 332INF(127)-0.7, RG407 E427 B8015, NARA.

⁶⁸ On 4 December the 126th Regimental Headquarters moved to Urbana sector at Buna. All American forces in the Sanananda area came under the command of Major Bernd G. Baetcke, XO 126th Regiment, as American Soputa Forces. III/126th Infantry Battalion Journal, 5 December 1942, 332-INF(126)-7-0.7, RG407 E427 B8010, NARA.

⁶⁹ The two battalions attacked sequentially because there was no reserve. 30th Infantry Brigade War Diary, 7 December 1942, AWM52 8/2/30/9, AWM.

communications, and disorientating terrain caused the attack to become widely dispersed and cohesion quickly broke down. The 55/53rd Battalion's attack in the afternoon faced similar problems.⁷⁰ The losses suffered by the 30th Brigade forced Vasey and Porter pause further deliberate attacks, and switch to patrolling, attacking isolated strongpoints, and establishing forward positions within the Japanese lines through 'stalk and consolidate' tactics.⁷¹



Map 3.13: Sanananda-Killerton Junction, 1 December 1942-11 January 1943.

With the Allies unable to break-through to Huggins, the situation remained bleak. The roadblock was isolated and supply parties were frequently ambushed enroute. It was subjected to

⁷⁰ 30th Infantry Brigade War Diary, 7 December 1942, AWM52 8/2/30/9, AWM.

⁷¹ The 49th Battalion lost 14 officers and 215 ORs. The 55/53rd lost 8 officers and 122 ORs, including 28 NCOs. 30th Infantry Brigade War Diary, 8 December 1942, AWM52 8/2/30/9, AWM.

constant counterattacks while the garrison lacked the strength to mount offensive actions.⁷² The arrival of the 36th Battalion and 2/7th Cavalry Regiment as light infantry in mid-December permitted the 7th Division to try and break-through to Huggins again on 19 December. The 2/7th Cavalry was tasked with exploiting north from Huggins towards Sanananda Point, while the 30th Brigade would mount another attack to clear the Killerton Junction.⁷³ The attack demonstrated similar issues which had limited the effectiveness of previous efforts. Leading elements of the 2/7th Cavalry managed to establish James Roadblock 400m north of Huggins but the unit was badly disorganised after encountering unexpected opposition along the way.⁷⁴ Meanwhile, the 30th Brigade finally penetrated the defences on the east side of the Junction, but the western side was held by two formidable positions that inflicted heavy casualties.⁷⁵ The 36th Battalion attacked these positions for several days without result, while efforts to link Huggins and James were also unsuccessful.

Morale and welfare became critical concerns for the 7th Division. The division was greatly depleted, exhausted, and morale was falling. CMF battalions were particularly fragile and there were several instances of sub-units refusing orders to advance.⁷⁶ Vasey and Herring concurred that no further attacks could be made until the 18th Brigade became available. The Allies consolidated their positions and reorganised. The 39th Battalion relieved Huggins Roadblock while the 2/7th Cavalry concentrated at James Roadblock. Additionally, the 163rd Regiment was ordered to Sanananda after a dispute between senior Allied commanders as to its best use. Its arrival permitted the withdrawal of Australian and American units which had been in near-continuous contact with the enemy for more than a month. Offensive action during December had worn-down the Japanese but not resulted in a breakthrough. Vasey had to wait until the Buna operations concluded before the Allies could concentrate fresh troops, armour, and artillery to reduce the Sanananda salient.

Gona: Breakthrough Phase, 4-9 December 1942

The breakthrough at Gona came through the effective use of adapted small-unit and combined arms tactics. At this point the Australians had to contend with the dual challenge of the Japanese presence in the Kumusi-Amboga area – bolstered by troops landed on 2 December – and unsustainable sick and battle casualties. The first issue was exacerbated when a large Japanese force

⁷² The original force of 250 men had been reduced to about 120 fit personnel. Milner, *Victory in Papua*, 223-225.

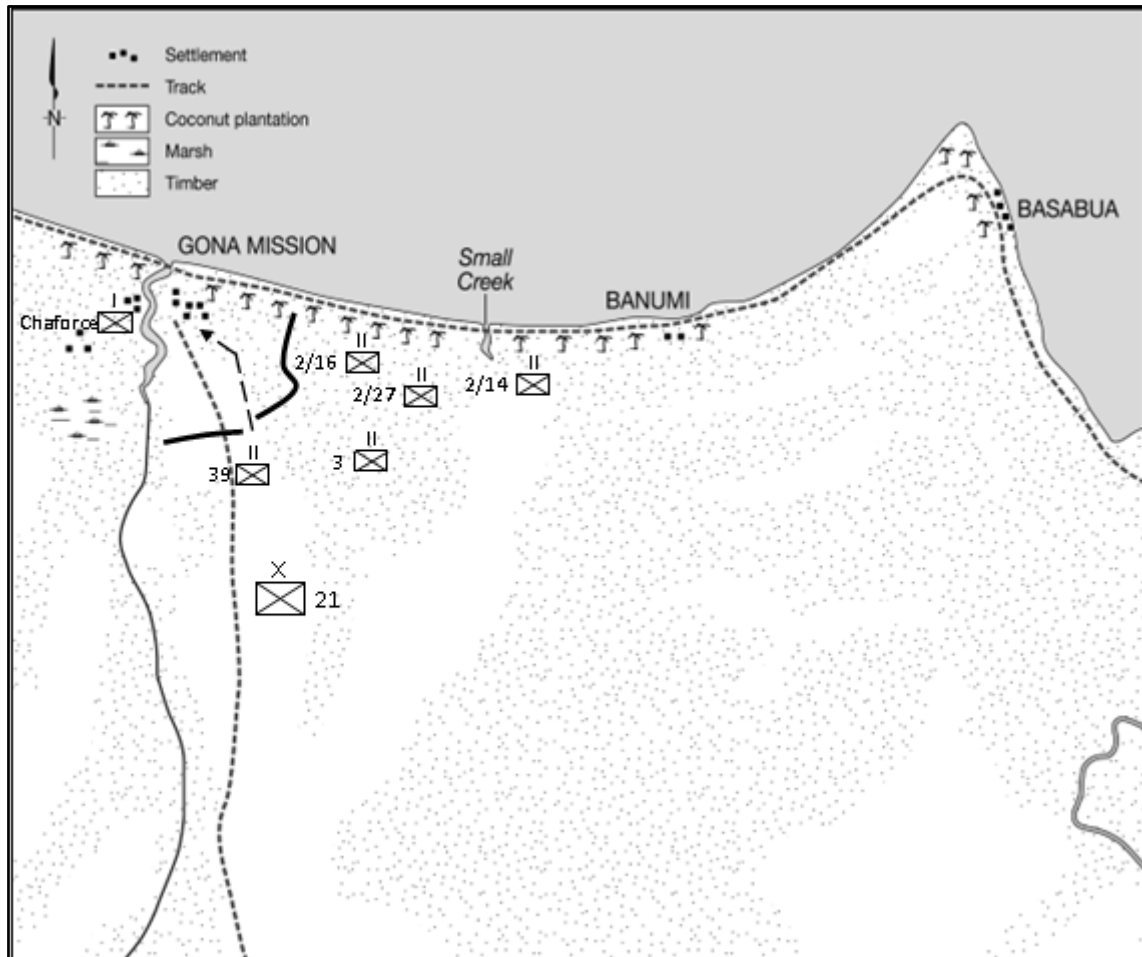
⁷³ 7th Division General Staff Branch War Diary, 17 December 1942, AWM52 1/5/14/38, AWM.

⁷⁴ The Americans referred to this position as Kano or Fisk Roadblock.

⁷⁵ 30th Infantry Brigade War Diary, 19 December 1942, AWM52 8/2/30/9, AWM.

⁷⁶ 7th Division General Staff Branch War Diary, 24 December 1942, AWM52 1/5/14/38, AWM; 30th Infantry Brigade War Diary, 24 December 1942, AWM52 8/2/30/9, AWM.

overwhelmed the Australian patrol at Haddy's Village on the night of 5 December and continued pushing east towards Gona.⁷⁷ Dougherty dispatched his remaining Chaforce companies to deal with the situation while the 2/14th Battalion established defensive positions 1.5km west of Gona to defend the Allied flank.⁷⁸ The 21st Brigade therefore depended on the newly arrived 39th Battalion for offensive action against Gona.



Map 3.14: Gona, 4-9 December 1942

The Japanese threat to the west made the capture of Gona imperative, though the 21st Brigade could not sustain its current battle casualty rates.⁷⁹ On 6 December, the brigade attacked over the same axes as had been used previously against the eastern and south-eastern defence.⁸⁰ Cognisant of the problem, the 39th Battalion's CO called-off the attack after errant air support and used the extra time for reconnaissance. The battalion developed a complex small-unit and combined arms plan to exploit a covered approach south of the village and along the eastern bank of Gona

⁷⁷ 21st Infantry Brigade War Diary, 4-5 December 1942, AWM52 8/2/21/18, AWM.

⁷⁸ 21st Infantry Brigade War Diary, 7-8 December 1942, AWM52 8/2/21/18, AWM.

⁷⁹ 7th Division General Staff Branch War Diary, 8 December 1942, AWM52 1/5/14/38, AWM.

⁸⁰ 21st Infantry Brigade War Diary, 6-7 December 1942, AWM52 8/2/21/18, AWM.

Creek.⁸¹ Its tactics are explored in Chapters Eight and Ten. On 8 December the 39th Battalion's attack breached the defences and occupied Gona Village.⁸²

While Gona had been captured, the threat from Japanese forces to the west remained. This led to a protracted patrol war which lasted into January 1943. On 10 December the 39th and 2/14th Battalions moved westward to clear the Japanese.⁸³ They reclaimed Haddy's Village on 18 December through a series of patrols, skirmishes, and attacks on outposts.⁸⁴ The 21st Brigade was then relieved by the 14th Brigade – formed from the 36th and 55/53rd Battalions withdrawn from Sanananda – in early January, which continued to patrol against the remaining Japanese.⁸⁵ The Japanese held the west bank of the Amboga River until 12 January, when Australian patrols reported it unoccupied. The threat to the Allies' western flank had ceased. This coincided with the Japanese withdrawal from Sanananda.

Warren Sector: Breakthrough Phase, 18 December 1942 – 2 January 1943

Blamey's decision to deploy tanks to Buna was demonstrative of the strength of the Japanese positions and the need to employ new resources to achieve a breakthrough. The 18th Brigade planned a three-phase operation, first penetrating the line of positions in Duropa Plantation, then turning west to attack along Old Strip, before finally reducing Giropa Point. Success rested on careful coordination and understanding between all arms. Phase One commenced at dawn on 18 December with intense artillery concentrations against identified positions.⁸⁶ Along the coast, the 2/9th Battalion and tanks broke through and reached Cape Endaiadere. However, unsupported infantry on the interior flank were held up by Japanese positions on New Strip until tanks could assist them later in the day.⁸⁷ A new front line running from New Strip northwards to the sea was established.⁸⁸ It was a significant though costly success after the prolonged stalemate in Warren

⁸¹ 21st Infantry Brigade War Diary, 7 December 1942, AWM52 8/2/21/18, AWM; 39th Infantry Battalion War Diary, 7 December 1942, AWM52 8/3/78/4, AWM; Honner, "The 39th at Gona," AWM67 Item 3/170 [3], AWM.

⁸² 39th Infantry Battalion War Diary, 7 December 1942, AWM52 8/3/78/4, AWM.

⁸³ 21st Infantry Brigade War Diary, 10 December 1942, AWM52 8/2/21/18, AWM.

⁸⁴ 21st Infantry Brigade War Diary, 10-18 December 1942, AWM52 8/2/21/18, AWM.

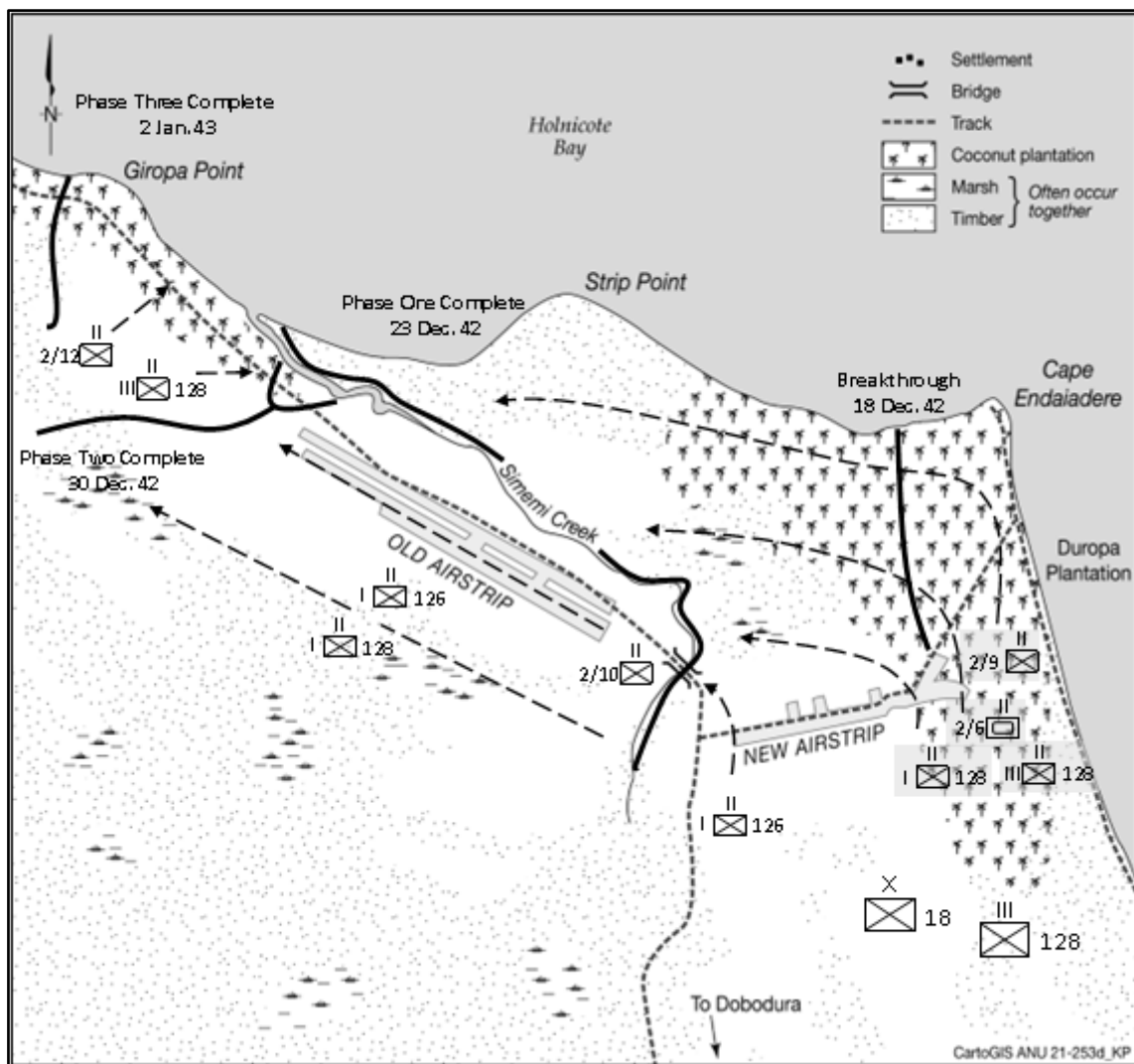
⁸⁵ New Guinea Force Headquarters and General (Air) War Diary, 1 January 1943, AWM52 1/5/51/24; 7th Division General Staff Branch War Diary, 1 January 1943, AWM52 1/5/14/45, AWM.

⁸⁶ 18th Infantry Brigade "Part I: Report on Operations 18 Aust Inf Bde Gp at Cape Endaiadere-Giropa Point and Sanananda Area – 14 Dec 43/22 Jan 43," AWM52 8/2/18/32, AWM; 2/9th Infantry Battalion War Diary, 14-17 December 1942, AWM52 8/3/9/20, AWM; X Squadron 2/6th Australian Armoured Regiment War Diary, 10-17 December 1942, AWM3/1/12/2, AWM.

⁸⁷ 18th Infantry Brigade "Part I: Report on Operations 18 Aust Inf Bde Gp," AWM52 8/2/18/32, AWM; 2/9th Infantry Battalion War Diary, 18 December 1942, AWM52 8/3/9/20, AWM; X Squadron 2/6th Australian Armoured Regiment War Diary, 18 December 1942, AWM3/1/12/2, AWM.

⁸⁸ 18th Infantry Brigade "Part I: Report on Operations 18 Aust Inf Bde Gp," AWM52 8/2/18/32, AWM.

Sector. While the tanks were invaluable, the attack demonstrated the difficulties of infantry-tank cooperation in close terrain. These issues and the development of effective infantry-tank tactics are addressed in Chapter Ten. Between 19-23 December the 2/9th Battalion continued towards Strip Point.⁸⁹ Meanwhile, the Americans advanced towards the Simemi Creek bridge and northern edge of New Strip.⁹⁰ Extensive patrolling found a crossing through the Simemi Creek and established a bridgehead onto Old Strip, which forced the Japanese defending the bridge to withdraw. The newly arrived 2/10th Battalion established positions on the northern edge of Old Strip, while the Americans occupied the southern edge ready to commence Phase Two.⁹¹



Map 3.15: Warren Sector, 18 December 1942-2 January 1943

Phase Two was conducted with calculated risk but ultimately cost the Allies several valuable tanks which made the advance along Old Strip more difficult. The 2/10th Battalion was to attack

⁸⁹ 18th Infantry Brigade "Part I: Report on Operations 18 Aust Inf Bde Gp," AWM52 8/2/18/32, AWM.

⁹⁰ 128th Infantry Regiment Journal, 19-23 December 1942, 332-INF(128)-0.7, RG407 E427 B8039, NARA.

⁹¹ 18th Infantry Brigade "Part I: Report on Operations 18 Aust Inf Bde Gp," AWM52 8/2/18/32, AWM.

along Old Strip supported by four tanks.⁹² The possibility of Japanese dual-purpose guns defending the airstrip was not discounted but thought unlikely. The attack began on 24 December and proceeded steadily until the tanks were successively knocked-out by a gun on the southern edge of Old Strip. Without tanks, Warren Force switched to 'soft-spot' infiltration tactics, which are discussed in Chapter Eight. Some gains were made near Simemi Creek but the strong defences across Old Strip and deep swamps on the southern flank slowed progress.⁹³ The battalion slowly rolled-back echelons of defensive positions through costly, small-unit battles. In a hasty attempt to conclude Phase Two, Wootten ordered a poorly coordinated infantry-tank attack on 29 December. The attack's failure reinforced the high degree of coordination required for this type of fighting.⁹⁴

Phase Three of the operations to capture Giropa Point demonstrated the accumulated lessons from Buna. The 2/10th Battalion was relieved by the 2/12th Battalion and extra measures were taken to ensure a higher level of coordination between infantry and tanks. The assault on Giropa Point between 1-2 January 1943 was made with careful planning, the use of new improvised explosives, and modified tactics. The attack was highly effective as Australian and American infantry worked together to reduce the defences in Warren Sector. The last major strongpoint was destroyed by the afternoon of 2 January.⁹⁵ The capture of Giropa Point coincided with Urbana Force capturing Buna Mission, allowing the Allies to focus on reducing the Killerton Junction at Sanananda.

Urbana Sector: Breakthrough Phase, 23 December 1942-2 January 1943

There was no decisive breakthrough in Urbana sector, but small-scale penetrations and the exploitation of subsequent gains led to the collapse of Japanese positions defending Government Gardens and Buna Mission. Urbana Force was well-positioned after crossing Entrance Creek, but the Triangle still posed a problem. However, Urbana Force could not employ tanks like Warren Force because of the swampy terrain. This placed an emphasis on executing coordinated small-unit actions against clusters of Japanese positions. On 24 December, the 127th Regiment launched a five-company attack against Government Gardens.⁹⁶ However, attacking forces became disorganised in tall kunai grass while the defences in the Triangle continued to enfilade the attack from the eastern

⁹² 18th Infantry Brigade "Part I: Report on Operations 18 Aust Inf Bde Gp," AWM52 8/2/18/32, AWM.

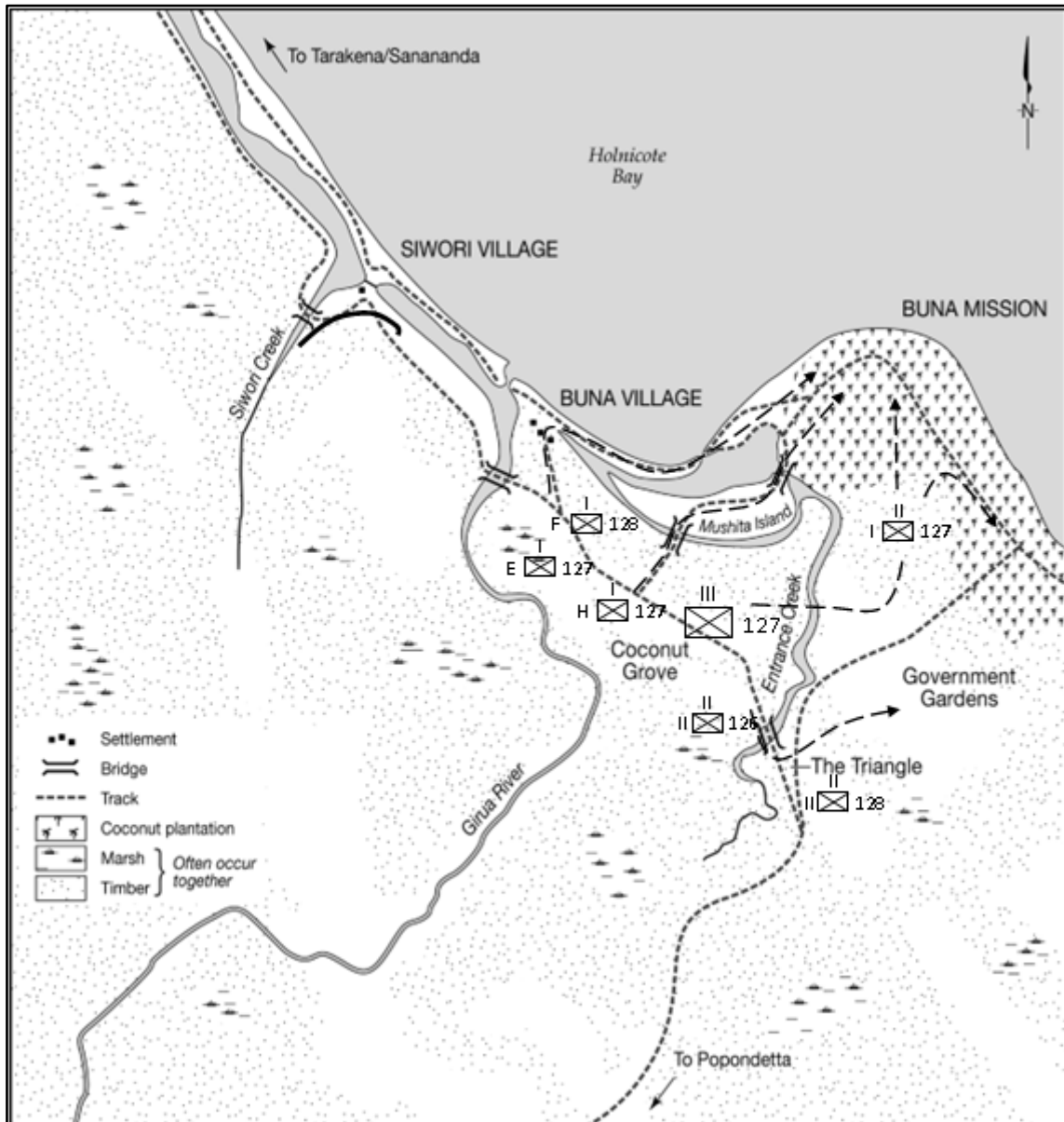
⁹³ 18th Infantry Brigade "Part I: Report on Operations 18 Aust Inf Bde Gp," AWM52 8/2/18/32, AWM; 2/10th Infantry Battalion War Diary, 24 December 1942, AWM52 8/3/10/24, AWM; X Squadron 2/6th Australian Armoured Regiment War Diary, 24 December 1942, AWM3/1/12/2, AWM.

⁹⁴ 18th Infantry Brigade "Part I: Report on Operations 18 Aust Inf Bde Gp," AWM52 8/2/18/32, AWM; 2/10th Infantry Battalion War Diary, 29 December 1942, AWM52 8/3/10/24, AWM.

⁹⁵ 18th Infantry Brigade, "Part I: Report on Operations 18 Aust Inf Bde Gp," AWM52 8/2/18/32, AWM.

⁹⁶ 127th Infantry Regiment, "Tactical History 127th Infantry Combat Team," 332-INF(127)-0, RG407 E427 B8014, NARA.

flank. Eichelberger, who was under intense pressure from MacArthur to quickly finish the operations, described the failure as a 'low point' in the campaign.⁹⁷ The attack resumed the next day, but a company-sized group was cut-off near the track junction to Buna Mission. On 27 December Eichelberger personally commanded operations to open a corridor to the stranded group.⁹⁸ The attack was costly, but it cleared a path through Government Gardens and finally isolated the Triangle, which forced its defenders to withdraw.⁹⁹



Map 3.16: Urbana Sector, 23 December 1942-2 January 1943

⁹⁷ Eichelberger to MacArthur, 24 December 1942, RG41 B1 F2, MM.

⁹⁸ Milner, *Victory in Papua*, 300-301.

⁹⁹ 127th Infantry Regiment, "Tactical History 127th Infantry Combat Team," 332-INF(127)-0, RG407 E427 B8014, NARA.

Securing the Triangle allowed Urbana Force to focus solely on Buna Mission. Late on 28 December, the III/127th launched an attack against the Mission from Mushita Island using assault boats but the landing parties were unable to establish a bridgehead after they came under heavy fire and their makeshift bridge collapsed into Entrance Creek. Patrols then discovered an alternative crossing to Buna Mission via a narrow spit by the sea.¹⁰⁰ The final assault on Buna Mission commenced on 31 December. Two companies crossed the sand spit, but poor fire discipline alerted the Japanese to the crossing. One company broke and withdrew until it was halted and ordered back into the attack, but it failed to secure the necessary positions near the bridge.¹⁰¹ Meanwhile, the I/127th broke through to the sea east of Buna Mission and severed it from Giropa Point. Urbana Force took two days to reorganise and commenced the final assault on Buna Mission from its positions in Government Gardens.¹⁰² During 2 January the remaining pockets of Japanese were destroyed as the II/127th advanced through the Mission. Urbana Force's success marked a distinctly American victory as part of the beachhead operations. After Buna's capture the 127th advanced on Sanananda's eastern flank along the coast via Tarakena to support the final phase against the Killerton Junction.

Sanananda: Breakthrough Phase, 12-22 January 1943

Despite constant attrition the defences holding the Junction remained resolute and offered no easy solution. Infiltration and bombardment had worn down the outlying Japanese posts, but the main positions around the Killerton Junction remained. After Buna was captured all Allied artillery and tanks, as well as the 18th Brigade, and the 127th and 163rd Regiments were made available for the Sanananda operations.¹⁰³ Hopes hinged on tanks replicating the successes from Buna. The pause in operations permitted planning and preparation to a degree which had not previously been possible. Allied commanders planned to reduce the Sanananda-Killerton Junction in phases.¹⁰⁴ The 163rd Regiment, commanded by Colonel Jens Doe, would cut-off the main Japanese positions behind the Killerton Junction before advancing towards Sanananda. The regiment enjoyed more thorough preparations than other American units prior to combat, though Doe was eager to acclimatise the regiment and launched several small attacks from Huggins and James Roadblocks on

¹⁰⁰ 127th Infantry Regiment, "Tactical History 127th Infantry Combat Team," 332-INF(127)-0, RG407 E427 B8014, NARA.

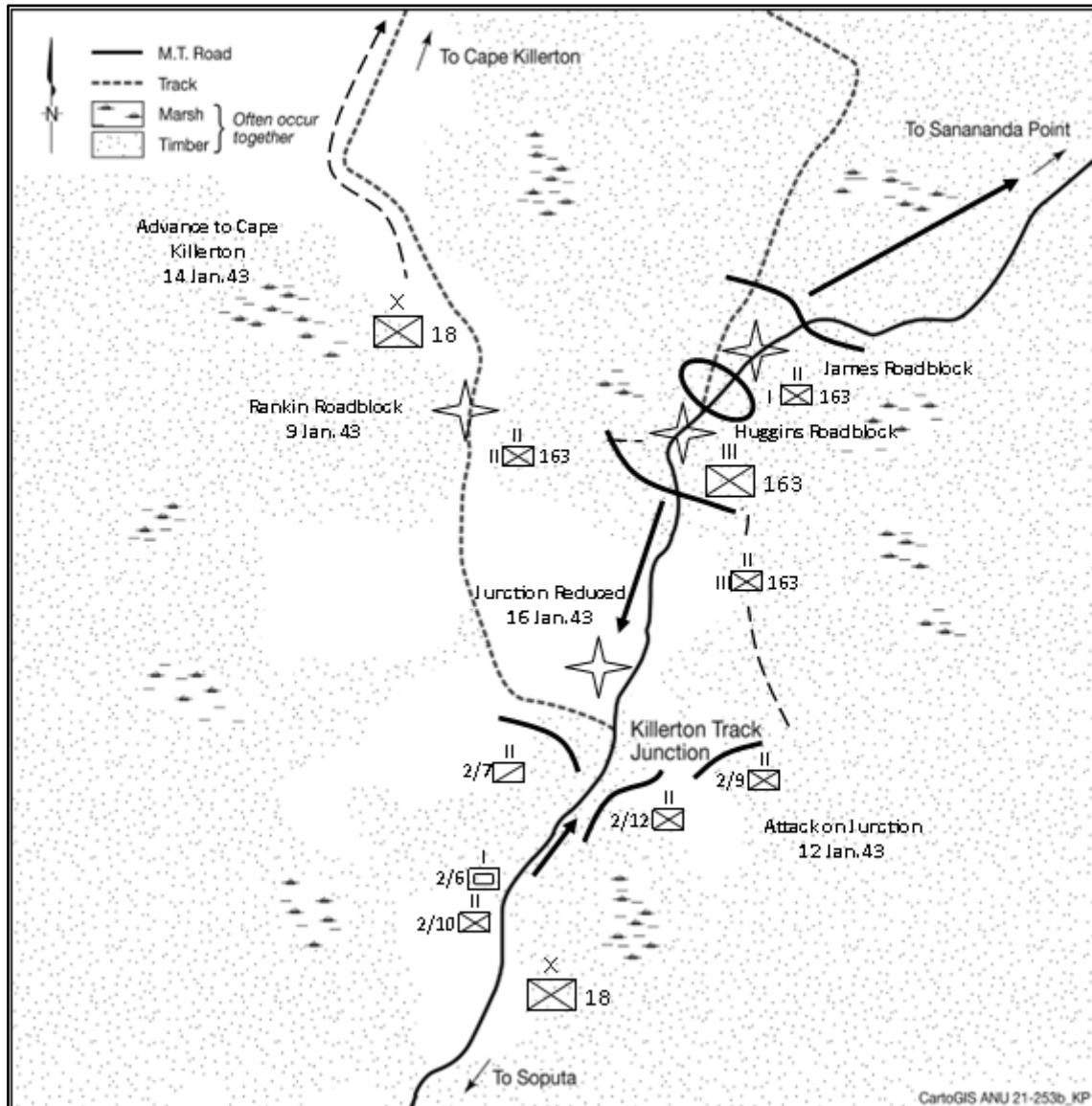
¹⁰¹ Milner, *Victory in Papua*, 313.

¹⁰² 127th Infantry Regiment, "Tactical History 127th Infantry Combat Team," 332-INF(127)-0, RG407 E427 B8014, NARA.

¹⁰³ New Guinea Force Headquarters and General (Air) War Diary, 1-3 January 1943, AWM52 1/5/51/24; 7th Division General Staff Branch War Diary, 1-3 January 1943, AWM52 1/5/14/45, AWM.

¹⁰⁴ 7th Division General Staff Branch War Diary, 5 January 1943, AWM52 1/5/14/45, AWM.

8 January, before establishing Rankin Roadblock on the Killerton Track.¹⁰⁵ The 18th Brigade, supported by tanks, would clear the Killerton Junction before proceeding along the Killerton track and turning eastward against Sanananda.¹⁰⁶ Meanwhile, the 127th Regiment would advance from Buna to Girua to cut-off the Japanese forces along the coast. The 127th secured Tarakena on 8 January, but it was held up by Japanese positions defending Konombi Creek, which posed a formidable natural obstacle. Heavy rains delayed preparations and caused critical supply shortages, but the attack, set for 12 January, was anticipated to be the last action of the campaign.



Map 3.17: Sanananda-Killerton Junction, 12-22 January 1943.

The attack demonstrated there was no single panacea for the tactical problems encountered at the beachheads. The 2/9th and 2/12th Battalions attacked north-west towards the Killerton

¹⁰⁵ 163rd Infantry Regiment Unit History Diary, 1-12 January 1943, 341-INF(163)-0.3, RG407 E427 B9085, NARA.

¹⁰⁶ 18th Infantry Brigade, "Part I: Report on Operations 18 Aust Inf Bde Gp," AWM52 8/2/18/39, AWM.

Junction. However, the supporting tanks, restricted to the main road by swamps, were immediately knocked out by concealed antitank weapons. The 2/9th Battalion gained some ground, but the 2/12th Battalion was unable to reach its objectives.¹⁰⁷ Allied commanders considered their options before controversially settling on a blockade.¹⁰⁸ Before orders could be issued, a prisoner captured on 14 January revealed the Japanese had begun evacuations.

Once confirmed, Allied forces were immediately directed to pursue their prior objectives.¹⁰⁹ The Japanese continued to hold defensive positions and inflicted delays and casualties on the pursuing Allied forces. The Allied advance was further hindered by heavy rain which flooded the swamps and the lack of alternative tracks. The 18th Brigade continued its 'soft-spot' tactics to overwhelm the Japanese who remained at the Killerton Junction before diverging to overcome key strongpoints on the coast at Cape Killerton, Wye Point, and Sanananda Point.¹¹⁰ Meanwhile, the 163rd Regiment struggled clearing Japanese positions between Huggins and James until 17 January, then systematically reduced positions north of James in a series of 'perimeter' attacks before destroying the largest position on 21 January.¹¹¹ The 127th Regiment steadily advanced towards the Giruwa River and linked up with the Australians near Sanananda on 21 January. On 22 January organised Japanese resistance in the area ceased as the last pockets were destroyed by concentrated artillery fire. This signalled the conclusion of the hard-fought and bloody beachhead operations.

Conclusion: 'Complete and Decisive'?

The Allied victory at the beachheads was not as complete nor decisive as suggested by MacArthur's communique. The Japanese evacuated several thousand personnel before the collapse of Sanananda and disorganised bands retreated along the coast to Lae and Salamaua. However, the Japanese presence in Papua was eliminated. Strategically, the operations secured the airfields and harbours necessary to execute Task Two of the 2 July Directive, but the casualties sustained by the Allies (Figure 4.1) were a harrowing indicator of the potential cost of future campaigns conducted without adequate preparation or support. While there was criticism the Allies might have isolated the beachheads and let the Japanese 'wither on the vine', this was unfeasible given the uncertainty

¹⁰⁷ 18th Infantry Brigade, "Part I: Report on Operations 18 Aust Inf Bde Gp," AWM52 8/2/18/39, AWM.

¹⁰⁸ New Guinea Force Headquarters and General (Air) War Diary, 13 January 1943, AWM52 1/5/51/24; 7th Division General Staff Branch War Diary, 13 January 1943, AWM52 1/5/14/45, AWM.

¹⁰⁹ 7th Division General Staff Branch War Diary, 14 January 1943, AWM52 1/5/14/45, AWM

¹¹⁰ 18th Infantry Brigade, "Part I: Report on Operations 18 Aust Inf Bde Gp," AWM52 8/2/18/39, AWM.

¹¹¹ 163rd Infantry Regiment Unit History Diary, 14-21 January 1943, 341-INF(163)-0.3 RG407 E427 B9085, NARA.

in the Solomons, the lack of air and naval superiority to completely isolate them, and the potential logistical difficulties of operating past Buna without further ports and airfields.¹¹² A year later Herring wrote to Eichelberger: 'Buna-Gona was the first real step towards driving the Jap out of New Guinea and New Britain. If we had failed, the edifice could never have been started'.¹¹³ The capture of the beachheads was therefore fundamental to the Pacific strategy.

Casualty Type	American	Australian	Japanese
Killed in Action	687	967	~4,000
Died of Wounds	160	228	NA
Died Other Causes	17	NA	~3,000
Wounded in Action	1,918	3,470	NA
Missing in Action	66	66	~3,000
POW	-	-	~250
Sick, Fatigue and Other Injuries	9,157	18,324	NA

Figure 3.1: Summary of Casualties, November 1942-January 1943.¹¹⁴

The beachhead operations presented many challenges for Allied forces which were reflected through the various phases of contact, stalemate, and breakthrough in each sector. The operations in each sector followed a similar pattern of establishing contact against unexpected positions and strengths, a stalemate where commanders and troops grappled with the circumstances of each area, and finally of a breakthrough, where lessons learned over the preceding periods, tactical adaptations, different approaches to command, or increased fire support yielded results. These developments evolved separately across sectors as competence and leadership in command, information, and doctrine, training and experience influenced the attitudes, approaches, and conduct of the Allied forces. The following chapters analyse issues of coalition warfare, command and leadership, logistics, and infantry, joint, and combined arms tactics to emphasise the importance of each area in the different phases of the operations and highlight their subsequent effects on the character and outcome of the campaign.

¹¹² McCarthy, *Kokoda to Wau*, 531-532; McAulay, *Bitter End*, 303-304.

¹¹³ Herring to Eichelberger, 13 December 1943, cited in Horner, *Crisis of Command*, 263.

¹¹⁴ Note: Australian sick casualties are for all personnel admitted to MDSs in forward areas and hospitals in Port Moresby between 1 November 1942 and 31 January 1943. Figures are based on; DDMS NGF, "Appendix VII: Statistics – Moresby-Owen Stanley-Gona-Buna Area August to January," undated, AWM54 481/12/50, AWM; "Report of the Commanding General Buna Forces on the Buna Campaign: Dec. 1, 1942-Jan. 25, 1942," Annex 4 Inclosure E: Medical Report, 105; Bullard, *Japanese Army Operations*, 205-210.

Chapter Four

‘The Show has Gone Astray’: Allied High Command during the Beachhead Operations

*Ours was another case of ‘never were so few commanded by so many’.*¹

Major General Edwin F. Harding
CG 32nd Infantry Division
Letter to Samuel Milner, US Army Official Historian
24 July 1957

The performance of Allied high command remains a controversial aspect of the beachhead operations. Dean describes the story of command during the period as one of ‘mediocrity, failure, and a small measure of brilliance’.² Similarly, Horner argues that few reputations survived the operations ‘untarnished’.³ In this thesis, ‘high command’ refers to the echelons of military command responsible for strategic direction and operational conduct of the beachhead operations: MacArthur’s theatre command – GHQ SWPA – and Blamey’s and Herring’s operational commands – NGF and Adv NGF – respectively. The small scale of operations in the SWPA during 1942 permitted MacArthur the unusual opportunity to be intimately involved with operational and tactical elements. The interplay between personalities, operational priorities, and strategic uncertainty created tension and pressure within high command. The operations were therefore characterised by friction between senior commanders and cumulative pressure on subordinates to achieve a quick victory. Many issues of command can be traced to GHQ’s flawed conception of the campaign which was

¹ Harding to Milner, 24 July 1957, Harding Interviews, RG319 E53 B4, NARA.

² Dean, “Grinding Out a Victory,” 166.

³ Horner, *Crisis of Command*, 223.

initially based on extremely limited and often inaccurate intelligence and fundamentally flawed assumptions about the environment, the Japanese, and Allied capabilities which did not reflect operational and tactical realities.

The concept of command refers to the authority to direct military forces, and to the myriad processes undertaken in exercising that authority.⁴ Fundamentally, command is a cognitive and organisational decision-making function which contends against the frictions of war.⁵ Command should not be conflated with leadership, which is the ability to influence others and motivate actions towards organisational goals. Exercising command effectively involves continuously gathering information about the state and intent of friendly and enemy forces and the operating environment to inform one's understanding of the current situation and potential future situations. It also involves determining objectives, allocating resources, ensuring subordinates are supported to undertake tasks, and monitoring execution through feedback.⁶ The exercise of command can be influenced by organisational features such as staffs, procedures, and the technical means of transmitting information.⁷ Command can be further influenced by intangible personal qualities and competence. These traits may allow a commander to improvise in difficult situations, deal with unexpected shocks, devise effective plans, or influence relationships with other commanders.⁸ This chapter assesses commanders on their capacity to meet the aforementioned criteria of analysing information, interpreting situations, directing forces, utilising command organisations, and managing relationships. In many cases, high command failed to fulfil the main functions of command which led to internal friction, a poor understanding of the battles, and tactical interference.

High command's conduct was influenced by the difficult relationships between Allied commands. The strategic complexities outlined in Chapter One contributed to the atmosphere of anxiety at GHQ and NGF during the campaign. Differing Australian and American doctrinal approaches to command and the first test of a new military coalition presented additional challenges. The SWPA's command structure diminished cooperation and understanding due to the lack of integration between senior Australian and American staffs. Issues arising from the Kokoda campaign remained unresolved and deeply affected the relationships between Australian and American officers.

⁴ Carl Builder, Steven Bankes and Richard Nordin, *Command Concepts: A Theory Derived from the Practice of Command and Control* (Santa Monica: RAND, 1999), xiii; Van Creveld, *Command in War*, 56.

⁵ Anthony King, *Command: The Twenty-First Century General* (Cambridge: Cambridge University Press, 2019), 56-58; Van Creveld, *Command in War*, 5.

⁶ Van Creveld, *Command in War*, 7.

⁷ Van Creveld, *Command in War*, 9-10.

⁸ Horner, *Crisis of Command*, xv-xxi.

The strained relationships, strategic uncertainty, intelligence failures, and initial failure to quickly capture the beachheads contributed to several command issues. First, internal friction continued between Blamey at NGF and MacArthur's GHQ. This was highlighted by conflicts over the deployment of Australian and American forces after the 32nd Division's early difficulties at Buna. Second, a persistent and cumulative pressure from above, originating at GHQ from personal and strategic issues, placed burdens on subordinate commands to resolve hastily the operations which led to poorly planned and executed attacks. Third, this pressure was compounded by inaccurate assumptions about the terrain, the enemy, and the conduct of the operations by senior commanders like MacArthur and Blamey, who were far-removed from the battlefield and failed to appreciate the challenges facing their subordinates. The lack of intelligence which underpinned the initial plans for the advance on the beachheads and expectations about what would happen upon the Allies' arrival, then subsequent failure to fully comprehend the increasingly complex situation provided by front line reports led to instances of tactical inference through exhortations to attack at all costs or by suggesting impractical approaches. Difficulty meeting these demands led to all senior formation commanders being considered for relief at some point in the campaign. Therefore, high command's conduct during the operations remained a complicating factor for the duration of the battles.

Coalition Warfare and Command Organisation in the SWPA

Many of the command problems during the beachhead operations arose from the difficulties of coalition warfare between untested partners. Coalitions without previous experience or mutual understanding often experience difficulties.⁹ While Australia had a long history as a junior coalition partner with Great Britain, there was no functional basis for a military relationship with America.¹⁰ The relationship had not been considered in either states' pre-war planning, which made addressing the issue an immediate challenge in early 1942.¹¹ MacArthur's position as theatre

⁹ Peter Leahy, "Introduction," in *The 2005 Chief of Army Military History Conference Entangling Alliances: Coalition Warfare in the Twentieth Century*, ed. Peter Dennis and Jeffrey Grey (Canberra: Australian History Military Publications, 2005), 2.

¹⁰ There had been minor Australian-American military cooperation during the First World War at the Battles of Hamel and St-Quentin in 1918. Several American infantry sub-units were integrated into Australian units, and officers and NCOs were exchanged for training purposes. John Blaxland, "US-Australian Military Cooperation in Asia," in *Australia's American Alliance: Towards a New Era?*, ed. Peter Dean et al. (Melbourne: Melbourne University Publish, 2016), 105-106; Joan Beaumont, "Australian-American Relations Under Strain: The Breaking of the Hindenburg Line, 1918," *The Strategist*, 2018.

¹¹ America only decided to establish a forward base in Australia ten days after the attack in Pearl Harbour. For a detailed analysis of Australian-American relations during this period see; Roger J. Bell, *Unequal Allies: Australian-American Relations and the Pacific War* (Carlton: Melbourne University Press, 1977), 10-106; Dean, *MacArthur's Coalition*, 11-330; Horner, *Crisis of Command*, 32-267; Horner, *High Command*, 129-301; Matloff & Snell, *Strategic Planning for Coalition Warfare 1941-42*, 9, 65-66, 87-88.

commander and the focal point of the Australian-American military and political relationship was problematic because he sought to establish control over the theatre while marginalising the influence of Australian officers. This personal objective was complicated by the fact that the majority of the SWPA's forces were Australian, which required MacArthur to cede some senior commands to Australian officers.¹² Chris Field describes MacArthur's relation with Australia during the period as 'paradoxical', as while he relied on Australian forces, he often treated his ally with 'contempt' and his operational and tactical interference was 'inappropriate'.¹³ Horner argues the SWPA was never truly an Allied command, but an American command where American forces had to tolerate and cooperate with other national forces.¹⁴ MacArthur's handling of the beachhead operations demonstrated many of these tendencies.

The Papuan campaign was not the ideal testing ground for a new military relationship. Limited information about the messy fighting over the Owen Stanleys coupled with broader strategic uncertainty cultivated an atmosphere of anxiety and blame-shifting – demonstrated by the command crises of September and October – and the deterioration of opinions about national combat forces. It also highlighted key differences between American and Australian command doctrines regarding centralisation and execution. However, the beachhead operations were the first Australian-American operation with approximately equal contributions. Success required a high degree of cooperation and coordination, but the lack of mutual understanding presented a barrier to learning how to fight together. Despite initial difficulties, positive relationships and mutual understanding between operational and tactical commanders emerged which overcame some of the doctrinal differences, but friction remained at higher levels of command.

MacArthur's efforts to limit Australian influence within his command also contributed to the lack of coalition understanding. MacArthur ignored a JCS directive to include officers from Allied nations on his staff.¹⁵ Senior staff positions were assigned to a nucleus of American officers. This decision hindered the development of understanding and cooperation between Australian and American forces and marginalised the wealth of operational and administrative experience of

¹² David Horner, "Australia and Coalition Warfare in the Second World War," in *The 2005 Chief of Army Military History Conference Entangling Alliances: Coalition Warfare in the Twentieth Century*, ed. Peter Dennis and Jeffrey Grey (Canberra: Australian History Military Publications, 2005), 105, 115.

¹³ Chris Field, "Operational Level of War Joint Campaign Analysis: Allied Forces in Papua 21 July 1942-23 January 1943", *Australian Defence Force Journal* 158 (2003), 29.

¹⁴ Horner, *High Command*, 208.

¹⁵ MacArthur informed Marshall 'there [was] no prospect of obtaining qualified senior staff officers from the Australians'. MacArthur to Marshall, 15 June 1942 cited in Milner, *Victory in Papua*, 23; JCS, "Directive to the Supreme Commander in the Southwest Pacific Area," 30 March 1942, Appendix C, Morton, *Strategy and Command*, 614-616; JCS, "Directive to the Commander in Chief of the Pacific Ocean Areas," 30 March 1942, Appendix D, Morton, *Strategy and Command*, 616-618.

Australian officers.¹⁶ Additionally, MacArthur was reluctant to place American forces under Australian commanders. He proposed deploying the 32nd Division and later I Corps to Papua as task forces directly under GHQ's control.¹⁷ The practice precluded the development of mutual understanding and coalition experience within combat commands prior to operations commencing. MacArthur consistently tried to circumvent NGF to control American combat forces, which complicated his relationship with senior Australian commanders.¹⁸

The SWPA's command organisation also presented challenges to conducting coalition and joint operations. It reflected the different command doctrines and nationalist and service priorities of Australian and American forces, which affected planning, coordination, and execution of operations. The SWPA was established on 'traditional army lines' of single-service commands.¹⁹ This gave MacArthur greater control over 'his' air, land, and naval assets, but impeded the ability to achieve coordination and understanding between services.²⁰ Command within New Guinea Force also complicated by Blamey's dispatch to Port Moresby in September, which increased the scope of its staff's responsibilities as it also had to support Blamey's concurrent role as C-in-C AMF. The solution was to establish an army-level headquarters under Blamey in Port Moresby to control operational and administrative functions throughout New Guinea, while an advanced element of NGF (Adv NGF) based on a corps-level headquarters under Herring was assigned responsibility for the operational control of the Allied forces on the north coast.²¹ While Herring nominally remained GOC NGF, there was 'never any doubt that Blamey was in charge' and he continued to exert considerable influence over the operations.²² This limited Herring's ability to personally influence the operations outside of Blamey's direction.

¹⁶ Horner, *High Command*, 206-207.

¹⁷ Blamey eventually convinced MacArthur that deploying the 32nd Division as a task force to operate alongside NGF would lead to an overly complicated system of command. Horner, *Blamey*, 316; Rowell, *Full Circle*, 110; Eichelberger, *Jungle Road*, 11.

¹⁸ Dean, *MacArthur's Coalition*, 74.

¹⁹ Morton, *Strategy and Command*, 253.

²⁰ Dean, *MacArthur's Coalition*, 92.

²¹ This was based on elements of the First Australian Army headquarters and Adv LHQ, which began to arrive in Port Moresby during December. However, Blamey's freedom as an independent commander was cut short at the beginning of November when MacArthur established an advanced echelon of GHQ SWPA in Port Moresby on the eve of what appeared to be the Allied victory in Papua. Horner, *Crisis of Command*, 217; Dean, *MacArthur's Coalition*, 156-157.

²² Horner, *Blamey*, 339.

Command Doctrine in FSR and FM100

Differing doctrinal conceptions of command contributed to the friction between Australian and American high command. Dean argues command doctrines fundamentally shaped the Australian-American relationship.²³ While both doctrines asserted commanders' roles as decision-makers, they emphasised different ideas about centralisation in command processes and execution. Van Crevelde argues that centralised command systems are more effective for administrative and function-based commands, whereas decentralised command systems with lower decision-making thresholds are often more effective for operational or output-based commands as they allow for greater freedom of action.²⁴ This became apparent during the beachhead operations, where decentralised Australian commands adapted more readily to circumstances, while adaptation in centralised American formations was highly dependent on the individual commander formalising changes.

American command doctrine emphasised the singular authority of the commander, centralised intent, and direct execution of orders. *FM100-5* stated:

Whether the force is large or small, whether the functions of the command are complex or simple, the commander must be the controlling head; his must be the master mind, and from him must flow the energy and the impulse which are to animate all under him.²⁵

This established a more rigid framework for command which could curtail the freedom of subordinates. Commanders might hold conferences with subordinates to seek advice or suggestions, but these were generally opportunities for subordinates to arrive at the 'correct understanding of the plans and intentions of their superior' rather than contribute to the overall direction.²⁶ This permitted any superior to intervene in a subordinate's decision-making and action. While doctrine recognised the need for clear intent and disciplined initiative to enable individual commanders to make their own decisions based on the situation, the methodical and detail-driven approach to command led to orders often being prescriptive.²⁷ When this detail and top-down direction was lacking – as would occur in jungle warfare – it could lead to a breakdown in the functions of command.

In contrast, British-Commonwealth doctrine advocated centralised intent with decentralised execution, which permitted subordinates greater freedom to act towards the objective of their superior. Decentralised execution was critical to ensuring the mobility and flexibility which *FSR*

²³ Dean, *MacArthur's Coalition*, 85-86.

²⁴ Van Crevelde, *Command in War*, 267-268.

²⁵ *FM100-5: Operations 1941*, 23.

²⁶ *FM100-5: Operations 1941*, 24-25.

²⁷ John Case, "The Exigency for Mission Command: A Comparison of World War II Command Cultures," *Small Wars Journal*, 2014.

emphasised.²⁸ The balance between control and direction from a senior commander was paramount. *FSR* advised commanders to:

allot [subordinates] definite tasks, clearly explaining his intentions, and will then allow them liberty of action in arranging the methods by which they will carry out these tasks. Undue centralisation and interference with subordinates is harmful, since they are apt either to chafe at excessive control or to become afraid of taking responsibility.²⁹

Decentralisation encouraged greater independent action and flexible and interpretation of doctrine, but also required a higher degree of initiative and responsibility, particularly at lower levels.³⁰ The differing conceptions of centralisation was a crucial contrast between the Allied forces.

Lack of exposure to the respective systems resulted in mistrust and misunderstanding of each approach. MacArthur refused to attend a Pacific theatre conference in September because he lacked confidence in Australian systems:

I would have grave doubts about leaving at any time. The second-in-command is an Australian [Blamey] whose entire methods and conception differ so materially from ours that his actions during my absence would be unpredictable.³¹

Australian commanders likewise resented what they perceived as undue interference or restrictions over their control of operations, while GHQ expected instantaneous responses from Australian commanders and a constant flow of information.³² These factors contributed to many of the grievances expressed by Allied commanders during the campaign.

Doctrine also shaped how the staffs were organised and operated. The American staff system adopted a 'managerial' approach which sought to impose order over battle through planning and 'efficiency through centralised control processes'.³³ The staff's role was to translate the commander's intent into a plan. *FM101-5* stated:

The staff secures and furnishes such information as may be required by the commander, prepares the details of his plan, translates his decision and plan into orders, and causes such orders to be transmitted to the troops.³⁴

²⁸ Christopher Pugsley, "'We Have Been Here Before': The Evolution of the Doctrine of Decentralised Command in the British Army 1905-1989," Sandhurst Occasional Papers No. 9, Royal Military Academy Sandhurst, 2011, 6.

²⁹ *FSR Vol. III: Higher Formations 1935*, 9, 30.

³⁰ French, *Churchill's Army*, 13.

³¹ #241 MacArthur to Marshall, 22 September 1942, RG4 S1 B16 F1, MM.

³² MacArthur's reactions to Clowes' command at Milne Bay, and Clowes and Vasey's responses, demonstrate these effects. GHQ's response to Allen's advance towards Kokoda also demonstrated divergent expectations. Horner, *Crisis of Command*, 135-187.

³³ Eitan Shamir, *Transforming Command: The Pursuit of Mission Command in the U.S., British, and Israeli Armies* (Stanford: Stanford University Press, 2011), 60-62.

³⁴ US War Department, *FM101-5 Staff Officer's Field Manual: The Staff and Combat Orders* (Washington DC: United States War Department, 1940), 3.

The staff was organised into four sections: G-1 for personnel, G-2 for intelligence, G-3 for operations, and G-4 for logistics.³⁵ Sections answered to the Chief of Staff (CoS), who relayed information to the commander. Meanwhile, the British-Commonwealth staff system embodied a more collaborative approach. While commanders were ultimately responsible for ideas and decision-making, staffs worked cooperatively in the planning process.³⁶ Staff officers assisted the senior commanding officer in their responsibilities and ensured forward troops were supported to carry out their tasks.³⁷ The staff was divided into three branches: General Staff for operations, intelligence, and training, Adjutant General for administration, and Quartermaster General for maintenance.³⁸³⁹ Two senior officers coordinated the G and Q & A branches. They liaised with each other and the commander.⁴⁰ The collaborative and flexible British-Commonwealth system has been deemed more adaptable to emerging operational and tactical circumstances, whereas the more procedure-focused American system excelled in areas such as logistics, mobilisation, and deployment.⁴¹ The capabilities of each system and the difficulties of managing them operating concurrently at different levels became apparent throughout the Papuan campaign.

Personalities in Allied High Command

The personalities of prominent officers contributed to shaping relationships and perceptions between the Allied commands. Much of the friction between the Australians and Americans can be traced to GHQ. Unsurprisingly, MacArthur proved an enigmatic and complicated theatre commander; he displayed strategic insight and tremendous understanding of military and political matters, but his emotions and insecurities caused problems. He was intelligent, charismatic, and had ‘tremendous ability’, but he was also temperamental.⁴² Long described him as ‘a man of mind and feeling rather than a man of iron’.⁴³ MacArthur was suspicious of rivals and valued loyalty above all from his subordinates. He controlled his public image through communiques and crafted the stories

³⁵ Below division-level these became S-1, S-2, S-3, S-4.

³⁶ Dean, *MacArthur's Coalition*, 88.

³⁷ Major-General Frank Berryman, “Planning History and Instructions”, PR84/370 Item 48, AWM.

³⁸ This was further subdivided into ‘G-Staff Duties’ which oversaw the preparation and equipment of troops for operations, ‘G-Operations’ for operational planning, ‘G-Intelligence A, B, and C’, each responsible for enemy intelligence, security, and censorship respectively, ‘G-Chemical Warfare’, and ‘G-Training’ which coordinated all non-administrative training matters.

³⁹ R.G. Jessel, *G, A, and Q: An introduction to the Staff* (Aldershot: Gale and Polden, 1947), 18-27.

⁴⁰ Grades of British Staff officers were GSO1, GSO2, and GSO3. These were sometimes shortened to G1, G2, and G3 – not to be confused with the American staff branches.

⁴¹ Shamir, *Transforming Command*, 61-62.

⁴² Byers Interview, RG49 B1, MM; Kenney Interview, RG49 B3, MM.

⁴³ Gavin Long, “Diary after Interview,” 8 June 1944, AWM54 577/7/32, AWM.

of his campaigns.⁴⁴ Some accounts of MacArthur during the Papuan campaign suggest he disregarded casualties, but Richard Marshall and Kenney recall his concern for the losses suffered by 'his boys'.⁴⁵ Lieutenant General George Brett, former Commander AAF, described every part of MacArthur as being 'on a grand scale; his virtues and triumphs and shortcomings'.⁴⁶ These attributes made him a brilliant but difficult commander.

MacArthur's CoS Major General Richard Sutherland had a strained relationship with most officers involved in the operations.⁴⁷ He was an intelligent, hard-working, and highly competent staff officer.⁴⁸ Richard Marshall recalled 'you could depend on an answer from [Sutherland] that would be brilliant any time'.⁴⁹ He was also thoroughly disliked. Sutherland was devoted to his role as MacArthur's 'hatchet man' and relished his role as GHQ's 'SOB'.⁵⁰ He was adversarial to anyone outside the US Army which made cooperation between the services and with the Australians difficult. Sutherland also enjoyed unparalleled access and influence over MacArthur.⁵¹ Berryman described him as an 'armchair editor'.⁵² Sutherland also had difficult relationships with American officers. Kenney regarded him as 'arrogant, opinionated and very ambitious'.⁵³ Eichelberger had particular difficulty dealing with Sutherland, whom he felt treated him 'more like a lieutenant than a lieutenant general'.⁵⁴

MacArthur's G-2, Brigadier General Charles Willoughby, was similarly unpopular, though less competent than Sutherland. Willoughby resented outside influence over the G-2 section and often clashed with Sutherland.⁵⁵ However, he was exceedingly loyal to MacArthur.⁵⁶ Willoughby's record as an intelligence officer was patchy. He was highly reliant on ULTRA intelligence and prone to confirming what MacArthur wished to hear. While some of his interpretations in later campaigns such as the Admiralties and Hollandia landings were impressively accurate, he grossly

⁴⁴ A notable example of this is the impression he gave through communiques and media interviews that he had commanded the Buna operations from the front lines.

⁴⁵ Kenney Interview, RG49 B3, MM; R.J. Marshall Interview, RG49 B3, MM.

⁴⁶ Lieutenant General George Brett cited in Horner, *Crisis of Command*, 63.

⁴⁷ Sutherland was a First World War veteran and graduate of the War College and Command and General Staff School. He had worked with MacArthur during his time as the US Army CoS and in the Philippines during the 1930s.

⁴⁸ Paul Rogers and Carol Petillo, "An Exchange of Opinion," in *MacArthur and the American Century: A Reader*, ed. William Leary (Lincoln: University of Nebraska Press, 2001), 67.

⁴⁹ R.J. Marshall Interview, RG49 B3, MM.

⁵⁰ R.J. Marshall Interview, RG49 B3, MM.

⁵¹ Eichelberger Dictations Book II, II-13-14, Robert L. Eichelberger Papers, B1 SII, USAHEC.

⁵² Berryman Diary, 20 September 1942, PR84/370 Item 2, AWM.

⁵³ Kenney Interview, RG49 B3, MM.

⁵⁴ Eichelberger cited in Luvaas, *Dear Miss Em*, 30-31.

⁵⁵ For example, see Sidney Mashbir's account of Willoughby's response to his efforts in establishing ATIS and compiling the first Japanese Order of Battle lists; Mashbir Interview, RG49 B3, MM; Willoughby Interview, RG49 B4, MM.

⁵⁶ Dean, *MacArthur's Coalition*, 95.

underestimated Japanese strengths at Biak and Luzon. MacArthur famously stated: 'There are only three great [intelligence chiefs] in the history of warfare, and mine isn't one of them'.⁵⁷ During 1942, ULTRA intelligence mechanisms were still immature and Willoughby's assessments 'exhibited his disconcerting habit of reversing major interpretations over-night' and imposing his own tactical intentions upon the enemy to align with MacArthur's plans: a 'cardinal sin for an intelligence officer who aims to understand, not transform, the enemy'.⁵⁸ Eichelberger found Willoughby's assessments were 'always very positive...and usually wrong'.⁵⁹

GHQ's other officers were more capable of cooperating within a coalition command. Brigadier General Richard Marshall, DCoS and G-4, was well-liked by most Australian and American officers with whom he worked. He was a conscientious officer who capably managed logistics and ensured cooperation between the Australian and American elements under his command.⁶⁰ Brigadier General Stephen Chamberlin, G-3, was a 'very methodical, meticulous, dedicated and hard-working individual' who was well suited to transposing MacArthur's strategic goals into workable plans.⁶¹ Chamberlin fostered positive relations with senior Australian officers.⁶² However, he viewed Australian methods of decentralised planning as inferior and was protective of his section.⁶³ Nevertheless, the ability of senior logistics and operations officers to work cooperatively was important for Australian-American operations.

Blamey's position as the most senior Australian officer in the SWPA was important in shaping the coalition. He was respected as a military commander and proved an adroit strategic and political thinker. Gavin Long described him as possessing:

... a mind which comprehended the largest military and politico-military problems with a singular clarity, and by experience and temperament was well-equipped to cope with the special difficulties which face the commander of a national contingent which is part of a coalition army in a foreign theatre of war.⁶⁴

MacArthur regarded Blamey's military capabilities highly and described him as 'a first-class military commander'.⁶⁵ Blamey's forceful personality was a useful foil against MacArthur, and though the

⁵⁷ MacArthur cited in Drea, *MacArthur's Ultra*, 186-187.

⁵⁸ Edward Drea, *MacArthur's ULTRA: Codebreaking and the War Against Japan 1942-1945* (Lawrence: Kansas University Press, 1992), 58-59.

⁵⁹ Eichelberger Dictations Book II, II-23, Robert L. Eichelberger Papers, B1 SII, USAHEC.

⁶⁰ Dean, *MacArthur's Coalition*, 95-96.

⁶¹ Byers Interview, RG49 B1, MM.

⁶² Horner, *Crisis of Command*, 295.

⁶³ Dean, *Architect of Victory*, 231-233.

⁶⁴ Gavin Long, *The Six Years War: A Concise History of Australia in the 1939-45 War* (Canberra: Australian War Memorial and the Australian Government Publishing Service, 1973), 22.

⁶⁵ Frederick Shedden, serving as Secretary of the Department of Defence, recorded MacArthur's comments about Blamey at a War Conference meeting held on 17 July 1942. Shedden cited in David Horner, "Field

two clashed, Kenney noted they ‘worked closely and loyally’ together.⁶⁶ Brigadier Ronald Hopkins, NGF’s BGS, found Blamey to be ‘outstandingly helpful’ during the campaign.⁶⁷ Blamey was well-respected by senior American officers like Kenney and Eichelberger; Eichelberger found him ‘a very fair commander and...would have taken his judgement any time... [over MacArthur and Sutherland’s].⁶⁸ However, his many concurrent responsibilities as C-in-C AMF, chief military adviser to the government, Commander ALF, and GOC NGF dispersed his attention and energy.

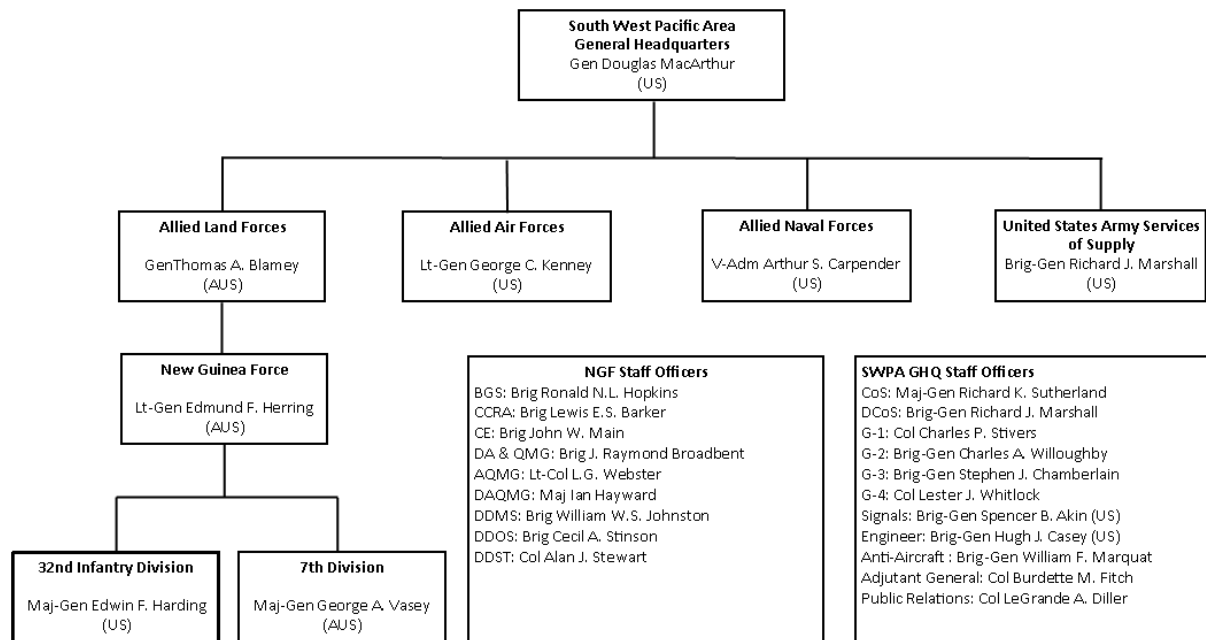


Figure 4.1: Command Organisation in SWPA, November 1942.⁶⁹

Herring was the primary operational commander of the beachhead operations. He was a quiet, competent commander who worked cooperatively.⁷⁰ His personality was suited to the difficult position of managing Allied tensions. Vasey found him: ‘first class... He has ideas, nearly always good ones, and has the power to have them put into execution’ and noted his ability to cooperate and

Marshal Sir Thomas Blamey: Commander-in-Chief, Australian Military Forces,” in *The Commanders: Australian Military Leadership in the Twentieth Century*, ed. David Horner (Sydney: George Allen & Unwin, 1984), 212.

⁶⁶ Kenney Interview, RG49 B3, MM;

⁶⁷ Hopkins to Horner, cited in *Crisis of Command*, 200.

⁶⁸ Kenney Interview, RG49 B3, MM; Eichelberger Dictations Book VIII, VIII-37, Robert L. Eichelberger Papers, B1 SVIII, USAHEC.

⁶⁹ Advanced New Guinea Force was established on 28 November 1942. Adv NGF assumed command operational command of the Australian 7th and 32nd Infantry Divisions. Blamey assumed command of NGF which included the administration of Adv NGF and all other Allied forces in Papua. Broadbent remained as NGF’s DA & QMG in Port Moresby, while Colonel George DeGraaf, US I Corps Quartermaster, initially assumed the responsibilities of the senior logistics officer at Adv NGF until the arrival of Colonel Stanley F. Legge in December.

⁷⁰ Horner, *Crisis of Command*, 71.

learn.⁷¹ Eichelberger and his CoS Brigadier General Clovis Byers considered Herring a 'tremendous, competent and pleasant individual'.⁷² Herring was regarded as a thorough and methodical, if not spectacular, commander:

[Herring's] method was to work carefully round any problem, discussing factors, difficulties and courses. It took a good deal of time because he went over the same ground a good deal. But he was thorough...[Herring] would go through our plans with [Blamey] and then tackle any other matters.⁷³

Herring's ability to work cooperatively with Australian and American commanders while displaying loyalty to his superiors ameliorated the friction generated by Allied high command. However, some criticisms by his contemporaries about his tactical and organisational aptitude are discussed in this chapter.⁷⁴

NGF's staff grew as its operational and administrative responsibilities increased. It drew on many officers with experience from the Middle East campaigns. Herring leant heavily on his staff.⁷⁵ Hopkins was a capable staff officer and a colourful personality – Berryman described him as a 'cheerful rascal' – though he could be disruptive and some of the staff practices instituted at NGF were inefficient.⁷⁶ Hopkins was replaced as BGS on 26 December by Berryman.⁷⁷ Berryman was also highly experienced and a tremendously capable, energetic, yet demanding staff officer.⁷⁸ Lavarack regarded him as 'the best combination of fighting leader, staff officer, and administrator...in our Army'.⁷⁹ Berryman and Hopkins proved able to cooperate with their American counterparts which improved the functioning of Adv NGF as a coalition command. While Hopkins later claimed that 'New Guinea was never more than a corps job', the operational and administrative demands on NGF and Adv NGF's staff were significant.

⁷¹ George Vasey to Jesse Vasey, 29 August 1941 & George Vasey to Jesse Vasey, 12 September 1941, MS3782 Item 2/15, NLA.

⁷² Byers Interview, RG49 B1, MM.

⁷³ Ronald Hopkins to Horner, cited in Horner, *Crisis of Command*, 200.

⁷⁴ For another analysis of Herring's conduct, see; Dean, "Grinding out a Victory," 179-183.

⁷⁵ Horner, *Crisis of Command*, 70-72.

⁷⁶ Hopkins had previously commanded the 7th Division's cavalry regiment before returning to Australia to oversee the development of the Royal Australian Armoured Corps, and serve as Director Military Operations and BGS at Adv LHQ. Berryman cited in Horner, *Crisis of Command*, 71; George Vasey to Jesse Vasey, 4 October 1942, MS3782 Item 2/15, NLA.

⁷⁷ New Guinea Force Headquarters and General (Air) War Diary, 26 December 1942, AWM52 1/5/51/21, AWM.

⁷⁸ Berryman had served as the 6th Division's GSO1, 7th Division's CRA, a temporary combat command, and MGGS First Army in the Middle East, and BGS I Corps and DCGS Adv LHQ after returning to Australia. Horner, *Crisis of Command*, 255; Dean, *MacArthur's Coalition*, 125.

⁷⁹ Lieutenant-General John Lavarack to Gavin Long, 14 February 1945, AWM67 Item 3/209 [1], AWM.

Planning and Intelligence for the Beachhead Operations

Planning the beachhead operations was principally influenced by optimistic estimates about the strength and intentions of the Japanese defenders. While high command was concerned about the risk of Japanese reinforcements and threats to Allied lines of communication, planning was based on the assumptions that the beachheads were weakly defended, and a rapid advance would allow the Allies to quickly capture and consolidate the positions. When these assumptions turned out to be false, high command had difficulty reconciling its expectations with the actual situations being reported by front line commanders. The dismissal of front-line reports and new intelligence which provided a clearer picture of the complexity of the situation was a major barrier to GHQ being able to effectively manage the operations.

The vulnerability of supply lines was a limiting factor in the Allies' ability to concentrate forces on the north Papuan coast. Transportation and supply were difficult while Japanese naval forces posed a serious threat. This encouraged high command to limit the number of troops committed to the coastal axis:

The successful employment of any considerable body of troops on the north shore...is entirely dependent upon lines of communication. The enemy has complete control of the sea lanes and we are not now, nor have any reasonable expectation of being, in a position to contest that control...Our fundamental plans are limited by the fact that the enemy can cut that line at will.⁸⁰

This presented a paradox for high command. The situation demanded 'cautious handling of troops' but also to move with great speed once committed.⁸¹ Blamey warned any delays risked jeopardising the chance for a rapid advance.⁸² MacArthur agreed with Blamey to commence the advance as soon as ten days' supplies could be built up behind each column, with 15 November as the start date for operations.⁸³ The development of supply lines to support the operations is covered in Chapter Five. High command considered having to quickly withdraw but were optimistic that the beachheads could be captured quickly.

Once the Allies had converged on the beachheads, the operational plan to capture them was naively simple. Notwithstanding the difficulties concentrating the American forces along the coast and the exhaustion of the 7th Division, each formation was to advance directly on its objectives –

⁸⁰ #16 MacArthur to Blamey, 20 October 1942, RG4 S1 B6 F2, MM.

⁸¹ #21 MacArthur to Blamey, 1 November 1942, RG4 S1 B6 F2, MM.

⁸² NGF to GHQ SWPA, 2 November 1942, 3DRL/6643 Item 2/47, AWM.

⁸³ MacArthur to Blamey, 2 November 1942, 3DRL/6643 Item 2/47, AWM; GHQ SWPA, "Memorandum," 3 November 1942, 98-GHQ1-3.2, RG407 E427 B574, NARA.

the 7th Division on Gona-Sanananda and the 32nd Division on Buna – on 16 November.⁸⁴ There was little consideration of extra support. The next day instructions were issued regarding ‘Lilliput’, the development of Buna as a Base Area, which anticipated Buna’s capture within days.⁸⁵ While Lilliput covered the transport of supporting weapons, these were primarily for defensive purposes.⁸⁶ Considerations for the defence of Buna were logical, but the timeframe for these preparations indicate high command did not anticipate complications and were already considering operations against New Guinea. Recent successes airlifting troops and developing forward bases encouraged the consideration of similar plans for attacking Nadzab, Lae, and Salamaua.⁸⁷ Blamey noted:

At the conclusion of present operations, if successful, we should have the bulk of two divisions in the Buna area (32 USA Division and the 7th Australian Division AIF); a strong force at Milne Bay and a strong force to capture Lae and later Salamaua should plans develop as I now envisage them.⁸⁸

The capture of the beachheads was considered a foregone conclusion, and little thought was given to potential complications in achieving the objective.

The lack of contingency planning and consideration of alternatives to a quick victory or Japanese withdrawal was the product of GHQ’s optimistic and ultimately inaccurate intelligence. Edward Drea notes that at this stage ‘neither ULTRA nor traditional battlefield intelligence...penetrated the cloak of secrecy that surrounded Japanese operations and...their deployments’.⁸⁹ The defeat of the Japanese in the Owen Stanleys meant GHQ was more concerned with the Japanese in the Solomons rather than the remaining Japanese in Papua. Estimates of Japanese strengths and dispositions were largely derived from identifications made during the advance on Kokoda and captured documents.⁹⁰ The difficulty of accurately identifying Japanese units based on signals intelligence and of conducting conventional close or aerial reconnaissance in Papua

⁸⁴ NGF, “Operation Instruction No. 42,” 14 November 1942, AWM52 1/5/51/20, AWM; NGF, “Administration Instruction No. 32,” 15 November 1942, AWM52 1/5/53/1, AWM.

⁸⁵ NGF, “Operation Instruction No. 43,” 15 November 1942, AWM52 1/5/51/20, AWM; NGF, “Administration Instruction No. 32,” 15 November 1942, AWM52 1/5/53/1, AWM.

⁸⁶ NGF, “Operation Instruction No. 44,” 21 November 1942, AWM52 1/5/51/20, AWM.

⁸⁷ Blamey to MacArthur, 24 October 1942 & Blamey to MacArthur, 27 October 1942, 3DRL/6643 Item 2/47, AWM.

⁸⁸ Blamey to MacArthur, 27 October 1942, 3DRL/6643 Item 2/47, AWM.

⁸⁹ Drea, *MacArthur’s ULTRA*, 51.

⁹⁰ Identifying IJA units by signals was complicated by the organisation of Japanese army forces, the tendency to detach units from formations, and the peculiarity of Japanese signal traffic being transmitted vertically to higher formations. This was further confused by the frequent misidentification of armies and divisions. It was not until mid-December that Allied signals intelligence identified the commanding headquarters of the Japanese operations in New Guinea. Drea, *MacArthur’s ULTRA*, 32, 49-53.

created further barriers to accurately determining the likely strength of the defending forces.⁹¹ The drastic underestimation of Japanese strengths fundamentally undermined the operational plan.

GHQ's estimates of enemy strengths were considerably less than NGF and forward formations. The earliest captured information suggested Horii's force was based on two infantry regiments, totalling a maximum 6,000 Japanese combat personnel and 2,500 support personnel at the beginning of October.⁹² Japanese strengths were rapidly revised downwards during their withdrawal along the Kokoda Trail.⁹³ Based on these estimates, the decision in October to commit twelve battalions against the beachheads appeared sufficient force. Documents captured at Oivi-Gorari suggested losses in some Japanese units exceeded 75% of their total strength.⁹⁴

Command	Estimated Japanese Strengths Kokoda-Buna Area				
	c. 1 October	c. 15 October	c. 1 November	c. 15 November	c. 30 November
GHQ SWPA	8,500-4,500	2,900-4,200	2,400-3,600	1,300-1,500	1,600-3,000
NGF	10,400-6,000	3,000-3,500	4,200-5,700	1,800-3,600	4,000-5,000
7th Div *	-	-	5,000	1,500-2,000	-
32nd Div **	7,000-7,500	3,000-4,000	650-1,000	500-600	800-1100

Figure 4.2: Estimates of Japanese Strengths Kokoda-Buna, 1 October-15 November 1942.⁹⁵

⁹¹ Drea explains that intelligence analysts often misinterpreted the identification and location of Japanese units and formations due to the way Japanese task forces were created. Drea, *MacArthur's Ultra*, 49-51.

⁹² GHQ SWPA MIS, "Monthly Summary of Enemy Dispositions No. 4, 1 October 1942," 1 October 1942, RG3 B15 F6, MM; GHQ SWPA MIS "G-2 Intelligence Summary #193," 1 October 1942, RG3 S2 B26 F4, MM.

⁹³ There was some confusion as to whether the 41st, 44th, and 144th Regiments were present as part of the "Horii Division" in Papua. It was believed that PW information had conflated the 44th and 144th Regiments, and the 41st had not been confirmed at this point. Adv HQ ALF GSI, "Adv HQ Allied Land Forces Weekly Intelligence Summary No. 10," 9 October 1942 & Adv HQ ALF GSI, "Adv HQ Allied Land Forces Weekly Intelligence Summary No. 11," 16 October 1942, AWM54 423/11/63 [1], AWM.

⁹⁴ A battalion of the 41st Regiment recorded that it had lost 441 out of 587 personnel up to 2 November before it was relieved and returned to the coast. The second and third battalions of the 144th Regiment lost 1,185 personnel up to 2 November, leaving an effective strength of just 356 troops between the two units. Adv HQ ALF GSI, "Adv HQ Allied Land Forces Weekly Intelligence Summary No. 16," 20 November 1942, AWM 54 423/11/63 [3], AWM.

⁹⁵ Based on: GHQ SWPA MIS, "G-2 Intelligence Summary #188," 26 September 1942, RG3 S2 B26 F3, MM; GHQ SWPA MIS, "G-2 Intelligence Summary #209," 16 October 1942, RG3 S2 B6 F4, MM; GHQ SWPA MIS, "G-2 Intelligence Summary #227," 4 November 1942, RG3 S2 B27 F1, MM; GHQ SWPA MIS, "G-2 Intelligence Summary #238," 15 November 1942, RG3 S2 B27 F2, MM; GHQ SWPA MIS, "G-2 Intelligence Summary #250," 27 November 1942, RG3 S2 B27 F3, MM; Adv HQ ALF GSI, "Adv HQ Allied Land Forces Weekly Intelligence Summary No. 10," 9 October 1942 & Adv HQ ALF GSI, "Adv HQ Allied Land Forces Weekly Intelligence Summary No. 11," 16 October 1942, AWM54 423/11/63 [1], AWM; Adv HQ ALF GSI, "Adv HQ Allied Land Forces Weekly Intelligence Summary No. 15," 13 November 1942 & Adv HQ ALF GSI, "Adv HQ Allied Land Forces Weekly Intelligence Summary No. 17," 27 November 1942, AWM54 423/11/63 [3], AWM; 32nd Infantry Division G-2, "Intelligence Summary No. 5," 28 September 1942, 32nd Infantry Division G-2, "Intelligence

Figure 4.2 shows Allied estimates between 1 October-30 November which reflect the belief the Japanese were effectively defeated when the Allies reached the beachheads. No shipping had been observed since 21 August, which further suggested there had been no attempt to reinforce or resupply the garrisons.⁹⁶ However, Allied aerial reconnaissance had missed the arrival of several reinforcement and supply convoys throughout September-November.⁹⁷ Estimates also overlooked non-combat personnel who would participate in the defence. This meant the Allies faced at least 8,000 defenders, who were reinforced by another 1,500 personnel on 17-18 November. However, GHQ firmly believed the Japanese were vastly outnumbered.

Another significant intelligence failure was the Allies' lack of knowledge about the Japanese defences. Neither aerial reconnaissance nor local reports identified the scale or complexity of the fortifications. Initial intelligence suggested an 'echelonment-in-depth' from the Kumusi River, with an inner defence running from Soputa-Sanananda-Buna, though it failed to note organised defensive positions.⁹⁸ Aerial reconnaissance detected little movement on the main roads to Buna and Sanananda.⁹⁹ Furthermore, Buna's anti-aircraft defences had slackened, suggesting Japanese intentions to hold the beachheads were weakening.¹⁰⁰ Sanananda-Soputa was thought to only be an administrative area.¹⁰¹ However, during early November locals reported the Buna-Simemi area was strongly held, though there was no mention of fortifications.¹⁰² Admittedly, reconnaissance of defensive positions was difficult as fortifications rarely appeared in aerial photos because they were well camouflaged or obscured by vegetation. The 2/6th Independent Company, which would have

Summary No. 6," 13 October 1942, 32nd Infantry Division G-2, "Intelligence Summary No. 9", 6 November 1942, 332-2.6, RG407 E427 B7875, NARA; US Buna Forces, "G-2 Report No.1," 7 December 1942, G-2 Periodic Reports Buna Campaign Buna Forces, RG338 E314 B86, NARA; 7th Division GSI Weekly Intelligence Summaries No.1-22 1942, AWM54 423/11/119 [3], AWM.

⁹⁶ Adv HQ ALF GSI, "Adv HQ Allied Land Forces Weekly Intelligence Summary No. 12," 23 October 1942, AWM54 423/11/63 [3], AWM.

⁹⁷ Willoughby admitted it was 'possible' a convoy sighted off Gasmata on 1 November had unloaded at Buna. The IJA had dispatched two army transport vessels with supplies and ammunition which successfully unloaded at Buna on the night of 1 November. GHQ SWPA MIS, "G-2 Intelligence Summary #225," 2 November 1942, RG3 S2 B27 F1, MM; Bullard, *Japanese Army Operations*, 171.

* From 1 November estimates are for the 7th Division's area of operations (Kokoda-Soputa-Sanananda-Gona).

** From 1 November estimates are for the 32nd Division's area of operations (Simemi-Buna).

⁹⁸ GHQ SWPA MIS, "G-2 Daily Intelligence Summary #209," 17 October 1942, RG3 S2 B26 F4, MM.

⁹⁹ Brigadier General Kenneth Walker, CG V Bomber Command, to Brigadier General Ennis Whitehead, Commander ADVON5AF, 11 October 1942, Kenney Diary, RG54 B1 VII, MM.

¹⁰⁰ See GHQ SWPA MIS, "G-2 Daily Intelligence Summary #204," 12 October 1942 and GHQ SWPA MIS, "G-2 Daily Intelligence Summary #210," 18 October 1942; RG3 S2 B26 F4, MM.

¹⁰¹ A local report gathered on 4 October indicated that there were two camps between Soputa and Sanananda, one cannon at Soputa, and one cannon and two seaward-facing and five machineguns controlling the Abau-Buna road junction at Buna. Adv HQ ALF GSI, "Adv HQ Allied Land Forces Weekly Intelligence Summary No. 10," 9 October 1942 & Adv HQ ALF GSI, "Adv HQ Allied Land Forces Weekly Intelligence Summary No. 13," 30 October 1942, AWM54 423/11/63 [3], AWM; GHQ SWPA MIS "G-2 Daily Intelligence Summary #216," 24 October 1942, RG3 S2 B26 F4, MM.

¹⁰² GHQ SWPA G-2, "Troop Dispositions and Movements," undated, 98-GHQ1-3.2, RG407 E427 B574, NARA.

been ideally suited to reconnoitring the area, was held back to screen the American advance along the coast. Despite intelligence on the Japanese positions being sparse, it is unclear why the Allied forces – from GHQ to the advancing divisions – did not make greater efforts to gather intelligence and seemingly dismissed much of what was available. Eichelberger claimed that before reaching Buna there was little indication ‘the Japanese had put in a tremendous amount of work in putting up their bunkers’.¹⁰³ The initial shocks from the strength and depth of Japanese defences and the realisation that the beachheads could not be captured quickly escalated a range of command issues relating to internal friction, pressure on subordinates, inaccurate assumptions, and tactical interference from high command.

‘I Know They Will Fight’: Internal Friction in Allied High Command

The internal friction inherent in coalition forces manifested in several critical incidents between Australian and American high command which exacerbated the already strained Australian-American relationship. As Horner highlights, most tensions originated at Blamey and MacArthur’s level, where scrutiny and pressure were greatest for the most senior commanders in theatre. Neither commander had personally witnessed the performance of their counterpart’s troops, but their views remained stubbornly entrenched throughout the campaign. Some American officers expressed a low opinion of Australian troops, criticising their methods or slow progress as the product of a lack of aggression.¹⁰⁴ Conversely, some Australians perceived the Americans as arrogant, over-confident, and lacking practical operational experience.¹⁰⁵ Allied cooperation and understanding was severely tested by the command organisation, strategic uncertainty, and anxiety arising from early tactical shocks.

The 32nd Division’s initial struggles at Buna called into question the competency of American forces. GHQ’s Chief Engineer, Brigadier General Hugh Casey, noted that following the

¹⁰³ Eichelberger Dictations Book V, II-100, Robert L. Eichelberger Papers, B1 SV, USAHEC.

¹⁰⁴ Byers stated the widespread American viewpoint was that until 1939, the Australians had ‘no regular army’. Dean also cites the deterioration of relations among servicemen in Australia and the Battle of Brisbane as another contributing factor to Australian-American tensions at the time. Byers Interview, RG49 B1, MM; Dean, *MacArthur’s Coalition*, 130-134.

¹⁰⁵ Eichelberger noted an exchange between himself and Lavarack, GOC First Australian Army, during September 1942 where Lavarack raised MacArthur’s request for American staff officers to serve in Australian divisions because he considered Australian staff work ‘poor’. Lavarack responded that the Australian regular officers were better trained and experienced from the First World War and more recently in the Middle East. Eichelberger observed a similar response when Herring enquired about the 32nd Division and was informed it was a National Guard unit. Eichelberger Dictations Book II, II-19-20, Robert L. Eichelberger Papers, B1 SII, USAHEC.

Philippines, Buna raised questions whether the Americans could defeat the Japanese in battle.¹⁰⁶ After a week of little progress, Herring visited the front and was unimpressed by his observations.¹⁰⁷ This coincided with Vasey's letter to Blamey regarding the 126th Regiment's 'unsatisfactory' conduct at Sanananda.¹⁰⁸ At a conference between MacArthur, Blamey and Herring, the capabilities of the 32nd Division were raised. MacArthur proposed bolstering the attack with the 41st Division. According to Kenney:

Blamey said he'd rather put in more Australians as he knew they would fight...Herring there too confirms what Blamey says. They both don't think much of our 32nd [Division's] leadership and fighting qualities.¹⁰⁹

MacArthur's previous criticisms that Australian troops had been 'unable to match the enemy in jungle fighting' and that 'aggressive leadership [was] lacking' were now levelled against the Americans.¹¹⁰ Kenney recorded it was a 'bitter pill' for MacArthur to swallow, while MacArthur's secretary noted Blamey 'sat smiling smugly now that the shoe seemed to fit neatly on MacArthur's foot'.¹¹¹ Later in the operations, Berryman told Eichelberger of Australian high command's perspective during the campaign:

...the jokes of the American officers in Australia, making fun of the Australian army...were told all over Australia...[Berryman] said of those who talked sharply or made fun of the Australians as fighters [including MacArthur, Kenney and Sutherland] were not guiltless. Therefore...when [the Australians] got the least thing on American troops fighting in the Buna sector, [Australian] high command has gone to [MacArthur] and rubbed salt in his wounds.¹¹²

The tense coalition between unequal allies complicated the coordination of Allied efforts at the highest levels and introduced a competitive element between Australian and American commanders. However, Blamey was focused on defeating the Japanese, and noted to Shedden high command's shared disappointment: 'MacArthur is equally [disappointed] at the lack of force and drive shown by the 32nd Division'.¹¹³ Characterisation of forces based on nationality proved unhelpful and overlooked the difficulties faced by ground forces.

Conflating military problems with national reputations obscured objective assessments of the tactical situation.¹¹⁴ The perceived failure of the 32nd Division damaged Australian opinions of

¹⁰⁶ Hugh J. Casey, *Engineer Memoirs* (Washington DC: Office of History US Army Corps of Engineers, 1993), 253-254.

¹⁰⁷ Horner, *Crisis of Command*, 226.

¹⁰⁸ Vasey to Blamey, 25 November 1942, 3DRL/6643 Item 2/140, AWM.

¹⁰⁹ Kenney Diary, 25 November 1942, RG54 B1 VIII, MM.

¹¹⁰ #43 MacArthur to Marshall, 6 September 1942, RG4 S1 B16 F1, MM.

¹¹¹ Kenney, *Kenney Reports*, 151; Rogers, *Good Years*, 336.

¹¹² Eichelberger Dictations Book V, V/II-122-123, Robert L. Eichelberger Papers, B1 SV, USAHEC.

¹¹³ Blamey to Shedden, 30 November 1942, 3DRL/6643 Item 2/3, AWM.

¹¹⁴ Horner, *Crisis of Command*, 244.

American combat troops while the division became a symbolic pawn in the contest between senior Australian and American commanders' egos. It took several weeks for Eichelberger to remediate the damage.¹¹⁵ Even after the Americans began to achieve successes at Buna and fought cooperatively with the Australians, the battle for reputations persisted. Eichelberger advised MacArthur:

My relations with General Herring have been most happy and I am inclined to think that his criticisms of the American troops might not have been as strong as General Blamey might indicate...I hope you will not let any Australian generals talk down their nose at you.¹¹⁶

However, Blamey still doubted American capabilities. Despite Herring's growing optimism, Blamey wrote: 'I would be very sorry to do anything that would impair the good relations you have established with the Americans, but I doubt very much whether Buna will be captured if we rely on them to do it'.¹¹⁷ Nationality rather than capability became a factor in the employment of reserves. Blamey and Herring's reluctance to rely on American troops saw Australian forces take on most of the offensive roles. Blamey wrote to Curtin:

...American troops cannot be classified as attack troops. They are definitely not equal to the Australian militia...I am afraid now that the bulk of the fighting will fall on our troops...The Americans say that the [41st Division]...is a much better one than the one they have here, but since they chose this as number one, I believe their view to be merely wishful thinking. I feel quite sure...that the American forces...will not attain any high standard of training or war spirit for very many months to come.¹¹⁸

Blamey continued to favour deploying Australian forces when possible, and despite scathing assessments of CMF units, preferred them over the 41st Division.

While there was persistent tension between MacArthur and Blamey, Herring was generally able to overcome internal friction to work within the coalition. Herring had enjoyed a long and positive relationship with Blamey prior to his appointment, while MacArthur had reinforced to Herring the soldier's duty to 'get on' with their superior prior to leaving for Papua.¹¹⁹ He also developed positive relationships with his American subordinates. Herring met Harding in Australia and thought him intelligent, confident, and a 'good man', while Harding believed he could be 'candid' with his Australian superior and found him 'especially fine to work with'.¹²⁰ However, the relationship deteriorated as Herring lost faith in Harding's capacity to command his force. Herring became frustrated by the lack information from Harding's headquarters and a perceived lack of drive by American units. Harding outlined a 'catalogue of woe' to Herring, explaining the reasons for the

¹¹⁵ Herring to Blamey, 10 December 1942, 3DRL/6643 Item 2/135, AWM.

¹¹⁶ Eichelberger to MacArthur, 26 December 1942, RG41 B1 F2, MM.

¹¹⁷ Blamey to Herring, 11 December 1942, 3DRL/6643 Item 2/135, AWM.

¹¹⁸ Blamey to Curtin, 4 December 1942, 3DRL/6643 Item 2/11, AWM.

¹¹⁹ Sayers, *Herring*, 218-219.

¹²⁰ Herring cited in Sayers, *Herring*, 214; Harding cited in Anders, *Gentle Knight*, 228-229; Harding to Sutherland, 31 October 1942, 98-GHQ1-3.2, RG407 E427 B573, NARA.

Americans' difficulties. Harding felt he had not received equal support and claimed Herring 'took a detached view of the trial and tribulations of my All-American outfit'.¹²¹ Conversely, Herring felt Harding '...didn't really seem to know what was going on and obviously had more than his hands full...the poor fellow was in no fit state to carry on'.¹²² Subsequent visits to Harding's headquarters confirmed Herring's concerns and contributed to Harding's relief.

Herring's excellent relationship with Eichelberger was a critical factor in the Allies' success at Buna. Herring described Eichelberger's arrival as a 'very pure breath of fresh air'.¹²³ His leadership, direction, and highly experienced staff helped to restore confidence in American troops. After the battle, Herring wrote:

Of General Eichelberger's conduct...from the time of his arrival till his departure after the last beachhead had been taken, one cannot speak too highly...he and members of his staff set an example of courage which cannot be surpassed...General Eichelberger kept them going and he proved to himself and his men and to the world, that the American soldier of 1943 has all the courage and determination and powers of endurance that his forefathers have shown in previous wars.¹²⁴

Eichelberger reciprocated Herring's confidence. Shortly after taking command, he informed GHQ his 'relations with Australian high command have been very cordial...I like General Herring very much and think we can work [together]'.¹²⁵ Eichelberger and Byers were impressed that Herring was the only senior commander to regularly visit them during the battle.¹²⁶ Herring later recalled that ensuring the cooperation between the two forces was his greatest achievement during the campaign.¹²⁷ Records show a clear mutual respect between the two and the relationship provided a buffer between the friction within high command and the battlefield, where there were two significant consequences which enabled tactical successes. First, it two enabled the Australian 18th Brigade to fight at Buna as a task force containing American forces without concern or interference from Eichelberger.¹²⁸ Second, it ensured that when Herring returned to Australian in early January 1943, Eichelberger was endorsed and supported as acting GOC Adv NGF to conclude the fighting at Sanananda. The respect, coordination and good-will between Herring and Eichelberger was a significant step to ensuring smoother cooperation at the tactical level during the campaign.

¹²¹ Harding to Milner, 24 July 1951, Harding Interviews, RG319 E53 B4, NARA.

¹²² Harding to Herring, 28 November 1942, HQ I Corps G-3 Journal New Guinea Campaign, RG338 E330 B198, NARA; Herring cited in Sayers, *Herring*, 242.

¹²³ Herring cited in Horner, *High Command*, 234.

¹²⁴ Lieutenant-General Edmund Herring, GOC NGF, "The Battles for the Beachheads," AWM54 581/6/10, AWM.

¹²⁵ Eichelberger to Sutherland, 8 December 1942, RG41 B1 F2, MM.

¹²⁶ Byers Interview, RG49 B1 F1, MM.

¹²⁷ Herring to Horner, cited in Horner, *Crisis of Command*, 264.

¹²⁸ See multiple correspondence between Herring and Blamey, 10-13 December 1942 & Blamey to Herring, 28 December 1942, 3DRL/6643 Item 2/135, AWM.

'Take Buna, or [Don't] Come Back Alive': Pressure from Above

Theatre-wide uncertainty placed all commanders, regardless of their position, under intense and cumulative pressure from above. The entire Allied position, commands, and individuals' reputations were at stake. This drove MacArthur to seek a quick victory while mitigating against potential disasters. The arrival of Japanese reinforcements on 17-18 November caused MacArthur's staff to advocate for the 'withdrawal and extrication from the whole show'.¹²⁹ MacArthur himself became 'remote [and] highly strung' under the circumstances.¹³⁰ He remained concerned about his career for most of the operations. In late December MacArthur remarked to Herring:

Well, we're not getting on very fast, are we...If we do not clean this position up quickly, I will be finished and so will your General Blamey, and what will happen to you...I just don't like to think about.¹³¹

Initial shocks of finding extensive prepared positions and reinforcements amplified MacArthur's pressure on his subordinates to achieve results or be relieved.

This pressure is evident in MacArthur's communications with his subordinates. Urgency, rather than efficiency, was a key theme in most correspondence. Late on 20 November, MacArthur directed Blamey to attack and '[drive] through to objectives regardless of losses' the next morning.¹³² MacArthur also communicated this message directly to Harding.¹³³ The hurried attack failed. MacArthur responded in a similar fashion after the Japanese landed west of Gona, sending a panicked order to Blamey late at night that 'Gona will be captured at dawn'.¹³⁴ Blamey dismissed MacArthur's directive, responding 'the man's a fool. Doesn't he know how long it takes to mount a battle'.¹³⁵ MacArthur placed tremendous pressure on Eichelberger when he sent him to relieve Harding:

...I'm putting you in command at Buna. Relieve Harding. I am sending you in Bob, and I want you to remove all officers who won't fight. Relieve regimental and battalion commanders if necessary, put sergeants in charge of battalions and corporals in charge of companies –

¹²⁹ Kenney Diary, 20 November 1942, RG54 B1 VIII, MM.

¹³⁰ Colonel Gerald Wilkinson, British Liaison Officer GHQ SWPA, cited in Clive Baker, "General Douglas MacArthur and the Papuan Campaign: A Study of his Mental State in 1942," (Hons. diss., University of Wollongong, 1997), 54.

¹³¹ MacArthur cited in James, *The Years of MacArthur Vol. II*, 269-270.

¹³² New Guinea Force Headquarters and General (Air) War Diary, 21 November 1942, AWM52 1/5/51/20, AWM.

¹³³ The 32nd Division's journal notes receipt of an unnumbered message from C-in-C GHQ SWPA at 0245 on 21 November 1942, though it does not specify what it contained. #1069 HQ 32nd Division to GHQ SWPA, 21 November 1942, 332-0.7, RG407 E427 B7796, NARA; James, *The Years of MacArthur Vol. II*, 240-241.

¹³⁴ MacArthur cited in Norman Carlyon, *I Remember Blamey* (South Melbourne: Macmillan, 1980), 120.

¹³⁵ Blamey cited in Carlyon, *I Remember Blamey*, 120.

anyone who will fight. Time is of the essence. The [Japanese] may land reinforcements any night...I want you to take Buna, or not come back alive.¹³⁶

MacArthur later apologised for the ultimatum, but it indicates the tremendous pressure placed on his subordinates.

MacArthur's insistence on hastening attacks revealed a flawed conception of what was required to fight the battles effectively. On 13 December, he reminded Eichelberger that 'time is fleeting and our dangers increase with its passage', and urged him to 'hasten' preparations and commit his forces into attacks, rather than carefully plan and coordinate them or ensure suitable supply arrangements.¹³⁷ This demonstrated MacArthur's ignorance of how supply was vital to restoring American morale at Buna. MacArthur again urged Eichelberger on 25 December to make a quick attack to reduce potential casualties and the risk of a 'great counter stroke' against the Allies on the coast.¹³⁸ In frequently emphasising this threat, MacArthur placed his subordinates under great pressure while simultaneously failing to grasp the realities of what he was asking them to achieve.

While MacArthur applied pressure and used the relief of commanders as an expedient to ensure progress, Blamey demonstrated greater tact when dealing with his subordinates. He initially directed NGF to attack with the utmost haste, which was reflected through NGF when it instructed the 7th and 32nd Divisions it was 'imperative' to launch their attacks 'with greatest possible forces at earliest moment'.¹³⁹ However, his approach shifted as the difficulty of the operations became apparent. Blamey sought to insulate Australian commanders from MacArthur's insistent pressure. In late December several staff officers, including Berryman, had noted the strain on Herring.¹⁴⁰ Blamey had already relieved two generals during the campaign and it would have reflected poorly on himself and the AMF if he had to relieve another. Subsequently, Blamey recalled Herring to Port Moresby for a day's rest, and sent Berryman to replace Hopkins as his BGS. This revitalised Adv NGF's perspective and ensured a high standard of staff work in future planning. Berryman sought to minimise GHQ's interference by only accepting orders from Blamey and that all attacks would be prepared for

¹³⁶ The exchange was only witnessed by a handful of officers. There are differences in recordings of this exchange, but MacArthur's sentiment remained the same. See for example, MacArthur cited in Eichelberger, *Jungle Road*, 21; Kenney, *Kenney Reports*, 151; Kenney Diary, 30 November 1942, RG54 B1 VIII, MM; Byers Interview, RG49 B1, MM; Eichelberger Dictations Book V, V-19, Robert L. Eichelberger Papers, B1 SV, USAHEC.

¹³⁷ MacArthur to Eichelberger, 13 December 1942, RG41 B1 F2, MM.

¹³⁸ MacArthur to Eichelberger, 25 December 1942, RG41 B1 F2, MM.

¹³⁹ C-in-C AMF to GOC NGF, 17 November 1942, 3DRL/6643 Item 2/47, AWM; #966 NGF to Headquarters 32nd Division, 19 November 1942, 332-0.7, RG407 E427 B7796, NARA.

¹⁴⁰ NGF's DAQMG Brigadier Raymond Broadbent had visited Herring at Dobodura and reported to Blamey that Herring looked 'tired'. Berryman recorded in his diary that 'the strain was starting to show' on Herring. Horner, *Crisis of Command*, 249; Berryman Diary, 25 December 1942, PR84/370 Item 2, AWM.

properly.¹⁴¹ Blamey therefore solved several problems at once: he relived pressure on Herring, introduced a buffer to GHQ's interference, and protected the 'sensibilities and pride' of his senior commanders.¹⁴² However, unnecessary pressure and tactical interference based on inaccurate assumptions remained a prominent issue for much of the beachhead operations.

'Ensure the Ultimate Collapse': Inaccurate Assumptions

High command's failure to understand the operational environment was perhaps the most detrimental command issue. Its handling of the beachhead operations was shaped by a range of erroneous assumptions and lack of understanding about terrain, the defences, Allied and Japanese strengths, logistics and tactics. The reasons these assumptions persisted are difficult to determine, but stubbornness, interference, and inadequate intelligence hindered high command from reappraising the situation and relating verbal and written reports to the reality on the ground. The conditions in Papua were unlike any jungle encountered by MacArthur and his staff in the Philippines.¹⁴³ Crucially, failure to appreciate terrain's effects on manoeuvre, concentration of force, and fire support contributed to the pressure placed on subordinate commanders.

High command's intent for the three-axis envelopment worked at a strategic level, but failed tactically where flanks were protected by the sea, swamps, or bunkers.¹⁴⁴ Willoughby erroneously anticipated the 'coastal plain and savannah country' would permit the Allies freedom of manoeuvre to envelop the beachheads and believed most creeks and swamps were fordable.¹⁴⁵ This was highly inaccurate as waterways were flood-prone and movement was largely restricted to existing tracks, all of which were heavily defended. MacArthur remained optimistic about enveloping each sector and attacking from the flanks:

I have confidence [the 7th Division]...can reach [Sanananda]. If this is done I feel confident that the Buna position can be enveloped along the coast. While the [Girua] River may prevent actual infantry contact, I believe that artillery can be so emplaced as to enfilade the entire Buna position, making it untenable to the enemy. I believe a break-through at practically any place will ensure the ultimate collapse of the hostile position.¹⁴⁶

However, this fundamentally misinterpreted the terrain, the Japanese positions, and Allied capabilities. Buna could only be reached from Sanananda along the coast, while Allied artillery was limited in guns and ammunition and proved ineffective destroying defences. This idea was echoed by

¹⁴¹ Berryman to David Horner, cited in Dean, *Architect of Victory*, 188-189; Horner, *Blamey*, 376.

¹⁴² Horner, *Crisis of Command*, 250.

¹⁴³ Casey, *Engineer Memoirs*, 199; Zobel, "Victory at All Costs," 106.

¹⁴⁴ Blamey to Curtin, 4 December 1942, 3DRL/6643 Item 2/11, AWM.

¹⁴⁵ GHQ SWPA MIS "G-2 Daily Summary No. 227," 4 November 1942; GHQ SWPA MIS "G-2 Daily Summary No. 229x," 6 November 1942, RG3 S2 B27 F1, MM.

¹⁴⁶ MacArthur to Blamey, 27 November 1942, RG4 S1 B6 F2, MM.

Blamey who initially believed the Japanese positions would be vulnerable to enfilading artillery fire.¹⁴⁷

High command's continual questioning of why positions were not bypassed also reflected a poor understanding of the organisation of the Japanese defences and the limits to manoeuvre. Herring and Eichelberger sought to describe their situations but their success influencing their superiors' understanding was limited.¹⁴⁸ Blamey questioned why Herring did not bypass strongly-held positions at Gona, stating 'it is a great error in tactics to hammer away at a pocket, since it delays the operation and leads to casualties'.¹⁴⁹ However, there was no depth to manoeuvre around Gona's defences, and the Japanese threat from the west necessitated its capture.¹⁵⁰ Blamey's understanding of Sanananda was worse. He queried why it had not been possible for Vasey to replicate the brigade-level envelopment he conducted at Oivi-Gorari, and why further roadblocks like Huggins had not been established: 'this is a question that General MacArthur has put to me this morning and I must admit that I can find no satisfactory answer'.¹⁵¹ Vasey simply did not have the forces to conduct such attacks, nor did the terrain permit large-scale manoeuvres from the main road.

High command also held misconceptions about Allied strengths and capabilities. Allied forces were drastically depleted due to casualties and sickness. References to units had little relation to their actual effective strengths. The terrain also inhibited the concentration of force and the frontages over which units could fight effectively. This was no better demonstrated than when MacArthur urged Eichelberger to make use of his numerical superiority:

One word of advice on your fighting; it is being done with gallantry, but with too little concentration of force...Where you have a company on your firing line, you should have a battalion: and where you have a battalion, you should have a regiment. And your attacks, instead of being made by two or three hundred rifles, should be made by two or three thousand...Your battle casualties to date compared with your total strength are slight so you have a big margin to work with.¹⁵²

Eichelberger's forces in Urbana sector consisted of two company-strength battalions and the recently arrived 127th Regiment. While battle casualties had not been exorbitant, sick casualties

¹⁴⁷ Blamey to Herring, 4 December 1942, 3DRL/6643 Item 2/135, AWM.

¹⁴⁸ See Eichelberger's correspondence with GHQ SWPA and Herring's demi-official correspondence with Blamey. RG4 B6 F1, MM; 3DRL/6643 Item 2/135, AWM.

¹⁴⁹ Blamey to Herring, 30 November 1942, 3DRL/6643 Item 2/135, AWM.

¹⁵⁰ Blamey also noted it was 'surprising' there was no practicable route from Gona to Sanananda, though the 7th Division had repeatedly tried to find a way during late November. Blamey to Herring, 4 December 1942, 3DRL/6643 Item 2/135, AWM.

¹⁵¹ Blamey to Herring, 13 December 1942, 3DRL/6643 Item 2/135, AWM.

¹⁵² MacArthur to Eichelberger, 25 December 1942, RG41 B1 F2, MM.

among American troops were severe. MacArthur's idea of massing troops was also impractical given the limited avenues for movement in the area.

Despite more information becoming available as the operations progressed, GHQ and NGF were slow to appreciate it or seemingly ignored it. GHQ's G-2 reports continued to underestimate the strength and capacity of the Japanese forces well into December because they continually dismissed the role of support personnel in actively defending the beachheads.¹⁵³ The situation reports which eventually reached high command had lost the details which explained the difficulties and conditions faced by units as they were relayed upwards, while topographic maps failed to capture the reality of the terrain. This information gap should have been filled by tactical reconnaissance or reports from staff officers. While Willoughby and Sutherland both visited the front, neither toured the forward positions. It is uncertain what they reported, but it seems they were unwilling or unable to inform MacArthur of the true picture.¹⁵⁴

Correspondence from senior commanders in the field should also have informed high command's understanding. Herring and Eichelberger both included detailed explanations in their frequent correspondence to Blamey and MacArthur respectively, but high command's responses suggest they had difficulty conceptualising the situations described.¹⁵⁵ While Blamey began to accept the circumstances reported to him by Herring during December, GHQ's understanding remained disconnected. Sutherland's manipulative influence cannot be ruled out. He regarded Eichelberger's correspondence as a form of 'propaganda' to protect and enhance Eichelberger's reputation.¹⁵⁶ Sutherland's dismissal of the conditions is also supported by his claim the Japanese defences were 'hasty field entrenchments' after visiting Dobodura, which was not part of the main defence system, and contradicted all recorded descriptions and diagrams from Warren and Urbana sector.¹⁵⁷

¹⁵³ Willoughby continued to suggest the Japanese were fighting rearguard actions to enable evacuations during the first week of the operations. GHQ SWPA MIS, "G-2 Daily Summary #241," 18 November 1942, & GHQ SWPA MIS "G-2 Daily Summary #241x," 18 November 1942, RG3 S2 B27 F2, MM.

¹⁵⁴ Willoughby visited Sanananda in early December and observed an attack by the American II/126th against the Killerton Junction on 5 December. He interviewed an Australian Lieutenant who provided him frank observations about the American's performance. Sutherland made several visits to Dobodura – first regarding the relief of Harding on 30 November, then between 25-26 and 28-29 December. McCarthy, *Kokoda to Wau*, 404, Luvaas, "A 'Leavenworth Nightmare'," 201, 390.

¹⁵⁵ Harding wrote several letters to Sutherland during October, but correspondence with GHQ ceased during November. Eichelberger wrote to MacArthur and Sutherland at GHQ daily. Herring and Blamey corresponded frequently during November and December until the situation began to resolve. Herring was in personal contact with Vasey and Eichelberger frequently. These relationships are discussed in Chapter Six.

¹⁵⁶ Sutherland to Ward, 6 April 1951, Interviews, RG319 E53 B5, NARA.

¹⁵⁷ Luvaas, "A 'Leavenworth Nightmare'," 201, 390.

Given the distorting effects of reporting and personalities, MacArthur and Blamey's understanding of the operations would have been improved had they visited the front.¹⁵⁸ Understanding derived from personal observation was a key factor in effective command. Adv NGF's initial disconnect from its forward formations contributed to misunderstandings over issues like the role of the 126th Regiment.¹⁵⁹ However, after establishing Adv NGF headquarters at Popondetta and then Dobodura, Herring and his staff met regularly with Vasey and Eichelberger.¹⁶⁰ They became familiar with the conditions, terrain, and forces under their command. According to Casey, personal experience of the Papuan jungles was essential to appreciating its effects on combat and logistics:

I don't think there's a proper concept among those who weren't there and didn't see it...which those on our headquarters did not do...they didn't do as much personal reconnaissance as I felt they should.¹⁶¹

Eichelberger later wrote that MacArthur's 'knowledge of details was so faulty that his directives...indicated he knew nothing of the jungle and how one fights there'.¹⁶² American doctrine advised commanders to visit their subordinates when possible and that understanding terrain and conditions was a commander's responsibility.¹⁶³ Blamey repeatedly requested MacArthur to accompany him over the Owen Stanleys during the operations, but he never agreed.¹⁶⁴ Whether MacArthur should have visited the battlefields is vexed. He had a wide range of responsibilities as theatre commander and the short flight from Port Moresby to Dobodura was inherently dangerous because of both flying conditions and the Japanese air threat. Later in the war he would visit forward areas under fire, but MacArthur was not fond of flying and preferred to travel by sea.¹⁶⁵ His decision not to visit the forward areas was not critical but ensured his reliance on reports and his staff.

The accuracy of Blamey's understanding of conditions is also debatable. Some officers felt Blamey had 'no idea of what [was] going on over the range'.¹⁶⁶ An officer told Chester Wilmot, an Australian war correspondent, that Blamey ignored warnings from Herring, Berryman, and Vasey

¹⁵⁸ Horner, *Crisis of Command*, 256, 266.

¹⁵⁹ Vasey, "Notes on Operations in New Guinea," undated, MS3782, B3 F18, NLA.

¹⁶⁰ Sayers, *Herring*, 242.

¹⁶¹ Casey, *Engineer Memoirs*, 252-253.

¹⁶² Eichelberger Dictations Book V, V-24, Robert L. Eichelberger Papers, B1 SV, USAHEC.

¹⁶³ *FM100-5: Operations 1941*, 25-30.

¹⁶⁴ Horner, *Crisis of Command*, 256.

¹⁶⁵ Kenney Interview, RG49 B2, MM.

¹⁶⁶ Horner suggests the officer, who is unnamed in the source, was Brigadier Denzil MacArthur-Onslow, Commander 1st Armoured Brigade, who was present in Papua during this period and had previously been critical of Blamey's handling of the campaign in a letter to Gavin Long. Horner, *Crisis of Command*, 183-184; Horner, *Blamey*, 382; Wilmot to Molesworth, 23 January 1943, AWM67 Item 3/427, AWM.

about the wastage of troops and vulnerability of the Allied positions around Sanananda.¹⁶⁷

Furthermore, the officer observed:

The NGF staff are all very unhappy because they know the show has gone astray – [Blamey] won't take advice even from people on the spot who know – and anyone who dares offer advice is on the black list...the worst feature was that no officer knew when he would get the sack.¹⁶⁸

Vasey also suggested it was 'quite impossible to change the outlook' of Blamey.¹⁶⁹ However, Blamey's attitude began to shift during mid-December as he accepted the views of Herring and Vasey. His eventual visit to Buna and Sanananda on 5 January finally convinced him of the challenges Allied troops had faced. Blamey inspected bunkers, swamps, and witnessed 'all-American battle[s]' after A-20s attacked friendly positions. After examining the battlefield, Blamey told Eichelberger that a 'miracle had been performed'.¹⁷⁰ While the visit was appreciated, it was of little value so late in the campaign. It is unclear why it took so long for Blamey to visit. Horner suggests it was from fear of upstaging MacArthur or appearing to interfere in the battle to avoid similar tensions which had emerged with Rowell in Port Moresby in September.¹⁷¹ High command's poor understanding of the operations contributed to instances of tactical interference as it sought to direct the battles as it hoped they would occur.

'Advice Only': Tactical Handling and Interference

Adv NGF's ability to direct the beachhead operations was constrained by the unusual command relationship with high command and the character of operations. Herring and his subordinates contended with efforts by high command to interfere with the employment of their forces as pressure mounted to conclude the operations. Meanwhile, the dispersed and small-scale character of jungle fighting meant most significant tactical decisions were made at lower levels, leaving Adv NGF primarily to manage forces rather than direct them. This meant Adv NGF's most important function was ensuring the cooperation and coordination of Australian and American forces, and ensuring supply was maintained. These were ultimately more important to victory.

High command's interference with NGF and the Allied divisions manifested in orders to attack immediately or in greater strengths – which have been addressed previously – or in circumventing the chain of command. Allied doctrines permitted the chain of command to be

¹⁶⁷ Wilmot to Molesworth, 23 January 1943, AWM67 Item 3/427, AWM.

¹⁶⁸ Wilmot to Molesworth, 23 January 1943, AWM67 Item 3/427, AWM.

¹⁶⁹ George Vasey to Jesse Vasey, 5 January 1943, MS3782, B3 F18, NLA

¹⁷⁰ Eichelberger Dictations Book V, V/II-100, Robert L. Eichelberger Papers, B1 SV, USAHEC; Robert Eichelberger to Emmalina Eichelberger, 13 January 1943 cited in Luvaas, *Dear Miss Em*, 54.

¹⁷¹ Horner, *Blamey*, 380.

bypassed in urgent situations.¹⁷² However, the SWPA's command organisation and GHQ's intent to retain close control over American forces resulted in considerable interference.¹⁷³ The differing emphases on centralisation meant it was perceived differently by Australian and American commanders, though it was generally felt to reflect high command's poor appreciation of the conditions.

The most egregious example was GHQ's attempts to alter the deployment of the 163rd Regiment. In late December Herring noted Vasey's forces were still held fast at Sanananda and 'in a bad way'.¹⁷⁴ Meanwhile, Allied forces at Buna had achieved multiple breakthroughs and were close to capturing their objectives. Herring, supported by Blamey, gained MacArthur's approval to deploy the 163rd Regiment to reinforce the 7th Division.¹⁷⁵ However, the next day, Sutherland informed Blamey the 163rd Regiment would go to Eichelberger instead. Blamey believed that Sutherland's recent visit to Buna had influenced the reversal.¹⁷⁶ Blamey immediately protested the decision, highlighting the situation to MacArthur and citing the successes of the combined Australian-American Warren Force.¹⁷⁷ Regardless, Blamey's greatest concern was MacArthur's interference:

I regret still more that you should have personally taken tactical control of a single phase of the action...Herring returned to the front to make his plans based on your undertaking that the [163rd Regiment] would be made available in the Sanananda area. With greatest respect I would urge for your consideration that this alteration...will profoundly disturb his confidence and upset his arrangements.

I do not for one moment question the right of the [C-in-C] to give such orders as he may think fit, but I believe that nothing is more contrary to sound principles of command that the [C-in-C, GHQ SWPA or Commander, ALF] should take over the personal direction of portion of the battle. This can only result in disturbing the confidence of the inferior commanders.¹⁷⁸

Blamey's defence of Herring's command was a significant departure from the previous course of compliance with MacArthur's pressure.

MacArthur's dismissal of Blamey's concerns inadvertently highlighted his ignorance of his conduct:

I do not for one moment agree...that I am unduly interfering with the local details of the operation. I am in no way attempting to control tactical execution on the front but am

¹⁷² FM100-5: *Operations 1941*, 30; FSR Vol. II: *Operations – General 1935*, 28-29.

¹⁷³ Blakeley, *The 32nd Infantry Division*, 126.

¹⁷⁴ Herring cited in Sayers, *Herring*, 242.

¹⁷⁵ Herring cited in Sayers, *Herring*, 242-243.

¹⁷⁶ In a letter to Herring, Blamey indicated that Sutherland believed the Americans were being treated unfairly by the Australian NGF command. Sutherland cited the uneven distribution of carriers as an example; Vasey had 3,000 while Eichelberger had only 700. Blamey then raised this with MacArthur. Blamey to Herring, 28 December 1942, 3DRL/6643 Item 2/135, AWM; Blamey to MacArthur, 27 December 1942, 3DRL/6643 Item 2/47, AWM.

¹⁷⁷ Blamey to MacArthur, 27 December 1942, 3DRL/6643 Item 2/47, AWM.

¹⁷⁸ Blamey to MacArthur, 27 December 1942, 3DRL/6643 Item 2/47, AWM.

merely strategically advising as to where I believe it would be wise to exert the main effort...no [C-in-C]...could have given greater latitude to you or expressed both by word and deed greater confidence in commanders involved...You have mistaken my advice as an arbitrary order...any order that I issue will be in written form. My verbal discussions are advice only.

Dean describes this statement as 'blatantly dishonest'.¹⁷⁹ MacArthur and GHQ had been constantly critical of subordinates throughout the campaign, had exacerbated Australian-American tensions, and directly intervened on numerous occasions. MacArthur's focus on Buna also disregarded that Sanananda was the main centre of the Japanese defences.¹⁸⁰ However, MacArthur backed down and the 163rd Regiment was deployed to Sanananda.

Despite Blamey interceding on Herring's behalf in this instance, he was not innocent of restricting his subordinate's decision-making. The crucial deployment of the 18th Brigade and tanks to Buna was largely initiated by Blamey on 13 November.¹⁸¹ Blamey was convinced the tanks had to be under Australian control after the Americans' mishandled Bren Carrier attack, and set the parameters for their employment:

These troops are being sent under Brig Wooten's command as a force to capture the area Endaiadere-Buna, and are NOT available for action against Sanananda until this task is complete. I also want to make it quite clear that the operation will be carried out under Brig Wooten's command, and you may consider it as a task force primarily for this purpose...After the Endaiadere-Buna area is captured the Force is at your disposal for any purpose. The detailed plan is a matter for your own determination.¹⁸²

A staff officer at Adv NGF noted a 'tense' atmosphere after the receipt of the letter as Herring sought clarification.¹⁸³ Blamey appeased Herring, stating his ideas were 'suggestions' based on terrain and Herring could ultimately determine where the tanks were employed, though Blamey was adamant on Wooten's command.¹⁸⁴ Blamey's reasoning about terrain was sound and the matter was satisfactorily resolved.

Senior command's tactical appreciations were also contentious. While MacArthur persisted in his exhortations for massed attacks, Blamey questioned the shift towards small-unit tactics during December. Adv NGF's Operation Instruction No. 48 recognised that hasty massed attacks were unlikely to succeed, and the 'completion of operations must...be achieved with all speed consistent

¹⁷⁹ Dean, *MacArthur's Coalition*, 187.

¹⁸⁰ MacArthur to Blamey, 28 December 1942, RG4 S1 B6 F2, MM.

¹⁸¹ New Guinea Force Headquarters and General (Air) War Diary, 13 November 1942, AWM52 1/5/51/20, AWM.

¹⁸² Blamey to Herring, 9 December 1942, 3DRL/6643 Item 2/1235, AWM; Blamey to Herring, 10 December 1942, 3DRL/6643 Item 2/1235, AWM.

¹⁸³ Sayers, *Herring*, 243

¹⁸⁴ Blamey to Herring, 11 December 1942, 3DRL/6643 Item 2/1235, AWM.

with the standard of training and endurance of troops'.¹⁸⁵ It denoted the first sanctioned shift in tactics across the front. Herring's subsequent correspondence with Blamey explicitly detailed the terrain and defences which required tactical adaptation as 'attacks on Jap positions in strength have all been extremely costly, and as a rule have produced...little'.¹⁸⁶ Herring supported Porter and Vasey's 'peaceful penetration' policy and Eichelberger's aggressive patrolling as part of a 'daily wearing down process rather than the direct attacks that [cause] the enemy to break'.¹⁸⁷ Herring endorsed the decision to:

...[go] quietly, take out a post here or a post there each day if possible, shoot men out of trees and generally harry the enemy, maintaining pressure everywhere to breakdown his morale. This seemed the only proper course when it is considered how little was achieved by 30 Brigade's splendid effort and heavy losses.¹⁸⁸

However, Blamey was reluctant to accept the risk and time it would take to succeed through attrition:

I note that your policy is now rather one of sit down and wait, and quite honestly I am afraid of it. We have a devilish determined enemy to deal with and delay is dangerous. It was the knowledge of his very strongly built-in positions that led to the sending up of the tanks.¹⁸⁹

While Blamey was entitled to ask questions of Herring's approach, it indicates his lack of understanding of tactical conditions and high command's preference for a decisive result.

The prospect of achieving decisive tactical breakthroughs and envelopments preoccupied high command. This led to the suggestion of risky and ill-conceived plans for amphibious landings against Buna. MacArthur and Blamey entertained a landing along the Buna-Gona front in 'as great a force as possible', hoping 'any penetration in rear of the hostile positions should result in decisive flanking action against the remaining enemy elements'.¹⁹⁰ It was a daring but ultimately impractical plan which demonstrated the desperation of the beachhead operations. Blamey was unable to secure the ANF's cooperation – whose role is discussed in Chapter Nine – and the plan was abandoned in favour of deploying tanks. The proposal demonstrated Blamey and MacArthur's desire for decisive attacks and their flawed knowledge of the operational environment.

¹⁸⁵ Adv NGF, "Operation Instruction No. 48," 6 December 1942, AWM52 1/5/51/20, AWM.

¹⁸⁶ Herring to Blamey, 11 December 1942, 3DRL/6643 Item 2/1235, AWM.

¹⁸⁷ Herring to Blamey, 11 December 1942, 3DRL/6643 Item 2/1235, AWM.

¹⁸⁸ Herring to Blamey, 11 December 1942, 3DRL/6643 2/1235, AWM.

¹⁸⁹ Blamey to Herring, 11 December 1942, 3DRL/6643 Item 2/1235, AWM.

¹⁹⁰ MacArthur to Blamey, 26 November 1942, RG4 B6 F2, MM.

Conclusion

The performance of Allied high command contributed to many of the operational and tactical problems of the beachhead operations. The operations were characterised by internal friction, pressure from above, inaccurate assumptions about the situation, and tactical interference. These were the product of personalities, prejudices, and a command organisation ill-suited to coalition warfare. The cumulative effect of these command issues resulted in increased pressure on subordinates to commit costly and ineffective attacks, a lack of appropriate support, increased tensions between coalition partners, and increasing disillusionment with high command.

The beachhead operations were a harsh test of leadership and command. MacArthur and Blamey fared poorly.¹⁹¹ MacArthur deserves little credit for the Allied success at the beachheads. It was a victory achieved despite his efforts to shape their conduct. His narrow strategic focus and personal goals made him a complicating factor, which was further exacerbated by Sutherland's deep animosity towards the Australians. These factors marginalised any positive influence the rest of GHQ might have exerted. Blamey's role was mixed. While he managed to protect senior Australian commanders from the worst of GHQ's pressure, he was guilty of many of the same faults regarding his knowledge and understanding of the operations. However, he was able to achieve some positive effects supporting Adv NGF. Herring's ability to influence the battle as GOC Adv NGF was curtailed by both the command structure and the character of the operations. The dispersed and discontinuous battlefield meant tactically important decisions were often made by commanders at division-level and below. Herring's role became primarily one of a manager rather than a commander, though importantly, he was successful in maintaining positive relationships with his superiors and subordinates.

Allied high command generally failed to meet the criteria for effective command. Accurate and timely intelligence regarding Japanese strengths, dispositions, and intent was difficult to determine or poorly interpreted. The fundamental problem was the reluctance of senior commands to challenge their expectations about the operations. Even as more information filtered through to NGF and GHQ, only Herring appeared to accurately perceive the complexity of the operations. While the intent of the operations remained consistent, the emphasis to achieve major objectives in short timeframes presented considerable challenges and pressures for subordinate commanders. GHQ's desire to exert tight control also restricted how freely subordinates could pursue objectives and devise their own plans. This led to instances of tactical interference and the violation of the principles of the chain of command. Senior command was also guilty of failing to effectively monitor

¹⁹¹ Horner, *Crisis of Command*, 264.

the operations through feedback. This was demonstrated by the dismissal of the shift towards attritional, small-unit tactics compared to massed attacks, which without proper fire support offered little chance of success. The result was that subordinate commanders faced a continuous challenge trying to inform their superiors of actual conditions while simultaneously achieving their intent with limited combat and logistical resources.

Chapter Five

‘Easily Fifty Percent of Jungle Warfare’: Logistics During the Beachhead Operations

This campaign, as far as Q was concerned, was a triumph of improvisation of existing transportation media over almost insurmountable physical obstacles. The terrain as well as the task produced and influenced the system where conventional methods of maintenance were not practicable...Necessity, resources and experience combined in evolving a flexible system suitable to the peculiarities of the tactics and topography of the campaign.¹

**Q Branch, NGF
“Methods and Lessons Learnt During the
Buna-Gona Campaign, Sep 42/Jan 43”
29 March 1943**

Logistics presented a major challenge for the Allies and had a definitive influence on the character and course of the operations.² The failure to achieve a quick victory exposed a fragile supply system which required constant coordination, improvisation, and adaptation to overcome a challenging operational environment and a ‘logistical shoestring’ to sustain a major offensive operation for more than two months.³ Ultimately, the campaign was decided by the Allies’ ability to maintain and improve their supply lines and adapt to challenges, while the Japanese failed to do so.⁴

¹ NGF Q Branch and Services, “Serial 9: Methods and Lessons Learnt during the Buna-Gona Campaign, Sept. 42-Jan. 43,” 29 March 1943, AWM54 577/7/29 [8], AWM.

² This chapter focuses on operational and tactical level logistics. Strategic level logistics – the allocation of supplies, personnel, and equipment to the SWPA theatre – has been addressed in Chapter One.

³ John Coates, “New Guinea Campaign,” in *The Oxford Companion to Australian Military History*, eds. Peter Dennis et al., 2nd Edition (Oxford: Oxford University Press, 2009), 420.

⁴ Fully addressing Japanese logistics is beyond the scope of the thesis but it provides a counterpoint to the Allies’ relative success. Examinations of Japanese logistics can be found in Keith Richmond’s study of the

Japanese supply relied on sea transportation from Rabaul, but the concurrent commitment to Guadalcanal and the Allies' increasingly effective interdiction of Japanese shipping – examined in Chapter Nine – crippled the XVIII Army's ability to maintain the beachheads by December.⁵ When this supply line broke down, the Japanese had no recourse except for barges shuttling supplies from Lae or submarines floating supplies to shore which could not meet the demands for food or medical supplies. This supply shortage degraded the defenders, but they never lacked ammunition and continued to resist stubbornly.⁶ Meanwhile the Allies were able to leverage airborne, seaborne, and to a lesser extent overland supply to mitigate challenges and interruptions while continually improvising and improving their supply capabilities. Logistics is a critical factor in military operations.⁷ It determines what forces can or cannot do; where, how far and how fast they can move, how they fight, how long they can fight for, and the losses they can sustain. In practical terms, it refers to moving troops, equipment, and supplies where they are needed and then sustaining forces with ammunition, reinforcements, food, and medical care.⁸ Despite most military histories identifying the significance of logistics in the outcomes of battles, few examine it.⁹ Martin van Creveld and James Huston argue histories tend to focus on the movement of troops across battlefield, but neglect the practical details of how they arrive or how they stay there.¹⁰ The breakdown of logistics is often cited as a cause for military failure, but overcoming logistical challenges is rarely identified as a reason for victory. Logistical success ensured the Allies could survive and win at the beachheads.¹¹

The Allies faced four main logistical challenges during the beachhead operations. First, the Allies' logistical systems had to be coordinated to reconcile doctrinal differences and simplify supply. The establishment of the Combined Operational Service Command (COSC) helped organise the efforts of Australian and American logistical services and maximise limited logistics capabilities through liaison with NGF. It proved a functional and effective Allied command which supported the

Papuan and New Guinea campaigns, Peter Williams' study of the Japanese on the Kokoda Trail, and Steven Bullard's work on the Japanese medical corps in Papua. Keith Richmond, "Some Logistical Challenges for the Japanese in the New Guinea Campaign, 1942-1945," *Sabretache* XLVI no. 2 (2005): 31-42; Keith Richmond, *The Japanese Forces in New Guinea during World War II: A Primer in Logistics* (Canberra: Keith Richmond, 2003); Peter Williams, *The Kokoda Campaign 1942: Myth and Reality* (Melbourne: Cambridge University Press, 2003); Steven Bullard, "The Great Enemy of Humanity: Malaria and the Japanese Medical Corps in Papua, 1942-43," *The Journal of Pacific History* 39 no. 2 (2004): 203-220.

⁵ The rice ration fell from 360ml in December to 40-80ml by January. Bullard, *Japanese Army Operations*, 231.

⁶ A Japanese soldier recorded in his diary: 'We have not eaten for over a week and have no energy. As soldiers, we are ready to die gallantly'. ATIS, "No. 203: Notebook of MP Cpl Tanaka," AWM55 3/2, AWM.

⁷ Beaumont, "Logistics, Strategy and Tactics," 49; James A. Huston, *The Sinews of War: Army Logistic* (Washington DC: Office of the Chief of Military History United States Army, 1966), 665; Martin Van Creveld, *Supplying War: Logistics from Wallenstein to Patton* (Cambridge: Cambridge University Press, 1997), 1-3.

⁸ Van Creveld, *Supplying War*, 1.

⁹ Moremon, "Triumph of Improvisation", 2.

¹⁰ Huston, *Sinews of War*, viii; Van Creveld, *Supplying War*, 2.

¹¹ Moremon, "Triumph of Improvisation", 15.

beachhead operations through a range of administrative functions like transportation, medical care, and base development. Second, supply methods had to be adapted to the environment. The Allied forces were reliant on air and sea transportation and the use of local labour as carriers. Seaborne supply proved most effective but was initially vulnerable, while airborne supply was a useful expedient but unreliable and inefficient. These means required Allied logistics staff to adapt procedures to meet operational and tactical demands and presented difficulties in terms of availability, reliability, and capacity.

Third, the volumes and types of supplies and equipment required by combat and supporting units to fight the battles had to be delivered. This proved constantly challenging because of limited transportation, lack of infrastructure, and disruptions caused by weather and enemy activity. The zero-sum game of supply meant Allied commanders had to weigh the essential supplies to sustain their available forces against bringing in more troops and equipment. Allied forces had to make optimal use of available resources while concurrently developing infrastructure such as airstrips, docks, and roads to improve supply capacity, and allocating local labour through the Australian New Guinea Administrative Unit (ANGAU). Last, the health and effective strength of forces had to be maintained in an environment which was hyper-malarial and presented severe challenges to delivering care to sick and battle casualties. Wastage through diseases, especially malaria, became a primary concern for commanders, while the difficulties of evacuation presented another problem of supply. Through a continuous process of learning, adaptation, and improvisation, the Allies implemented a practical and improving logistical system to support their operations and mitigate these challenges.

'Operations and Administration are Inseparable': Logistical Coordination

The first logistical challenge the Allies had to meet to sustain a coalition operation was to coordinate Australian and American logistics systems which operated by different doctrines. *FSR* and *FM100* shared similar conceptions of administration as the provision of supply and the maintenance of forces in the field, and offered common principles such as self-sufficiency, responsiveness, simplicity, and flexibility in planning and practice.¹² However, doctrines differed greatly in how

¹² *FSR* defined administration as the 'business of maintaining the forces in the field and of performing for them the various services required by them to enable them to fight'. *FM100-10* defined it as 'all phases of military operations not involved in... "tactics" and "strategy"' such as supply, evacuation, construction and maintenance, transportation and law'. The term "logistics" was not commonly used by British-Commonwealth forces during the Second World War while American doctrine interchangeably used the terms "administration" and "logistics". However, there was a generally accepted understanding of what the term meant, and after prolonged cooperation in the Pacific it also became prevalent in Australian military language as an

logistics was controlled and organised. British-Commonwealth doctrine saw logistics as a function of a general headquarters staff. Administrative matters were controlled by the C-in-C through A and Q staff branches and the heads of services.¹³ Conversely, American administration was controlled by a separate command – the Services of Supply – which was subordinate to a general headquarters. The command comprised all services and was represented by a staff officer.¹⁴ The Allies needed to reconcile these differences to establish an effective system of supply.

NGF faced two problems with the organisation and coordination of Allied supply. First, while NGF was responsible for the general administration of all Australian and American personnel in Papua and New Guinea, the American logistics command – USASOS – remained in Australia and was not represented at NGF.¹⁵ While the Australian army supplied American forces with petroleum and rations, some essential items remained USASOS's responsibility.¹⁶ Establishing USASOS in Papua separate from NGF risked creating waste by complicating supply lines and stretching the SWPA's shipping resources. Second, better understanding between the two systems was needed. However, Australian and Americans officers expressed strong views about their respective systems. Lieutenant-General Henry Wynter believed the American system separated logistics from operations.¹⁷ Meanwhile, American officers felt the Australian approach did not appreciate the complexity of logistics and was inclined to disfavour the Americans:

interchangeable term. *FSR Vol. I: Administration 1939*, xix; *FM100-10: Administration 1942*, ii, 18-19; Moremon, "Triumph of Improvisation," 3; Mallett, "Australian Army Logistics," 3-4.

¹³ During the First World War, a separate position of Inspector General of Communications existed which was responsible for administration and maintenance. However, the position proved unwieldy and was subsumed into GHQ's staff. *FSR Vol. I: Administration 1939*, 13; Mallett, "Australian Army Logistics," 29.

¹⁴ *FM100-10: Administration 1942*, 5-9.

¹⁵ This equated NGF with GHQ, and the GOC NGF with the C-in-C GHQ. *FSR Vol. I: Administration 1939*, 13; LHQ, "Administration Instruction No.1: Adm of Allied Forces in New Guinea," 19 August 1942, Appendix #59, AWM52 1/1/1/11, AWM.

¹⁶ LHQ, "Administration Instruction No.1: Adm of Allied Forces in New Guinea," 19 August 1942, Appendix #59, AWM52 1/1/1/11, AWM; Mallett, "Australian Army Logistics," 30-32; Alvin Stauffer, *The Technical Services: The Quartermaster Corps: Operations in the War Against Japan* (Washington DC: Centre of Military History Institute United States Army, 1990), 98-100.

¹⁷ Wynter, serving as the Lieutenant-General Administration at LHQ, wrote: 'As you know, we went to war in 1914 with a system very similar to the present system of the Americans (i.e. gen adm under Inspector-General of Communications separate from GHQ) but it was dropped like a hot cake because it would not work in the moving warfare of Mons and the Marne. The reason is not difficult to discern. It follows from the fact that operations and adm are inseparable and the responsible Adm Staff and heads of services must be in the operational picture at all time and often must be told the general intentions of the commander even before he sees fit to reveal them to other than his most senior General Staff officer...This is one of the main reasons why the C-in-C, under our system, controls gen adm through his staff and the services under them and not through a separate command'. Wynter tried to improve cooperation and understanding between American and Australian logistics systems through staff exchanges. Wynter to Blamey, 31 October 1942, 3DRL/3364 Item 2/36, AWM.

...our allies are not familiar with the requirements or methods of supply, and, secondly, do not have the same degree of interest in supplying our troops as we have ourselves. This is but natural...¹⁸

Accusations of favouritism remained an issue throughout the campaign, but it was not always possible to simultaneously fill the demands of both American and Australian forces.

The solution was found in merging Australian and American supply systems. GHQ authorised the establishment of the Combined Operational Services Command (COSC) on 5 October.¹⁹ COSC was created subordinate to NGF and represented a hybrid of Australian and American logistics organisation.²⁰ NGF's ability to deal with administrative matters was limited by its function as a corps headquarters – which was primarily a tactical command – until its staff was bolstered in November to deal with 'work additional to normal functions'.²¹ COSC incorporated all base and Lines of Communication (LoC) units in Port Moresby and assumed responsibility for the rear-area administration including shipping, storage, distribution, transportation, maintenance, base development, and medical care (Figure 5.1).²² This permitted NGF to focus on administration related to combat operations. There was some overlap in responsibilities, but it worked admirably and there were few complaints about its effectiveness.²³

COSC was a truly Allied command. American Brigadier General Dwight Johns, formerly Commander, USASOS Advanced Base Port Moresby, was appointed Commander, COSC, and Australian Brigadier Victor Secombe, DDST NGF, was appointed deputy, two experienced logisticians.²⁴ Johns engendered respect by exercising command of Australian units through Secombe, while his sensitive approach to complex inter-Allied logistical issues further demonstrated the effect of personalities on coalition operations.²⁵ Herring described the pair as 'born co-

¹⁸ Colonel George DeGraaf, I Corps Quartermaster, "Notes on the Buna Campaign, 1 December 1942-24 January 1943," 1 February 1943, 333 HQ I Corps Office of Quartermaster, RG338 E339 B279, NARA.

¹⁹ GHQ SWPA, "Establishment of an Operational Service Command in New Guinea," 5 October 1942, Appendix #1, AWM52 1/11/1/1, AWM.

²⁰ Wynter to Blamey, 31 October 1942, 3DRL/3364 Item 2/36, AWM.

²¹ This issue was raised by Rowell when he was GOC NGF, to which Blamey consented to dispatch elements of First Army headquarters. Blamey to Rowell cited in Mallett, "Australian Army Logistics," 29. For an overview of the disfunction of NGF, see Dean, *Architect of Victory*, 181-189.

²² GHQ SWPA, "Establishment of an Operational Service Command in New Guinea," 5 October 1942, Appendix #1, AWM52 1/11/1/1, AWM.

²³ However, the Americans were less pleased with it as it was part of an Australian command and gradually dismantled it by March 1943. McCarthy, *Kokoda to Wau*, 350; Moremon, "Triumph of Improvisation," 305.

²⁴ COSC, "Establishment of an Operational Service Command in New Guinea," 14 October 1942, AWM54 577/7/29 [13], AWM.

²⁵ Secombe had overseen the rebuilding of Tobruk Port in 1941 while Johns was heavily involved in the development of airfields in Papua during 1942. Johns had also been part of the development of the Marston Mat, a steel-plank surface which was used prominently throughout the Pacific. Ironically, ports and airfields became two of the foremost concerns for COSC. Blanche Coll, Jean Keith and Herbert Rosenthal, *The Technical Services: The Corps of Engineers: Troops and Equipment* (Washington DC: Centre of Military History Institute

operators'.²⁶ The organisation was based on the idea of 'parallelism'.²⁷ Representatives from each Australian and American service were paired together to coordinate and assist one another.²⁸ Johns and Secombe conducted 'detailed discussion of all problems arising and the agreement...to the appropriate solution and action has, at all times, been arrived at as the basis for actions and directives'.²⁹ They regularly attended NGF's conferences and remained well-informed of operational developments. This meant administrative and operational requirements could be married. While COSC's main responsibilities were in Port Moresby and Milne Bay, it supported the beachhead operations by managing the seaborne supply lines and arranging supplies for air transportation.³⁰ COSC's ability to coordinate Australian and American logistics services towards operational ends was a vital element to the Allies' success during the beachhead operations.

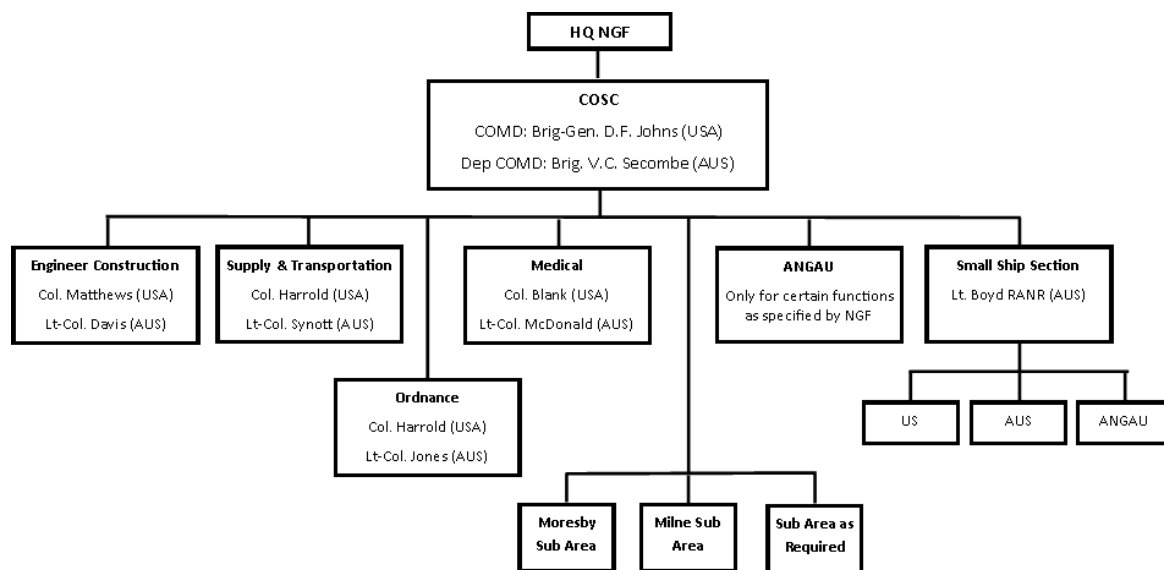


Figure 5.1: Organisation of the Combined Operational Services Command, October 1942.³¹

United States Army, 1988), 60-62; Ronald McNicholl, *The Royal Australian Engineers, 1919 to 1945: Teeth and Tail* (Canberra: Corps Committee of the Royal Australian Engineers, 1982), 35; Herring to D. Clayton James, 22 May 1972, MS 11355, B37, SLV.

²⁶ Herring to Clayton James, 22 May 1972, MS11355 B37, SLV.

²⁷ Johns, "Report on Recent Operations in the Owen Stanley-Buna Area," 25 February 1943, AWM54 577/7/29 [13], AWM.

²⁸ Johns, "Report on Recent Operations in the Owen Stanley-Buna Area," 25 February 1943, AWM54 577/7/29 [13], AWM.

²⁹ Johns, "Report on Recent Operations in the Owen Stanley-Buna Area," 25 February 1943, AWM54 577/7/29 [13], AWM.

³⁰ Control of the aircraft required for air transportation was retained by Fifth Air Force. For an overview of COSC's role in airfield, storage, and port construction in New Guinea see Moremon, "Triumph of Improvisation," 300-308.

³¹ Brigadier Dwight F. Johns, Commander COSC, "Report on Recent Operations in the Owen Stanley-Buna Area," 25 February 1943, AWM54 577/7/29 [13], AWM.

A 'Logistical Shoestring': Preparations for the Beachhead Operations

The approach to the beachheads was made on a logistical shoestring. Supply was constrained by limited transportation and was highly vulnerable to disruption. While high command acknowledged the importance of supply to the advance, logistical preparations were focused on the development of the area after its capture, rather than sustaining the operations.³² Supply was managed by NGF through COSC and 5AF for sea and air transport respectively. The 7th Division would be supplied by air, while Warren Force relied on small ships.

The Allies' air transport fleet was ill-suited to maintain a prolonged operation. The mix of military and civilian airframes was an 'expression of both the urgency of the situation...and of the poverty...in transport aircraft.'³³ The 374th Troop Carrier Group's Douglas DC-3s – which were civilian aircraft – provided most of the Allies' airlift capability, though the unit was partially re-equipped with C-47s – which were military-designed DC-3s with improved loading capacity – during November.³⁴ C-47s were the only aircraft capable of loading bulky equipment like jeeps and artillery pieces.³⁵ However, there were seldom more than 16 aircraft available at any time because of maintenance issues.³⁶ The RAAF's Special Transport Flight and No.33 Squadron were relocated to Port Moresby during December to bolster air transport. These units were equipped with a mix of Lockheed Hudsons, DC-2s and DC-3s, and other military and civilian aircraft.³⁷ Air transport provided

³² NGF, "New Guinea Force Adm Instn No.32: Move of 'Lilliput'," 15 November 1942, Appendix R, AWM52 1/5/53/1, AWM.

³³ Douglas Gillison, *Royal Australian Air Force, 1939-1942*, Volume I (Canberra: Australian War Memorial, 1962), 661-663.

³⁴ The air transport section of the AAF's Directorate of Air Transport – the Air Transport Command – was redesignated the 374th Troop Carrier Group on 12 November. It was composed of the 6th, 21st, 22nd and 33rd Troop Carrier Squadrons. The 21st and 22nd TCS had been in Australia since April. The 6th TCS arrived in Port Moresby on 13 October. The 33rd TCS did not reach Papua until 28 December 1942. Samuel Moore, "Tactical Employment in the US Army of Transport Aircraft and Gliders in World War II: Study Based on Histories of Troop Carrier Commands and Other Pertinent Data Ch V-X, Vol. II," (1969), 264, 274-278; Richard Watson, "The Papuan Campaign," in *The Army Air Forces in World War II: The Pacific: Guadalcanal to Saipan, August 1942 to July 1944*, Volume IV, eds. Wesley Craven and James Crate (Washington DC: Office of Air Force History, 1983), 114.

³⁵ During October Blamey repeatedly requested more C-47s after it proved impossible to load jeeps or artillery into DC-3s. The option of cutting open the roof of a DC-3 to load heavy equipment was proposed by NGF but Fifth Air Force immediately rejected it as it risked compromising the structural integrity of the aircraft. Moremon, "Triumph of Logistics," 326; "Operations in New Guinea: Air Transport Statistics and Notes," 20 March 1943, AWM54 519/6/50, AWM.

³⁶ There were severe shortage of parts for engine maintenance, particularly ball bearings for the Allison engines of American-made fighter aircraft and tools for Pratt and Whitney engines of Douglas transport aircraft. Gillison, *Royal Australian Air Force, 1939-1942*, 654; Lieutenant Colonel Ralph Birkness, 32nd Division Quartermaster, "Report of Activities of G-4, Rear Echelon 32nd Infantry Division in New Guinea, November 13, 1942 to March 3, 1943," 10 April 1943, 332-4, RG407 E427 B7940, NARA.

³⁷ No.6 Squadron's Hudsons were also seconded to a supplementary air transport role. Gillison, *Royal Australian Air Force, 1939-1942*, 661; Kenney, *Kenney Reports*, 163; RAAF Historical Society, *Units of the Royal Australian Air Force: A Concise History: Volume 4 Maritime and Transport Units* (Canberra: Australian Government Publishing Services, 1995), 35-41; RAAF Historical Society, *Units of the Royal Australian Air Force:*

considerable mobility and expedited supply, but it was limited by lift capacity. DC-3s and C-47s were preferred as they could carry 5,000lbs of cargo. Hudsons, which were designed as light bombers, were unwieldy to load and could only carry 3,500lbs of cargo. Limited lift capacity, aircraft availability, and poor weather meant it was difficult to meet the daily supply requirements of the advance (Figure 5.2).³⁸

Location	Minimum Daily Requirements	Maximum Daily Requirements
Wanigela	-	5,000lbs
Laruni-Jaure	5,000lbs	10,000lbs
Kokoda	32,000lbs	48,000lbs
Wau	4,300lbs	5,000lbs
Ave to Increase Reserves	20,600lbs	34,000lbs
Total	61,900lbs	102,000lbs
DC-3 Loads	13	21
Hudson Loads	18	30

Figure 5.2: Summary of Air Transport Requirements for Advance.³⁹

Seaborne supply was also limited by capacity. GHQ established the Lilliput fleet to supply the consolidation of Buna on 20 October.⁴⁰ The ships – ranging from 1,200-4,500 tons – were ready-loaded with engineering units and stores, artillery, and anti-aircraft defences and docked ready to move forward from Port Moresby and Milne Bay.⁴¹ However, until the route from Cape Nelson to Oro Bay was charted for large vessels, seaborne supply was reliant on COSC's small ships.⁴² COSC had procured a motley collection of 'schooners, motorships, motor launches, cabin cruisers, ketches,

A Concise History: Volume 8 Training Units (Canberra: Australian Government Publishing Services, 1995), 65-67.

³⁸ Blamey to MacArthur, 5 October 1942, 3DRL/6643 Item 2/47, AWM.

³⁹ The Wanigela minimum supply estimate assumed it could be sustained by sea rather than by air. Blamey to MacArthur, 5 October 1942, 3DRL/6643 Item 2/47, AWM.

⁴⁰ USASOS was responsible for the acquisition of shipping and transhipment. Most of the vessels were combat loaded in Australia. Once at Milne Bay, the ships came under NGF's command. The ANF was only responsible for protecting shipping to Milne Bay, not forward to Buna. Blamey to MacArthur, 16 October 1942, 3DRL/6643 Item 2/47, AWM; MacArthur to Blamey, 25 October 1942, RG4 S1 B6 F2, MM; GHQ SWPA, "Lilliput Operations (Notes for Staff Planning)," 17 October 1942, 98-GHQ1-3.2, RG407 E427 B573, NARA; GHQ SWPA, "Operations Instructions No.21: Lilliput," 20 October 1942, RG3 S3 B175 F1, MM.

⁴¹ The ships initially allocated to Lilliput included *Balikpapan*, *Both*, *Bontenkoe*, *Cremer*, *Jesse Applegate*, *Maetsuycker*, *Masaya*, *Stagen*, and *Yochow*. *Yochow* broke down off Rockhampton and was replaced by *John B. Ash*. *Stagen* was delayed unloading in Port Moresby and was replaced by *Bantam* and *Japara*. Because of the delays in capturing Buna, the vessels in Port Moresby eventually discharged their cargo and returned to Australia. Colonel Lester Whitlock, GHQ SWPA G-4, to Chamberlin, 28 October 1942, 98-GHQ1-3.2, RG407 E427 B573, NARA; "Lilliput," undated, AWM54 581/3/9, AWM; NGF, "HQ NG Force Op Instn No.43," 15 November 1942, AWM52 1/5/52/20, AWM; Gill, *Royal Australian Navy 1939-1942*, 239-241.

⁴² Navigational and hydrographic survey was not completed until early December by *HMAS Paluma* and *HMAS Warrego*. Gill, *Royal Australian Navy 1939-1942*, 239.

trawlers, barges...most of which were ancient and rusty' from USASOS for this task.⁴³ The average cargo capacity of these vessels was 20 tons.⁴⁴ Only eight ships were allocated to the 32nd Division's advance.

The logistical difficulties experienced during the advance demonstrated the fragility of the Allied supply lines. The 7th Division relied on airdropping until it secured the Kokoda airfield on 2 November. The airstrip was quickly expanded to accommodate DC-3s and NGF immediately dispatched supplies to build reserves to support the advance.⁴⁵ Poor weather and engineering shortages precluded the development of a jeep road from Kokoda, which meant all supplies had to be carried by labourers until dropping grounds and airstrips were established closer to Gona and Sanananda.⁴⁶ The Australians advanced from Wairopi with five days' supplies but gradually outpaced their supply lines and exhausted their carriers over the long distances shown in Figure 5.3.⁴⁷ When the 7th Division encountered the Japanese outside Gona and Sanananda it was dangerously low on ammunition and rations. It was a poor logistical basis from which to begin the attack.

Track	Distance	Time on Foot
Kokoda-Oivi	12km	11 hours
Oivi-Wairopi	16km	8 hours
Wairopi-Buna	38km	36 hours
Wairopi-Soputa	35km	33 hours
Wairopi-Jumbora	32km	30 hours

Figure 5.3: Supply Line Distances and Times on Foot.⁴⁸

The 32nd Division also faced supply problems before reaching Buna. The II/126th's advance via Jaure was plagued by supply shortages which severely depleted the strength and health of the

⁴³ James R. Masterson, *US Army Transportation in the Southwest Pacific Area 1941-1947* (Washington DC: Transportation Unit, Historical Division, U.S. Army, 1949), 587; Dwight F. Johns, "We Are Doing What We Can with What We Have," *Military Review* XXV no.1 (1945), 15-16.

⁴⁴ Captain Maxwell Emerson, 32nd Division Quartermaster, "Report on Activities of the 32nd Division Quartermaster during the Buna Campaign," 15 April 1943, 332-QM-0.3, RG407 E427 B8069, NARA.

⁴⁵ NGF, "NGF Op Instn No.40: Lapstone," 31 October 1942, Appendix 14, AWM52 1/5/51/19, AWM; NGF, "Adm Instn No.29," 4 November 1942, Appendix N, AWM52 1/5/53/1, AWM.

⁴⁶ Air dropping techniques were still in their infancy; there were problems accurately dropping supplies and with wastage, which ranged from 30-70%. Wastage depended on the type of supplies, their packaging, and their delivery. Fragile supplies like biscuits, medical equipment and mortar fuzes could not be dropped. Dropping grounds were established at Wairopi, Awala, Amboga Crossing, Sangara Mission and Jumbora. Moremon, "Triumph of Improvisation," 270, 282, 296.

⁴⁷ Under fair conditions on the tracks leading towards the coast, a battalion could cover about 10km per day. While the ground was relatively flat, the major obstacles were the creeks and streams which had to be crossed. 25th Infantry Brigade War Diary, 13 November 1942, AWM52 8/2/25/15, AWM.

⁴⁸ "Track Appreciation Ilolo-Kokoda-Buna," undated, AWM52 1/5/52/2, AWM.

unit.⁴⁹ Air dropping was inaccurate and inconsistent.⁵⁰ Large quantities of equipment which would be needed at Buna such as entrenching tools, mess kits, tents, mosquito nets, and helmets had been discarded.⁵¹ When the detachment reached Wairopi most personnel were sick and exhausted.⁵² Meanwhile, the small ships sustaining Warren Force were not suitable for military transportation. The ships could only sail at night because of the threat of Japanese aircraft, and they were mechanically unreliable. Porlock Harbour and Pongani were used as discharge points for shipping, but moving supplies forward relied on carriers or transshipment to forward supply dumps at Mendaropu, Embogo and Hariko by smaller craft. The lack of roads and reliance on small ships made Warren Force's supply line vulnerable and exposed troops to a slow march through hyper-malarial terrain. Mitigating the vulnerabilities in the Allies' supply lines, increasing supply capacity, and developing infrastructure were fundamentally important once the operations commenced.

'A Big Bearing on the Campaign': The Effect of Supply on Operations

Logistics fundamentally influenced operational and tactical approaches during the operations by determining equipment, ammunition, and the state of personnel at a commanders' disposal. Supply remained a zero-sum game due to the limited lift capacities. It required constant balancing between immediate tactical needs and operational-level requirements. Essentials like rations, small arms ammunition, and medical supplies had to be weighed against resources which might permit more tactical options like more artillery and ammunition, equipment, and personnel, or engineer stores for the development of infrastructure. Supply programmes had to be flexible to address constant changes in transport availability and operational priorities. Air transport was primarily responsible for day-to-day supply requirements. However, this made building up reserves difficult and meant daily expenditures could not be made up if there were disruptions.⁵³ The basic principle of passing ammunition supply from rear to forward areas to replace battle expenditure

⁴⁹ Captain Alfred Medendorp, OC 126th Regimental Service Company, led an advanced detachment with 100 local carriers and ANGAU officers from Kalikodobu on 6 October. Nine-hundred personnel of the II/126th and several hundred carriers were to follow one week later. However, the reported difficulties convinced Harding to fly the remainder of the unit to forward airfields. Medendorp, "The March and Operations of Antitank and Cannon Companies 126th Infantry," 6-7, USAHEC.

⁵⁰ Medendorp, "The March and Operations of Antitank and Cannon Companies 126th Infantry" 6-7, USAHEC.

⁵¹ Much of this equipment had been discarded under orders from General Harding. The regiment's commander countermanded this after learning the unit was abandoning equipment and ordered it to be reclaimed. 126th Infantry Regiment Journal, #13 7 October 1942, 332-INF(126)-0.7, RG407 E427 B8000, NARA; Medendorp, "The March and Operations of Antitank and Cannon Companies 126th Infantry," 6-7, USAHEC.

⁵² For a succinct account of the march, see Milner, *Victory in Papua*, 111-115.

⁵³ AASC NGF, "AASC Supplies by Air Transport," 31 December 1942, AWM54 85/4/11, AWM.

proved particularly problematic for artillery and served to limit the number of rounds guns could fire per day.⁵⁴

NGF's daily supply requirements were considerable. A brigade-sized formation required at least 15,000lbs of rations, 7,500lbs of ammunition, and 1,500lbs of miscellaneous stores each day.⁵⁵ Figure 5.4 shows Adv NGF's daily requirements in early December. While 5AF could meet these requirements under good conditions, this merely ensured supply until the next day.⁵⁶ These requirements increased as more units and equipment were moved into action. By 11 January, Adv NGF required 211,600lbs of supplies every day.⁵⁷ During the early phases, logistics could barely meet daily requirements, let alone make an allowance for greater levels of supporting weapons and equipment. This meant the contact and stalemate phases of the campaign were primarily fought by infantry and their own supporting weapons. The development of air and sea supply capacity during December permitted the integration of greater levels of fire support and a greater emphasis on combined arms tactics. However, the Allies always faced the possibility their supply lines might break down and halt attacks.

Command	Strength	Supplies Required (lbs)					Plane Loads
		Rations	Ammn.	Artillery	POL	Total	
7th Div. Popondetta-Soputa	5,300 Australian	26,500	15,000	10,000	5,000	71,500	15
	1,000 American	5,000					
	2,900 ANGAU	10,000					
32nd Div. Dobodura	4,200 American	21,000	11,750	23,250	5,000	73,400	15
	500 Australian	2,500					
	800 ANGAU	2,400					
Total	14,700	67,400	26,750	33,250	10,000	144,900	30

Figure 5.4: Allied Forces Daily Maintenance Requirements, c.9 December 1942.⁵⁸

Allied operations were threatened on several occasions when daily transport was interrupted. The operations were bookended by supply disruptions during mid November 1942 and mid to late January 1943. Between 16-20 November poor weather grounded air transport and Japanese aircraft sunk shipping. This halted the offensive as troops ran out of rations and

⁵⁴ British doctrine stated, 'the fundamental principle of ammunition supply is that ammunition must be passed systematically and automatically from rear to front to replace that expended in battle'. *Field Service Pocket Book Pamphlet No.9: Supply and Replenishment in the Field* (War Office: London, 1939), 7.

⁵⁵ This is calculated on a basis of 5lbs of rations and 2.5lbs of ammunition per man, regardless of role.

⁵⁶ To put this in perspective, 5AF's herculean effort on 16 December of 70 flights and 356,000lbs was only two and a half day's supply. Milner, *Victory in Papua*, 255.

⁵⁷ Adv NGF, "Air Priority List No. 9," 11 January 1943, Appendix A.1, AWM52 1/5/51/24, AWM.

⁵⁸ Buna Forces G-3 Journal, "Air Transport Daily Maintenance Requirements Buna-Gona Area," #2676 9 December 1942, 332-3.2, RG407 E427 B7885, NARA.

ammunition. The 25th Brigade paused its attack on Gona, ceding initiative and surprise and allowing the Japanese to reinforce and strengthen Gona's defences.⁵⁹ The 16th Brigade experienced a similar situation after encountering Japanese defences north of Soputa.⁶⁰ The cumulative effect of poor supply and tactical shocks in the American sector resulted in a decrease in the health and morale of personnel. Colonel George DeGraaf noted 'morale [was] vitally linked to... leadership and supply' – both of which were notably deficient during this period.⁶¹ He identified the poor health of troops as a prime factor in their tactical difficulties and noted the physical, psychological, and combat effect of improved rations from mid-December onwards.⁶²

Supply and weather had a notable effect on the 7th Division's preparations for its attack on the Killerton Junction in January. Throughout December, the division recorded many air supply requests were delayed or short-loaded. Significantly, there was difficulty making up deficiencies which could have a 'big bearing on the campaign'.⁶³ As Allied forces converged on Sanananda, heavy rains between 4-12 January exacerbated supply deficiencies by grounding aircraft and severing the road networks linking the 7th Division to the coast.⁶⁴ This impeded the movement of troops, tanks, and much-needed artillery and mortar ammunition to the area.⁶⁵ Figure 5.5 highlights Adv NGF's limited artillery reserves preceding the 12 January attack. Vasey had hoped to maintain stocks for 2,000 rounds expenditure per day, but there were often under 1000 rounds available.⁶⁶ This shortage necessitated 'strict control and conservation of the few remaining rounds' to support the 18th Brigade and prevented preparatory and harassing fires.⁶⁷ The attack failed for a number of reasons, but the breakdown of the Allied supply lines significantly affected preparation and execution.⁶⁸ Supply and the employment of artillery is addressed further in Chapter Ten.

⁵⁹ 25th Infantry Brigade War Diary, 18-20 November 1942, AWM52 8/2/25/15, AWM; Frank Sublet, *Kokoda to the Sea: A History of the 1942 Campaign in Papua* (McRae: Slouch Hat Publications, 2000), 160.

⁶⁰ The 16th Brigade war diary recorded the 'the ration situation was...approaching the already foreseen...unavoidable climax' and was causing 'anxiety'. 16th Infantry Brigade War Diary, 18-21 November 1942, AWM52 8/2/16/20, AWM.

⁶¹ DeGraaf, "Notes on the Buna Campaign, 1 December 1942-24 January 1943", 1 February 1943, 333 HQ I Corps Office of Quartermaster, RG338 E339 B279, NARA.

⁶² DeGraaf, "Notes on the Buna Campaign, 1 December 1942-24 January 1943", 1 February 1943, 333 HQ I Corps Office of Quartermaster, RG338 E339 B279, NARA.

⁶³ 7th Division General Staff Branch War Diary, 13 December 1942, AWM52 1/5/14/38, AWM.

⁶⁴ Adv NGF, "Air Strip Report, 7 & 8 January 1943, Appendix P, AWM52 1/5/51/24, AWM; Adv NGF, "Roads: Impassable to Jeeps," 6-8 January 1943, Appendix R, AWM52 1/5/51/24, AWM.

⁶⁵ When the 126th Regiment was relieved, it was ordered to leave all weapons, equipment, and stores behind because the 163rd Regiment could not be supplied its own. New Guinea Force Headquarters and General (Air) War Diary, 3 January 1942, AWM52 1/5/51/24, AWM; 7th Division General Staff Branch War Diary, 3, 5, 7 & 8 January 1943, AWM52 1/5/14/45, AWM.

⁶⁶ 7th Division General Staff Branch War Diary, 5 January 1943, AWM52 1/5/14/45, AWM.

⁶⁷ 7th Division General Staff Branch War Diary, 11 January 1943, AWM52 1/5/14/45, AWM.

⁶⁸ 7th Division General Staff Branch War Diary, 12-13 January 1943, AWM52 1/5/14/45, AWM.

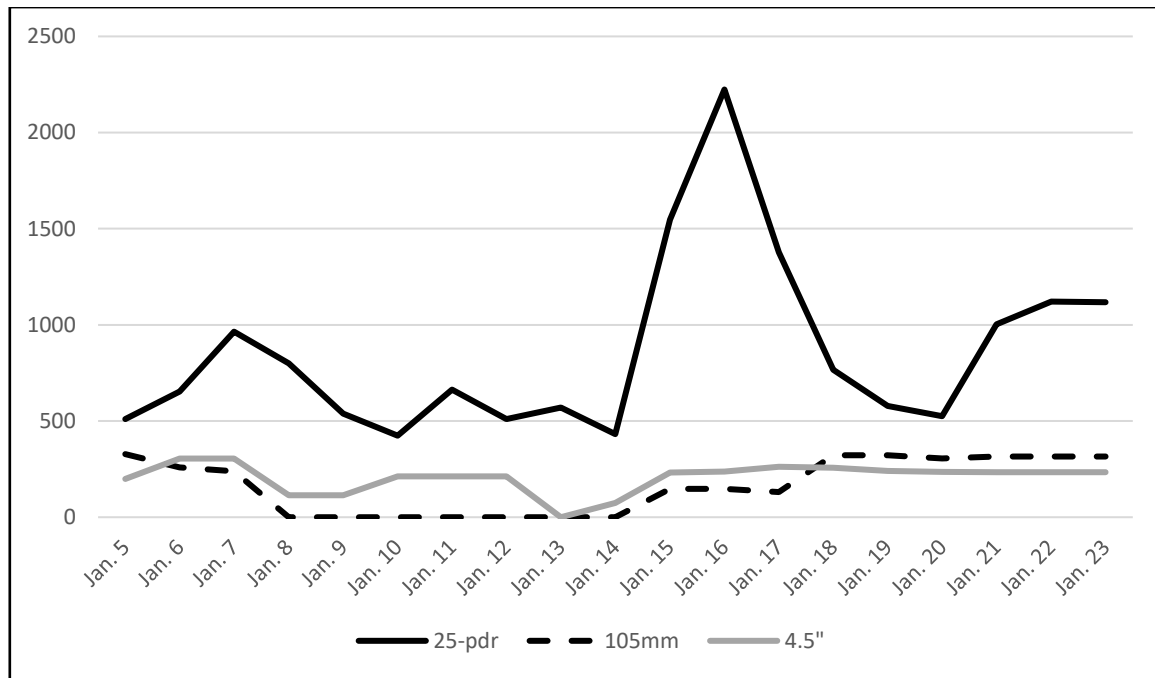


Figure 5.5: Adv NGF Artillery Ammunition Holdings, 5-23 January 1943.⁶⁹

'Tough on Men...and Supplies': Supply by Sea

Seaborne supply was a crucial element of Allied logistics because its greater lift capacity enabled the movement of bulk quantities of supplies and ammunition, as well as heavy equipment like artillery, tanks, machinery, and vehicles. However, sea transport's practicality was constrained by its vulnerability to interdiction, navigational risks, and small number of ships. Seaborne supply struggled to meet demands until the Allies established aerial superiority, developed port facilities, and employed larger vessels. Once these criteria were met, seaborne supply provided the Allies with the heavy equipment and quantities of supplies needed to achieve tactically important breakthroughs against the Japanese.

The vulnerability of the seaborne supply lines was highlighted by the early loss of small shipping to Japanese air attacks. Harding had been warned by 5AF during October that 'sure as hell the [Japanese] would be over to strafe...water-borne troop movement'.⁷⁰ Harding initially heeded the warning, noting he'd 'rather be slow than sorry in this particular issue' and instructed no shipping should operate between 0800-1700.⁷¹ However, in the rush to close on Buna and with no Japanese aircraft spotted for weeks, Harding contravened the advice and began operating shipping during daylight hours without fighter cover. Late on 16 November, a four-vessel convoy was strafed

⁶⁹ From: Adv NGF, "Formation Holdings," 5-23 January 1943, Appendix N, AWM52 1/5/51/24, AWM.

⁷⁰ 32nd Infantry Division G-2 & G-3 Journal, #143 21 October, 332-0.7, RG407 E427 B7796, NARA.

⁷¹ 32nd Infantry Division G-2 & G-3 Journal, #143 21 October, 332-0.7, RG407 E427 B7796, NARA.

by Japanese fighters near Cape Sudest.⁷² All vessels and their cargo were lost, including large quantities of ammunition, rations, medical supplies, heavy weapons, wireless equipment, and two 25-pdr guns.⁷³ The next day Japanese aircraft attacked two more vessels in the area, leaving only one of the original eight ships in action.⁷⁴ NGF subsequently prohibited daylight movement until further notice.⁷⁵ Four more vessels were lost to air attacks before the end of November, marking the end of the 'Red Arrow Freighters'.⁷⁶ Eventually, no ships were permitted beyond Porlock Harbour before 1930 to minimise losses as 5AF could not reliably provide air cover.⁷⁷

The significance of these losses at the outset of the operations cannot be understated. The 32nd Division lost a large proportion of essential weapons, equipment, and supplies, complicating its concentration against Buna.⁷⁸ The division existed on tenuous and dwindling supplies during its first attacks against Buna, including severe shortages of rations and mortar rounds. The losses rattled Harding's confidence; he admitted his 'estimation of the situation wasn't so good'.⁷⁹ The shipping losses highlighted three significant problems for Allied logistics. First was the operational control of transport resources. Command of the small ships passed from COSC to the 32nd Division once they passed Pongani.⁸⁰ However, COSC disputed this arrangement, claiming it was 'unsatisfactory and expensive in craft'.⁸¹ COSC argued it was more effective to designate a specific task for COSC to carry

⁷² *Alacrity* was carrying ammunition and medical equipment, *Minnemura*, the largest vessel, carried most of the heavy equipment, wirelesses and weapons, while *Bonwin* carried rations and ammunition. Two Australian 25-pdrs, ammunition and crews were on board a barge. A small lighter was also present, which was used to ferry cargo from ship to shore. Waldron and Harding had joined the convoy to oversee the move and visit the forward positions near Hariko. They were also accompanied by two US Army Observers – Colonel H.F. Handy and Colonel H. B. Laux – and the Division's Quartermaster, Lieutenant Colonel Laurence McKenny. Accounts of the number of Zeros vary between 18 to 30. 32nd Infantry Division G-2 & G-3 Journal, #755-765 16 November 1942, 332-0.7, RG407 E427 B7796, NARA; Drea, *MacArthur's ULTRA*, 49; Bullard, *Japanese Army Operations*, 175.

⁷³ McKenny was killed onboard *Bonwin*. Major Ralph Birkness, 32nd Division G-4, took command of the 32nd Division's Quartermaster Company. Twenty-three Australian and American personnel and 28 ANGAU carriers were killed.

⁷⁴ *Two Freddies*, 'loaded to the gunwales', was carrying most of the I/126th's equipment when it was strafed by Japanese fighters near Embogo. It smashed against a reef and had to be towed to Milne Bay. *Williyama* was attacked near Mendaropu and was rendered inoperable. *Kelton* was the only ship still in service.

⁷⁵ 32nd Infantry Division G-2 & G-3 Journal, #838 18 November 1942, 332-0.7, RG407 E427 B7796, NARA.

⁷⁶ The *Helen Dawn* grounded on a reef and was bombed by Japanese aircraft on 25 November, while three more ships were bombed at anchor near Mendaropu, Embogo and Oro Bay. Harding to Herring, 28 November 1942, HQ I Corps G-3 Journal New Guinea Campaign, RG338 E330 B198, NARA.

⁷⁷ Major P.S. Lang, COSC, "S E Coast of New Guinea Supply by Sea Before, During and After Operations at Buna," 10 August 1943, AWM54 581/7/2, AWM.

⁷⁸ The remaining troops in the Pongani area had to march to Boreo along the coast even though this route had proved almost impassable beforehand. This exposed them to further malarial environments and exhausted the troops before they reached the battle.

⁷⁹ Harding cited in Anders, *Gentle Knight*, 242.

⁸⁰ 32nd Infantry Division G-2 and G-3 Journal, #610 9 November 1942, 332-0.7, RG407 E427 B7796, NARA.

⁸¹ Lang, "S E Coast of New Guinea Supply by Sea," 10 August 1943, AWM54 581/7/2, AWM.

out itself.⁸² Additionally, there was confusion whether the Naval Officer in Charge (NOIC) Moresby or Milne Bay could exercise control over shipping in the event of an attack.⁸³ Second was the matter of air cover. 5AF's fighters had limited flying windows and could not consistently patrol the area during daylight. Sea transport was ultimately contingent upon achieving air superiority. Last, and most significantly, 5AF then bore sole responsibility for supplying the entire front. This strained 5AF's limited transport fleet and hastened the need to establish airstrips.⁸⁴

Sea supply resumed in early December and focused on the development of Porlock Harbour and Oro Bay as discharge points for cargo due to their favourable natural characteristics. Porlock Harbour became the main Advanced Supply Point and primary discharge point for large vessels.⁸⁵ COSC was also able to establish rapidly further supply points by keeping two vessels preloaded as floating reserves. These were quickly dispatched to Oro Bay at the end of November when NGF requested COSC sustain 'by sea, all troops operating in the forward area'.⁸⁶ Oro Bay then became the hub of sea supply because of the road being built to Dobodura, which shortened the supply line to the front.⁸⁷ COSC tried to maintain a 10-day stockpile of rations, ammunition, and petroleum for 10,000 men at Porlock Harbour and Oro Bay, which required approximately 400 tons of supplies per day.⁸⁸ Supplies were then shuttled by small craft to Hariko and Embogo. Unloading and transshipping supplies remained difficult because rafts, canoes, and assault boats had to be used to discharge ships in the absence of barges and landing craft.⁸⁹ All cargo had to be offloaded at night to reduce the risk of enemy air attack, but crews could only handle 15 tons of cargo per hour which placed a limit on what could be completed before daybreak.⁹⁰ The arrival of larger ships required extra labour

⁸² Brigadier Victor Secombe, Deputy Commander COSC, "Report on Recent Operations in the Owen Stanley-Buna Areas," 2 March 1943, AWM54 577/7/29 [13], AWM.

⁸³ Many COSC vessels remained under USASOS control, which left the issue unresolved. Lang, "S E Coast of New Guinea Supply by Sea," 10 August 1943, AWM54 581/7/2, AWM.

⁸⁴ NGF requested the 32nd Division prepare a forward airstrip in the Dobodura area on 15 November. 32nd Infantry Division G-2 & G-3 Journal, #670 15 November 1942, 332-0.7, RG407 E427 B7796, NARA.

⁸⁵ NGF, "NG Force Op Instn No.45," 27 November 1942, AWM52 5/1/51/20, AWM; Lang, "S E Coast of New Guinea Supply by Sea," 10 August 1943, AWM54 581/7/2, AWM.

⁸⁶ NGF, "NG Force Op Instn No.46," 28 November 1942, AWM52 5/1/51/20, AWM; NGF, "NG Force Op Instn No.54," 18 December 1942, AWM52 5/1/51/21, AWM; Secombe, "Report on Recent Operations in the Owen Stanley-Buna Areas," 2 March 1943, AWM54 577/7/29 [13], AWM; Colonel John Carew, 32nd Infantry Division Chief Engineer, to Harding, "Preliminary Reconnaissance Report of Oro Bay Area," 14 November 1942, 332-0.7, RG407 E427 B7796, NARA.

⁸⁷ NGF, "NG Force Op Instn No.54," 18 December 1942, AWM52 5/1/51/21, AWM.

⁸⁸ Secombe, "Report on Recent Operations in the Owen Stanley-Buna Areas," 2 March 1943, AWM54 577/7/29 [13], AWM.

⁸⁹ Captain Maxwell Emerson, 32nd Division Quartermaster, "Activities of the 107th Quartermaster Detachment at Oro Bay and Hariko, New Guinea," 27 March 1943, 332-QM-0.3, RG407 E427 B8070; Emerson, "Report of Activities of 32nd Division Quartermaster," 15 April 1943, 332-QM-0.3, RG407 E427 B8069, NARA.

⁹⁰ Emerson, "Activities of the 107th Quartermaster Detachment," 27 March 1943, 332-QM-0.3, RG407 E427 B8070; Emerson, "Report of Activities of 32nd Division Quartermaster," 15 April 1943, 332-QM-0.3, RG407 E427 B8069, NARA.

to be diverted from construction tasks by ANGAU and the development of additional infrastructure.⁹¹ As the operations proceeded, new piers, wharves, and storage had to be constructed to accommodate larger ships and greater quantities of supplies. Discharge points and dump sites also needed to be sited to make use of natural cover and link to the developing road network towards Buna.⁹² Secombe's post-campaign assessment was highly critical of high command's failure to appreciate the time, labour, and material required to develop infrastructure in an area devoid of roads, wharves, storage, and specialised labour.⁹³

Improved sea supply capacity during December allowed the Allies to bring greater quantities of heavy equipment into the combat zone. However, the lack of landing craft presented practical problems for loading, transporting, and unloading heavy equipment like artillery and tanks. With considerable difficulty and improvisation, rafts and barges were used to deliver ten 25-pdr guns and two 4.5" howitzers to Hariko.⁹⁴ The dispatch of Bren Carriers instead of tanks in early December was a compromise based on transport capabilities because tanks proved too heavy for the available barges.⁹⁵ This reflected both tactical desperation and logistical constraints. However, as the need for greater fire support became clear, NGF accepted greater risks sending larger ships forward. Delays in capturing Buna meant the original Lilliput plan was postponed and then cancelled.⁹⁶ However, once these freighters were employed, they dramatically increased the Allies' supply capacity. The delivery of eight tanks and a number of barges by *MV Karsik* was the most significant delivery as these tanks were vital to the Allied breakthrough at Buna.⁹⁷ This also marked a logistical victory as the Allied supply lines finally began to meet the demands of the operations. Freighters allowed greater quantities of artillery ammunition to be moved forward and permitted greater application of fire support. During a 39-day period at Oro Bay, the American Quartermaster detachment handled 760

⁹¹ Emerson, "Activities of the 107th Quartermaster Detachment," 27 March 1943, 332-QM-0.3, RG407 E427 B8070; Emerson, "Report of Activities of 32nd Division Quartermaster," 15 April 1943, 332-QM-0.3, RG407 E427 B8069, NARA.

⁹² Lang, "S E Coast of New Guinea Supply by Sea," 10 August 1943, AWM54 581/7/2, AWM.

⁹³ Secombe, "Report on Recent Operations in the Owen Stanley-Buna Areas," 2 March 1943, AWM54 577/7/29 [13], AWM.

⁹⁴ Brigadier Lewis E.S. Barker, CRA NGF, "Artillery Operations in the Buna-Gona Area," 31 January 1943, AWM54 581/6/9, AWM.

⁹⁵ Harding appealed to Johns to 'do whatever [he could]' to secure suitable barges to move the tanks. New Guinea Force Headquarters and General (Air) War Diary, 19 & 21 November 1942, AWM52 1/5/51/20, AWM; 32nd G-2 & G-3 Journal, #1584 27 November 1942, 332-0.7, RG407 E427 B7797, NARA.

⁹⁶ New Guinea Force General (Air) Branch War Diary, #2248 18 November 1942, AWM52 5/1/51/7, AWM; NGF, "New Guinea Force Admin Instn No.43: Disembarkation of 2nd, 3rd, and 4th Flights 'Lilliput'," 9 December 1942, AWM52 1/5/53/1, AWM; Gill, *Royal Australian Navy 1939-1942*, 242.

⁹⁷ Two large barges suited to transporting heavy vehicles were requested from Melbourne on 5 December, but they still had not shown up by the time the tanks had been moved to Hariko. Blamey to Herring, 21 December 1942, 3DRL/6643 Item 2/135, AWM; Johns, "Report on Recent Operations in the Owen Stanley-Buna Area," 25 February 1943, AWM54 577/7/29 [13], AWM; "Operations Using M3 Light Tanks in New Guinea - Part I," undated, AWM54 577/7/29 [1], AWM.

tons of cargo from COSC's small ships and over 7,800 tons – excluding tanks, jeeps, machinery, and artillery – from Lilliput ships after 20 December.⁹⁸

Shipping's advantage in lift capacity over air transport was readily apparent. Typically, small ships could carry 20 tons of cargo and larger vessels upwards of several hundred tons, whereas a DC-3 had a maximum capacity of 2.5 tons (Figure 5.6). Between 11-30 December, shipping delivered three times more supplies to Buna than air transport during the period.⁹⁹ The summary of cargo delivered to Porlock Harbour and Oro Bay shown in Figure 5.7 further demonstrates the efficiency of sea supply compared to air supply. When Buna was captured, almost 200 tons of supplies were arriving daily at Oro Bay which alleviated the supply problem, and only presented one of distribution.¹⁰⁰ Sea supply eventually permitted the Allies to maintain the levels of resources and equipment required to attack prepared positions.

Supply Type	Unit Weight	Small Ship	Freighter	DC-3
Load Capacity	-	20 tons	100 tons	2.5 tons
Ammunition (Unit of Fire)	100 tons	0.2 Units	1 Unit	0.025 Units
Rations (1 Ration)	3lbs	14,900 Rations	74,600 Rations	1,670 Rations
25-pdr Ammunition (8 Rounds)	292lbs	1,200 Rounds	6,000 Rounds	136 Rounds

Figure 5.6: Comparison of Transport Cargo Capacities.¹⁰¹

⁹⁸ Emerson, "Report of Activities of 32nd Division Quartermaster," 15 April 1943, 332-QM-0.3, RG407 E427 B8069, NARA.

⁹⁹ This equated to about 4,000 tons of cargo, compared to 1,252 tons by aircraft. Milner, *Victory in Papua*, 307.

¹⁰⁰ Captain Maxwell Emerson, 32nd Division Quartermaster, "107th Quartermaster Detachment Buna Campaign, October 2, 1942 – 1 March, 1943," 15 April 1943, 332-QM-0.3, RG407 E427 B8069, NARA.

¹⁰¹ 25-pdr rounds were packaged in two parts – a cartridge box containing 8 cartridges, and a projectile box containing 4 projectiles. The combined weight for eight full rounds was approximately 292 lbs, or about 36lbs per round. Average loads are derived from; Combined Operational Services Command, "Summary of Shipments By Small Craft for North of Milne Bay," AWM54 577/7/29 [13], AWM.

Ship	Arrival	Destination	Cargo
<i>Petrula</i>	25 Nov. 1942	Oro Bay	25 tons Rations
<i>Matafele</i>	25 Nov. 1942	Porlock Harbour	100 tons Rations
<i>Muliama</i>	29 Nov. 42	Porlock Harbour	200 tons Rations 90 tons Ammunition 60 tons POL
<i>Canonbar</i>	9 Dec. 1942	Oro Bay	200 tons Rations 50 tons Ammunition 40 tons Stores 10 tons POL
	25 Dec. 1942	Porlock Harbour	3,000 Rounds 25-pdr Ammunition 25 tons Ammunition 200 tons Rations 5 tons POL
<i>S 105</i>	8 Dec. 1942	Hariko	1,100 Rounds 25-pdr Ammunition
<i>Karsik</i>	12 Dec. 1942	Oro Bay	1,500 Rounds 25-pdr 4 M3 Stuart Light Tanks 1 Jeep 100 tons Stores and Ammunition
	14 Dec. 1942	Oro Bay	1,500 Rounds 25-pdr Ammunition 4 M3 Stuart Light Tanks 100 tons Stores and Ammunition
<i>Desikoko</i>	12 Dec. 1942	Porlock Harbour	150 tons Ammunition
<i>Koomella</i>	19 Dec. 1942	Porlock Harbour	1,620 rounds 25-pdr Ammunition
<i>Bundaberg</i>	20 Dec. 1942	Porlock Harbour	600 rounds 25-pdr Ammunition
<i>Tung Song</i>	20 Dec. 1942	Porlock Harbour	6,000 rounds 25-pdr Ammunition 25 tons Ammunition 175 tons Rations
	5 Jan. 1943	Oro Bay	4,875 rounds 25-pdr Ammunition
<i>Panuco</i>	24 Dec. 1942	Oro Bay	1,200 rounds 25-pdr Ammunition 25 tons Ammunition
<i>Bantam</i>	23 Dec. 1942	Porlock Harbour	420 tons Supplies 2 M3 Stuart Light Tanks
<i>Japara</i>	19 Dec. 1942	Oro Bay	750 tons Supplies
	25 Dec. 1942	Oro Bay	3,250 rounds 25-pdr Ammunition 50 tons Rations 25 tons POL 11 M3 Stuart Light Tanks
<i>Comara</i>	30 Dec. 1942	Oro Bay	500 tons Supplies 1,600 rounds 25-pdr Ammunition
<i>Bath</i>	30 Dec. 1942	Oro Bay	350 tons Supplies
<i>Erina</i>	3 Jan. 1943	Oro Bay	3,250 rounds 25-pdr Ammunition
<i>Balikpapan</i>	3 Jan. 1943	Oro Bay	125 tons Ammunition
			55 tons POL
<i>Corabie</i>	4 Jan. 1943	Oro Bay	6,500 rounds 25-pdr Ammunition

Figure 5.7: Summary of Shipments to Porlock Harbour-Oro Bay.¹⁰²

¹⁰² Derived from: Combined Operational Services Command, "Summary of Shipments By Small Craft for North of Milne Bay," AWM54 577/7/29 [13], AWM; Milner, *Victory in Papua*; Masterson, *US Army Transportation in the Southwest Pacific Area*.

'Will They Fly Today?': Supply by Air

Airborne supply allowed the Allies to meet emerging supply crises and rapidly respond to immediate tactical or operational priorities. Through improvisation and innovation in systems and methods it enabled troops, supplies, and equipment to be quickly delivered to the beachheads. However, despite its value and expedience, it remained largely inefficient because it could never reliably deliver the quantity of supplies nor the equipment required for a major offensive operation due to interruptions and limited transport capacity.

Securing areas for supply dropping and airstrips was an immediate objective for the Allied forces. Areas of well-drained, flat ground which could accommodate the 800m runway required by a DC-3 were rare, but suitable grounds were identified near Popondetta, Soputa, and Dobodura, with additional dropping grounds at Amboga Crossing, Jumbora, Sangara, and Inonda.¹⁰³ The Australians made Popondetta airstrip operational 21 November. This permitted eleven transports to land the next day and temporarily resolved the dire supply situation.¹⁰⁴ Shortly thereafter, NGF ordered Popondetta be expanded to four strips and eventually abandoned the development of Soputa.¹⁰⁵ The development of Popondetta was vital as maintaining the 7th Division's supply by carriers from Kokoda was impractical. The 7th Division depended on supply via Popondetta until roads connected it to the sea. In the American sector, air resupply offered an immediate solution to the loss of shipping and hastened Warren Force's development of Dobodura airstrip. The Americans' precarious supply situation had panicked GHQ, but Kenney assured MacArthur that planes would commence supply when weather permitted.¹⁰⁶ Major Ralph Birkness, acting as the 32nd Division's Quartermaster from Port Moresby, organised to have urgent supplies dropped by air until the

¹⁰³ Major Bruce Buddle, 2/5th Field Company, "Information Ref Potential A/C Landing Grounds," undated, Appendix C, AWM52 5/5/11/15, AWM.

¹⁰⁴ The 16th Brigade was informed rations would be dropped at Popondetta on 18 November, but these never arrived. It was subsequently told to move forward to Soputa – about 10kms closer to Sanananda – to receive rations the next day. At Jumbora, the 25th Brigade held the 2/33rd Battalion as a reserve labour force to collect supplies. This meant it had only two battalions ready to attack Gona. 16th Infantry Brigade War Diary, 18-19 November 1942, AWM52 8/2/16/20, AWM; 25th Infantry Brigade War Diary, 18-21 November 1942, AWM52 8/2/25/15, AWM; RAE 7th Division War Diary, 21-22 November 1942, AWM52 5/5/11/15, AWM.

¹⁰⁵ 5AF condemned the Soputa strip after aerial reconnaissance on 26 November. Two attempts to land at Soputa were made after this, but both were abandoned. NGF subsequently requested a 5AF officer be dispatched to inspect both strips. The Soputa strip was made operational again during early December, but the decision to abandon it as a landing ground was made on 15 December. New Guinea Force Headquarters and General (Air) War Diary, 25, 29-30 November 1942, AWM52 1/5/51/20, AWM; RAE 7th Division War Diary, 26 November 1942 & 5-7, 13-15 December 1942, AWM52 5/5/11/15, AWM.

¹⁰⁶ Kenney, *Kenney Reports*, 144-145; Kenney Diary, 20 November 1942, RG54 B1 VIII, MM.

airstrip was finished. Dobodura's first airstrip was completed on 21 November and later expanded to a four-strip complex by mid-December.¹⁰⁷

The Allies needed to continuously improve their air supply system to capitalise on the establishment of airstrips. The system built upon that devised to support the advance to Kokoda. It evolved organically as there was 'no precedent...available on which to base a system or organisation' but gradually a 'satisfactory system [evolved]...mainly by the process of trial and error'.¹⁰⁸ It forced a reconceptualisation of supply from conventional three-day indents to a daily basis.¹⁰⁹ While the Australians were familiar with the system and its limitations, the Americans had to adjust their priorities and procedures. Kenney noted the Australians better managed their supply requirements: 'the Aussie planning had been much better. They...made sure that they were going to eat, no matter what else happened'.¹¹⁰

The system required close coordination between NGF's Q and G Staff, which handled the operational logistics, COSC, which procured the supplies, and 5AF, which handled transportation, to meet daily requirements. Each afternoon commanders sent their supply status and requests to NGF.¹¹¹ G staff determined priorities and organised additional supplies as they saw fit. This was relayed to Q staff who determined loading tables and transport requirements for 5AF.¹¹² However, aircraft availability determined the provision of supply. The number and types of operational aircraft constantly changed due to weather and maintenance. If insufficient aircraft were available, supplies were reprioritised based on capacity. An officer lamented the 'agonies caused by the substitution of [Hudsons]...for the 5000lb Douglas...[which] happens from time to time on 10 minutes notice'.¹¹³ The development of loading tables for each type of aircraft proved an 'invaluable basis' for quickly adapting to aircraft availability.¹¹⁴ Loading tables were then sent to supply depots and trucks loaded for each individual flight. In the morning, planes were loaded under the supervision of Q staff.¹¹⁵ In the case of dropping supplies, AASC personnel were best suited to pack loads to reduce wastage.

¹⁰⁷ Lieutenant-Colonel John C. Carew, CO 114th Engineer Combat Battalion, "114th Engineer (Combat) Battalion – History, 4 April 1942-28 February 1943," 332-ENG-0.1, RG407 E427 B7972, NARA; New Guinea Force Headquarters and General (Air) War Diary, 22 November 1942, AWM52 1/5/51/20, AWM.

¹⁰⁸ NGF Q Branch, "Reports on Operations in New Guinea Serial 9: Introduction to Reports by Q Branch and Services," undated, AWM54 577/7/29 [8], AWM.

¹⁰⁹ NGF Q Branch, "Introduction to Reports by Q Branch and Services," undated, AWM54 577/7/29 [8], AWM.

¹¹⁰ Kenney, *Kenney Reports*, 146.

¹¹¹ NGF Q Branch, "Introduction to Reports by Q Branch and Services," undated, AWM54 577/7/29 [8], AWM.

¹¹² NGF Q Branch, "Introduction to Reports by Q Branch and Services," undated, AWM54 577/7/29 [8], AWM.

¹¹³ "Operations in New Guinea: Air Transport Statistics and Notes," 20 March 1943, AWM54 519/6/50, AWM.

¹¹⁴ "Operations in New Guinea: Air Transport Statistics and Notes," 20 March 1943, AWM54 519/6/50, AWM.

¹¹⁵ NGF Q Branch, "Introduction to Reports by Q Branch and Services," undated, AWM54 577/7/29 [8], AWM.

Flights were scheduled to deliver the highest priority supplies first given the unpredictable flying conditions.¹¹⁶

Flexibility and adaptability were essential to make the system work, but it was prone to disruption and dissatisfaction. Birkness observed:

...nothing ever worked as planned and constant changes and interruptions were to be expected. Planes' assignments were suddenly and without explanation changed or cancelled, planes were laid up for repairs, planes failed to take off after loading and the supplies had to be unloaded and shifted to other...Quick decisions had to be made and problems solved on the spot with the constant object in view of keeping the flow of supplies as high as possible.¹¹⁷

Additionally, NGF's ability to override commanders' requests highlighted the divorce between front and rear areas. During January, when Adv NGF requested medical supplies to deal with a backlog of patients awaiting evacuation from Popondetta, NGF overrode its request and instead delivered engineering equipment for the development of a fighter strip.¹¹⁸ I Corps' G-4 Colonel William McCreight contended 'the commander in the combat zone is in the better position to determine supply priorities than a rear echelon...103 miles away'.¹¹⁹ This highlighted the importance of developing mutual understanding and coordinating operational and administrative needs.

Poor weather proved an insurmountable barrier to dependable air supply. While the flight time between Port Moresby and the beachheads was less than one hour, the conditions either side of the Owen Stanleys could change rapidly.¹²⁰ Days began fine but storms quickly developed in the afternoon, fog closed over the Owen Stanleys, and heavy rains could render airstrips inoperable.¹²¹ A fully-loaded DC-3 had a ceiling altitude of approximately 3,000m, which meant aircraft often had to fly between the mountains, rather than over them. Flying by instrument through poor weather was unsafe and the steep descent to the beachhead airstrips was difficult for pilots of heavily-laden aircraft even in good conditions.¹²² Flying in bad weather was halted early after a DC-3 crashed

¹¹⁶ Birkness, "Report of Activities of G-4 Rear Echelon," 10 April 1943, 332-4, RG407 E427 B7940, NARA.

¹¹⁷ Birkness, "Report of Activities of G-4 Rear Echelon," 10 April 1943, 332-4, RG407 E427 B7940, NARA.

¹¹⁸ The message, dated 13 January, read: "Comd to see. Air Priorities 14 January. No change priorities already requested. More than 600 patients awaiting evacuation from POP. Of 115,000 pounds delivered DOB today 75,000 were ENGR equipment for fighter strip and not requested by this HQ." Colonel William V. McCreight, US I Corps G-4, "Memorandum to Commanding General I Corps," 1 February 1943, 580 Air Transportation, RG338 E339 B288, NARA.

¹¹⁹ McCreight, "Memorandum to Commanding General I Corps," 1 February 1943, 580 Air Transportation, RG338 E339 B288, NARA.

¹²⁰ Director Supply and Transport, "Report on Visit to New Guinea, 2-19 May 1943," AWM54 431/13/6, AWM.

¹²¹ NGF AASC, "AASC Supplies by Air Transport: Appendix A S&T Service Notes on Operations Owen Stanley-Buna Areas," March 1943, 577/7/29 [9], AWM.

¹²² Colonel H.F. Handy, USAGF Observer, "Report of Military Observer in the Southwest Pacific Theater of Operations, September 26 to December 23 1942," 2 January 1943, #5, RG337 E15A B51, NARA.

attempting to land through fog.¹²³ Air strip surfaces also proved dangerous, particularly after wet weather, and could cause accidents. Two of Popondetta's strips were closed during early December until two wrecks could be cleared, while Soputa strip was condemned by 5AF after a Lockheed Lodestar crashed into a drainage ditch.¹²⁴ Airstrips could also only handle limited traffic before they began to deteriorate. A maximum of two aircraft per hour could be maintained before damage outpaced maintenance.¹²⁵ The uncertainty of air transportation caused NGF's BGS Hopkins to recall 'for months after the campaign, my waking thought was "will they fly today?"'.¹²⁶ The potential for air supply to be disrupted is shown in Figure 5.8, which covers preparations for the final attacks on Sanananda. Aircraft did not fly on four days and only delivered half the requested supplies three times. It was therefore difficult to sustain the operations solely through air supply.

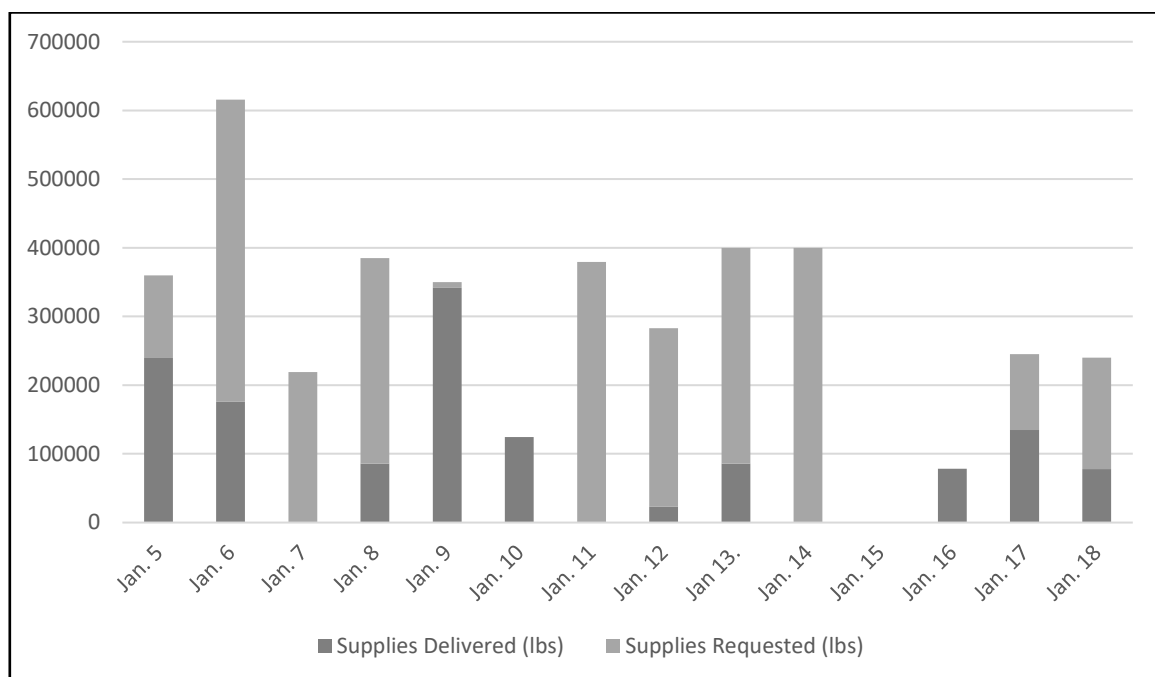


Figure 5.8: Adv NGF Air Supply Requested and Delivered, 5-12 January 1943.¹²⁷

Air transport provided NGF the advantage of being able to deploy troops directly into combat without gruelling approach marches. However, moving personnel was time-consuming and placed huge demands on the available lift capacity. An NGF Q officer noted 'the human element introduced by the presence of "bodies" with minds of their own led to more errors in transport

¹²³ Handy, "Report of Military Observer in the Southwest Pacific Theater," 2 January 1943, #5, RG337 E15A B51, NARA; Kenney Diary, 20 November 1942, RG54 B1 VIII, MM.

¹²⁴ It was thought that the original crash of the DC-3 on Popondetta's No.1 Strip was the cause of later crashes as aircraft tried to avoid it. 7th Division General Staff Branch War Diary, 5 & 9 December 1942, AWM52 1/5/14/38, AWM.

¹²⁵ RAE 7th Division War Diary, 13-14 December 1942, AWM52 5/5/11/15, AWM.

¹²⁶ Hopkins cited in Horner, *Crisis of Command*, 249.

¹²⁷ Records missing for 15 January 1943. From: NGF, "Air Transport Requirements," 5-12 January 1943, 580 Air Transportation, RG338 E339 B292, NARA; NGF Q Branch, "Detailed Air Deliveries," 5-12 January 1943, 580 Air Transportation, RG338 E339 B292, NARA.

arrangements than did the movement of...boots or biscuits'.¹²⁸ The weight of each man and his equipment was limited to 250lbs to avoid overloading while some equipment was pooled.¹²⁹ According to NGF's loading calculations (Figure 5.9), a DC-3 could carry 16 fully-equipped troops. Transporting a unit therefore required the majority of 5AF's aircraft over the span of several days; it took four days to fly the 21st Brigade's 872 personnel in preparation to attack Gona, while the 127th Regiment's airlift occurred over 21 days.¹³⁰ However, the prioritisation of troop movements came at the expense of other supply requirements, though this was mitigated as sea supply improved.¹³¹

Unit	Total Weight	Average Plane Load	Flights by DC-3
Infantry Battalion (Scale A)	292,500lbs	Personnel (16 men w/250lbs) = 4,000lbs Equipment = 1,000lbs	59
Infantry Battalion (Scale B)	262,000lbs	Personnel (16 men w/250lbs) = 4,000lbs Equipment = 1,000lbs	48
Infantry Battalion (Scale C)	177,500lbs	Personnel (19 men w/210lbs) = 4,180lbs Equipment = 800lbs	36
Section Field Troop 25-pdrs	44,807lbs	2x Guns = 7,502lbs Stores = 3,694lbs Ammunition (632 Rounds) = 23,290 lbs 2 x Jeeps and POL = 4,500lbs Personnel (30 men) = 7,200lbs	9

Figure 5.9: Aircraft Loading Tables – Units and Equipment.¹³²

Air transportation also showed utility delivering equipment which was not intended to be moved by air. These were significant innovations which enabled new dimensions of fire support in difficult terrain. NGF's CRA wrote it was a remarkable to imagine:

...a troop stripping its gun to major portions, packing the bits into a plane, crossing a 7,000ft range to land 120 miles from the aerodrome on a strip cut through 4ft kunai grass,

¹²⁸ NGF Q Branch, "Introduction to Reports by Q Branch and Services," undated, AWM54 577/7/29 [8], AWM.

¹²⁹ Items like entrenching tools, tents, and razors were collated into section or platoon pools. It was noted that thankfully most men retained their own toothbrushes. NGF Q Branch, "Introduction to Reports by Q Branch and Services," undated, AWM54 577/7/29 [8], AWM.

¹³⁰ The 21st Brigade's move was completed between 25-29 November, while the 127th Regiment's move began on 6 December and concluded on 27 December, though it was in action from 14 December. New Guinea Force Headquarters and General (Air) War Diary, 24 November 1942, AWM52 1/5/51/20, AWM; 21st Infantry Brigade War Diary, 25-29 November 1942, AWM52 8/2/21/15, AWM; 127th Infantry Regiment Journal, 6-27 December 1942, 332-INF(127)-0. 7, RG407 E427 B8015, NARA.

¹³¹ New Guinea Force Headquarters and General (Air) War Diary, 27 November 1942, AWM52 1/5/51/20, AWM.

¹³² The scales were explained as follows: 'Infantry Battalion (Scale A) at full War Establishment and stores. Infantry Battalion (Scale B) at strength of 770 personnel and equipment needed in unopposed landing in jungle area. Infantry Battalion (Scale C) at strength of 680 personnel and equipment necessary for immediate combat role.' Loading tables were based on DC-3 or C-47 transports. "Operations in New Guinea: Air Transport Statistics and Notes," 20 March 1943, AWM54 519/6/50, AWM.

deplaning, assembling the guns and advancing 8 miles by road and firing in support of their own [infantry] by the evening.¹³³

Initially, three 3.7" howitzers were disassembled and flown to Kokoda and Pongani to support the advance on the beachheads.¹³⁴ However, as demands for fire support became more urgent, experiments dismantling 25-pdrs for air transport were conducted and two troops flown to Dobodura and Popondetta after the airstrips became operational.¹³⁵ Most impressively, an American 105mm howitzer was disassembled in Rockhampton and flown to Port Moresby by four B-17s, then shuttled to Dobodura via DC-3s.¹³⁶ While air transport permitted guns to be quickly deployed, artillery's effectiveness was still governed by ammunition supply which was better fulfilled by shipping. A range of plant machinery and motor transport was also transported by air to assist in the construction and maintenance of airstrips and the movement of supplies to forward distribution points. Figure 5.10 shows the total quantities of equipment and vehicles transported by air to support the beachheads.

The air bridge between Port Moresby and the beachheads prevented a logistical disaster in the opening stages of the operations when other means of supply were compromised. Figure 5.11 shows air supply's impressive total contribution to the campaign. However, while air supply was a useful expedient, it was still inefficient and unreliable. An American officer condemned air transport as the 'peak of inefficiency and uneconomical operations' because the lift capacity of the largest available aircraft was only equal to the payload of the standard 2 ½ ton truck.¹³⁷ Air supply's constant trade-offs between competing daily priorities prevented it from developing sufficient reserves on its own to sustain the Allied forces, but its agility and adaptability provided a significant advantage in desperate situations.

¹³³ Barker, "Artillery Operations in the Buna-Gona Area," 31 January 1943, AWM54 581/6/9, AWM.

¹³⁴ This included one section of two guns, three officers, 30 men and four jeeps to Pongani on 12 November and one gun, 2 officers and 30 men to Kokoda on 14 November. The QF 3.7" howitzer weighed approximately 1,610lbs – less than half of the QF 25-pdr. The move to Pongani required 6 planeloads. 1st Mountain Battery War Diary, 11-14 November 1942, AWM52 4/9/1/1, AWM.

¹³⁵ 2/1st Field Regiment War Diary, 4, 8, 30 October & 1 November 1942, AWM52 4/2/1/19, AWM; E.V. Haywood, *Six Years in Support: The Official History of the 2/1st Australian Field Regiment* (Sydney: Angus and Robertson, 1959), 144-145, 161.

¹³⁶ The first gun from Battery A, 129th Field Artillery Battalion, left Australia on 13 November but did not arrive at Dobodura until 26 November. Three more 105mms were similarly transported to Port Moresby but were never moved forward as there was not enough ammunition to make it worthwhile. 32nd Infantry Division Artillery, "Diary of Buna Force Artillery, New Guinea, 1 October 1942 to 25 January 1943," 332-ART-0.3.0, RG407 E427 B7947, NARA.

¹³⁷ Colonel M.E. Darby, US I Corps Ordnance Officer, "Ordnance Lessons Learned in the Buna Campaign," 1 February 1943, 580 Air Transportation, RG338 E339 B292, NARA.

Type and Quantity (lbs)		Oct. 42	Nov. 42	Dec. 42	Jan. 43	Total
Artillery	Guns					
	25-pdr	-	8	1	4	13
	105mm	-	1	-	-	1
	4.5"	-	-	2	-	
	3.7"	-	3	-	-	
	40mm	-	-	-	6	
	37mm	-	-	4	7	
	2pdr	-	-	1	-	
	Weight	-	50,100	19,478	189,380	258,958
Artillery Ammunition	Rounds					
	25-pdr	-	6,290	25,726	6,756	38,772
	3.7"	-	496	1,701	16	2,213
	105mm	-	100	1,521	21	1642
	4.5"	-	-	690	26	716
	Weight	-	237,250	1,082,462	254,564	1,574,276
Motor Transport	Vehicles					
	Jeep	1	28	53	13	95
	Trailer	-	10	27	41	78
	Weight	2,500	71,691	424,088	57,534	555,813
Total Supply & Equipment						17,092,480

Figure 5.10: Total Quantities of Equipment Transported by Air, October 1942-January 1943.¹³⁸

¹³⁸ From: New Guinea Force Adjutant General, "Summary of Air Transport Deliveries 1 Oct. 42-28 Feb. 43," Appendix Z-2, AWM52 1/5/53/1, AWM.

Type and Quantity (lbs)		Oct. 42	Nov. 42	Dec. 42	Jan. 43	Total
Personnel	Number	95	2,260	8,881	8,722	19,958
	Weight	20,239	635,960	2,329,000	2,180,500	5,165,699
Engineer Stores	Landed	10,998	42,633	88,834	113,655	256,120
	Dropped	1,500	13,754	720	-	15,974
Signal Stores	Landed	6,501	31,347	60,947	57,914	156,709
	Dropped	16,161	11,693	-	-	27,854
POL, Ordnance & Unit Stores	Landed	13,647	277,371	1,098,251	1,011,215	2,390,484
	Dropped	106,875	42,442	10,087	-	117,386
Medical Stores	Landed	3,162	16,257	91,553	114,152	225,124
	Dropped	7,791	5,809	-	186	13,786
Small Arms Ammunition	Landed	23,278	216,900	586,808	240,757	1,067,743
	Dropped	318,248	280,366	59,730	23,800	682,144
Rations (European)	Landed	86,912	610,998	1,071,000	863,245	2,632,155
	Dropped	1,040,990	732,344	544,340	152,036	2,469,710
Rations (Native)	Landed	12,617	144,694	339,130	336,472	832,913
	Dropped	187,227	160,515	236,255	46,739	630,736
Rations (Emergency)	Landed	5,533	8,506	15,425	16,552	46,016
	Dropped	47,417	49,470	7,035	-	103,922

Figure 5.11: Total Volumes of Supplies Transported by Air, October 1942-January 1943.¹³⁹

‘Supply is Specialised’: Construction, Distribution, and Maintenance

The beachhead operations required considerable construction works to enable and sustain them. Most of the infrastructure needed to support military actions had to be developed while the battles were fought. Airstrips and wharf facilities – discussed in the preceding sections – were needed for the delivery of supply, while road networks were vital to ensuring distribution. As logistical infrastructure improved, the Allies were able to deploy more troops and equipment and the supplies to sustain them. Infrastructure development was the responsibility of NGF’s few engineer units. These were stretched between developing Port Moresby and Milne Bay, improving the lines of communication towards the beachheads, and supporting combat forces.¹⁴⁰ Initially, the

¹³⁹ From: New Guinea Force Adjutant General, “Summary of Air Transport Deliveries 1 Oct. 42-28 Feb. 43,” Appendix Z-2, AWM52 1/5/53/1, AWM.

¹⁴⁰ During November there were five American Engineer Regiments and one Australian Pioneer Battalion in NGF’s order of battle for base construction tasks.

American 126th and 128th RCTs were each supported by a company of 114th Engineer Combat Battalion (ECB), while the 7th Division was supported by two field companies and a field stores section disposed along the trail from Kokoda.¹⁴¹ NGF did not have corps-level engineering units to support the operations, so divisional units were often retained for tasks by NGF or COSC.¹⁴² Colonel John Carew, CO 114th ECB, noted the 'constant demand' for engineers and believed the 'tasks assigned to this battalion would have kept a full regiment busy'.¹⁴³ An American engineer officer recorded the consequence of high demand, under-strength or incomplete units, and absence of engineering staff led to 'generally poor' effectiveness, and noted 'twice as many [engineers] could have been well utilised'.¹⁴⁴

Engineer units were hampered by extreme wastage from sickness and exhaustion from gruelling working conditions. The 7th Division's Chief Engineer noted an 'alarming' increase in the percentage of engineers evacuated per week because of sickness upon entering the beachheads area after its rapid 'forced march' during November (Figure 5.12).¹⁴⁵ This resulted in a decline from 349 personnel at the end of November to just 203 by the end of December. The 114th ECB experienced similar levels of wastage, diminishing from 304 fit personnel to 140 within six weeks of action.¹⁴⁶ As strengths dwindled, sections and sub-sections were often combined to remain at a functional strength, but this reduced the number of tasks engineer units could work on simultaneously.¹⁴⁷

¹⁴¹ This included the organic 2/5th and 2/6th Field Companies, and the stores section of the 2/25th Field Park Company. Elements of the 2/14th Field Company were attached to the 7th Division on 7 November but did not fully arrive until 26 November. The 7th Field Company was attached to the 7th Division in late December. The 2/4th Field Company was dispatched from Milne Bay with the 18th Brigade in December. The American 116th Engineer Combat Battalion – attached to the 163rd Regiment – came under 7th Division's command upon its arrival in January 1943. RAE 7th Division, "Report on Engineering Works During NG Campaign," 27 December 1942, AWM54 313/4/28, AWM.

¹⁴² The 43rd Engineer General Service Regiment was deployed to manage Dobodura and its surrounding infrastructure to free-up the 114th ECB in early December. Brigadier John W. Main, CE NGF, "Operations in the Owen Stanley-Buna Areas: Engineering Problems and Lessons Learnt," AWM54 313/4/28, AWM.

¹⁴³ Colonel John J. Carew, CO 114th Engineer Combat Battalion, "Engineer Operations in Papuan Campaign," undated, 332-ENG-0.3, RG407 E427 B7979, NARA.

¹⁴⁴ The 32nd Division Engineer staff did not arrive in Papua until 26 December, which greatly disadvantaged the unit for the majority for the campaign. Major W. B. Parker, "Notes on Operations Near Buna, New Guinea, Nov. 14-23, 1942", 2 December 1942, AWM 581/7/20, AWM; Carew, "Engineer Operations in Papuan Campaign," undated, 332-ENG-0.3, RG407 E427 B7972, NARA.

¹⁴⁵ RAE 7th Division War Diary, 1 December 1942, AWM54 313/4/28, AWM; 2/5th Field Company RAE War Diary, "Summary for the Month of November," AWM52 5/13/5/18, AWM.

¹⁴⁶ Karl Dod, *The Technical Services: The Corps of Engineers: The War Against Japan* (Washington DC: Centre of Military History Institute United States Army, 198), 203.

¹⁴⁷ Main, "Operations in the Owen Stanley-Buna Areas: Engineering Problems and Lessons Learnt," undated, AWM54 313/4/28, AWM.

Period	Area	Evacuation Sick/per Week
3 October – 3 November	Uberi-Kokoda	2%
4 – 13 November	Kokoda-Wairopi	10%
14 November – 6 December	Wairopi-Gona	27%

Figure 5.12: 7th Division RAE Personnel Evacuated Sick, 3 October-6 December 1942.¹⁴⁸

Engineers also struggled with a lack of equipment. Transport limitations meant units arrived ‘almost emptyhanded’ with a few hand-tools of each type. The dropping of equipment and stores was often ‘a sad story of too little too late’.¹⁴⁹ The allocation of tools and stores ultimately proved inadequate given the scale of tasks like clearing airstrips by hand and the need to equip local labourers. There were widespread shortages of vital tools like machetes, which were regarded as ‘the most important tool [for] all branches’.¹⁵⁰ When transport permitted, equipment shortages could only be made good by requisitioning from engineer units in Port Moresby.¹⁵¹ Hard work, lack of equipment, and high levels of wastage led to the depletion of engineer strengths at the beachheads and forced greater reliance on ANGAU labourers.

The development of road networks linking supply points to the front lines was fundamental to the maintenance of the Allied forces. This was no easy task considering the terrain and the strength of engineering units. The first roads served to link airstrip supply dumps with forward distribution points close to existing tracks, such as the Popondetta Strip-Popondetta and Soputa Strip-Soputa roads.¹⁵² Subsequently, tracks between all detail issue depots and field ammunition depots were developed to accommodate motor transport. Major road developments were initiated during mid-December as Allied supply capacity began to increase. Foremost of these projects were the Oro Bay-Embogo-Dobodura road which linked the seaborne supply lines to the American front, bridging the Girua River and the Ango-Soputa road which connected the Australian and American sectors and permitted the Australians access to seaborne supply, and upgrading the Inonda-Popondetta road which permitted tanks to move to Sanananda after Buna had been captured.¹⁵³

¹⁴⁸ Main “Operations in the Owen Stanley-Buna Areas: Engineering Problems and Lessons Learnt,” undated, AWM54 313/4/28, AWM.

¹⁴⁹ 2/5th Field Company RAE War Diary, “Summary for the Month of November,” AWM52 5/13/5/18, AWM; Colonel Harry Knight, USAGF Observer “Observations in the Southwest Pacific Theater, during the Period October 16 to December 30 1942,” 2 April 1943, #6, RG337 E15A B51, NARA; Parker, “Notes on Operations Near Buna,” 2 December 1942, AWM 581/7/20, AWM.

¹⁵⁰ Parker, “Notes on Operations Near Buna,” 2 December 1942, AWM 581/7/20, AWM.

¹⁵¹ Main, “Operations in the Owen Stanley-Buna Areas: Engineering Problems and Lessons Learnt,” undated, AWM54 313/4/28, AWM.

¹⁵² AASC 7th Division, “Report on New Guinea Campaign,” undated, AWM54 63/1/7, AWM.

¹⁵³ New Guinea Force, “NG Force Ops Instn – 54,” 18 December 1942, Appendix B, AWM52 1/5/51/21, AWM.

Improving roads increased the amount of traffic and types of vehicles which could traverse the routes. This required jungle to be cleared, the construction of culverts for drainage, and more durable corduroy roads. However, road construction was a difficult task as most tracks traversed creeks and swamps which were prone to flooding. The Embogo-Dobodura section required:

Twelve to fourteen miles of road through kunai grass and jungle areas and 20 bridges varying in length from 15ft to 298ft...All bridges were to be constructed to take Class 5 loads and later to be strengthened to Class 9 and some were across particularly wide and fast flowing streams with little good timber in the vicinity.¹⁵⁴

In the Buna area the 114th ECB built and maintained 50km of roads, 13km of which was corduroyed, 510m of footbridges, 200m of Class 5 or above bridges, and cleared 250,838m² of grass and jungle.¹⁵⁵ The improvement of roads enabled more motor vehicles to be used for transporting supplies, freeing carriers to be allocated to other tasks like maintenance.¹⁵⁶

Road construction and maintenance required the adaptation of conventional techniques and materials to local conditions. Initially, some engineer units had difficulty employing appropriate materials and techniques. Some of the first roads built by 114th ECB involved several critical errors in an effort to quickly complete the task, such as omitting bottom stringers from corduroy roads in marshy areas. This meant the road sunk into ground after heavy traffic or rain.¹⁵⁷ Through trial and error an effective method using 8-10" bottom stringers was later employed.¹⁵⁸ Many construction techniques relied heavily on field expedients and local knowledge. Local labourers showed engineers which barks and vines could be used for lashing, and which native timbers could be used for roads or bridges.¹⁵⁹ Labourers also demonstrated methods for sinking piles and H-frames into creek beds by hand.¹⁶⁰ Road drainage was improved by clearing large swathes of jungle either side of the tracks to

¹⁵⁴ Class 3 roads were jeep-capable tracks. Class 5 roads were capable of bearing vehicles up to one tonne, and Class 9 roads up to 3 tonnes. Class 12-13 roads were capable of bearing a 15-ton M3 Stuart light tank. Lieutenant J.C. Grover, 2/14th Field Company, "Experiences of 6 Pl 2/14th Aust Army Fd Coy on Construction of Road Dobodura to Embogo," AWM54 581/7/23, AWM.

¹⁵⁵ Carew, "Engineer Operations in Papuan Campaign," undated, 332-ENG-0.3, RG407 E427 B7972, NARA.

¹⁵⁶ AASC 7th Division, "Report on New Guinea Campaign," undated, AWM54 63/1/7, AWM.

¹⁵⁷ A stringer is a half-round or round piece of timber which runs under the length of the road to keep the corduroy surface off the ground. Hugh J. Casey, *Engineers of the Southwest Pacific 1941-1945, Volume VIII: Critique* (Washington DC: U.S. Government Printing Office, 1951), 68; Dod, *The Corps of Engineers*, 198.

¹⁵⁸ Major David B. Parker, CE USASOS, "Notes on Engineering Opns in Buna Area," 12 January 1943, Bulk Packages #2, RG319 E53 B4, NARA.

¹⁵⁹ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

¹⁶⁰ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.



¹⁶¹ From: Adv NGF, "NGF Operation Instruction 59: Defence of the Gona-Buna and Oro Bay Area," 13 January 1943, Appendix 2, AWM52 1/5/51/24, AWM.

increase sunlight exposure.¹⁶² However, little could be done to prevent flooding, which was a constant threat to low-lying roadways and bridges. Engineers constructed causeways by filling creeks rather than building bridges where possible due to the likelihood of bridges washing away.¹⁶³ The use of field expedients and adaptation of engineering techniques to develop the road network was key to the cumulative improvement of logistics and improved the Allies' capacity to distribute supplies.

In the American sectors, the effective distribution of supplies was initially hampered by poor handling and storage by troops untrained in supply, which created bottlenecks and exacerbated wastage. The 32nd Division had prioritised combat personnel and initially relied on a five-man detachment of the 107th Quartermaster Battalion to manage its supply lines while its Regimental Service Companies remained in Port Moresby to dispatch supplies.¹⁶⁴ The Quartermaster detachment could not manage both coastal and air supply dumps, which meant engineers and combat personnel assumed responsibility at Dobodura airstrip. They did not employ appropriate systems for handling, storage, and distribution which led to wastage and shortages for forward troops, which contributed to the 32nd Division's dire situation during late November.¹⁶⁵ When I Corps took command, American personnel were existing on one-third of a daily ration. However, 20,000 D-rations and 5,000 C-rations were discovered scattered about Dobodura airstrip, deteriorating and apparently forgotten.¹⁶⁶ DeGraaf attributed the failure to the absence of trained quartermaster personnel, and a new detachment of the 107th Quartermaster Battalion was quickly sent to takeover Dobodura airstrip.¹⁶⁷ The detachment established sections for managing the

¹⁶² Grover, "Experiences of 6 Pl 2/14th Aust Army Fd Coy on Construction," AWM54 581/7/23, AWM.

¹⁶³ Major D.C. Thomson, OC 2/6th Field Company, "Recce of Track Inonda-Popondetta," 16 December 1942, Appendix C5, AWM52 5/5/11/15, AWM.

¹⁶⁴ The advanced detachment comprised Lieutenant Colonel Laurence A. McKenny, CO 107th QM Battalion, and four EMs, followed by another officer and 29 men on 14 November. A detachment of one officer and 29 men remained in Port Moresby. McKenny was killed on 16 November. On 26 November, another detachment comprising five officers and 50 EMs arrived in Port Moresby to bolster the unit. Headquarters 107th Quartermaster Battalion, "107th Quartermaster Detachment – Buna Campaign, October 2, 1942 to March 1, 1943," undated, 332-QM-0.3, RG407 E427 B8069, NARA; NGF, "Location Statement as at 2359 Hrs 30 November 42," AWM52 1/5/51/21, AWM.

¹⁶⁵ Emerson, "Report of Activities of 32nd Division Quartermaster," 15 April 1943, 332-QM-0.3, RG407 E427 B8069, NARA.

¹⁶⁶ C-rations were a prepared wet reserve ration of meat and vegetables intended for short-term use. D-rations were a high-energy chocolate ration for emergency situations. They were heat resistant, though unpalatable and could adversely affect soldiers' digestion. DeGraaf, "Notes on the Buna Campaign, 1 December 1942-24 January 1943", 1 February 1943, 333 HQ I Corps Office of Quartermaster, RG338 E339 B279, NARA.

¹⁶⁷ DeGraaf, "Notes on the Buna Campaign, 1 December 1942-24 January 1943", 1 February 1943, 333 HQ I Corps Office of Quartermaster, RG338 E339 B279, NARA; First-Lieutenant Marlyn E. Mohr, Dobodura Quartermaster Detachment, "Activities of the 107th Quartermaster Detachment at Dobodura, New Guinea," 27 March 1943, 332-QM-0.3, RG407 E427 B8070, NARA.

Advanced Depot and for maintaining divisional supply.¹⁶⁸ In contrast, Australian logistics personnel were immediately dispatched to Popondetta and Soputa to organise and manage the unloading, storage, and distribution of supplies from forward depots.¹⁶⁹ DeGraaf later noted ‘...supply is specialised...[and] no establishment can accomplish it properly except trained quartermaster personnel’.¹⁷⁰

The deterioration of supplies put further strain on Allied logistics. Harsh environmental conditions – extreme heat, humidity, and exposure to rain or saltwater – caused the deterioration of most items. Carboard and wooden packaging rotted, metal rusted, electrical components corroded, and material mildewed. The delivery methods – via air or via sea – also exposed supplies to damage and the elements.¹⁷¹ Wastage prevented the build-up and storage of large quantities of supplies in the forward areas. This made the Allied supply lines more vulnerable to disruption. It therefore increased daily supply requirement to replenish smaller forward stores at airstrips and docks.¹⁷² Ammunition and small arms were particularly susceptible to the conditions. Within the first week at Buna, American infantry ran out of basic supplies for weapons maintenance. Rifles failed for lack of oil and cleaning equipment and automatic weapons jammed because of sand and corrosion. Personnel ‘[lost] confidence’ in their weapons and became less likely to take aggressive action.¹⁷³ This required ordnance personnel to devote considerable time to examining and servicing weapons and ammunition. Ordnance work was ‘10% “maintenance” and 90% salvage’ because of the lack of replacements parts.¹⁷⁴ The ‘cannibalisation’ of recovered weapons and equipment through resourceful adaptation and salvage was also advantageous as it reduced transport requirements for parts and freed cargo space for rations and medical supplies.¹⁷⁵ This was also important as more heavy equipment such as tanks and artillery increased maintenance, repair, and ordnance

¹⁶⁸ Mohr, “Activities of the 107th Quartermaster Detachment at Dobodura, New Guinea,” 27 March 1943, 332-QM-0.3, RG407 E427 B8070, NARA.

¹⁶⁹ DDOS NGF, “Notes Regarding Activities of Ordnance Services in Connection with Owen Stanleys-Buna-Gona Campaign,” 25 February 1943, AWM52 13/1/23, AWM; NGF Q Branch, “Introduction to Reports by Q Branch and Services,” undated, AWM54 577/7/29 [8], AWM.

¹⁷⁰ DeGraaf, “Notes on the Buna Campaign, 1 December 1942-24 January 1943,” 1 February 1943, 333 HQ I Corps Office of Quartermaster, RG338 E339 B279, NARA.

¹⁷¹ DDOS NGF, “Notes on Operations – Owen Stanleys-Buna Area,” 1 March 1943, AWM54 577/7/29 [10], AWM.

¹⁷² DDOS NGF, “Notes Regarding Activities of Ordnance Services in Connection with Owen Stanleys-Buna-Gona campaign,” 25 February 1943, AWM52 13/1/23, AWM.

¹⁷³ 32nd Division G-2 & G-3 Journal, #1151 22 November 1942 & #1413 25 November 1942, 332-0.7, RG407 E427 B7796, NARA.

¹⁷⁴ Darby, “Ordnance Lessons Learned in the Buna Campaign,” 1 February 1943, 580 Air Transportation, RG338 E339 B292, NARA; 32nd Infantry Division Ordnance, “Ordnance Report – Buna Force in the Papuan Campaign,” 21 April 1943, 332-27, RG407 E427 B7945.

¹⁷⁵ DDOS NGF, “Notes on Operations – Owen Stanleys-Buna Area,” 1 March 1943, AWM54 577/7/29 [10], AWM.

requirements.¹⁷⁶ The maintenance and salvage of equipment was a cornerstone of existing on the tenuous supply lines and limited resources of the beachhead operations.

'Survival and Success': ANGAU and Local Labour

Local labour provided much-needed manpower for transportation and construction tasks to support the operations. Labour pools were organised by ANGAU, which was a subordinate command to NGF.¹⁷⁷ These pools were then allotted to NGF, COSC, or combat commands for specific tasks. However, ANGAU struggled to meet NGF's requirements without overworking its limited labour force.¹⁷⁸ By the time Allied forces reached the beachheads, ANGAU's labour pool had been greatly depleted and numbered about 1,500 workers.¹⁷⁹ Upon entering the coastal plains, ANGAU's District Officers made a concerted effort to restore confidence in Allied administration by re-establishing a visible presence, providing food, and offering payment in trade goods with the aim of improving recruitment.¹⁸⁰ The labour pool was also bolstered by labourers who deserted the Japanese during the SSF's retreat.¹⁸¹ By the end of 1942, ANGAU's labour strength at the beachheads had increased to 5,500, which had been the minimum requirement to commence the operations.¹⁸² While the growing labour force permitted more work to be undertaken, it also put greater demands on rations and medical care.

¹⁷⁶ DDOS NGF, "Notes Regarding Activities of Ordnance Services," 25 February 1943, AWM52 13/1/23, AWM.

¹⁷⁷ ANGAU was a military command established in April 1942 to coordinate the civil administration of Papua and New Guinea. It was responsible for policing, population welfare, transportation, food supply, and labour in the territories. It was subordinate to NGF and commanded by former GOC NGF Major-General Basil Morris. Alan Powell, *The Third Force: ANGAU's War in New Guinea, 1942-46* (South Melbourne: Oxford University Press, 2003), 68.

¹⁷⁸ Jeffrey Grey, "The Coming of the War to the Territories: Forced Labour and Broken Promises," (Paper presented at the Remembering the War In New Guinea Symposium, Australian National University, 2000).

¹⁷⁹ On 1 October, ANGAU estimated 5,000 carriers were needed to support the Allied counterattack over the range but could only muster 1,000. Captain Herbert Kienzle, "Report on Kokoda L of C, Native Carriers During Campaign Owen Stanley Range, Kokoda-Gona-Buna," February 1943, AWM54 577/6/8, AWM.

¹⁸⁰ The Mambare area was the responsibility of District Officer Captain Thomas Grahamslaw, an experienced Patrol Officer who had accompanied the Australians through the Owen Stanleys and assisted the 32nd Division's coastal advance. Additionally, Major W.J. Lambden was posted to Kokoda on 10 November, Lieutenant-Colonel S. Elliott-Smith to Sangara on 18 November, and Captain G.H. Vernon to Popondetta on 30 November. There was uncertainty about the loyalty of some local groups like the Orakaivans, who were reported as being 'wholly under Japanese influence', though fears of them betraying the Allied advance to the Japanese proved untrue. ANGAU War Diary, 2 October 1942, AWM52 1/10/1/5; ANGAU War Diary, 6 November 1942, AWM52 1/10/1/6; Captain Thomas Grahamslaw, ANGAU, "Waiwa," 31 October 1942, Appendix 50C, AWM52 1/10/1/5, AWM; Major Sydney Elliott-Smith, ANGAU, "Patrol by Major Elliott-Smith, Kokoda to Soputa – 15 November to 1 December 1942, Appendix 52, AWM52 1/10/1/6, AWM; Thomas Grahamslaw, "Recollections of ANGAU," Manuscript, MSS1920, AWM; Powell, *The Third Force*, 51.

¹⁸¹ Over 300 labourers joined the 7th Division at Wairopi on 13 November. 7th Division General Staff Branch War Diary, "SITREP to 1900 Hrs," 13 November 1942, AWM52 1/5/14/29, AWM; ANGAU War Diary, 17 November 1942, AWM52 1/10/1/6, AWM.

¹⁸² Kienzle, "Report on Kokoda L of C. Native Carriers during Campaign Owen Stanley Range, Kokoda-Gona-Buna," AWM54 577/6/8, AWM; ANGAU War Diary, 30 December 1942, AWM52 1/10/1/6, AWM.

ANGAU's labour pool was primarily used for construction tasks to support the operations or to carry supplies for combat commands. ANGAU representatives were attached to each command to ascertain their labour requirements.¹⁸³ Most engineering units required between 200-400 labourers but labour was often redirected to prioritise the transport troops or supplies.¹⁸⁴ The 7th Division's CE noted the 21st Brigade's deployment to Gona caused the division's labourers to be reallocated for four days, which delayed the development of roads and the airstrips in the Popondetta and Soputa areas.¹⁸⁵ With limited manpower and resources, there were constant trade-offs based on emerging demands.

Combat formations required labour to supplement service personnel and motorisation shortages.¹⁸⁶ Deficits in service personnel meant the distribution of supplies often relied entirely upon the local labour organised by ANGAU until jeep tracks were developed and more motor transport became available.¹⁸⁷ Closer to the lines, military personnel had to take over as carriers were reluctant to get close to the fighting. Daily supply and carrier requirements were worked out between Adv NGF and an ANGAU representative at the evening conference.¹⁸⁸ Carriers were generally attached at a scale of 40-60 per battalion and 90 per brigade, though they were more effectively employed from a brigade pool and allocated to tasks as required by each unit.¹⁸⁹ This meant each sector required between 420-620 carriers to directly support its combat formations, exclusive of other tasks.¹⁹⁰ However, labour could not always be assigned on this scale, which required some tasks to be taken up by combat or support personnel.

With limited manpower, the allocation of labour between Australian and American forces remained a contentious issue among senior commanders. The labour available to the 7th and 32nd

¹⁸³ NGF, "New Guinea Force Adm Instn No.32: Move of 'Lilliput'," 15 November 1942, Appendix R, AWM52 1/5/53/1, AWM; ANGAU War Diary, 15 & 18 November 1942, AWM52 1/10/1/6.

¹⁸⁴ The 114th ECB had 400 labourers attached in late December, while the 43rd Engineer General Service Regiment at Dobodura had 100 labourers. The 2/14th Field Company had between 250-400 ANGAU labourers attached to assist in road construction. Grover, "Experiences of 6 Pl 2/14th Aust Army Fd Coy on Construction of Road Dobodura to Embogo," AWM54 581/7/23, AWM; Dod, *The Corps of Engineers*, 203.

¹⁸⁵ 7th Division RAE War Diary, 28 November 1942, AWM52 5/5/11/15, AWM.

¹⁸⁶ Lieutenant-Colonel J.F. Dice, GSC, "Lessons from Theatres of War New Guinea June 42-January 43," AWM54 519/6/51, AWM.

¹⁸⁷ DeGraaf, "Notes on the Buna Campaign 1 Dec 1942-24 January 1943," 1 February 1943, 333 HQ I Corps Office of Quartermaster, RG338 E339 B279, NARA; AASC 7th Division, "Report on New Guinea Campaign," undated, AWM54 63/1/7, AWM; Dice, "Lessons from Theatres of War New Guinea June 42-January 43," AWM54 519/6/51, AWM.

¹⁸⁸ Powell, *The Third Force*, 53; Grahamslaw, "Recollections of ANGAU".

¹⁸⁹ This meant a formation would ideally have 210 carriers attached for support tasks. Colonel J.A. Considine, GSC, "Notes on Supply and Evacuation by Native Bearers as Effecting 21 Aust Inf Bde New Guinea Campaign Period Dec 42 – Jan 43," undated, AWM54 917/4/15, AWM.

¹⁹⁰ This is calculated on the basis of the situation in early December, with two brigades at Gona, two brigades and half a regiment at Sanananda, two regiments in Urbana sector, and one and a half regiments in Warren sector. The total required number of carriers required was between 1,680-2,480 across the front.

Divisions for the development of their respective airstrips differed greatly and ANGAU could not meet the numbers requested by the 32nd Division.¹⁹¹ In late November, Harding erroneously complained to NGF that the 7th Division had 3,000 labourers compared to the 32nd Division's 300, which he perceived as favouritism.¹⁹²

Task	Labour Strength
32nd Division Engineers	406
Dobodura Supply Base	300
Hariko Supply Base	340
32nd Division Surgeon	160
Urbana Force	400
Total	1,606

Figure 5.13: Allocation of ANGAU Labour, Buna Force, 9 December 1942.¹⁹³

Several factors disproportionately affected the Americans. First, the American sector was less-populated than the Australian sector.¹⁹⁴ Second, moving Papuan peoples out of their home territories increased desertion, making it unproductive to transfer labourers between the Australian and American sectors.¹⁹⁵ Last, there were not enough ANGAU officers to effectively organise and administer labour groups.¹⁹⁶ Labour remained a contentious issue when Sutherland raised it with Blamey again in December, despite Adv NGF and ANGAU's continued liaison to assign labour.¹⁹⁷ As a solution, Herring proposed organising labour into a corps pool which could be allocated on priorities

¹⁹¹ The 7th Division had quickly obtained an extra 500 labourers to develop Popondetta, but only a portion of the requested 3,000 labourers could be found to assist at Dobodura. ANGAU War Diary, 26 November 1942, AWM52 1/10/1/6; ANGAU, "The Establishment of Supply Lines in Buna Area," undated, Appendix 51, AWM52 1/10/1/6, AWM; Elliott-Smith, "Patrol by Major Elliott-Smith, Kokoda to Soputa – 15 November to 1 December 1942," Appendix 52, AWM52 1/10/1/6, AWM.

¹⁹² This figure appears to be inaccurate. At least 500 labourers were recruited to work on the Dobodura airstrip, and ANGAU had recruited an additional 300 by the end of the month. I Corps recorded 1,606 labourers attached to the division during December. Harding to Herring, 28 November 1942, I Corps G-3 Journal New Guinea Campaign, RG338 E330 B198, NARA; Grahamslaw, "Recollections of ANGAU"; McCreight, "Memorandum to Commanding General, I Corps," 1 February 1943, 580 Air Transportation, RG338 E339 B292, NARA.

¹⁹³ McCreight, "Memorandum to Commanding General, I Corps," 1 February 1943, 580 Air Transportation, RG338 E339 B292, NARA.

¹⁹⁴ Herring to Blamey, 29 December 1942, 3DRL/6643 Item 2/135, AWM.

¹⁹⁵ Herring to Blamey, 29 December 1942, 3DRL/6643 Item 2/135, AWM.

¹⁹⁶ Herring to Blamey, 29 December 1942, 3DRL/6643 Item 2/135, AWM.

¹⁹⁷ When the issue was raised again by Sutherland to Blamey in late December, Sutherland believed there were 700 labourers with the Americans. Regardless, the imbalance was enough to force Blamey to seek answers from Herring. Grahamslaw, "Recollections of ANGAU"; Blamey to Herring, 28 December 1942, 3DRL/6643 Item 2/135, AWM; Blamey to Adv NGF, 28 December 1942, 3DRL/6643 Item 2/47, AWM.

and avoid further issues.¹⁹⁸ Despite shortages, NGF Q staff credited the Papuans' 'doggedness, superb physical condition and loyalty' as key factors in the 'survival and success' of the Allies.¹⁹⁹

'Under Conditions...So Fantastic': Medical Care, Treatment, and Evacuation

The medical aspects of the operations were 'just as important as [tactics] and supply', and equally as difficult.²⁰⁰ Providing sufficient medical care stressed supply lines and added an additional complicating factor to Allied logistics. Medical logistics influenced the operations by determining the condition and effective strength of forces and increasing supply requirements at the beachheads because of the difficulties in treating and evacuating casualties. The maintenance of forces was exacerbated by the deleterious climate, hyper-malarial environment, and endemic tropical diseases. Malaria, scrub typhus, and dengue fever were highly prevalent, and there were many disease-carrying vectors like mosquitos, ticks, fleas, and flies.²⁰¹ Susceptibility to infection was exacerbated by exhaustion, exposure, and malnutrition.²⁰² Malaria had the greatest effect because of its widespread transmission and debilitating symptoms.²⁰³ Prior operational estimates had anticipated casualties from sickness of between one-third to one-half of deployed strengths, and the need for greater than normal medical services and provision for replacements.²⁰⁴ However, none of these provisions were put in place, nor did the estimates capture the magnitude of the problem.

When the Allies reached the beachheads malarial infections surged. Allied preventative measures proved ineffective because of shortages of antimalarial drugs and protective equipment, planning deficiencies by GHQ and the AMF, and poor malarial discipline in Papua.²⁰⁵ Malarial

¹⁹⁸ Herring to Blamey, 29 December 1942, 3DRL/6643 Item 2/135, AWM.

¹⁹⁹ NGF Q Branch, "Methods and Lessons Learnt During the Buna-Gona Campaign," AWM54 577/7/29 [8], AWM.

²⁰⁰ 2/2nd Australian General Hospital, "Malaria Among Troops of the Australian Imperial Forces Recently Evacuated from New Guinea," August 1943, AWM54 267/6/7 [121], AWM; Dice, "Lessons from Theatres of War New Guinea June 42-January 43," AWM54 519/6/51, AWM.

²⁰¹ Eugene Palka and Francis Galgano, "Protecting the Force: Medical Geography and the Buna-Gona Campaign," in *Modern Military Geography*, eds. Francis Galgano and Eugene Palka (Florence: Routledge, 2010), 173.

²⁰² Palka and Galgano, "The Medical Geography of the Buna Campaign," 180.

²⁰³ Malaria is a virulent parasitic infection of the blood, transmitted by *anopheles* mosquitoes. Its effects manifest between 12-16 days after initial infection. Symptoms include fever, nausea, weakness, and disorientation. In serious cases it can cause seizures, coma, and death. The severity and mortality rate increases with malnutrition and exhaustion. Japanese forces were similarly affected by malaria. John Greenwood, "The Fight against Malaria in the Papua and New Guinea Campaigns," *Army History* 59 (2003): 18-19; Walker, *Clinical Aspects of War*, 154-156; Bullard, "The Great Enemy of Humanity," 211-212.

²⁰⁴ US I Corps, "Estimate of the Situation: Employment of US Forces in New Guinea," 22 September 1942, 230 I Corps Estimates, RG338 E339 B287, NARA

²⁰⁵ For an account of global supply issues and the Australian approach to the malaria problem in Papua during 1942 see: Walker, *Clinical Problems of War*, 81-98; McLeod, *Within Reach, Beyond Care*, 286-310; Ian Howie-Willis, "Australian Malariology During the Second World War (Part 3 of 'Pioneers of Australian Military

precautions had been sacrificed to bring the Allied forces against the beachheads more quickly.²⁰⁶ On the mountainous overland routes, personnel had discontinued anti-malarial medication because of supply shortages and the rapid deterioration of quinine tablets.²⁰⁷ Equipment such as mosquito nets and tents had also been abandoned as impractical. On the coast, a medical officer noted malarial control was 'minus zero' as personnel were distracted preparing for combat.²⁰⁸ Despite supply difficulties, some commands tried to institute malarial controls. The 7th Division requested anti-malarial provisions upon reaching Kokoda, but no quinine, mosquito nets, or repellent cream arrived before it advanced to the beachheads.²⁰⁹ The division did not receive supplies for suppressive quinine doses until 29 November.²¹⁰ As the severity and number of infections increased, larger doses were required which further stretched quinine supplies.²¹¹ By December the battle against malaria was lost.

Wastage through disease and lack of reinforcements meant many sick cases were kept in their units and were unable to receive full treatment. Personnel with recurrent fevers could not receive a full anti-malarial course nor be held for the standard 17 day treatment period because there was insufficient medicine, hospital beds, or medical personnel.²¹² Cases expected to regain fitness within 7-10 days were not evacuated.²¹³ Most sick personnel therefore remained active with their units, fighting and patrolling despite fevers and exhaustion.²¹⁴ However, symptoms such as nausea, exhaustion, and confusion reduced their endurance and mental efficiency. 'Patching-up' sick cases hindered the efficacy of medical care and placed a cyclic burden as patients had to be

Malariology')," *Journal of Military and Veterans' Health* 25 no.2 (2017): 49-52. For accounts of the American preparations and response, see: Robert Joy, "Malaria in American Troops in the South and Southwest Pacific in World War II," *Medical History* 43 (1999): 192-207; Greenwood, "The Fight against Malaria in the Papua and New Guinea Campaigns". For an account of Allied cooperation in developing a theatre-wide anti-malarial programme, see; Mary Condon-Rall, "Allied Cooperation in Malaria Prevention and Control: The World War II Southwest Pacific Experience," *The Journal of The History of Medicine and Allied Sciences* 46 (1991): 493-513.

²⁰⁶ Condon-Rall, "Allied Cooperation in Malaria Prevention and Control," 497.

²⁰⁷ Brigadier William W.S. Johnston, DDMS NGF, "Medical Notes New Guinea Campaign," undated, AWM54 481/12/48, AWM.

²⁰⁸ "Notes on Conference with Lt Col De [Pasquale], 32d Div Surgeon," 23 November 1943, Ike Skelton Combined Arms Research Library, Fort Leavenworth.

²⁰⁹ The 3rd Battalion repeatedly requested anti-malarial measures but did not receive them until after the unit was committed to Gona. In action it recorded 6 sick casualties to every 1 battle casualty. Lieutenant-Colonel Allan G. Cameron, CO 3rd Battalion, "Report on Operations in New Guinea: Serial 17 Notes on New Guinea Fighting," 19 December 1942, AWM54 577/7/29 [16], AWM; Colonel Frank K. Norris, ADMS 7th Division, "Medical Services 7 Aust Div During Papuan Campaign," January 1943, AWM54 481/12/13, AWM.

²¹⁰ Norris, "Medical Services 7 Aust Div During Papuan Campaign," January 1943, AWM54 481/12/13, AWM.

²¹¹ The standard 10gr doses often proved inadequate to suppress the symptoms for advanced cases. Many casualties required up to 20gr, which was double the normal dosage. Norris, "Appendix VII: Diseases Encountered," January 1943, AWM54 481/12/13, AWM.

²¹² Lieutenant-Colonel M.M.S. Earlam, CO 14th Field Ambulance, "Report on Operations 14 Aust Field Ambulance – Papua," undated, AWM54 19/7/17, AWM.

²¹³ Dice, "Lessons from Theatres of War New Guinea June 42-January 43," AWM54 519/6/51, AWM.

²¹⁴ Walker, *The Island Campaigns*, 86; McCarthy, *Kokoda to Wau*, 406.

retreated.²¹⁵ The effects of diseases and exhaustion meant the effective strength of units were often much lower than unit returns suggested. In most cases, sub-units operated at less than half-strength or were consolidated into composite sub-units. This reduced the number of personnel available for action and the tactical options open to commanders, who had fewer elements to employ. This undermined basic tactical approaches such as section and platoon attacks as they could not generate the firepower or lacked manoeuvre or support elements.

Casualty	126th RCT	127th RCT	128th RCT	Divisional	Total
Killed	266	182	138	16	602
Died of Wounds	34	29	25	0	88
Died - Other	5	3	4	5	17
Total Killed	305	214	167	21	702
Wounded - Gunshot	475	308	279	6	1,068
Wounded - Shrapnel	253	196	155	8	612
Total Wounded	728	504	434	14	1,680
Fever (inc. Malaria)	1,422	2,011	1,264	661	5,358
Dysentery	170	123	205	65	563
Shell Shock	35	89	87	0	211
Miscellaneous	658	590	682	224	2,154
Total Sick	2,285	2,813	2,238	950	8286
Injured	88	57	123	19	287
Missing	-	-	-	-	62

Figure 5.14: 32nd Infantry Division Casualties, 26 September 1942-28 February 1943.²¹⁶

Sickness inflicted a greater toll on the Allies than the Japanese defenders. The 32nd Division's casualty summary (Figure 5.14) highlights the prevalence of sickness, which occurred at a ratio of 3.2 cases per battle casualty. The rate of 1,158 cases per thousand per annum also demonstrates recurrence of illness.²¹⁷ Australian forces suffered a similarly high ratio of sick casualties. Through November 1942 to January 1943, AMF hospitals admitted 12,502 sick casualties to 2,801 battle casualties.²¹⁸ The ratio of sick to battle casualties peaked during January at 4.8:1.

²¹⁵ Norris, "Appendix VII: Diseases Encountered," January 1943, AWM54 481/12/13, AWM.

²¹⁶ 32nd Infantry Division Surgeon, "Papuan Campaign – Narrative History Table No. 1: Casualties – 32d Division – Buna Campaign 26 September 1942 – 28 February 1943," undated, 332-26, RG407 E427 B7944, NARA.

²¹⁷ Shortly before the end of the campaign, 53% of the remaining 675 "fit" personnel were examined and found to have temperatures between 37.2°C-40.4°C. Blakely, *The 32d Infantry Division*, 125.

²¹⁸ "Appendix V: Statistics – Moresby-Owen Stanley-Gona-Buna Area, August to January," undated, AWM54 481/12/50, AWM.

Lieutenant-Colonel Allan Cameron, CO 3rd Battalion, summarised 'sickness decimated the unit in a manner that the enemy could not accomplish'.²¹⁹

The rate of battle and sick casualties presented a serious challenge for the provision of timely and appropriate medical care. Allied medical services adapted conventional processes to meet this challenge. Typically, immediate treatment was delivered by forward units at regimental or battalion aid posts. Casualties were then transferred to dressing stations and infantry aid stations to prepare them for evacuation, which were maintained by Australian field ambulance and American casualty clearing companies respectively. Complex procedures like surgery and the care of sick casualties were performed by rear area units. However, the operating environment and difficulty of transportation between forward and rear areas meant the normal functions of divisional medical units (Figure 5.15) were expanded to address all types of care.²²⁰ This was difficult as Australian formations lacked forward surgical units. However, American portable hospitals, which were deployed to the beachheads for the first time, were flexible units which could perform a variety of functions including surgery and helped to meet the expansion of medical requirements.²²¹

Formation	Medical Unit	Sub-Units/Function
Australian Division	3 x Field Ambulance (Attached to Brigades)	HQ Coy: Main Dressing Station A & B Coy: Advanced Dressing Stations S&T Coy: Supply and Transportation
American Infantry Division	1 x Medical Battalion (Portioned to RCTs)	HQ Coy: Supply and Administration 3 x Collecting Coy: Infantry Aid Stations 1 x Clearing Coy: Divisional Clearing Station
	3 x Portable Hospitals (To each Infantry Battalion)	Surgery, Treatment, or Evacuation

Figure 5.15: Standard Organisation of Medical Units for Infantry Formations.

The Allies' dispersed advance, difficult lines of communication, and limited medical resources necessitated flexible organisation to treat casualties. Colonel Frank Kingsley Norris, ADMS 7th Division, noted medical services acted more like a 'pool' than fully-fledged units.²²² Medical detachments 'budded-off' to maintain staged medical posts based on the time it took – rather than the distance – to remove casualties for treatment, while a main dressing station (MDS) was established at Soputa. By 25 November there were 638 patients requiring treatment between

²¹⁹ Cameron, "Notes on New Guinea Fighting," 19 December 1942, AWM54 577/7/29 [16], AWM.

²²⁰ McLeod, "Within Reach, Beyond Care," 1.

²²¹ John Greenwood, "Portable Surgical Hospitals," US Medical Department Office of Medical History, undated.

²²² Norris, "Medical Service 7 Aust Div During Papuan Campaign," 7 January 1943, AWM54 481/12/13, AWM.

Wairopi and Soputa.²²³ However, there were not enough personnel to operate all posts and mounting casualties presented a serious challenge for over-extended medical units. This necessitated the redeployment of medical units from rear areas and establishing another MDS at Popondetta for air evacuations.²²⁴ American medical units were similarly unable to function as intended because of the dispersed advance and breakdown of RCT unity.²²⁵ This led to collecting companies and clearing platoons combining, while portable hospitals 'exceeded expectations' in their ability to fulfil surgical, treatment, or evacuation needs.²²⁶ While the pooling of units was unconventional, it was a practical, effective response which guaranteed adequate personnel and supplies at each post to deliver care. Despite immense difficulties, medical logistics proved 'elastic' in its ability to adapt organisation and function to sustain the Allied effort.²²⁷

In sectors with both Australian and American forces, medical units were integrated into an Allied organisations which saw high degrees of interdependence and cooperation.²²⁸ The flexibility of Allied medical services enabled quick and appropriate care for casualties. At Buna, detachments from the 2/5th and 10th Australian Field Ambulances were integrated into Warren Force's medical arrangements.²²⁹ Casualties were removed from the battlefield by Allied bearer units to an Australian advanced dressing station. Casualties were then treated at the collocated 14th Portable

²²³ The 7th Division maintained a line of communication back to the Kokoda airstrip which was managed by the 2/6th Field Ambulance, while detachments of the 14th Field Ambulance maintained ADSs at Ilolo and Myola. Medical care for the two advancing brigades was provided solely by the 2/4th Field Ambulance. Kokoda's importance diminished with the establishment of the beachhead airstrips, which freed-up these units to move forward. Norris, "Medical Service 7 Aust Div During Papuan Campaign," 7 January 1943, AWM54 481/12/13, AWM; Brigadier Clive Disher, DDMS NGF, "Medical Notes on Operations – Owen Stanley-Buna Area," undated, AWM54 481/12/50, AWM.

²²⁴ After the Soputa airstrip was condemned the new MDS at Popondetta was manned by the 14th Field Ambulance, and the 2/6th and 10th Field Ambulances eventually relieved the 2/4th Field Ambulance from Soputa. Norris, "Medical Service 7 Aust Div During Papuan Campaign," 7 January 1943, AWM54 481/12/13, AWM.

²²⁵ The 107th Medical Battalion's headquarters was never deployed to Papua. This meant there was no sub-unit exerting a command function across the companies attached to infantry regiments. The battalion's headquarters took on medical and supply functions for the balance of the 32nd Division which remained in Australia. 32nd Division Surgeon, "Papuan Campaign – Narrative History," undated, 332-26, RG407 E427 B7944, NARA.

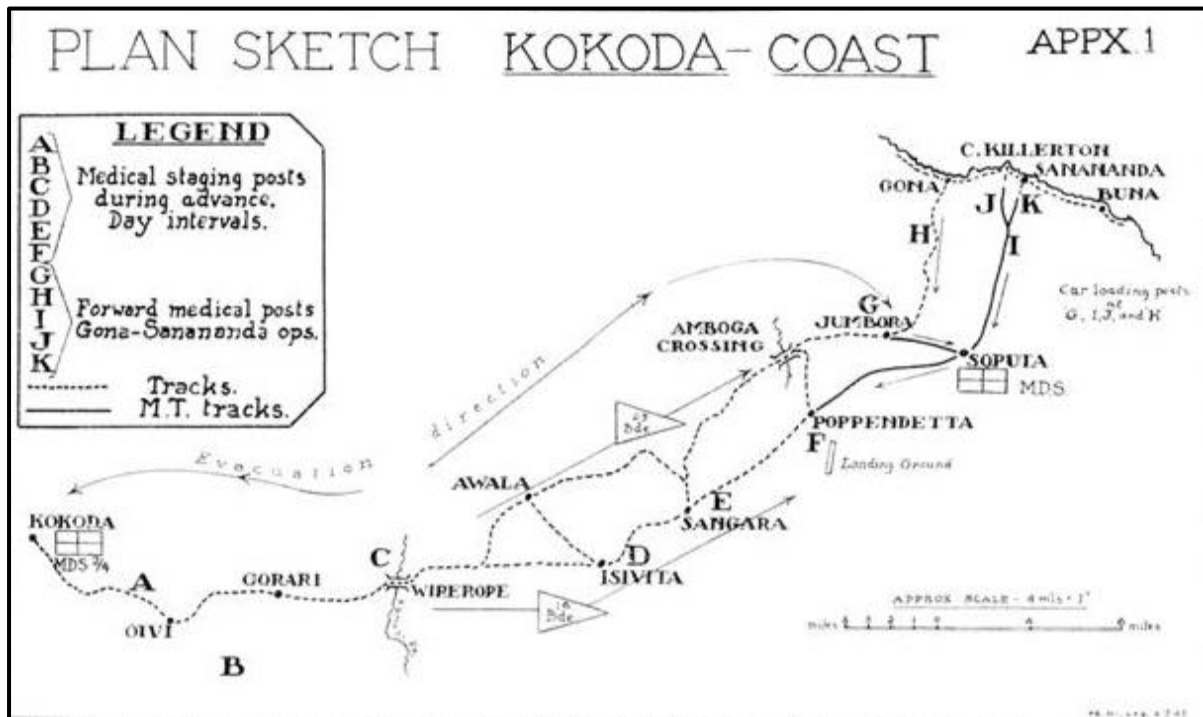
²²⁶ 32nd Infantry Division Surgeon, "Papuan Campaign – Narrative History," undated, 332-26, RG407 E427 B7944, NARA.

²²⁷ Major J.O Lavarack, 2/5th Field Ambulance, "Report on Activities Detachment 2/5 Aust. Fd Ambulance – Medical Service with 'Hammer' Forces in Buna-Sanananda Areas, 12 Dec. – 15 Feb. 1942/1943," August 1943, AWM54 19/7/6, AWM.

²²⁸ Earlam, "Report on Operations 14 Aust Field Ambulance – Papua," undated, AWM54 19/7/17, AWM.

²²⁹ Lavarack, "Report on Activities Detachment 2/5 Aust. Fd Ambulance," August 1943, AWM54 19/7/6, AWM; Lieutenant-Colonel E .C. Palmer, CO 10th Field Ambulance, "Report on 10 Aust. Fd. Amb. – Buna Campaign – Dec. 42-Feb. 43," 15 April 1943, AWM54 19/4/4, AWM.

Hospital or removed to the 22nd Portable Hospital as required.²³⁰ This improved care over the 16km journey back to Dobodura for evacuation.



Map 5.2: 7th Division Medical Post Locations, Gona-Sanananda Area.²³¹

Difficult terrain and reliance on labour to remove casualties from the battlefield increased the time it took to administer initial treatment. Medical posts had to be sited to guarantee casualties were received within 8-12 hours.²³² This required siting forward medical posts within hundreds of metres of the front line, compared to thousands of metres in open terrain.²³³ Medical units therefore operated in difficult, uncomfortable, and dangerous positions. An officer touring Buna observed:

...[conditions which] in time set any sane man crazy. I saw a field portable hospital operating under conditions that would not be believed they were so fantastic.²³⁴

Several units like the 19th Portable Hospital at Ango and the 7th Portable Hospital at Soputa were collocated near Allied artillery but were forced to relocate by Japanese counter-battery fire.²³⁵ Siting

²³⁰ Lavarack, "Report on Activities Detachment 2/5 Aust. Fd Ambulance," August 1943, AWM54 19/7/6, AWM.

²³¹ From: Norris, "Medical Service 7 Aust Div During Papuan Campaign," 7 January 1943, AWM54 481/12/13, AWM.

²³² Dice, "Lessons from Theatres of War New Guinea June 42-January 43," AWM54 519/6/51, AWM.

²³³ Major J.M. Yeates, 2/9th Army General Hospital, "Organisation and Equipment of Advanced Surgical Teams in New Guinea," undated, AWM54 921/7/10, AWM.

²³⁴ Anonymous Author, Adv Echelon I Corps, 19 December 1942, 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

²³⁵ Captain Bernard Friedenthal, 19th Portable Hospital, "History of the Medical Activities of the 19th Portable Hospital," 16 January 1943, History of the Medical Activities of the 19th Portable Field Hospital, 126th Regiment, Buna Area, USAHEC.

medical posts to access roads also improved casualty movement, but risked observation from the air. The Soputa MDS was attacked by Japanese aircraft on 27 November as the site sacrificed dispersal and concealment to improve access to the Soputa track.²³⁶ The American 2nd Field Hospital at Simemi was also bombed twice on 7 December.²³⁷ These attacks reinforced the need to balance security and concealment against ensuring access for effective care.²³⁸

The addition of surgical teams to forward units was another significant organisational adaptation which improved medical care. The considerable time it took to remove casualties from the battlefield and evacuate them to Port Moresby necessitated treatment of serious cases at the front in order to ensure the principle of timely and appropriate care.²³⁹ Norris had initially organised small surgical teams to accompany field ambulances on the Kokoda Trail to conduct life-saving surgeries. The first complete surgical team did not arrive at the beachheads until late November, but soon surgical teams were attached to all medical units. By January, four surgical teams were available for the 18th Brigade's attack at Sanananda and managed to treat all 52 cases which required surgery within 22 hours.²⁴⁰ This would have been impossible without forward surgical teams as poor weather during that time prevented evacuations for five days. Forward surgery saved lives and ensured no casualties were 'prejudiced' by the restrictions imposed by transport and weather.²⁴¹ However, the 6.9% of personnel who died of wounds after arriving at aid posts was still higher than most campaigns.²⁴²

²³⁶ The attack resulted in 29 killed, including Major Ian F. Vickery who was leading the MDS's surgical team and Major Hew McDonald, CO 2/4th Field Ambulance, and 55 wounded. Colonel Spry, GSO1 7th Division, was also wounded. Another raid by Japanese bombers was made on 6 December, but the MDS had been relocated. Brigadier William W.S. Johnston, DDMS NGF, "Report on Operations Buna-Gona-Sanananda Medical Positions – Work of 2/4th Field Ambulance," undated, AWM54 581/7/33, AWM; Earlam, "Report on Operations 14 Aust Field Ambulance – Papua," undated, AWM54 19/7/17, AWM; 32nd Division Surgeon, "Papuan Campaign – Narrative History," undated, 332-26, RG407 E427 B7944, NARA; 107th Medical Battalion, "History of 107th Medical Battalion," undated, 332-MED-0.1, RG407 E427 B8067, NARA.

²³⁷ Nine men were killed and more than 30 wounded. Several tents were badly perforated by shrapnel. 32nd Division Surgeon, "Papuan Campaign – Narrative History," undated, 332-26, RG407 E427 B7944, NARA.

²³⁸ Johnston, "Report on Operations Buna-Gona-Sanananda Medical Positions," undated, AWM54 581/7/33, AWM.

²³⁹ Johnston, "Medical Notes New Guinea Campaign," undated, AWM54 481/12/48, AWM; Norris, "Medical Service 7 Aust Div During Papuan Campaign," 7 January 1943, AWM54 481/12/13, AWM.

²⁴⁰ Norris, "Medical Service 7 Aust Div During Papuan Campaign," 7 January 1943, AWM54 481/12/13, AWM; Lavarack, "Report on Activities Detachment 2/5 Aust. Fd Ambulance," August 1943, AWM54 19/7/6, AWM.

²⁴¹ Norris, "Medical Service 7 Aust Div During Papuan Campaign," 7 January 1943, AWM54 481/12/13, AWM.

²⁴² This figure is considerably higher than the 3.2% rate of personnel died of wounds during the Guadalcanal campaign, which was 3.2%. AMF, "Battle Casualties Buna-Gona Coastal Campaign 14 November 1942 – 22 January 1943," undated, AWM54 171/2/25; 32nd Infantry Division Surgeon, "Papuan Campaign – Narrative History Table No. 1: Casualties – 32d Division – Buna Campaign 26 September 1942 – 28 February 1943," undated, 332-26, RG407 E427 B7944, NARA; 163rd Infantry Regiment, "163rd Infantry Regiment History – New Guinea: Part VIII Statistics," undated, 341-INF(163)-0.3, RG407 E427 B9085, NARA; John Zimmerman, *Marines in World War II Historical Monograph: The Guadalcanal Campaign* (Quantico: USMCR Historical Section, 1949), 168.

Evacuation presented the most significant medical logistics problem as it was dependent on air transport. While air evacuation's value was unquestioned, it was difficult to plan for or rely on because it functioned on a day-to-day basis due to aircraft availability and weather (Figure 5.16).²⁴³ In the best case, a casualty could be evacuated to Port Moresby within five hours of being wounded; in the worst case, it could take a week.²⁴⁴ Dobodura and Popondetta were the main medical hubs as they provided the most direct points for supply and evacuation.²⁴⁵ Hospitals and staging posts were established near the airstrips for casualties prioritised for evacuation, who were backloaded onto every empty transport aircraft.

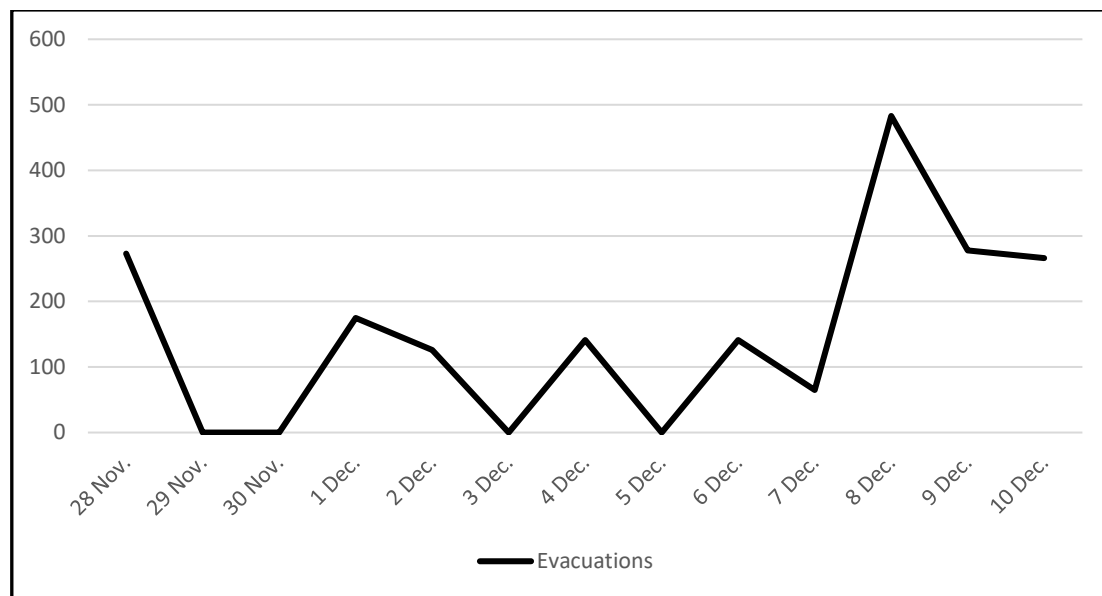


Figure 5.16: Medical Evacuations to Port Moresby, 28 November-10 December 1942.²⁴⁶

If air transport was interrupted, medical posts could be overwhelmed by the increase in patients and supply requirements to maintain adequate care. Popondetta MDS exceeded its capacity by over 250 patients when the strip was closed between 6-7 December, and Soputa's MDS swelled to 615 patients after Popondetta flooded between 12-17 January 1943.²⁴⁷ The breakdown of

²⁴³ Sea routes were seen as less useful because they took much longer to traverse. Palmer, "Report on 10 Aust. Fd. Amb.," 15 April 1943, AWM54 19/4/4, AWM.

²⁴⁴ The record for speedy evacuation was set on 16 December. A soldier of the 36th Battalion was wounded at 0800, passed through the RAP to a motor ambulance and arrived at Soputa MDS by 0900 where they received urgent surgery, and were then transported to Popondetta to be backloaded on a plane which reached Port Moresby by 1300. Norris, "Medical Service 7 Aust Div During Papuan Campaign," 7 January 1943, AWM54 481/12/13, AWM.

²⁴⁵ Norris, "Medical Service 7 Aust Div During Papuan Campaign," 7 January 1943, AWM54 481/12/13, AWM.

²⁴⁶ From: Johnston, "Report on Operations Buna-Gona-Sanananda Medical Positions," undated, AWM54 581/7/33, AWM

²⁴⁷ 14th Field Ambulance War Diary, 4-8 December 1942, AWM52 11/12/38, AWM; Lieutenant-Colonel M.S.S. Earlam, CO 14th Field Ambulance, "Report on Conditions and Complaints 14th Field Ambulance Popondetta," 28 December 1942, AWM54 19/7/22, AWM; Earlam, "Report on Operations 14 Aust Field Ambulance – Papua," undated, AWM54 19/7/17, AWM; Lavarack, "Report on Activities Detachment 2/5 Aust. Fd Ambulance," August 1943, AWM54 19/7/6, AWM.

evacuations and overcrowding of airstrip hospitals had a 'bad effect on the morale and the physical condition of patients'.²⁴⁸ These instances placed acute strain on the limited medical resources available, and there are claims that medical care suffered during these periods.²⁴⁹ Issues with evacuation displayed the inherent difficulties of conducting operations over difficult lines of communication.

Conclusion: 'A Nightmare'

A post-campaign report succinctly summarised that logistics during the beachhead operations had been 'a nightmare'.²⁵⁰ Nevertheless, success managing and adapting to the demands of logistics was perhaps the most important factor in the Allied victory. Supply remained a zero-sum game for much of the campaign because of the Allies' limited transport capacity. Herring was particularly cognisant of this balance as 'an extra plane load of ammunition...the guns...could have fired off in a few minutes left so much less food for the troops'.²⁵¹ The requirements for essential rations, ammunition, and medical supplies had to be balanced against demands for increased fire support, heavy equipment, engineering supplies, and the means of sustaining more equipment and troops.

Logistics was second only to the environment when considering factors which exerted the most influence on the operations. The operations could have easily failed due a breakdown in logistics. They commenced on a shoestring which counted on a short campaign; there was little room for complications. However, the first weeks were beset by the loss of shipping, poor weather, limited air transport capacity, and the need to develop infrastructure in forward areas. This required resourcefulness and unconventional approaches. Captain Maxwell Emerson, 32nd Division Quartermaster, concluded:

Supply is easily fifty percent of jungle warfare. If you don't get it up there, nobody else can do it for you and a battle can be won or lost accordingly.²⁵²

The ability to improvise and adapt to find practical – if incomplete – solutions was a hallmark of the operations. This allowed the Allies to tackle the four main logistical challenges of coordination, the means and methods of supply, meeting the escalating supply requirements, and to a lesser extent

²⁴⁸ Palmer, "Report on 10 Aust. Fd. Amb.," 15 April 1943, AWM54 19/4/4, AWM.

²⁴⁹ McLeod explores these claims in greater detail in "Within Reach, Beyond Care," 359-364; Major Adrian A. Buckley, "Report on 14 Fld Amb," 17 December 1942, AWM54 19/7/22, AWM.

²⁵⁰ DeGraaf, "Notes on the Buna Campaign 1 Dec 1942-24 January 1943," 1 February 1943, 333 HQ I Corps Office of Quartermaster, RG338 E339 B279, NARA.

²⁵¹ Herring to Eichelberger, 15 July 1957, cited in Horner, *Crisis of Command*, 262.

²⁵² Emerson, "Report of Activities of 32nd Division Quartermaster," 15 April 1943, 332-QM-0.3, RG407 E427 B8069, NARA.

sustaining their forces against environmental factors. By the end of the campaign, the Allied supply lines had demonstrated increased capacity and continual improvement.

Significantly, logistics supported important tactical developments which enabled Allied forces to make inroads against the Japanese defences. While 5AF's operations against the Japanese lines of communication began to yield results and cripple Japanese supply, the Allies managed to provide enough rations, ammunition, and medical supplies to sustain the troops on the ground. Increased levels of fire support through the provision of artillery and tanks could not have been achieved in air and sea supply had failed, nor had improved road networks and infrastructure facilitated greater distribution of supplies. However, supply still fundamentally constrained the tactical options available to commanders in terms of how troops could fight and the resources at their disposal. The operations reinforced the fundamental connection between logistics, command, and tactics. The implications of this will be explored further in the following chapters.

Chapter Six

‘Buna or Bust’:

Formation Command During the Beachhead Operations

All in all, I think that Buna was the most severe action of the war. I cannot imagine troops going into action under more unfavourable conditions. From the highest commander to the lowest private there was not the slightest conception of what was to turn out to be. The troops went in on a shoe-string, and the shoestring was mildewy rotten. I have only sympathy for those commanders whose military reputation was tarnished. The die was cast against them, and by and large they were helpless to change it.¹

Colonel Clarence A. Martin
G-3 US I Corps & Commander Warren Force
Letter to Samuel Milner, US Army Official Historian
6 March 1951

The beachhead operations proved a difficult and unusual challenge for divisional commanders – Major-General George Vasey, GOC Australian 7th Division, Major General Edwin Harding, CG American 32nd Infantry Division, and later Lieutenant General Robert Eichelberger, CG US I Corps – and their subordinate brigade and regimental commanders, which tested their robustness, endurance, and competence in command. Formation commanders faced a range of problems stemming from the lack of information about the enemy, internal friction and pressure from high command, and tactical limitations imposed by terrain and the capabilities of their forces. Effective command was therefore contingent upon developing a realistic understanding of the situation, establishing practical methods for control, ensuring functional command relationships,

¹ Colonel Clarence Martin to Milner, 6 March 1951, Interviews, RG319 E53 B5, NARA.

efficiently handling and maintaining forces, and demonstrating leadership under demanding conditions.

As divisions could not function as cohesive formations due to the discontinuous nature of the battlefield, brigade commanders assumed greater responsibility for significant tactical decision-making as they often controlled the largest effective forces operating against an objective. While divisional commanders had limited opportunities to exert decisive tactical influence, their appreciations and approaches were crucial to shaping the conditions in which their subordinates could adapt. Crucially, senior officers at formation level were fundamental to the learning and adaptation process, by facilitating, directing, or formalising adaptations to tactics and techniques throughout their formations.

Formation commanders of the 7th Division conducting the battles for Gona and Sanananda demonstrated the decentralised command of Australian forces and highlighted the need for close coordination and liaison between formations. While Gona remained an all-Australian affair, at Sanananda it proved more difficult to manage Australian and American interests. Meanwhile, formation command within the American forces at Buna can be clearly delineated by Harding's and Eichelberger's periods in command. Harding's command reflected several key weaknesses within the division. His personal failures as a commander, and those of his forces, proved the catalyst for his relief. Eichelberger's tenure saw greater direct influence exerted over the battles and more proactive command by his appointed subordinates. The comparative analysis of relationships and functions of formation commands within the 7th and 32nd Division sectors show the strengths and weaknesses within the respective national systems, issues arising from coalition commands, and the role and influence of individual commanders in shaping the attitudes and approaches in their sectors.

'Who will Reach Zero First?': The 7th Division at Gona and Sanananda

The 7th Division arrived at the beachheads facing the challenge of attacking two Japanese positions each with a single, exhausted brigade. Vasey, who assumed command of the formation at the end of October, had won the confidence of his superiors and his brigade commanders with his aggressive advance from Kokoda and decisive victory at Oivi-Gorari via a brigade encirclement, which demonstrated the 'rapidity with which Vasey had seized control and imposed his personality on the division'.² Blamey described him as the driving force of the advance, as he 'pushed right

² Horner, *General Vasey's War*, 212.

forward himself the whole time and so kept his brigadiers pressing on'.³ Vasey was supported by an experienced staff who were familiar with the logistics and problems of jungle warfare.⁴ His tactical proficiency and confidence ensured he was heavily involved in planning and decision-making. However, this meant he principally employed his G officers as links to subordinates to explain intentions and relay information between commands, rather than for planning.⁵

Vasey adroitly formulated an appreciation of the challenges of jungle warfare and identified four main problems: information, mobility and manoeuvre, fire power, and manpower.⁶ The reduced pace of movement and lack of information required commanders to act quickly and decisively or at worst 'make...mistakes quickly'.⁷ Deficiencies in fire support were problematic because 'all...previous teaching [was] based on fire support'; he could see no solution other than using what the Allies possessed, such as mortars, 'really close' air support, or infiltration.⁸ Jungle conditions also imposed high rates of wastage which could not be sustained over long periods. Horner argues this assessment proves Vasey's ability to quickly comprehend situations.⁹

The 7th Division's options for the initial attacks against Gona and Sanananda were limited. Both positions had to be captured and the Allies' interior flanks secured, but there was little information about the Japanese dispositions and his two brigades were greatly under-strength. Vasey was conscious of the relative weakness of his forces. He warned Herring that 'talk of having two brigades [was] misleading' and requested reinforcements, though Herring was optimistic that 'relief rather than reinforcement' would be possible with the swift capture of Buna.¹⁰ Despite these issues, the 7th Division remained confident, and signalled NGF 'Buna or bust is our motto and we will not bust'.¹¹ Vasey dispatched Brigadier Kenneth Eather's 25th Brigade to Gona while Brigadier John Lloyd's 16th Brigade and 7th Division headquarters moved towards Soputa to link with the

³ Blamey to Shedden, 14 November 1942, cited in Horner, *General Vasey's War*, 214.

⁴ 7th Division General Staff Branch War Diary, 5 October 1942, AWM52 1/5/14/30, AWM.

⁵ Vasey felt Allen had not made the best use of a divisional staff nor was he aware of what it could do. He was also critical of the way Allen had handled his brigades. Colonel Charles Spry, GSO1 7th Division, believed Vasey needed a 'secretary rather than a GSO'. Vasey to Herring, 28 October 1942 MS11355 Item 12/9, SLV; George Vasey to Jesse Vasey, 6 November 1942, MS3782 Item 2/15, NLA; Colonel Charles Spry cited in Horner, *General Vasey's War*, 212.

⁶ It should be noted that these share similarities with Allen's observations submitted after his relief. 7th Division, "Ops – 7 Aust Div," undated, AWM54 577/7/10, AWM; Vasey to Herring, 10 November 1942, MS11355 Item 12/9, SLV.

⁷ Vasey to Herring, 10 November 1942, MS11355 Item 12/9, SLV.

⁸ Vasey to Herring, 10 November 1942, MS11355 Item 12/9, SLV.

⁹ Horner, *General Vasey's War*, 210-212.

¹⁰ Vasey expressly requested from Herring 'any other brigade other than 14 Brigade'. He was aware of the poor state of the formation while GOC 6th Division in Port Moresby. Vasey to Herring, 10 November 1942, MS11355 Item 12/9, SLV; Herring to Vasey, 11 November 1942, MS3782 Item 2/16, NLA.

¹¹ 7th Division General Staff Branch War Diary, 13 November 1942, AWM52 1/5/14/29, AWM.

Americans (Figure 6.1).¹² The initial engagements by the two brigades validated Vasey's concerns about firepower, manpower, manoeuvre, and supply. He acknowledged the risks of a protracted campaign:

The Jap is being much more stubborn and tiresome than I thought and I fear a war of attrition is taking place on this front. The Jap won't go until he is killed and in the process he is inflicting many casualties on us. I am beginning to wonder who will reach zero first.¹³

The 7th Division needed to sustain and support the attacking brigade's battles with the few resources it could bring to bear.

7th Australian Division Major-General George Vasey	
Gona	Sanananda
25th Brigade - Brigadier Kenneth Eather 21st Brigade (from 26 Nov. 1942) - Brigadier Ivan Dougherty 14th Brigade (from 1 Jan. 1943) - Lieutenant-Colonel Geoffrey Matthews	16th Brigade - Brigadier John Lloyd 126th Regiment (from 23 Nov. 1942) - Colonel Clarence Tomlinson 30th Brigade (from 6 Dec. 1942) - Brigadier Selwyn Porter 21st Brigade (from 28 Dec. 1942) - Brigadier Ivan Dougherty 163rd Regiment (from 1 Jan. 1943) - Colonel Jens Doe 18th Brigade (from 5 Jan. 1943) - Brigadier George Wootten

Figure 6.1: 7th Division Command Organisation, November 1942-January 1943.

Vasey trusted his brigade commanders to fight their respective battles. They were highly competent officers with considerable experience in Papua.¹⁴ However, he demonstrated less trust in

¹² Vasey, "Report on Owen Stanleys to Sanananda," undated, AWM54 519/6/46, AWM.

¹³ By this time the 25th Brigade numbered 736 men and the 16th Brigade 1,021. Vasey to Herring, 23 November 1942, MS3782 Item 2/16, NLA; 16 Infantry Brigade War Diary, 26 November 1942, AWM52 8/2/16/20, AWM; 25th Infantry Brigade War Diary, 24 November 1942, AWM52 8/2/25/15, AWM.

¹⁴ Brigadier Kenneth Eather had commanded the 2/1st Battalion at Bardia and Tobruk. He was promoted to command the 25th Brigade and oversaw the Australian withdrawal to Imita Ridge during September. Brigadier John Lloyd was a First World War veteran and commanded the 2/28th Battalion in the Middle East before assuming command of the 16th Brigade in Ceylon in March 1942. Brigadier Ivan Dougherty commanded the 2/4th Battalion in Libya, Greece, Crete, and Syria, before returning to Australia to command the 23rd Brigade. Dougherty replaced Potts as Commander 21st Brigade in October 1942. Brigadier Selwyn Porter commanded the 2/6th and 2/31st Battalions in the Middle East before taking over the 30th Brigade in Port Moresby in March 1942. Porter briefly commanded Marourba Force. Steve Eather, "Eather, Kenneth William (1901-1993)," *Australian Dictionary of Biography*, Australian National University; Keith Howard, "Lloyd, John Edward

the American regiments under his command, particularly in offensive roles. The 126th Regiment made a poor first impression after its initial attack on the Killerton Junction.¹⁵ He believed the regiment lacked 'the idea of strong and quick action' and had 'maintained masterful inactivity'.¹⁶ The 126th Regiment's first task had been a difficult one, but its slow movement, loss of control, and lack of drive reflected its inexperience, training, and conditioning. Even the 126th Regiment's commander, Colonel Clarence Tomlinson, admitted he was 'embarrassed' by its initial effort.¹⁷ However, other Australian commanders were more forgiving, with Lloyd accepting the 'temporary loss of contact' with American companies as 'no new experience' in jungle fighting, and the regiment's subsequent attack to establish Huggins Roadblock and determination to hold it indicated that under the right conditions, the Americans were a capable force.¹⁸ Vasey's concerns about American forces persisted throughout the operation. He was unconvinced the 163rd Regiment were 'quite as aggressive when it comes to close work as is necessary to finish the Jap' during the pursuit to Sanananda.¹⁹ After inspecting the regiment's positions, Vasey stated he was 'very fed up with [Colonel Jens Doe] and...[swore] never to accept Yanks under command again'.²⁰ Dean attributes Vasey's attitude to 'cultural snobbery', whereby he was automatically dismissive of the Americans.²¹ However, it is more likely Vasey's comments were motivated by his assessment of performance. He was not alone in offering similar criticisms of the 32nd Division. Kenney, Herring, and Blamey all expressed doubts about the capacity of the Americans.²² Vasey also offered similar criticisms of the CMF units which came under his command.²³

(1894-1965)," *Australian Dictionary of Biography*, Australian National University; G.H. Fearnside and Ken Clift, *Dougherty: A Great Man Among Men* (Sydney: Alpha Books, 1979); Mark Johnston, "Porter, Selwyn Havelock Watson Craig (1905-1963)," *Australian Dictionary of Biography*, Australian National University.

¹⁵ On 19 November NGF contacted Vasey seeking his preference of taking control of the 126th Regiment or altering the American area of operations to include Soputa. Vasey accepted command of 126th and directed the regiment to Soputa. However, NGF was unaware that only the III/126th was in Vasey's area. Harding subsequently requested the return of the II/126th, which left two companies less two platoons of the I/126th, the III/126th, and 126th Regimental Headquarters (including the Cannon and Anti-tank Companies) in the 7th Division sector. The 126th Regimental Headquarters relocated to take control of Urbana sector on 3 December. Vasey, "Report on Owen Stanleys to Sanananda," undated, AWM54 519/6/46, AWM; New Guinea Force Headquarters and General (Air) War Diary, 19-22 November 1942, AWM52 1/5/51/2, AWM.

¹⁶ 'Masterful inactivity' is a reference to a phrase used by 18th Century poet William Cowper, who described it as 'doing nothing with exceptional skill'. Vasey to Herring, 23 November 1942; MS3782, Item 2/16, NLA; Vasey to Blamey, 25 November 1942, 3RDL/6643 Item 2/140, AWM; Vasey, "Report on Owen Stanleys to Sanananda," undated, AWM54 519/6/46, AWM.

¹⁷ Vasey to Blamey, 25 November 1942, 3RDL/6643 Item 2/140, AWM.

¹⁸ 16th Infantry Brigade War Diary, 30 November 1942, AWM52 8/2/16/20, AWM.

¹⁹ Vasey to Brigadier Ronald L. Hopkins, 16 January 1943, MS3782 Item 2/16, NLA.

²⁰ Riggall Diary, 18 January 1943 cited in Horner, *General Vasey's War*, 235; 7th Division General Staff Branch War Diary, 18 January 1943, AWM52 1/5/14/39, AWM; Eichelberger, *Jungle Road*, 60-61.

²¹ Dean, *MacArthur's Coalition*, 199.

²² Kenney believed: 'The trouble with the 32nd Division was that, in addition to being a green outfit, they sat around in the jungle for about ten days doing nothing except worry about the rain and the mud and listening to strange noises at night. They had been careless about their drinking water and as a result nearly everyone

Vasey sought to instil drive and confidence in his forces, but the dispersed front presented challenges to control.²⁴ He sited his headquarters close to his leading units at Soputa – the furthest point forward with tracks to both objectives – to maintain drive and direct contact with subordinates.²⁵ He strongly believed in the value of being forward:

[The commander] must continually be getting about to see what is actually happening...This getting about not only keeps the commander informed by first-hand knowledge, but the confidence of the troops is raised when they constantly see him amongst themselves.²⁶

Vasey or his staff visited the forward troops almost daily. This mitigated the unreliability of wireless communications; Eather noted he had no radio contact with divisional headquarters between 17-18 November but the GSO1, Colonel Charles Spry, made several visits.²⁷ Continuous contact provided the division's headquarters with first-hand knowledge of the terrain, Japanese positions, and the state of its forces, which was used to inform decisions about how forces were employed in consultation with subordinates and staff.²⁸ This confirmed reciprocal confidence between the divisional headquarters and its brigadiers. Brigadier Ivan Dougherty warmly remembered Vasey's support of the 21st Brigade at both Gona and Huggins Roadblock.²⁹ Visits from headquarters staff, and particularly Vasey himself, were also important for morale. Vasey's Aide Lieutenant William Riggall recalled:

I heard the other day from one of our own lads as we were walking up towards the front; "There must be a war on up front, the old man's in a hurry" answered by his cobbler; "Yeah its bloody good to see a bloody fighting general for once in your life".³⁰

Private Robert Innes, 2/27th Battalion, believed Vasey was one of the few generals who 'made it his business' to know what the men were experiencing and thereby earned their trust and confidence.³¹

got dysentery. Their initial eagerness had gone and they simply were not as good combat troops at this time as the seasoned veterans that Vasey had in his 7th Division'. Kenney, *Kenney Reports*, 151.

²³ Vasey to NGF, "Condition of Tps at Present Under Comd 7 Aust Div," 24 December 1942, MS3782 Item 6/48, NLA.

²⁴ Vasey, "Problems of a Commander," undated, MS3782 Item 6/49, NLA.

²⁵ The headquarters was established about 4km behind the 16th Brigade. Vasey, "Report on Owen Stanleys to Sanananda," undated, AWM54 519/6/46, AWM; Vasey cited in Horner, *General Vasey's War*, 209.

²⁶ Vasey, "Untitled Lecture," undated, MS3782 Item 6/49, NLA.

²⁷ Eather Diary, 17-23 November 1942, AWM2017/7/342, AWM.

²⁸ Colonel Reginald Pollard, who replaced Spry as GSO1 after he was wounded on 27 November, supervised an American ration party trying to reach Huggins Roadblock on 12 December. He reported back to Vasey about the state of the American forces, their outlook, and the terrain conditions surrounding the roadblock. Eather Diary, 17-23 November 1942, AWM2017/7/342, AWM; 7th Division General Staff Branch War Diary, 12 December 1942, AWM52 1/5/14/38, AWM.

²⁹ Dougherty to Vasey, 2 February 1943, MS3782 Item 3/18, NLA.

³⁰ Lieutenant William Riggall, ADC GOC 7th Division, to Jessie Vasey, 3 December 1942, MS3782 Item 2/15, NLA.

³¹ Private Robert Innes, 2/27th Infantry Battalion, S00902, KMSA.

The adherence to decentralised execution and Vasey's confidence in his subordinates enabled brigade commanders to develop localised tactical solutions. Brigade commanders at Gona were largely left to fight the battle as they saw fit. A conference between Eather and Dougherty regarding the employment of the 21st Brigade determined it was best used to assist the 25th Brigade against Gona, to which Vasey consented.³² The arrival of Japanese forces in the Kumusi River area added a further complication as Dougherty and Vasey agreed that only one objective – Gona or the Japanese to the west – could be dealt with at a time because of the lack of available troops.³³ Dougherty's decision to focus on Gona proved justified, but his continuation of attacks against the strong defences of the south-eastern sector is questionable given the casualties sustained attacking over the same ground. This led to tensions between Dougherty and some of his battalion COs, who were understandably concerned about the casualties their units had sustained.³⁴ However, his confidence in Lieutenant-Colonel Ralph Honner's tactical decision-making permitted the 39th Battalion the freedom to exploit a new axis of attack and break into Gona on 8 December.

While the decentralised system enabled brigade commanders to determine their means of achieving the division's objectives, it produced problems at Gona where two brigades were engaged without a clear hierarchy to direct the battle. When the 21st Brigade arrived, the 25th Brigade's role switched to supporting the 21st Brigade.³⁵ The 25th Brigade remained in position south of Gona, while Dougherty directed his forces to the east to attack along the coast. However, the reliance on 'cooperation' rather than coordination between the two brigades resulted in a lack of clarity and the failure of the 3rd Battalion – which remained under 25th Brigade's command – to act in accordance with the 21st Brigade's plans when it failed to support the 2/27th Battalion on 1 December.³⁶ Dougherty noted the lack of a designated controlling headquarters was 'never as satisfactory a solution as one where there is someone "on the spot" in command'.³⁷ Gradually, the exhausted 25th Brigade was relieved and Dougherty assumed control of the area from 4 December.

³² 7th Division General Staff Branch War Diary, 2 December 1942, AWM52 1/5/14/38, AWM; 21st Infantry Brigade War Diary, 26-27 November 1942, AWM52 8/2/21/18, AWM; 25th Infantry Brigade War Diary, 26-27 November 1942, AWM52 8/2/25/15, AWM; Dougherty, "Report on Operations 25 Nov. 42 – 14 Jan. 43," AWM67 Item 3/109 [3], AWM; Dougherty, "Comments on Volume 5 Chapter 14 (Draft) of Official War History (Gona)," AWM67 Item 3/109 [4], AWM; Eather Diary, 26-27 November 1942, AWM2017/7/342, AWM.

³³ 7th Division General Staff Branch War Diary, 8 December 1942, AWM52 1/5/14/38, AWM;

³⁴ Dougherty was concerned by the attitudes and competence of Lieutenant-Colonel Albert Caro, 2/16th Battalion, and Lieutenant-Colonel Geoffrey Cooper, CO 2/27th Battalion. Dougherty, "Comments on Volume 5 Chapter 14 (Draft) of Official War History (Gona)," AWM67 Item 3/109 [4], AWM.

³⁵ 25th Infantry Brigade War Diary, 26 November 1942, AWM52 8/2/25/15, AWM.

³⁶ Dougherty, "Report on Operations 25 Nov. 42 – 14 Jan. 43," AWM67 Item 3/109 [3], AWM; Dougherty, "Comments on Volume 5 Chapter 14 (Draft) of Official War History (Gona)," AWM67 Item 3/109 [4], AWM.

³⁷ Dougherty, "Report on Operations 25 Nov. 42 – 14 Jan. 43," AWM67 Item 3/109 [3], AWM; Dougherty, "Comments on Volume 5 Chapter 14 (Draft) of Official War History (Gona)," AWM67 Item 3/109 [4], AWM.

At Sanananda, Vasey sought to envelop the Japanese as the most effective means of defeat.³⁸ The Japanese had collapsed after being encircled at Oivi-Gorari, but the terrain at Sanananda offered few opportunities for similar manoeuvres. Vasey proposed employing the 21st Brigade to attack from the west but this was abandoned after a possible route from Basabua to Sanananda was found impracticable on 4 December.³⁹ The failure of the 30th Brigade's attack on the Killerton Junction on 7 December validated Vasey's preference to encircle the Japanese given the strength of the defences, and the heavy casualties forced Vasey and Porter to pause large-scale attacks.⁴⁰ Porter recognised he could not commit his battalions to similar attacks nor expect them to fight like seasoned AIF units. In a written appreciation, Porter demonstrated sound tactical judgment in assessing the prospects of continued attacks compared to small-scale envelopments and the effects of wastage.⁴¹ Subsequently, Vasey supported Porter's shift to 'stalk and consolidate' tactics to maintain pressure on the Japanese while reducing losses.⁴² This approach is assessed in Chapter Eight.

As the fighting devolved into smaller engagements, the 7th Division's role shifted towards managing supply and coordinating support from NGF. The 7th Division was more susceptible to supply issues because of its reliance on air transport. While Vasey had 'hated his own days in [Q Branch]' he was 'thankful' for the experience and appreciation for supply.⁴³ Considerations of maintenance continually influenced the 7th Division's tactical thinking and there were serious concerns about the long-term effects of supply deficiencies.⁴⁴ Supply was also linked to morale. This became increasingly important as a stalemate developed. During December, the 7th Division increased requests for more amenities, varied rations, gratuitous items, and medical supplies.⁴⁵ Issues of tobacco, sweets, soap, and the *Guinea Gold* newsletter began and were 'keenly

³⁸ Vasey concluded that, despite their stubborn defence, '[the Japanese don't] like being attacked from all directions at once'. This suggested Japanese forces would attempt to withdraw if threatened with encirclement, rather than remain in place to be destroyed as happened at the beachheads. George Vasey to Jesse Vasey, 11 November 1942, MS3872 2/15, NLA.

³⁹ This plan required the 7th Division's brigades to be reconstituted; the 25th Brigade took command of the 3rd, 2/16th and 2/27th Battalions, while 21st Brigade headquarters along with the 2/14th and 39th Battalions formed a new force. The 30th Brigade comprised the 49th and 55/53rd Battalions. 7th Division General Staff Branch War Diary, 1-3 December 1942, AWM52 1/5/14/38, AWM; Vasey to Herring, 23 November 1942, MS3782, Item 2/16, NLA; New Guinea Force Headquarters and General (Air) War Diary, 24 & 29 November 1942, AWM52 1/5/51/20, AWM.

⁴⁰ 7th Division General Staff Branch War Diary, 7-9 December 1942, AWM52 1/5/14/38, AWM.

⁴¹ Porter, "Report on Situation," 15 December 1942, Appendix E, AWM52 8/3/30/9, AWM.

⁴² 7th Division General Staff Branch War Diary, 9 December 1942, AWM52 1/5/14/38, AWM.

⁴³ Vasey, "Untitled Lecture," undated, MS3782 Item 6/49, NLA.

⁴⁴ 7th Division General Staff Branch War Diary, 7 & 13 December 1942, AWM52 1/5/14/38, AWM.

⁴⁵ 7th Division General Staff Branch War Diary, 19 December 1942, AWM52 1/5/14/38, AWM.

anticipated' by the troops.⁴⁶ This was essential to offset the rapidly diminishing morale and discipline of troops in the sector.

The breakdown of tactical unity and high wastage meant commanders at Sanananda were rarely able to conduct attacks according to doctrinal principles as they did not have the requisite strengths. The 16th Brigade was unable to follow-up its initial attacks because it was gravely understrength and exhausted, while the 30th Brigade, which had two battalions at Sanananda and another detached to the 21st Brigade at Gona, conducted its main attack on 7 December without a reserve battalion. The brigade noted 'splitting formations is bad and [led] to confusion and lack of confidence'.⁴⁷ Similarly, Tomlinson's 126th Regiment was never able to function as a cohesive regiment because its units were scattered across three sectors (Figure 6.2). This:

...inevitably led to confusion...[and] had its effect on morale...because a unit separated from its parent organisation invariably believes that it is discriminated against in supplies provided and tasks assigned.⁴⁸

Ad hoc commands like American Soputa Forces under Major Richard Boerem had to be formed to control American units. However, Boerem's force was subsequently attached to the 30th Brigade and gradually broken-up to reinforce dwindling CMF battalions. Boerem protested the 'habitual Australian practice of causing American field officers to relinquish command of portions of his men to Australian command'.⁴⁹ This highlights the tensions between Australian and American forces regarding perceptions of favouritism and the effects of breaking tactical unity on morale.

Sector	Component Units and Sub-Units
Warren	I/126th (Headquarters, A & B Company, 1 Platoon C Company, 1 Squad D Company)
Urbana	II/126th (from 24 Nov. 1942) Headquarters 126th Regiment (from 4 Dec. 1942)
Sanananda	Headquarters 126th Regiment (until 3 Dec. 1942) Detachment I/126th (D Company less 1 Squad and 3 Platoons C Company) III/126th 126th Cannon and Antitank Companies (from 23 Nov. 1942)

Figure 6.2: Dispersal of the 126th Infantry Regiment, November-December 1942.

⁴⁶ 7th Division Adjutant and Quartermaster General Branch War Diary, 14 December 1942, AWM52 1/5/15/13, AWM.

⁴⁷ Lieutenant-Colonel Albert Kessel, Adm Comd 30th Brigade, "Report on Operations in Sanananda Area 2 Dec 42 – Jan 43," undated, AWM54 581/7/13, AWM.

⁴⁸ Blakeley, *32nd Division*, 68.

⁴⁹ I/126th Infantry Battalion Journal – Major Boerem Force Sanananda-Soputa Operations, 13-14 December 1942, 332-INF(126)-7-0.7, RG407 E427 B8010, NARA.

Vasey's tactical appreciations during December reflected concerns about his force's capacity for offensive action. He reconsidered holding Huggins Roadblock because it could not be exploited offensively and was difficult to supply.⁵⁰ The situation frustrated Vasey: '...for three weeks now we have been in the same place and getting more and more annoyed with the stubborn little Jap every day'.⁵¹ The lack of confidence in American forces was reflected in how they were employed by the 7th Division throughout December. American forces assumed supporting roles carrying supplies, manning outposts, or 'merely occupying' rear areas as a condition of their coming under Australian command.⁵² Porter noted Boerem's objections to any suggestions of the Americans resuming offensive roles given their exhaustion, which made the CMF battalions the primary offensive units at Sanananda during December.⁵³

Vasey was concerned about the training and discipline within CMF units. He expected high standards, but:

My experience of the past two months convinces me that for success in jungle warfare...the first requisites for success in either attack or defence are high morale, a high standard of training, both individual and collective, and for successful offensive action, superiority of numbers is also necessary. I regret to have to report that none of these conditions is present in my command.⁵⁴

This assessment of the CMF battalions was shared by Porter and other CMF battalion COs.⁵⁵ This evaluation was harsh and accurate, but also reflective of Vasey's frustrations. Despite this, Vasey assured Herring the 7th Division would continue to attack 'with all the ability we possess and are able to impart to those under our [command]'.⁵⁶ However, the series of ineffective attacks during mid-December led to another pause to large-scale attacks. Vasey remained concerned his forces lacked the capabilities or support to destroy the Killerton Junction defences.

I am doubtless a bit mentally tired...the main cause [of which] is frustration. For weeks and weeks now I have been trying to make bricks without straw, which in itself is bad enough,

⁵⁰ 7th Division General Staff Branch War Diary, 10 & 12 December 1942, AWM52 1/5/14/38, AWM.

⁵¹ George Vasey to Jesse Vasey, 10 December 1942, MS3782 Item 2/15, NLA.

⁵² 30th Infantry Brigade War Diary, 7 December 1942, AWM52 8/2/30/9, AWM; Porter, "Report on Situation," 15 December 1942, Appendix E, AWM52 8/2/30/9, AWM; 30th Infantry Brigade, "30 Aust Inf Bde OO No. 12," 11 December 1942, Appendix D, AWM52 8/2/30/9, AWM.

⁵³ I/126th Infantry Battalion Journal – Major Boerem Force Sanananda-Soputa Operations, 9-12 December 1942, 332-INF(126)-7-0.7, RG407 E427 B8010, NARA; Major Richard Boerem, CO American Soputa Forces, "Fighting State of Troops," 27 December 1942, Appendix K, AWM52 8/2/30/9, AWM.

⁵⁴ The extract was forwarded to NGF with attached reports from Porter on the 30th Brigade, Lieutenant-Colonel Isaachsen on the 36th Battalion, and reports on the strength of the 21st Brigade and the American units still in the area. Vasey to NGF, "Condition of Tps at Present Under Comd 7 Aust Div," 24 December 1942, MS3782 Item 6/48, NLA.

⁵⁵ Vasey to NGF, "Condition of Tps at Present Under Comd 7 Aust Div," 24 December 1942, MS3782 Item 6/48, NLA.

⁵⁶ Vasey to NGF, "Condition of Tps at Present Under Comd 7 Aust Div," 24 December 1942, MS3782 Item 6/48, NLA.

but which is made much worse when others believe you have the straw. However, I believe I have now convinced all concerned on the latter point, though the straw has not yet been delivered.⁵⁷

The release of artillery, tanks, and troops after the capture of Buna finally permitted Vasey to employ the 'straw' which he needed (Figure 6.3).⁵⁸ These were clearly critical to jungle warfare and represented the key elements around which Allied adaptations evolved during the operations.

Formation	Units	Relieving	Role
30th Brigade	3rd Battalion 39th Battalion 49th Battalion 2/7th Cavalry	36th, 55/53rd Battalions and American Soputa Forces	Positional at Killerton Junction
14th Brigade	36th Battalion 55/53rd Battalion	2/14th and 2/16-2/27th Battalions	Positional at Gona
163rd Regiment	I/163rd Battalion II/163rd Battalion III/163rd Battalion	21st Brigade (2/7th Cavalry, 39th and 49th Battalions)	Attack Sanananda Road
18th Brigade	2/9th Battalion 2/10th Battalion 2/12th Battalion	30th Brigade (39th and 49th Battalions)	Attack Killerton Junction
Support	4 x M3 Light Tanks 12 x 25-pdr	- -	Support 18th Bde

Figure 6.3: 7th Division Reorganisation for Killerton Junction Attack, 12 January 1943.⁵⁹

Once these elements were available, the 7th Division planned a coordinated attack. The 18th Brigade – supported by tanks – would attack the Killerton Junction while the 163rd Regiment mounted a supporting attack from the Killerton Track.⁶⁰ This again reflected Vasey's mistrust of American offensive capabilities, but Doe's approach was both confident and considered.⁶¹ While he tested his troops in several unsuccessful small-scale attacks prior to 12 January, the 163rd Regiment's operations demonstrated the phased, limited-objective approach and represented the transition towards greater preparations and planning, which included highly detailed orders for

⁵⁷ George Vasey to Jesse Vasey, 2 January 1942, MS3782 Item 3/18, NLA.

⁵⁸ 7th Division, "7 Aust Div O.I. No. 20," 31 December 1942, Appendix F, AWM52 1/5/14/38, AWM.

⁵⁹ From: 7th Division, "7 Aust Div OI No. 21," 7 January 1943, Appendix 2, AWM52 1/5/14/45, AWM.

⁶⁰ 7th Division General Staff Branch War Diary, 5 January 1943, AWM52 1/5/14/45, AWM; 7th Division, "7 Aust Div OI No. 21," 7 January 1943, Appendix 2, AWM52 1/5/14/45, AWM.

⁶¹ Gavin Long interviewed Vasey in April 1944 and noted 'Vasey is evidently still bitter about [the beachheads], and the way in which he had to use Wootton's brigade there when the Americans had failed'. Gavin Long, "Maj-Gen G. A. Vasey – US Army," 21 April 1944, AWM67 Item 2/44, AWM.

infantry and fire plans.⁶² While the attack failed, the Americans expressed a willingness to work with the 18th Brigade to reduce the Killerton Junction, reflecting the cooperative attitude which had developed by this stage.⁶³ However, Vasey was convinced that continued frontal attacks were ‘repeating the costly mistakes of 1915-17’ and remained in favour of bypassing the Junction.⁶⁴

The 7th Division’s commanders clearly recognised the tactical challenges and cumulative pressures of the operation, but were unable or unwillingly demand more time for preparations or more resources from higher headquarters. Commitment to offensive intent was necessary, but neither Vasey nor his brigade commanders forcibly pushed back against the demands to attack, such as when NGF overruled Vasey and Dougherty’s appeals to delay the 21st Brigade’s first attack, denying it time to familiarise itself with the situation.⁶⁵ Vasey enjoyed Herring’s support, but it is clear he believed Herring did not fully appreciate the situation:

I became browned off with Ned the other day; but was sorry afterwards...The trouble with [NGF] is they will keep telling me how to do my job. If only they would give me the resources I know how to do it.⁶⁶

And later:

[Herring] professes to realise what I am saying; but whether he really does or not I am not sure. I am at least certain that those further back do not and it is his business to see that they do.⁶⁷

It is difficult to gauge the strength of Vasey’s representations from the available sources. However, it should be noted Herring permitted the adoption of localised tactics and secured Vasey the 163rd Regiment. Vasey’s comments better represent frustration rather than a lack of support.

More forceful representations from Vasey to NGF or from the 7th Division’s brigadiers to Vasey for more support or more time would have been reasonable given the conditions. The overall climate of the operations – both the threat from the enemy and the repercussions of internal dissent when so many had been relieved – may have been judged too dangerous, though this came at the cost of the lives of those under their command. This meant they remained complicit in the continual exertion of pressure, though this was not borne easily by the 7th Division’s commanders. At Gona,

⁶² 163rd Infantry Regiment, “Field Order No. 4,” 15 January 1943, 341-INF(163)-0.3, RG407 E427 B9085, NARA.

⁶³ 7th Division, “Report on Visit to HQ 163 US Regt 1600-1830 hrs 12 Jan 43,” 12 January 1943, AWM52 8/2/18/39, AWM.

⁶⁴ Vasey, “Notes on Situation – Sanananda Area,” 13 January 1943, MS3872 Item 6/48, NLA; Vasey to Herring, 14 January 1943, MS3872 Item 2/16 NLA.

⁶⁵ Dougherty, “Comments on Volume 5 Chapter 14 (Draft) of Official War History (Gona),” AWM67 Item 3/109 [4], AWM; 21st Infantry Brigade War Diary, 27-28 November 1942, AWM52 8/2/21/18, AWM; Vasey to Herring, 27 November 1942, MS3872 Item 2/16, NLA; New Guinea Force Headquarters and General (Air) War Diary, 28 November 1942, AWM52 1/5/51/20, AWM.

⁶⁶ George Vasey to Jesse Vasey, 18 December 1942, MS3782 Item 2/15, NLA.

⁶⁷ George Vasey to Jesse Vasey, 26 December 1942, MS3782 Item 2/15, NLA.

Sergeant Jack Scott, 2/16th Battalion, recalled overhearing Dougherty on the phone to 7th Division prior to the 1 December attack at Gona:

[Dougherty] must have been under enormous pressure. You could hear him on the phone...just behind us. His voice was raised with the strain. It must have been terrible for him, a real quandary.⁶⁸

Lloyd later wrote to Herring:

...it was evident that speed counted a lot towards success, and this was maintained by grand troops under extremely difficult conditions. Therefore it was [difficult] for us to realise nor did we know of the pressure coming on to you and the C-in-C [Blamey] from Gen MacArthur...⁶⁹

Lieutenant-Colonel Paul Cullen believed this pressure led to Lloyd developing a 'Somme mentality' in the push for quick victories during the campaign.⁷⁰

The 7th Division was successful in its operations against Gona and Sanananda in part to the competence and decision-making of its formation commanders which enabled localised responses in each sector. After the battle, Herring wrote that 'success [at Sanananda] was due to General Vasey's well-conceived plan and the magnificent way in which it was carried out'.⁷¹ However, this success had come at a terrible cost and the division required considerable rehabilitation and retraining. While the commanders had achieved a victory, many of the lessons they derived from the experience were aimed at avoiding the costly mistakes which had been made in preparing for and conducting the beachhead operations. The senior officers involved at Gona and Sanananda went on to play prominent roles in future campaigns and in shaping the Australian Army's adaptation to jungle warfare.

'No Substantial Headway': The 32nd Division at Buna, 16 November-2 December 1942

The 32nd Division's initial approach to the operations was characterised by bullishness in the division's capabilities and underestimations of the enemy and the environment. Harding was confident the Americans had 'little to fear' as the Japanese preoccupation with Guadalcanal would make Buna 'easy pickings' with a rapid advance.⁷² He believed his forces outnumbered the defenders three-to-one, and 'imbued... with considerable confidence in the fighting qualities of the American

⁶⁸ Sergeant Jack Scott cited in Brune, *A Bastard of a Place*, 454.

⁶⁹ Brigadier John E. Lloyd, Commander 16th Infantry Brigade, to Herring, 1 February 1960, PR00305 Item 13, AWM.

⁷⁰ Cullen cited in Pratten, *Battalion Commanders*, 186

⁷¹ Herring, "Battle for the Beachheads," undated, AWM54 581/6/10, AWM.

⁷² Harding to Sutherland, 12 & 14 October 1942, 98-GHQ1-3.2, RG407 E427 B573, NARA.

soldier [was] not at all pessimistic about the outcome of the scrap'.⁷³ Throughout the division, it was widely believed the American advance on Buna had been delayed to accommodate the overly-cautious Australians.⁷⁴ However, this overconfidence was founded on flawed assumptions about the environment, its effects on supply and tactics, and the enemy positions. Harding had little knowledge of the Buna area, believing it offered 'considerable open country' for manoeuvre and that most trails could accommodate motor vehicles.⁷⁵ The division's advance was focused on moving quickly, rather than what it might face when it arrived.⁷⁶

The divisional headquarters' ability to exercise control over the initial phase of fighting was severely hampered by its dislocation from forward units. The headquarters only left Port Moresby on 13 November, before being established at Mendaropu, 12km behind the leading units.⁷⁷ The separation was exacerbated by the loss of small shipping, which left Harding stranded near Hariko and out of contact with the headquarters for several days. Harding subsequently missed an important conference with BGS NGF Hopkins, while neither his CoS, Colonel John Mott, nor G-2, Captain William Hawkins, could provide the information NGF required.⁷⁸ Divisional headquarters was later established at Embogo – still 21km behind the Buna front – on 19 November.⁷⁹ Conditions at Embogo were far divorced from those at the front; Harding recalled '[it was] quite possible to forget at times that there was a war on. There seemed sometimes to be an air of rustic tranquillity'.⁸⁰ It was later decided to relocate the headquarters to Dobodura, but the move was 'not...pressed for time' despite two major attacks being made that day.⁸¹ When Harding arrived at Dobodura he was again unable to provide a liaison officer from NGF with a clear account of the situation, contributing to Adv NGF's perception he was out of his depth.

The distance between divisional headquarters and forward units placed complete reliance on wireless communications. However, the division's small signals detachment was overwhelmed by

⁷³ Harding to Sutherland, 31 October 1942, 98-GHQ1-3.2, RG407 E427 B573, NARA.

⁷⁴ Handy, "Report of Military Observer in the Southwest Pacific Theater," 2 January 1943, #5, RG337 E15A B51, NARA; Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #6, RG337 E15A B51, NARA; Anders, *Gentle Knight*, 228-245

⁷⁵ Harding to Sutherland, 31 October 1942, 98-GHQ1-3.2, RG407 E427 B573, NARA.

⁷⁶ Harding to Sutherland, 14 October 1942, 98-GHQ1-3.2, RG407 E427 B573, NARA.

⁷⁷ Harding had delegated command of the coastal advance to Brigadier General Hanford MacNider of GHQ SWPA's G-4 Section once American troops arrived at Wanigela on 14 October. Harding to Sutherland, 14 October 1942; 32nd Infantry Division, "Report of Action Papuan Campaign," 332-0.3, RG407 E427 B7793, NARA.

⁷⁸ New Guinea Force Headquarters and General (Air) War Diary, 15 November 1942, AWM52 1/5/51/20, AWM; Anders, *Gentle Knight*, 244.

⁷⁹ 32nd Infantry Division, "Report of Action – Papuan Campaign," 332-0.3, RG407 E427 B7793, NARA.

⁸⁰ Harding Diary, 26 November 1942, Harding Diary, RG319 E53 B3, NARA.

⁸¹ Harding Diary, 29 November 1942, Harding Diary, RG319, E53, B3, NARA; 32nd Infantry Division, "Report of Action – Papuan Campaign," 332-0.3, RG407 E427 B7793, NARA.

the volume of traffic, and limited and unreliable equipment.⁸² This resulted in frequent delays, garbled transmissions, and misdirected messages.⁸³ Hawkins noted the division was 'practically out of touch with everything except [Warren] Force' during the initial phase.⁸⁴ This meant Harding could not reliably communicate with his superiors, his subordinates, or the Australians.⁸⁵ The distance between headquarters and the front line also impeded access to subordinate commanders and prevented him from exerting the direct influence which was required by the American's centralised command doctrine. Harding only made one visit to Warren sector on 26 November and did not see Urbana sector until I Corps' inspection on 2 December.⁸⁶ This also established a precedent for regimental and battalion commanders to establish command posts further back from their troops.⁸⁷ Harding's failure to actively engage with his front line units is notable, though it cannot be attributed to a lack of courage, as during the Japanese air attack on 16 November he returned fire against the aircraft and rescued wounded men from the water.⁸⁸ Under these conditions, it is difficult to imagine how Harding could have developed an accurate understanding of the tactical situation. It therefore reflects a failure to recognise the demands of jungle warfare.

The dispersed and disjointed advance and transfer of units between formations disrupted the tactical unity of the division. Harding's preliminary orders – while vague – envisaged an envelopment of Buna using the 128th Regiment along the coast and the 126th Regiment against Buna Village.⁸⁹ However, Harding became fixated on securing his interior flank at Soputa, which lay beyond the division's boundary.⁹⁰ Harding requested the boundary be adjusted, but NGF instead

⁸² Captain Morely R. Wilson, CO 32nd Division Signals Company, "Report on New Guinea Campaign," 29 March 1943, 332-SIG-0.3, RG407 E427, B8070, NARA; "Report of the Commanding General Buna Forces," Annex 4 Inclosure D: Signals Report, 100-103.

⁸³ The 32nd Signals Company consisted of 4 officers and 65 men in the Buna area. A canoe carrying 6 radio sets from Pongani to Emo Mission on 15 November capsized, and later sets were all found to be defective. These sets were necessary for divisional-regimental communications. The balance of the 32nd Signal Company arrived in Port Moresby on 26 November and was transported to the front as aircraft became available. Wilson, "Report on New Guinea Campaign," 29 March 1943, 332-SIG-0.3, RG407 E427 B8070, NARA; 32nd Infantry Division G-2 & G-3 Journal, #823 17 November 1942, 332-0.7, RG407 E427 B7796, NARA.

⁸⁴ Hawkins cited in Anders, *Gentle Knight*, 244-245.

⁸⁵ Signals regarding the transfer of the 126th Regiment demonstrate the flawed and unworkable system in place at the time. The 126th Regiment was out of direct contact with 32nd Division headquarters. It relied on messages from divisional headquarters being routed back to its rear elements in Port Moresby, and then forwarded to the regimental headquarters. Tomlinson to Milner, 28 November 1950, Soputa-Sanananda Letters, RG319 E53 B5, NARA.

⁸⁶ Harding Diary, 26 November 1942 and 2 December 1942, Harding Diary, RG319 E53 B3, NARA.

⁸⁷ Hale's command post for the 128th Regiment was sited more than 7km from his forward battalions. J. Tracy Hale to Harding, 7 November 1949, Correspondence, RG319 E53 B4, NARA.

⁸⁸ Harding was awarded the Silver Star for his actions, which is the third-highest military honour for gallantry in action against enemy forces. Anders, *Gentle Knight*, 242-243, 272,

⁸⁹ 32nd Infantry Division, "Field Order No. 1," 15 November 1942, 332-3.9, RG407 E427 B7938, NARA.

⁹⁰ Herring thought Harding had developed a fascination with Soputa. Herring's biographer believed Harding become 'obsessed with the notion that Herring thereby had broken faith by [reallocating] the 126th Regiment,

offered Vasey the 126th Regiment to secure Soputa. Harding protested but Herring was adamant about Harding's cooperation.⁹¹ The subsequent reorganisation forced the II/128th to assume the task of the entire 126th Regiment on the Ango-Buna approach. This forced the main attack into the heavily defended coastal sector. When the division first encountered strong resistance, it was disorganised, scattered across three sectors, and could not reliably coordinate its efforts.

The breakdown of regimental unity required Task Forces to control each sector. However, the resultant organisation reflected the lack of confidence in the 32nd Division's senior leadership (Figure 6.4). Warren Force remained under the command of Brigadier General Hanford MacNider, whose drive and direction in command were valued because Harding doubted Colonel J. Tracy Hale's – Commander 128th Regiment – capacity as a tactical commander.⁹² MacNider often bypassed the 128th Regiment headquarters, which placed it in an 'anomalous' and hollow role.⁹³ Harding also appointed Lieutenant Colonel Alexander MacNab, XO 128th Regiment, as the regiment's operational commander to better coordinate the I/126th and I/128th to further insure against Hale's capacity. MacNider was wounded visiting the front on 23 November and replaced by Hale, but this created an unusual arrangement whereby MacNab retained operational command over his superior.

32nd Infantry Division	
Major General Edwin Harding	
Warren Sector	Urbana Sector
Warren Force - Brigadier General Hanford MacNider - Lieutenant Colonel Alexander MacNab (from 22 Nov. 1942) - Colonel J. Tracy Hale (from 23 Nov. 1942) 128th Regiment less II/128th I/126th less 1 Squad and 3 Platoons 2/6th Independent Company	Urbana Force - Lieutenant Colonel Herbert "White" Smith - Colonel John Mott (from 27 Nov. 1942) II/128th II/126th (from 24 Nov. 1942)

Figure 6.4: 32nd Division Command Organisation, 16 November-2 December 1942.

denying him the opportunity to take and hold Soputa, which he appeared to regard as rightfully his'. Sayers, *Herring*, 238.

⁹¹ Herring is sometimes misattributed as telling Harding to 'make no more difficulties' on the matter. Herring's message to Harding read: 'Vasey's assumption [command] 126 regt purely temporary and operational to ensure complete coordination Soputa area. His decision must stand. Rely on your loyal cooperation avoidance misunderstanding and whole-hearted determination destroy enemy. Consider Vasey's action essential and [unintelligible] necessary permit his force bypass Soputa and strike main enemy with all speed'. 32nd Infantry Division G-2 & G-3 Journal, #1068 20 November 1942, 332-0.7, RG407 E427 B7796, NARA.

⁹² 32nd Infantry Division G-2 & G-3 Journal, 20-23 November 1942, 332-0.7 G-2 & G-3 Journal, RG407 E427 B7796; Harding to Milner, 24 July 1951, Harding Interviews, RG319 E53 B4, NARA; Luvaas, "A Leavenworth Nightmare," 208-209.

⁹³ "Harding Interview," Interview and Journal Entries Pacific Campaign, Jay Luvaas Papers B7B F31 [1/2], USAHEC.

Urbana Force, comprising Lieutenant Colonel Herbert A. “White” Smith’s II/128th and Major Herbert M. “Red” Smith’s II/126th, also struggled to coordinate its actions.⁹⁴ “White” Smith assumed command as the senior officer, but the battalion’s headquarters was insufficient to coordinate the two units, which became badly intermixed and confused.⁹⁵ Harding sent Mott to oversee the sector after reports of a ‘lack of push...and some instability’.⁹⁶ Mott arrived demanding a plan from each battalion, but appears to have been a disruptive presence. Despite being a staff officer, Mott assumed command and began relieving officers. “White” Smith claims Mott sidelined him to pull troops out of the swamps on the right flank, which had originally been rejected by divisional headquarters.⁹⁷ Mott also deferred to “Red” Smith to control the night attack on 1 December, and falsely reported a heavy Japanese counterattack that night.⁹⁸

These arrangements highlighted serious weaknesses in the division’s senior leadership. The 32nd Division had a mix of senior Regular Army and National Guard officers. Harding believed retaining as many Guard officers ‘as could do a job’ was good for morale and cohesion, and was reluctant to relieve Hale – the most senior remaining Guard officer – despite serious questions about his ‘qualifications to lead a regiment into battle’.⁹⁹ Harding was content to carry Hale until the conclusion of the battle since MacNab was ably directing Warren Force.¹⁰⁰ There were also serious concerns about the division’s staff. Byers, CoS I Corps, described the staff as a ‘scrub team’ because it lacked formal organisation and had favoured developing certain officers, which had left it under-trained.¹⁰¹ Harding had not imposed a formal staff organisation until late July, which had made it

⁹⁴ Both battalions were commanded by Herbert Smiths. Major Herbert M. Smith had assumed command of the II/126th after the former CO, Lieutenant Colonel Harry Geerds, suffered a heart attack at the beginning of the campaign. Harding designated Smith of the II/126th “Red” Smith, and Smith of the II/128th “White” Smith, matching American radio colour designations for the units. 32nd Infantry Division G-2 & G-3 Journal, #1254 & #1257, 23 November 1942, 332-0.7, RG407 E427 B7796, NARA; II/128th Infantry Battalion Journal, 23 November 1942, 332-INF(128)-7-0.7, RG407 E427 B8062, NARA.

⁹⁵ Colonel John Mott, “Memorandum,” 10 December 1942, Memorandum – Colonel J.W. Mott, RG319 E53 B4, NARA.

⁹⁶ Mott, “Memorandum,” 10 December 1942, Memorandum – Colonel J.W. Mott, RG319 E53 B4, NARA.

⁹⁷ Mott claims he relieved “White” Smith of command of his battalion and directed him to command a patrol against the Girua River to the west. Smith states that he was never relieved, but agrees that he was ordered to command the patrol, then to command G Company on Urbana Force’s right flank; ‘in short, Colonel Mott did not want me anywhere around where by word or implication I might say, “I told you so.”’ Herbert A. Smith to Milner, 20 January 1950, Urbana Letters, RG319 E53 B4, NARA; Mott, “Memorandum,” 10 December 1942, Memorandum – Colonel J.W. Mott, RG319 E53 B4, NARA.

⁹⁸ Herbert M. Smith to Milner, 16 March 1950, Urbana Letters, RG319 E53 B4, NARA.

⁹⁹ Harding Diary, 30 November 1942, Harding Diary, RG319 E53 B3, NARA; Harding to Milner, 24 July 1951, Harding Interviews, RG319 E53 B4, NARA; Eichelberger to MacArthur, 6 September 1942, RG30 B25 F8, MM; Eichelberger to MacArthur, 29 September 1942, RG41 B1 F2, MM; Harding cited in Luvaas, “A ‘Leavenworth Nightmare,’” 192.

¹⁰⁰ “Harding Interview,” Interview and Journal Entries Pacific Campaign, Jay Luvaas Papers B7B F31 [1/2], USAHEC.

¹⁰¹ Byers observed Bradley was often given the most important staff position for any training exercise. Byers Interview, RG49 B1, MM.

difficult for the division's staff to hone their skills and for I Corps staff to become familiar with their counterparts. Mott and Colonel Sladen Bradley were regarded as the only staff officers of 'ability'.¹⁰² However, when Mott arrived in Urbana sector demanding plans, "Red" Smith concluded Mott would not be doing 'any of the organising' to make the attacks work.¹⁰³ Personality clashes also affected the division staff's capacity to work with other formations.¹⁰⁴ Mott was competent but possessed a 'notable talent for antagonising superiors, subordinates, and contemporaries'.¹⁰⁵ This led to tensions with GHQ, NGF, and later I Corps.

Role	Officer	Notes
CG	Maj-Gen. Edwin Harding (R)	Relieved 2 Dec. 1942
CoS	Col. John Mott (R)	Relieved 3 Dec. 1942
G-1	Lt-Col. George Sherman (NG)	Remained in Port Moresby
G-2	Capt. William Hawkins (R)	-
G-3	Lt-Col. Merle Howe (NG)	Appointed Cmdr 127th Reg. 14 Jan. 1943
G-4	Col. J. Sladen Bradley (R)	Appointed CoS 32nd Div. 3 Dec. 1942
126th RCT	Col. Lawrence Quin (R)	Killed 5 Nov. 1942
127th RCT	Lt-Col. Edward Schmidt (NG)	Appointed XO 127th Regt 9 Dec. 1942
128th RCT	Col. J. Tracy Hale (NG)	Relieved 3 Dec. 1942

Figure 6.5: 32nd Division Staff and Regimental Officers, November 1942.¹⁰⁶

Despite the obvious tactical difficulties during the initial attacks, there were only limited attempts to adapt to the problems encountered. Harding was regarded as a sound tactician: 'not...brilliant...or a quick thinker, but...steady', who favoured a conservative approach and opposed pressuring commanders to 'do something' in difficult situations.¹⁰⁷ However, on 21 November GHQ

¹⁰² Byers Interview, RG49 B1, MM.

¹⁰³ H.M. Smith to Milner, 5 June 1950, Urbana Letters, RG319 E53 B4, NARA.

¹⁰⁴ Anders cites an incident during I Corps' visit to 32nd Division Headquarters in early November where Colonel Gordon B. Rogers, G-2 I Corps, informed Hawkins that Willoughby disapproved of the form and content of the division's G-2 reports, which contained too much information about friendly forces. When Hawkins referred the matter to Willoughby, he attributed the criticism to Rogers. There is an undated letter from Willoughby to Rogers referring to this problem in I Corps G-2 Correspondence, indicating Willoughby was likely the originator of the complaint and cause of the antagonism. Willoughby to Rogers, undated, G-2 Intelligence Mix Files (New Guinea) 1942, RG338 E314 B81, NARA; Anders, *Gentle Knight*, 238.

¹⁰⁵ Harding to Milner, 24 July 1951, Harding Interviews, RG319 E53 B4, NARA.

¹⁰⁶ "R" denotes Regular Army officers. "NG" denotes National Guard officers.

¹⁰⁷ Harding edited and published *Infantry in Battle* in 1934 and became secretary of the US Army Infantry Association and Editor of the *Infantry Journal* from 1934-1938. He oversaw the transformation of the journal into a progressive publication on the role and potential of infantry. Ironically, in 1936 Harding wrote an eerily prophetic editorial about the security of higher commands in future wars and the likelihood of commanders being replaced on a one-strike policy. Van Volkenburgh Interview, RG49 B4, MM; Anders, *Gentle Knight*, 156; Leslie Anders, "The Watershed: Forrest Harding's Infantry Journal," *Military Affairs* 40, no.1 (1976): 14; Edwin

ordered him to take Buna 'regardless of losses'.¹⁰⁸ Harding relayed the order to MacNider: 'This is the big show. Take [Buna] today', but warned not to push if casualties began to mount, and accepted full responsibility for amending the order.¹⁰⁹ Harding's desire to restrict his losses from organised attacks with limited support was understandable. After another directive from GHQ, he reflected:

I know as well as anybody that you can't win battles without getting a lot of people hurt. But I also know...that infantry can't break through an automatic weapons defence without first knocking out the automatic weapons.¹¹⁰

Harding requested twenty more guns, tanks, and the 127th Regiment to 'smash their defences', but NGF could not sustain the additional logistical burden.¹¹¹ His request for tanks was approved, but they could not yet be transported forward.¹¹² Harding remained optimistic about the effectiveness of air support and wrote to ADVON5AF that 'requests...for air support will be made with the understanding...you will turn me down unless you can give me plenty'.¹¹³ However, air support – examined in Chapter Nine – failed to deliver. He admitted he had been unable to 'make substantial headway' and that Buna was 'a lot tougher nut to crack than I thought it would be. The Japs are evidently set to make it a little Tobruk or Bataan affair'.¹¹⁴

Despite deficiencies in support, Harding did not adapt from mounting large-scale deliberate attacks. Harding dismissed his G-2's proposal to initiate patrolling and infiltration tactics. He believed his troops were 'so weak on patrolling and self-reliance' it would be prohibitively expensive and inefficient and that 'such tactics were simply not practical' against a continuous front line'.¹¹⁵ Harding made a tentative proposal to experiment with night actions, but the division's lack of night training made this unfeasible.¹¹⁶ This was unfortunate proof of the division's training deficiencies. Without centralised endorsement and promulgation, the critical adaptation of small-unit tactics and

Harding (ed), *Infantry in Battle* (Washington DC: The Infantry Journal Incorporated, 1934); Thomas Doherty, "Gentle Knight: Edwin Forest Harding," *The Wisconsin Magazine of History* 70, no. 3 (1987): 213.

¹⁰⁸ 32nd Infantry Division G-2 & G-3 Journal, #1031 21 November 1942, 332-0.7, RG407 E427 B7796, NARA.

¹⁰⁹ 32nd Infantry Division G-2 & G-3 Journal, #1032 21 November 1942, 332-0.7, RG407 E427 B7796, NARA.

¹¹⁰ Harding cited in Anders, *Gentle Knight*, 252.

¹¹¹ Harding to Herring, 28 November 1942, HQ I Corps G-3 Journal New Guinea Campaign, RG338 E330 B189, NARA; Harding Diary, 30 November 1942, Harding Diary, RG319 E53 B3, NARA.

¹¹² New Guinea Force Headquarters and General (Air) War Diary, 13 November 1942, AWM52 1/5/1/51/20, AWM; 32nd Infantry Division G-2 & G-3 Journal, #972 19 November 1942 & #1293 23 November 1942, 332-0.7, RG407 E427 B7796, NARA.

¹¹³ Harding to Whitehead, 24 November 1942, 32nd Division G-2 & G-3 Journal, 332-0.3, RG407 E427 B7796, NARA.

¹¹⁴ Harding to Herring, 28 November 1942, HQ I Corps G-3 Journal New Guinea Campaign, RG338 E330 B189, NARA.

¹¹⁵ Hawkins cited in Anders, *Gentle Knight*, 255-256; Harding Diary, 2 December 1942, Harding Diary, RG319 E53 B3, NARA.

¹¹⁶ This is evident in Urbana Force's attempted night attack on 28-29 November, which was poorly organised, slowly executed, and largely ineffective. Harding Diary, 2 December 1942, Harding Diary, RG319 E53 B3, NARA.

techniques to jungle fighting against prepared positions did not take root throughout the division under Harding's command. Formation commanders like Hale and Mott therefore persisted with deliberate attacks.

Logistics was the critical factor in the division's limited effectiveness and capacity to expand its operations. Harding and his logistics staff mismanaged small shipping and overestimated the capacity of air supply. Harding recognised too late the 'little ships [were] the critical link...and [the Japanese were] going after them'.¹¹⁷ This led to a perilous supply situation which directly hindered combat effectiveness through decreased morale, malnutrition, limited ammunition, and the loss of supporting weapons and equipment. The condition of the division declined quickly. The shelters and spare clothing abandoned during the advance left troops exposed to the elements. The lack of rations, cooking equipment, and reluctance to start fires meant many had not had a decent meal for days. The division existed on a 'hand-to-mouth, catch as catch can basis'.¹¹⁸ Harding wanted to increase supply to Dobodura, but this demonstrated unrealistic expectations of air transport to supply two divisions concurrently.

The 32nd Division was more prone to interference and scrutiny because of internal friction within high command. This affected Harding's relationships with GHQ and NGF. The division was subjected to direct and unjustified pressure from GHQ. The repeated directives to capture Buna on 21-22 November 'shook [the 32nd Division's] confidence in MacArthur badly' and led to poorly coordinated attacks mounted with haste.¹¹⁹ Harding felt unsupported by Sutherland, who 'could have been more helpful to...the division'.¹²⁰ He maintained Sutherland's report on conditions at Buna was a 'masterpiece of imaginative writing' because Sutherland never left the airfield.¹²¹ Harding also felt he was not receiving proportionate support and supply from NGF.¹²² Harding claimed he was made a scapegoat; he told Eichelberger that '[Eichelberger] was probably sent over here to get heads. Maybe mine is one of them'.¹²³ Harding had lost the confidence of his superiors and was unable to meet the high expectations placed on his formation.

¹¹⁷ Harding to Herring, 28 November 1942, HQ I Corps G-3 Journal New Guinea Campaign, RG338 E333 B198, NARA.

¹¹⁸ Harding to Herring, 28 November 1942, HQ I Corps G-3 Journal New Guinea Campaign, RG338 E333 B198, NARA.

¹¹⁹ Hawkins cited in Anders, *Gentle Knight*, 250.

¹²⁰ Harding to Milner, 24 July 1951, Harding Interviews, RG319 E53 B4, NARA.

¹²¹ Harding to Milner, 24 July 1951, Harding Interviews, RG319 E53 B4, NARA.

¹²² Harding to Milner, 24 July 1951, Harding Interviews, RG319 E53 B4, NARA.

¹²³ Harding to MacArthur, 7 December 1942, RG30 B1 F6, MM; Harding Diary, 2 December 1942, Harding Diary, RG319 E53 B3, NARA.

Issues of command were central to Harding's relief. An unfavourable verbal report delivered to GHQ by Lieutenant Colonel David Larr and a visit by Sutherland catalysed the issue.¹²⁴ While Hale's inability to coordinate his force was clear, Mott's work in Urbana sector was initially supported by I Corps.¹²⁵ I Corps appreciated the difficulties imposed by terrain, supply, and fire support, but could not condone problems regarding leadership and discipline.¹²⁶ However, subsequent clashes between Eichelberger, Harding and Mott produced a situation where the retention of Harding, Mott and Hale was untenable.¹²⁷ Harding defended his subordinates, but his failure to address systemic issues in his formation produced conditions which adversely affected its combat effectiveness and ultimately guaranteed his relief.

Harding's command of the 32nd Division was bedevilled by issues outside of his direct control, but also by problems of his own creation. Harding summarised that the division had not 'performed perfectly... [and] did well with what [it] had'.¹²⁸ Many of Harding's subordinates were shocked by his relief and some troops felt they had let Harding down.¹²⁹ Waldron noted he was 'very sorry' to see Harding relieved. One soldier recalled:

...[Harding] was a wonderful leader. He didn't believe in throwing the whole Army into the combat... He wanted to take it a little easier... We had to fight harder [with Eichelberger] than we had been...they didn't say that [Harding] had failed in his duty, exactly, but the word was they relieved him because [he] wasn't getting rid of the Japs.¹³⁰

Despite being well-liked, Harding's style of leadership and command was ill-suited to what was required at Buna.

¹²⁴ Harding believed Mott had run afoul of Larr, Deputy G-3 GHQ SWPA, after an incident involving the use of a jeep during Larr's tour of the forward areas. Larr was the only GHQ officer to visit Buna before Sutherland. Larr's report was delivered verbally and there are no written records of its contents. Sutherland suggested to Harding that Larr's report forced MacArthur to call upon Eichelberger. Harding to Milner, 24 July 1951, Harding Interviews, RG319 E53 B4, NARA.

¹²⁵ When Grose took command of Urbana Force, he told Eichelberger he was 'surprised to find conditions much better than he expected'. Eichelberger to Sutherland, 4 December 1942, RG41 B1 F2, MM; Harding Diary, 27-28 November 1942, RG319 E53 B3, NARA; Mott, "Memorandum," 10 December 1942, Memorandum – Colonel J.W. Mott, RG319 E53 B4, NARA.

¹²⁶ Eichelberger Dictations, V-65, Robert L. Eichelberger Papers, B1 SV, USAHEC.

¹²⁷ Mott and Harding lost their tempers over Eichelberger's criticisms during a conference on 2 December. Eichelberger later recorded that he 'had a job to do and while I am a reasonable man, I would not allow subordinates to run it over me'. Eichelberger Dictations, V-71-73, Robert L. Eichelberger Papers, B1 SV, USAHEC; Chwialkowski, *Caesar's Shadow*, 60.

¹²⁸ Harding to MacArthur, 7 December 1942, RG30 B1 F6, MM.

¹²⁹ On departing the battlefield, Harding passed through an aid station; one officer exclaimed 'we let you down'. Anders, *Gentle Knight*, 266; Harding Diary, 2 December 1942, Harding Diary, RG319 E53 B3, NARA.

¹³⁰ Corporal Adrian Stransky, Headquarters 32nd Infantry Division, OH1926, Wisconsin Veterans Museum Research Centre Oral History.

'Inspired Leadership is Lacking': The 32nd Division at Buna, 2 December 1942-22 January 1943

The dispatch of Headquarters I Corps to the front initiated a series of critical changes to formation and unit-level command, control, and tactical direction which precipitated a transformation throughout the 32nd Division. Eichelberger had been given an exceptional task, but his decisiveness, aggression, and determination established him as MacArthur's 'fireman' in the SWPA.¹³¹ Marshall, Deputy CoS GHQ SWPA, stated it was 'no mistake to use Eichelberger in any big way whenever he was needed'.¹³² However, prior to Buna, Eichelberger and I Corps headquarters had been sidelined from the campaign. Initiatives by I Corps to better understand the theatre were thwarted by GHQ.¹³³ Eichelberger wrote:

Prior to November 30 I had been treated more like a lieutenant than a lieutenant general by [Sutherland]. My staff had from the beginning been made to understand our relative unimportance in the big picture.¹³⁴

Sutherland's reasons for sidelining I Corps from operational matters can likely be attributed to the personalities and politics within GHQ. However, when the 32nd Division stalled at Buna, Eichelberger and I Corps were dispatched from Port Moresby to salvage the situation.¹³⁵

Formation command was fundamentally overhauled once I Corps inspected the front. The relief of officers deemed incapable of decisive leadership and tactical innovation was important. These commands were filled by trusted I Corps officers or 32nd Division officers who had shown potential (Figure 6.6). Eichelberger relieved Harding and appointed the 32nd Division's Artillery Officer, Brigadier General Albert Waldron, as CG.¹³⁶ Waldron dismissed Hale and accepted Colonel Clarence Martin, G-3 I Corps, as a replacement. Eichelberger also relieved Mott. Waldron initially

¹³¹ Shortal, *Forged by Fire*, xi.

¹³² Marshall Interview, RG49, B3, MM.

¹³³ Sutherland firmly indicated that I Corps' role was to train American combat units in Australia. When the 32nd Division left for Papua, I Corps staff were denied the chance to assist with planning or intelligence. Subsequently, Eichelberger requested permission for I Corps to visit Papua to observe the country and operations with the aim of developing training programs. I Corps staff were permitted to visit Port Moresby in late September and again in mid-November but were confined to the rear areas. Eichelberger had hoped to visit the American units at Pongani in early November but was abruptly told by Sutherland to return to Rockhampton. Eichelberger, *Jungle Road*, 13-14; Eichelberger to MacArthur, 29 September 1942, RG41 B1 F2, MM; Eichelberger to Major General Virgil L. Peterson, Inspector-General US Army, 19 January 1943 cited in Luvaas, *Dear Miss Em*, 28.

¹³⁴ Eichelberger to Peterson, 19 January 1943 cited in Luvaas, *Dear Miss Em*, 28.

¹³⁵ This group included: CG Lieutenant General Robert Eichelberger; CoS Brigadier General Clovis Byers; G-2 Colonel Gordon Rogers; G-3 Colonel Clarence Martin, Assistant G-3 Colonel Frank Bowen; G-4 Colonel William McCreight; QM Colonel George DeGraaf; Assistant QM Captain Fred Brown; IG Colonel John Grose; ADC Captain Daniel Edwards; SO Lieutenant Colonel Samuel Auchincloss; and 9 enlisted men. Colonel Marshall Darby (Ordnance) and Colonel William Miehle (Surgeon) later arrived in Port Moresby. "I Corps History," 201-0.1, RG407 E427 B2514, NARA; "Record of Events, Advanced Detachment. Forward Echelon, Headquarters I Corps (US)," 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

¹³⁶ For a thorough account of the fallout from the Buna campaign, including Harding's perspective of events, see Chwialkowski, *Caesar's Shadow*, 64-75.

appointed his deputy, Lieutenant Colonel Melvin McCreary to the role but subsequently decided he was needed to command the artillery, and appointed Colonel John Grose, IG I Corps, to the role until Tomlinson's 126th Regiment arrived and provided a proper headquarters unit to control the sector.¹³⁷ Despite retaining nominal division CGs in Waldron and later Byers, it was clear that 'Eichelberger [was], in effect, in command' of the division as he became heavily involved in directing attacks.¹³⁸ Eichelberger combined the 32nd Division's and I Corps headquarters to form American Buna Forces to control the battle, which bolstered staff capacity. This meant some officers fulfilled dual command and staff roles but it permitted experienced I Corps officers to provide extra leadership and guidance.¹³⁹ Staff processes were also overhauled. Harding's staff had maintained a combined G-2 and G-3 journal and record-keeping was patchy. Separate operations and intelligence journals were established, with more rigorous reporting about conditions and supply.¹⁴⁰

32nd Infantry Division Major General Albert Waldron Brigadier General Clovis Byers (from 5 Dec. 42) Lieutenant General Robert Eichelberger (from 16 Dec. 42)	
Warren Sector	Urbana Sector
Warren Force - Colonel Clarence Martin - Brigadier George Wootten (from 16 Dec. 1942) 128th Regiment less II/128th I/126th less 1 Squad and 3 Platoons 18th Brigade (from 16 Dec. 1942) - Brigadier George Wootten	Urbana Force - Lieutenant Colonel Melvin McCreary (from 3 Dec. 1942) - Colonel John Grose (from 4 Dec. 1942) - Colonel Clarence Tomlinson (from 6 Dec. 1942) - Colonel John Grose (from 20 Dec. 1942) - Colonel Merle Howe (from 14 Jan. 1943) II/126th II/128th 127th Regiment (from 11 Dec. 1942) - Colonel John Grose - Colonel Merle Howe (from 14 Jan. 1943)

Figure 6.6: 32nd Division Command Organisation, 3 December 1942-22 January 1943.

¹³⁷ Waldon to Ward, 5 March 1951, Interviews, RG319 E53 B5, NARA.

¹³⁸ Byers to Colonel Rex Chandler, DCoS I Corps, 8 December 1942, 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

¹³⁹ Eichelberger to Sutherland, 4 December 1942, RG41 B1 F2, MM; Byers to Chandler, 4 December 1942, 312 Correspondence Buna Forces, RG338 E314 B86, NARA; Byers to Chandler, 13 December 1942, 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

¹⁴⁰ Byers to Chandler, 13 December 1942, 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

Buna Forces headquarters established better control and more reliable information by relocating from Dobodura to Simemi on 12 December. This shortened the distance to each sector, but the swamp which divided the American sectors prevented lateral movement; travelling between the two required a circuitous eight-hour journey under gruelling conditions:

...I [Eichelberger] left this morning with Bill [Colonel Frank Bowen] in a jeep – the trails were horrible after the rains. Beyond belief, but Bill got through further than anyone has been able to go for some time. Then about 6 hours through swamps over the tops of my shoes – mud to my knees. A young major gave out and had to be put in a hospital.¹⁴¹

The relocation of divisional headquarters permitted closer contact with front line units and enabled frequent liaison with subordinates.

The aggressiveness brought to the division by Eichelberger saw most formation commanders personally directing units close to the front. He and his staff constantly visited forward positions to issue instructions, observe attacks, advise commanders, or intervene as required. Eichelberger and his staff 'took an active part in the [5 December attack], pushing and leading troops forward, and in general operating as troop leaders'.¹⁴² Eichelberger personally led one company pinned down outside Buna village, urging the troops: 'boys, we are going forward, go with us'.¹⁴³ Colonel Gordon Rogers, G-2 I Corps, recalled Eichelberger insisted on making his presence known to the troops.¹⁴⁴ Rogers was 'convinced that without this kind of personal, determined and resourceful leadership this particular force would not have been successful'.¹⁴⁵ However, personal leadership on the front lines exposed senior officers to high risk; Waldron was wounded on 5 December, and his replacement, Byers, was also wounded on 16 December. Eichelberger assumed full command of the division thereafter.

The 32nd Division's situation did not materially alter with the change in command. GHQ was frustrated by the stalemate, morale was low, and terrain 'terrifically restricted' where and how the Americans could attack.¹⁴⁶ The situation required aggressive tactical intent while building morale and initiative within the formation. An operational pause identified several serious problems.¹⁴⁷ First, it

¹⁴¹ Robert Eichelberger to Emmalina Eichelberger, 13 December 1942 cited in Luvaas, *Dear Miss Em*, 43.

¹⁴² Eichelberger Diary, 5 December, Robert L. Eichelberger Papers, B2 Diary I, USAHEC.

¹⁴³ Rogers to Ward, 5 July 1950, Interviews, RG319 E53 B5, NARA.

¹⁴⁴ Rogers wrote later: 'In approaching the rear of a battalion, a sentinel stopped General Eichelberger and said, "Sir, the General had better take off those stars before proceeding". General Eichelberger said, "Why?" The sentinel said, "Because the snipers will get you". The General said: "My boy, I would do far more good back in the command post than being shot at up here, unless the men know their commanding general is with them". Where upon the General proceeded forward with his three brightly shined stars on his collar.' Rogers to Ward, 5 July 1950, Interviews, RG319 E53 B5, NARA.

¹⁴⁵ Rogers to Ward, 5 July 1950, Interviews, RG319 E53 B5, NARA.

¹⁴⁶ Eichelberger to Sutherland, 31 December 1942, RG41 B1 F2, MM.

¹⁴⁷ Eichelberger's first report to GHQ SWPA on 1 December noted things appeared 'more favourable' than had been reported, and he seemed confident in Mott and the prospect of capturing Buna Village quickly. However,

permitted American units and sub-units which were dispersed and ‘scrambled like eggs’ to be reorganised.¹⁴⁸ Second, the division was reluctant to utilise close artillery or air support, yet it appeared to be ‘the only great superiority’ the Allies possessed.¹⁴⁹ Eichelberger subsequently requested more photomaps from 5AF to better coordinate air support.¹⁵⁰ Last, Eichelberger sought to improve supply. DeGraaf was tasked to manage logistics while the 32nd Division’s rear echelon was bolstered to handle administrative matters.¹⁵¹ A logistics liaison officer was also attached to NGF to better coordinate supply and establish daily minimum requirements for the division.¹⁵² Ensuring adequate rations, hot food, mail, and replacement equipment had a ‘remarkable’ effect on morale.¹⁵³ After the pause, Waldron directed the attack to be resumed on 5 December. Bren Carriers were used wholly unsuccessfully to support Warren Force, while ‘successive waves’ of infantry attempted to capture Buna Village.¹⁵⁴ Warren forces attack proved ineffective, demonstrating the strength of the Japanese defences, while the small but significant gains in Urbana sector emboldened the Americans to focus their efforts against Buna Mission during December.¹⁵⁵

The appointment of reliable formation commanders permitted several key changes in attitudes, procedures, and tactics. Martin’s influence started to rectify some of the poor command, leadership, and discipline practices which had emerged in Warren sector. He re-sited his headquarters close to the front line to push his battalion COs further forward and briefed all officers on his expectations.¹⁵⁶ Martin remained in the forward areas whenever there were actions in progress: ‘if there was any reason that orders were not carried out vigorously, I would know it, and if any commander needed moral support, I would be there to give it to him’.¹⁵⁷ He concluded his

in a subsequent note on 3 December, he stated things were just as MacArthur had described and he had received ‘nothing but excuses’ from Harding and Mott. Eichelberger to Sutherland, 1 December 1942 and Eichelberger to Sutherland, 3 December 1942, RG41 B1 F2, MM.

¹⁴⁸ Eichelberger to Sutherland, 3 December 1942, RG41 B1 F2, MM

¹⁴⁹ Eichelberger to Sutherland, 4 December 1942, RG41 B1 F2, MM.

¹⁵⁰ Eichelberger to Kenney, 5 December 1942 RG41 B1 F2, MM.

¹⁵¹ Eichelberger to Sutherland, 4 December 1942, RG41 B1 F2, MM.

¹⁵² DeGraaf, ‘Notes on the Buna Campaign 1 December 1942-24 January 1943’, 333 I Corps Office of the Quartermaster, RG338, E339, B279, NARA; DeGraaf to Lieutenant Ingoldsby, US I Corps, 22-24 December 1942, 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

¹⁵³ DeGraaf, “Notes on the Buna Campaign 1 December 1942-24 January 1943,” 333 I Corps Office of the Quartermaster, RG338, E339, B279, NARA; Eichelberger to Sutherland, 8 December 1942, RG41 B1 F2, MM.

¹⁵⁴ Buna Village and a line running northeast from Old Strip to Strip Point were the objectives. Warren Force was supported by Australian Bren Carriers as substitute armour. 32nd Infantry Division, “Field Order No. 2,” 15 November 1942 (Erroneously Dated), 332-3.9, RG407 E427 B7938, NARA.

¹⁵⁵ Herring to Blamey, 1 December 1942, 3DRL/6643 Item 2/135, AWM; New Guinea Force Headquarters and General (Air) War Diary, 5 December 1942, AWM52 1/5/51/22, AWM; Herring to Eichelberger, 6 December 1942, RG41 B1 F2, MM; Eichelberger to Herring 6 December 1942, RG41 B1 F2, MM; Eichelberger to Sutherland, 6 December 1942, RG41 B1 F2, MM; I US Corps, “Estimate of Situation, I Corps, US Army as of 071400 December,” 7 December 1942, 384 I Corps Estimates, RG338 E339 B288, NARA.

¹⁵⁶ Martin to Ward, 6 March 1951, Interviews, RG319 E53 B5, NARA.

¹⁵⁷ Martin to Ward, 6 March 1951, Interviews, RG319 E53 B5, NARA.

forces had 'had little in the nature of weapons and equipment...normally considered necessary to dislodge an enemy from a dug in, concealed position'.¹⁵⁸ This was validated when the first major attack after the reorganisation 'hit...and bounced off'.¹⁵⁹ However, Martin recognised the need to maintain pressure and initiated 'vigorous patrolling' from 6 December.¹⁶⁰ This was further formalised when Eichelberger and Buna Forces issued a directive for all sub-units in all sectors to commence frequent patrols. This adaptation recognised the difficulty of continuing organised large-scale attacks and the need to build small-unit skills and initiative which were vital to success in jungle warfare.¹⁶¹ Martin continued to fight small-unit actions until the 18th Brigade arrived.

The deployment of the 18th Brigade to Buna placed its commander, Brigadier George Wootten, in a challenging situation. High command had pinned its hopes of achieving a breakthrough in the Buna sector on the brigade. Wootten needed to carefully employ the combined arms assets available to him and coordinate with the existing American forces while maintaining a determined offensive outlook. Wootten was the only Australian formation commander to fight under an American command, though he assumed command of all American and Australian forces in the Warren sector as the *de facto* task force commander. While this organisation was attributed to Wootten's seniority over Martin, Blamey ensured Wootten commanded 'the show' because he mistrusted the Americans after the Bren Carrier debacle.¹⁶² The decision as accepted by Eichelberger, who permitted Wootten autonomy carrying out the operations and commanding American forces. The first weeks at beachheads had demonstrated that large-scale deliberate attacks with unlimited objectives were liable to break down due to the loss of control or the attack running out of impetus. Wootten orchestrated his attack in three phases with specific objectives.¹⁶³ This permitted more detailed planning and intelligence gathering prior to the attacks, and greater control over forces once they began.¹⁶⁴ However, operational necessities and logistical constraints forced Wootten's brigade to be deployed in increments, which meant he was only able to attack

¹⁵⁸ Martin to Ward, 6 March 1951, Interviews, RG319 E53 B5, NARA.

¹⁵⁹ 128th Infantry Regiment Journal, #128 5 December 1942, 332-INF(128)-0.7, RG407 E427 B8039, NARA.

¹⁶⁰ I/128th Infantry Battalion Journal, #20 6 December 1942, 332-INF (128)-7-0.7, RG407 E427 B8058, NARA.

¹⁶¹ American Forces Buna Area, "Memorandum: Night Patrolling," 12 December 1942, 332-INF(127)-0. 7, RG407 E427 B8015, NARA.

¹⁶² Eichelberger to Sutherland, 13 December 1942, RG41 B1 F2, MM; Blamey to Herring, 9 December 1942, 3DRL/6643 Item 2/135, AWM.

¹⁶³ Wootten personally visited Buna on 11 December and met with Herring, Hopkins, and Eichelberger and toured the 128th Regiment's area. An advanced brigade headquarters arrived on 12 December for further conferences. 18th Infantry Brigade, "Part I: Report on Operations 18 Aust Inf Bde Gp," AWM54 581/7/31 [1], AWM.

¹⁶⁴ See: 18th Infantry Brigade, "18 Aust Inf Bde Gp Operation Order No. 1," 17 December 1942, Appendix B, AWM54 581/7/31 [1], AWM; 18th Infantry Brigade, "18 Aust Inf Bde Gp Operation Instruction No.2," 31 December 1942, Appendix F, AWM54 581/7/3 [1], AWM; 18th Infantry Brigade. "18 Aust Inf Bde Gp Operation Instruction No.3," 11 January 1943, Appendix G, AWM54 581/7/3 [1], AWM;

with a single battalion during each phase of the operations, which curtailed the potential to exploit any gains. Warren Force provided a reserve and were tasked with covering the Australian's flanks and clearing captured ground.¹⁶⁵ Initially, there were challenges overcoming the perception the Americans had 'had their chance' at cleaning up Buna.¹⁶⁶ However, the Americans took a greater offensive role against Old Strip and Giropa Point, which resulted in a comradely rivalry and mutual respect and esteem' between the two forces.¹⁶⁷

Wootten's handling of the operations has been criticised for the heavy casualties his brigade suffered and the relentless – and sometimes careless – push to attack.¹⁶⁸ He was under considerable pressure as he had been singled out by Blamey to achieve results. Phase Two against Old Strip was handled poorly. It was rushed and accepted very high risks which resulted in the loss of several tanks, heavy casualties, and waning cohesion within the 2/10th Battalion.¹⁶⁹ However, he formalised tactical innovation through the adoption of soft-spot tactics – examined in Chapter Eight – and his brigade's operational instructions demonstrate an iterative learning process which incorporated lessons from each phase of the attack. Wootten also retained the confidence of many officers, who recognised the necessity of attacking daunting positions:

We liked old Wootten. We called him the widow-maker [because] he...was a driver...An officer was looking at a place...he had to...attack...and he reckoned he couldn't...[Wootten] roared at him and said, "When you volunteered for the army you volunteered to die for your country, didn't you?" and the chap said, "Yes, I did sir". So he said, "Well now might be the time. Get up there and do it". So he went up and he took the position...but that's the qualities of a leader.¹⁷⁰

Eichelberger later described Wootten as 'one of the best'.¹⁷¹ Wootten was successful in making tactical breakthroughs, but his brigade could not have continued if it had not been reinforced after Buna, which suggests he accepted too high a threshold of casualties during the Buna actions.

Command of Urbana Force during December demonstrated the increasing pressure the all-American sector was under. Byers determined there was no need for two regimental commanders – Grose and Tomlinson – in the area, and placed Tomlinson in command while Grose withdrew to take command of the 127th Regiment arriving at Dobodura. Tomlinson's capacity to attack with the

¹⁶⁵ 18th Infantry Brigade, "18 Aust Inf Bde Gp Operation Order No. 1," 17 December 1942, Appendix B, AWM54 581/7/31 [1], AWM.

¹⁶⁶ Martin to Ward, 6 March 1951, Interviews, RG319 E53 B5, NARA.

¹⁶⁷ Lieutenant Colonel Alexander J. MacNab, XO 128th Infantry Regiment, to Milner, 18 April 1950, Warren Letters, RG319 E53 B4, NARA; Martin to Ward, 6 March 1951, Interviews, RG319 E53 B5, NARA.

¹⁶⁸ Brune, *A Bastard of a Place*, 500-503.

¹⁶⁹ Martin observed the 2/10th Battalion troops, particularly the two companies on the north edge of the Strip, had reached 'that stage where hopelessness and apprehension sets in' after sustaining such heavy casualties since 21 December. Martin to Ward, 28 March 1951, Interviews, RG319 E53 B5, NARA.

¹⁷⁰ Captain Owen Curtiss, 2/12th Battalion, S00541, KMSA.

¹⁷¹ Eichelberger Dictations, V-61, Robert L. Eichelberger Papers, B1 SV, USAHEC.

exhausted II/126th and II/128th was limited. He focused on developing the left flank while the Triangle held up his right. However, Tomlinson was physically worn down by malaria and dysentery, and his judgement began to deteriorate.¹⁷² On 20 December he allowed E Company, II/127th to make two abortive attacks on the Triangle which cost the company 40% of its strength on its first day.¹⁷³ Tomlinson voluntarily requested to be relieved of command and was replaced by Grose.¹⁷⁴ Eichelberger noted that Tomlinson had been 'aggressive, but quite erratic', but intended to keep him on at headquarters.¹⁷⁵ From this point, Eichelberger took greater personal control of Urbana Force. While his personal direction was important, he succumbed to increasing pressure from GHQ to quickly capture Buna Mission. This led to several reckless and hastily mounted attacks – particularly those made on 27 December while Sutherland was visiting – which incurred heavy casualties.¹⁷⁶ Original members of the 32nd Division felt I Corps came in with 'tough hands and tough hearts'.¹⁷⁷ He earned the nickname "Eichel-butcher", and the division cemetery became known as "Eichelberger Square".¹⁷⁸ Eichelberger acknowledged that his orders to attack were unpopular and his direction had contributed to the division's growing casualty list, but believed his direct interventions had been necessary and the outcomes justified.¹⁷⁹

Eichelberger made a concerted effort to repair the American relationship with NGF. Upon assuming command he immediately contacted Herring to 'ensure... [his] entire cooperation with your troops in all missions that you may have'.¹⁸⁰ Subsequently, Hopkins met Eichelberger to address outstanding issues, including the process of requesting air support and American objectives.¹⁸¹ Eichelberger 'acknowledged his subordinate position to General Herring, despite their equal rank,

¹⁷² Tomlinson to Ward, 7 March 1951, Interviews, RG319 E53 B5, NARA.

¹⁷³ 126th Infantry Regiment Journal, #13 20 December 1942, 332-INF(126)-0.7, RG407 E427 B8001; 127th Infantry Regiment, "Tactical History," 332-INF(127)-0.1, RG407 E427 B8015, NARA.

¹⁷⁴ Tomlinson to Milner, 7 March 1951, Interviews, RG319 E53 B5, NARA; Eichelberger to Sutherland, 20 December 1942, RG41 B1 F2, MM.

¹⁷⁵ Eichelberger to Sutherland, 20 December 1942, RG41 B1 F2, MM.

¹⁷⁶ Eichelberger to Sutherland, 24 December 1942, RG41 B1 F2, MM; Grose Diary, 28 December 1942, Grose Diary-Bradley Comments, RG319 E53 B3, NARA; "Interview with Colonel John E. Grose," 15 November 1950, Grose Diary-Bradley Comments, RG319 E53 B3, NARA; "Interview with Colonel John E. Grose," 1 February 1951, Grose Diary-Bradley Comments, RG319 E53 B3, NARA; Chwialkowski, *Caesar's Shadow*, 66-67.

¹⁷⁷ Corporal Adrian Stransky, Headquarters 32nd Infantry Division, OH1926, Wisconsin Veterans Museum Research Centre.

¹⁷⁸ Carle O'Neil, *Men Do Your Duty: Memories of Flathead National Guardsmen from their Pacific Campaigns of World War II* (Whitefish: Big Mountain Publishing, 2001), 47.

¹⁷⁹ Robert Eichelberger to Emmalina Eichelberger, 2 January 1943 cited in Luvaas, *Dear Miss Em*, 50.

¹⁸⁰ Eichelberger to Herring, 1 December 1942, M3782 Item 2/16, NLA; Eichelberger to Sutherland, 1 December 1942, RG41 B1 F2, MM; Eichelberger Diary, 1 December 1942, Robert L. Eichelberger Papers, B2 Diary I, USAHEC.

¹⁸¹ Previously, Harding had bypassed NGF and requested air support directly through GHQ SWPA or 5AF. This led to problems of coordination between Australian and American requests for air support and is addressed in Chapter Nine. Herring to Blamey, 1 December 1942, 3DRL/6643 Item 2/135, AWM.

and established a rapport with the Australians'.¹⁸² Eichelberger, Byers, Herring and Hopkins met regularly and developed an constructive relationship.¹⁸³ Eichelberger's commitment to offensive action also reassured Herring:

There is no doubt that Eichelberger's visit to see for himself exactly what the forward troops are doing, has had a great effect. He practically walked into Buna village. No one could deter him...¹⁸⁴

Hopkins was also impressed by Eichelberger, describing him as 'having a transparent honesty, [who] went straight to the heart of things and could be devastating if he encountered inefficiency'.¹⁸⁵ The improved relationship was crucial to enabling the 18th Brigade's operations in Warren Sector. Eichelberger's appointment as Commander Adv NGF on 11 January was a vote of confidence in his ability as a commander and co-operator by the Australians.¹⁸⁶

Buna Forces' relationship with high command remained strained. Eichelberger faced similar pressure to Harding; sent forward to 'to take Buna, or not come back', he was frequently reminded that speed was imperative and subjected to MacArthur's tactical interference on multiple occasions.¹⁸⁷ However, MacArthur's directives relied on wholly inaccurate understandings of the Buna front, which eroded Buna Force's confidence in GHQ. Eichelberger recorded the failure of the 24 December attack on Buna Mission marked 'the all-time low point' in his career.¹⁸⁸ At this point, GHQ considered relieving Eichelberger.¹⁸⁹ Sutherland was sent to Dobodura with authorisation to 'take command if necessary to 'accomplish desired results'.¹⁹⁰ However, when Eichelberger suggested Sutherland might be valuable in Urbana sector, Sutherland elected to return to Port Moresby.¹⁹¹ Eichelberger firmly believed GHQ did not comprehend the operations.¹⁹² Despite

¹⁸² Eichelberger to Sutherland, 1 December 1942, RG41 B1 F2, MM; Eichelberger Diary, 1 December 1942, Robert L. Eichelberger Papers, B2 Diary I, USAHEC; Shortal, *Forged by Fire*, 49.

¹⁸³ Eichelberger to Sutherland, 3 December 1942, RG41 B1 F2, MM; Eichelberger to Sutherland, 4 December 1942, RG41 B1 F2, MM.

¹⁸⁴ Herring to Blamey, 3 December 1942, 3DRL/6643 Item 2/135, AWM.

¹⁸⁵ Hopkins cited in Horner, *Crisis of Command*, 234.

¹⁸⁶ At the conclusion of the campaign, Eichelberger congratulated Vasey on the 'splendid work of your officers and men. The fine work they have done in the Sanananda area is the direct reflection of your own skilful leadership. It has been a pleasure to be associated with you and your staff during this operation and your wholehearted cooperation has been much appreciated'. Eichelberger to Vasey, 21 January 1943, MS3782 Item 3/18, NLA.

¹⁸⁷ MacArthur to Eichelberger, 13 December 1942, RG41 B1 F2, MM; MacArthur to Eichelberger, 25 December 1942, RG41 B1 F2, MM.

¹⁸⁸ Eichelberger to MacArthur, 25 December 1942, RG41 B1 F2, MM.

¹⁸⁹ Sutherland to Ward, 6 April 1951 & MacArthur to AGWAR, 23 August 1943, cited in Chwialkowski, *American Caesar*, 74.

¹⁹⁰ Sutherland Office Diary, 25 December 1942, RG30 B26 F15, MM.

¹⁹¹ Sutherland Office Diary, 25 December 1942, RG30 B26 F15, MM.

¹⁹² Eichelberger to Petersen, 19 January 1943 cited in Luvaas, *Dear Miss Em*, 61-62.

Sutherland and Willoughby visiting his headquarters, they never toured the forward positions.¹⁹³ GHQ's handling of the later stages of the operations – particularly the premature announcement that Buna's capture represented the end of serious fighting – signalled a greater disconnect between MacArthur's headquarters and Buna Forces.¹⁹⁴

Buna Forces under Eichelberger achieved considerable tactical successes and restored confidence in American combat forces. The leadership provided by I Corps officers provided the drive needed in a centralised system to achieve results and institute changes needed to transform attitudes and approaches. Eichelberger's command of Buna Forces remains a case study in battlefield leadership because of his success in overcoming a range of tactical, administrative, and command problems. His command philosophy and leadership by example at the critical point were crucial in transforming the *esprit de corps* and combat effectiveness of the 32nd Division.¹⁹⁵ However, the influence of commanders like Martin and Wootten, who were also able to shape the attitudes and approaches of their subordinates, should not be overlooked as part of the broader transformation which occurred throughout December.

Conclusion

Formation commanders faced the difficulty of translating operational intent into tactical actions. However, the overarching pressure from high command placed them in a position where constant offensive action was demanded where more careful planning and preparations would have been preferable. The dispersed character of jungle fighting, coupled with the breakdown in conventional organisations, communications, and tactical unity placed greater emphasis on brigades and regimental-level formations to make critical tactical decisions. While divisional commanders were less able to exert decisive tactical influence over the battles, they established the conditions for subordinates regarding command and control, leadership, and tactics and techniques, and the flexibility to adjust their approaches to local conditions. This was pertinent to the process of learning and adaptation, where most of the significant adaptations to tactics and techniques occurred at the brigade and regimental levels. These adaptations are explored in detail in the following chapters.

¹⁹³ On 26 December Eichelberger's diary notes that himself, Sutherland, and Bowen went 'forward to observe'. On 28-29 December the diary notes Sutherland visited Urbana and Warren command posts. It is unclear that Sutherland ever witnessed the front line first-hand. Eichelberger, *Diary*, 25-29 December 1942, Robert L. Eichelberger Papers B2 Diary I, USAHEC.

¹⁹⁴ Eichelberger to Petersen, 19 January 1943 cited in Luvaas, *Dear Miss Em*, 61-62.

¹⁹⁵ Eichelberger was recommended for the Medal of Honour after the Buna campaign by Byers. All necessary documents were sent to GHQ SWPA but were shelved. Rogers then submitted them directly to the War Department. MacArthur then intervened in the case as he deemed the award inappropriate, though it is also likely he felt that I Corps staffs' actions represented a disloyalty to GHQ SWPA. Chwialkowski, *Caesar's Shadow*, 74-75.

The beachheads demonstrated a number of lessons about doctrinal basics like intercommunication, information, and leadership to formation commanders fighting in the jungle. First, it highlighted the need for commanders to be present and connected to their subordinates in meaningful ways. This ensured more accurate understanding of the conditions, more reliable communications, and built trust and confidence in forward units. Second, commanders had to accept less direct influence over the battlefield as terrain and the character of fighting pushed responsibilities for tactical decision-making to lower levels. Conventional tactical manoeuvres like envelopments or penetrations were less likely to be conducted at divisional-level due to the difficulties of concentrating and manoeuvring forces and applying firepower. Third, the operations demonstrated how the complexities of coalition operations in the SWPA could affect the tactical employment of forces. Australian-American relationships were not completely harmonious at formation-level, but those involved were better able to remediate them.

The operations also demonstrated how different command doctrines influenced approaches to exercising command and control. The Australians effectively exerted command and control within a decentralised system to pursue objectives largely without interference. This extended to Vasey's confidence in his subordinates to work toward their objectives. The contrast between Harding and Eichelberger's experiences suggests the centralised American command system required constant direct influence. Harding did not deliver the impetus needed to overcome the inertia caused by subordinate commanders who lacked direction or initiative. In contrast, Eichelberger exerted a constant influence over his subordinates either through explicit directions or through his command appointments. However, there was a boundary between influence and interference, which he sometimes breached.

The beachhead operations were a stern test for formation commanders. While Dean describes this period as a 'low-point' for Vasey, he was still an effective commander.¹⁹⁶ Crucially, the 7th Division fostered productive relationships through a continuous process of intercommunication, reciprocity, and decentralisation which fostered conditions which allowed brigade commanders to fight their own battles.¹⁹⁷ Harding's defenders claim he was a victim of Australian-American tensions

¹⁹⁶ Dean, "Grinding Out a Victory," 169.

¹⁹⁷ The competence of the commanders involved in these operations is supported by their futures; Lloyd was duly appointed as the Chief Instructor at Land Headquarters Tactical School at Canungra in March 1943 and toured giving lectures on Australian Jungle warfare tactics. Eather retained command of the 25th Brigade through the Ramu and Markham Valleys, and led the capture of Lae ahead of 9th Division. Dougherty also retained his command, and led the brigade in heavy fighting against the Finisterre Ranges before establishing an Australian foothold for the attack of Shaggy Ridge. Porter also served as Chief Instructor Land Headquarters Tactical School at Canungra before commanding the 24th Brigade during the 9th Division's advance from Finschhafen towards Wareo. Wootten was promoted to temporary Major-General in March 1943 and succeeded Major-General Leslie Morshead to command the 9th Division, where he oversaw its training for

but this overlooks some of his fundamental failures in command. He had not sufficiently prepared the 32nd Division for jungle combat and failed to address systemic issues of command and leadership within the formation. Ultimately, Harding was unable to exert the necessary command, control, and leadership through his subordinates and lost the confidence of his superiors.

Eichelberger's assumption of command at Buna marked a distinctive turning point in the operations. The influence of selected commanders instilled a new, aggressive outlook, and enabled tactical adaptations to suit each sector.¹⁹⁸ Given the conditions, many commanders faced no greater test than that of the beachheads, and those who succeeded went on to gain high regard commanding troops and influencing the development of their organisations during 1943-44.

jungle warfare and then operations in New Guinea against Lae, Finschhafen and Sattelberg. Eather, "Eather, Kenneth William," *Australian Dictionary of Biography*; A.J. Hill, "Wootten, Sir George Frederick (1893–1970)," *Australian Dictionary of Biography*; Howard, "Lloyd, John Edward," *Australian Dictionary of Biography*; Fearnside and Clift, *Dougherty*; Johnston, "Porter, Selwyn Havelock," *Australian Dictionary of Biography*.

¹⁹⁸ Martin was promoted to Brigadier General and joined the 32nd Division as Deputy CG in February 1943. He led the Michaelmas Task Force in the Saidor landings and commanded the 32nd Division's covering force on the Driniumor River at Aitape. MacNab succeeded Martin as the Commander 128th Regiment. Doe was shortly thereafter promoted to Assistant Division Commander 41st Infantry Division and led the Persecution Task Force in operations against Aitape and Tornado Task Force at Wadke during 1943-1944. Doe assumed command of the 41st Division at Biak in August 1944 after Fuller was relieved. Bradley and Howe were promoted to command the 126th and 127th Regiments respectively in the coming campaigns. Eichelberger and the nucleus of I Corps returned to Australia to oversee the training of newly arrived American forces. The headquarters would be deployed in the Hollandia landings and at Biak throughout 1944. Blakeley, *32nd Division*; McCartney, *The Jungleers*; Eichelberger, *Jungle Road*.

Chapter Seven

‘Combat Sorts Them Out Fast’:

Unit and Sub-Unit Command During the Beachhead Operations

[D] Coy HQ, following 18 Pl encountered a cleverly concealed MG post and both [Captain] Coote OC and [Lieutenant] McCallum 2IC were severely wounded, whilst the [Signal] phone was shot from the orderly's hands, thus disrupting [Signal Communications]. [Signals] returned and obtained another phone but it was also destroyed by enemy fire. The disruption of Coy HQ severely upset the impetus of the Coy attack and Pl Comd found difficulty in relaying [Information]. The CSM [Sergeant] Poiner, remained with his wounded OC throughout the day, endeavouring to control the Coy from his [position].¹

**55/53rd Infantry Battalion
War Diary Entry
19 December 1942**

The excerpt from the 55/53rd Battalion's war diary highlights the many problems which combined to make infantry actions difficult during the beachhead operations. The operations highlighted how close terrain and the breakdown of cohesion pushed the responsibilities for decision-making and achieving objectives to lower levels in jungle warfare. Companies and platoons became the primary tactical units in small engagements to neutralise or destroy positions. However, these responsibilities were complicated by conditions which negatively affected command, control, information, and leadership. The character of jungle warfare meant there were few immediate or easy solutions. Adaptations were generally practical adjustments to existing methods or the

¹ 55/53rd Infantry Battalion War Diary, 19 December 1942, AWM52 8/3/91/7, AWM.

innovative use of available resources. Typically, AIF units responded better to these difficulties than CMF and American units because of their prior experience. The differing command philosophies also influenced responses. American sub-units relied more on direct influence by leaders and required constant direction. The operations ultimately highlighted the importance of preparations which honed individual initiative and group cohesion.

To fight effectively, units and sub-units required efficient means of control, accurate information about the enemy, clear and attainable objectives, coordination with other elements, and leadership and initiative. Control was greatly affected by close terrain, the suddenness of contact, and unreliable communications. This forced practical adaptations to unit formations, spacing, and means of communication. Information remained vital to tactical success. The Allies' lack of knowledge about terrain and the enemy was a key factor in early difficulties. However, concerted efforts to improve the quantity and quality of information about Japanese positions and tactics through reconnaissance and patrolling permitted tactical exploitations and adaptations. Command and the direction of forces was affected by the breakdown in tactical unity and persistent pressure to attempt unrealistic attacks. Furthermore, the coordination of coalition efforts required the Allies to establish *how* to fight together. The operations also highlighted the need to firmly inculcate discipline, the chain of command, and initiative at lower levels for sub-units to succeed in jungle fighting. Significant weaknesses in these areas within CMF and Guard units were exposed by initial combat experiences. As the campaign progressed, morale and discipline became an issue in American and CMF units which had less rigorous leadership. Many of these problems relating to unit and sub-unit command and control had been anticipated but had not been sufficiently addressed prior to the operations. More significant were the lessons for future campaigns about the need for rigorous preparations and the development of junior leadership for jungle warfare.

'You Couldn't See a Bloody Thing': Control, Cohesion, and Communications

The beachheads' terrain and the suddenness of contact made it difficult for commanders at all levels to exert control over their subordinates. Terrain principally affected contact between units, cohesion, and navigation. Moving through jungles and swamps made maintaining physical or visual contact nearly impossible. Captain Phil Rhoden, 2iC 2/14th Battalion, bluntly stated '[in Papua] you couldn't see a bloody thing'.² Platoons as far as 50m away were practically out of contact with each

² Captain Phil Rhoden, 2/14th Battalion, cited in Lindsay, *Spirit of Kokoda*, 59.

other.³ Even sections quickly lost contact with each other; Sergeant James Flanagan, 39th Battalion, recalled:

We were to go forward, quite a lot of sections in line...I said [to a man in the section], "Now keep in touch with the man next to you belonging to the other section" which he didn't do and, of course, we just went on, and on...I...signalled to him: "Were they there?" and he shook his head, and, of course, we were out on a limb on our own and the Japs opened up.

American troops initially operated in skirmish lines, but these quickly dispersed and separated individuals from their units.⁴ There were two main responses. First, commanders placed themselves much further forward to maintain control. Lieutenant-Colonel Geoffrey Cooper, CO 2/27th Battalion, found 'it was no good being 50 yards ahead or 50 yards behind', and situated his battalion headquarters between his forward companies at Gona.⁵ However, this exposed leaders to enemy fire. One Australian and two American battalion commanders were killed, and one American and two Australian battalion commanders were wounded during the operations.⁶ Losses of sub-unit leaders further forward with troops were exceptionally high. Second, sub-unit spacings were condensed to achieve greater control in close country. However, this risked potentially higher casualties from sudden contact.

Many engagements were sudden and at close quarters because of poor visibility and well-concealed positions which were not discovered until they opened fire. This further disrupted unit cohesion and stalled advances:

...you couldn't get used to not seeing who was shooting at you...sometimes you'd be within six or eight feet of a person...and you can't see [who is] shooting you...when you've got to fight your way through the tangled undergrowth.⁷

The proximity and suddenness of enemy contact meant it was 'essential that the private soldier and all junior leaders act promptly. "Dithering" at such short range means heavy casualties'.⁸ Inexperienced American commanders demonstrated a tendency to prematurely deploy their sub-

³ Major Frank Sublet, 2/16th Battalion, cited in Pratten, *Battalion Commanders*, 181.

⁴ Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA.

⁵ Lieutenant-Colonel Geoffrey Cooper, CO 2/27th Battalion, cited in Pratten, *Battalion Commanders*, 180.

⁶ Lieutenant-Colonel Edgar Logan, CO 2/7th Cavalry Regiment, was killed by a Japanese sniper while trying to establish a new roadblock on the Sanananda Track on 19 December. Captain William Boice, who had assumed command of the II/126th in Urbana sector, was killed by mortar fire leading an attack on the Triangle. Major Edmund Schroeder, CO III/127th, died of a head wound sustained attacking the Government Gardens. Lieutenant-Colonel Geoff Cooper, CO 2/27th Battalion, was wounded by a sniper on 1 December at Gona. Lieutenant-Colonel Clement Cummings, CO 2/9th Battalion, was wounded by mortar fire observing the attack on Old Strip on 24 December. Major Herbert "Red" Smith was wounded by mortar fire on 7 December near the Triangle.

⁷ Captain Owen Curtis, 2/12th Battalion, S00541, KMSA.

⁸ 25th Infantry Brigade, "Some Notes on the New Guinea Campaign," AWM54 577/7/31, AWM.

units anticipating contact. This led to a greater loss of control and often halted the momentum of an advance.⁹ In one case:

A battalion had been ordered to attack, and after advancing a few feet one lone single Japanese machine gun opened up and the entire battalion hit the ground!!! They stayed right there and called for mortar and artillery fire, and then nobody could tell the observer where the machine gun was!!!¹⁰

The inability to locate the sources of fire also had a 'demoralising effect on morale'.¹¹ The loss of control due to unexpected fire emphasised the importance of gathering intelligence about enemy positions before an attack.

Close terrain confused navigation and made it difficult to coordinate actions between units. It was easy for units to become separated or disorientated as visibility in jungles and swamps was limited and there were few discernible terrain features. The commanders' 'first impression was that one part of the jungle was as good as another' unless aerial photographs were available, or a road, stream or village provided a landmark.¹² The terrain and lack of contact between units made it difficult to determine the locations of other friendly units, and in many cases, 'the locations of adjacent and supporting units was not known; in most instances, their locations, extent, and direction of advance could only be surmised'.¹³ These issues meant timetabling fire support or movements was the only practical means of coordination. This was demonstrated by the 21st Brigade's attack at Gona on 1 December, when the 3rd Battalion did not support the 2/27th Battalion after failing to establish physical contact.¹⁴ Brigadier Ivan Dougherty, Commander 21st Brigade, believed 'timings [were] key' in close country, and the 3rd Battalion should have understood that 'physical "linking" [was] not practicable'.¹⁵ However, any delays with troops moving potentially negated the coordination, especially with fire support. This challenge is examined in Chapter Ten.

The I/126th's advance at Buna on 26 November fully demonstrated the challenges of navigation and coordination after the battalion badly misjudged the direction and distance it travelled. The battalion was assigned to support the III/128th on its right flank in an attack through

⁹ "Report of the Commanding General Buna Forces," Annex #3 G-3 Report, 67.

¹⁰ Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA.

¹¹ Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA.

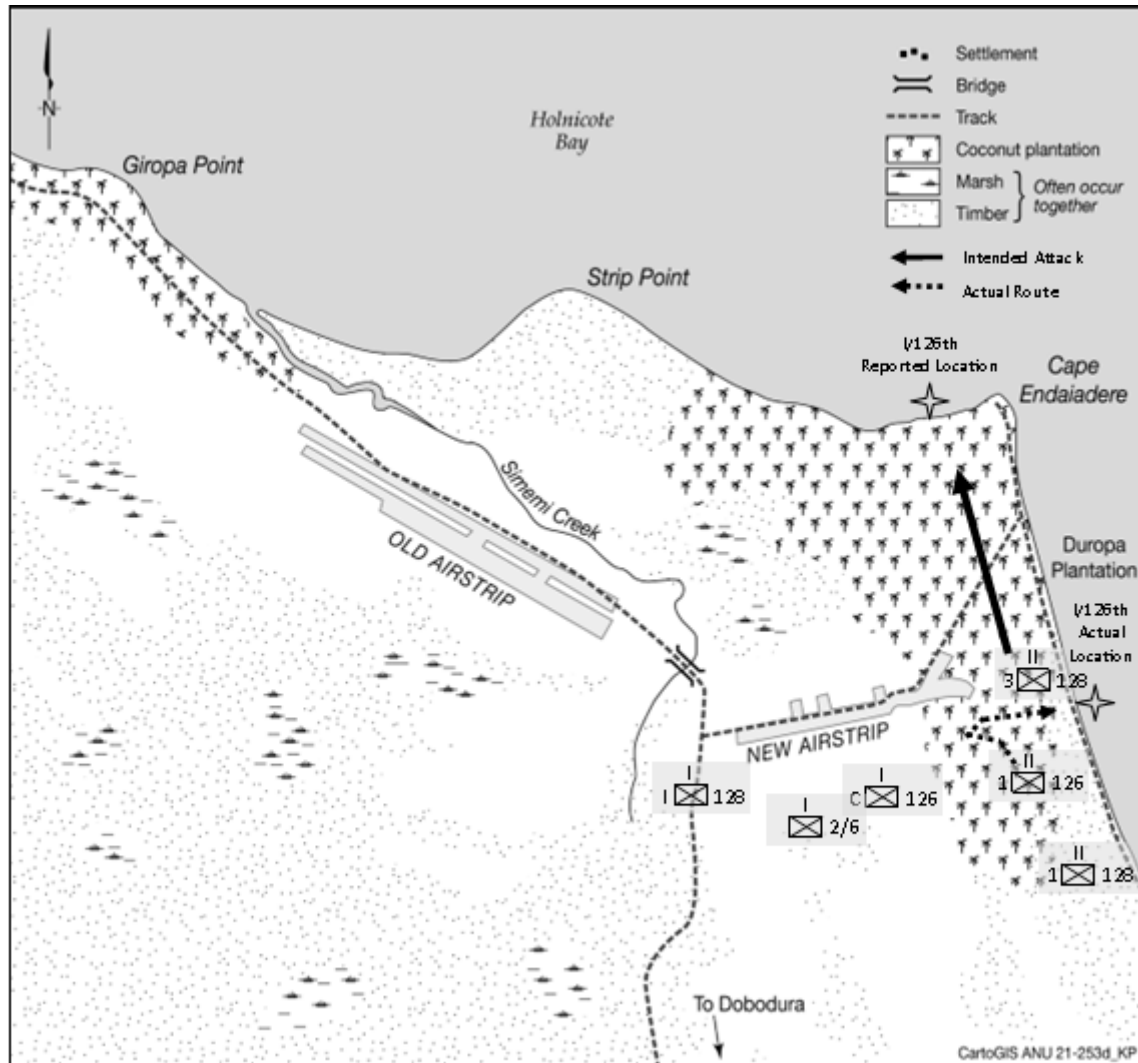
¹² Dice, "Notes from Theatres of War: New Guinea July 42 – January 43," undated, AWM54 519/6/51, AWM.

¹³ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

¹⁴ 21st Infantry Brigade War Diary, 30 November & 1 December 1942, AWM52 8/2/21/18, AWM; 2/27th Infantry Battalion War Diary, 30 November & 1 December 1942, AWM52 8/3/27/51 & 8/3/27/52, AWM; 3rd Infantry Battalion War Diary, 30 November & 1 December 1942, AWM52 8/3/39/2, AWM.

¹⁵ Dougherty, "Comments on Volume 5 Chapter 14 (Draft) of Official War History (Gona)," AWM67 Item 3/109 [4], AWM.

Duropa Planation towards Cape Endaiadere.¹⁶ As the attack proceeded, contact between the two battalions was lost. The I/126th became disorientated and veered sharply east.¹⁷ The battalion's CO remained unaware of his unit's actual location and informed Warren Force his unit was 'pushing to the sea', which he believed was Cape Endaiadere.¹⁸ However, the battalion emerged behind the III/128th in Duropa Plantation (Map 7.1). The attack demonstrated that large-scale movements over wide frontages were prone to breakdowns because of the difficulty maintaining contact.



Map 7.1: Warren Force Attack, 26 November 1942.

Communications remained a persistent challenge. Conditions in Papua 'could hardly have been worse' for all forms of communications.¹⁹ Communications failures meant a commander's

¹⁶ 128th Infantry Regiment Journal, 25 November 1942, 332-INF(128)-0.7, RG407 E427 B8039, NARA; I/126th Infantry Battalion Journal, #384 25 November 1942, 332-INF(126)-7-0.7, RG407 E427 B8010, NARA.

¹⁷ III/128th Infantry Battalion Journal, #14, 26 November 1942, 332-INF(128)-7-0.7, RG407 E427 B8065, NARA.

¹⁸ 128th Infantry Regiment Journal, 26 November 1942, 332-INF(128)-0.7, RG407 E427 B8039, NARA; I/126th Infantry Battalion Journal, 26 November 1942, 332-INF(126)-7-0.7, RG407 E427 B8010, NARA.

¹⁹ Max Dimmack, *Signals of the Silent Seventh: A Short History of Signals 7th Australian Division, 2nd AIF, 1940-1945* (Sassafras: Benchmark Publications Management, 2001), 58.

immediate understanding and influence over an event was often fragmentary or, at worst, non-existent. This was significant because control was fundamentally based on intercommunication between headquarters and sub-units.²⁰ Conventionally, Australian and American forces relied on wireless communications between battalions and companies because of the increasing dispersion of modern battlefields, while American forces extended wireless communication between companies and platoons.²¹ However, wireless communications proved ineffective in Papua due to technical unreliability and environmental interference. Wireless sets required frequent maintenance as they lacked adequate waterproofing and were easily damaged in rough terrain. The dense jungles and humid climate drastically reduced the range of low-powered sets issued to infantry battalions.²² The Australian No.108 Set was described as 'useless' under the conditions.²³ American SCR-536 sets also experienced problems; observers for mortar platoons found communication back to their units was almost impossible because of interference.²⁴ In more open terrain like Buna's coconut plantations the 18th Brigade borrowed American sets and enjoyed 'reasonable but by no means consistent' success for sub-unit communications.²⁵ However, wireless operators made conspicuous targets for Japanese snipers. The 30th Brigade noted wireless communications were rendered useless after all troops carrying No.108 sets were 'picked off' in an attack.²⁶ Despite extensive efforts, neither Australian nor American forces established reliable wireless communications below battalion level.²⁷

Combat units increasingly depended on line communications because of its reliability compared to wirelasses.²⁸ Colonel Sam Auchincloss, Chief Signal Officer US I Corps, wrote:

²⁰ Generally, higher formations provided intercommunications down to their subordinate units. For example, divisions set up rear links with brigade headquarters, and brigade headquarters furnished rear links to battalions. *FSR Vol. II: Operations – General 1935*, 33.

²¹ Australian battalions were issued with six to nine No.108 wireless sets which enabled the battalion headquarters to communicate with the four rifle companies and other supporting platoons. American battalions had sufficient radio sets to link all companies into a battalion net. Rifle companies were issued with a further six SCR536 handsets which enabled the company commander to communicate with their three rifle platoons and weapons platoon.

²² "Report of the Commanding General Buna Forces," Annex 4 Inclosure D: Signals Report, 100-103.

²³ Kessel, "Report on Operations in Sanananda Area 2 Dec 42 – Jan 43," undated, AWM54 581/7/13, AWM.

²⁴ Milner, *Victory in Papua*, 178.

²⁵ 18th Infantry Brigade, "Part II: Lessons Learnt in Cape Endaiadere-Giropa Point and Sanananda Area Ops – Dec 42 – Jan 43 and Recommendations Arising Therefrom," undated, AWM54 581/7/31 [1], AWM.

²⁶ Kessel, "Report on Operations in Sanananda Area 2 Dec 42 – Jan 43," undated, AWM54 581/7/13, AWM.

²⁷ Wireless communications remained the only viable means of communicating with rear area commands in Port Moresby for much of the campaign. Construction of an overland cable from Port Moresby to Kokoda was joined with another line constructed from Popondetta to Wairopi. However, this was not completed until 22 January, the day organised Japanese resistance was broken in the beachheads area. Colonel R. Kendall, "Notes on Operations in New Guinea: Owen Stanley Range-Buna Areas Aug 42-Jan 43 Signal Communication," undated, AWM54 577/7/29 [18], AWM.

²⁸ OC J Section Signals, "Report on Bde Sigs in NG Campaign During Oct-Dec '42," undated, AWM54 425/6/16, AWM.

A lot has been said about this being a “Radio War”. Well, it is for the higher echelons, but below division wire is our most important means of communication and should be stressed to the utmost.²⁹

The 163rd Regiment found the sound-power telephone was ‘worth its weight in gold’ because of its portability over the short distances involved in jungle fighting. Companies of the 163rd Regiment carried two telephones to connect with battalion headquarters and supporting weapons or artillery.³⁰ The majority of Australian reports similarly concluded telephones were the most effective means of intercommunication.³¹ Australian brigades developed a procedure whereby brigade signallers laid lines following the leading company until it was held up, after which lines were established to link all battalions back to brigade headquarters, while battalion signallers established connections to their companies.³² However, maintaining the vast networks of cabling presented further challenges as cables were often severed by falling trees, flooding, enemy action, or vehicles, and there were shortages of signals personnel for the task.³³

Line communications were well-suited to the static conditions which developed across the beachheads, but imposed limitations on mobility and the rate at which information could be relayed when used by sub-units in attack. Cable and laying equipment were cumbersome and proved difficult to move forward with attacking units. The 18th Brigade’s battalions recommended lightweight US Army ‘assault cable’ or Commonwealth D2 Cable was the most practical for following attacking companies.³⁴ Furthermore, the dispersal of units often required more cable than was

²⁹ Lieutenant Colonel Samuel Auchincloss, Signals Officer US I Corps, to Chandler, 18 December 1942, 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

³⁰ Field telephones were used in three-quarters of communications by the 163rd Regiment at Sanananda and were judged to be the most satisfactory by American service personnel compared to wirelasses and runners. Colonel Jens A. Doe, Commander 163rd Infantry Regiment, “Notes on Jungle Warfare No. 1,” 341-INF(163)-0.3, RG407 E427 B9085, NARA; Observer Team II, “Jungle Warfare; Inclosure No. I – Compilation of the Answers to a Questionnaire Prepared by Brigadier General Jens A. Doe After the Sanananda Operations of Combat Team 163,” 27 April 1943, #11, RG337 E15A B51, NARA.

³¹ See: 18th Infantry Brigade, “Part II: Lessons Learnt in Cape Endaiadere-Giropa Point and Sanananda Area Ops,” undated, AWM54 581/7/31 [1], AWM; 21st Infantry Brigade, “Report on Operations: Owen Stanley Range,” undated, AWM54 577/7/3, AWM; 25th Infantry Brigade, “Some Notes on the New Guinea Campaign,” AWM54 577/7/31, AWM; Kessel, “Report on Operations in Sanananda Area 2 Dec 42 – Jan 43,” undated, AWM54 581/7/13, AWM.

³² OC J Section Signals, “Report on Bde Sigs in NG Campaign During Oct-Dec ‘42,” AWM54 425/6/16, AWM.

³³ The movement of tanks to the front lines from Hariko to Buna caused many problems as signal cables laid across or near roads were severed. Even during the advance, cables laid to forward units were also vulnerable. At one point a tank cut the lines from 18th Brigade headquarters to all forward battalions – a total of 13 lines – and rendered line communications inoperable. 18th Infantry Brigade, “Part II: Lessons Learnt in Cape Endaiadere-Giropa Point and Sanananda Area Ops,” undated, AWM54 581/7/31 [1], AWM; Auchincloss to Chandler, 18 December 1942, 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

³⁴ 18th Infantry Brigade, “Part II: Lessons Learnt in Cape Endaiadere-Giropa Point and Sanananda Area Ops,” undated, AWM54 581/7/31 [1], AWM; 21st Infantry Brigade, “Report on Operations: Owen Stanley Range,” undated, AWM54 577/7/3, AWM; 25th Infantry Brigade, “Some Notes on the New Guinea Campaign,” AWM54 577/7/31, AWM; Kessel, “Report on Operations in Sanananda Area 2 Dec 42 – Jan 43,” undated, AWM54

available. At Sanananda, the 49th Battalion made its first attack with only enough cable for one field telephone to connect the battalion's CO, who was forward with the attack, to battalion headquarters.³⁵ Linesmen and telephone operators were also prime targets for snipers. The loss of signallers and equipment further served to reduce control and the impetus of attacks, as highlighted by the 55/53rd Battalion's account. The difficulties with line communications during engagements meant sub-units often relied on runners.

The use of physical and verbal communications at sub-unit level was standard practice but jungle conditions slowed the transmission of information and introduced greater uncertainty. Runners were used to maintain contact between sub-units but had difficulty locating units because of dense terrain and poor visibility. This slowed the organisation of forces and the impetus of attacks. The 2/7th Cavalry's attack on 19 December was 'necessarily slow' because its rear headquarters only had wireless contact with one squadron, runners to two squadrons, and one squadron out of contact entirely.³⁶ Runners faced the risk of getting lost, never finding their recipients, or becoming casualties; there was a 'ten to one' chance runners would never deliver their message.³⁷ Japanese troops often reoccupied positions behind Allied advances which meant leading sub-units were frequently cut-off from their headquarters. When Sergeant James Flanagan's section became isolated from his company at Gona, he sent a runner to the Company OC:

[The runner] started to come back to me and he ran into the Japs. They were between him and us...that left me with the whole situation in my own hands. He couldn't get through...So we just stayed there...all night.³⁸

The breakdown of communications meant sub-units needed to have clear instructions, definite objectives, and the initiative to pursue them when out of contact with their superiors.

Crucially, the loss of control from breakdowns in communications interfered with quick decision-making as commanders sought information on their subordinates and subordinates sought direction from their commanders. Conditions counteracted the flexibility and adaptability required to adjust plans to new situations once an attack began, which placed a premium on initiative and improvisation. The loss communication and incomplete information made it difficult for

581/7/13, AWM; "Report of the Commanding General Buna Forces," Annex 4 Inclosure D: Signals Report, 100-103.

³⁵ McCarthy states that each company was supposed to be given a No.108 Set before the attack but these never arrived. Subsequently, the company commanders were told to take telephones but there was a shortage of cable and 'at least three companies had to go forward without line'. The battalion's war diary noted: 'CO only one in communication with rear HQs'. 49th Infantry Battalion War Diary, 7 December 1942, AWM52 8/3/88/7, AWM; McCarthy, *Kokoda to Wau*, 409.

³⁶ 2/7th Division Cavalry Regiment War Diary, 19 December 1942, AWM54 2/2/8/16, AWM.

³⁷ Rhoden cited in Pratten, *Battalion Commanders*, 181

³⁸ Sergeant James E. Flanagan, 39th Battalion, S00504, KMSA.

commanders to formulate situational assessments. Lieutenant Colonel Robert McCoy, CO I/128th, recalled:

We carried field telephones...from our CP out to the [I/126th] and then there was one back to regiment...they'd call me...and I'd go back there, and they'd tell me what they wanted done. And I'd ask them a lot of questions, and they'd say, "I don't know. That's up to you"...We wouldn't get [Situation Reports]...if we were making an advance, the phone service was out. [Field telephones were] carried along, but...that was always the last thing, when the wire strung out...They had to [communicate] by runner. They'd come back...and say, "We're held up at this point, or we need this or that, or what will we do now?" And that had to be done by runner. And so you just had to hope for the best and then, if they had been going along and reached where they were supposed to go, then we would dig in and I'd verify it. And when I was sure of it, then I would send a runner back or a message back and tell regiment where I was and what had been accomplished and what next...³⁹

However, jungle fighting showed that quick and decisive action was important to avoid units stalling and sustaining heavier casualties. Unit and sub-unit commanders needed a much high level of information than was often available, and the initiative to act on it.

'Limited...and Frequently Faulty': Information and Intelligence

The Allies' information about the terrain and Japanese positions available to tactical commanders was scarce and of little value in planning and executing their initial attacks. The insistence on a quick advance coupled with a lack of reconnaissance contributed to the costly and unsuccessful opening phase of the operations. Commanders needed more information to exploit terrain features and devise more suitable approaches. More information also meant commanders could provide more detailed instructions to their subordinates which made attacks less likely to stall against unexpected opposition or when communications broke down.

The provision of accurate maps in sufficient quantities was a persistent problem during the campaign. Allied survey services struggled to develop accurate maps at a practical scale for military operations because of the limited number of survey personnel in theatre, the innate difficulty of mapping Papua, and the absence of reproduction facilities.⁴⁰ Early maps were generated from aerial photographs, but the lack of controls resulted in scale errors and the locations and names of villages varied across sources.⁴¹ Production of 1in:1ml maps of the beachheads did not begin until October, but their scale was impractical for tactical commanders. The inaccuracy of early maps led to some

³⁹ Lieutenant Colonel Robert McCoy, CO I/128th Infantry Regiment, OH1515, Wisconsin Veterans Museum Research Centre.

⁴⁰ Major P.A. Kennedy, NGF AD Survey, "Report by AD Survey Headquarters New Guinea Force on Survey During Owen Stanley-Buna Campaign Serial No.7," 1 March 1943, AWM54 577/7/29 [6], AWM.

⁴¹ Kennedy, "Report by AD Survey Headquarters New Guinea Force," 1 March 1943, AWM54 577/7/29 [6], AWM.

confusion as the Allied forces tried to make sense of the unfamiliar area. The 25th Brigade found there were two separate Gona villages rather than one as indicated on its maps. This caused uncertainty when one patrol reported the village was empty while another reported it was strongly held by the Japanese.⁴² The 126th Regiment received 'what few maps were available' when it arrived at Sanananda but these were grossly inaccurate in terms of the positioning of features and distances.⁴³ This made the 126th Regiment's envelopment of the Killerton Junction difficult to track.⁴⁴ Captain Harry Katekar, 2/27th Battalion, recalled that even as the 21st Brigade was called to Gona at the end of November it did not have 'accurate maps of any tracks or the nature of the vegetation on the outskirts of Gona'.⁴⁵ Allied survey personnel did not develop suitable maps until mid-December when revised Buna and Gona 4in:1ml locality maps were issued on a wider scale.⁴⁶

Aerial photographs were a practical expedient to remedy deficiencies in conventional maps. They afforded ground commanders more immediate information about terrain and Japanese positions than maps. They could also be gridded and used for artillery and air support requests. The 18th Brigade used them extensively in preparations for its attack against Cape Endaiadere and noted aerial photographs were the only 'effective' and 'reliable' means of obtaining information on the poorly mapped area.⁴⁷ However, aerial photos required careful interpretation.⁴⁸ Details could be deceiving from the air, such as clear areas actually being tall, dense foliage, and there was uncertainty regarding the scale of the photos.⁴⁹ However, few battalion or brigade intelligence officers were sufficiently trained in photo interpretation to utilise this source effectively.⁵⁰ Lieutenant Robert Johns, 2/27th Battalion, thought the photographs available to the 21st Brigade

⁴² Major P.K. Parbury, Headquarters NGF, "Notes on Recent Ops 7 Aust Div – Kokoda to Soputa," 13 January 1943, AWM54 577/7/35, AWM.

⁴³ These were copies of the unrevised Buna 1":1ml maps, which barely covered the Sanananda sector; they only depicted the Killerton Junction track and a small area of swamp to the west. Colonel Clarence M. Tomlinson, Commander 126th Infantry Regiment, to Milner, 28 November 1950, Soputa-Sanananda Letters, RG319 E54 B3, NARA.

⁴⁴ Tomlinson to Milner, 28 November 1950, Soputa-Sanananda Letters, RG319 E54 B3, NARA.

⁴⁵ Captain Henry J. Katekar, 2/27th Battalion, S00903, KMSA.

⁴⁶ 36th Infantry Battalion, "A Brief History of 36 Aust Inf Bn in Action in the Sanananda and Gona Areas," AWM52 8/3/75/3, AWM.

⁴⁷ 18th Infantry Brigade, "Part II: Lessons Learnt in Cape Endaiadere-Giropa Point and Sanananda Area Ops," undated, AWM54 581/7/31 [1], AWM.

⁴⁸ A post-campaign report provided the following description of jungle terrain features in aerial photography: "'High" jungle appears as a uniform cluster of relatively large and dark rosettes. "Low" jungle appears as loose clusters of smaller rosettes of lighter colour than "high" jungle. The timber edges appear as black irregular lines on aerial photographs. Kunai grass appears as an even textured clear space usually light in colour and with well-defined edges. Swamps appear darker than the surrounding vegetation'. Dice, "Notes from Theatres of War: New Guinea July 42 – January 43," undated, AWM54 519/6/51.

⁴⁹ 36th Infantry Battalion, "A Brief History of 36 Aust Inf Bn in Action," AWM52 8/3/75/3, AWM.

⁵⁰ 18th Infantry Brigade, "Part II: Lessons Learnt in Cape Endaiadere-Giropa Point and Sanananda Area Ops," undated, AWM54 581/7/31 [1], AWM.

revealed 'very little' about the conditions it faced at Gona.⁵¹ The 36th Battalion found its aerial photomap of Sanananda indicated a scale of 1in:250yds, but it was later confirmed to be closer to 1in:190yds.⁵² These discrepancies could be dangerous when requesting artillery or air support.

Despite their value, aerial photographs were not supplied to all units nor available in sufficient quantities. In early December Adv NGF warned higher headquarters the aerial photograph situation was 'most unsatisfactory'; there were not enough copies and too many vital areas remained unmapped.⁵³ The scarcity of photo maps also prevented them from being distributed to company or platoon commanders, where they would have been of great value.⁵⁴ The 30th Brigade did not receive copies of the two photos of Sanananda until a week after its arrival, and even then did not have enough to issue to all its battalions.⁵⁵ The 36th Battalion only received a photograph of the western sector. When it prepared to attack on 19 December it had to borrow a photograph of the eastern sector from a nearby unit.⁵⁶

Reconnaissance provided the most practical information about terrain and the Japanese defences. Information was even more important in jungle fighting because:

[The information] necessary to plan any attack needs more careful confirmation on the ground in jungle warfare than elsewhere – mainly because observation is limited and therefore frequently faulty; partly also because of inaccurate maps.⁵⁷

In the American sectors the haste of the advance and limited patrolling contributed to the lack of information about the Japanese positions and the shock of the first engagements. Lieutenant Colonel Alexander MacNab believed the Americans' initial hardships grew out of a faulty intelligence picture that could have been improved by 'vigorous "G-2-ing"', patrolling, and coordination with ANGAU.⁵⁸ Major W.B. Parker, a GHQ observer, recorded '[American] patrol activity was sporadic and generally not up to a good standard'.⁵⁹ Effective patrolling towards Simemi was not continued which failed to identify two major positions which clocked the advance.⁶⁰ Subsequently, the 'haphazard'

⁵¹ Lieutenant Robert D. Johns, 2/27th Battalion, S00799, KMSA.

⁵² Kessel, "Report on Operations in Sanananda Area 2 Dec 42 – Jan 43," undated, AWM54 581/7/13, AWM.

⁵³ New Guinea Force Headquarters and General (Air) War Diary, 10 December 1942, AWM52 1/5/51/22, AWM.

⁵⁴ Kessel, "Report on Operations in Sanananda Area 2 Dec 42 – Jan 43," undated, AWM54 581/7/13, AWM.

⁵⁵ Kessel, "Report on Operations in Sanananda Area 2 Dec 42 – Jan 43," undated, AWM54 581/7/13, AWM.

⁵⁶ 36th Infantry Battalion, "A Brief History of 36 Aust Inf Bn in Action," AWM52 8/3/75/3, AWM.

⁵⁷ Lieutenant-Colonel Ralph H. Honner, CO 39th Battalion, "Notes on and Lessons From Recent Operations in Gona and Sanananda Areas," undated, AWM54 581/7/19, AWM.

⁵⁸ MacNab to Milner, 15 November 1949, Warren Letters, RG319 E53 B4, NARA.

⁵⁹ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

⁶⁰ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM; 128th Infantry Regiment Journal, 18-19 November 1942, 332-INF(128)-0.7, RG407 E427 B8039, NARA; 1/128th Infantry Battalion Journal, 18-19 November 1942, 332-INF(128)-7-0.7, RG407 E427 B8058, NARA.

organisation of patrols 'resulted in meagre and inaccurate information'.⁶¹ Information from patrols was often too vague to be of use; patrols could not determine where they had started, where they had been, or what they had seen.⁶² Eichelberger noted early patrols consistently overestimated enemy strength which led to "hiding out" and "fairy stories".⁶³ Until I Corps issued a patrol policy, the 32nd Division only gained information about enemy positions from attacks. I Corps' policy mandated each company dispatch a patrol each night for reconnaissance.⁶⁴ The change in American patrol culture was positive for morale and information-gathering. It allowed small groups to identify positions without blundering into them during attacks.

In contrast to the Americans, Australian units entered combat with a strong patrol culture. This was inherited from the First World War, fostered in the Middle East, and adapted on the Kokoda Trail.⁶⁵ The development of patrol culture in CMF units was influenced by the intake of AIF officers and NCOs prior to the operation. The 39th Battalion's highly successful assault against Gona was based on extensive reconnaissance work which revealed a corridor of jungle providing a concealed approach that led directly into the heart of the Japanese defences.⁶⁶ The 39th Battalion's CO remarked 'strangely enough, its possibilities seem to have been overlooked [by the 3rd Battalion] while bloody losses were sustained in reckless attacks elsewhere'.⁶⁷ At Buna, extensive patrolling by the 2/10th Battalion discovered a crossing of Simemi Creek which outflanked Japanese positions defending the bridge and forced their withdrawal, thus avoiding crossing the creek under fire.⁶⁸ The 25th Brigade had concluded patrolling was 'key of all successful jungle ops'.⁶⁹

Patrolling provided information on the location and nature of the Japanese defences. Information on the construction and appearance of the Japanese positions from patrol reports aided devising tactics against them:

All emplacements appeared to be made of cocoanut [sic] logs laid lengthwise with others placed on bearers forming the roof. The whole was then camouflaged according to the

⁶¹ Colonel Herbert B. Laux, Observer USAGF, "Observers Report," 20 February 1943, #7, RG337 E15A B51, NARA.

⁶² Hawkins, "G-2 Report of Action, Papuan Campaign," 3 April 1943, 332-2, RG407 E427 B7819, NARA.

⁶³ "Report of the Commanding General Buna Forces," 54-55.

⁶⁴ I/128th Infantry Battalion Journal, #20 6 December 1942, 332-INF(128)-7-0.7, RG407 E427 B8058, NARA.

⁶⁵ Threlfall, "The Development of Australian Army Jungle Warfare Doctrine," 150, 195-196.

⁶⁶ Honner, "Notes on and Lessons From Recent Operations in Gona and Sanananda Areas," undated, AWM54 581/7/19, AWM.

⁶⁷ Honner, "The 39th at Gona," AWM67 Item 3/170 [3], AWM.

⁶⁸ 32nd Infantry Division G-3 Journal, #3812 21 December 1942, 332-3.2, RG407 E427 B7886, NARA; 128th Infantry Regiment Journal, #2010 21 December 1942, 332-INF(128)-0.7, RG407 E427 B8039, NARA; I/126th Infantry Battalion Journal, 20-21 December 1942, 332-INF(126)-7-0.7, RG407 E427 B8010, NARA; 18th Infantry Brigade, "Part I: Report on Operations 18 Aust Inf Bde Gp," AWM54 581/7/31 [1], AWM; 2/10th Infantry Battalion War Diary, 21-23 December 1942, AWM52 8/3/10/24, AWM.

⁶⁹ 25th Infantry Brigade, "Some Notes on the New Guinea Campaign," AWM54 577/7/31, AWM.

country in which it was situated...In most cases the loopholes were hidden to view by a screen of bush or camouflage, although vision from the inside out was still possible, and in most cases the pillbox or emplacement was not discovered until you were right on to it.⁷⁰

Later, a compilation of sketches which showed common designs, camouflages, and placements was distributed to help plan attacks on positions.⁷¹ The collation of this information was an essential part of the adaptation process and was systematically disseminated to all forces at Buna.⁷² Sometimes captured documents also shed light on the Japanese defences. A map found at Gona indicated the Japanese defences in the south-west sector of the Killerton Junction were not delaying positions but part of a complex network.⁷³ This helped to explain the difficulty Allied forces faced attacking the Junction. The accumulation of accurate and useful information helped mitigate the uncertainties of jungle fighting, though commanders still faced significant pressure to launch attacks without thorough preparations.

'Pushed into Action': Command, Planning, and Pressure

The difficulty of developing an accurate picture of the Japanese defences was compounded by the pressure on unit and sub-unit commanders to maintain constant offensive action. Rhoden believed that 'time spent in reconnaissance [was] never wasted' but pressure prevented commanders from accurately diagnosing what they were facing.⁷⁴ This was particularly problematic for new units arriving at the front. Katekar recalled the 2/27th Battalion was:

...brought down to Gona and briefed that we would have to attack Japanese defences there. There was no knowledge of the nature of these defences, except that they were in around the Gona village, and we had no opportunity to do proper reconnaissance to find out where these defences were.⁷⁵

It was keenly noted:

⁷⁰ 2/6th Independent Company War Diary, 30 November 1942, AWM52 25/3/6/4, AWM.

⁷¹ Hawkins, "Constructional Details of Enemy Emplacements," 21 December 1942, AWM52 8/3/18/31, AWM; Colonel Gordon B. Rogers, G-2 HQ Buna Forces, "Memo," 24 December 1942, 332-3.2, RG407 E427 B7887, NARA.

⁷² A similar survey was completed by the 163rd Regiment at Sanananda. 163rd Infantry Regiment, "163rd Infantry Regiment History – New Guinea 20 Dec. 42 to 20 Jul. 43: Part 10 Maps and Sketches," 25 March 1944, 341-INF(163)-0.3, RG407 E427 B9085, NARA.

⁷³ On 12 November the 21st Brigade noted a map was being sent to 7th Division headquarters. However, neither 7th Division nor 30th Brigade war diaries have records of this map. The map can be found in the 2/1st Battalion War Diary for 15 December, as noted by Michael Fraser. It is therefore difficult to gauge how this piece of intelligence was used – if at all – despite its obvious value to the situation. 21st Infantry Brigade War Diary, 12 December 1942, AWM54 8/2/21/18, AWM; 2/1st Infantry Battalion War Diary, 15 December 1942, AWM53 8/3/1/28, AWM; Fraser, *Combat Effectiveness*, 226-228.

⁷⁴ Rhoden, 2/14th Battalion, #2549, AAWFA.

⁷⁵ Katekar, 2/27th Battalion, S00903, KMSA.

...in the higher command above us...there was an element of "Push, push, push...we've got to do this quickly"...More Japanese reinforcements were conjured up, they didn't arrive. So everything was done with speed...There's still this element from the people above us, not the troops, that we were going to be beaten again...And so things went on at greater pace than perhaps they ought of.⁷⁶

Likewise, the 2/9th Battalion's officers only had several hours to survey the Japanese positions and very little time to confer with their new American partners in the area prior to the 18 December attack.⁷⁷ Units unable to familiarise themselves with the situation, the terrain, and the enemy faced a substantial barrier to achieving their objectives and devising tactical solutions.

Hastily mounted attacks based on limited information made ambitious objectives like capturing an entire beachhead sector unreasonable. While the need to maintain offensive pressure remained constant, reducing the scope of objectives to ones which were within the physical and moral capacity of the available troops and support enabled commanders to mount smaller, more successful attacks.⁷⁸ It became apparent that all commanders, but particularly those at company-level and below, needed attainable limited objectives because of the loss of control and the difficulty of re-establishing contact or redirecting efforts in jungle conditions.⁷⁹ Limited information also increased the need to give junior leaders something attainable because detailed orders were impractical:

As it is impossible to point out objectives, lines of advance etc on the ground, a great deal depends on the prompt action and initiative of the junior leaders. Frequently unit comds will be unable to give detailed orders. Often Coy comds are told what the Unit Comd wishes to accomplish...⁸⁰

Limited objectives gave unit and sub-unit commanders greater capacity to control, concentrate, and coordinate their forces. Simple directions to conduct basic tactical actions against small groups of strongpoints were more likely to succeed as complex ideas and actions were often lost on less-experienced personnel or thwarted by the terrain.⁸¹ An excellent example is the 39th Battalion's successful attack against Gona, which tasked platoons and sections with specific objectives based on reconnaissance.⁸² Clear intent and realisable objectives were crucial to enabling the devolution of

⁷⁶ Rhoden, 2/14th Battalion, #2549, AAWFA.

⁷⁷ III/128th Infantry Battalion Journal, 17 December 1942, 332-INF(128)-7-0.7, RG407 E427 B8065, NARA; W.B. Spencer, *In the Footsteps of Ghosts: With the 2/9th Battalion in the African Desert and the Jungle of the Pacific* (St Leonards: Allen & Unwin, 1999), 214.

⁷⁸ *FSR Vol. II: Operations – General 1935*, 114-115; *FM100-5: Operations 1941*, 97.

⁷⁹ Dice, "Notes from Theatres of War: New Guinea July 42 – January 43," undated, AWM54 519/6/51.

⁸⁰ 25th Infantry Brigade, "Some Notes on the New Guinea Campaign," AWM54 577/7/31, AWM.

⁸¹ Under US I Corps, American commanders adopted orders which were 'brief and clear and objectives easy to understand. Complicated ideas [could not] be remembered or even grasped in the heat of the fire fight'. "Report of the Commanding General Buna Forces," 67.

⁸² Honner, "Notes on and Lessons From Recent Operations in Gona and Sanananda Areas," undated, AWM54 581/7/19, AWM.

responsibilities to lower levels which was a key component of effective jungle warfighting. However, this was inherently tied to the capacity of junior leaders.

In Allied sectors, commanders also had to devise ways to cooperate and coordinate with their partners. The initial advance kept Australian and American forces separate, but the need to reinforce rapidly depleting units saw Australian and American formations attached in Warren sector and at Sanananda. While Australian and American forces shared similar doctrinal principles, there was still a challenge to establish how to fight together as they lacked prior experience and understanding. As manpower decreased, composite Australian and American sub-units were formed to ensure available personnel were formed as effective fighting groups. This led to a high degree of sub-unit integration, as is evidenced by the 55/53rd and 36th Battalions incorporating American platoons at Sanananda and Warren Force detaching companies to support the 18th Brigade's battalions at Buna. However, the relationship required trust and familiarity to be developed. The Americans' inexperience presented some challenges for AIF units. At Sanananda, mutual understanding was undermined when some American companies failed to notify neighbouring Australian sub-units when they withdrew from positions at night, which risked creating a gap in the line to allow Japanese infiltration or friendly-fire casualties.⁸³ When close coordination and timing were critical, Australian wireless sections were attached to American units to reconcile different signals procedures and overcome the 'language barrier'.⁸⁴

The US WWII Veteran's Surveys indicate American soldiers overwhelmingly had a high opinion of Australian troops.⁸⁵ American soldiers were impressed by the way in which Australian forces attacked and the leadership of their officers.⁸⁶ Australian troops were generally welcoming of the Americans, though they were less-impressed – and often sympathetic – to the lack training, discipline, and leadership in the green National Guard division. The 2/1st Battalion's war diary noted the Australians 'lost no time in making friends with the Americans' relieving them at Sanananda, though some were not impressed by the American's cockiness 'after being told we could go home now, as [the Americans] were here to clean things up'.⁸⁷ The operations highlighted differences in experiences and preparation between the two forces. Different expectations and standards in discipline, training and methods generated some negative feelings, but the hardships of the campaign provided a common ground for future cooperation.

⁸³ 16th Infantry Brigade War Diary, 27 November 1942, AWM52 8/2/16/20, AWM.

⁸⁴ Kendall, "Notes on Operations in New Guinea: Owen Stanley Range-Buna Areas Aug 42-Jan 43 Signal Communication," undated, AWM54 577/7/29 [18], AWM.

⁸⁵ WWII Veteran's Surveys, 32nd Infantry Division and 41st Infantry Division, USAHEC.

⁸⁶ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

⁸⁷ 2/1st Infantry Battalion War Diary, 22 November 1942, AWM52 8/3/1/28, AWM.

Unsurprisingly, the operations took a significant physical and mental toll on unit commanders. Despite protestations from most senior commanders, the constant friction between the pressure to attack and the need to prepare was resented by many. Cooper described Gona as:

...a bloody massacre, unnecessarily brought about by fighting soldiers not being allowed to practise their art; being pushed into action with bad support and insufficient time to conduct their operations – a panicky rush.⁸⁸

However, he conceded he '[could not] make a song and dance' as orders and had to be carried out.⁸⁹ Cummings also protested the immediate commitment of his battalion at Buna without the opportunity to reconnoitre the ground.⁹⁰ Commanders were cognisant they lacked the support to break the enemy lines but still attacked, as MacNab recalled: 'we knocked our heads, on orders, against a line that we knew was impregnable to our...weapons'.⁹¹ Some commanders, like Lieutenant-Colonel James Dobbs, CO 2/10th Battalion, became increasingly distressed by the casualties his battalion sustained at Buna.⁹² Pratten's study of Australian battalion commanders indicates most believed it was the toughest experience of the war.⁹³ The sentiment was shared by many American commanders; Colonel Clarence Martin regarded it as the 'most severe action' in the theatre.⁹⁴

'Junior Leadership is also Lacking': The Chain of Command, Initiative, and Discipline

The loss of control and lack of information in jungle warfare placed a premium on lower-level leadership and initiative. Commanders needed confidence in their subordinates to carry out their tasks, while subordinates needed to act in accordance with higher directions to complete their objectives. This relationship required thorough training and confidence in the chain of command. Leadership and initiative were essential to maintaining the impetus of an advance after taking fire and acting on partial information. The 32nd Division's first contact with the Japanese confirmed serious deficiencies in sub-unit leadership. Poor standards of junior leadership were 'the most striking and depressing fact gleaned from...observations' and represented the most serious non-tactical problem.⁹⁵ US Army Ground Forces (USAGF) observers concluded the demoralisation of the American troops was because '...troops were poorly trained in almost every aspect of jungle

⁸⁸ Cooper cited in Brune, *Those Ragged Bloody Heroes*, 264.

⁸⁹ Cooper cited in Pratten, *Battalion Commanders*, 188.

⁹⁰ Cummings cited in Brune, *A Bastard of a Place*, 500.

⁹¹ MacNab to Milner, 15 November 1949, Warren Letters, RG319 E53 B4, NARA.

⁹² The 2/10th Battalion suffered a total of 331 casualties during the two weeks of fighting at Buna. For accounts by 2/10th Battalion personnel on Dobb's state towards the end of December, see; Brune, *A Bastard of a Place*, 533-535.

⁹³ Pratten, *Battalion Commanders*, 188.

⁹⁴ Martin to Ward, 6 March 1951, Interviews, RG319 E53 B5, NARA.

⁹⁵ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

warfare... and because of inferior junior leadership, resiliency was greatly reduced'.⁹⁶ The Americans' centralised command doctrine relied on a firm understanding of the chain of command and constant direction from leaders. Without this, cohesion and drive disintegrated. I Corps staff observed that the troops themselves were not necessarily lacking aggression, determination, or initiative, but the leadership required to foster those traits was absent.⁹⁷

Deficiencies in the leadership and competence of junior officers had a threefold effect. First, junior officers lacked the respect of enlisted men. The leadership of NCOs substituted the lack of leadership from junior officers because they were 'closer to the enlisted men' and 'better [leaders] than their officers'.⁹⁸ Second, officers' poor understanding of their responsibilities led to failures to ensure compliance with orders. Martin believed this was attributable to the officers' lax training and noted his interactions with a company commander who repeatedly failed to ensure his orders were completed satisfactorily.⁹⁹ In battle, these officers were more 'hindrance...than...help'.¹⁰⁰ Third, observers noted many company and platoon commanders were so concerned for the safety of their men they were unable to commit them to attack.¹⁰¹ American casualties rates after two weeks had not been excessive – between 5-10% in most units – but had a considerable morale effect.¹⁰² This led to attacks stalling as soon as sub-units sustained casualties. Junior officers were noted sympathising with nervous soldiers: 'such misguided sympathy was a strong contributing factor in causing straggling and failure to attack with determination'.¹⁰³ Martin observed a company commander in the I/128th refuse to order his unit forward against Old Strip as he had become crippled by concerns about casualties. He found 'no amount of urging or cajoling had any effect' and relieved the captain immediately.¹⁰⁴

Australian CMF units and reinforcements also demonstrated deficiencies in junior-level leadership. While most Australian NCOs and officers were more experienced than their American

⁹⁶ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

⁹⁷ Martin to Ward, 6 March 1951, Interviews, RG319 E53 B5, NARA.

⁹⁸ The USAHEC WWII Veteran's Surveys include a question; 'Who were the "real" leaders – officers, noncoms, or enlisted men?'. Most who answered the question wrote NCO's. First-Lieutenant Harold J. Bookman, Headquarters Company III/128th Infantry Regiment, WWII Veterans Survey, USAHEC; Captain William G. Demers, D Company I/128th Infantry Regiment, WWII Veterans Survey, USAHEC.

⁹⁹ Martin to Ward, 6 March 1951, Interviews, RG319 E53 B5, NARA.

¹⁰⁰ Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA; "Report of the Commanding General Buna Forces," Annex #3 G-3 Report, 72-73.

¹⁰¹ Martin to Ward, 6 March 1951, Interviews, RG319 E53 B5, NARA.

¹⁰² This included 82 killed, 325 wounded, and 85 missing up to 30 November 1942. 32nd Infantry Division G-2 & G-3 Journal #1860 28 November 1942, 332-0.7, RG407 E427 B7797, NARA; 32nd Infantry Division G-3 Journal, #1900 1 December 1942, 332-3.7, RG407 E427 B7885, NARA.

¹⁰³ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM; "Report of the Commanding General Buna Forces," Annex #3 G-3 Report, 73.

¹⁰⁴ Martin also noted there had been previous troubles with this OC on 5 December, and described him as a 'mill stone around his company's neck'. Martin to Ward, 6 March 1950, Interviews, RG319 E53 B5, NARA.

counterparts and CMF units had been bolstered by AIF officers and NCOs, the competence and leadership required for jungle warfare was still difficult to develop in training programmes. Major William Parry-Okeden, acting CO 2/9th Battalion at Sanananda, recalled many of the reinforcement officers his battalion received lacked the experience, tactical knowledge, and leadership qualities to command men into battle:

A Coy was not advancing so I went forward to find...[the officer] had completely lost control of his Coy. They had come under heavy fire...and [the officer] was not doing anything about it. The poor bugger really didn't know what to do... A little while later [he] was killed.¹⁰⁵

Post-campaign reports concluded the junior-level leadership and initiative required for jungle fighting had to be developed through rigorous and realistic training.

There were many junior leaders who demonstrated initiative, leadership, and determination under difficult conditions, but these were largely overshadowed by failures. Some junior officers were observed to be reluctant to advance themselves, which was reflected in the troops they lead.¹⁰⁶ Captain William Demers, OC D Company I/128th, watched a fellow company commander 'hiding behind a tree while his unit was [decimated]'.¹⁰⁷ This influenced morale and confidence in leaders. The mixed standard of leaders was noted by Sergeant Ronald Acheson, II/126th, who recalled there were 'some good, some bad...[but] combat sorts them out fast'.¹⁰⁸ However, some NCOs and enlisted men stepped up. First Sergeant Ralph Smith, Cannon Company 126th Regiment, took command of his sub-unit after hearing his OC remark 'if they put us back into the line I hope every man gets killed'.¹⁰⁹ Smith also observed a private take command of a platoon without any objection from its commander because they could not do the job.¹¹⁰ By the conclusion of the campaign, it was common for NCOs to be commanding companies.¹¹¹ The Australian practice of officers involving themselves in attacks impressed the American forces.¹¹² In Warren sector, 'more than one man was heard to remark that he wished his officers were more like the Australian officers, who were believed to lead their men into enemy fire'.¹¹³

¹⁰⁵ Parry-Okeden Diary, 12 January 1943, PR00321 Item 1, AWM.

¹⁰⁶ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

¹⁰⁷ Captain William G. Demers, D Company I/128th Infantry Regiment, WWII Veterans Survey, USAHEC.

¹⁰⁸ Staff Sergeant Ronald G. Acheson, H Company, II/126th Regiment, WWII Veterans Survey, USAHEC.

¹⁰⁹ Master-Sergeant Ralph J. Schmidt, Cannon Company 126th Infantry Regiment, WWII Veterans Survey, USAHEC.

¹¹⁰ Schmidt, WWII Veterans Survey, USAHEC.

¹¹¹ Private Clarence J. Jungwirth, II/127th Infantry Regiment, OH2001.13.8, Oshkosh Museum.

¹¹² Captain Owen Curtiss, 2/12th Battalion, remembered '...[the Americans] were amazed [by] the seniority of our officer that went into action with the men. They said that in attacks like [Buna]... "If our people had attacked like that our sergeants would have to take us in...officers don't take us in there" which seemed a bit funny to me'. Captain Owen Curtiss, 2/12th Battalion, S00541, KMSA.

¹¹³ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

The relief of ineffective officers was an immediate step in transforming the combat effectiveness of the 32nd Division. Overhauling command during battle was not ideal, but:

Many commanders were relieved on the battlefield because of deficiencies which should have been detected during the training period. This was bound to have a bad effect on the troops, and created doubt as to the competency of their leaders. The weeding out of incompetent officers should be done before the unit gets to the battlefield.¹¹⁴

MacNab noted:

... Carrier [CO I/126th] [never moved] out of his battalion CP or away from his slit trench. The same applied to McCoy [CO I/128th], except on one occasion, when he couldn't stand my needing any longer. I had to fight their front line companies without being in command."¹¹⁵

The operational pause gave I Corps the chance to overhaul unit and sub-unit commands and clearly outline expectations for leaders.¹¹⁶ Eichelberger appointed I Corps officers to battalions and authorised unofficial field promotions in sub-units needing determined leadership.¹¹⁷ McCoy was eventually relieved while Carrier suffered a heart attack. Lieutenant Colonel Kelsie Miller, CO III/128th, was only relieved due to exhaustion.¹¹⁸ "White" Smith was the only 32nd Division battalion CO to retain his command for the duration, though he was on the 'borderline' of being relieved before earning Eichelberger's respect and 'developed into quite a fighter'.¹¹⁹ While the changes in command were unpopular, 'examples of defeated units becoming revitalised under vigorous leadership were numerous', especially on Warren Front.¹²⁰ The reorganisation of command and demonstration of personal leadership by I Corps officers was predicated on setting an example to the 32nd Division's officers, not the enlisted men. However, the type of leadership and practical methods required to successfully lead sub-units in jungle conditions contributed to high losses among junior leaders.

High casualties among junior leaders further eroded control as this interrupted initiative and the chain of command. The loss of leaders at key moments could stall an advance. The advance of C Company, 2/14th Battalion, at Gona on 28 November was halted when the OC and all three platoon commanders were killed, and 'some confusion existed owing mainly to officer casualties'.¹²¹ The

¹¹⁴ Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA

¹¹⁵ MacNab to Milner, 15 November 1949, Warren Letters, RG319 E53 B4, NARA.

¹¹⁶ Martin to Ward, 6 March 1951, Interviews, RG319 E53 B5, NARA.

¹¹⁷ I Corps lacked the authority to transfer officers who were unfit for command from the division or to grant field promotions. "Report of the Commanding General Buna Forces," Annex #1 G-1 Report, 50.

¹¹⁸ According to MacNab, 'Lt Col. Miller fought his battalion well, throughout. He was relieved for battle fatigue on 14 December at which time he moved back to Regimental Executive and I took his battalion until 17 February 1943 when I was given the regiment'. MacNab to Milner, 15 November 1949, Warren Letters, RG319 E53 B4, NARA.

¹¹⁹ Eichelberger to Sutherland, 16 December 1942, RG41 B1 F2, MM.

¹²⁰ "Report of the Commanding General Buna Forces," Annex #3 G-3 Report, 73.

¹²¹ 2/14th Infantry Battalion War Diary, 28 November 1942, AWM52 8/3/14/59, AWM.

55/53rd Battalion's officer and NCO casualties on 7 December were noted to have 'rendered control difficult'.¹²² As leader casualties were often sustained early in an advance, it fell to subordinates to continue.¹²³ However, advances often stalled in American and CMF units because the chain of command was not thoroughly understood and the next subordinate leader did not take over.¹²⁴ Junior leaders had to be capable of commanding above their rank and be ready to take over in any circumstance.¹²⁵

Criticisms of junior leadership often focused on the lack of aggression. However, aggression alone was not sufficient to successfully lead a sub-unit in jungle fighting. Sub-unit commanders had to temper aggression with tactical knowledge and initiative. Leaders who emerged during combat without this knowledge tended to rely on personal example, bravery, and encouragement rather than employing suitable tactics. However, these leaders often exposed themselves to greater danger and became casualties themselves. Porter observed this within the CMF battalions at Sanananda:

What success these units achieve...is due to a percentage of personnel who are brave in the extreme; and, is the result of unskilled aggression. Unfortunately, the latter personnel have been almost exterminated in 55/53 Bn and are likely to be exterminated in 36 Bn. The remainder lack confidence in themselves and their weapons, and they lack discipline, due entirely to lack of training and, in some cases, cowardice. Junior leadership is also lacking. Pl Comds and Sec Comds, with few exceptions, do NOT understand minor tactics; but, devote their energy to individual effort or to urging their personnel to leave cover.¹²⁶

Colonel Frank Bowen observed a similar pattern in the 32nd Division, where many of the best NCOs and officers had become casualties:

...as is often the case. The reason being that the leadership is so rotten that it was necessary for the real leaders to unnecessarily expose themselves in order to get the men to advance. As a result, those that are left are the 'Skulkers' and the men who were unable or unwilling to get out and do something.¹²⁷

The relationship between leadership, initiative, and tactical understanding was therefore significant, and vital component to effective junior leadership.

Leadership and an effective chain of command was also linked to morale and discipline. As conditions worsened and casualties increased, morale and discipline within some Allied units deteriorated and led to the breakdown of military order. Australian cases were largely confined to

¹²² 55/53rd Infantry Battalion War Diary, 19 December 1942, AWM52 8/3/91/7, AWM.

¹²³ Kessel, "Report on Operations in Sanananda Area 2 Dec 42 – Jan 43," undated, AWM54 581/7/13, AWM.

¹²⁴ Rogers to I Corps HQ Rear Echelon, 16 December 1942, G-2 Intelligence Reports Mix Files New Guinea 1942, RG338 E314 B81, NARA; Colonel Frank S. Bowen, G-3 US I Corps, "Memorandum: Lessons Obtained in Buna Campaign," 1 February 1943, 300.6 HQ I Corps Memos, RG338 E 339 B272, NARA.

¹²⁵ Kessel, "Report on Operations in Sanananda Area 2 Dec 42 – Jan 43," undated, AWM54 581/7/13, AWM.

¹²⁶ Porter, "Fitness for War – 55/53 Aust Inf Bn and 36 Aust Inf Bn," 22 December 1942, AWM54 581/7/18, AWM.

¹²⁷ Bowen to Lieutenant Colonel Ernest Smith, US I Corps, 5 January 1943, 312 Correspondence Buna Forces Dec 1942 Jan 1943, RG338 E314 B86, NARA.

CMF units. The motivation in the 55/53rd Battalion quickly waned after the 7 December attack. When it launched its next major attack on 19 December, OCs had 'great difficulty in moving [troops] fwd' and '...[troops] were too prone to go to ground at the slightest excuse'.¹²⁸ By 20 December, the battalion diary noted:

The nervous strain of the two attacks was beginning to tell on the [troops] and that together with heavy losses suffered plus the appalling conditions under which [troops] lived caused a lowering of morale.¹²⁹

In the 36th Battalion, the decline in morale and discipline resulted in the majority of A and C Companies refusing to advance against a position that had inflicted heavy losses earlier in the day 'claiming that their nerves were in too bad a state'.¹³⁰ C Company refused orders again the next day and was subsequently withdrawn.¹³¹ The breakdown in discipline and cohesion was potentially disastrous without additional reserve forces available.

The situation concerned Vasey and Porter because the units could not maintain offensive action. Both commanders submitted reports highlighting the state of battalions where the 'bulk of trained and resolute leaders' had become casualties and the standard of leadership had declined.¹³² There was concern the decline in morale 'unless checked immediately...[would] quickly spread to an alarming degree'.¹³³ These units were soon withdrawn. However, military discipline also declined within successful and experienced units. Seven members of the 39th Battalion were detained on charges of cowardice.¹³⁴ Major Frank Sublet, acting CO 2/16th-2/27th Composite Battalion, noted morale among AIF units was 'low' because of sickness and the low strength of units.¹³⁵ Even high degrees of training, cohesion, and experience could not sustain units enduring prolonged exposure to jungle conditions, high casualties, and excessive demands.

¹²⁸ 55/53rd Infantry Battalion War Diary, 19 December 1942, AWM52 8/3/91/7, AWM.

¹²⁹ 55/53rd Infantry Battalion War Diary, 20 December 1942, AWM52 8/3/91/7, AWM.

¹³⁰ 36th Infantry Battalion War Diary, 26-27 December 1942, AWM52 8/3/75/3, AWM; 36th Infantry Battalion, "A Brief History of the 36 Aust Inf Bn in Action in the Sanananda and Gona Areas," Appendix M, AWM52 8/3/75/3, AWM.

¹³¹ 36th Infantry Battalion War Diary, 28 December 1942, AWM52 8/3/75/3, AWM; 36th Infantry Battalion, "A Brief History of the 36 Aust Inf Bn in Action," Appendix M, AWM52 8/3/75/3, AWM.

¹³² Vasey, "Condition of Units at Present Under Comd 7 Aust Div," 24 December 1942, AWM54 581/7/18, AWM; Porter to Vasey, "Fitness for War – 55/53 Aust Inf Bn & 36 Aust Inf Bn," 22 December 1942, AWM54 581/7/18, AWM; Porter to Vasey, "Fitness for War," 24 December 1942, AWM54 581/7/18, AWM.

¹³³ 7th Division General Staff Branch War Diary, 28 December 1942, AWM52 1/5/14/38, AWM.

¹³⁴ The 39th Battalion was highly-regarded, and the battalion's war diary has no record of any morale issues during the late-December period. However, it had suffered heavy losses to leadership. It is possible that this is a mistake and Vasey was referring to the 36th Battalion, which was experiencing serious discipline issues. Vasey to NGF, "Condition of Units at Present Under Comd 7 Aust Div," 24 December 1942, AWM54 581/7/18, AWM.

¹³⁵ Captain Frank Sublet, CO 2/16th-2/27th Composite Battalion, "21 Aust Inf Bde," 23 December 1942, AWM54 581/7/18, AWM.

Discipline and morale were also issues for American units. On 24 November two American companies near the Triangle abandoned their weapons and withdrew without orders after being ambushed in deep swamps, while communications breakdowns meant “White” Smith was unable to halt the retreat.¹³⁶ When Mott assumed control of the sector he took ‘strong action’, ordering the companies to retrieve the weapons and relieving the OCs.¹³⁷ However, most unauthorised withdrawals occurred after the leader casualties and the chain of command broke down. E Company, II/127th’s attempt to gain a foothold against Buna Mission failed after Lieutenant William Bragg – the ‘spark plug of the whole affair’ – was wounded and the company fled.¹³⁸ Colonel John Grose, Commander Urbana Force, personally intervened to stop the rout:

...I placed myself on the trail over which I knew they would have to come, and, pistol in hand, I stopped the Lieutenant and all those following him. I directed the Lieutenant to return and he said he couldn’t. I then asked him if he knew what that meant and he said he did...I designated a sergeant nearby to take the men back and he did so. I then sent the lieutenant to the rear in arrest and under guard.¹³⁹

While outright displays of the breakdown in military order were not common, they highlighted the difficult task facing all commanders of maintaining motivation and discipline under trying conditions.

Conclusion

Unit and sub-unit commanders were presented with a number of complex problems during the beachhead operations with few obvious solutions. The primary challenges were the loss of control, lack of information, and increased importance of lower level leadership. The broader challenges of cooperation and coordination between untested allied partners was also prevalent. Some of these problems stemmed from the practicalities of jungle warfare. Others were related to technical issues and the preparation and training of the forces involved. Many of these problems

¹³⁶ Further confusion resulted from poor communications within the retreating column. Two separate orders emerged and reached the two senior officers, Lieutenant Orin Rogers, XO E Company, and Captain A.T. Bakken, OC E Company, that the company was to return to the battalion’s headquarters. Both officers tried to verify the originator of the orders and were informed they were truthful via the chain method. However, it is definite the order to withdraw did not come from Smith – it is much more likely that it originated from someone within the unit. H.A. Smith to Milner, 20 Jan 1950, Urbana Letters, RG319 E53 B4, NARA; II/128th Infantry Battalion Journal, 24-25 November 1942, 332-INF(128)-7-0.7, RG407 E427 B8062, NARA.

¹³⁷ Mott, “Memorandum,” 10 December 1942, Memorandum – Col. John W. Mott, RG319 E53 B4, NARA; H.A. Smith to Ward, 20 March 1951, Urbana Letters, RG319 E53 B4, NARA; II/128th Infantry Battalion Journal 27-28 November 1942, 332-INF(128)-7-0.7, RG407 E427 B8062, NARA.

¹³⁸ 127th Infantry Regiment Urbana Force Journal, 31 December 1942, 332-INF(127)-0.7, RG407 E427 B8015, NARA; Eichelberger to Sutherland, 31 December 1942, RG41 B1 F2, MM; Colonel John E. Grose, “Comments on the Buna-Sanananda Operation of the Papuan Campaign,” 20 March 1946, Urbana Letters, RG319 E53 B4, NARA; Grose Diary, 31 December 1942, Grose Diary-Bradley Comments, RG319 E53 B3, NARA.

¹³⁹ Eichelberger to Sutherland, 31 December 1942, RG41 B1 F2, MM; Grose, “Comments on the Buna-Sanananda Operation of the Papuan Campaign,” 20 March 1946, Urbana Letters, RG319 E53 B4, NARA; Grose Diary, 31 December 1942, Grose Diary-Bradley Comments, RG319 E53 B3, NARA.

could not be satisfactorily overcome during the operations, though expedients and practical solutions emerged. Lessons regarding leadership, command, and control were thoroughly noted by observers for future campaigns.

The fundamental problem was that jungle warfare increasingly pushed the responsibility for important decision-making to lower levels. While this issue had been anticipated in training, it had not been sufficiently addressed. It forced commanders at all levels to reassess how they controlled their forces and how they conducted battle. Commanders had to accept the loss of control and lack of contact between sub-units. They had to place themselves further forward and constantly seek information regarding the status of their forces to better exert control. Information was essential, but commanders faced a constant struggle to balance the time needed to gather intelligence against the pressure to achieve their objectives. During the early phases of the operations, commanders were denied this chance, and the lack of information about the terrain and Japanese positions hindered tactical success. Patrolling and personal reconnaissance offered the best means of remedying the lack of information, and the Allies gradually developed a fairly accurate picture of the battlefield by mid-December.

The exercise of command during the beachhead operations was complicated by environmental and tactical conditions. The early operational pressure resulted in attacks which tried to achieve too much, and the wide dispersal of forces and breakdown of tactical unity presented problems for the coordination of effort. As the fighting progressed, carefully planned attacks with limited objectives proved more successful. Coordination between Allied forces also gradually improved. Without prior experience and understanding, the integration of forces presented some challenges, particularly regarding roles and communications. However, interoperability, the goodwill demonstrated by most commanders in desperate situations enabled Australian and American forces to fight as coalition forces without great impediment.¹⁴⁰

The devolution of responsibility to lower levels placed a premium on leadership and initiative. American and Australian commanders noted serious deficiencies in this area which reflected the mixed preparations of Guard and CMF formations prior to the campaign. However, the style of leadership and methods to exert control needed for jungle warfare also increased the losses to junior leaders and potentially weakened the chain of command. Some units suffered a breakdown in cohesion and discipline as a result of poor lower-level leadership and prolonged exposure to high casualties and terrible conditions. However, unskilled aggression was not a substitute for leadership

¹⁴⁰ Brockschmidt, "The New Guinea Campaign: A New Perspective through the Use of Oral Histories"; Dean, *MacArthur's Coalition*, 184-185; Kane, "Embattled Coalition," 51-97.

and tactical knowledge. The small-unit tactics required to overcome the Japanese positions required the careful application of fire and manoeuvre, which was not always easy to achieve in the jungle.

Chapter Eight

‘A Leavenworth Nightmare’: Infantry Tactics and Techniques

It would be impossible to overstress the tenacity with which the Japs clung to their prepared positions. Grenades, and ordinary gun and mortar fire were completely ineffective. There were many instances (not isolated ones) where dugouts were grenaded inside, covered with gasoline and burned, and then sealed with dirt and sand, – only to yield, 2 or 3 days later, Japs who came out fighting.¹

**War Department
Military Intelligence Service
“Tactical and Technical Trends No. 21”
25 March 1943**

Allied infantry tactics and techniques underwent considerable adaptation as forces grappled with the difficulties of attacking prepared positions in jungle terrain. It was a ‘Leavenworth Nightmare’ which confounded conventional approaches such as concentration of force or firepower which were taught at Allied command and tactical schools. The terrain and design of the defensive system, which channelled Allied forces into heavily-defended areas, offered commanders few options.² Allied forces faced the challenge of dislocating and destroying complex and mutually supporting positions without the firepower or space to manoeuvre to achieve an advantage. Tactics – the employment and coordination of forces – and techniques – the methods used by forces to attack – had to be adapted to the conditions.

¹ War Department Military Intelligence Service, “Tactical and Technical Trends,” No. 21, 25 March 1943.

² Leavenworth was the location of the US Army Command and General Staff College for officers preparing for battalion commands or formation staff roles. Eichelberger wrote to MacArthur: ‘Some day the Leavenworth boys will get on their platform and describe a Japanese position which initially had a left flank resting on the ocean, a right flank resting on unfordable tidal streams, a rear on the ocean, and an impassable swamp across most of the front.’ Eichelberger to MacArthur, 24 December 1942, RG41 B1 F2, MM.

Typically, accounts of Allied conduct emphasise the reliance on continual and hastily-mounted deliberate frontal attacks. While these attacks did occur and their attritional effects gradually reduced the defender's capabilities, the characterisation oversimplifies the evolution and growing sophistication in small-unit tactics and techniques which occurred to overcome challenges and counter Japanese defences. Commanders gradually learned to apply doctrinal principles and tactics to the jungle as success could not be ensured by 'unskilled aggression'.³ However, adaptations were not consistent across the front, nor did they always lead to immediate success.

The Japanese defences determined Allied tactics. Positions exploited the terrain to dictate where the Allies attacked and deny them opportunities for manoeuvre. Japanese defensive doctrine emphasised surprise, discipline, and concealment, which, combined with determination to hold their positions indefinitely, made identifying and destroying the positions very difficult. These challenges were highlighted during the Allies' initial attacks, which employed conventional, deliberate large-scale penetrations or envelopments at battalion or brigade level. These attacks proved ineffective because of the lack of information, difficulties in coordinating large units, and a lack of fire support. While some envelopments were successful in establishing new positions, they were often unable to force the collapse of Japanese positions as local successes could rarely be exploited because of casualties or the lack of reserves. While these attacks inflicted considerable attrition on the Japanese, the losses incurred by Allied forces were unsustainable. These approaches led to stalemates in all sectors.

Gradually, Allied forces adapted their tactics and techniques towards small-unit patrolling, infiltration, and attacks on isolated positions. This exploited the attrition of Japanese forces but also reflected a growing appreciation for the conditions of jungle warfare and the need to adapt from deliberate attacks. These adaptations followed similar principles but demonstrated different characteristics across the front, including the 32nd Division's adoption of patrolling and infiltration, the 30th Brigade's stalk and consolidate tactics that aimed to incrementally move the Allied line forward, and the 18th Brigade's soft-spot tactics that sought to wear down the Japanese defences and exploit weak points to achieve manoeuvre. However, the effectiveness of these approaches was mixed and could not achieve decisive results. Allied forces also adapted techniques to counter Japanese tendencies and refine procedures. Addressing the threats of Japanese snipers and attacking strongpoints with small arms represented major adaptations of the Allied forces. By the conclusion of the operations, Allied tactics and techniques demonstrated the increasing importance of sophisticated small-unit tactics to achieve success in jungle warfare.

³ Porter, "Fitness for War – 55/53 Aust Inf Bn and 36 Aust Inf Bn," 22 December 1942, AWM54 581/7/18, AWM.

'Backwardness and Ingenuity': The Japanese on the Defensive in Papua

The Japanese defences dictated Allied unit and sub-unit tactics and techniques by exploiting terrain to deny the Allies a battlefield of their choosing or the ability to manoeuvre. The dense jungles, impassable swamps, and channelised approaches overwhelmingly favoured the defender. Japanese forces, assisted by a large contingent of engineering and labour units, had commenced fortifying the beachheads during September.⁴ When the Allies arrived in mid-November they met a labyrinthine network of strongly constructed, well-concealed, and mutually supporting positions. An USAGF Observer noted that while it seemed 'logical' for the Japanese to have prepared defensive positions, the prospect was seldom discussed. The perception of the Japanese as an attacker, combined with the general over-confidence and belief the beachheads were lightly defended, led to a gross underestimation of the Japanese defensive preparations.⁵

The Japanese garrison adopted a static defence and held their positions with grim determination. Their defence demonstrated a 'curious mix of backwardness and ingenuity' which frustrated Allied forces.⁶ The Allies anticipated Japanese defensive operations would rely on aggressive counterattacks rather than the construction of elaborate fortifications as the defensive was considered antithetical to the spirit of the Japanese army.⁷ Japanese doctrine acknowledged the material superiority of the Allied forces, but it placed great significance in the moral strength of the Japanese soldier to persevere under severe conditions.⁸ After IGHQ demanded the beachheads be held indefinitely pending reinforcements, Colonel Yosuke Yokoyama, temporary commander of the beachheads garrison, ordered: 'it is not permissible to retreat even a step from each unit's original defensive position. I demand that each man fights until the last'.⁹ Captured diaries indicate most Japanese soldiers accepted these orders unquestioningly. This meant every position had to be assaulted and cleared.

⁴ The South Seas Force was ordered on 23 September to 'adjust the front line in the area of South Seas Force operations to strengthen the defences at Buna...to this end, a force based on the main strength of the 41st Infantry Regiment will be immediately deployed to Buna to resist any planned Allied landings and to secure the area around the airfield'. See Bullard, *Japanese Army Operations*, 133-134, 142, 157-159.

⁵ Handy, "Report of Military Observer in the Southwest Pacific Theater of Operations," 2 January 1943, #5, RG337 E15A B51, NARA.

⁶ Douglas Ford, "US Assessments of Japanese Ground Warfare Tactics and the Army's Campaigns in the Pacific Theatres, 1943-1945: Lessons Learned and Methods Applied," *War in History* 16 no.3 (2009): 327.

⁷ War Department, *Technical Manual TM-E 30-480: Handbook on Japanese Military Force* (Washington DC: War Department, 1942), 120-126.

⁸ Ford, "US Assessments of Japanese Ground Warfare Tactics," 329.

⁹ "Yokoyama Force Orders," ATIS Bulletin #47, AWM55 1/1, AWM.

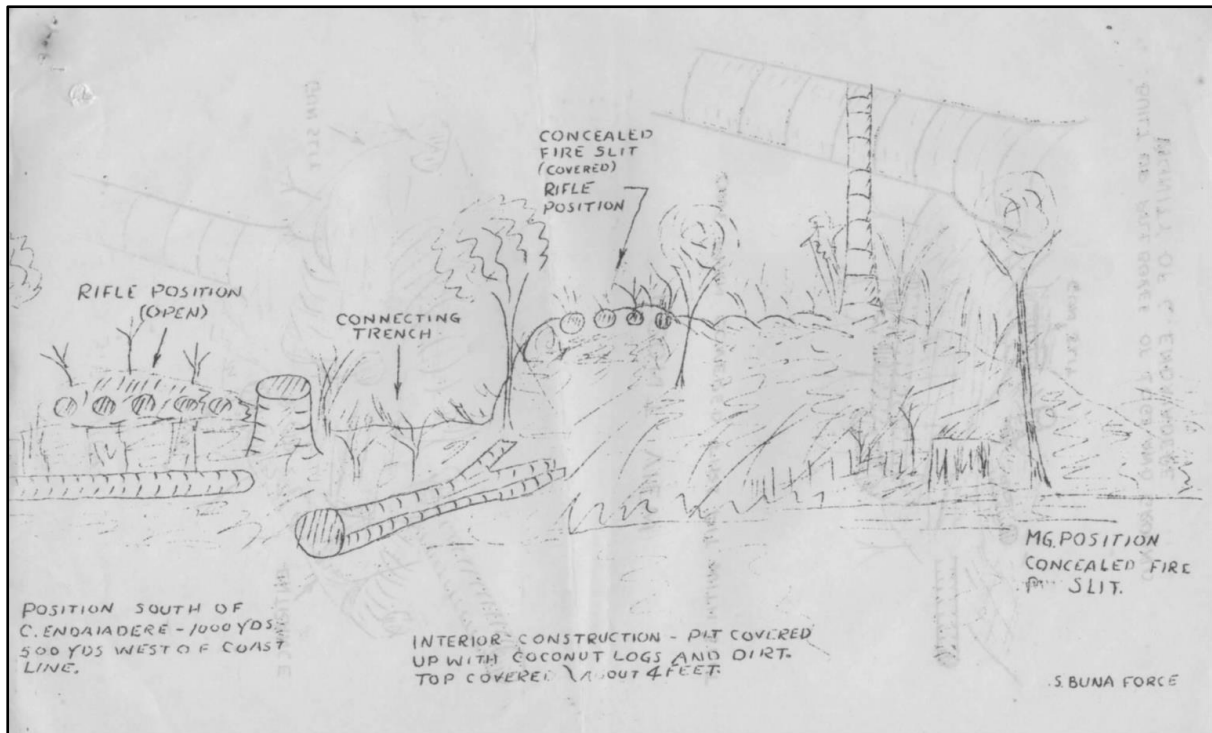


Figure 8.1: Sketch of Japanese Defensive Positions at Buna.¹⁰

The beachhead defences were the first ‘highly organised’ defensive positions encountered in the Pacific.¹¹ Japanese doctrine stressed the importance of adapting defensive positions to suit terrain and conditions. Doctrine advised not to ‘adhere blindly to set forms in construction work, but to adapt such work to fit the tactical situation’.¹² “Outline on Defence” provided the basic parameters for the beachheads’ defences.¹³ Concealment from observation and all-around protection from attacks were emphasised, as well as strict fire discipline which allowed the enemy to approach as closely as possible before firing.¹⁴ Defences were organised in circular supporting patterns at unit and sub-unit levels to permit continuous rotation against enemy attacks and to incorporate all types of supporting weapons. Local materials were used to build obstacles and defensive positions with overhead cover to ensure concealment and protection. Japanese defenders constructed several types of positions with local variations based on terrain and materials. These included dugouts to shelter from bombardment, covered fighting positions with multiple firing ports and protected entrances, and smaller supporting weapons pits connected by slit trenches. Positions

¹⁰ From: Buna Forces, “Memo,” 24 December 1942, AWM52 8/2/18/32, AWM.

¹¹ War Department Military Intelligence Service, *Intelligence Bulletin* 1 no.7 (March 1943): 30.

¹² War Department, *Technical Manual TM-E 30-480: Handbook on Japanese Military Forces* (Washington DC: War Department, 1944), 166.

¹³ “Outline on Defence”, 1 September 1942, cited in War Department Military Intelligence Service, *Intelligence Bulletin* 1 no.6 (February 1943): 13.

¹⁴ “Outline on Defence”, 1 September 1942, cited in War Department Military Intelligence Service, *Intelligence Bulletin* 1 no.6 (February 1943): 13.

were sited close together and echeloned in depth to provide mutual support and enfilade potential approaches. Each small system was supported by observers and snipers in nearby trees. All were well-concealed by natural vegetation or camouflaged. Decoy cover was built to lure advancing forces into areas enfiladed by other positions. Deceptions like decoy positions and dummy soldiers were also incorporated into the defensive systems.¹⁵

The Allies' previous experiences against the Japanese in defence on the Kokoda Trail gave a limited indication of what would occur at the beachheads.¹⁶ The Australians had encountered few prepared positions, but their siting had been impressive. The 16th Brigade observed the Japanese had 'foresight and training' in the selection of defensive positions, while the 3rd Battalion noted Japanese forces demonstrated a 'remarkable aptitude for field engineering and never [seem] to tire at the task of improving...earth works'.¹⁷ The Australians encountered more organised positions including timber bunkers at Templeton's Crossing, Eora Creek, and Oivi-Gorari.¹⁸ However, many of these positions could be out-maneuvred and in most cases the occupants withdrew from positions when outflanked, though some Japanese soldiers 'seemed content to sit and wait for destruction'.¹⁹ These encounters did not represent accurately the complexity of the positions nor the tenacity that characterised the Japanese defence of the beachheads.

Japanese defensive techniques were intended to deprive Allied attacks of momentum, inflict heavy casualties, and cause confusion. The Japanese garrison possessed a high proportion of automatic weapons which were sited 'offensively' to inflict maximum casualties and disrupt attacking forces rather than simply protect an area.²⁰ Connected, mutually-supporting positions enabled a highly flexible defence and permitted men and weapons to relocate quickly to meet advances from any direction. Even when patrolling identified Japanese defences, the defenders' ability to use alternate positions made 'basing...an attack on information gained from patrols...a risky business'.²¹ Treetop snipers also presented a major problem for the Allies. Snipers were a constant threat and worked in tandem with automatic weapons teams to spot targets or force attacking

¹⁵ "Outline on Defence", 1 September 1942, cited in War Department Military Intelligence Service, *Intelligence Bulletin* 1 no.6 (February 1943): 13.

¹⁶ The Japanese fought defensive engagements at Templeton's Crossing, Eora Creek, and Oivi-Gorari during the SSF's withdrawal during October-November.

¹⁷ Cameron, "Notes on New Guinea Fighting," 29 December 1942, AWM54 577/7/29 [16], AWM; 16th Infantry Brigade, "Report on Operations in New Guinea: 16 Aust Inf Bde," 28 December 1942, AWM54 577/7/29 [15], AWM.

¹⁸ Collie and Marutani, *Path of Infinite Sorrow*, 161.

¹⁹ Buckler, "Ops Report by Capt S.H. Buckler, 2/14 Aust Inf Bn Att 126 Regt USF," 12 October 1942, AWM54 577/7/20, AWM; 25th Infantry Brigade, "Some Notes on the New Guinea Campaign," AWM54 577/7/31, AWM.

²⁰ Cameron, "Notes on New Guinea Fighting," 29 December 1942, AWM54 577/7/29 [16], AWM.

²¹ 30th Infantry Brigade War Diary, 12 December 1942, AWM52 8/2/30/9, AWM.

troops to ground. Observation meant that machinegun positions did not need clear fields of fire.²²

The nature of the Japanese defensive systems meant attacking troops had to neutralise all elements of the defence and multiple positions to secure an area.

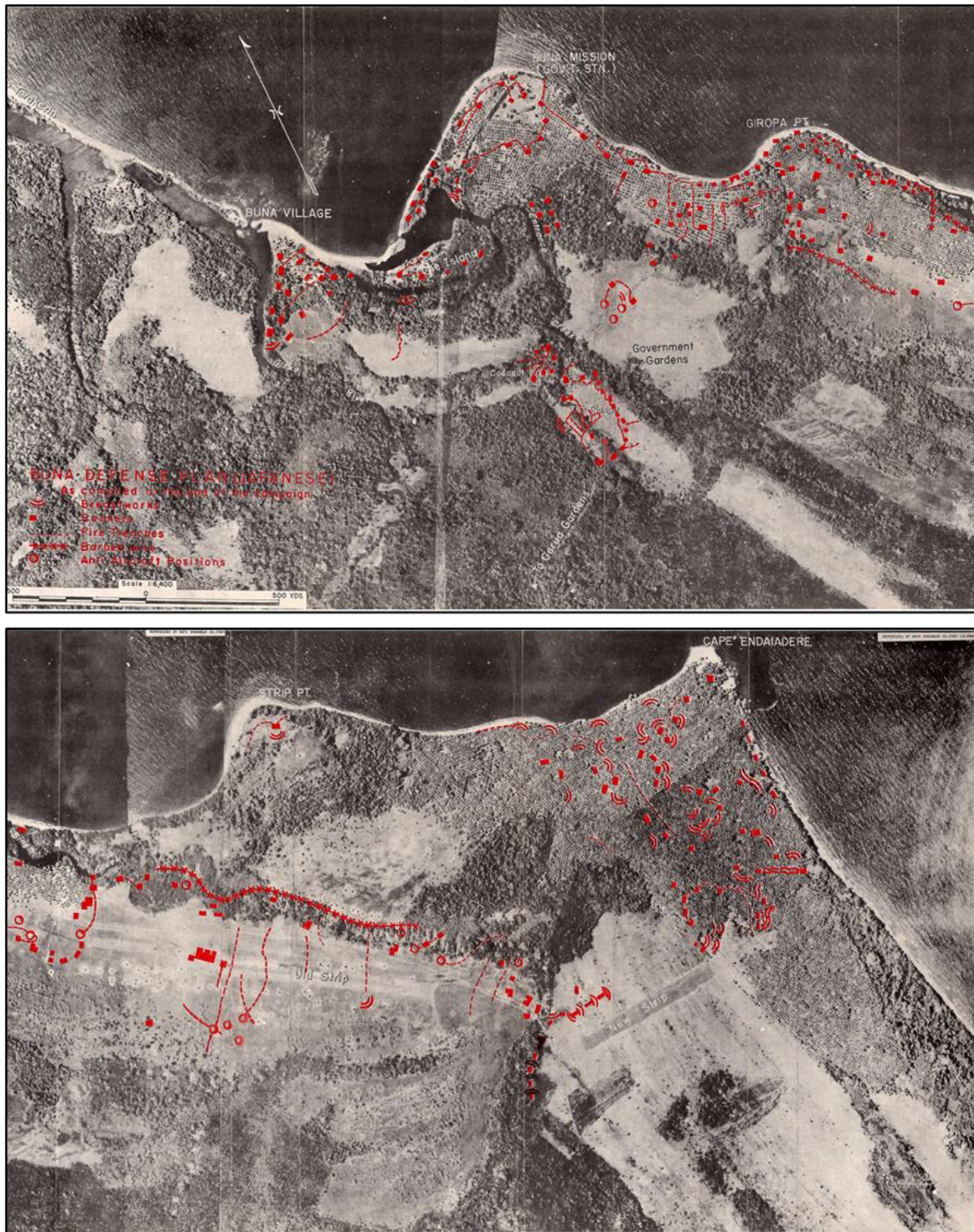


Figure 8.2: Photomap of Japanese Defences, Urbana (Top) and Warren (Bottom) Sectors.²³

²² "Report of the Commanding General Buna Forces," Annex #3 G-3 Report, 65.

The Japanese defenders maximised surprise by employing careful fire discipline, unpredictability, and deception. Its effects were most pronounced against the inexperienced American and CMF forces. Many positions were not discovered until they fired on the attacking troops. The defenders held fire until the last moment, waiting until a proportion of the attacking force had passed to cut its line of retreat, or fired on it from behind. Snipers also acted erratically, letting some troops pass while firing on others. This proved 'disconcerting' to Allied troops.²⁴ Defenders frequently feigned death or remained hidden until infantry had passed and then opened fire.²⁵ Ruses to confuse or disorientate were particularly successful against inexperienced troops who were not acclimated to the jungle. An USAGF observer with the American forces noted Japanese anti-morale tactics were 'true to form' and very effective.²⁶ The III/128th reported its attack against the Simemi Creek bridge breaking down after the Japanese used firecrackers to make it 'think there were machinegun nests, on all sides'.²⁷ Sound could be especially effective because jungles and swamps had a distorting effect which made direction and distance difficult to gauge. The characteristics of Japanese munitions also made it difficult to identify the sources of fire; the Japanese .25 calibre round was smokeless and had a high muzzle velocity which produced a deceptive 'crack' which made it difficult to follow.²⁸ Identifying the characteristics of the Japanese defences and techniques eventually enabled the Allies to develop appropriate responses.

'Smashed in a Short Space of Time': Deliberate Frontal Attacks at Buna, Gona and Sanananda

The attacks in Warren Sector and Gona between 21 November and 5 December and the 30th Brigade's attack against the Killerton Junction on 7 December demonstrated the difficulties of making battalion-scale frontal assaults intended to penetrate the Japanese lines. While frontal penetrations enabled the Allies to concentrate force, the limited information about Japanese strengths and the dispersing effect of jungle terrain rarely permitted attacks to strike decisively. Combined with the difficulty of coordinating units, lack of fire support, and either lack of strength or inexperience, these attacks failed to achieve their objectives. Warren Force's first attacks were shocked by the heavy resistance from strong, concealed defences. Battalions attacked in columns of

²³ From: "Report of the Commanding General Buna Forces".

²⁴ Eichelberger, *Jungle Road*, 53.

²⁵ The Australians termed this ruse "lying doggo" while the Americans used the phrase "playing possum".

²⁶ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

²⁷ III/128th Infantry Battalion Journal, 21 November 1942, 332-INF(128)-7-0.7, RG407 E427 B8065, NARA.

²⁸ Cameron, "Notes on New Guinea Fighting," 29 December 1942, AWM54 577/7/29 [16], AWM.

companies – which was suitable for narrow frontages and retaining control – but it was difficult for units to deploy and bring fire to the fore.²⁹ The attacking infantry could not locate the Japanese:

...[contact] was a surprise and shock to our green troops. The enemy positions were amazingly well camouflaged, and seemed to have excellent fields of fire, even in the close quarters of the jungle – they have been sited to take advantage of any natural alleyways through the jungle...Our troops were pinned down everywhere by extremely effective fire.³⁰

Neither the infantry nor air or artillery support could generate the weight of fire necessary to neutralise enemy positions and enable manoeuvre.

Generating firepower was hindered by American commanders' difficulties with deploying their organic supporting weapons in jungle conditions. For the first weeks at Buna, weapons sub-units were kept in reserve because they lacked their weapons and ammunition, and because commanders could not figure out how to use them.³¹ "Red" Smith noted heavy weapons companies were frequently broken down and reassigned as rifleman because they 'could not use the Heavy Weapons Company as the Infantry School then taught'.³² In conventional terrain, machineguns were positioned on a flank and assigned zones or lines of fire to support rifle companies. However, the lack of observation in dense terrain and the inability to find a flank challenged their use. Mortars were similarly affected by difficulties with observation and control. Thus, the early American advances were hampered by the lack of organic and supporting fire needed to enable penetration attacks.

The 30th Brigade's attack against the Killerton junction also demonstrated the limited viability of deliberate frontal attacks without adequate information and fire support. The brigade was tasked with breaking through to Huggins Roadblock but the information about the defences was 'neither accurate nor complete'.³³ There was little finesse in the plan of attack: its two battalions would attack sequentially parallel to the main track with a 'big white tree' serving as the only landmark.³⁴ Only one battalion could attack at a time while the other performed a fire demonstration as there was no reserve.³⁵ Limited fire support was provided by four 25-pdrs and mortars. The attack suffered from a loss of control and direction. The leading platoons deployed in

²⁹ *FM7-20: Infantry Rifle Battalion 1942*, 69.

³⁰ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

³¹ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

³² *FM7-20: Infantry Rifle Battalion 1942* permitted the attachment of weapons sub-units to attacking echelons when terrain made control 'extremely difficult'. However, from Smith's experiences, it appears that this was not often considered. *FM7-20: Infantry Rifle Battalion 1942*, 132; Major Herbert M. Smith, CO II/126th Infantry Battalion, to Ward, "Comments on Draft Victory in Papua," 9 March 1951, Interviews, RG319 E53 B5, NARA.

³³ 30th Infantry Brigade War Diary, General - December 1942, AWM52 8/2/30/9, AWM.

³⁴ The 49th Battalion was deployed to the east on the right side of the track, while the 55/53rd Battalion was deployed to the west on the left side of the track. 55/53rd Infantry Battalion, "Verbal Orders Issued by CO 55/53 Bn at 1435hrs, 7 December 42," 7 December 1942, Appendix #2, AWM52 8/3/91/8, AWM.

³⁵ 30th Infantry Brigade War Diary, 7 December 1942, AWM52 8/2/30/9, AWM.

extended skirmish formation, but the terrain disrupted cohesion and made moving in a straight line problematic.³⁶ Subsequently, they became separated from their supporting platoons, which allowed the Japanese to reoccupy the intervening positions, causing heavy casualties through enfilading fire, and breaking contact between them.³⁷ The 55/53rd battalion diary noted:

Had C Company maintained direction and crossed to the left of the track as instructed it is felt that A Company would not have been held up by enfilade fire from that direction as the enemy would have been forced to concentrate their fire on C Company troops.³⁸

Rapid casualties meant '[companies and platoons] were shattered in a short space of time'.³⁹

Porter's subsequent appreciation of the situation concluded that frontal attacks were impractical.⁴⁰

This heralded a transition toward stalk and consolidate tactics and reflected the broader trend among Allied forces towards patrolling, infiltration, and the use of concentrated fire support to eliminate isolated positions.

Frontal attacks were the only viable tactics at Gona given the area's condensed depth and limited approaches from the south and east. Unbeknownst to Brigadier Kenneth Eather, Commander 25th Brigade, the Japanese garrison was the equivalent strength of the attacking force. After initial patrolling established Gona was strongly held, the brigade launched its main attack from the east on 22 November with a supporting thrust along the track from the south. These attacks were made with minimal fire support and over narrow frontages which forced companies into bunched frontal attacks.⁴¹ When the 21st Brigade arrived it persisted with attacking from the east despite the open ground in front of the defences and their density.⁴² Attacks were consistently met by intense enfilading fire from positions protecting the south-east edge of the village and along the beach. The use of battle drills which involved the immediate deployment of sub-units to the flanks after contact had been effective on the Kokoda Trail where units could manoeuvre around the enemy but proved

³⁶ Sergeant William A. Elliot, 55/53rd Infantry Battalion, S00585, KMSA.

³⁷ 30th Infantry Brigade War Diary, 7 December 1942, AWM52 8/2/30/9, AWM; 49th Infantry Battalion War Diary, 7 December 1942, AWM52 8/3/88/7, AWM.

³⁸ 55/53rd Infantry Battalion War Diary, 7 December 1942, AWM52 8/3/91/7, AWM; 55/53rd Infantry Battalion, "Verbal Orders Issued by CO 55/53 Bn at 1435hrs, 7 December 42," 7 December 1942, Appendix #2, AWM52 8/3/91/8, AWM.

³⁹ Lieutenant Alexander Bell, 55/53rd Infantry Battalion, S00707, KMSA.

⁴⁰ Porter attributed the high casualties to the lack of information and well-concealed positions which broke-up the cohesion of advancing units, though he was well aware of the overall training deficiencies of the CMF battalions under his command. 30th Infantry Brigade War Diary, 7 December 1942, AWM52 8/2/30/9, AWM.

⁴¹ The 2/31st Battalion War Diary states: 'It was decided to have 4 Coys to crawl into kunai for frontal attack, C Coy to guard left flank resting on swamp and D Coy to guard rear from attack from direction of Buna...each man on rising was to move half right in order to allow A and E Coys to secure some front as they had been unable to get into the kunai patch'. The 2/31st Battalion suffered 65 casualties attacking this area on 22 November. The next day, the 2/25th suffered 64 casualties attacking the same positions. 2/31st Infantry Battalion War Diary, 22 November 1942, AWM52 8/3/31/11, AWM.

⁴² The 21st Brigade suffered 138 casualties within the first two days of action at Gona, similar to the losses of the 25th Brigade in its first major attacks.

costly against undiscovered positions.⁴³ Between 1-6 December the Australians made several small local gains but could not exploit or consolidate the ground due to heavy casualties. However, the attrition of the defenders by these attacks had also been considerable. While the Australians could not sustain such attacks, they did create the conditions in which a move to small-unit actions based on reconnaissance, limited objectives, and the exploitation of terrain features by the 39th Battalion could be successful. However, the battalion's success also counted on close combined arms coordination.

'By Themselves...Not Sufficient': Envelopment Attacks at Sanananda

Envelopments were the other early method of attacking the Japanese defences. While Gona and Buna offered little room for manoeuvre, the concentration of defences along the Sanananda-Soputa road provided opportunities if Allied forces could move through the deep swamps which bounded the area to achieve surprise and cut-off Japanese positions, echoing lessons from Malaya and the Kokoda Trail where tracks and roads were the dominant tactical features. The battle at Sanananda evolved into a continuous effort to disrupt the Japanese positions by establishing successive roadblocks and staging attacks to link up with these positions. The 2/1st Battalion's envelopment of the forward Japanese defences led by Captain Basil Catterns on 20-21 November and the 126th Regiment's attack which established Huggins Roadblock on 30 November highlighted the challenges of conducting these attacks.

Envelopments were contingent upon troops achieving surprise by moving through difficult terrain which the Japanese deemed unnavigable. The 2/1st Battalion and III/126th both traversed deep swamps and dense jungles to move into positions from which to attack. The 2/1st Battalion's CO, Lieutenant-Colonel Paul Cullen, convinced the brigade's commander of the desirability of a flanking attack instead of a frontal attack due to the strength of the Japanese forward positions.⁴⁴ The battalion drew on previous experiences and resolved to outflank the Japanese to '[get] the Japs to withdraw, which they usually did when hit hard in the rear'.⁴⁵ However, envelopments had to develop width and depth to strike at vulnerable points behind the Japanese lines, which took time and exhausted attacking units. By the time the 2/1st Battalion's attack started at dusk, the troops were already exhausted by the gruelling approach march. However, they had pushed 2.5km behind

⁴³ Pratten, *Battalion Commanders*, 183.

⁴⁴ This was not the first time in the campaign where Lloyd had favoured a frontal attack on a prepared position. At Eora Creek, Lloyd insisted on using the 2/1st and 2/3rd in attacks on strong Japanese positions despite both COs' protests and Cullen's urging to develop a flanking movement that had already begun. Cullen cited in Pratten, *Battalion Commanders*, 186; 2/1st Infantry Battalion, "Narrative of New Guinea Campaign," AWM52 8/3/1/27, AWM.

⁴⁵ 2/1st Infantry Battalion, "Narrative of New Guinea Campaign," AWM52 8/3/1/27, AWM.

the southernmost defences and achieved complete surprise. The attack came from a direction the Japanese had failed to fortify and were using as a bivouac area.⁴⁶ In contrast, the III/126th's manoeuvre, which began on 22 November, took almost a week to develop.⁴⁷ By 25 November, Tomlinson's ambitious attack had only progressed 1.2km north of their starting point and 1km east of the Killerton Track. Progress was slowed by deep swamps, sub-units losing direction and cohesion, and continual skirmishes.⁴⁸ The first attack on 26 November failed to gain more than a few hundred metres after several hours of 'indecisive fighting'.⁴⁹ The success of the next attack on 30 November can be attributed to the initiative and leadership of sub-unit commanders who led two companies in a vigorous bayonet charge which caught the Japanese off-guard.⁵⁰

Envelopments and the establishment of blocking positions carried great risks given the paucity of knowledge about the Japanese defences and the lack of available forces to hold them. While the two attacks were successful in establishing roadblocks within the Japanese defences, the situations quickly escalated and these positions risked being cut-off and overwhelmed. Catterns' attack inadvertently struck the centre of the main Killerton Junction defences.⁵¹ The two under-strength companies which made the attack suffered almost 50% casualties.⁵² While it forced the withdrawal of some Japanese screening positions, its lines of communication were easily cut. The

⁴⁶ 2/1st Infantry Battalion, Untitled Note (127), AWM52 8/3/1/29, AWM; 2/1st Infantry Battalion, "Narrative of New Guinea Campaign," AWM52 8/3/1/27, AWM.

⁴⁷ The 126th Regiment proposed to attack in a larger "V" formation; the reinforced III/126th for the envelopment, Boerem's detachment of the I/126th along the track, and the II/126th in reserve to exploit any successes. However, the reallocation of the II/126th to Buna deprived Tomlinson of his reserve force and left the Regiment at about half-strength. Tomlinson stuck with the initial plan but this substantially weakened the enveloping force to company-strength units, though they were reinforced by extra machine guns and mortars stripped from units in the supporting attacks. 126th Infantry Regiment Journal, #23 21 November 1942, 332-INF(126)-0.7, RG407 E427 B8001, NARA; Tomlinson to Milner, 28 November 1950, Soputa-Sanananda Letters, RG319 E53 B5, NARA.

⁴⁸ The 126th Regiment's journal frequently noted that squads from I and K Company were 'missing', 'not reported' or 'out of contact' during the period 22-25 November. 126th Infantry Regiment Journal, 22-25 November 1942, 332-INF(126)-0.7, RG407 E427 B8001, NARA

⁴⁹ I/126th Infantry Battalion Journal – Major Boerem Force Sanananda-Soputa Operations, 25-26 November 1942, 332-INF(126)-7-0.7, RG407 E427 B8010, NARA; Zeeff to Milner, 25 October 1950, Soputa-Sanananda Letters, RG319 E53 B5, NARA.

⁵⁰ Shirley attacked deploying his company in a two-up one-back or "V" formation, which was typically the opposite of the Australian formation for jungle fighting. This allowed it to deploy more fire to its front, but presented less opportunities to flank with the supporting platoon.

⁵¹ Catterns quickly realised: '...the enormity of the situation...for the first time...all the signal lines laying on the road, it would have been a dozen of them...I knew then that what I'd stumble-bummed onto was a big event'. Captain Basil Catterns, 2/1st Infantry Battalion, #1505, AAWFA; 2/1st Infantry Battalion, "Narrative of New Guinea Campaign," AWM52 8/3/1/27, AWM.

⁵² Catterns' force numbered just 90 men. Catterns, #1505, AAWFA; 2/1st Infantry Battalion, "Narrative of New Guinea Campaign," AWM52 8/3/1/27, AWM; 2/1st Infantry Battalion War Diary, 20 November 1942, AWM52 8/3/1/29, AWM.

position proved untenable and had to be ceded back to the Japanese.⁵³ The battalion diarist recorded:

It must be considered whether a [battalion-sized force as proposed by Cullen]...had been sent in place of Catterns' ninety men, it might not have succeeded in permanently establishing its position in the area, and thus have forced a further Japanese withdrawal to less well prepared positions.⁵⁴

This squandered a significant early tactical advantage, as 'had a greater knowledge of Catterns' position been realised, his salient would doubtless have been held, but at this time the decision [to withdraw] appeared to be a wise one'.⁵⁵ The establishment of Huggins Roadblock shared similar difficulties. The 126th Regiment only knew the defences formed an inverted "V" around the Junction, but had no knowledge of the secondary positions just north of where the roadblock was established.⁵⁶ Two reinforced companies clung desperately to defend an exposed 250m perimeter from constant counterattacks, but lacked the strength to attack from it.⁵⁷ These roadblocks presented potential tactical liabilities because they initially lacked sufficient strength to achieve a decisive result, nor had the strength to exploit the gains to greater advantage.

Linking with these roadblocks presented another major challenge. Linking required forces to breakthrough the Killerton Junction defences to reach the roadblocks, weakening the surrounding positions, or manoeuvring through the same difficult terrain. The 16th Brigade's attempts to link with Catterns' group via frontal attacks were unsuccessful because it lacked sufficient strength, but these efforts drew Japanese attention away from the eastern flank which allowed the 2/2nd Battalion to make substantial gains. Plans to link with the Huggins Roadblock also proved impractical because of the inability to weaken the Japanese defences. The 126th Regiment intended to reinforce the roadblock but the dire conditions at Huggins and the failure of supporting attacks by the 126th Regiment and the 30th Brigade on 5 and 7 December to penetrate the junction's defences along the road made it difficult to sustain.

The difficulty of maintaining roadblock positions also limited their potential value. The roadblocks were isolated and constantly risked being cut-off. The lines of communication and supply to these positions traversed swamps and jungle and could be readily intercepted by Japanese patrols. During the 2/1st Battalion's attack, Catterns' group remained out of contact with battalion headquarters for almost 24 hours, during which time it expended most of its ammunition. A supply

⁵³ 2/1st Infantry Battalion, "Narrative of New Guinea Campaign," AWM52 8/3/1/27, AWM; 2/1st Infantry Battalion War Diary, 21 November 1942, AWM52 8/3/1/29, AWM.

⁵⁴ 2/1st Infantry Battalion, "Narrative of New Guinea Campaign," AWM52 8/3/1/27, AWM.

⁵⁵ 2/1st Infantry Battalion, "Narrative of New Guinea Campaign," AWM52 8/3/1/27, AWM.

⁵⁶ Tomlinson to Milner, 28 November 1950, Soputa-Sanananda Letters, RG319 E53 B5, NARA.

⁵⁷ The force which held Huggins was initially composed of I Company, the Antitank Company, a machinegun section of M Company, and a signals detachment. Milner, *Victory in Papua*, 219.

party later reached the position, but 'owing to faulty communications...it was not realised how serious' the situation was.⁵⁸ Maintaining Huggins proved even more difficult as its supply line wound through Japanese positions to the west of the junction. Supply parties were frequently ambushed enroute.⁵⁹ By 10 December, the strength of the Huggins garrison had been greatly reduced. Huggins' wireless communications with the rest of the unit were unreliable and the Japanese frequently cut or tapped telephone lines, leaving the out of contact for three or four days at a time.⁶⁰ These factors meant more effort was spent trying to maintain and defend the roadblock rather than using it offensively.

Envelopments alone were not enough to destroy Japanese positions, but they became a key feature of the tactical approach at Sanananda. Adv NGF noted:

Experience has shown that encircling movements by themselves are NOT sufficient but that their object should be to gain a favourable position from which to attack the enemy. They should be based on a secure [line of communication].⁶¹

Gradually, as more troops and supplies became available in late December Huggins was consolidated and used as a staging point for the 2/7th Cavalry to establish another roadblock further north.⁶² However, information about positions beyond Huggins was still sparse. The attack ran into strong positions and heavy ambushes which dispersed the unit, but an exhausted and depleted element managed to establish James Roadblock 300m north-east of Huggins, in front of the Japanese Central Sector defences.⁶³ Successive roadblocks allowed pockets of Japanese resistance to be isolated and systematically destroyed, but strong positions remained between the Allied lines and Huggins, between Huggins and James, and north of James itself. When the 163rd Regiment arrived, it replicated this approach by establishing further roadblocks and perimeters around Japanese resistance it encountered on its drive north along the Sanananda Road.

⁵⁸ The Japanese cut the phone lines at approximately 1530, 21 November 1942. 2/1st Infantry Battalion, "Narrative of New Guinea Campaign," AWM52 8/3/1/27, AWM; 2/1st Infantry Battalion War Diary, 20-21 November 1942, AWM52 8/3/1/29, AWM.

⁵⁹ First-Lieutenant Peter Dal Ponte, OC 126th Service Company, led a 60-strong ration party on 5 December which met a heavy ambush west of the roadblock. The party, mostly support troops who were encumbered by supplies, managed to repel the ambush and almost reached Huggins but had to withdraw when it seemed they would be enveloped by another Japanese party. III/126th Infantry Battalion Journal, #1 5 December 1942, 332-INF(126)-7-0.7, RG407 E427 B8010, NARA; Dal Ponte to Milner, 12 July 1950, Soputa-Sanananda Letters, RG319 E53 B5, NARA.

⁶⁰ Milner, *Victory in Papua*, 225.

⁶¹ Adv NGF, "NGF Op Instn No.57," 29 December 1942, AWM54 581/4/5, AWM.

⁶² 7th Division, "7 Aust Div OI No. 19," 17 December 1942, Appendix B, AWM52 1/5/14/38, AWM; 2/7th Divisional Cavalry Regiment War Diary, 16-18 December 1942, AWM52 2/2/8/16, AWM.

⁶³ Huggins Roadblock was renamed Musket and James Roadblock renamed Fisk by the time the 163rd Infantry Regiment arrived in January 1943. 2/7th Divisional Cavalry Regiment War Diary, 19 December 1942, AWM52 2/2/8/16, AWM.

'No Easy Way of Avoiding Hard Fighting': Infiltration, Stalk and Consolidate, and Soft-Spot Tactics

As Allied commanders realised large-scale deliberate attacks had little prospect of success without adequate information and fire support, there was a distinct shift towards aggressive patrolling and small-unit infiltration tactics. This allowed Japanese positions to be identified, isolated, and destroyed on a smaller scale. The 2/6th Independent Company had demonstrated the value of infiltration in support of Warren Force by dominating no-man's land, establishing observation posts close to or behind the Japanese lines, reporting Japanese activities to artillery, and interdicting the rear areas.⁶⁴ However, observers with the Americans concluded that none of the troops initially possessed the requisite training, initiative, and tactical skill for this action.⁶⁵ The 2/6th Independent Company noted American units' efforts to infiltrate Japanese positions near New Strip were 'not very successful' and only managed to advance several hundred metres in four days.⁶⁶

The skills and initiative developed through patrolling were fundamental to conducting infiltration tactics. However, the reluctance of senior commanders like Harding and Hale to embrace small-unit actions precluded this development. Subsequently, I Corps officers instituted a rigorous patrolling policy to serve as both reconnaissance and training.⁶⁷ Companies were ordered to send out nightly short-range patrols with a limited objective close to the American lines.⁶⁸ Patrols deemed ineffective were sent out again the next night.⁶⁹ While there were initially widespread issues with compliance, rigid enforcement by senior officers saw the capabilities of patrols, quality of information, and personnels' confidence improve.⁷⁰

Allied forces found that smaller patrols were better suited to the beachheads rather than large fighting patrols which had been employed on the Kokoda Trail. The 2/6th Independent

⁶⁴ The unit had been trained in irregular warfare to operate independently on long range reconnaissance missions, though it was never permitted to function as intended by Warren Force. For a detailed account of the 2/6th Independent Companies' activities see Gregory Blake, "The Australian Army's Independent Companies and Commandos, 1940-1945," (PhD diss., University of New South Wales, 2019), 137-157; Major Harry Harcourt, Officer Commanding 2/6th Independent Company, "General Report on Lessons Learnt and Equipment with and Indep Coy in NG," 24 February 1943, AWM54 519/17/14A, AWM.

⁶⁵ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

⁶⁶ 2/6th Independent Company War Diary, 22-26 November, AWM52 25/3/6/4, AWM.

⁶⁷ Eichelberger, *Jungle Road*, 26-27.

⁶⁸ Buna Forces, 'Memorandum: Night Patrolling', 12 December 1942, 332INF(128)-0.3, RG407 E427 B8039, NARA.

⁶⁹ Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA.

⁷⁰ The first long-range patrols failed to achieve their objectives. The next patrol was briefed on the failings of the prior attempts and given a summary of Elbert Hubbard's "A Message to Garcia." Hubbard's essay described a fictional tale about a messenger tasked with delivering a message to the leader of a Cuban insurgent group during the Spanish-American War. Hubbard's main themes were initiative, resilience, and conscientiousness. The phrase 'carry a message to Garcia' was often used to indicate taking initiative during a difficult task. The patrol stayed out for two days and brought back much useful information about Japanese defensive positions. "Report of the Commanding General Buna Forces," 54-55; Martin to Ward, 6 March 1951, Interviews, RG319 E53 B5, NARA.

Company devised a formation for a section-sized patrol which balanced firepower, mobility, and control (Figure 8.3). The Americans opted for even smaller patrols for close reconnaissance. This was ideally conducted by three to five or six to eight men in squad column. At least one-third of the patrol was armed with automatic weapons.⁷¹ This highlighted the preference for small groups with a high proportion of firepower for close and sudden engagements. The preference for smaller patrol groups was in line with USMC experiences in the Solomons.⁷²

Role	Weapon	Distance to Next Man
Point Man	TSMG	15-20m
Point Follower	TSMG	20-30m
3x Patrolmen and OC	2 TSMG, 2 Rifles	15-20m
3x Patrolmen	2 Rifles & Rifle Grenade	20-30m
Getaway Man (NCO)	Rifle and TSMG	-

Figure 8.3: Patrol Organisation, 2/6th Independent Company.⁷³

Gradually, the Americans began to adopt small-unit infiltration and reconnaissance-by-fire advances across the Buna front. Platoons proved ineffective as the primary fire and manoeuvre elements because they could not maintain cohesion or communicate easily.⁷⁴ Tactical success depended on devolution to smaller sub-units and closer coordination with organic fire support:

Our tactics were initially bad; however, they went through a rapid evolution...Our troops at first attempted to advance in mass formation, utilising cover, with disastrous results. They changed to efforts to move by squad rushes or squad advances, with similar results. After a week of fighting, the method finally evolved was that of a small group patrol advance: in each squad or platoon, three men were sent forward, crawling through the grass, the rest of the unit observing their movement closely. As soon as the 3-man patrol was fired upon, the rest of the unit concentrated fire on the enemy positions from which the fire came.⁷⁵

⁷¹ Observer Team II, "Jungle Warfare Part V – Jungle Tactics," 27 April 1943, USAGF Report #11, RG337 E15A B51, NARA.

⁷² Brigadier General Frayne Baker, 32nd Division Rear Echelon commander, corresponded with the USMC for information about American patrolling in the Solomons. The USMC reported smaller patrols (2-4) men led by battalion or regimental intelligence officers were most effective. They would stay out overnight and return the next afternoon. Brigadier General Frayne Baker, 32nd Infantry Division, "Memorandum: Scouting and Patrolling Tactics," 16 December 1942, 384 Operations Reports, RG338 E339 B288, NARA.

⁷³ Harcourt, "General Report on Lessons Learnt and Equipment with and Indep Coy in NG," 24 February 1943, AWM54 519/17/14A, AWM.

⁷⁴ *FM7-10 Infantry Rifle Company, Rifle Regiment 1942* suggested that when attacking an enemy concealed in the edge of close terrain such as a forest fringe that attacks should be made under cover of smoke or at night. In the jungle, attacking in any scale at night proved almost impossible as units were easily disorientated and the limitations on visibility were exacerbated. *FM7-10: Infantry Rifle Company, Rifle Regiment 1942*, 37, 60.

⁷⁵ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

The sub-unit would develop a base of fire from a flank position to facilitate an advance or cover its withdrawal.⁷⁶ After identifying an enemy position, troops could either bypass it or withdraw a short distance and call on artillery or mortar fire before commencing an assault with small arms. However, this required additional coordination with other units and the neutralisation of surrounding positions. From mid-December the 32nd Division committed to maintaining pressure on the Japanese through the successive destruction of individual and small groups of posts. This was essential to eroding defences which led to the capture of Buna Village. This tactical shift represented the broader trend towards small-unit tactics, as jungle fighting was 'usually and necessarily carried out independently by small clusters of men' with limited and definite objectives.⁷⁷

The 30th Brigade followed a similar pattern in its adjustment to infiltration tactics after the severe casualties suffered during frontal attacks. This shift recognised that relative training deficiencies and a lack of information about Japanese positions meant further attacks on the Killerton Junction were unlikely to succeed. On 8 December Porter reorganised his positions and initiated the 'peaceful penetration' of the Japanese lines.⁷⁸ This approach mirrored the First AIF's tactics against the Germans during spring 1918, which emphasised wearing down enemy positions by patrolling and successively infiltrating through weak points.⁷⁹ The 30th Brigade eliminated snipers, made small advances, harassed the Japanese with mortar and artillery fire, and conducted patrols to pinpoint enemy positions to gradually occupy enemy territory.⁸⁰ Porter termed this 'stalk and consolidate'.⁸¹ The approach intended to maximise the number of troops available for mobile striking roles through the construction of twelve mutually supporting platoon-sized strongpoints to maintain front line security. These provided bases from which small attacks and patrols could be mounted. Porter reiterated it would be a yard-by-yard advance and that 'present activity and occupation of ground won must NOT be released or prejudiced'.⁸² Sapping was undertaken on several occasions to close on enemy positions.⁸³ Fire demonstrations and artillery and mortar shoots

⁷⁶ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

⁷⁷ Eichelberger, *Jungle Road*, 27-28.

⁷⁸ Porter initially described his approach in these terms to Herring. Herring to Blamey, 8 December 1942, 3DRL/6643 Item 2/135, AWM.

⁷⁹ Porter was not a veteran of the First World War. The Australians capitalised on the static nature of the German defences to continually encroach on outlying positions and occupy territory for future advances. While tactically successful, it did not 'win wars, or battles'. Jeffrey Grey, *A Military History of Australia*, 108.

⁸⁰ 30th Infantry Brigade War Diary, 8 December 1942, AWM52 8/2/30/9.

⁸¹ 30th Infantry Brigade, "30 Aust Inf Bde OO No. 12," 11 December 1942, Appendix D, AWM52 8/2/30/9, AWM.

⁸² 30th Infantry Brigade, "30 Aust Inf Bde OO No. 12," 11 December 1942, AWM52 8/2/30/9.

⁸³ 7th Division General Staff Branch War Diary, 9-10 December 1942, AWM52 1/5/14/38, AWM.

were scheduled to draw fire from Japanese positions and increase their ammunition expenditure after intelligence suggested the Japanese were under orders to conserve ammunition.⁸⁴

The effectiveness of 'stalk and consolidate' tactics between 8-19 December was mixed. These tactics were endorsed by Herring, who felt they were the 'only proper course when it is considered how little was achieved by [the 30th Brigade's] splendid effort and heavy losses [of 7 December]...I believe this policy will bear fruit in doing so however unspectacular'.⁸⁵ Feasibly, Porter had few other options; his battalions were not capable of mounting deliberate attacks and the approach minimised the brigade's casualties. While the 49th and 55/53rd Battalions persisted with active patrolling and identifying Japanese positions, only minimal ground was gained. However, attacks on strongpoints invariably ran into fire from other positions that had not been identified.⁸⁶ Porter lacked the fire support or the numbers to assault them simultaneously.⁸⁷ Furthermore, it is doubtful whether the 49th and 55/53rd Battalions possessed the small-unit tactical competence to be effective in this role.⁸⁸ The 55/53rd Battalion's two-platoon attack on Japanese positions on 12-13 December was unable to exploit the preliminary bombardment because troops were slowed moving through dense terrain. The platoons laid-up overnight and recommenced the attack the next day, but the troops were reluctant to move and could not execute section-level fire and manoeuvre against the Japanese position.⁸⁹ Porter recognised that the 'slow policy of stalking and starving' would not materially reduce the enemy localities, only maintain pressure over time.⁹⁰

Porter accurately foresaw the battle for the Killerton Junction resembling a series of slow sieges unless superior numbers could be employed, which would undoubtedly result in high casualties.⁹¹ When the Allies launched another major frontal attack on 19 December, the 30th Brigade incurred similar casualties to those on 7 December. This confirmed to Vasey that 'further major offensive action on this front was not possible with the troops available' given casualties, morale, and support.⁹² Thus, the 30th Brigade reverted to 'attacks on limited objectives with a view

⁸⁴ 30th Infantry Brigade War Diary, 9 December 1942, AWM52 8/2/30/9, AWM.

⁸⁵ Herring to Blamey 11 December 1942, 3DRL/6643 Item 2/135, AWM.

⁸⁶ See for example, the attack by 55/53rd Battalion on positions to left of track on 12-13 December. 30th Infantry Brigade War Diary, 12-13 December 1942, AWM52 8/2/30/9, AWM; 55/53rd Infantry Battalion War Diary, 12-13 December 1942, AWM52 8/3/91/7, AWM.

⁸⁷ The two battalions of the 30th Brigade had been reduced to an effective strength of approximately 527 personnel, while the attached American 126th Regiment and the Australian 2/3rd Battalion could muster only 674 troops who were in no way capable of continued offensive action.

⁸⁸ Fraser, "Combat Effectiveness," 275-277; Carter Malkasian, *A History of Modern Wars of Attrition* (Westport: Praeger, 2002), 73-75.

⁸⁹ 55/53rd Infantry Battalion War Diary, 12-13 December 1942, AWM52 8/3/91/7, AWM.

⁹⁰ Porter, "Report on Situation," 15 December 1942, Appendix E, AWM52 8/2/30/9, AWM.

⁹¹ Porter, "Report on Situation," 15 December 1942, Appendix E, AWM52 8/2/30/9, AWM.

⁹² 7th Division General Staff Branch War Diary, 20 December 1942, AWM52 1/7/14/38, AWM.

to destroying enemy posts piecemeal'.⁹³ The 30th Brigade's experiment with 'stalk and consolidate' tactics was an example of adaptation to the situation, but one that did not lend itself to great tactical success.

While the 18th Brigade conducted several successful infantry-tank assaults to breach the Japanese defences at Buna, other phases of the operations against the airstrips and at Sanananda were characterised by another variation of infiltration tactics which leveraged attrition to 'maintain constant pressure' to degrade the defenders and exploit 'soft-spots' when they were encountered.⁹⁴ These 'soft-spot' tactics involved:

...engaging the enemy and masking his strength and of pressing home and exploiting the attack where the enemy is weakest and by so doing piercing his defences and "mushrooming" behind those defences. His strong centres of resistance are masked by an adequate force while reserves are used to attack not those centres which are holding out, but to exploit success where success has been achieved or is likely and leaving centres that are holding out for subsequent destruction.⁹⁵

Surprise, initiative, and economy of force were critical to this approach. It was heavily influenced by the 18th Brigade's experiences against the Japanese at Milne Bay which had shown value in patrolling, screening, seeking flanks upon contact, and close coordination with artillery.⁹⁶ Strong centres of resistance could be used to draw-in defenders to be destroyed by bombardment or gradually weakened by eliminating surrounding positions. However, these tactics were not expected to result in a quick victory. Wootten recognised it was often a prolonged process, but 'by continually hammering away and exploiting the weak spots and by maintaining constant pressure that even the hardest nuts were found to crack'.⁹⁷ The principles of soft-spot tactics were applicable to units and sub-units during the fighting along Old Strip at Buna and to brigade-level manoeuvre at Sanananda.

The success of soft-spot tactics relied on patrolling and probing to find gaps and weaknesses in the Japanese lines. The discovery of an unprotected crossing through Simemi Creek was an example of this. Surprise was complete and the Australian's 'refusal to accept the "impassability" of the ground' gained immediate success.⁹⁸ It allowed the 2/10th Battalion to establish a bridgehead

⁹³ 30th Infantry Brigade War Diary, General Comment – December 1942, AWM52 8/2/30/9, AWM.

⁹⁴ 18th Infantry Brigade, "Part II: Lessons Learnt in Cape Endaiadere, Giropa Point and Sanananda Area Ops," AWM54 581/7/31 [1], AWM.

⁹⁵ 18th Infantry Brigade, "Part I: Report on Operations 18 Aust Inf Bde GP," AWM54 581/7/31 [1], AWM; 18th Infantry Brigade, "Part II: Lessons Learnt in Cape Endaiadere, Giropa Point and Sanananda Area Ops," AWM54 581/7/31 [1], AWM.

⁹⁶ 18th Infantry Brigade, "Points Noted and Lessons Learned in Recent Ops," 16 September 1942, AWM52 8/2/18/20, AWM.

⁹⁷ 18th Infantry Brigade, "Part II: Lessons Learnt in Cape Endaiadere, Giropa Point and Sanananda Area Ops," AWM54 581/7/31 [1], AWM.

⁹⁸ 18th Infantry Brigade, "Part I: Report on Operations 18 Aust Inf Bde GP," AWM54 581/7/31 [1], AWM.

and forced the Japanese to give up positions covering the Simemi Creek bridge.⁹⁹ Soft-spot tactics were more applicable at Sanananda where there was greater depth between the Japanese positions and more opportunity to manoeuvre. After the failure of the 12 January tank attack, the 18th Brigade persisted in probing the frontal and flank positions around the Killerton Junction. While the 2/12th Battalion was held fast against the frontal positions, the 2/9th Battalion made significant inroads on the right flank by attacking the rear of the Junction defences. The discovery of the Japanese evacuation accelerated the pace of the operations while the remaining Japanese positions were then 'folded up' over the next few days through the application of scouting, screening stronger centres of resistance, and infiltration as battalions worked along the Killerton Track to the coast and enveloped Sanananda Point.¹⁰⁰

Soft-spot tactics also included small-unit attacks on prepared positions. After the loss of tanks on 24 December, infantry were forced to fight without armoured support against Japanese positions echeloned in depth along Old Strip. Between 25-28 December the 2/10th Battalion edged forward using fighting patrols against strongly-held Japanese defences. Wootten instructed the battalion and Warren Force to 'push on to the enemy's flank where we can then bite off a piece. Keep pressure on and pave way with guns'.¹⁰¹ The Allied line developed into a crescent stretching between the edges of the Strip as strongest resistance was met in the centre while the units on the flanks made better progress. Support from a 25-pounder in a direct fire role helped neutralise strongpoints on Old Strip. Sub-units were often left to operate semi-independently in intense, close-quarters engagements against complex positions. However, this led to issues of coordination between Australian and American sub-units. The 2/10th's CO was concerned the Americans were not thoroughly consolidating captured ground and too many Japanese were still active in the rear areas. Wootten informed the Americans 'soft-spot tactics did not mean leaving centres of resistance of unknown strength behind'.¹⁰²

The effectiveness of soft-spot tactics varied. They maintained pressure on the Japanese positions when deliberate combined arms attacks could not be launched, but they required attrition to create weaknesses in the Japanese lines which often resulted in heavy losses by the Australians. However, it was difficult to exploit soft spots for decisive gains because of the limited strength available. The brigade had been deployed sequentially to relieve tired battalions, which meant it

⁹⁹ 2/10th Infantry Battalion War Diary 21-23 December 1942, AWM52 8/3/10/24, AWM.

¹⁰⁰ 18th Infantry Brigade, "Part II: Lessons Learnt in Cape Endaiadere, Giropa Point and Sanananda Area Ops – Dec 42-Jan 43 and Recommendations Arising Thereafter," AWM54 581/7/31 [1], AWM.

¹⁰¹ McCarthy, *Kokoda to Wau*, 471; 18th Infantry Brigade, "Part I: Report on Operations 18 Aust Inf Bde GP at Cape Endaiadere, Giropa Point and Sanananda Area – 14 Dec 42/22 Jan 43," AWM54 581/7/31 [1], AWM; 128th Infantry Regiment Journal, 0956L 25 December 1942, 332-INF(128)-0.7, RG407 E427 B8039, NARA.

¹⁰² McCarthy, *Kokoda to Wau*, 476.

could only commit limited forces to screening, probing, or exploiting at any one time, and there was no strong reserve available. During the fighting on Old Strip, the 2/10th Battalion was the only unit capable of offensive action. Heavy casualties – the battalion lost 177 personnel between 25-28 December – and the early commitment of the reserve company to the left flank meant there was no reserve for future manoeuvre or exploitation.¹⁰³ This committed the battalion to a methodical advance along the length of the strip. Conversely at Sanananda, Wootten had the entire brigade at his disposal and was able to make better use of reserves and manoeuvre to find gaps and ‘mushroom’ behind the Japanese.¹⁰⁴ The brigade’s post-campaign report contended the application of soft-spot tactics by the 2/9th Battalion in conjunction with the frontal attacks by the 2/12th caused the Japanese resistance to ‘wilt’ under pressure. Lieutenant-General Iven Mackay, later GOC NGF, noted ‘while the term “soft spot tactics” may sound attractive it is prudent to remember that there is no easy way of avoiding hard fighting’.¹⁰⁵

‘Snipers Were Everywhere’: Adapting Counter-Sniper Techniques

In addition to the increasing emphasis on small-unit tactics, Allied forces also developed techniques to counter Japanese practices like treetop snipers and observers. Snipers’ ability to break-up the momentum of attacks by forcing advancing groups to ground was effective and demoralising for inexperienced troops. As snipers and weapons positions worked in tandem, it was necessary to neutralise one or both to facilitate an advance. Developing effective counter-sniper techniques became a significant component of infantry attacks. The first phase of adapting to the problem included identifying the marksman-observer role snipers played in the defensive system and honing troops’ observation of likely sniper positions. For troops unfamiliar with the jungle, this was difficult. Most senior American commanders accepted that snipers were a serious tactical problem. Parker noted: ‘Snipers were everywhere...and they were so well camouflaged that it was nearly impossible to discern them’.¹⁰⁶ However, troops began to recognise tell-tale signs, such as piles of branches at the base of trees. The 18th Brigade brought these observations from Milne Bay, while other units learnt this at the beachheads. Given the Japanese propensity to rotate positions and use decoys, it was safer to target any likely positions, rather than just known ones.

¹⁰³ The 18th Brigade’s total battle casualties for the beachhead operations were 75 officers and 1215 ORs. Headquarters 18th Infantry Brigade, “Part I: Report on Operations 18 Aust Inf Bde GP,” AWM54 581/7/31 [1], AWM.

¹⁰⁴ 18th Infantry Brigade, “Part I: Report on Operations 18 Aust Inf Bde GP,” AWM54 581/7/31 [1], AWM.

¹⁰⁵ Mackay, “18 Aust Inf Bde Report on Operations Cape Endaiadere-Buna-Sanananda 14 Dec 42 to 22 Jan 43,” 22 February 1943, AWM54 581/7/31 [1], AWM.

¹⁰⁶ Parker, “Notes on Operations Near Buna,” 2 December 1942, AWM 581/7/20, AWM.

By mid-December, most Allied attacks integrated anti-sniper machinegun programmes into any attack. The 32nd Division's units designated machinegun platoons or sections to sweep treetops and undergrowth prior to attacks before diverting fire to support the infantry.¹⁰⁷ The gradual deployment of .50cal HMGs with the 127th Regiment in Urbana sector provided a highly effective weapon for this task. The 21st and 25th Brigades at Gona employed Vickers MMGs where clearer fields of fire allowed them to cover positions in kunai or the coastal plantations.¹⁰⁸ If they could be 'boldly' sited, they could then be used to thicken frontal fire against enemy positions.¹⁰⁹ The 18th Brigade immediately instituted anti-sniper programmes on its arrival at Buna:

The intensive use by the enemy of snipers makes it essential in any plan of action that, as an integral portion of that plan, a specific course of action should be laid down for dealing with snipers.¹¹⁰

It employed battalion machineguns to sweep treetops and likely positions on timed programmes. After the 2/12th Battalion's 20-minute programme during the final attacks on Giropa Point on 1 January, the battalion's diary noted 'not one sniper was left in the palm tops in the target area where in other places they were quite plentiful'.¹¹¹ However, the effectiveness of these programmes made the machine-gunners heavily targeted by snipers. The 163rd Regiment entered battle with the benefit of the 32nd Division's experiences. The regiment used .50cal HMGs to comb trees around Japanese positions.¹¹² Machinegun platoons were sited on each flank and designated to sweep treetops with fire for intermittent periods in preparation for an advance. These platoons were linked by field telephone to battalion headquarter so fire could be shifted to areas which required greater neutralisation.¹¹³ After this, the guns continued a slow rate of fire against the treetops while troops moved forward.¹¹⁴ Light mortar rounds with instantaneous fuzes were also used to create tree bursts to thin out tree-top snipers.

The development of counter-sniper teams complemented preparatory machinegun programmes but these emerged more slowly. Australian forces trailed the Americans in this area and made only limited use of sniper teams; the Americans noted 'strangely enough, the Australians used no tree snipers'.¹¹⁵ American programmes began on 11 December, when Colonel John Grose,

¹⁰⁷ III/128th Infantry Battalion Journal, 1700 4 December 1942, 332-INF(128)-7-0.7, RG407 E427 B8065, NARA.

¹⁰⁸ 25th Infantry Brigade, "Some Notes on the New Guinea Campaign," AWM54 577/7/31, AWM.

¹⁰⁹ Cameron, "Notes on New Guinea Fighting," 19 December 1942, AWM54 577/7/29 [16], AWM.

¹¹⁰ 18th Infantry Brigade, "Part II: Lessons Learnt in Cape Endaiadere, Giropa Point and Sanananda Area Ops," AWM54 581/7/31 [1], AWM.

¹¹¹ 2/12th Infantry Battalion War Diary, 1 January 1943, AWM52 8/3/12/10, AWM.

¹¹² Doe, "Part V: Notes on Jungle Warfare No.1," undated, 341-INF(163)-0.3, RG407 E427 B9085, NARA.

¹¹³ 163rd Infantry Regiment, "Field Order #4," 15 January 1943, 341-INF(163)-0.3, RG407 E427 B9085, NARA.

¹¹⁴ 163rd Infantry Regiment, "Field Order #4," 15 January 1943, 341-INF(163)-0.3, RG407 E427 B9085, NARA.

¹¹⁵ 163rd Infantry Regiment, "163rd Inf Reg History - New Guinea Part III The Battle of Sanananda," 341-INF(163)-0.3, RG407 E427 B9085, NARA.

Commander 127th Regiment, recommended to Buna Forces it was 'highly essential to employ snipers in trees' to counter Japanese sharpshooters.¹¹⁶ However, there was never a uniform development of counter-sniper teams within Buna Force.¹¹⁷ Informally, American troops were 'climbing trees and becoming snipers', but it was not until 27 December that Eichelberger authorised the formation of ten anti-sniper teams to help in mopping-up the Triangle and Government Gardens.¹¹⁸ The development of counter-sniper teams was also hindered by shortages of tree-climbing equipment and telescopic sights for the M1903 Springfield rifle which was the most effective weapon for the task.¹¹⁹ While teams were never properly employed, Colonel Frank Bowen, G-3 I Corps, envisaged them preceding the advance of companies to clear the way forward.¹²⁰ By contrast, the 163rd Regiment again benefited from information from Buna before its deployment and instituted an aggressive anti-sniper programme upon occupying Musket Perimeter where 'tree snipers were very active'.¹²¹ The 163rd Regiment used designated anti-sniper teams to operate on the ground or in trees. They included decoys to draw fire and perimeter observers to watch for movement.¹²² Night patrols were ordered to locate snipers or booby-trap likely positions. The programme was highly successful, and the number of snipers was 'appreciably thinned out'.¹²³

'Rifles, Hand Grenades, and Human Courage': Small-Unit Attacks on Prepared Positions

The most difficult task for infantry after locating defensive positions was to destroy them. Due to the limited number of guns and mortars, it was not possible to support all infantry attacks with additional fire support. This made it necessary for small groups of infantry relying on 'rifles, hand grenades, and human courage' to close with and assault smaller groups of positions.¹²⁴ The construction and placement of positions posed a significant challenge to approaching, suppressing, and eliminating them with small arms fire or grenades as they were designed to resist frontal attacks with narrow, low firing apertures sited to the front or to the sides.¹²⁵ The entrances to bunkers were

¹¹⁶ Colonel John E. Grose, Commander 127th Infantry Regiment, "Memorandum," #3 11 December 1942, 332-INF(127)-0.8, RG407 E427 B8019, NARA.

¹¹⁷ Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA.

¹¹⁸ Eichelberger to Major General Horace Fuller, CG 41st Infantry Division, 14 December 1942, RG41 B1 F2, MM; Eichelberger to Sutherland, 27 December 1942, RG41 B1 F2, MM.

¹¹⁹ Grose, "Memorandum," #3 11 December 1942, 332-INF(127)-0.8, RG407 E427 B8019, NARA.

¹²⁰ Bowen to E.G. Smith, 5 January 1943, HQ I Corps G-3 Correspondence, RG338 E330 B198, NARA.

¹²¹ 163rd Infantry Regiment, "163rd Inf Reg History - New Guinea: Part III The Battle of Sanananda," 341-INF(163)-0.3, RG407 E427 B9085, NARA.

¹²² Private Edward Hula, 163rd Infantry Regiment, cited in O'Neil, *Men Do Your Duty*, 46.

¹²³ 163rd Infantry Regiment, "163rd Inf Reg History - New Guinea Part III The Battle of Sanananda," 341-INF(163)-0.3, RG407 E427 B9085, NARA.

¹²⁴ H.A. Smith to Milner, 20 January 1950, Urbana Letters, RG319 E53 B4, NARA.

¹²⁵ As the bunkers were slightly raised above ground level, Japanese machineguns usually fired on fixed lines less than 1m above the ground. Private Jack Stevens, 55/53rd Battalion, inadvertently discovered a defiladed spot below a bunker after his platoon was ambushed on 19 December: 'We flattened ourselves and [a

located to the side or rear and accessed via tunnels or trenches. Infantry therefore needed to attack these positions from the flanks or from a defilade below the line of fire.

Grenades were the infantry's primary weapon for attacking positions but were often not sufficiently powerful to neutralise bunkers. This was predominantly due to the angled design of the bunkers' entrances, which negated fragmentation blasts from affecting the interior firing positions. Grenades also proved unreliable during the initial phase of the operations. Approximately 70% of the grenades used by American troops at Buna during November proved defective due to poor storage.¹²⁶ The limited effectiveness of grenades against bunkers forced the 7th Division to issue a memorandum to all units at Sanananda:

Jap dugouts are often connected by communicating trenches and have more than one entrance. This, in addition to the angular plan of some of the dugouts, make it impossible to eliminate all enemy resistance throwing in one grenade. There have been instances where this has apparently been assumed, with the result that men who have got into the entrenchments, have been shot from behind.¹²⁷

Allied infantry needed a more effective weapon:

Time and again infantry units found themselves face to face with enemy pill boxes with no means of combatting them except the rifle and the hand grenade. Neither weapon could do the job without heavy loss of life...The desirability of placing into the hands of the rifleman new and more destructive methods and munitions for use against these pill boxes is obvious.¹²⁸

USAGF Observer Colonel Harry Knight formed a similar conclusion after watching a Japanese soldier emerge from a bunker after three grenades had been used on it at Cape Endaiadere.¹²⁹ He noted 'an explosive must be used which is powerful enough to blow up and cave in the entrance to the dugouts'.¹³⁰ In lieu of powerful explosives, the Australian EY Rifle grenade launcher with No.68 AT Grenades became a favoured weapon for attacking bunkers.¹³¹ These grenades employed a shaped

Japanese MG] fired another burst and the damn thing screamed over us again... we were so close that we were beneath it. He was firing out of an aperture in a bunker and we [were] just beneath the field of fire...So for a few moments it was...like a rehearsed exercise. He would fire, we'd lay flat on the ground, he'd stop to reload, we'd fire, then we'd flatten ourselves'. Private Jack Stevens, 55/53rd Infantry Battalion, S00580, KMSA.
¹²⁶ Between 19-20 November, a patrol of the III/128th managed to stalk close to a group of Japanese soldiers and threw seven grenades at them but none detonated. Many of these were Australian No.36 "Mills Bombs". Exposure to moisture was the primary cause of failure. In the ensuing grenade duel the Americans suffered 30% casualties. MacNab to Milner, 15 November 1949, Warren Letters, RG319 E53 B4, NARA.

¹²⁷ There is no record of this document in the 7th Division's War Diary, though the memorandum's distribution list includes the 21st and 30th Brigades, GoForce and the 2/1st Field Regiment. 7th Division, "Notes for Information of All Front Line Units," 22 December 1942, AWM52 8/3/14/60, AWM.

¹²⁸ First-Lieutenant Ervin Sanders, 32nd Division Chemical Officer, "Report of Activities 32nd Infantry Div Chemical Section During the Papuan Campaign," 18 February 1943, 332-19, RG407 E427 B7943, NARA.

¹²⁹ Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA.

¹³⁰ Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA.

¹³¹ Lieutenant Stan Bisset believes this was the first time that No.68 Grenades had been used with a rifle discharger. He recounted that they were used to bombard a Japanese position on the beach near Haddy's

charge which used chemical energy rather than fragmentation to penetrate the fortifications. This gave it an advantage over quick-fused mortar shells and grenades.

The task of developing an effective anti-bunker weapon fell to Allied engineers. The 127th Regiment experimented with modified Bangalore torpedoes in Urbana sector. However, they were unreliable as the detonator was often dislodged while sliding them into bunkers, and soon crews 'lost all interest in slipping Bangalores into enemy pillboxes'.¹³² The most effective improvised weapon was the 'blast bomb' devised by Australian engineers at Buna.¹³³ Tests concluded that bunkers were protected against external explosions, but a 2lb ammonal charge placed at an opening had:

Considerable blast effect; walls bulged outwards for almost full length of 30', 8' of overhead cover above charge collapsed, access opening at opposite end disturbed. Conclusion: - Charge sufficient to knock out all occupants by blast irrespective of interior arrangements of slit trenches or splinter protective walls.¹³⁴

The weapon's design was simple, easy to use, and used existing materials.¹³⁵ The blast bombs were used by the 2/12th Battalion during the reduction of Giropa Point. Their employment was closely tied to the developing infantry-tank tactics. After the successful employment of blast bombs, Lieutenant-Colonel Arthur Arnold, CO 2/12th Battalion, reported:

...the new type of improvised ammonal bomb proved to be very effective in dealing with enemy pillboxes. The bomb thrown in one of the entrances caused a terrific blast blowing debris from any other entrance. It was found that once the bomb had exploded within the pillbox that it is usually unnecessary to worry any further about its occupants.¹³⁶

The Americans sought to emulate the blast bomb by adding TNT and gelignite to Bangalore torpedoes or 37mm shell casings, though never used them as the first batch was lost enroute to

Village containing seven or eight machineguns. The Australians had sniped at them for several days before using the EY launcher on the position, killing all but one Japanese defender. Lieutenant Stanley Bisset, 2/14th Infantry Battalion, #1223, AAWFA.

¹³² The modified bangalore torpedo used a fragmentation grenade as the detonator. Sanders "Report of Activities 32nd Infantry Div Chemical Section During the Papuan Campaign," 18 February 1943, 332-19, RG407 E427 B7943, NARA.

¹³³ 18th Infantry Brigade, "Part II: Lessons Learnt in Cape Endaiadere, Giropa Point and Sanananda Area Ops," AWM54 581/7/31 [1], AWM.

¹³⁴ RAE 6th Division, "Japanese Strong Points – Expedients in Assisting Attack," 4 January 1943, Appendix E, AWM54 581/7/31 [1], AWM.

¹³⁵ The charge was constructed by attaching a rifle grenade baseplate to a 4" deep tin which was then filled with 2lbs of loose ammonal. The lid was taped closed to secure and waterproof the charge. A length of primacord was inserted into the tin and taped to a No. 36 grenade with a four-second fuse. This was then attached to the rifle grenade baseplate. The charge resembled a German stick grenade, with the No. 36 grenade acting as the handle. The only defects were that sometimes the No. 36 grenade would become dislodged from the tin, preventing it from detonating.

¹³⁶ Lieutenant-Colonel Arthur Arnold, CO 2/12th Infantry Battalion, "Blast Bombs," undated, AWM52 8/2/13/39, AWM; Sanders, "Report of Activities 32nd Infantry Div Chemical Section During the Papuan Campaign," 18 February 1943, 332-19, RG407 E427 B7943, NARA.

Sanananda.¹³⁷ The blast bomb finally gave infantry with an effective weapon against Japanese structures. Furthermore, it hastened attacks as less time was needed to clear bunkers and reduced the risk of defenders re-emerging from bunkers once they had been passed.¹³⁸

Allied forces also employed Australian 2pdr and American 37mm antitank guns in anti-personnel and anti-bunker roles. Though there were few guns available, they were man-portable in jungle terrain and gave infantry another level of fire support. The first gun was used during the 30 November attack on the barricaded positions in Duropa Plantation.¹³⁹ They were used to knock out enemy bunkers or with cannister rounds as an anti-personnel weapon which proved highly effective clearing tree-tops and jungle of enemy personnel:

To date [cannister] has not been used as well as I would have hoped it might be. There has been a failure to recognise that this cannister is for use against personnel...I believe that...cannister will be pretty valuable for spraying tree tops just prior to the jump-off, so that these tree-snipers that bother us so much can be eliminated or disconcerted at the time of the initial advance.¹⁴⁰

More guns were deployed to bolster base of fire positions near Simemi Bridge, west of Buna Village, Huggins Roadblock, and Mushita Island.¹⁴¹ However, the effectiveness of these weapons was dependent on establishing observation and lines of fire which was not always possible – an Australian 2-pdr gun deployed to Sanananda had limited value because it could only fire indirectly at suspected positions.¹⁴²

Infantry made negligible use of specialised weapons like flamethrowers due to limited and unreliable equipment. On 6 December Colonel Clarence Tomlinson, Commander Urbana Force, requested flamethrower teams to assist the II/126th eliminate a key strongpoint controlling the

¹³⁷ Notes on the Australian “blast bomb” were sent to 32nd Infantry Division headquarters by the 18th Brigade on 4 January 1943. The notes included a sketch of the construction of the device, as well a report on its effectiveness by Arnold. Testing revealed these had a similar effect and were powerful enough to loosen roof beams and blow holes in the sides of bunkers. Tests were carried out under the guidance of the 32nd Division’s G-2 Major William Hawkins and were adopted for the 127th Infantry Regiment. 18th Infantry Brigade, “Blast Bombs,” 4 January 1943, 332-19.0, RG407 E427 B7943; 32nd Infantry Division Chemical Section, “Memorandum,” 12 January 1943 & 32nd Inf Div Adv Echelon, “Memorandum,” 16 January 1943, 332-19.0, RG407 E427 B7943, NARA.

¹³⁸ RAE 6th Division, “Japanese Strong Points – Expedients in Assisting Attack,” 4 January 1943, Appendix E, AWM54 581/7/31 [1], AWM.

¹³⁹ Parker, “Notes on Operations Near Buna,” 2 December 1942, AWM 581/7/20, AWM.

¹⁴⁰ Eichelberger to Chandler, 18 December 1942, 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

¹⁴¹ 128th Infantry Regiment Journal, 0830 30 November 1942, 332-INF(128)-0.7, RG407 E427 B8039, NARA; Eichelberger to Sutherland, 22 December 1942, RG41 B1 F2, MM; 128th Infantry Regiment Journal, #47 5 December 1942, 332-INF(128)-0.7, RG407 E427 B8039, NARA; I/126th Infantry Battalion Journal Buna, #513 5 December 1942, 332-INF(126)-7-0.7, RG407 E427 B8010, NARA; II/126th Infantry Battalion Journal, 5 December 1942, 332-INF(126)-7-0.7, RG407 E427 B8010, NARA.

¹⁴² The effectiveness of the gun dispatched from the 2/1st Antitank Regiment in Port Moresby was negligible. Lieutenant K.H. McLeod, the gun’s OC, recalled ‘...we would fire a program of 18 to 20 rounds over a small arc in the hope of hitting something vital, but always unseen by us’. Lieutenant K.H. McLeod, 2/1st Antitank Regiment, “Buna - Gona - Sanananda 1942-43”, 25 December 1993, MSS1882, AWM.

approach to Buna Village.¹⁴³ This was the first operational use of flamethrowers by US forces in the Pacific. Their employment was planned and supervised by the 32nd Division's Chemical Weapons Section to maximise surprise and effect.¹⁴⁴ Careful reconnaissance and planning identified the bunker's design, fields of fire, and role within the defensive system.¹⁴⁵ The team also identified a covered approach to the bunker which would put the flamethrower within effective range. The CWS representative felt it was an appropriate use of the flamethrower and 'from a tactical standpoint, the situation was perfect'.¹⁴⁶ The plan of attack also addressed how to protect the operator and neutralise snipers near the bunker.¹⁴⁷ However, while the flamethrower had tested satisfactorily prior to the attack, it failed to function. The jet only reached several metres – as opposed to the effective range of 20m – which forced the operator to close with the bunker, but the team came under heavy fire and was forced to withdraw.¹⁴⁸ Another attempt was made to use a flamethrower against a bunker in the Coconut Grove on 15-16 December, but it too 'fizzed out and [the] Japanese shot it up'.¹⁴⁹ USAFFE's Chief Chemical Officer was mortified the weapon had let infantry down at 'a critical point' and brought the weapon 'into such ill-repute that...they may never want to use them again'.¹⁵⁰ The employment of flamethrowers during the beachhead operations had depended on improvisation. However, these experiences established principles for their future employment, with a focus on solving reliability issues and integrating flamethrowers into infantry units and assault teams armed with more powerful weapons like grenade launchers, demolition chargers, and bazookas.¹⁵¹

¹⁴³ Colonel Clarence Martin also requested flamethrowers to assist the I/126th on 7 December. They were prioritised for Urbana sector as this was where the main effort was to be made after the failure of the 5 December attack in Warren sector. They would be sent to the I/126th after the completion of their mission with the II/126th. Buna Forces G-2 Journal, #250 & #259, 7 December 1942, 332-2.2, RG407 E427 B7822, NARA; Sanders, "Report of Activities 32nd Infantry Div Chemical Section During the Papuan Campaign," 18 February 1943, 332-19, RG407 E427 B7943, NARA.

¹⁴⁴ Sanders, "Report of Activities 32nd Infantry Div Chemical Section During the Papuan Campaign," 18 February 1943, 332-19, RG407 E427 B7943, NARA.

¹⁴⁵ Reconnaissance was conducted by the II/126th's S-3, 32nd Division Chemical personnel, a platoon OC, and the weapon operator.

¹⁴⁶ Sanders, "Report of Activities 32nd Infantry Div Chemical Section During the Papuan Campaign," 18 February 1943, 332-19, RG407 E427 B7943, NARA.

¹⁴⁷ Sanders, "Report of Activities 32nd Infantry Div Chemical Section During the Papuan Campaign," 18 February 1943, 332-19, RG407 E427 B7943, NARA.

¹⁴⁸ The initial jet from the flamethrower only went several meters. The operator reached within 15m of the bunker before he was hit in the head and knocked unconscious. The assault team leader was killed and another man wounded.

¹⁴⁹ Major Roy Zinser, cited in Milner, *Victory in Papua*, 253.

¹⁵⁰ Colonel William Copthorne cited in Leonard L. McKinney, "Chemical Corps Historical Studies No. 4: Portable Flamethrower Operations in World War II," 1949, 59.

¹⁵¹ In 1942, flamethrowers remained specialised weapons operated by the Corps of Engineers. Flamethrowers lacked any substantive infantry doctrine or centralised training initiative until 1943. In the SWPA, this development was headed by I Corps Chief Chemical Officer Colonel Harold Riegelman, who established a training programme at Rockhampton for the 24th, 32nd and 41st Infantry Divisions in September 1943. This

In the absence of additional weapons, variations in small unit techniques emerged in each sector. These invariably involved designated fire and assault elements with specific roles and the use of organic fire support. Infantry had to engage bunkers with fire from the front or flank to cover the firing ports or entrances, then envelope the rear to 'wrinkle out' the occupants with grenades.¹⁵² The 39th Battalion developed a methodical process to achieve the destruction of posts in detail. Information about bunkers and fields of fire were ascertained by patrolling, then sections were designated to attack specific positions. It was important to attack any supporting positions simultaneously. Positions were first subjected to concentrated mortar fire or grenades. A feint attack was then launched to draw fire away from the main effort. Suppressive fire was then directed against the post while 'storm troops' rushed the position from a different direction.¹⁵³ Reducing posts in detail was the most 'economical' method, but it was time-consuming. However, it proved highly successful at Gona.¹⁵⁴

The 30th Brigade adopted a similar drill out of necessity to train sub-units in minor tactics. After the first week of action, widespread deficiencies in small-unit tactics and weapons handling had been observed in the CMF battalions.¹⁵⁵ Porter established front line training schools to teach sub-units basic weapons skills and methods for attacking Japanese strongpoints.¹⁵⁶ These schools revealed many personnel had never fired automatic weapons or thrown grenades, which were vital for attacking prepared positions.¹⁵⁷ The drill (Figure 8.4) organised the attack into four elements: a gun group with LMGs, a scout group with submachineguns, a grenadier group, and a supporting rifle group. This organisation could be scaled from section to platoon-level. Each group had a specific task. Typically, the gun group stalked to a position to cover the enemy bunker while the scout and grenadier groups closed on the bunker from both flanks while maintaining surprise and concealment. When the attack commenced, the gun group directed rapid fire onto the bunker's

coincided with the issue of 12 flamethrowers to every infantry regiment in the Pacific. Kelber and Birdsell, *The Chemical Warfare Service: Chemicals in Combat*, 548-549; McKinney, "Chemical Corps Historical Studies No. 4: Portable Flamethrower Operations in World War II," 60-61.

¹⁵² 7th Division, "Notes for Information of All Front Line Units," 22 December 1942, AWM52 8/3/14/60, AWM.

¹⁵³ Honner, "Notes on and Lessons from Recent Operations in Gona and Sanananda Areas," undated, AWM54 581/7/19, AWM.

¹⁵⁴ Honner, "Notes on and Lessons from Recent Operations in Gona and Sanananda Areas," undated, AWM54 581/7/19, AWM.

¹⁵⁵ Porter noted the standard of junior leadership in the 36th and 55/53rd Battalion was appreciably lower than that of the 39th and 49th Battalions, which originally formed part of the brigade but had since been detached for duties elsewhere. These sentiments were also reflected in Lieutenant-Colonel Oscar A. Kessel's report on the 30th Brigade after the campaign. Porter, "Fitness for War – 55/53 Aust Inf Bn and 36 Aust Inf Bn," 22 December 1942, Appendix G, AWM52 8/2/30/9, AWM; Kessels, "Report on Operations in Sanananda Area 2 Dec 42 – Jan 43," AWM54 581/7/13, AWM.

¹⁵⁶ 30th Infantry Brigade, "Instruction for Specific Training to be Carried Out for Attacking Enemy Strongpoints," 25 December 1942, Appendix J, AWM52 8/2/30/9, AWM.

¹⁵⁷ 30th Infantry Brigade War Diary, 27 December 1942, AWM52 8/2/30/9, AWM.

firing ports while the grenadiers commenced bombing the position and the scout group advanced firing from the hip. The rifle group provided further fire support or moved to the rear of the position to cover nearby weapons pits. The position was then consolidated by the gun group. Porter's schools were the only example where troops were removed from the lines for training.

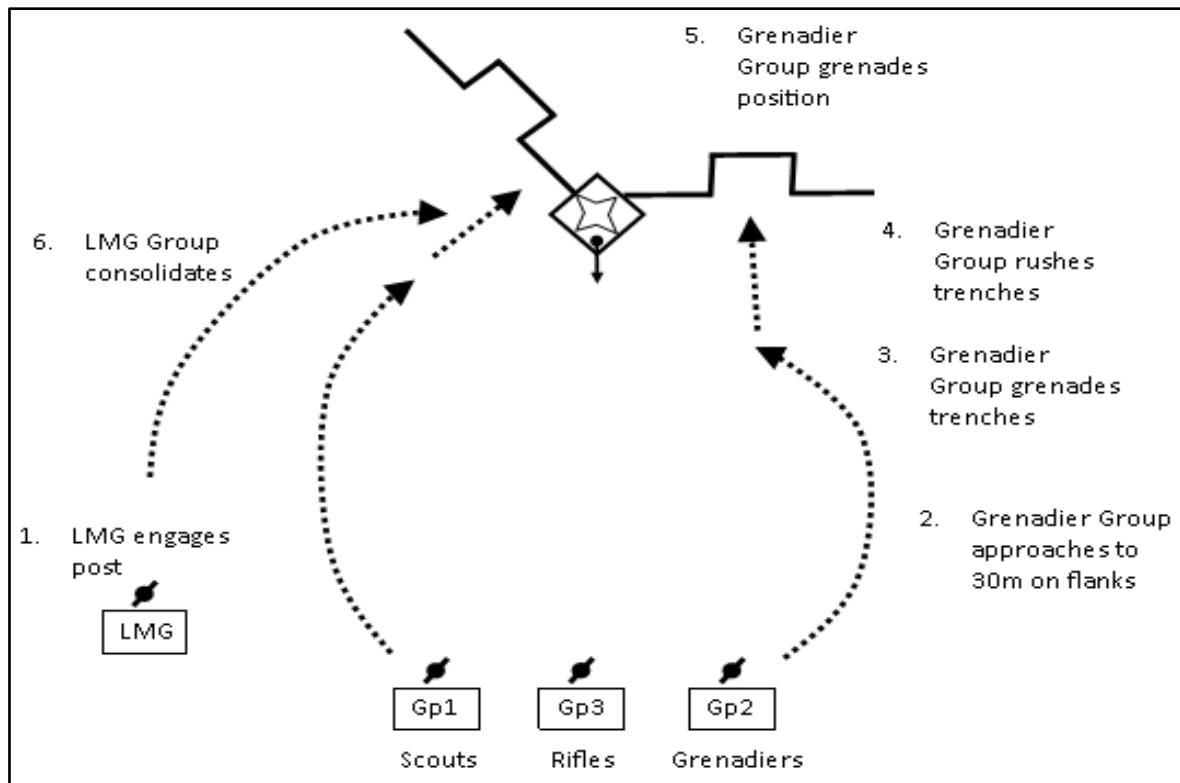


Figure 8.4: Diagram of 30th Brigade Drill for Attack on Enemy Position

The varied conditions the 32nd Division encountered at Buna meant 'no particular method of attack could be generally adopted' for small-unit drills for assaulting bunkers.¹⁵⁸ During the initial phase, American troops were reluctant to close with bunkers to make their small arms and grenades effective:

Troops seemed to think they should be able to stand off at a distance and kill the enemy, or to have aircraft, tanks, artillery, mortars or machine guns do the killing for them, and were reluctant to believe that it was their duty to personally go forward and kill the Jap themselves.¹⁵⁹

Overcoming this inertia through more active leaders and coordinated organic fire support was vital. An early development by the I/128th involved alternating mortar bombardments and small-unit infiltrations to rush positions. Heavy preparations of mortar fire were laid down for 10-15 minutes before the infantry advanced. As soon as the infantry were held up, more mortar fire was employed.

¹⁵⁸ "Report of the Commanding General Buna Forces," Annex #3 G-3 Report, 66.

¹⁵⁹ Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA.

This basic drill allowed attacking companies to move forward, though it was restricted by ammunition supplies and the difficulty of observing fire.¹⁶⁰

Some units developed sophisticated approaches which dealt with specific tactical problems. C Company, I/127th, refined its techniques and organisation to counter the Japanese defensive systems in Urbana sector. The unit correctly identified that Japanese defences were based on three coordinated elements: machinegun teams, snipers, and grenade dischargers and noted the tendencies of each element, such as the difference between fixed and mobile machinegun positions, fire discipline, the role of snipers providing protection and observation, and dischargers restricting movement after the other elements had engaged.¹⁶¹ Therefore, 'clearing of Jap held jungle areas [required]...the attacking force in its composition and tactical employment be adequate to handle all three elements'.¹⁶²

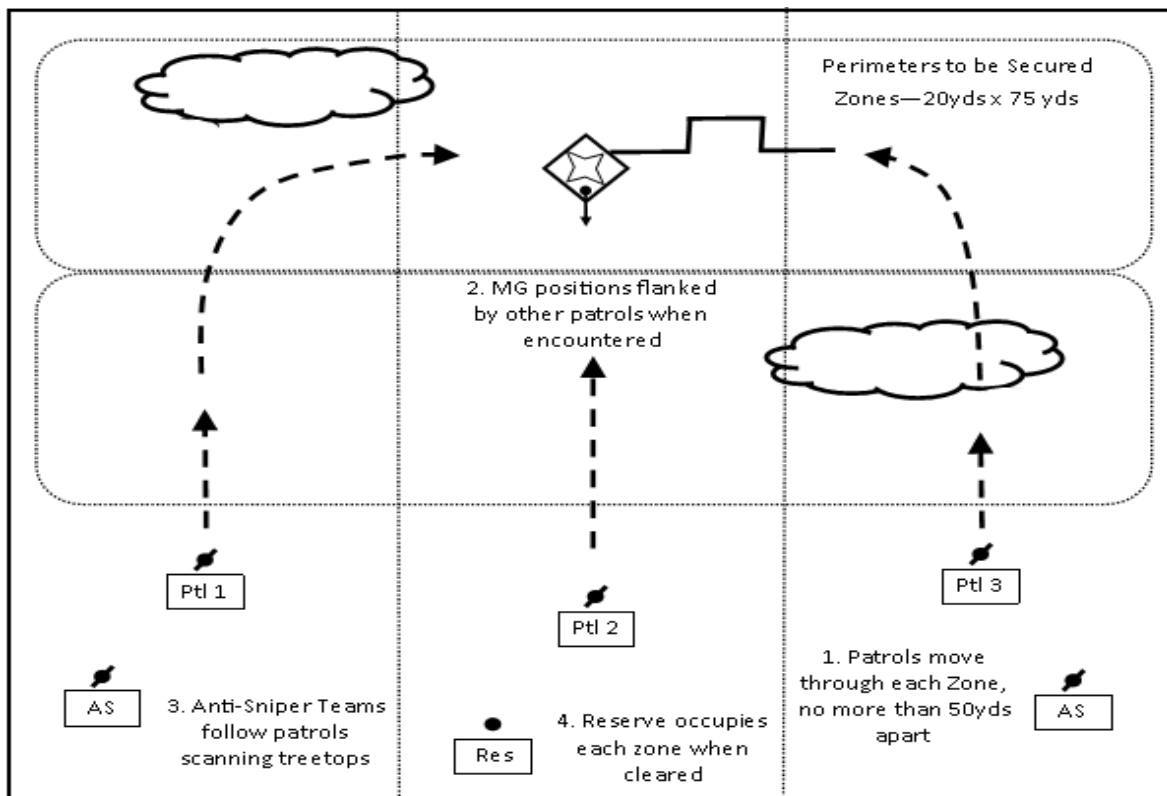


Figure 8.5: Diagram of C Company, I/127th Drill for Zone Attack

Attacks were conducted at platoon or company-level, with the aim to flank, contain, clear, and consolidate an area. The attacking group was divided into a combat patrol element, an anti-

¹⁶⁰ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

¹⁶¹ This reflects Japanese defensive doctrine which stated that defensive positions needed to incorporate all weapon types. Staff-Sergeant Robert Thompson, C Company I/127th, "Miscellaneous Notes on Jungle Tactics," 7 January 1943, 332-2.2, RG407 E427 B7823, NARA.

¹⁶² Thompson, "Miscellaneous Notes on Jungle Tactics," 7 January 1943, 332-2.2, RG407 E427 B7823, NARA.

sniper element, and a holding element (Figure 8.5). The patrol element consisted of three to six five-man patrols commanded by a patrol leader. Patrols were designated to clear a specific 'zone' of jungle 20m wide by 75m deep. A reserve patrol was retained by the commander which could be deployed to flank machinegun positions when they were encountered. Snipers were countered by anti-sniper teams operating to the rear of the patrols. When a zone was cleared, the holding force moved in to secure the area to stop Japanese infiltration and re-occupation.¹⁶³ These tactics were used effectively through the Government Gardens and into Buna Mission.

The 163rd Regiment arrived at Sanananda in January 1943 having practiced bunker assault tactics. Bowen had directed the training of the 41st Division to:

...concentrate on the reduction of individual bunkers by small groups. The tactics that must be adopted are those that our troops used in the Argonne [in the First World War]. Stress the use of flame throwers and rifle grenades.¹⁶⁴

The 163rd Regiment's tactics included probing patrols to locate strongpoints, establishing assembly points close to the enemy, and launching attacks against the flanks or rear of Japanese positions where possible.¹⁶⁵ The 163rd Regiment established a pattern of forming perimeters around Japanese strongpoints and fighting individual battles at company-level. Attacks were preceded by 30-minute artillery concentrations while mortars pinned the Japanese in place. The attack was then made using a rolling mortar barrage wide enough to neutralise flanking positions and deep enough to prevent the Japanese from moving to alternate positions. The barrage advanced in 50-100m increments at a rate of 100m every 4-8 minutes as required by the infantry, who rushed as the last salvo was fired.¹⁶⁶ If bunkers were far enough apart, small patrol groups of three or four men were sent to close with each bunker and use grenades to neutralise them.¹⁶⁷ While the density of Japanese defences made them difficult to penetrate, if a breakthrough could be made the lack of interior defences made it possible for groups to 'mushroom' and attack the rear of the positions, resembling the 18th Brigade's soft-spot approach.¹⁶⁸ The breadth of approaches throughout the Allied forces demonstrates variations in learning and adaptation based on circumstances and resources.

¹⁶³ Thompson, "Miscellaneous Notes on Jungle Tactics," 7 January 1943, 332-2.2, RG407 E427 B7823, NARA.

¹⁶⁴ Bowen to E.G. Smith, 9 December 1942, 384 I Corps Estimates, RG338 E339 B288, NARA.

¹⁶⁵ Doe, "Part V: Notes on Jungle Warfare No.1," undated, 341-INF(163)-0.3, RG407 E427 B9085, NARA.

¹⁶⁶ The 163rd Regiment's fire plan called for a 30-minute artillery concentration of 250 rounds. Mortars bombs with light fuzes were also incorporated to cause tree-bursts. Doe, "Part V: Notes on Jungle Warfare No.1," undated, 341-INF(163)-0.3, RG407 E427 B9085, NARA.

¹⁶⁷ Doe, "Part V: Notes on Jungle Warfare No.1," undated, 341-INF(163)-0.3, RG407 E427 B9085, NARA.

¹⁶⁸ Doe, "Part V: Notes on Jungle Warfare No.1," undated, 341-INF(163)-0.3, RG407 E427 B9085, NARA.

Conclusion

Solving the 'Leavenworth Nightmare' required the adaptation of tactics and techniques to meet the unique conditions of the beachhead operations. This process started slowly and reflected the uneven level of capabilities and competency throughout the Allied forces. Considerable in-theatre learning had to occur to develop the skills and confidence needed for the small-unit fighting required for jungle warfare. The initial phase of deliberate frontal penetration attacks and envelopments demonstrated the difficulties of conducting and maintaining large-scale attacks in the jungle. Allied forces simply lacked the information, strength, and firepower for these attacks to be effective. When these attempts failed, the Allies shifted to attrition and the defeat-in-detail of Japanese strongpoints through small-unit tactics which gradually reduced the enemy positions. These tactics still incurred casualties, but do not support the contention the Allies remained committed to deliberate and hasty frontal assaults. This shift acknowledged the strengths of the Japanese defences and the limitations of the Allied forces. There was no panacea to the problems of jungle fighting. These tactics tried to accommodate the difficulties of command, control, and leadership outlined in Chapter Seven by devolving more responsibility and support to junior leaders. Bloody-minded aggression might claim a post, but invariably led to more losses and could not be sustained; it needed to be tempered by sound tactical approaches.

Australian and American forces developed approaches which met the challenges of the terrain, their equipment, and the enemy. The solutions which emerged across the front were not uniform, but shared many similarities reflecting the doctrinal principles of the Allied forces. Fire and manoeuvre remained key elements, as did the principles of surprise, economy and concentration of force, and information. The 32nd Division's policy of patrolling and conducting small-unit infiltration attacks, the 30th Brigade's stalk and consolidate approach, and the 18th Brigade's soft-spot tactics all represented different variations of small-unit tactical approaches. Experience led to the development of specific techniques to overcome persistent tactical problems which had hampered early phases of the operations such as tree-top snipers and the challenge of attacking defensive positions with small arms and organic weapons. By the end of the campaign, the lessons from Buna, Gona, and Sanananda formed the basis for Allied jungle warfare training and doctrine for the rest of the war.¹⁶⁹

¹⁶⁹ For example, see the USMC Marine Corps Gazette article from 1944 on "Bunker Busting," which deals specifically with the battles of Buna and Sanananda – a 'veritable jungle Maginot Line' – as a typical example of Japanese prepared defences and methods for overcoming them. Robert M. White, "Bunker Busting," *Marine Corps Gazette* 28, no. 1 (1944): 51-53.

Despite these adaptations, it was clear that infantry attacks against prepared positions should, where possible, have additional fire support. While Infantry units adjusted their approaches to the conditions and their capabilities, they needed to be part of a broader combined arms approach. Artillery, tanks, and close air support were the Allies' primary means of supporting infantry in attack. However, the coordination and employment of this support during the beachhead operations presented new and unique challenges which had to be overcome.

Chapter Nine

‘The Artillery in This Theatre Flies’:

Joint Warfare

The campaign, however, would not have been won but for the cooperation accorded by the Allied Air Forces and Allied Naval Forces, who practically stopped the enemy from getting supplies and reinforcements, provided us with air and sea transport for our supplies and on the part of the Air Force, gave us valuable and constant air support of all types.¹

General Thomas Blamey
Commander ALF
“Report on New Guinea Operations”
14 July 1943

Joint operations by the Allies’ air and naval forces to support the capture of the beachheads and isolate the battlefield were constrained by the environment and the Allies’ objectives and resources. While joint warfare was a feature of the Pacific War, the beachhead operations were atypical compared to later campaigns as the Allies fought from the landward side to clear the Japanese, rather than advancing inland from the sea. Joint operations were focused on supporting ground forces and interdicting and isolating the battlefield. These tasks primarily fell to the Allied Air Forces (AAF). While direct support operations ultimately proved ineffective, joint operations to interdict Japanese supply lines contributed to the drastic deterioration Japanese supply from mid-December onwards and was a vital factor in the Allies’ victory.

Despite the littoral environment, the Allied Naval Forces (ANF) played a very limited role in the beachhead operations and were unable to exert direct influence over its outcome. This was attributable to the perceived hazards to navigation along the north-east Papuan coast and into the Solomon Sea, and the potential superiority of Japanese surface and air forces which made naval

¹ General Thomas Blamey, Commander ALF SWPA, “Report on New Guinea Operations 23 Sep 42 – 23 Jan 43,” 14 July 1943, AWM54 519/6/58, AWM.

commanders reluctant to risk their few combat vessels. The coordination of joint efforts was hampered by the Allies' command structure which inhibited understanding and liaison between service commanders. Ground commanders hoped for a greater level of naval support, but the ANF perceived disproportionate risks and acted with reasonable caution. Discussions about amphibious landings and naval gunfire support demonstrated some fundamental misunderstandings about how the navy could support the operations, the ANF's other responsibilities, and the broader context of naval operations in the SWPA and SOPAC.

Kenney's employment of the AAF during the campaign was decisive but not without problems. While early air operations had difficulty adapting to operational and tactical conditions, the AAF devised methods which were highly effective at disrupting Japanese shipping and winning air superiority. This was a vital prerequisite for the Allies to achieve ascendancy in logistics and for the employment of greater artillery and armoured resources at the beachheads. However, the AAF was less effective providing direct air support for ground forces. It was hoped that air support could take up a greater role in providing fire support, but problems with coordination, air-ground communication, and target identification limited its effectiveness. While Allied organisations, procedures, and techniques constantly evolved to better meet the conditions, they were unable to find satisfactory solutions to the problems of air-ground support. This meant that conventional combined arms warfare involving infantry, artillery, and later armour, was still required to neutralise the Japanese defences.

'Shades of Nelson': Allied Naval Forces Operations

The ANF was widely criticised for not playing a greater role supporting the beachhead operations, but its numerical inferiority to Japanese surface forces, risk of aerial interdiction, and the difficulties navigating the coastal channels towards the beachheads deterred naval commanders from committing their vessels. In November 1942 the ANF's naval striking power was minimal (Figure 9.1). It possessed a small force of light cruisers and destroyers, a collection of escort vessels, and two groups of submarines. It was still waiting on a group of patrol boats which had been promised in July but diverted to SOPAC. The ANF's few ships were split between escorting convoys between Australian and Papua and patrolling the Coral Sea. The ANF had frequently dispatched task forces to support the USN in SOPAC, but on its own, it was insufficient to defeat Japanese surface forces in the Solomon or Bismarck Seas.

Unit	Vessels	Unit Tasks	Area
Task Force 44 (Group 1)	<i>HMAS Australia</i> (CA) <i>USS Phoenix</i> (CL) <i>USS Patterson</i> (DD) <i>USS Mugford</i> (DD) <i>USS Helm</i> (DD)	Patrol	Coral Sea
Task Force 44 (Group 2)	<i>HMAS Hobart</i> (CL) <i>USS Henley</i> (DD) <i>USS Selfridge</i> (DD) <i>USS Bagley</i> (DD)	Patrol	Coral Sea
RAN Destroyer Group	<i>HMAS Arunta</i> (DD) <i>HMAS Stuart</i> (DD)	Convoy Escort Operation Drake	Australia-Papua Goodenough Island
New Guinea Convoy Group	<i>HMAS Katoomba</i> (FS) <i>HMAS Ballarat</i> (FS) <i>HMAS Broome</i> (FS) <i>HMAS Colac</i> (FS) <i>HMAS Lithgow</i> (FS) <i>HMAS Whyalla</i> (FS)	Convoy Escort Anti-Submarine Patrol Lilliput Escort Troop Transport	Australia-Papua Holnicote Bay Milne Bay-Oro Bay Milne Bay-Buna
Task Force 50.1	<i>USS Hilo</i> (AGP) 6 x PT Boats	Patrol	Tufi-Amboga

Figure 9.1: Allied Naval Forces Surface Vessels, November-December 1942.²

Japanese air and surface forces posed a significant threat to Allied operations along the Papuan coast.³ Naval intelligence between November-December suggested comparable, or a clear overmatch, in warships based at Buin and Rabaul (Figure 9.2). The IJN's presence increased as operations against Guadalcanal intensified. By mid-December the IJN's 2nd, 4th, and 6th Fleets were identified in the Truk-Rabaul-Solomons area, comprising at least three battleships, twelve cruisers, five carriers, 25 submarines and 40 destroyers. Without support from SOPAC, the ANF could not safely operate near the beachheads. Carpenter argued that land-based aircraft were at the time the best defence against Japanese surface vessels operating against Buna, though he remained sceptical of their effectiveness.⁴

² Ship classifications are: CA (Cruiser); CL (Light Cruiser); DD (Destroyer); FS (Corvette); AGP (Patrol Craft Tender); PT (Patrol Torpedo Boat).

³ Carpenter to MacArthur, 10 November 1942, RG4 B6 F4, MM.

⁴ Carpenter to MacArthur, 10 November 1942, RG4 B6 F4, MM.

Period	9 Nov. 1942	19 Nov. 1942	29 Nov. 1942	9 Dec. 1942
Estimated Japanese Naval Strength SOPAC/SWPA	4 x Cruisers 3 x Light Cruisers 12 x Destroyers 18 x Transports 9 x Unidentified Ships	3 x Cruisers 3 x Light Cruisers 20 x Destroyers 11 x Transports 1 x Unidentified Ships	3 x Cruisers 2 x Light Cruisers 22 x Destroyers 13 x Transports 2 x Unidentified Ships	2 x Cruisers 2 x Light Cruisers 23 x Destroyers 19 x Transports 35 x Unidentified Ships

Figure 9.2: Japanese Naval Strengths, Buin-Rabaul, 9 November – 9 December 1942.⁵

The ANF also cited the difficulties of navigating the reefs between Cape Nelson and Cape Endaiadere as precluding support by naval forces. Carpenter argued that survey and charting between Milne Bay and Buna was inadequate to permit larger vessels to escort convoys or support ground operations.⁶ Survey and hydrography of the coast had begun in late October but only covered as far as Oro Bay by November.⁷ This permitted the Lilliput freighters to supply the operations but did not extend to the defended positions. However, Carpenter's claims about navigability are contentious. While the Allied Geographical Section's Buna study warned against vessels larger than 1,000 tons operating around Cape Nelson, it did not rule out navigable channels.⁸ In July local reports about navigable channels between Cape Nelson and Buna had been relayed by Brigadier General Richard Van Volkenburgh to GHQ. However, these were never acknowledged, and never passed to the ANF.⁹ Additionally, Commander R.B.A. Hunt, NOIC Moresby, believed that 'no navigational danger exists as far as reefs to the south-east of Cape Nelson'.¹⁰ Despite this, the ANF did not commit vessels larger than corvettes to operate in these waters.

Blamey's appeals for naval forces to directly support the operations at Buna demonstrated increasing desperation and a lack of understanding between ground and naval forces. Carpenter rejected Blamey's first request for destroyers because he did not want to split-up Task Force 44's vessels in case they were required in the Solomons, concerns about the AAF's ability to provide air

⁵ From: GHQ SWPA MIS, "G-2 Daily Summary #232" 9/10 November 1942, RG3 S2 B27 F1, MM; GHQ SWPA MIS, "G-2 Daily Summary #242" 19 November 1942, RG3 S2 B27 F2, MM; GHQ SWPA MIS, "G-2 Daily Summary #252" 29 November 1942, RG3 S2 B27 F3, MM; GHQ SWPA MIS, "G-2 Daily Summary #262" 9 December 1942, RG3 S2 B27 F4, MM.

⁶ Carpenter to MacArthur, 10 November, RG4 B6 F4, MM.

⁷ Gill, *Royal Australian Navy 1942-1945*, 239.

⁸ Allied Geographical Section SWPA, "Terrain Study No. 27: Aera Study Buna and Plains of Northern Division, Papua," 18 October 1942, RG3 S2 B44 F4, MM.

⁹ Brigadier General Robert Van Volkenburgh had relayed information to GHQ from locals in the Cape Nelson area about navigable channels to Buna in July, but it was never acknowledged by Willoughby and never passed to the ANF. Van Volkenburg Interview, RG49 B4, MM.

¹⁰ Commander Royce Hunt, NOIC Port Moresby, to Blamey, 4 November 1942, 3DRL/6643 Item 2/47, AWM.

cover, and that warships could not necessarily operate in waters safe for transports.¹¹ Blamey did not believe the claim, stating ‘the attitude of the Navy in regard to the destroyers appears to be to avoid risk at a time when all services should give a maximum of cooperation’.¹² When the operations reached a stalemate, Blamey proposed a night-time amphibious landing at Buna.¹³ MacArthur encouraged Blamey to consider the idea of further landings along the coast in ‘as great a force as possible’, and that ‘any penetration in rear of the hostile positions should result in decisive flanking action’.¹⁴ The plan was overly-ambitious and unfeasible. It is unlikely it would have succeeded because the Japanese retained seaward defences and supply would have required linking with the landing force or maintaining highly vulnerable supply lines around Cape Endaiadere. The proximity and position of Allied troops relative to the Japanese defences also posed risks of naval bombardments hitting friendly forces due to its low trajectory. The idea was ultimately abandoned in favour of deploying tanks, but Blamey remained critical of the ANF:

I understand that the Navy is reluctant to risk its vessels. I desire to point out that the Navy is only being asked to go where the Japanese have gone frequently...It is somewhat difficult to understand the Navy attitude of non-cooperation because of risk. ‘Safety First’ as a Naval motto — Shades of Nelson!¹⁵

However, as Gill points out, Japanese warships had not operated in the same channels required by Allied warships to avoid the Solomon Sea.¹⁶ Blamey’s understanding of naval matters was therefore inaccurate.

The lack of understanding between ground and naval forces resulted in divergent perspectives of the campaign.¹⁷ This was caused by the divided command structure and lack of inter-service liaison. Carpenter viewed the Papuan campaign in defensive terms, focusing on protecting Port Moresby, Milne Bay, and the southern Solomon Sea, while GHQ and NGF saw the campaign from October onwards as offensively-focused.¹⁸ This meant the navy remained risk-averse to conserve its forces in the event of a Japanese incursion, while the AAF and ALF focused on actions to defeat the enemy. Carpenter’s refusal to operate the ANF in accordance with the army’s view of

¹¹ Blamey to MacArthur, 19 November 1942, 3DRL/6643 Item 2/47, AWM; Carpenter to MacArthur, 21 November 1942, RG4 B6 F4, MM.

¹² Blamey to MacArthur, 19 November 1942, 3DRL/6643 Item 2/47, AWM; Carpenter to MacArthur, 21 November 1942, RG4 B6 F4, MM.

¹³ Blamey to MacArthur, 26 November 1942, 3DRL/6643 Item 2/47, AWM.

¹⁴ MacArthur to Blamey, 26 November 1942, 3DRL/6643 Item 2/47, AWM.

¹⁵ Blamey also made similar remarks to Herring at the same time. Blamey to MacArthur, 8 December 1942, 3DRL/6643 Item 2/47, AWM; Blamey to Herring, 8 December 1942, 3DRL/6643 Item 2/135, AWM.

¹⁶ Japanese ships could operate in the deep open waters of the Bismarck and Solomons sea as they travelled south towards the north Papuan coastline. Gill, *Royal Australian Navy 1942-1945*, 242-244.

¹⁷ Grant Jones, “The Navy Principle is Now ‘Safety First’: Naval Aspects of the Papuan Campaign in the Second World War,” *War and Society* 32, no. 3 (2013): 197.

¹⁸ Jones, “The Navy Principle is Now ‘Safety First’,” 197.

naval support exacerbated tensions.¹⁹ Carpender noted he did not get Blamey's 'game' after 'another foolish request for [destroyers]'.²⁰ GHQ's failure to relay information which may have allayed fears about navigation also demonstrates the weakness in the SWPA's single-service command organisation and lack of joint culture.

The ANF also shares blame for the lack of understanding and coordination during the operations. Despite Carpender's insistence on naval-ground liaison occurring at NGF's level, the ANF failed to appoint a Naval Commander to the headquarters after a directive from GHQ in August.²¹ This position remained unfilled until 30 January 1943.²² The consequence of this was confusion over naval responsibilities in logistics and poor coordination of patrol boat operations which commenced late in the battles. This again reflects the lack of joint culture in the theatre. An integrated staff might have resolved these issues and enabled the ANF to play a greater role in the operations. The ANF's understandable reluctance to venture into the Solomon Sea meant the AAF had the primary responsibility for isolating the battlefield and attacking the Japanese supply lines, and of directly supporting ground forces.

'Sink Ships and Shoot Down Planes': Allied Air Forces Operations

The AAF demonstrated its evolution as a fighting force by exerting increasing control over the air and the sea approaches to the beachheads which enabled conditions for the Allied victory. In November 1942, the AAF was highly organised but lacked operational experience.²³ By January 1943, it dominated the airspace over Papua. Kenney proved an intuitive, adaptable, and determined commander.²⁴ The establishment of an advanced echelon of Fifth Air Force (ADVON5AF) in Port

¹⁹ Admiral Thomas Kinkaid, Commander ANF, cited in Paolo E. Coletta, "Daniel E. Barbey: Amphibious Warfare Expert," in *We Shall Return!: MacArthur's Commanders and the Defeat of Japan, 1942-1945*, ed. William Leary (Lexington: University of Kentucky Press, 2004), 220.

²⁰ Carpender cited in Jones, "The Navy Principle is Now 'Safety First'," 206.

²¹ GHQ SWPA's Operation Instruction No. 15, issued on 6 August, directed Vice-Admiral Herbert Leary, then Commander ANF, to appoint an officer as Naval Commander, NGF, but the position remained unfilled. GHQ SWPA, "Operations Instructions No.15," 6 August 1942, RG3 S3 B175 S1, MM; Gill, *Royal Australian Navy 1942-1945*, 236-238; Jones, "The Navy Principle is Now 'Safety First'," 194-195.

²² Sutherland to Carpender, 28 January 1943, 98-GHQ1-3.2, RG407 E427 B579, NARA; Carpender to MacArthur, 30 January 1943, 98-GHQ1-3.2, RG407 E427 B580, NARA.

²³ Much of Kenney's work between August-November 1942 was aimed at improving the training, organisation, supply, maintenance, and operational efficiency of his air force. However, the AAF's aircrews were still relatively inexperienced, and aircraft and maintenance shortages reduced the number of available aircraft. For a detailed analysis of Kenney's reorganisation of the AAF see; Wolk, "George C. Kenney: MacArthur's Premier Airman," 88-114 & Griffith, *MacArthur's Airman*.

²⁴ General Henry "Hap" Arnold, CG USAAF, later remarked of Kenney: 'it may truthfully be said that no air commander ever did so much with so little'. Arnold cited in Herman Wolk, "The Genius of George C. Kenney," in *Fulcrum of Power: Essays on the United States Air Force and National Security*, ed. Herman Wolk (Washington DC: Air Force Historical Office, 2003), 51.

Moresby was unconventional but provided an effective and flexible operational and tactical command to assign missions and aircraft as necessary (Figure 9.3).²⁵ He sought to work cooperatively with the Australians, whom he regarded as a 'red-hot crowd'.²⁶ Importantly, Kenney earned the trust of MacArthur, which permitted him flexibility to conduct air operations on his terms. Kenney noted MacArthur 'knew practically nothing about the use of aviation', but he went to great lengths to highlight the challenges faced by the AAF.²⁷ This increased MacArthur's appreciation for air power and permitted Kenney greater freedom of action.²⁸ In September MacArthur admitted:

It has been little more than a month since [Kenney] assumed command of the air component of this area. The improvement in its performance has been marked and is directly attributable to [Kenney's] splendid and effective leadership.²⁹

Innovation in air transport and supply would not have been possible without MacArthur's faith in Kenney and the improved capabilities of the AAF.

Command	Officer	Area of Operation
AAF	Lt-Gen. George Kenney	SWPA
5AF	Lt-Gen. George Kenney	SWPA
RAAF Coastal Command	A-VM. William Bostock	Australia & Netherlands East Indies
ADVON 5AF	Brig-Gen. Ennis Whitehead	SWPA
5AF Fighter Command	Brig-Gen. Paul Wurtsmith	Papua, New Guinea, Bismarcks & Solomons
5AF Bomber Command	Brig-Gen. Kenneth Walker	Papua, New Guinea, Bismarcks & Solomons
RAAF No. 9 Operational Group	Gp-Capt. William Garing	Papua, New Guinea, Bismarcks & Solomons

Figure 9.3: Allied Air Forces Commands, November 1942.

Establishing air superiority was crucial to the success of the beachhead operations. Kenney firmly adhered to the USAAF's tactical doctrine which prioritised, in order, aerial superiority, air interdiction, and ground support.³⁰ The AAF's campaign was based on the premise that 'freedom of action in the air and denial of the same to hostile air forces' was the main objective of air forces and was vital to enabling ground operations.³¹ Kenney recognised that destroying Japanese aircraft also

²⁵ Kenney Diary, 5 August 1942, RG54 B1 VII, MM; Kenney, *Kenney Reports*, 78-79.

²⁶ GHQ SWPA, "General Orders No. 28: Constitution of Fifth Air Force," 3 September 1942, RG4 S1 B6 F1, MM.

²⁷ Kenney Interview, RG49 B3, MM.

²⁸ Kenney Interview, RG49 B3, MM.

²⁹ MacArthur to Kenney, 6 September 1942, RG3 S1 B1 F2, MM.

³⁰ Kenney Diary, 3 August 1942, RG54 B1 VIII, MM; USAF, "USAF Historical Studies No. 86: Close Air Support in the War Against Japan," 1-3.

³¹ Kenney, "The Proper Composition of the Air Force," (diss., Army War College, 1933), 1.

curtailed Japanese offensives, noting 'if his fighters don't go, his troops and boats don't go either'.³² 5AF began a concerted campaign to destroy Japanese aircraft on the ground during October.³³ The innovative use of parachute-fragmentation and daisy-cutter bombs, as well as Beaufighters and modified A-20s for ground attack proved exceedingly effective against Japanese bases in New Guinea.³⁴ By 1 November, Japanese air strength in the area was estimated at only 279 aircraft of all types.³⁵ Concurrently, Allied air power increased, as shown in Figure 9.4. Between 15 November and 15 December, Allied fighter and attack aircraft based in Papua increased from 121 to 214 operational aircraft. Significantly, this included the arrival of superior P-38 fighters.³⁶ The Japanese maintained an active air presence over the beachheads during November and exploited breaks in the Allied fighter umbrella caused by adverse weather, but by early December Allied air superiority was uncontested. Aerial superiority was a requisite for air transport, secure sea supply lines, and made interdicting Japanese shipping easier.

Aircraft Type	15 November 1942		15 December 1942	
	Operational	Maintenance	Operational	Maintenance
P-39 & P-400	62	19	95	26
P-40	27	8	45	19
P-38	4	21	14	22
Beaufighter	14	7	10	4
A-20/Boston	14	2	16	11
B-25	-	-	27	1
Beaufort	-	-	7	2
Total	121 (68%)	57 (32%)	214 (72%)	85 (28%)

Figure 9.4: AAF Aircraft Available in Papua, 15 November-15 December 1942.³⁷

5AF's major contribution to the campaign was the interdiction of Japanese supply which helped the Allies win the logistics battle. Japanese convoys were prioritised over other targets if

³² Kenney to Arnold, 28 August 1942 and 24 October 1942, cited in Richard Watson, "The Papuan Campaign," in *The Army Air Forces in World War II: The Pacific: Guadalcanal to Saipan, August 1942 to July 1944*, Volume IV, eds. Wesley Craven and James Cate (Washington DC: Office of Air Force History, 1983), 101.

³³ By November, 180 raids had been launched against Japanese airfields by heavy bombers based in Northern Queensland which flew to Port Moresby, were refuelled and fitted, and then flew on to their missions. Each sortie took between 36-48 hours. Kenney, *Kenney Reports*, 59.

³⁴ Matthew Rodman, *A War of Their Own: Bombers over the Southwest Pacific* (Maxwell: Air Force University Press, 2005), 41, 44-48.

³⁵ This included 109 aircraft in New Britain and New Ireland, 4 in New Guinea, 52 in the Solomons, and 114 in the Netherlands East Indies. Kenney Diary, 31 October 1942, RG54 B1 VII, MM.

³⁶ The majority of Allied fighter aircraft were P-39s and P-40s. P-38s had arrived in-theatre in October but were plagued by maintenance problems. They were not operationally effective until mid-December. AAFHS, "Army Air Force Historical Studies No. 17: Air Action in the Papuan Campaign," 1944, 76-77.

³⁷ AAF, "Aircraft Status Reports," 15 November & 15 December 1942, RG30 B16 F7, MM.

reconnaissance detected large shipping concentrations at port or at sea.³⁸ However, it took time for 5AF to develop effective tactics for these missions. Initially, aircraft employed medium-altitude bombing attacks, but these were adversely affected by the inexperience of crews, the limited number of aircraft, poor weather, and the Japanese use of destroyers and fast transports. Kenney informed Hap Arnold 'it [was] necessary to improvise and adapt our procedure to meet existing conditions'.³⁹ Between September-November, 5AF bombardment groups began attacking ships at night from lower altitudes.⁴⁰ Night attacks reduced visibility but made it more difficult for Japanese ships to avoid aircraft. Low-altitude bombing eventually evolved into 5AF's mast-height technique.⁴¹ Additionally, up-gunned, fast B-25s and A-20s were employed as commerce-raiders for low-level strafing.⁴² These tactics were still being refined as the Allies neared the beachheads.

Despite improved techniques, initial efforts to isolate the beachheads and interdict Japanese shipping during November were ineffective. Poor weather proved the Allies' greatest enemy as low clouds shielded ships at sea and prevented aircraft from flying. On 2 November, a Japanese convoy was intercepted enroute to Buna and attacked repeatedly, but only one transport was sunk before weather prevented further sorties.⁴³ Japanese reinforcement convoys between 17-23 November exploited poor weather and reached the beachheads with minimal losses.⁴⁴ The arrival of Japanese convoys increased high command's fear of reinforcements and put pressure on ground commanders, but also validated the ANF's concerns about the threat of Japanese surface vessels and the AAF's limited capacity to destroy them.

³⁸ AAFHS, "Air Action in the Papuan Campaign," 57-58.

³⁹ Kenney to Arnold, 27 November 1942, RG54 B1 VIII, MM.

⁴⁰ Kenney Diary, 13 August 1942, RG54 B1 VIII, MM; MacArthur to Marshall, 16 September 1942, RG4 S1 B16 F1, MM.

⁴¹ 5AF initially experimented with skip-bombing, which involved aircraft attacking shipping at lower altitudes – usually lower than 100m – with bombs fuzed for a five second delay so that the bomb skipped across the water before exploding just below the waterline. The idea originated with the RAF and had gained some traction within the USAAF, which had conducted trials under the direction of Arnold in early 1942. Tests with heavy bombers revealed they were very vulnerable to anti-aircraft fire, but fast light bombers like the A-20 and B-25 were ideal. These aircraft further adapted skip-bombing to release bombs so they struck the side of vessels, which became known as mast-height bombing. Kenney, *Kenney Reports*, 21-22; Timothy Gann, "Fifth Air Force Light and Medium Bomber Operations During 1942 and 1943: Building Doctrine and Forces That Triumphed in the Battle of the Bismarck Sea and the Wewak Raid," School of Advanced Airpower Studies Paper (1993), 12-16.

⁴² Kenney, *Kenney Reports*, 161.

⁴³ Kenney Diary, 2 November 1942, RG54 B1 VII, MM.

⁴⁴ The first echelon of the reinforcement convoy consisted of about 1000 troops and was carried out by five destroyers which left Rabaul at 0800 17 November and arrived at Buna at 2340 that night. The second echelon of 500 troops was delivered by three destroyers which sailed from Rabaul at 1700 18 November and delivered their cargo by 0740 on 19 November. The unloading was completed just before heavy air attacks damaged one destroyer. The 63rd Bombardment Squadron claimed two destroyers and one light cruiser probably sunk. Bullard, *Japanese Army Operations*, 177; Kenney Diary, 17-19 November 1942, RG54 B1 VIII, MM.

Under better conditions and with timely information, however, the AAF's improved techniques yielded better results (Figure 9.5). Allied signals intelligence provided a significant advantage to the AAF, affording early warning of Japanese convoys. On 24 November two destroyers were sunk by seven B-17s attacking from low altitude at night.⁴⁵ USN intelligence also forewarned of a convoy departing Rabaul on 28 November which was promptly attacked by B-17s, damaging two destroyers, and forcing the convoy to return.⁴⁶ Allied air attacks greatly disrupted Japanese convoys during December which saw only three attempts to reach the beachheads. One convoy was forced back on 9 December, while another on 13 December was attacked unloading troops near the Mambare River which resulted in many landing barges being sunk and only a portion of the reinforcements making it ashore.⁴⁷ The last Japanese attempt was made on 18 December by five warships and two transports which were met by heavy bombers and repelled. This marked the collapse of the Japanese supply lines. The Japanese resorted to using submarines and barges to ferry supplies and troops along the New Guinea coast, but this was insufficient to sustain the garrisons.

Month	Aug. 42	Sep. 42	Oct. 42	Nov. 42	Dec. 42	Jan. 43
Sorties	563	786	763	964	1,200	1,184
Bombs	434	425	803	1,261	1,420	1,098
Hits	19	9	93	72	73	129
Damaged	1 DD 1 Transport 2 SS	2 Transport	3 CA 2 DD 9 Transport	1 CA 2 DD 3 Transport	4 DD	1 DD 24 Transport 6 Unknown
Probable	1 CA 1 FS 4 Transport	1 DD	1 CA 1 DD 1 Launch 1 SS	2 DD	4 Transport	1 DD 4 Transport
Sunk	2 Transport	1 Transport	1 Launch 1 SS	2 DD	2 CA 4 Transport 1 Launch	2 CA 6 Transport
Accuracy	4.4%	2.1%	11.9%	5.86%	5.14%	10.01%

Figure 9.5: Results of AAF Anti-Shipping Operations, August 1942-January 1943.⁴⁸

⁴⁵ Kenney's diary notes one destroyer definitely sunk, and one destroyer sustaining a direct hit. It was later confirmed to have sunk. Kenney Diary, 24 November 1942, RG54 B1 VIII, MM; AAFHS, "Air Action in the Papuan Campaign," 57-59.

⁴⁶ Kenney Diary, 29 November 1942, RG54 B1 VIII, MM.

⁴⁷ Kenney Diary, 9-10, 13-14, 18-19 December 1942, RG54 B1 VIII, MM; AAFHS, "Air Action in the Papuan Campaign," 60-61.

⁴⁸ From: AAFHS, "Air Action in the Papuan Campaign," Appendix 1: Summary of Air Operations.

The AAF's wider operational contributions attaining aerial superiority and interrupting Japanese shipping seriously weakened the defending forces and ultimately contributed to the Japanese decision to evacuate. A Japanese officer with the SSF argued defeat at Buna occurred because 'we could not retain air superiority, because we could not supply our troops, and because our navy and air force could not disrupt the enemy supply line'.⁴⁹ The campaign was a formative experience for Kenney who believed it provided 'a demonstration of how the war will be fought in this theatre'.⁵⁰ Kenney insisted that the best contribution his air forces could make was 'to sink ships and shoot down planes', which vindicated USAAF tactical doctrine.⁵¹ However, while 5AF was eventually highly effective at the operational level, during the early phases of the operations it was called upon to directly support ground forces, where its tactical effect was far less effective.

'Something of a Step-Child': Air-Ground Support Operations

NGF had promised air support to both divisions to expedite the capture of the beachhead but ground commanders' hopes that air support could offset the advance's deficiency in artillery contradicted air force thinking.⁵² Both British-Commonwealth and American doctrine favoured aerial superiority and battlefield interdiction as more valuable tasks than ground support as it was the most difficult and potentially costly mission to execute.⁵³ Kenney's assertion that 'the artillery in this theatre flies' has often been interpreted as suggesting aircraft would replace artillery when assessing the role of air support during the beachhead operations.⁵⁴ When the statement is viewed in conjunction with Kenney's conduct of the air war in the SWPA, it is largely concerned with mobility

⁴⁹ Major Mitsuo Kowai, 41st Infantry Regiment, cited in Milner, *Victory in Papua*, 374.

⁵⁰ Kenney to Arnold, 10 December 1942, RG54 B1 VIII, MM.

⁵¹ Kenney Diary, 3 September 1942, RG54 B1 VII, MM.

⁵² New Guinea Force Headquarters and General (Air) War Diary, 17 November 1942, AWM52 1/5/51/20, AWM.

⁵³ *FSR Vol. II: Operations – General 1935*, 16-17, 130, 163; USAF, "Close Air Support in the War Against Japan," 16, 1-3; Joe Taylor, "The American Experience in the Southwest Pacific," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Cooling (Washington DC: Office of Air Force History, 1990), 297-299; Lee Kennett, "Development to 1939," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Cooling (Washington DC: Office of Air Force History, 1990), 47-49.

⁵⁴ This interpretation appears to originate in Mayo's *Bloody Buna* and reoccurs throughout popular histories. However, the letter in full read: 'Tanks and heavy artillery can be reserved for the battlefields of Europe and Africa. They have no place in jungle warfare. The artillery in this theatre flies, the light mortar and machine guns, the rifle, tommy-gun, grenade and knife are the weapons carried by men who fly to war...In the Pacific theatre we have a number of islands...[which] are nothing more or less than aerodromes or aerodrome areas from which modern fire-power is launched...Port Moresby, Lae and Buna are all on the island of New Guinea, but the only practicable way to get from one to the other is by air or by water: they are all islands as far as warfare is concerned. Each is garrisoned by a small force and each can be taken by a small force once local air control is secured. Every time one of these islands is taken, the rear is better secured and the emplacements for the flying artillery are advanced closer and closer to Japan itself'. Kenney to Arnold, 24 October 1942, cited in Watson, "The Papuan Campaign," 118-119; Mayo, *Bloody Buna*, 96.

and the centrality of airfields and air transportation to the offensive.⁵⁵ Kenney saw air power as another means of applying firepower in support of ground operations, but not as a replacement for artillery.

During the Papuan campaign, Allied air support missions were conducted via an improvised system which incorporated elements of Australian and American doctrines, organisations, and capabilities. Ground support missions included direct support aimed at achieving an immediate material or morale effect to enable ground forces to gain an objective, or indirect support which targeted enemy rear areas.⁵⁶ The Australian *Manual of Direct Air Support* and the American *FM31-35 Aviation in Support of Ground Forces* were untested and inherently problematic in their conceptions of tactical air support and reflected an army-centric preference to allocate air assets to ground commanders.⁵⁷ Both used a Rover and Tentacle system for organisation and communication (Figure 9.6). A controlling unit, including an air staff at divisional or corps level coordinated air support requests from ground formations.⁵⁸ Communications between ground units and aircraft were conducted through air support links, while the formation headquarters retained direct communications to all allocated air units.⁵⁹ Air Liaison Sections (ALSs) relayed information for support missions between air and ground units. The entire system was based on wireless communications. However, this aspect proved highly problematic because of reliability and mobility issues with wireless sets in Papua. Furthermore, NGF did not have the number of signals personnel to establish the communications systems envisaged.⁶⁰

⁵⁵ This is likely a reference to the recently completed airlift of the 126th and 128th Infantry Regiments firstly from Australia to Port Moresby, and then forward to airstrips at Wanigela and Porlock Harbour in preparation for the advance on the beachheads. Kenney to Arnold, 24 October 1942, cited in Watson, "The Papuan Campaign," 118-119.

⁵⁶ Both British-Commonwealth and American doctrine defined any action undertaken by air forces in conjunction with the army as air support. However, the language used to distinguish types of air support differed. When referring to air support against front line targets, British-Commonwealth doctrine used the term 'direct support', whereas American doctrine used 'close support'. When referring to support against rear area targets, British-Commonwealth doctrine used the term 'indirect support', whereas American doctrine used 'direct support'. NGF communications generally utilised British-Commonwealth terms, and as such they will be adopted in the thesis. Allied Land Forces SWPA, *Manual of Direct Air Support June 1942* (Melbourne: F.J. Hilton & Co. Pty. Ltd., 1942), 1; USAF, "Close Air Support in the War Against Japan," 1; Kennett, "Developments to 1939," 28-29.

⁵⁷ For a detailed analysis of the *Manual for Direct Air Support*, see Russell Parkin, "Goodwill of the Services and the Problems of Lesser Partner: The Creation of the Australian Manual of Direct Air Support, 8 June 1942," Air Power Studies Centre Paper No. 52 (1997).

⁵⁸ The British-Commonwealth used Air Support Controls, while the Americans used Air Support Commands.

⁵⁹ These were provided by Forward Air Support Links (FASLs) and Rear Air Support Links (RASLs). These were provided by Air Support Parties (ASPs) in the American system.

⁶⁰ Nicola Baker, *More Than Little Heroes: Australian Army Air Liaison Officers in the Second World War* (Canberra: Strategic and Defence Studies Centre Australian National University, 1994), 44-45; USAF, "Close Air Support in the War Against Japan," 3-5; Kennett, "Developments to 1939," 56.

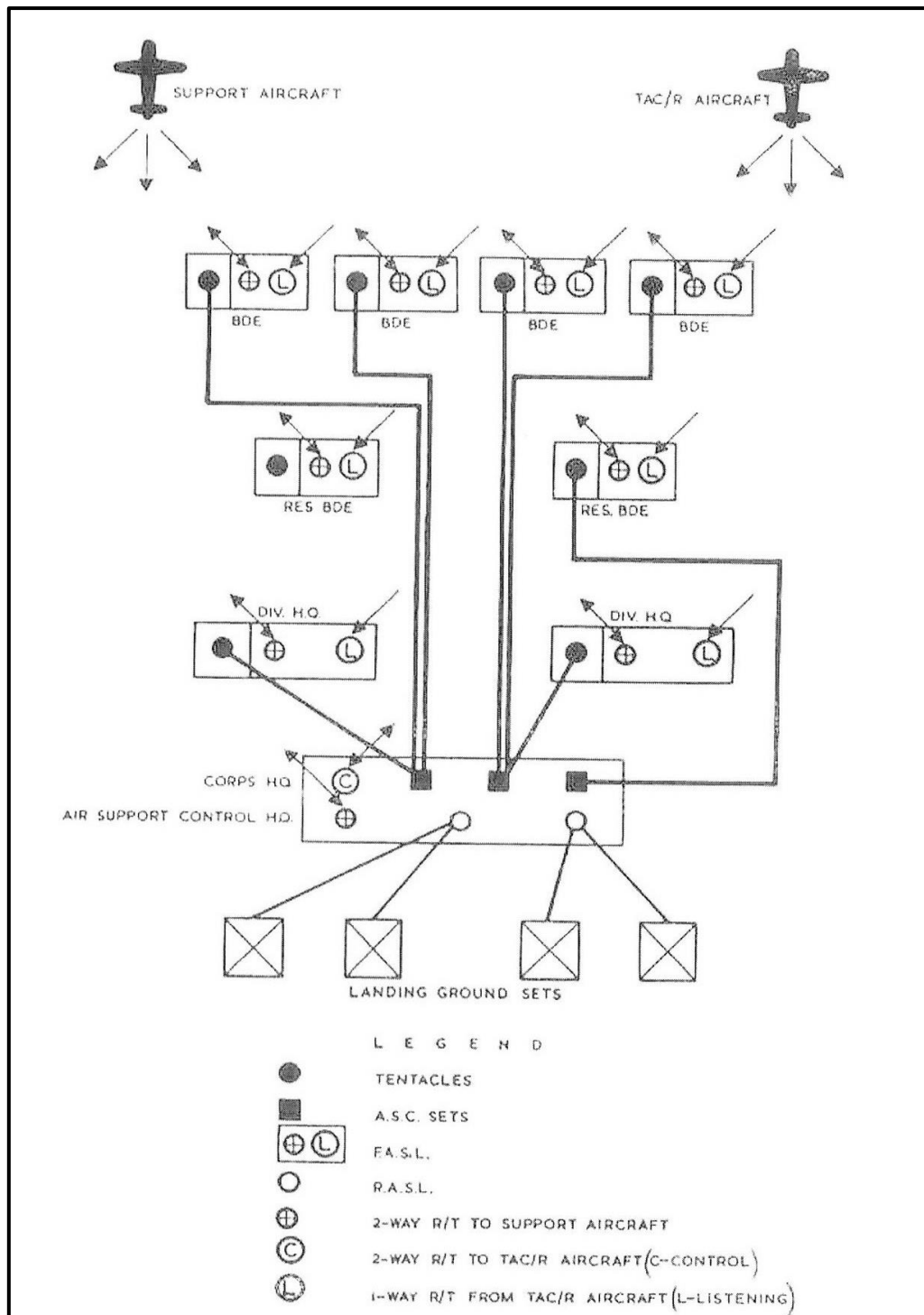


Figure 9.6: Diagram of Rover and Tentacle System for Air Support.⁶¹

Despite flaws in the respective systems, they were highly interoperable, which enabled the creation of a functional hybrid arrangement. Kenney, 5AF, and NGF demonstrated considerable flexibility in devising a system which operated outside of doctrine, but not in contravention of its

⁶¹ From: Paul Johnston, "The Question of British Influence on US Tactical Air Power in World War II," *Air Power History* 52 no.1 (2005): 20.

principles.⁶² It incorporated Australian and American organisation, procedures, and personnel, though still required adaptations to the circumstances. 5AF's liaison officer at NGF noted:

I've have had some experiences with direct air support while on manoeuvres in the United States. I believe the Australian *Manual of Direct Air Support* to be basically sound. Since it was designed primarily for desert warfare, we have to make certain departures from it here because weather and terrain are different...The systems of communication and recognition prescribed therein are similar to our own.⁶³

However, critically, the AAF retained control of all air assets, which meant they were prioritised for missions against Japanese shipping rather than ground support and made the controlling units attached to ground headquarters redundant.⁶⁴

The lack of liaison and coordination between air and ground commands during the early phases was a significant barrier to effective air support. NGF and ADVON5AF were still developing a system for air-ground coordination based on available organisations, staff, and resources. ADVON5AF had begun dealing directly with NGF regarding air-ground support in late October as until then there was 'no provision...at HQ NGF for dealing with general air matters'.⁶⁵ This helped inform NGF of operations against Japanese shipping and airfields which had a 'definite bearing' on land operations.⁶⁶ During November an Air Operations Section was established at NGF under Lieutenant-Colonel Tim Cape to assist the existing GSOIII (Air).⁶⁷ Cape's 'Air Ministry' consolidated intelligence and operational matters and became responsible for assessing and coordinating ground forces' requests for support.⁶⁸ It briefed ADVON5AF on the ground situation and Air Liaison Officers (ALOs) on the required air support.⁶⁹ Additionally, Major T. Bridges from ADVON5AF's Operations Section was attached as the Air Support Officer at NGF and relayed air support requests between the two headquarters.⁷⁰ Coordination was further enhanced when NGF instituted a Senior Army Liaison

⁶² In July 1942, Arnold complained that under Brett '[American] combat units are not being employed in accordance with War Department doctrines and principles...The Australians have been operating our combat units in accordance with their doctrines and no attempt has been made to on our part to gain control'. However, Kenney's reassertion of national division within 5AF had placated some of this anger and permitted him the freedom to apply doctrine as needed. Arnold, "Memorandum," 22 July 1942 cited in Horner, *High Command*, 207; USAF, "Close Air Support in the War Against Japan," 4.

⁶³ Handy, "Report of Military Observer in the Southwest Pacific Theater of Operations," 2 January 1943, #5, RG337 E15A B51, NARA.

⁶⁴ As 5AF controlled all air units, the 2nd Air Support Control (ASC) attached to NGF became an informational relay between air and ground units. Baker, *Little Heroes*, 54.

⁶⁵ NGF, "Air Support in New Guinea Sept. 42-Jan. 43," 23 January 1943, AWM54 85/3/8, AWM.

⁶⁶ NGF, "Air Support in New Guinea Sept. 42-Jan. 43," 23 January 1943, AWM54 85/3/8, AWM.

⁶⁷ Ordinarily, a corps headquarters' staff only contained a GSOIII (Air Liaison).

⁶⁸ NGF, "Air Support in New Guinea Sept. 42-Jan. 43," 23 January 1943, AWM54 85/3/8, AWM.

⁶⁹ NGF, "Air Support in New Guinea Sept. 42-Jan. 43," 23 January 1943, AWM54 85/3/8, AWM.

⁷⁰ Bridges arrived at Adv NGF headquarters on 25 December 1942. New Guinea Force Headquarters and General (Air) War Diary, 25 December 1942, AWM52 1/5/51/22, AWM.

Officer (SALO) who attended all air force and army conferences at NGF and ADVON5AF.⁷¹ However, coordination between NGF and its divisions on air matters was lacking. During December, both Vasey and Eichelberger requested an air officer be attached to their headquarters to improve coordination and avoid instances of friendly fire.⁷² This was denied and ADVON5AF opted to place an officer from 5AF Bomber Command with NGF instead. It was not until 28 December that Bridges visited 7th Division's headquarters to address Vasey's concerns regarding air-ground coordination.⁷³

ALOs had a critical role in relaying accurate and up-to-date information about the ground situation to air units. This was particularly important at the beachheads where target identification was difficult. The allocation of ALOs to combat squadrons was of 'real value' given ground units' inability to establish radio contact with aircraft and where knowledge of the ground situation was vital.⁷⁴ However, the shortage of ALOs meant ALSs could not be assigned to every squadron.⁷⁵ Only the 2nd ALS – attached to No.4 Army Cooperation Squadron RAAF – operated as a complete section given its important work observing for artillery. The 2nd ALS proved very effective coordinating artillery and infantry actions. An ALO explained to the 32nd Division's command how the aircraft might be employed and a 'plan for the campaign was decided'.⁷⁶ 2nd ALS maintained a continuous flow of information between Allied artillery, infantry, and No.4 Squadron which greatly improved situational awareness and responsiveness.⁷⁷ The need to economically assign ALOs eventually led to the reorganisation of the five ALSs into the New Guinea Force Air Liaison Group, which was attached to ADVON5AF.⁷⁸ However, despite greatly increasing liaison and information-sharing between air and ground forces, practical problems of procedure, communication, and identification remained barriers to effective air support.⁷⁹

⁷¹ NGF, "General Staff Instruction No.6: Co-operation with the Air Force," 18 December 1942, Appendix D, AWM52 1/5/51/21, AWM.

⁷² 7th Division General Staff Branch War Diary, 6, 9 & 16 December 1942, AWM42 1/5/14/38, AWM; Eichelberger, *Jungle Road*, 40, 249.

⁷³ 7th Division General Staff Branch War Diary, 28 December 1942, AWM52 1/5/14/38, AWM.

⁷⁴ NGF, "Air Support in New Guinea Sept. 42-Jan. 43," 23 January 1943, AWM54 85/3/8, AWM.

⁷⁵ ALSs rarely operated at the regular establishment of three ALOs per section as the ALOs were often assigned to squadrons as needed. ALSs only operated on full establishment when working with No.4 Army Cooperation Squadron RAAF. Baker, *Heroes*, 67.

⁷⁶ Captain Roderick O'Loan, OC 2nd Air Liaison Section, "2 Aust Air Liaison Section – Operations in New Guinea, November 1942," 24 April 1943, AWM54 81/4/11, AWM.

⁷⁷ ALOs from the 2nd ALS sometimes acted as observers in No.4 Squadron's aircraft to gain a better understanding of the tactical situation. 2nd ALS OC Major Francis O'Hara was killed when the aircraft he was observing from was shot down by Japanese AA fire on 21 December over Buna. O'Hara was the first ALO killed in the SWPA. Gillison, *Royal Australian Air Force, 1939-1942*, 667.

⁷⁸ The reorganisation occurred on 1 January 1943. Four command sections and 17 Squadron Sections were reformed and allocated to air commands. NGF, "Air Support in New Guinea Sept. 42-Jan. 43," 23 January 1943, AWM54 85/3/8, AWM; Headquarters Section New Guinea Force Air Liaison Group War Diary, 1 January 1943, AWM52 1/14/57/4, AWM; Baker, *Little Heroes*, 67.

⁷⁹ NGF, "Air Support in New Guinea Sept. 42-Jan. 43," 23 January 1943, AWM54 85/3/8, AWM

The coordination of air missions was impeded by each division initially adopting different procedures for requesting air support. The 32nd Division followed its “Direct Air Support” memorandum.⁸⁰ Battalions submitted requests directly to divisional command which included map coordinates for targets and friendly troop locations and timings.⁸¹ Divisional command assessed and prioritised each request – favouring indirect missions – before informing battalions of their suitability, then sometimes made direct representations to 5AF or GHQ for air support missions. This excluded NGF from the process.⁸² In contrast, 7th Division’s brigade commanders made requests for air support to division headquarters, which were then made to NGF. Brigade requests included the area to be attacked, specific terrain features rather than map references, timings, bomblines, and the types of support.⁸³ The omission of NGF from some of the 32nd Division’s requests complicated organising air support for the 7th Division as 5AF resources were directly allocated. It became clear that a standard request process had to be established.

Early attempts at air support demonstrated the lack of coordination between air and ground forces. The effects of the first direct support missions on 19 and 21 November were negated by confusion at higher headquarters regarding the details of the 32nd Division’s requests and delays confirming air support to battalion commanders, who remained unaware their air support had been approved.⁸⁴ A battalion CO lamented not being ‘given advance information of the plan’.⁸⁵ In subsequent sorties, aircraft arrived late or failed to appear at all.⁸⁶ The day also resulted in several attacks completely missing their targets and some hitting friendly positions.⁸⁷ Aircraft could not hit the pin-point targets holding up the advance.⁸⁸ An observer described the day’s last mission as:

⁸⁰ 32nd Infantry Division, “Memorandum: Direct Air Support,” 4 November 1942, 332-3.2, RG407 E427 B7886, NARA.

⁸¹ AAFHS, “Air Action in the Papuan Campaign,” 82.

⁸² AAFHS, “Air Action in the Papuan Campaign,” 82.

⁸³ A bomblines is a demarcated zone beyond which aircraft are permitted to attack without risk to friendly forces. 7th Division, “Direct Air Support – Jungle Warfare,” 22 February 1943, AWM54 85/3/8, AWM.

⁸⁴ Map references for air support were received from Warren Force late on 20 November and confirmed by NGF for 0740 the next morning. Support was considerably more than the Direct Air Support Memorandum had envisaged. It included 12 A-20s dropping fragmentation bombs and strafing at 0740 and 10 B-25s dropping 500lb bombs at 0745 against the western ends of New Strip which the III/128th had indicated was strongly held. However, orders confirming the timing for air attacks did not reach the attacking battalions until one hour after the sorties had been made. 32nd Infantry Division G2 & G-3 Journal, #926 & #930 19 November 1942, #1004 20 November 1942, 332-0.7, RG407 E427 B7796, NARA; III/128th Infantry Battalion Journal, 20 November 1942, 332-INF(128)-7-0.7, RG407 E427 B8065, NARA; AAF, “Operations Report,” 21 November 1942, RG30 B9 F3, MM.

⁸⁵ III/128th Infantry Battalion Journal, #1 21 November 1942, 332-INF(128)-7-0.7, RG407 E427 B8065, NARA.

⁸⁶ Another sortie for 1200-1245 was promised but failed to materialise because 5AF feared its aircraft would not meet the deadline and risked hitting friendly troops. Parker, “Notes on Operations Near Buna,” 2 December 1942, AWM 581/7/20, AWM.

⁸⁷ One bomb fell on friendly positions and caused six casualties. III/128th Infantry Battalion Journal, #1 21 November 1942, 332-INF(128)-7-0.7, RG407 E427 B8065, NARA.

⁸⁸ Hawkins, “Report of Action, Papuan Campaign,” 3 April 1943, 332-2, RG407 E427 B7819, NARA.

...an abortive one, as far as ground troops' observation was concerned. One flight of A-20s dropped their complete string of antipersonnel bombs two miles at sea, off Cape Endaiadere. Another flight dropped several heavy bombs on our own forward positions.⁸⁹

The inaccuracy of sorties meant ground forces quickly lost confidence in air support. Friendly casualties had a 'most disheartening effect on morale' and several companies pulled back from their positions without permission.⁹⁰ Furthermore, visual communications methods by ground units to indicate their location via panels proved impractical. Wireless communications were also wholly ineffective. Only one channel was available for two-way communications, but it had to be opened by the aircraft, and ground forces' wirelasses were not functioning reliably.⁹¹ While the failure to inform battalion commanders of the air missions lay with the 32nd Division, coordination, communications, and target identification problems highlighted significant practical issues which needed to be addressed.

Establishing a standard approach for requesting, assessing, and authorising air support missions was critical. Australian and American procedures provided different information and passed along different channels which resulted in 'delays and confusion' about the availability of aircraft and the feasibility of support missions.⁹² From December, Buna Forces agreed to send all air support requests via NGF. NGF's "Requests for Air Support" directive of 9 December confirmed a standard procedure.⁹³ All requests for prearranged air support were forwarded to Adv NGF by 1700 the day prior, then relayed to NGF and its Air Operations Section. This gave air officers greater authority in determining the specifics of air support.⁹⁴ All requests included the nature of support, targets and geographic and visual information about them, whether the attack was coordinated with ground forces, the location and identification of friendly forces, bomblines, and timing windows.⁹⁵ Timing was recognised as the 'crux' of air support coordination.⁹⁶ Ground forces had to rely on timing rather than confirming the arrival of aircraft because of the difficulty communicating with them. This

⁸⁹ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM.

⁹⁰ Parker's report states that 15 men were killed and another 50 wounded, while McCoy's I/128th Bn Journal records 6 killed and 12 wounded. Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM; I/128th Infantry Battalion Journal, 21 November 1942, 332-INF(128)-7-0.7, RG407 E427 B8058, NARA; Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA.

⁹¹ Hawkins, "Report of Action, Papuan Campaign," 3 April 1943, 332-2, RG407 E427 B7819, NARA.

⁹² US Buna Forces G-3 Journal, #2252 5 December 1942, 332-3.2, RG407 E427 B7885, NARA.

⁹³ NGF, "General Staff Instruction No.3: Requests for Air Support," 9 December 1942, Appendix C, AWM52 1/5/51/21, AWM.

⁹⁴ The instruction stated 'The Air Force consider that with the correct target information they are capable of deciding on method of attack, direction of attack, [aircraft] and types of bombs to be used. None of these details are required in requests'. NGF, "General Staff Instruction No.3: Requests for Air Support," 9 December 1942, Appendix C, AWM52 1/5/51/21, AWM.

⁹⁵ NGF, "General Staff Instruction No.3: Requests for Air Support," 9 December 1942, Appendix C, AWM52 1/5/51/21, AWM.

⁹⁶ 7th Division, "Direct Air Support – Jungle Warfare," 22 February 1943, AWM54 85/3/8, AWM.

removed delays due to communications which could negate the effects of bombing.⁹⁷ If sorties arrived after the specified times they were aborted for fear of hitting friendly troops. The process offered greater certainty to ground commanders, but air support could be delayed or interrupted by weather, the availability of aircraft, or competing operational priorities.⁹⁸ The sudden diversion of aircraft or failure to meet timings contributed to a further loss of confidence in air support.

Despite improved systems, air-ground recognition remained a persistent issue. There were two elements to this problem: pilots identifying targets from the air, and ground forces marking their positions. Initially, the maps available for briefings and air requests were inadequate and while photomaps were useful for navigation and identification, they did not provide any additional details the human eye could discern from the air.⁹⁹ The targets themselves were usually concealed groups of bunkers which were difficult, if not impossible, to observe from altitude. Their locations were usually given by a distance and bearing from terrain features which could be used as landmarks, such as kunai patches or creeks, though the coastline offered few distinctive shapes for orientation.¹⁰⁰ However, distinguishing these features from fast-moving aircraft at low altitudes remained difficult.

Allied forces tried different means of visual communication to indicate ground positions. American doctrine advocated the use of identification panels to indicate friendly troops, but this method was unsatisfactory in jungles as overhead vegetation obscured the panels. This meant troops had to display them in open terrain, which invariably drew Japanese fire. Air crews might sometimes sight the panels but could not determine an accurate idea of friendly positions from this information.¹⁰¹ Frustrated by the failure of panels, Lieutenant Colonel Robert McCoy, CO I/128th, established a primitive semaphore system on the beach to indicate to aircraft when they were approaching their targets.¹⁰² NGF's "Requests for Air Support" also tried to formalise the use of

⁹⁷ 7th Division, "Direct Air Support – Jungle Warfare," 22 February 1943, AWM54 85/3/8, AWM.

⁹⁸ 7th Division, "Direct Air Support – Jungle Warfare," 22 February 1943, AWM54 85/3/8, AWM.

⁹⁹ The 32nd Division's direct air support memorandum even noted that references for air support missions using the specified Buna 2in:1ml map would technically be inaccurate: 'In designating points on this map, they must be indicated as the location of the point appears [sic] on the map itself even though it may be somewhat inaccurate'. 32nd Infantry Division, "Memorandum: Direct Air Support," 4 November 1942, 332-3.2, RG407 E427 B7886, NARA.

¹⁰⁰ AAFHS, "Air Action in the Papuan Campaign," 93.

¹⁰¹ Major L.C. Wheeting, G-2 Section US I Corps, to Byers, "Use of Small, Coloured Balloons for Ground-Air Liaison in Jungle Operations," 1 November 1942, 384 Operations Reports, RG338 E339 B288, NARA.

¹⁰² McCoy recalled his battalion's experiences with air-ground communication and coordination: '[The aircraft] couldn't see down through the umbrella [of the canopy]. You couldn't see. The only thing we could do...when we did operate with the planes, when they came over and bombed us, we had a plan... in mind. We had a man right close to the beach...with a long pole that he could stick out. And on that, we had a white rag...when he saw the planes coming, he was to pull a string, and that rag would drop. That meant that they were just about on the target, where to drop their bombs. But I couldn't put out any panels'. Lieutenant Colonel Robert McCoy, CO I/128th Infantry Battalion, OH1515, Wisconsin Veteran's Museum Research Centre.

smoke to indicate enemy positions and flares to designate friendly positions.¹⁰³ However, visual communications were at best unreliable and prone to interference as the Japanese fired their own smoke shells to confuse ground recognition.¹⁰⁴

The Allies conducted several experiments to develop a functional system for air-ground identification. Representative from GHQ, NGF, and 5AF proposed a range of signals systems including tracers, flares, smoke, and balloons.¹⁰⁵ The use of coloured balloons which could be raised or lowered to mark friendly positions was investigated by I Corps in November and was enthusiastically supported by MacArthur, who authorised further studies into marking front line troops in the jungle.¹⁰⁶ The 7th Division also developed a similar concept but included greater liaison though direct communication with aircraft and mapping the location of balloons on aerial photographs.¹⁰⁷ In contrast, Air Force and air liaison groups concluded it was more effective to mark enemy targets rather than friendly troops.¹⁰⁸ Tests concluded:

In the opinion of the observers, both air and ground, smoke is an excellent way of indicating enemy positions. With efficient R/T comms, smoke need not be placed on the target until the aircraft are approximately within one minute's flying time to target. This will obviate giving warning to the enemy of an impending air attack.¹⁰⁹

This method potentially solved the issue of recognition but remained problematic until wireless communications improved with forward troops.

Direct air-ground communications were seldom established due to technical or operational limitations. NGF initially prohibited ground forces from contacting aircraft for fear of enemy fighter interception.¹¹⁰ This was during the period when aircraft were the primary means of supporting

¹⁰³ NGF, "General Staff Instruction No.3: Requests for Air Support," 9 December 1942, Appendix C, AWM52 1/5/51/21, AWM.

¹⁰⁴ USAF, "Close Air Support in the War Against Japan," 14.

¹⁰⁵ The Tracer and Flare system envisaged a dedicated aircraft watch on the ground whose task was to observe and report on the approach of all aircraft. If an aircraft was identified as friendly, a red flare or white tracer would be fired in prolongation of the aircraft's approach. The aircraft would alternate shallow dips and dives or a green flare to indicate recognition. However, this was ruled out because of its complexity and openness to interference. "Means of Identification Ground to Air, Friendly Ground Troops, Friendly Airplanes," 2 December 1942, 384 Operations Reports, RG338 E339 B288, NARA.

¹⁰⁶ Colonel B.M. Fitch, AG GHQ SWPA, "Marking of Front Line Troops," 12 December 1942, 384 Operations Reports, RG338 E339 B288, NARA; Wheeting, "Use of Small, Coloured Balloons for Ground-Air Liaison in Jungle Operations," 1 November 1942, 384 Operations Reports, RG338 E339 B288, NARA; Eichelberger, "Request for Balloons and Hydrogen Gas," 10 November 1942, 384 Operations Reports, RG338 E339 B288, NARA.

¹⁰⁷ 7th Division, "Direct Air Support – Jungle Warfare," 22 February 1943, AWM54 85/3/8, AWM.

¹⁰⁸ Major C. Woodward, OC 2nd Australian Air Support Control, "Subject – Air Ground Recognition and Comn Test 15 Jan 43," 17 January 1943, Appendix A, MP742/1 323/1/98, NAA.

¹⁰⁹ Woodward, "Subject – Air Ground Recognition and Comn Test 15 Jan 43," 17 January 1943, Appendix A, MP742/1 323/1/98, NAA.

¹¹⁰ There is no record of this signal in the NGF or 7th Division War Diary. The 2nd ASC report notes that; 'It is regretted that no copy of these signals is available as all files could not be preserved or carried on the march'. However, it is corroborated by "Notes on Recent Ops 7 Aust Div – Kokoda to Soputa," 13 January 1943,

ground forces. Without forward air links, which were crucial to a responsive Rover and Tentacle system, brigades had limited ability to contact aircraft in flight. Furthermore, the 32nd Division lacked dedicated wireless systems for air-ground communications. Communications therefore had to be conducted over the division's already-strained wireless channels which led to delays from encryption and corruption until suitable equipment arrived on 24 November.¹¹¹ However, even then the division's G-2 noted 'no success was ever obtained in establishing air-ground communications' at Buna.¹¹² The 2nd ASC similarly had little success contacting aircraft supporting Australian forces at Gona and Sanananda. The unit noted attempts to issue instructions or call off attacks were rarely acknowledged as the squadrons allocated to air support missions frequently changed, aircraft neglected to establish contact with ground stations to confirm missions, and ground forces were rarely informed of the frequencies aircraft were using.¹¹³ These issues appear to have been overlooked despite increasingly close liaison between air and ground forces through ALSs. The lack of communication between air and ground forces meant infantry were not able to achieve the level of coordination required to successfully exploit the neutralising effects of aerial bombardment, nor work as cohesively with aircraft as they could with artillery.

Direct support missions never satisfactorily achieved the desired effects and were gradually phased out as the operations progressed. Early American experiences resulted in commanders becoming 'gun-shy' about air support.¹¹⁴ "White" Smith described the air support delivered in Urbana sector on 24 November as a 'fizzle' after 12 P-40s missed their target, while a later sortie strafed the battalion headquarters.¹¹⁵ Eichelberger was reluctant to employ direct support after assuming command because of the deleterious effect it had on morale.¹¹⁶ He described two incidents to Sutherland:

This morning one of our bombers let go of a stick of big bombs on our troops around Buna Creek...Yesterday three friendly planes on our right flank strafed the front line and set fire to an ammunition dump. Tell [Kenney] to give us an even break and not treat us worse than he

AWM54 577/7/35, AWM; Major R.H. Warneford, 2nd Australian Air Support Control, "Brief Report on Ground to Air Communications During Papuan Campaign – Air Support Control 7 Aust Div," 28 January 1943, Appendix B, MP742/1 323/1/98, NAA.

¹¹¹ Handy, "Report of Military Observer in the Southwest Pacific Theater of Operations," 2 January 1943, #5, RG337 E15A B51, NARA; 32nd Infantry Division G-2 & G-3 Journal, #1317 24 November 1942, 332-0.7, RG407 E427 B7796, NARA.

¹¹² Bowen, "Basic Report G-3 32nd Inf Div," undated, 332-0.3, RG407 E427 B7793.

¹¹³ Warneford, "Brief Report on Ground to Air Communications During Papuan Campaign," 28 January 1943, Appendix B, MP742/1 323/1/98, NAA.

¹¹⁴ Harding to Herring, 28 November 1942, HQ I Corps G-3 Journal New Guinea Campaign, RG338 E330, B198, NARA.

¹¹⁵ 32nd Infantry Division G-2 & G-3 Journal, #1339 24 November 1942, 332-0.7, RG407 E427 B7797, NARA.

¹¹⁶ AAFHS, "Air Action in the Papuan Campaign," 83.

does the Japs. We have been told not to give the direction of flight we desire. Our boys in the front line love the air force like the doughboys liked the artillery in the last war.¹¹⁷

Eichelberger believed air support had an important role, but its inaccuracy greatly concerned him:

I still wish we had some precision dive bombers that could lay the bombs in a barrel...If I could be sure nineteen bombs out of twenty would drop on the Japanese I would be willing to have the twentieth come in on our troops.¹¹⁸

The Australians made less use of coordinated direct support missions – one instance of which was aborted after hitting the 39th Battalion at Gona – and instead requested more indirect support missions against Sanananda's rear areas.¹¹⁹

Direct support's effect on Japanese positions was also unclear. Despite considerable tonnages of bombs and munitions used against enemy positions (Figure 9.7 and 9.8), accuracy and the types of ordnance limited air support's neutralising effects. Only a small proportion of 5AF's aircraft were specialised attack aircraft, and 5AF lacked dive-bombers which could make precision attacks. Low-altitude strafing and bombing using fragmentation ordnance by A-20As and Beaufighters nor medium-altitude bombing by medium and heavy bombers could guarantee the degree of accuracy needed to hit concealed and protected positions close to friendly troops.¹²⁰ Instantaneous-fuzed fragmentation bombs detonated on contact with overhead cover and usually failed to penetrate Japanese positions. Demolition bombs were better-suited to penetrating overhead protection and destroying bunkers, but aircraft were unable to achieve the pin-point accuracy to destroy specific targets. Heavier demolition ordnance also required troops to be withdrawn between 200-500m from their front-line positions to accommodate the safety zone. The long delay between troops reoccupying their positions and beginning their advance negated any effect on the Japanese defences.¹²¹ These factors, coupled with the inability to adjust air attacks, made it less preferable to artillery and mortar support.

¹¹⁷ Eichelberger to Sutherland, 11 December 1942, RG41 B1 F2, MM.

¹¹⁸ Other American officers also expressed a desire for aircraft more suited to precision ground support. Colonel Harry Knight, USAGF Observer, reported 'close support of ground forces was a dismal failure during this battle' and lamented the lack of dive-bombers which might have alleviated some of the issues with identification and accuracy. Eichelberger to Sutherland, 22 December 1942. RG41 B1 F2, MM; Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA.

¹¹⁹ Parbury, "Notes on Recent Ops 7 Aust Div – Kokoda to Soputa," 13 January 1943, AWM54 577/7/35, AWM.

¹²⁰ A-20As were designated "Bostons" by the RAAF and "Havocs" by the USAAF. The A-20A was a variant which had been designed for low and medium altitude bombing. Those in Australia had been heavily modified at Kenney's instigation to bolster their forward firing machinegun armament by adding four .50 calibre machine guns in addition to the four .30 calibre machineguns already fitted and extending its range by adding two 450-gallon fuel tanks in the bomb bay. This reduced its payload but significantly increased its ability to make flights over the Owen Stanley ranges. Watson, "The Papuan Campaign," 106; Taylor, "The American Experience," 338-339; AAFHS, "Air Action in the Papuan Campaign," 81.

¹²¹ Handy, "Report of Military Observer in the Southwest Pacific Theater of Operations," 2 January 1943, #5, RG337 E15A B51, NARA.

	Urbana		Warren	
Bomb Type	Number	Tonnage	Number	Tonnage
Demolition	375	59.25	353	65.25
Fragmentation	1335	13.25	1472	14.75
General Purpose	20	2.5	49	8

Figure 9.7: Ordnance used in Air Support Missions, Buna, 2 November 1942-23 January 1943.¹²²

Ordnance	Direct Support	Indirect Support	Total
Bombs (tons)	30	197	227
Ball Ammunition (rds)	97,000	303,000	400,000

Figure 9.8: Ordnance and Ammunition Expenditure, 5AF, 26 August 1942-23 January 1943.¹²³

Despite the limited effectiveness of air attacks, 5AF remained committed to supporting ground forces throughout the operations. 5AF authorised 72 of the 110 requested support missions between November 1942-January 1943.¹²⁴ However, this represented only a small proportion of 5AF's 611 total missions. Direct support remained 'something of a step-child' to 5AF and without adequate air-ground recognition and communications, it remained problematic for the duration of the campaign.¹²⁵ However, constant air attacks had a moral effect on the defenders. Captured diaries documented the continual presence of Allied aircraft. Private Kiyoshi Wada wrote 'not a single one of our planes flew overhead, and enemy strafing was very fierce...it would be good if two or three of our planes came over' while another at Buna recorded 'enemy planes unbearable today'.¹²⁶ The Japanese air forces' inability to intercept Allied sorties contributed to the sense of abandonment felt by many of the garrison.

¹²² Demolition ordnance primarily included 100lb and 500lb bombs. Less frequently used were 300lb and some 2000lb bombs. Fragmentation ordnance was primarily 20lb & 30lb fragmentation bombs and 23lb parachute fragmentation bombs. AAF SWPA, "Operational Survey No. 1: Land-Air Offensive in New Guinea Kokoda to Gona-Buna, Nov. 2nd, 1942 – Jan. 23rd, 1943," 6, AWM54 581/7/39, AWM.

¹²³ "Air Support Since Ioribaiwa from 26 Aug 42," Appendix D, MP742/1 323/1/98, NAA.

¹²⁴ Of the 29 missions which were rejected, 15 were refused because the target was deemed unsuitable; 12 were refused because of aircraft availability; and 11 were not carried out due to adverse weather conditions. "Air Support Since Ioribaiwa from 26 Aug 42," Appendix D, MP742/1 323/1/98, NAA.

¹²⁵ Handy, "Report of Military Observer in the Southwest Pacific Theater of Operations," 2 January 1943, #5, RG337 E15A B51, NARA.

¹²⁶ Private Kiyoshi Wada, cited in Paull, *Retreat from Kokoda*, 302; Buna Forces, "Interrogation of Yoshida, Toshio Captured Japanese Prisoner 18 December 1942," AWM52 8/2/18/32, AWM.

Conclusion

The beachhead operations, in conjunction with the concurrent operations in the Solomons, established that the joint effort of air, land, and naval forces was paramount to successes in the Pacific. However, the beachheads demonstrated a lop-sided involvement heavily weighted toward the air force, with the ANF playing a limited role in supporting the campaign. Criticism of the ANF reflected a lack of mutual understanding between the services: a product of MacArthur's scepticism of the navy and emphasis on single-service commands. The lack of liaison across this divide meant ground commanders had unreasonable expectations of what naval forces could contribute, while the navy pursued an approach that was fundamentally defensive and based on preserving its forces in the face of a potentially stronger threat from the Japanese. It was demonstrative of the strategic uncertainty and balance of forces in the Pacific during late 1942 and early 1943.

The AAF therefore played the predominant role supporting the ground operations in Papua. The establishment of aerial superiority was a precondition for Allied victory. Without it, the Allies' supply lines – which proved highly vulnerable in the early phases – would have been unable to sustain the build-up of personnel, supplies, and equipment which was required for tactical success. The AAF also developed considerable tactical proficiency engaging Japanese shipping and crippling Japanese supply. This also contributed to the conditions necessary for the Allies to achieve results on the ground. The AAF's campaign against the Japanese supply lines demonstrated the significance of logistics to the campaign.

The AAF's efforts at direct support, however, were less satisfactory. The barriers to effective air-ground support in the jungle were not easily overcome. The combination of inexperience, improvised doctrine, practical difficulties, and a lack of understanding between air and ground forces prevented direct support from providing ground forces with the fire support necessary to neutralise or destroy Japanese positions and enable attacks. However, Allied commands recognised many of these shortcomings and proved responsive to these issues. They adapted organisation, procedures, and techniques to improve liaison, coordination, and recognition. However, given the difficult conditions and limited resources, the issues were never satisfactorily addressed by the operations' conclusion. However, the lessons were thoroughly noted and formed the basis for Kenney's *Allied Air Forces SWPA Air Support Doctrine*, released in mid-1943.¹²⁷

Experiences with airpower in Papua validated Kenney's conception of tactical air power. He concluded:

...We will keep on – first gaining local air control...then bombing and strafing to kill...the enemy off and prevent his getting supplies and reinforcements. This part goes through quite

¹²⁷AAF SWPA, "Allied Air Force SWPA Air Support Doctrine (1943)," AWM54 85/3/8, AWM.

rapidly. Eventually, however, the troops get in close contact in an area so restricted that if we bomb we kill both our troops and the Japs.¹²⁸

The operational-level achievements of the AAF contributed far more to the Allies' victory than direct support missions. The beachheads showed that while air power could play a role in supporting ground troops, direct support was necessarily provided through combined arms tactics involving artillery and eventually armour. Again, the Allies would need to adapt methods for coordination and overcome the practical difficulties imposed by the jungle.

¹²⁸ Kenney to Arnold, 1 January 1943 cited in USAF, "Close Air Support in the War Against Japan," 16.

Chapter Ten

‘A Compromise to Attain Results’:

Combined Arms Warfare

In most instances, it was a compromise to attain results with the means available in which SURPRISE was the most important element. Most of the fighting was at close range due to limited visibility. In a mobile situation, the infantry could not wait for artillery that lacked the mobility to keep up. Air strafing was employed when suitable targets were presented. Tanks were employed over unfavourable terrain to give impetus to the infantry attack when its momentum was lost due to lack of adequate artillery support. However, the campaign proved that the basic tactical doctrines are correct, but special application is necessary in adapting these tactics to conditions peculiar to the jungle.¹

Lieutenant-Colonel John B.F. Dice
Land Headquarters (G Branch)
“Notes from Theatres of War: New Guinea”
July 1943

Combined arms tactics involving coordinated actions between infantry, artillery, and armour were crucial to many of the significant tactical successes achieved by Allied forces. As the previous chapters have demonstrated, infantry had significant difficulty overcoming prepared positions relying on their own arms, though their tactics and techniques evolved to better address the challenges, while direct air support proved ineffective and unreliable. Initial expectations that the beachheads could be secured without conventional fire support were quickly quashed and it became clear that artillery and armour were not redundant in jungle fighting. However, the application of offensive combined arms tactics had to be adapted to meet the unique and unexpected conditions of the beachheads. The difficulties imposed by terrain and logistics, the training of forces, and their coordination with different combat arms had to be accommodated. The Allies’ organisation, tactics,

¹ Dice, “Notes from Theatres of War: New Guinea July 42 – January 43,” undated, AWM54 519/6/51, AWM.

and techniques underwent considered adaptation to complement evolving infantry methods. Despite practical challenges to the employment of artillery and armour, they proved vital to Allied successes.

The effectiveness of artillery, which provided the bulk of infantry support, was restricted by the inherent challenges of the terrain. Identification of targets and observation of fire was difficult in the jungle and remained unsatisfactory until aerial observation began. The effectiveness of artillery fire was further restricted by the limited number of guns and ammunition. While the volume of fire that could be employed was often sufficient for neutralisation, the strength of the Japanese bunkers and ineffectiveness of ordnance often negated its effects. Subsequently, and complementing the infantry's shift towards small-unit attacks on designated positions, artillery adopted fire plans which employed concentration and accuracy over volume. This approach required the development of mutual confidence and understanding through close liaison between infantry and artillery units to ensure the effective exploitation of artillery fire.

The deployment of armour gave the Allies mobile fire support to enable infantry to close against heavily defended positions. While armour improved infantry's protection and immediate firepower, it was not without drawbacks. Armour's employment was fundamentally limited by terrain. The Allies could also only deploy light tanks, which were not designed for infantry support. As neither the crews nor infantry were experienced in working together, tactics and techniques for coordination had to be improvised and adapted on the battlefield. Again, concerted efforts were made to develop mutual understanding between the two arms to mitigate the respective limitations and overcome deficiencies in communication and coordination. While armour was essential to the breakthrough at Buna, its vulnerabilities and limitations were fully demonstrated at Sanananda.

Each supporting arm provided infantry with an additional element of firepower, mobility, or protection in attack. They were vital components to Allied attacks, though they were not always effective. Conventional doctrine and methods had to be adapted judiciously to meet tactical and environmental conditions. Innovation and experimentation with equipment, organisation, and tactics provides ample evidence the Allies forces consciously sought to learn and adapt during the battles and highlighted the centrality of combined arms principles to modern warfare.

'Difficulties Rarely Mentioned': Artillery at the Beachheads

Allied doctrine recognised field artillery as the main supporting arm for infantry. Artillery enabled the manoeuvre of friendly forces via the neutralisation or destruction of the enemy. The main factors in an effective fire plan which would enable infantry to reach and hold their objective

were accuracy, the weight of fire to achieve the desired effect, and responsiveness.² The accuracy of indirect artillery fire – either through observed or predicted shoots – was dependent on precise information. Predicted shoots required complex calculations and accurate survey to determine the location of guns and targets. Observed fire could be moved onto targets by incremental adjustments relayed from an observer to the firing unit. Fire missions included preparations prior to an assault to cause casualties or damage defences, covering fire to neutralise enemy positions during an assault, and harassing fire to disrupt enemy rear areas.³ Typically, offensive fire plans took the form of a barrage, which brought down fire in lines across an area, or concentrations against specific targets. Figure 10.1 shows the weights of fire necessary to achieve specific effects.⁴ The flexibility and responsiveness of artillery was determined by command, communications, and fire control. Doctrine advised the command of artillery was most effective if centralised under a single commander at the highest ‘practical’ level – usually corps – but offered flexibility dependent on the scale of operations.⁵ Artillery might be decentralised and sub-allotted ‘in support’ or ‘under command’ of formations or units.⁶ The extent to which control over artillery was decentralised was determined by communications and the dispersal of battle.

Allied doctrines diverged on fire control. American doctrine favoured the employment of massed battalion fires calculated from a fire direction centre (FDC) at the battalion’s headquarters and conducted at battery-level.⁷ The battalion remained the primary firing unit, though battery commanders could still conduct observed fire independent of the battalion.⁸ British-Commonwealth

² This chapter uses British-Commonwealth terminology from the period when discussing artillery matters. Many of these terms have modern equivalents. *FSR Vol. II: Operations – General 1935*, 9-13; *FM100-5: Operations 1941*, 8-10.

³ American doctrine primarily recognised ‘destruction fire’ and ‘neutralisation fire’. War Department, *FM6-20: Field Artillery Tactics and Technique 1941* (Washington DC: United States Government Printing Office, 1941), 97-98; *FSR Vol. II: Operations – General 1935*, 9-13.

⁴ By 1944, the British War Office had determined the intensity of fire needed to achieve specific effects. While these measurements were not used by artillerymen in 1942, they are useful for assessing the potential effectiveness of artillery fire during the beachhead operations. Neutralising was defined as; ‘To prevent enemy movement and observation, and in cases of greater effect to prevent the effective use of enemy weapons. Effect to last during the bombardment’. This was assumed against troops in open or weapons pits. Morale was defined as; ‘To produce, in addition to neutralisation, a lack of will to resist continuing for some time after the end of the bombardment’. Lethal was defined as that which resulted in 2% casualties to troops in weapon pits and 20% casualties to troops in the open, while material effect refers to the destruction of 1.5% of weapons in prepared positions and 20% destruction of motor transport. J.B.A. Bailey, *Field Artillery and Firepower* (Basingstoke: Taylor & Francis, 1989), 16; Nigel Evans, “British Artillery in World War 2: Effects and Weights of Fire.”

⁵ *FSR Vol. II: Operations – General 1935*, 9.

⁶ *FSR Vol. II: Operations – General 1935*, 9.

⁷ Boyd Dastrup, *King of Battle: A Branch History of the US Army’s Field Artillery* (Fort Monroe: Office of the Command Historian US Army Training and Doctrine Command, 1992), 197; War Department, *FM6-40: Field Artillery Firing 1939* (Washington DC: United States Government Printing Office, 1939).

⁸ Dastrup, *King of Battle*, 197-198.

Effect	Rate/Weight of Fire			
	25-pdr Gun	3.7" Howitzer	Heavy Mortar	105mm Howitzer
Neutralising (0.02-0.08 lb/yd ² /hr)	8-32 rounds per hour	8-32 rounds per hour	12-48 rounds per hour	5-19 rounds per hour
Morale (0.1 lb/sq yd/hr)	40 rounds for 4 hours	40 rounds for 4 hours	60 rounds for 4 hours	24 rounds for 4 hours
----- (0.25 lb/sq yd/min)	----- 100 rounds for 15 minutes	----- 100 rounds for 15 minutes	----- 150 rounds for 15 minutes	----- 59 rounds for 15 minutes
Lethal (0.1 lb/yd ²)	40 rounds	40 rounds	60 rounds	24 rounds
Material (0.1 lb/yd ²)	40 rounds	40 rounds	60 rounds	24 rounds

Figure 10.1: Rates and Weights of Fire to Achieve Effect in Area 10,000yds².⁹

doctrine gave greater responsibility to lower levels. Fires were often conducted at troop-level which made it more responsive. Responsiveness was also influenced by the role and authority of observers. British-Commonwealth observers were placed further forward with attacking sub-units and had the authority to order immediate fire from their troop or battery, whereas American observers were not located below battalion-level and could only request fire.¹⁰ This highlighted the British emphasis on responsiveness compared to the American emphasis on mass.

The mixed Australian-American artillery force at the beachheads demonstrated some of the issues caused by different doctrines. Colonel Horace Harding, I Corps Artillery, noted the potential difficulties of integrating the two forces:

Whilst the Australians undoubtedly have artillery that could be used their methods of employment are so different from ours that their use in a mixed force would present great difficulties. They have not developed the technique of massing fires to the extent our artillery has.¹¹

⁹ These values are calculated from an equivalence with 25-pdr ordnance. A 3.7" howitzer shell had a comparable effect to a 25-pdr shell. A 105mm howitzer shell had 1.7 times the effect. The equivalence of heavy mortar shells is calculated on comparison of shell weight and explosive weight of rounds, which equates to 66% of a 25-pdr HE shell. Evans "British Artillery in World War 2: Weight and Effects of Fire."

¹⁰ During 1943 changes were made so that artillery observers could be assigned to forward infantry companies. This was a product of experiences in North Africa during late 1942. John McGrath, *Fire for Effect: Field Artillery and Close Air Support in the US Army* (Fort Leavenworth: Combat Studies Institute Press, 2010), 59-60.

¹¹ Colonel Horace Harding, US I Corps Artillery, "Recommendations for Additional Artillery Units for the Southwest Pacific Theatre," 22 September 1942, 332 HQ I Corps Artillery, RG338 E339 B277, NARA.

Similarly, Lieutenant-Colonel Keith O'Connell, who temporarily commanded Allied artillery at Buna, thought the Americans were 'technically qualified from a theoretical point of view but did not see the picture'.¹² Australian officers did not 'trust' attempts to control fire through an FDC at Buna despite tests which proved accurate to within 50m of targets.¹³ The decentralisation and dispersal of fire sub-units and the reliance on observed fire made the British-Commonwealth more appropriate for the conditions, but artillery still faced a number of technical and practical challenges to develop a workable system.

The organisation and command of artillery reflected the *ad hoc* deployment of guns during the operations. Artillery operated in sections, troops, and batteries rather than in regiments or battalions as intended, which led to the breakdown of tactical unity and the decentralisation of artillery.¹⁴ NGF's artillery was commanded by Brigadier Lewis Barker, who, due to a shortage of artillery staff in theatre, simultaneously served as CRA 7th Division, CRA New Guinea Force, and CCRA (Figure 10.2).¹⁵ Barker went forward to join Headquarters Adv NGF at the end of November. NGF retained centralised control over artillery operations because of the limited artillery officers available in each division's area and complex firing arrangements.¹⁶ The wide dispersal of firing units required Barker to carefully monitor and coordinate artillery plans between sub-units and across the Allied sectors while trying to reconcile technical and tactical differences between the Australians and Americans.¹⁷ At Buna, an additional senior artillery officer was attached to both Warren and Urbana Force headquarters. This complicated communications by duplicating signals, but it was the best

¹² Lieutenant-Colonel Keith E. O'Connell, CO 2/1st Field Regiment, "Report by Lt Col K.E. O'Connell," undated, AWM54 581/7/26, AWM.

¹³ H. Harding to Lieutenant Colonel James Collins, US I Corps, 26 December 1942, 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

¹⁴ Major N.A. Vickery, OC 2nd Australian Field Battery, "B.C.'s Memo No. 1: Tropical Warfare – The Regiment and the Individual," 22 January 1943, AWM52 4/2/1/20, AWM.

¹⁵ Barker was a highly experienced artillery officer who had commanded the 2/1st Field Regiment in the Middle East and served as Director of Artillery at LHQ upon his return to Australia.

¹⁶ Barker became CRA 7th Division on 1 September 1942. Headquarters RAA 7th Division became Headquarters RAA NGF on 17 October 1942. Lieutenant-Colonel Keith O'Connell, CO 2/1st Field Regiment, who was present in the forward areas, became CRA 7th Division after Buna was captured and the artillery in the 32nd Division's area was consolidated to support operations against Sanananda. Brigadier General Albert Waldron was the senior American artillery officer. Lieutenant Colonel Melvin McCreary was present as the XO. American artillery personnel participating in the beachhead operations totalled 9 officers and 63 enlisted men. Barker, "Artillery Operations in Buna-Gona Area," 31 January 1943, AWM54 581/6/9, AWM; RAA 7th Division War Diary, 17 October 1942, AWM52 1/4/14/15, AWM; Major Earl Kindig, "History of Artillery in the Buna Campaign," 23 April 1943, 332-ART-0.3, RG407 E427 B7946, NARA.

¹⁷ Barker, "Artillery Operations in Buna-Gona Area," 31 January 1943, AWM54 581/6/9, AWM.

possible solution to ensure coordination between infantry and artillery as it was impractical for a single officer to travel between each sector.¹⁸

Sector	Commanding Officer	Original Command	Period
NGF	Brig. Lewis Barker	CCRA	1 Sep.42-23 Jan. 43
Buna	Brig Gen. Albert Waldron	CG 32nd Division Artillery	15 Nov.-3 Dec. 42
	Lt-Col. Keith O'Connell	CO 2/1st Field Regiment	3-8 Dec. 42
	Maj. Cyril Thomas	BMRA NGF	6-8 Dec. 42
	Col. Horace Harding	US I Corps Artillery	8 Dec. 42-23 Jan 43
Soputa-Gona	Maj. Arthur Hanson	BC 51 Battery, 2/1st Field Regiment	23 Nov. 42-2 Jan. 43
	Lt-Col. Keith O'Connell	CO 2/1st Field Regiment	4-23 January 1943

Figure 10.2: Artillery Commanders, November 1942-January 1943.

The initial allocation of artillery reflected the Allies' assumption the beachheads were weakly defended and their limited capacity to transport and supply the guns. Figure 10.3 shows the piecemeal deployment of artillery during the campaign. No formation fought with a full complement of guns, nor did NGF employ any corps-level artillery.¹⁹ The Allies deployed 28 guns of four different calibres from five different units. This complicated supply, control, and communications as sub-units were divorced from parent units and became primary fire-units themselves. Brigadier General Albert Waldron noted that high command dismissed assigning artillery to the advance because of the difficulties transporting it by sea or air and the need for a rapid advance.²⁰ However, he believed artillery was still necessary in jungle fighting and made multiple representations to GHQ and NGF. Waldron was able to secure only one section of the Australian 1st Mountain Battery and a troop from the 2/5th Field Regiment to support the American advance.²¹ Meanwhile, the 7th Division advanced without artillery.

¹⁸ It took between six to eight hours to move between the two headquarters because of inadequate lateral interior communications and the deterioration of existing tracks in heavy rain. Barker, "Artillery Operations in Buna-Gona Area," 31 January 1943, AWM54 581/6/9, AWM.

¹⁹ A British-Commonwealth corps' artillery included two field regiments and a medium field artillery regiment, totalling 48 25-pdr guns and 16 4.5" medium guns. NGF's corps-level artillery and the 32nd Division's artillery remained in Australia. Artillery units in Papua were deployed to defend Port Moresby and Milne Bay. NGF, "Location Statement as at 2359 Hrs 15 November 1942," 15 November 1942, AWM52 1/5/51/20, AWM.

²⁰ Waldron noted that despite trials in Australia proving artillery's capabilities in the jungle once in place, 'no one believed us and became quite annoyed at our insistence'. Sea transport could not be secured for a battalion of 105mm howitzers, while airlifting a battalion of pack howitzers was considered then dismissed because of the need for a quick advance. Brigadier General Albert W. Waldron, 32nd Infantry Division Artillery, to Ward, 5 March 1951, Interviews, RG319 E53 B5, NARA.

²¹ One 3.7" howitzer was allotted to the 7th Division but after 'vague' verbal orders it moved to Boreo with the 32nd Division. 1st Australian Mountain Battery, "Report on 1 Aust. Mountain Battery 10 Nov., 42 – 20 Jan., 43: Part 1 – Operations Appendix 'A': Movement of One Gun from Kokoda-Kakendetta," undated, AWM52 4/9/1/1, AWM; Waldron to Ward, 5 March 1951, Interviews, RG319 E53 B5, NARA.

Unit	Detachment	Equipment	Date Moved	Means of Transport	Final Location	Officer I/C
1st Australian Mountain Battery	1 Section	2 x 3.7" Howitzers	10 Nov. 42	Air to Pongani Barge to Hariko Jeep to Sth Cape End	Boreo Village	Maj. Martin O'Hare, RAA
"	1 Sub-section	1 x 3.7" Howitzer	15 Nov. 42	Air to Kokoda Carriers to Kakendetta Jeep to Simemi	Boreo Village	Capt. W.M.J. Quinn, RAA
2/5th Field Regiment	Detachment E & F Troop, 55 Battery	4 x 25-pdr Guns (2 lost 16 Nov., replaced)	16-17 Nov. 42	Ship to Porlock Barge to Hariko Jeep to Giropa Point	Embogo-Hariko Giropa Point	Maj. William Hall, RAA
2/1st Field Regiment	E Troop, 51 Battery	4 x 25-pdr Guns	23 Nov. 42	Air to Dobodura Jeep to Ango	Ango	Capt. Herbert Manning, RAA
"	F Troop, 51 Battery	4 x 25-pdr Guns	23 Nov. 42	Air to Popondetta Jeep to Soputa	Soputa	Maj. Arthur Hanson, RAA
"	2 Battery	8 x 25-pdr Guns	4 Jan. 43	Ship to Oro Bay Barge to Hariko Jeep to Giropa Point	Giropa Point	Maj. N.A. Vickery, RAA
129th Field Artillery Battalion	1 sub-section, A Battery	1 x 105mm Howitzer	27 Nov. 42	Air to Dobodura Jeep to Ango	Ango	2nd-Lt. H. Jackson, US Army
13th Field Regiment	1 Section, D Troop, 50 Battery	2 x 4.5" Howitzers	20 Dec. 42	Air to Dobodura Jeep to Simemi	Simemi	Capt. N.R. Stokes, RAA
"	1 Section, D Troop, 50 Battery	2 x 4.5" Howitzers	21 Dec. 42	Ship to Oro Ba Barge to Hariko Jeep to Simemi	Simemi	"

Figure 10.3: Artillery During the Beachhead Operations, 10 November 1942-23 January 1943.

As the strength of the Japanese defences became clear, guns had to be flown or shipped forward. However, as sea supply proved more reliable, Allied artillery was concentrated in the Buna area. The wide dispersal of gun sub-units meant not all were favourably sited for all missions, which limited the number of guns which could be used on certain targets.²² While artillery could fire across the divisional boundary, it was generally used in support of the division in whose sector it was located.²³ This arrangement meant the 7th Division relied on a single troop of 25-pdrs at Soputa until January 1943. When fighting shifted towards Sanananda, the location of guns also proved problematic as those at Buna had to fire obliquely across the Allied front, which prevented fire on targets in close proximity to Allied troops.²⁴ Despite improved supply, artillery support never approached conventional establishments shown in Figure 10.4.

Formation/Attack	Conventional Establishment	Available
7th Division Sanananda & Gona 23 Nov. 42-2 Jan. 43	72 x 25-pdr guns	4 x 25-pdr guns
7th Division Sanananda 12 Jan. 43	72 x 25-pdr guns	12 x 25-pdr guns
126th & 128th RCTs Buna 19-23 Nov. 42	24 x 105mm howitzers 12 x 155mm guns	3 x 3.7" mountain howitzers 2x 25-pdr guns
Warren Force & 127th RCT Buna 5-18 Dec. 42	36 x 105mm howitzers 12 x 155mm guns	3 x 3.7" mountain howitzers 8 x 25-pdr guns 1 x 105mm howitzer
18th Brigade Buna 18 Dec. 42	24 x 25-pdr guns	3 x 3.7" mountain howitzers 8 x 25-pdr guns 1 x 105mm howitzer

Figure 10.4: Allied Artillery Support at the Beachheads, 19 November 1942-12 January 1943.

²² 18th Infantry Brigade, "Part II: Lessons Learnt in Cape Endaiadere-Giroa Point and Sanananda Area Ops," undated, AWM54 581/7/31 [1], AWM.

²³ The problem of supporting two fronts simultaneously was demonstrated when O'Connell, then acting as Commander 32nd Division Artillery, was informed on the evening of 4 December he had to prepare artillery plans to support attacks in both Warren and Urbana sectors the next morning. O'Connell did not receive field orders until late in the evening. The loss of line communications just prior to the attack prevented the observer with Urbana Force relaying information regarding targets, forcing one troop to shoot by predicted fire, while the other troop only received vague communications about targets for Warren sector. Last-minute delays and changes to targets rendered the fire plan ineffective. O'Connell, "Report by Lt Col K.E. O'Connell," undated, AWM54 581/7/26, AWM; Barker, "Artillery Operations in Buna-Gona Area," 31 January 1943, AWM54 581/6/9, AWM.

²⁴ 7th Division General Staff Branch War Diary, 8 January 1943, AWM52 1/5/14/45, AWM.

The difficulties of Identifying and observing targets to ensure accurate and effective artillery support became apparent during the first week of the operations. Infantry had difficulty providing specific targets which resulted in fire being conducted against general areas, which was less likely to neutralise defenders. Artillery observers also had difficulty observing fires. Captain Herbert Manning, BC 51 Battery, 2/1st Field Regiment, noted Observation Posts (OPs) had: '...no command at all, practically impenetrable jungle with open strips and all perfectly flat. To date only one observed shoot carried out. Infantry even unable to observe their mortar fire'.²⁵ Artillery expenditure was also greatly constrained by the limited supply capacity available to the advance. Parker believed 300-400 rounds of fire by Warren Force's 3.7" howitzers against Duropa Plantation would have helped the Americans push through the Japanese outposts, but only 30 rounds were fired on the area, which was insufficient to neutralise Japanese positions.²⁶ However, this would have expended the section's ammunition supply.²⁷

Coordination between infantry and artillery was poor during the early attacks. American infantry were unfamiliar working with artillery and lacked mutual understanding and confidence in the guns. The first fire mission was halted by Hale after only one round for fear of drawing counter-battery fire.²⁸ Some American infantry commanders were reluctant to adopt Australian artillery units. "White" Smith refused to work with Manning's troop of 25-pdrs based at Dobodura until Waldron intervened and formalised support.²⁹ After a week, Manning reported:

Infantry apparently well pleased with use of guns – main difficulty to be allowed to use them. The US Infantry Command have no appreciation of arty as a support weapon – their troops do not make the best use of neutralising fire. Effect on morale of troops appears to be extremely good'.³⁰

Australian officers noted American infantry were hesitant to advance under artillery fire for fear of friendly fire casualties. This was a product of their limited training with live artillery – discussed in Chapter Two – and recent experiences with air support.³¹ Subsequently, artillery fire was rarely called on targets closer than 300m from American positions, which meant troops had to be withdrawn to allow fire on positions close to the American lines. However, the delays in regaining

²⁵ Captain H.A. Manning, 2/1st Field Regiment, "Report by Capt H.A. Manning," 3 December 1942, AWM54 581/7/8, AWM.

²⁶ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM; 1st Australian Mountain Battery, "Report on 1 Aust. Mountain Battery," undated, AWM54 75/4/20, AWM.

²⁷ Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM; 1st Australian Mountain Battery, "Report on 1 Aust. Mountain Battery," undated, AWM54 75/4/20, AWM.

²⁸ The section moved forward with 500 rounds of ammunition. However, supply was subsequently severely impacted by the loss of the small ships on 16 November. 1st Australian Mountain Battery, "Report on 1 Aust. Mountain Battery," undated, AWM54 75/4/20, AWM.

²⁹ Manning, "Report by Capt H.A. Manning," 3 December 1942, AWM54 581/7/8, AWM.

³⁰ Manning, "Report by Capt H.A. Manning," 3 December 1942, AWM54 581/7/8, AWM.

³¹ Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA.

ground permitted the Japanese to recover.³² The Japanese also fired into Allied positions during artillery preparations, causing the Americans to 'invariably report (falsely) rounds dropping short and [who] appear totally unable to distinguish their own and Australian fire from that of the enemy'.³³ Artillery 'took great care to confine its fires well within hostile positions' until the infantry gained confidence.³⁴

Allied forces took significant steps to address target identification and observation. The particularities of jungle warfare placed much greater importance on forward observers and OPs. OPs had to provide clear lines of sight against targets, but 'no OPs in the usual meaning of the word were found'.³⁵ Tree-top OPs offered potential vantage points but establishing them involved trial and error as suitable trees were difficult to identify from ground-level. Tree-top OPs were also only viable when they overlooked a clearing, meaning 'only a very few...gave a field of view'.³⁶ Allied observers made extensive use of linked tree-top OPs and old Japanese AA lookouts to direct fire against enemy targets when fighting reached Buna's Old Strip.³⁷ Maintaining multiple observers led to a 'rather unique' communications arrangement.³⁸ Each observer was directly linked to his firing unit, which was then linked to the artillery headquarters. The headquarters had two telephones which allowed the senior artillery officer to communicate simultaneously with observers and infantry. The system gave the artillery commander excellent control, a high degree of flexibility, and constant coordination with infantry commanders.³⁹ However, the need to link and maintain cable to multiple observers in difficult terrain placed additional pressure on the few artillery signallers and their equipment.⁴⁰ The need to have more observers further forward exposed many to danger. Major William Hall's troop at Buna had four observers wounded while in tree-tops or forward with

³² Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA.

³³ 1st Australian Mountain Battery, "Report on 1 Aust. Mountain Battery," undated, AWM54 75/4/20, AWM.

³⁴ Handy, "Report of Military Observer in the Southwest Pacific Theater," 2 January 1943, #5, RG337 E15A B51, NARA.

³⁵ Barker, "Artillery Operations in Buna-Gona Area," 31 January 1943, AWM54 581/6/9, AWM.

³⁶ Barker, "Artillery Operations in Buna-Gona Area," 31 January 1943, AWM54 581/6/9, AWM; Captain H.A. Manning, 2/1st Field Regiment, "Use of Arty," 1 January 1943, AWM54 581/7/9, AWM.

³⁷ Major William H. Hall, 2/5th Field Regiment, "'The Artillery takes a Hand at Buna': Interview with Dudley Leggett, ABC," undated, AWM581/6/11B [1], AWM; Barker, "Artillery Operations in Buna-Gona Area," 31 January 1943, AWM54 581/6/9, AWM.

³⁸ Major Earl Kindig, 32nd Infantry Division Artillery, "Artillery in the Buna Campaign," 332-ART-0.3, RG407 E427 B7946, NARA.

³⁹ Kindig, "Artillery in the Buna Campaign," 332-ART-0.3, RG407 E427 B7946, NARA.

⁴⁰ One case required almost 5km of cable to link two points 900m apart. The 1st Mountain Battery attempted to man five OPs, a three-telephone headquarters, and air-to-ground wireless with only four signallers. 1st Australian Mountain Battery, "Report on 1 Aust. Mountain Battery," undated, AWM54 75/4/20, AWM; Hall, "Difficulties Encountered in Buna-Gona Campaign," 27 January 1943, AWM581/6/11B [1], AWM; Barker, "Artillery Operations in Buna-Gona Area," 31 January 1943, AWM54 581/6/9, AWM.

troops.⁴¹ Lieutenant A.N.T. Daniels, an observer for Hanson Troop, was killed in an ambush attempting to reach Huggins Roadblock to call in defensive fire to protect the position.⁴²

Limited visibility meant observers had to adapt ranging techniques to the terrain, though the 'basic principles of correction were not altered'.⁴³ Ranging was easily corrected near the coast, where rounds could be observed falling into the sea and then corrected inland.⁴⁴ Correcting fire in close country was more difficult. Observers had to rely on sound and shell splinters to determine the fall of shot.⁴⁵ When possible, smoke shells were used as 'HE cannot be observed as a rule'.⁴⁶ Observers situated in a protected position on the flank would gradually 'creep' fires onto targets.⁴⁷ However, this method was munitions-intensive and the Japanese dispersed when ranging fires began.⁴⁸ The arrival of No.4 Army Cooperation Squadron RAAF drastically improved the Allies' capacity to identify and register targets.⁴⁹ Aerial observation enabled predicted shoots to be conducted once guns were registered onto landmarks and map variations accounted for.⁵⁰ The CAC Wirraways flew slowly at low altitudes – sometimes at tree-top height – which allowed their observers to closely examine the battlefield. This was a new technique for pilots and observers:

The textbooks do not provide for such conditions as reconnaissance of the beaches below tree top height in jungle country. However, this is an essential in the type of warfare in New Guinea, particularly in the discovery of landing barges.⁵¹

Observed shoots began on 29 November at Buna.⁵² There were some teething problems but soon 'very smooth working was achieved'.⁵³ Communications between No.4 Squadron aircraft and

⁴¹ One had only been in his OP for an hour before being shot by a sniper. Another was luckier when an aircraft strafed his position and shot away the branch he was standing on, but left the OPO unharmed. Hall, "The Artillery takes a Hand at Buna", undated, AWM581/6/11B [1], AWM.

⁴² Major A.G. Hanson, 2/1st Field Regiment, "Report by Maj A.G. Hanson," 1 December 1942, AWM54 581/7/8, AWM; Zeeff to Milner, 5 October 1950, Sanananda-Soputa Letters, RG319 E53 B5, NARA.

⁴³ Barker, "Artillery Operations in Buna-Gona Area," 31 January 1943, AWM54 581/6/9, AWM.

⁴⁴ 1st Australian Mountain Battery, "Report on 1 Aust. Mountain Battery," undated, AWM54 75/4/20, AWM; 2/1st Field Regiment, "Artillery – Lessons From Operations – Buna-Cape Endaiadere Area," 1 January 1943, AWM54 581/7/9, AWM.

⁴⁵ Hanson, "Report by Maj A.G. Hanson," 1 December 1942, AWM54 581/7/8, AWM.

⁴⁶ There was a shortage of 25-pdr smoke shells for a period at the beachheads – the 2/5th Field Regiment's reserve of smoke shells was down to only 26 on 9 December – and more widely throughout Australia which prevented their use for training. Hanson, "Report by Maj A.G. Hanson," 1 December 1942, AWM54 581/7/8, AWM; "25 Pounder Ammunition Reports," AWM581/6/11B [1], AWM; Allied Land Forces SWPA, "Artillery in Jungle Warfare," 24 February 1943, AWM54 75/4/18, AWM.

⁴⁷ Hanson, "Report by Maj A.G. Hanson," 1 December 1942, AWM54 581/7/8, AWM.

⁴⁸ 1st Australian Mountain Battery, "Report on 1 Aust. Mountain Battery," undated, AWM54 75/4/20, AWM; Allied Land Forces SWPA, "Artillery in Jungle Warfare," 24 February 1943, AWM54 75/4/18, AWM.

⁴⁹ A flight from No.4 Army Cooperation Squadron RAAF was attached to each division to conduct artillery observation and tactical reconnaissance missions on 28 November. New Guinea Force Headquarters and General (Air) War Diary, 27-28 November 1942, AWM52 1/5/51/20, AWM.

⁵⁰ 2/5th Field Regiment Diary, 29 November 1942, AWM581/6/11B [1], AWM.

⁵¹ "Summary of Operations Carried out by No. 4 Army Co-Operation Squadron in Papua," undated, AWM54 85/3/50, AWM.

artillery was aided by ALOs who provided No.11 or No.109 sets for two-way communications. Aircraft were assigned to pre-arranged shoots to register targets.⁵⁴ It was possible to register and engage up to four targets in an hour.⁵⁵ Mixed smoke and HE shells were used to overcome issues with visibility in close country. Once fires were observed within 25m of the target, the mean point of impact of three rounds gunfire was noted and corrected. After some practice, aerial observers could engage registered targets with as few as six ranging rounds.⁵⁶ By mid-December each artillery sub-unit had been registered and the ability to hit targets through observed or predicted fire improved greatly.

While artillery's ability to hit targets improved, Allied infantry had to ensure they could effectively exploit the effects of fire. This was complicated by the practical difficulties of hitting targets within the normal safety zone of artillery fire and in dense terrain, and of coordination and mutual understanding. The conventional artillery safety zone for infantry was 200m for a 25-pdr. However, infantry were often within 50m of the enemy and dispersed along irregular front lines. The delay between infantry withdrawing then regaining their starting positions and then moving through difficult terrain could waste the effect of fire.⁵⁷ Gunners therefore had to maximise the angle of descent of rounds to penetrate jungle canopies and ensure a practical safe zone for friendly troops. All shoots were conducted using 'proximity close' procedures.⁵⁸ A higher angle of descent improved accuracy and reduced the 50% zone.⁵⁹ This required experimentation with gun positions, range, and charges (Figure 10.5). Gunners found that Charge 2 at 5,500yds provided the optimal angle of descent and accuracy for proximity shoots.⁶⁰ This allowed the safety zone to be reduced to 70-100m and negated the need for infantry to withdraw from positions, which was essential to allow them to exploit the effects of fire.

⁵² Buna Force Artillery, "Diary of Buna Force Artillery, New Guinea, 1 October 1942 to 24 January 1943," 332-ART-0.3.0, RG407 E427 B7947, NARA; 1st Australian Mountain Battery, "Report on 1 Aust. Mountain Battery," undated, AWM54 75/4/20, AWM; 2/5 Field Regiment, Diary, 29 November 1942, AWM581/6/11B [1], AWM.

⁵³ Allied Land Forces SWPA, "Artillery in Jungle Warfare," 24 February 1943, AWM54 75/4/18, AWM.

⁵⁴ 2/1st Field Regiment, "Artillery – Lessons From Operations," 1 January 1943, AWM54 581/7/9, AWM.

⁵⁵ This included observing the mean point of impact (MPI) for three rounds gunfire from single gun against a target. MPI is the spread of the fall of shot, which is useful for assessing the accuracy of firing data and fixing a target. Evans, "British Artillery in World War 2: Errors and Mistakes."

⁵⁶ Allied Land Forces SWPA, "Artillery in Jungle Warfare," 24 February 1943, AWM54 75/4/18, AWM.

⁵⁷ Manning, "Use of Arty," 1 January 1943, AWM54 581/7/9, AWM.

⁵⁸ Dice, "Notes from Theatres of War: New Guinea July 42 – January 43," undated, AWM54 519/6/51, AWM.

⁵⁹ The "50% zone" is the area in which 50% of the rounds fired are expected to land, based on one Probable Error (PE) of the Mean Point of Impact (MPI). One-hundred per cent of rounds will fall within 4 PE of the MPI. Probable Error is a function of a guns' consistency and accuracy, rather than a calculation of firing data. This is determined by the range, charge, meteorological and variations in flight patterns of shells. With proximity shoots and the blast and fragmentation radius of artillery shells this is particularly important to reduce the risk of friendly casualties. Evans, "British Artillery in World War 2: Errors and Mistakes."

⁶⁰ Dice, "Notes from Theatres of War: New Guinea July 42 – January 43," undated, AWM54 519/6/51, AWM.

Range	Charge	Angle of Descent	50% Zone
3,500yds	1	32°	80yds
	2	12.5°	20yds
5,500yds	2	23°	30yds
7,000yds	3	23°	30yds

Figure 10.5: Range Table Information for 25-pdr.⁶¹

Developing mutual understanding between the arms was crucial to enabling infantry to move confidently under artillery cover. Barker noted that while any artillery unit could provide support, the practical effect of an existing relationship was ‘very marked’.⁶² In most cases, ‘gunners and infantry officers met for the first time on the battlefield’.⁶³ Artillery had to build rapport with supported units, particularly in the American sectors, to reassure infantry about the accuracy of fire. Colonel Harding noted ‘we have report after report...almost every time we shoot, that we are firing into our own troops when we are nowhere near them. Rounds I have seen myself’.⁶⁴ At Buna, Hall ‘...liaised very closely with [18th Brigade and 2/6th Armoured Regiment] because we’d never fired over tanks before’.⁶⁵ Developing an understanding of the capabilities and limitation of each arm was also important, and artillery officers were encouraged to:

...freely discuss the question of close shooting and point out that from everybody’s point of view, including the infantry, it is better for the infantry to risk an occasional casualty from our own guns by keeping close to our fire than to incur far greater casualties from the enemy, which always happens if infantry hang back from the covering artillery fire.⁶⁶

Attaching observers and liaison officers to infantry units also improved confidence. Having infantry commanders present during registration ensured artillery targeted the desired areas and proved they could expect accurate fire.⁶⁷ After fire plans finished, observers could then engage targets as

⁶¹ Dice, “Notes from Theatres of War: New Guinea July 42 – January 43,” undated, AWM54 519/6/51, AWM.

⁶² Barker, “Artillery Operations in Buna-Gona Area,” 31 January 1943, AWM54 581/6/9, AWM.

⁶³ There were artillery units from I Australian Corps (NGF), 2nd Australian Division, 6th Australian Division, 7th Australian Division and US 32nd Infantry Division, along with infantry units from four division and two AMF brigades. The only units which had previously worked together were elements of the 2/1st Field Regiment and 16th Infantry Brigade, which had fought at Bardia in 1941. A different battery of the 2/5th Field Regiment had supported the 18th Brigade’s defence of Milne Bay. 2/1st Field Regiment, “Salient Artillery Lessons from the Buna-Gona Operations,” AWM54 581/7/9, AWM.

⁶⁴ This is supported by Colonel Frank Bowen, who wrote to US I Corps in Australia: ‘It got so bad that Horace Harding would cringe everytime an artillery shell or mortar shell would go overhead wondering who would call about our firing. It is absolutely essential that our troops become accustomed to this close firing, and only by actual firing can this be done’. Bowen to E.G. Smith, 5 January 1943, HQ I Corps G-3 Correspondence, RG338 E330 B198, NARA; Harding to Collins, 30 December 1942, 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

⁶⁵ Hall, “The Artillery takes a Hand at Buna,” undated, AWM581/6/11B [1], AWM.

⁶⁶ Barker, “Artillery Operations in Buna-Gona Area,” 31 January 1943, AWM54 581/6/9, AWM.

⁶⁷ Barker, “Artillery Operations in Buna-Gona Area,” 31 January 1943, AWM54 581/6/9, AWM.

requested by the infantry commander.⁶⁸ These aspects highlighted the need for close liaison which had a 'direct bearing on mutual confidence'.⁶⁹

While observation, accuracy, and coordination improved, the effectiveness of artillery fire was fundamentally limited by ordnance and supply. The neutralising effect of fire was significantly reduced by the construction of the Japanese defences.⁷⁰ The 25-pdr was an effective field gun, but its flat trajectory and relatively light shell was ill-suited against prepared positions in the jungle. The largest fortifications proved 'almost beyond 25-pdr scope' to destroy:

...the best effect was obtained using four guns...as the combined effect of four rounds did more damage than successive single rounds...From 100-200 rounds were required to blast away supports and cause the roof to collapse.⁷¹

There were never enough guns or ammunition to destroy each position in detail. One solution to improve effectiveness was to employ a 25-pdr in a direct fire role.⁷² One gun was moved onto Old Strip on 27 December and proved highly effective 'sniping' Japanese guns and pillboxes with exceptional accuracy to support attacking infantry.⁷³ The placement of this gun proved an important tactical decision which was 'largely responsible for the taking of Old Strip'.⁷⁴ However guns could only be used in this manner in more open terrain, and there were few other situations where this would have been applicable.

The lack of delay-action fuzes was another key limitation to the effectiveness of 25-pdr shells. The standard No.117 fuze proved unsatisfactory as shells burst on contact with tree-tops or immediately upon hitting the ground or the overhead cover of bunkers. Delay-action fuzes offered better penetration against fortifications and were much safer for infantry to follow behind as they detonated momentarily after impact and reduced the risk of airbursts in trees.⁷⁵ However, there was a severe shortage of No.231 delay-action fuzes. Gunners improvised a 'graze-action' fuze by using No.119 fuzes 'cap-on', but this was 'without much success' as the shells still burst before penetrating fortifications.⁷⁶ NGF requisitioned all available No.231 fuzes from Australia, but these did not arrive

⁶⁸ Allied Land Forces SWPA, "Artillery in Jungle Warfare," 24 February 1943, AWM54 75/4/18, AWM.

⁶⁹ Barker, "Artillery Operations in Buna-Gona Area," 31 January 1943, AWM54 581/6/9, AWM.

⁷⁰ Allied Land Forces SWPA, "Artillery in Jungle Warfare," 24 February 1943, AWM54 75/4/18, AWM.

⁷¹ Allied Land Forces SWPA, "Artillery in Jungle Warfare," 24 February 1943, AWM54 75/4/18, AWM.

⁷² 2/5th Field Regiment Diary, 25 December 1942, AWM581/6/11B [1], AWM.

⁷³ 2/5th Field Regiment Diary, 25 December 1942, AWM581/6/11B [1], AWM.

⁷⁴ 2/5th Field Regiment Diary, 25 December 1942, AWM581/6/11B [1], AWM.

⁷⁵ Dice, "Notes from Theatres of War: New Guinea July 42 – January 43," undated, AWM54 519/6/51, AWM.

⁷⁶ This involved firing the shell with the fuze cap still in place to provide a very short delay. This was deemed effective against targets behind 'light cover'. Lieutenant-Colonel Keith E. O'Connell, CO 2/1st Field Regiment, "Report on Observer Tour – New Guinea 3-18 Dec. 42," AWM54 581/7/7, AWM.

until late December.⁷⁷ Hall's troop at Buna only received No.231 fuzes for the final attack on Giropa Point.⁷⁸ This affected how closely infantry could exploit artillery neutralisation. The American 105mm howitzer with M48 delay-action fuzes was 'the only weapon which was really effective' against Japanese fortifications.⁷⁹ Its higher trajectory and exceptional accuracy made it ideal for destroying bunkers.⁸⁰ The shell – about 1.7 times more powerful than a 25-pdr – 'blew [Japanese bunkers] out from the inside'; Japanese soldiers called them 'earthquake bombs'.⁸¹ However, only one 105mm was ever deployed, and, because of ammunition shortages, expenditure was restricted to less than 50 rounds per day which limited its effectiveness⁸²

To bolster fire support, the Americans supplemented artillery by grouping their 81mm mortars into batteries under artillery officers. While Australian battalions brigaded their mortars, these remained under the direction of infantry commanders. Mortars were first 'battered' by Warren Force, but Lieutenant Colonel Melvin McCreary later introduced artillery methods for fire control.⁸³ All 81mm mortars were formed into three batteries and registered to a photomap fire direction chart via observed fire.⁸⁴ One mortar from each battery was used to correct the fire of each group, though for proximity shoots each mortar was corrected individually.⁸⁵ Colonel Harding was 'converted wholeheartedly' after seeing the batteries commanded by artillery officers in action.⁸⁶ The 81mm mortar was recognised as the 32nd Division's 'most valuable heavy weapon' in the absence of artillery.⁸⁷ The heavy round was deemed 'very effective and demoralising to the enemy' and several direct hits on a bunker could disable or kill the occupants.⁸⁸ However, supplies of heavy

⁷⁷ Berryman noted that a special shipment of delay-action fuzes from LHQ shipped at request turned out not to be delay-action fuzes after examination by ordnance and artillery officers. Berryman to Brigadier Ronald Irving, Adv LHQ, 24 December 1942, PR84/370 Item 11/90, AWM.

⁷⁸ 55 Battery, 2/5th Field Regiment War Diary, 31 December 1942, AWM52 4/2/5/17, AWM.

⁷⁹ Bowen to Smith, 11 January 1943, 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

⁸⁰ In one day, "Dusty" scored 9 direct hits out of 60 rounds fired against bunkers and pillboxes. An alternative source suggests 11 hits were scored. Harding to Collins, 26 December 1942, 312 Correspondence Buna Forces, RG338 E314 B86, NARA; US I Corps, "Means of Reducing Japanese Pillboxes," 25 September 1943, 384 Operations Reports #2, RG338 E339 B288, NARA.

⁸¹ US I Corps, "Means of Reducing Japanese Pillboxes," 25 September 1943, 384 Operations Reports #2, RG338 E339 B288, NARA; Collie & Marutani, *The Path of Infinite Sorrow*, 241.

⁸² Kindig, "Artillery in the Buna Campaign," undated, 332-ART-0.7, RG407 E427 B7948, NARA.

⁸³ MacNab to Milner, 15 November 1949, Warren Letters, RG319 E53 B4, NARA; Kindig, "History of Artillery in the Buna Campaign," 332-ART-0.3, RG407 E427 B7946, NARA.

⁸⁴ The 17 81mm mortars available on Urbana Front were formed from two groups of six and one group of five 81mm mortars. Milner, *Victory in Papua*, 248-249.

⁸⁵ Harding to Collins, 4 January 1943, 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

⁸⁶ Harding had initially preferred the artillerymen be used as cargadores or infantrymen. Eichelberger to Chandler, 18 December 1942, 332 Correspondence Buna Forces, RB338 E314 B86.

⁸⁷ Light rounds were comparable to the blast of a 75mm pack howitzer but were only equipped with a direct-action fuze. Heavy rounds had a delay fuze and burst radius comparable to a 105mm howitzer, but lacked the same explosive power. MacNab to Milner, 15 November 1949, Warren Letters, RG319 E53 B4, NARA.

⁸⁸ US I Corps, "Means of Reducing Japanese Pillboxes," 25 September 1943, 384 Operations Reports #2, RG338 E339 B288, NARA; Bowen to Smith, 11 January 1943, 312 Correspondence Buna Forces, RG338 E314 B86,

rounds were limited for much of the campaign. Subsequently, cannon companies were equipped with 81mm mortars to bolster regimental fire support, while Eichelberger advised the 41st Division to procure as many 81mm mortars as possible prior to its deployment.⁸⁹ The decision to employ artillery and cannon company personnel was a significant departure from standard procedure, but helped to coordinate and combine greater weights of mortar fire.⁹⁰

Allied artillery tactics adapted to the limited number of guns and the inherent difficulties of supporting infantry through close terrain against prepared positions. The conventional barrages favoured by the Americans tended to be less effective because it was difficult to maintain a sufficiently wide and dense curtain of neutralising fire which moved at the infantry's pace. The difficulties of such barrages were demonstrated by the 127th Regiment's attack against Government Gardens on 24 December, which required an intense preparation followed by a barrage across a 400m frontage which advanced 100m in 10 minutes.⁹¹ The infantry were unable to follow the barrage as the advance halted in places unaffected by artillery fire. Observers had to cease the barrage and shift fire onto specific targets, but this failed to restore the infantry's mobility. Observer-directed support could only be maintained for a short time as the guns were also required to support the 18th Brigade in Warren Sector.⁹² Concentrations fired on specific targets were more effective because of the few guns and limited ammunition available. The narrow frontage along which most Allied attacks were made partially helped to offset the limited number of guns.⁹³ However, concentrations could fall into predictable patterns and durations which alerted the Japanese to a pending attack, who withdrew or sought cover. Methods were adapted to try and catch the Japanese moving between their positions by firing at irregular intervals or remaining on target after the initial shelling. Fire was also used to force defenders into pre-registered bunkers which were then subjected to more intense concentrations.⁹⁴ Manning's troop honed this practice and on several occasions caught large groups of Japanese troops with 'a small correction and quick fire'.⁹⁵

NARA; Darby, "Ordnance Lessons Learned in Buna Campaign," 1 February 1943, 580 Air Transportation, RG338 E339 B292, NARA.

⁸⁹ Eichelberger to Chandler, 24 December 1942, 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

⁹⁰ Harding to Collins, 4 January 1943, 312 Correspondence Buna Forces, RG338 E314 B86, NARA.

⁹¹ Buna Forces, "Field Order No. 5," 21 December 1942, 332-3.9, RG407 E427 B7938, NARA.

⁹² Buna Forces, "Field Order No. 5," 21 December 1942, 332-3.9, RG407 E427 B7938, NARA.

⁹³ Allied infantry battalions covered frontages of 500-1000yds in attack. A troop of 25-pdr guns generally covered a frontage of 140yds, with HE shells having a blast frontage of 35yds. The American 105mm shell covered a frontage of 45-50yds, though as guns were grouped in sections and batteries, the battery frontage was equivalent to a British-Commonwealth troop. *FSR Vol. II: Operations – General 1935*, 8; *FM100-5: Operations 1941*, 103; Evans, "British Artillery in World War 2: Fire Planning".

⁹⁴ 1st Australian Mountain Battery, "Report on 1 Aust. Mountain Battery," undated, AWM54 75/4/20, AWM.

⁹⁵ Manning, "Use of Arty," 1 January 1943, AWM54 581/7/9, AWM.

While most fire plans achieved the weight of fire to neutralise targets in light cover, even heavy concentrations failed to fully neutralise Japanese positions because of the terrain and the design of the defences. This meant the exploitation of fire plans within the few minutes immediately following their completion was vital because they could not cause substantial material or lethal effects. The most effective fire plan was executed by Hanson Troop supporting the 39th Battalion's attack at Gona on 8 December. The plan (Figure 10.6) was effective because of the intensity of fire, the ordnance used, and the infantry's vigorous exploitation of its neutralising effects. The concentration was able to achieve sufficient neutralising effects compared to the 21st Brigade's previous plans because of the smaller target area and the use of delay-action fuzes. This was aggressively exploited by the infantry who advanced for two minutes under cover of the artillery fire and caught the defenders 'confused and reeling' as the bombardment concluded.⁹⁶ However, the battalion's tactics could not be replicated until delay-action fuzes were more widely available.

21st Brigade Fire Plan, Gona, 0530 6 December 1942						
Artillery	Task	Target	Time	Area (yds)	Expenditure	Required
4 x 25-pdr	Support	-	Z+20	-	50 Rds (IA)	-
Mortars	Neutr.	SW Timber	Z to Z+10	330x110	120 Rds (IA)	174 Rds
		Village	Z to Z+15	100x100	60 Rds	48 Rds
39th Battalion Fire Plan, Gona, 1245 8 December 1942						
Artillery	Task	Target	Time	Area (yds)	Expenditure	Required
4 x 25-pdr	Neutr.	SW Timber	Z-15 to Z	330x110	200 Rds (DA) 3 RpGpM	116 Rds
Mortars	Support	SW Timber	Z-15 to Z	330x110	N/A	-
		Village	Z-15 to Z+10	75x50	N/A	-

Figure 10.6: Comparison of Fire Plans, Gona, 6 and 8 December 1942.⁹⁷

The 18th Brigade's attacks in Warren sector reflected increasing complexity in fire plans and greater coordination between infantry, artillery, and armour units (Figure 10.7). Observers from each supporting troop were attached to infantry battalions and instructed to 'live' with the unit, attend every conference and reconnaissance, and provide observed fire on targets 'as and when

⁹⁶ Honner's personal account notes several casualties were incurred. 39th Infantry Battalion War Diary, 8 December 1942, AWM52 8/3/78/, AWM; Honner, "Notes on and Lessons from Recent Operations in Gona and Sanananda Areas by Lt Col R. Honner – Comd 39 Aus Inf Bn," undated, AWM54 581/7/19, AWM.

⁹⁷ IA denotes instantaneous-action fuzes, and DA denotes delay-action fuzes. 21st Infantry Brigade, "21 Aust Inf Bde Operation Instn," 5 December 1942, Appendix 10, AWM52 8/2/21/18; 39th Infantry Battalion War Diary, 8 December 1942, AWM52 8/3/78/4, AWM.

18th Brigade Fire Plan, Cape Endaiadere, 18 December 1942						
Artillery	Task	Target	Time	Area (yds)	Expenditure	Required
4 x 25-pdr	Neutr.	A) Duropa Plantation	Z-10 to Z	250x100	112 Rds (IA) 8mins 2 RpGpM 2mins Gunfire	80 Rds
		B) Cape Endaiadere	Z to Z+10	500x500	112 Rds (IA) 8mins 2 RpGpM 2mins Gunfire	800 Rds
4 x 25-pdr	Neutr.	A) New Strip	Z-10 to Z	250x100	112 Rds (IA) 8mins 2 RpGpM 2mins Gunfire	80 Rds
		B) Cape Endaiadere	Z to Z+10	500x500	112 Rds (IA) 8mins 2 RpGpM 2mins Gunfire	800 Rds
2 x 3.7"	Neutr.	A) S Cape Endaiadere	Z-10 to Z	250x250	64 Rounds (IA) 8mins 2 RpGpM 2mins Gunfire	200 Rds
		B) Cape Endaiadere	Z to Z+10	500x500	64 Rounds (IA) 8mins 2 RpGpM 2mins Gunfire	800 Rds
1 x 105mm	Observed	Cape Endaiadere	Z to Z+10	N/A	58 Rounds (DA)	N/A
Mortars	Support	Between Targets	Z-10 to Z	N/A	N/A	N/A
18th Brigade Fire Plan, Giropa Point, 1 January 1943						
Artillery	Task	Target	Time	Area (yds)	Expenditure	Required
3 x 25-pdr	Neutr.	A) Giropa Point	Z-10 to Z-2 Z-2 to Z	100x300	72 Rds (DA) 3 RpGpM 24 Rds (IA) 4 RpGpM	32
1 x 25-pdr	Harassing	A) Coconut Grove	Z-85 to Z	100x100	170 Rds (IA) 2 RpGpM	32

Figure 10.7: Comparison of Fire Plans, Buna, 18 December 1942, and 1 January 1943.⁹⁸

⁹⁸ 18th Infantry Brigade, "18 Aust Inf Bde Gp Operation Order No.1," 17 December 1942, Appendix B, AWM54 581/7/31 [1], AWM; 18th Infantry Brigade, "18 Aust Inf Bde Gp Operation Order No.2," 31 December 1942, Appendix F, AWM54 581/7/31 [1], AWM.

located' during the assault.⁹⁹ Infantry and tanks closed within 200m of enemy positions with two minutes of preparatory fire remaining. The fire achieved good physical effect:

After the attack had gone though it could be seen that the area of the Jap front line and about 100yds + and – of it had been well covered by shells as the grass and undergrowth had been flattened and burnt.¹⁰⁰

However, while it employed more guns and ordnance, it still failed to achieve a comprehensive neutralising effect across the attack's frontage. Delay-action fuses were still in short supply and there were not enough guns or ammunition to neutralise the larger target areas. Heavy concentrations on the left flank failed to destroy positions. The attack was most successful on the right flank, which was supported by tanks that could provide immediate fire support. In comparison, artillery support for the attack on Giropa Point generated much greater effect because of delay-action fuzes and greater concentration of fire on a smaller area. The analysis of fire plans demonstrates that, contrary to commanders like Doe and Waldron's opinion that more guns were needed, the effectiveness of artillery fire was largely determined by the ordnance available and the concentration of fire on smaller areas, which reflected the shift towards more limited attacks on strongpoints.¹⁰¹ It also proved that no matter the amount of artillery fire, it was only effective when closely coordinated with infantry.

Artillery provided more reliable support for infantry than direct air support, though the challenges to command, communications, fire control, and ordnance were significant. Artillery units and personnel had to be flexible and adaptable to the conditions. Barker summarised:

The war in New Guinea has been greatly varied and presented many new problems... Difficulties rarely mentioned and less rarely discussed have been overcome... Each and every soldier requires a fertile imagination, a resourceful outlook, and a mind which could adapt itself quickly to new conditions.¹⁰²

Artillery proved fundamentally important to the principles of fire and manoeuvre which underpinned Allied tactics. Wootten felt 'it may be stated with confidence that [artillery] may be employed very successfully in jungle warfare'.¹⁰³ While some commanders were critical that more artillery was not employed, this was fundamentally a matter of logistics rather than tactics, as '[ammunition] expenditure was governed by the amount that could be brought in and not by what

⁹⁹ 18th Infantry Brigade War Diary, "Conclusions Reached at Conference between Comd 18 Inf Bde and CCRA on 13 Dec Regarding Artillery Support for Attacks by 18 Inf Bde on the Buna-Endaiadere Positions," 14 December 1942, AWM52 8/2/18/34, AWM.

¹⁰⁰ 2/5th Field Regiment Diary, 18 December 1942, AWM581/6/11B [1], AWM.

¹⁰¹ Gavin Long Diary #5, 47-50, AWM67 Item 1/5, AWM; Waldron to Ward, 5 March 1951, Interviews, RG319 E53 B5, NARA.

¹⁰² Barker, "Artillery Operations in Buna-Gona Area," 31 January 1943, AWM54 581/6/9, AWM.

¹⁰³ 18th Infantry Brigade, "Part II: Lessons Learnt in Cape Endaiadere-Giropa Point and Sanananda Area Ops," undated, AWM54 581/7/31 [1], AWM.

the targets demanded'.¹⁰⁴ However, infantry ideally needed mobile fire support which they could work closely with to neutralise and destroy bunkers as they were encountered.

'[We] Would Not Have Gone Far Without Them': Armour at the Beachheads

Armour offered a means of providing mobile support and protection to infantry assaulting prepared positions such as those encountered at the beachheads. However, in difficult jungle terrain, infantry-tank operations could only be effective with sound methods, clear coordination, and a high degree of understanding between arms. Armour's purpose was to 'put [infantry] on the objective' by providing direct fire against defended positions.¹⁰⁵ A model infantry-tank attack involved heavily armoured Infantry tanks – known as "I" tanks – supporting infantry elements disposed in echelons: the first advancing to the objective at tank speed, the second at walking speed behind the leading infantry elements, and the third to consolidate the objective.¹⁰⁶ Ideally, a battalion of I tanks would support each infantry battalion in an attack against well-organised defences.¹⁰⁷ Doctrine stressed cooperation as the most important factor in successful infantry-tank attacks, but it was less clear on the specific techniques to achieve this at lower levels.¹⁰⁸ Infantry and tank commanders at the beachheads had to develop techniques and refine communications and coordination on the battlefield. The friction of jungle warfare caused by reduced visibility and surprise required infantry and tanks to develop a better understanding of the others' limitations and work very closely at sub-unit level.

The Allies' inability to deploy designated I tanks presented an obvious problem. Due to limited seaborne transport capacity and maintenance requirements, only the M3 Stuart Light Tanks of the 2/6th Armoured Regiment, based in Port Moresby and Milne Bay, were immediately available for deployment. The M3 was a fast tank designed for mobility and reconnaissance in open terrain and the 2/6th Armoured Regiment had been trained as 'light cavalry' for an armoured division.¹⁰⁹

¹⁰⁴ Barker, CCRA NGF, "Artillery Operations in Buna-Gona Area," 31 January 1943, AWM54 581/6/9, AWM.

¹⁰⁵ Brigadier G.W. Richards, Commander 23rd Armoured Brigade RAC, "Notes on the Employment of Army Tanks," 19 September 1942, AWM54 925/7/8, AWM.

¹⁰⁶ British armour theory conceived of two types of tanks – slow, heavily armoured I tanks to support infantry, and fast, lightly-armoured cruiser tanks to act like cavalry. War Office, *The Employment of Army Tanks in Co-Operation with Infantry* (North Melbourne: Victorian Railways Printing Works, 1941), 9-13; Richards, "Notes on the Employment of Army Tanks," 19 September 1942, AWM54 925/7/8, AWM; French, *Raising Churchill's Army*, 33.

¹⁰⁷ *Employment of Army Tanks*, 7, 9; David Wilson, "The Canadian Role in Operation 'Charnwood,'" 8 July 1944: A Case Study in Tank/Infantry Doctrine and Practice," *Canadian Military History* 8, no. 3 (1999): 7-9.

¹⁰⁸ *FSR Vol. II: Operations – General 1935*, 4-5, 120; *Employment of Army Tanks*, 13; Richards, "Notes on the Employment of Army Tanks," 19 September 1942, AWM54 925/7/8, AWM.

¹⁰⁹ NGF, "Operations Using M3 Light Tanks in New Guinea," 17 February 1943, AWM54 577/7/29 [1], AWM; *FSR Vol. II: Operations – General 1935*, 3-4.

The tanks lacked the armour, armament, and observation to be effective infantry support tanks (Figure 10.8). Limited visibility was a critical issue. The tanks lacked a periscope which was considered 'essential for I tank work', though some were modified in the field to accommodate one.¹¹⁰ As the crews had to operate closed-down to protect against small arms fire, this restricted visibility to 'almost nil'.¹¹¹ Crews noted 'a man [was] NOT visible; 5 paces from the front; 12 paces from the side; no vision to rear' from the tank's hull and turret ports.¹¹² Limited visibility also increased the risks of becoming immobilised by terrain features.¹¹³ Prolonged operation at infantry speeds caused excessive wear on transmissions, suspension, and brakes.¹¹⁴ The M3's interior was similarly not intended for lengthy support operations. The cooling and extraction fans proved inadequate when the tank was closed-down and ceased working when the engine idled or stopped. The physical and mental strain of operating a cramped, hot, poorly ventilated tank in combat took a tremendous toll on crews. After 7.5 hours, exhaustion, poor judgement, and carelessness began, with crews becoming 'utterly indifferent to what happened to them' or the events unfolding around them.¹¹⁵ The deployment of M3s was again a sign of desperation.

Tanks were also limited to where they could operate because of terrain. Buna was the only viable location for the employment of armour because of its location relative to Allied supply lines and its relatively flat, open coconut plantations and kunai patches. However, even the best ground presented many challenges:

In the case of the air strips [at Buna] the ground was low lying and sodden, and for the most part covered by head high...grass which obscured vision; and though it was studded with hidden bomb craters, it was nevertheless ground that had at one time been cleared, was for

¹¹⁰ Installing a periscope came at the expense of welding other ports shut, meaning that if the periscope was hit, the tank was effectively blind. The improvised periscope arrangement also had a blind spot between 4 and 8 O'clock because of the AA gun mount. NGF, "Operations Using M3 Light Tanks in New Guinea," 17 February 1943, AWM54 577/7/29 [1], AWM; 18th Infantry Brigade, "Appendix A: Notes on Tank and Inf Cooperation in Cape Endaiadere-Giroa Point and Sanananda Area Ops," undated, AWM54 581/7/31 [1], AWM.

¹¹¹ Lieutenant-Colonel Charles Hodgson, CO 2/6th Armoured Regiment, was severely wounded while trying to observe the fighting with the turret hatch open. McCarthy recounts: 'As he plunged into the fight, Hodgson, true to his own teaching, was looking out of the open turret of his tank to get a full view of what lay ahead. An inevitable fate overtook him when a machine-gun burst spattered his vehicle. He slumped back into the turret badly wounded'. McCarthy, *Kokoda to Wau*, 460; NGF, "Operations Using M3 Light Tanks in New Guinea," 17 February 1943, AWM54 577/7/29 [1], AWM.

¹¹² NGF, "Operations Using M3 Light Tanks in New Guinea," 17 February 1943, AWM54 577/7/29 [1], AWM.

¹¹³ NGF, "Operations Using M3 Light Tanks in New Guinea," 17 February 1943, AWM54 577/7/29 [1], AWM.

¹¹⁴ A post-campaign report noted: 'In this particular class of ops, transmission systems come in for very heavy work and unquestionably wear on clutches, gearbox assemblies, final drives, and brakes will be much greater than normal open type warfare...Suspension and track systems have received a very severe pounding. Some drivers' feet experienced a 'slow cooking' from the heat generated by the clutch and accelerator pedals from the tanks operating at slow speeds for extended periods. Captain C.M. Dimond, OC 2/92nd Light Aid Detachment, "Report on Operations of Tanks M3 Light – Buna Area," undated, Appendix D, AWM54 577/7/29 [14], AWM; Captain J. McKenzie, RMO 2/6th Armoured Regiment, "Medical Report on AFV Crews in Action at Buna (New Guinea) during Dec 42-Jan 43," undated, AWM54 267/6/7, AWM.

¹¹⁵ McKenzie, "Medical Report on AFV Crews in Action at Buna," undated, AWM54 267/6/7, AWM.

Specifications	M3 Stuart Light Tank	Matilda MkII "I" Tank
Engine	Twin Cadillac Series 42 (220 hp)	Twin diesel AEC 6 Cylinder (190 hp)
Weight	15.2 tons	25 tons
Power/Weight	14.5 hp/ton	7.5 hp/ton
Max Speed	58 km/h	26 km/h
Ground Clearance	41.9cm	48cm
Armour	38mm Turret 38-44mm Hull Front 25mm Hull Sides	75mm Turret 78mm Hull Front 70mm Hull Sides
Armament	37mm M6 .30 Coaxial, Bow, and AA MG	40mm QF 2-pdr 7.92mm Coaxial MG
Crew	4	4

Figure 10.8: Comparison of M3 Stuart and Matilda MkII Tanks.

the most part level and, apart from swampy patches, it was reasonably firm...bogging resulted almost invariably [when] virgin ground was encountered.¹¹⁶

Vegetation concealed stumps, logs, and other obstacles which could easily immobilise an M3. Tank crews also had little experience driving under these conditions. Trooper Cec Ganderton's tank became bogged trying to reach the start line for the 2/10th's attack on 29 December because:

...neither myself nor [the tank commander] had spotted this bog-spot and we were trapped in seconds...until that day we had next to no training with the hatches fully closed and the driver-commander using a periscope. We proceeded up the strip through very heavy kunai grass, I driving on my commander's instructions as I could only see a few feet in the grass.¹¹⁷

At Buna four of the 19 available tanks were irrecoverably bogged or immobilised.¹¹⁸ Conditions were even worse at Sanananda. Swamps confined tanks to the narrow Sanananda-Soputa road which was unsurprisingly covered by a concealed antitank gun which resulted in the loss of three tanks.

Coordination between the 18th Brigade and 2/6th Armoured Regiment at Buna relied on close liaison to establish how the two arms would work together. However, this was no small task since neither unit had notable training or experience in infantry-tank operations, nor the opportunity to rehearse the action.¹¹⁹ Lieutenant-Colonel Charles Hodgson, CO 2/6th Armoured

¹¹⁶ 18th Infantry Brigade, "Notes on Tank and Inf Cooperation," undated, AWM54 581/7/31 [1], AWM.

¹¹⁷ Trooper Cec Ganderton, 2/6th Armoured Regiment, cited in Brune, *Bastard of a Place*, 536.

¹¹⁸ Two of these tanks were also hit by a Japanese 75mm gun – these had their turrets removed and were later used to salvage other disabled tanks. Two more tanks were partially submerged in Simemi Creek and a shell crater for up to 5 weeks. 2/92nd Light Aid Detachment, "LAD Report and Tank Casualties," 28 January 1943, AWM54 44/1/5, AWM.

¹¹⁹ The 2/6th Armoured Regiment's training since July had focused on brigade and divisional armoured exercises in northern NSW. While in Port Moresby and Milne Bay, the unit's regular training was interrupted

Regiment, joined the brigade's advanced headquarters at Buna on 12 December as armour adviser.¹²⁰ Reconnaissance identified the coconut plantations near Cape Endaiadere as the most suitable ground.¹²¹ Two troops of X Squadron, 2/6th Armoured Regiment, were assigned to support the 2/9th Battalion's attack on 18 December.¹²² While the plan was adapted to the conditions and available resources, it dispersed tank support very thinly (Figure 10.9). However, difficulty moving troops and tanks forward meant the bulk of infantry and tank crews were unable to confer prior to the attack. Several issues related to the lack of understanding were demonstrated in the first attack.

	Doctrine for Infantry-Tank Attack	18 December Attack
Infantry Unit and Frontage	Infantry Battalion Two Rifle Companies 600m	2/9th Battalion Three Rifle Companies 750m
Tanks and Frontage	Army Tank Battalion 52 "I" Tanks in Three Echelons 1 x Squadron per Company 300m per Company	X Squadron 8 Light Tanks in Single Echelon 1 x Troop for Two Companies 250m per Company

Figure 10.9: Allocation of Tanks for 2/9th Battalion Attack, 18 December 1942.¹²³

Phase One of the operations helped establish basic principles for infantry-tank cooperation. Intercommunication between infantry and tanks posed a particular problem as they lacked direct wireless links. This meant communications to forward tanks had to be relayed through battalion headquarters and then a control tank in the middle of the action. A system of hand signals and flares was established for immediate communications to indicate targets or request assistance.¹²⁴ The

by road and construction work, as well as serving as stretcher bearers at nearby aerodromes. However, the unit's war diary notes that A Squadron participated in a 'demonstration' for the 30th Brigade in Port Moresby on 23 October, and B Squadron participated in offensive exercises with the 2/7th Battalion on 7-8 December and Milne Bay. The 18th Brigade attended a demonstration by the Royal Tank Corps on infantry-tank cooperation when it was stationed in Colchester in Britain during November 1940 but never had the chance to work with Australian armoured units. B Squadron 2/6th Armoured Regiment War Diary, 7-8 December 1942, AWM52 3/1/12/2, AWM; 2/7th Infantry Battalion War Diary, 7-8 December 1942, AWM52 8/3/7/23, AWM; 2/12th Infantry Battalion War Diary, 7 November 1940, AWM52 8/3/12/2, AWM.

¹²⁰ 18th Infantry Brigade, 11-12 December 1942, "Part I - Report on Operations 18 Aust Inf Bde GP," AWM54 581/7/31 [1], AWM.

¹²¹ 18th Infantry Brigade, 16 December 1942, "Part I - Report on Operations 18 Aust Inf Bde GP," AWM54 581/7/31 [1], AWM.

¹²² "X" Squadron was an *ad hoc* group initially composed of four tanks each from B and C Squadrons which came under the command of Captain Norman G. Whitehead. 2/6 Armoured Regiment War Diary, 10 December 1942, AWM52 3/1/12/2, AWM.

¹²³ *Employment of Army Tanks*, 7, 9; "Organisation of British Tank Brigades Structure and Brigade Elemental Assignments by Regiment 1939-1945," Combined Arms Research Library; 18th Infantry Brigade, "18 Aust Inf Bde GP Operation Order No. 1," 17 December 1942, Appendix B, AWM54 581/7/31 [1], AWM.

¹²⁴ The signals included: a) Line of flight of Very pistol will indicate resistance in that direction; b) Inf desiring tank to move to them will raise steel helmet on rifle and bayonet; c) Targets or centres of resistance may be

tanks were instructed to ‘...move ahead of adv[ance] at infantry pace and engage and destroy strongpoints’, though the infantry’s progress determined the pace of the advance.¹²⁵ The battalion attacked with three companies, but only the two attacking through Duropa Plantation were supported by tanks.¹²⁶ The advance was met by heavy fire but progressed well.¹²⁷ Infantry and tanks devised their own techniques. The tanks fired on positions which had been previously identified by reconnaissance or as indicated by infantry:

...[the tanks] simply blasted the Jap pillboxes to pieces by standing approximately 40/50 yards off and firing 37mm HE shells into them. The supporting infantry then mopped the Japs up.¹²⁸

Infantry then closed with bunkers to grenade them while the tanks moved to cover the exits.¹²⁹ The basic routine was repeated until the tanks ran out of ammunition. However, C Company, unsupported on the left flank near New Strip, was unable to progress until a troop of tanks was reassigned to support it. The company reorganised and attacked employing a formation of two tanks forward and one back with the infantry supporting in a “V”, which proved highly successful and minimised losses.¹³⁰

The attack was largely successful but demonstrated some of the difficulties for infantry-tank operations in the jungle.¹³¹ First, infantry without tank support had fared badly against the Japanese defences; likewise, tanks separated from infantry had been easy targets. Two tanks were immobilised after being rushed by Japanese infantry while another was destroyed by a magnetic

indicated by pointing rifle and bayonet at arm’s length; d) Positions of all wounded will be marked by fixing rifle vertically with bayonet in ground. 2/9th Infantry Battalion, “Operation Order No. Buna 1,” 17 December 1942, AWM52 8/3/9/20, AWM; 18th Infantry Brigade, “18 Aust Inf Bde GP Operation Order No. 1,” 17 December 1942, Appendix B, AWM54 581/7/31 [1], AWM.

¹²⁵ 2/9th Infantry Battalion, “Operation Order No. Buna 1,” 17 December 1942, AWM52 8/3/9/20, AWM; 18th Infantry Brigade, “18 Aust Inf Bde GP Operation Order No. 1,” 17 December 1942, Appendix B, AWM54 581/7/31 [1], AWM.

¹²⁶ D Company formed the right flank with the objective of Cape Endaiadere. A Company formed the middle of the line with the objective to hold the left flank of D Company on Cape Endaiadere, while C Company attacked on the open left flank to gain a position 150m north of New Strip and form the pivot on which the battalion would reorientate for Phase Two and attack westward along the coast towards Simemi Creek. B Company provided the battalion’s reserve. 2/9th Infantry Battalion, “Operation Order No. Buna 1,” 17 December 1942, AWM52 8/3/9/20, AWM.

¹²⁷ The attack was preceded by 10 minutes of intense artillery and mortar concentrations on identified positions in Duropa Plantation and New Strip areas, and then continued for another 10 minutes against Cape Endaiadere after the attack began. See Figure 10.7 for the full fire plan. 2/9th Infantry Battalion, “Operation Order No. Buna 1,” 17 December 1942, AWM52 8/3/9/20, AWM.

¹²⁸ “Cpl Barnett’s Account of Action,” Appendix, AWM52 3/1/12/2, AWM.

¹²⁹ Trooper John Wilson, 2/6th Armoured Regiment, cited in Brune, *Bastard of a Place*, 506-507.

¹³⁰ 2/9th Infantry Battalion War Diary, 18 December 1942, AWM52 8/3/9/20, AWM.

¹³¹ The battalion recorded 5 officers and 49 ORs killed, and 6 officers and 111 ORs wounded. The attacking platoons suffered approximately 50% casualties. 2/9th Infantry Battalion War Diary, 18 December 1942, AWM52 8/3/9/20, AWM.

mine.¹³² Captain Norman Whitehead's control tank also sustained serious damage after Japanese infantry and machineguns fired through the commander's vision port.¹³³ Second, communications between tanks and infantry had to be improved to allow tanks to respond to emerging situations. Visual signals were partially effective for infantry working with an individual tank, but poor visibility from a closed-down tank and Japanese snipers' propensity to target soldiers issuing commands were limitations. Last, it was clear that infantry and tanks had to develop a rapport to ensure mutual understanding of each units' capabilities and limitations:

Another psychological fact which the men agreed on was that they would have felt much happier if they could have trained with the infantry with which they actually had to work. These tanks are very blind in close country and it makes a lot of difference to the mental outlook of the crew if they have full confidence in the supporting infantry.¹³⁴

This sentiment was reciprocated by the infantry, who felt tank crews did not fully appreciate infantry minor tactics.¹³⁵ Lessons from Phase One offered opportunities to refine infantry-tank coordination, communication, tactics, and protection.

The need for careful planning, liaison, and coordination was demonstrated by a hastily launched attack on 29 December.¹³⁶ The tank crews participating in the attack had only just arrived at Buna and were unable to attend the briefing or reconnoitre the area. As the crews were unfamiliar with the ground, several tanks got lost or delayed enroute to the start line. Only three tanks arrived in time for the much-delayed attack.¹³⁷ Three more tanks arrived shortly afterwards, which led to confusion during the attack as they mistook an advancing company for enemy troops and opened fire, forcing it to withdraw from its objective.¹³⁸ The breakdown was attributable to the tank crews' lack of understanding of the attack and the terrain, as well as the limited intercommunication between infantry and tank units. The 2/10th Battalion's CO wrote:

It was evident that the commanders of tanks arriving later on in the fight had no knowledge of what was expected of them, and were not even conversant with the position of the start

¹³² 2/6th Armoured Regiment War Diary, 18 December 1942, AWM52 3/1/12/2, AWM.

¹³³ Whitehead was seriously wounded in the eye, face, and arm. 18 Aust Inf Bde, "Part I - Report on Operations 18 Aust Inf Bde GP," AWM54 581/7/31 [1], AWM.

¹³⁴ NGF, "Operations Using M3 Light Tanks in New Guinea," 17 February 1943, AWM54 577/7/29 [1], AWM; McKenzie, "Medical Report on AFV Crews in Action at Buna," undated, AWM54 267/6/7, AWM.

¹³⁵ NGF, "Operations Using M3 Light Tanks in New Guinea," 17 February 1943, AWM54 577/7/29 [1], AWM.

¹³⁶ 2/6th Armoured Regiment War Diary, "Appendix: Message O82 HQ 18th Australian Infantry Brigade to X Squadron 2/6th Armoured Regiment," 29 December 1942, AWM52 3/1/12/2, AWM.

¹³⁷ X Squadron 2/6th Armoured Regiment War Diary, 29 December 1942, AWM52 3/1/12/2, AWM; Lieutenant-Colonel James Dobbs, CO 2/10th Infantry Battalion, "HQ Barker - Report on Tank Action 29 Dec.," 31 December 1942, AWM52 8/2/18/26, AWM.

¹³⁸ Private Arthur Evans of A Company had to rush to one of the tanks firing on C Company and tell it to cease fire. Evans came under heavy fire from the Japanese while on the tank but was able to get the crews attention. Six other members of A Company became casualties exposing themselves to enemy fire to communicate with the tanks. Brune, *Bastard of a Place*, 537; Lieutenant Harry Robotham, 2/10th Infantry Battalion, #870, AAWFA; Dobbs, "HQ Barker - Report on Tank Action 29 Dec.," 31 December 1942, AWM52 8/2/18/26, AWM.

line...At 1930hrs the attack appeared to have every chance of success, which was nullified by the tanks' unfortunate mistake in firing on C [Company].¹³⁹

These events forced the 18th Brigade to modify its briefings and command organisation to ensure better coordination and communication during Phase Three. Wootten 'lectured all tanks and crew [commanders] on "I" tank tactics' and issued written orders for the next attack.¹⁴⁰ Tank crews were encouraged to 'leave their tanks' to take part in infantry conferences down to platoon-level.¹⁴¹ Tank commanders were included in briefings and a Tank Liaison Officer was attached to battalion headquarters. The officer's role was to advise on the employment and limitations of the available tanks and to relay all relevant information to tank crews.¹⁴² Despite the limited time for tank crews and infantry to familiarise themselves with their new partners, 'remarkably good liaison and understanding was obtained' by the end of the campaign.¹⁴³

Communications between infantry and tank units was also improved as the operations progressed. The visual signals system was expanded to permit tanks to request assistance.¹⁴⁴ However, because of poor visibility and the distraction of battle, infantry often found it more effective to climb onto the rear deck of the tank to communicate with the crews via messages or improvised morse code.¹⁴⁵ By the end of December a wireless network was developed to link tank commanders with infantry headquarters. A reserve tank remained at battalion headquarters as a command tank which retained wireless communications to the other operational tanks.¹⁴⁶ Tank-to-tank communications were conducted over one frequency, while the other was used for communications between the brigade, battalion, and senior tank officer.¹⁴⁷ Infantry companies were also issued with American SCR-536 walkie-talkies which enabled them to communicate directly with

¹³⁹ Dobbs, "HQ Barker – Report on Tank Action 29 Dec.," 31 December 1942, AWM52 8/2/18/26, AWM.

¹⁴⁰ X Squadron 2/6 Armoured Regiment War Diary, 31 December 1942, AWM52 3/1/12/2, AWM.

¹⁴¹ 18th Infantry Brigade, "Notes on Tank and Inf Cooperation," undated, AWM54 581/7/31 [1], AWM.

¹⁴² Dice, "Notes from Theatres of War: New Guinea July 42 – January 43," undated, AWM54 519/6/51, AWM; NGF, "Operations Using M3 Light Tanks in New Guinea," 17 February 1943, AWM54 577/7/29 [1], AWM.

¹⁴³ NGF, "Operations Using M3 Light Tanks in New Guinea," 17 February 1943, AWM54 577/7/29 [1], AWM.

¹⁴⁴ 18th Infantry Brigade, "18 Aust Inf Bde GP Operation Order No. 2," 31 December 1942, Appendix F, AWM54 581/7/31 [1], AWM.

¹⁴⁵ Neil Russell of the 2/12th Battalion recalled: '...the tanks had limited access...and they're noisy...they worked out a system by knocking and so forth, to give instructions to them. We did that and it was quite successful'. Angus Suthers recalled; 'There's a little window on the back of those tanks and [a section commander] was able to pass them a written message. There was no use trying to talk to them, you couldn't make yourself heard...he passed a message to the tank commander telling him just what his problems were, and the tank turned around and gave...a hand'. Private Neil Russell, 2/12th Infantry Battalion, #692, AAWFA; Captain Angus Suthers, 2/12th Infantry Battalion, #399, AAWFA.

¹⁴⁶ 18th Infantry Brigade, "Notes on Tank and Inf Cooperation," undated, AWM54 581/7/31 [1], AWM; 18th Infantry Brigade, "18 Aust Inf Bde Gp Operation Order No. 2," 31 December 1942, Appendix F, AWM54 581/7/3 [1], AWM; 18th Infantry Brigade, "18 Aust Inf Bde Gp Operation Order No. 3," 11 January 1943, Appendix G, AWM54 581/7/3 [1].

¹⁴⁷ 18th Infantry Brigade, "Part II: Lessons Learnt in Cape Endaiadere-Giroa Point and Sanananda Area," undated, AWM54 581/7/31 [1], AWM.

tanks.¹⁴⁸ This permitted tanks to be redirected as circumstances demanded with more certainty than in previous actions.

Formations and techniques were adapted to meet the 'widely divergent' terrain and availability of tanks.¹⁴⁹ Ideally, a troop of three tanks was assigned to each attacking company, which permitted mutual support and protection, along with a control tank and a reserve. C Company, 2/9th Battalion's, attack on 18 December set the model for infantry-tank formations.¹⁵⁰ However, infantry had to close immediately to the rear of the tanks in dense terrain.¹⁵¹ Spacing was a paramount concern for mutual support:

Tank commanders must...be constantly on the *qui vive* to ensure both that they do not outstrip the infantry, nor, on the other hand, hold up its advance by continuing to engage targets with which infantry are prepared to deal. If infantry and tanks become too divorced during the action the tanks are in much greater danger...'.¹⁵²

Where possible, tanks would approach bunkers obliquely and engage the firing slits, sides, or entrances with 37mm HE from 20-30m to blast an opening. The tank's machineguns and supporting infantry would cover the connecting trenches to prevent the defenders from exiting while an infantry assault team closed with the bunker to attack with grenades or blast bombs.¹⁵³ This was sometimes followed up by pouring a can of aviation fuel into the opening and setting it alight to burn the bunker out.¹⁵⁴ This was munitions-intensive, requiring tanks to expend an average of 30 rounds 37mm HE and 2000-2500 rounds of .30cal ammunition per combat hour.¹⁵⁵ However, it was highly successful and once the process had been refined it 'cut down our losses to practically zero once the breakthrough had been accomplished' against Giropa Point.¹⁵⁶ Some tanks operated with an additional crew member to serve as a designated loader for the 37mm gun which reduced fatigue and improved efficiency.¹⁵⁷ While uncomfortable, it allowed the commander to focus on directing the tank instead of loading and enabled all armaments to be used simultaneously.¹⁵⁸ The physical

¹⁴⁸ X Squadron 2/6 Armoured Regiment War Diary, 31 December 1942, AWM52 3/1/12/2, AWM.

¹⁴⁹ 18th Infantry Brigade, "Notes on Tank and Inf Cooperation," undated, AWM54 581/7/31 [1], AWM.

¹⁵⁰ 18th Infantry Brigade, "Part I - Report on Operations 18 Aust Inf Bde GP," AWM54 581/7/31 [1], AWM.

¹⁵¹ 2/12th Infantry Battalion War Diary, 1 January 1943, AWM52 8/3/12/10, AWM.

¹⁵² 18th Infantry Brigade, "Notes on Tank and Inf Cooperation," undated, AWM54 581/7/31 [1], AWM.

¹⁵³ 2/12th Infantry Battalion War Diary, 1 January 1943, AWM52 8/3/12/10, AWM.

¹⁵⁴ Use of petrol and grenades on Japanese bunkers is also described by Lieutenant Colonel Alexander MacNab, CO III/128th, and Lieutenant Neil Russell, 2/12th Battalion. MacNab to Milner, 25 November 1949, Warren Letters, RG319 E53 B3, NARA; Lieutenant Neil Russell, 2/12th Infantry Battalion, #692, AAWFA.

¹⁵⁵ NGF, "Operations Using M3 Light Tanks in New Guinea," 17 February 1943, AWM54 577/7/29 [1], AWM.

¹⁵⁶ Between 1-2 January 1943, the III/128th supported the 2/12th Battalion in the reduction of Giropa Point. During 1 January 1943, the III/128th only lost 8 men. The Australian's casualties were still high by comparison; 5 officers and 45 ORs killed and 7 officers and 120 ORs wounded from a total strength of 35 officers and 610 ORs. III/128th Infantry Battalion Journal, 1 January 1943, 332-INF(128)-7-0.7, RG 407 E427 B8065; 2/12th Infantry Battalion War Diary, 1-2 January 1943, AWM52 8/3/12/10, AWM.

¹⁵⁷ NGF, "Operations Using M3 Light Tanks in New Guinea," 17 February 1943, AWM54 577/7/29 [1], AWM.

¹⁵⁸ 18th Infantry Brigade, "Notes on Tank and Inf Cooperation," undated, AWM54 581/7/31 [1], AWM.

and mental exhaustion of crews also required complete replacement crews to be on hand at replenishment areas ready to go the moment a tank returned to rearm and refuel.¹⁵⁹

Measures were also taken increase the protection of tanks against Japanese infantry. Infantry protective parties were assigned to follow each tank closely and to cover tank crews in case they were immobilised and needed to bail out.¹⁶⁰ Despite many tanks becoming immobilised in action, only one tank was destroyed by infantry attack after 18 December (Figure 10.10).¹⁶¹ However, the M3 remained very vulnerable to high-velocity antitank guns. Three tanks were lost in quick succession on 24 December to a Japanese 75mm dual-purpose gun on Old Strip.¹⁶² While the gun was spotted by aircraft of No.4 Squadron and promptly knocked out by artillery, it was felt desirable to provide aerial observation to counter similar threats thereafter.

In spite of improvements in coordination, communication, and tactics, terrain was ultimately the deciding factor in the effective employment of tanks. When the Allies concentrated their forces against Sanananda, it was hoped that tanks would finally provide the direct support infantry needed to reduce the Killerton Junction.¹⁶³ However, Allied commanders were mindful that tanks were not a panacea, as the 7th Division noted 'the terrain, swamps, etc, close timber and vines will limit their employment to a marked degree'.¹⁶⁴ Extensive reconnaissance and planning was undertaken to determine how the tanks might operate.¹⁶⁵ This included consultation with Brigadier Denzil MacArthur-Onslow, Commander 1st Armoured Brigade, who was one of the AMF's foremost armour

¹⁵⁹ Dice, "Notes from Theatres of War: New Guinea July 42 – January 43," undated, AWM54 519/6/51, AWM.

¹⁶⁰ Corporal Geoffrey Holmes, a Bren-gunner with the 2/12th Battalion, recalled: '...the next thing I was to do was to protect the tank...I was given one side of the tank to look after, and one of the other machine-gunners on the other side of the tank...I stuck with that tank then for...quite a while.' Corporal Geoffrey Holmes, 2/12th Infantry Battalion, S00540, KMSA; 18th Infantry Brigade, "Notes on Tank and Inf Cooperation," undated, AWM54 581/7/31 [1], AWM; NGF, "Operations Using M3 Light Tanks in New Guinea," 17 February 1943, AWM54 577/7/29 [1], AWM.

¹⁶¹ An observer noted it was: 'amazing that either due to a lack of enterprise or a lack of facilities the enemy did not utterly destroy three or more of our tanks, which were hopelessly bogged and largely at his mercy'. NGF, "Operations Using M3 Light Tanks in New Guinea," 17 February 1943, AWM54 577/7/29 [1], AWM; 2/6th Armoured Regiment War Diary, 1 January 1943, AWM52 3/1/12/3, AWM; 2/12th Infantry Battalion War Diary, 1 January 1943, AWM52 8/3/12/10, AWM.

¹⁶² The Japanese were known to possess such weapons around Old Strip, but their lack of activity was interpreted as evidence they had been disabled or run out of ammunition. The uncertainty caused Wootten to limit the number of tanks committed to the action to a single troop. 18th Infantry Brigade, "Part I - Report on Operations 18 Aust Inf Bde GP," AWM54 581/7/31 [1], AWM, X Squadron 2/6 Armoured Regiment War Diary, 24 December 1942, AWM52 3/1/12/2, AWM.

¹⁶³ Heavy rains permitted movement of only one troop of tanks to Soputa. The tanks departed Buna on 5 January and did not arrive until three days later. 2/6th Armoured Regiment War Diary, 5-8 January 1943, AWM52 3/1/12/3, AWM.

¹⁶⁴ 7th Division General Staff Branch War Diary, 5 January 1943, AWM52 1/5/14/45, AWM.

¹⁶⁵ This commenced with the 30th Brigade, which was asked for its recommendations having occupied the area for several weeks. Subsequent reconnaissance work was carried out by the 18th Brigade upon its arrival on 9

Date	Location	Infantry Unit	Tanks	Destroyed		Damaged	
				INF	AT	INF	AT
18 December	Cape Endaiadere	2/9th Battalion	7	2	-	1	-
20 December			4	-	-	-	-
22 December			3	-	-	-	-
24 December	Old Strip	2/10th Battalion	3	1	-	-	2
29 December	Giropa Point		4	-	-	-	-
1 January	Giropa Point	2/12th Battalion	7	-	-	1	-
2 January	Giropa Point		7	-	-	-	-
12 January	Killerton Junction		4	1	-	2	-
16 January	Kano Roadblock	I/163rd Regiment	2	-	-	-	-

Figure 10.10: Summary of Tank Actions, Buna-Sanananda, December 1942-January 1943.

experts. MacArthur-Onslow supported the proposed plan but concurred that close country and swamps either side of the Soputa-Sanananda road imposed serious limitations.¹⁶⁶ Despite no activity, intelligence did not discount the possibility of high-velocity guns defending the junction.¹⁶⁷ The tanks would continue to work with the 18th Brigade to capture the junction. The plan was for infantry from the 2/12th Battalion to attack from east of the junction while a troop of tanks advanced north along the road to support the battalion's left flank.¹⁶⁸ Shortly after the attack began the leading tank was hit by a concealed antitank gun after advancing only 60m along the road. The other tanks tried to provide support but were also hit as they had no room to manoeuvre.¹⁶⁹ Infantry were unable to assist as they could not locate the gun despite it being within 40m of Allied

January. 7th Division General Staff Branch War Diary, 5 January 1943, AWM52 1/5/14/45, AWM; 18th Infantry Brigade, 8-11 January 1943, "Part I - Report on Operations 18 Aust Inf Bde," AWM54 581/7/31 [1], AWM.

¹⁶⁶ MacArthur-Onslow also visited the advanced headquarters of the 2/6th Armoured Regiment at Buna to discuss "I" Tank tactics in jungle warfare with Major Norman L. Moss, OC X Squadron. 7th Division General Staff Branch War Diary, 10 January 1943, AWM52 1/5/14/45, AWM; X Squadron 2/6 Armoured Regiment War Diary, 9 January 1943, AWM52 3/1/12/3, AWM.

¹⁶⁷ The location was also reconnoitred by Captain R.G. May, 2iC B Squadron, and Lieutenant D.A. Heap the day before the attack. Captain R.G. May, 2/6th Armoured Regiment, "Report on Action at Sanananda - 12 January", undated, AWM52 3/1/12/3, AWM; 18th Infantry Brigade, "Part I - Report on Operations 18 Aust Inf Bde GP at Cape Endaiadere, Giropa Point and Sanananda, 14 Dec 42/22 Jan 43," AWM54 581/7/31 [1], AWM.

¹⁶⁸ It was also noted that the movement of tanks along the Soputa Road, which had been badly affected by the recent heavy rains, could completely 'dislocate' the Allies' lines of communication between Soputa and the Allied forces around the Junction by destroying the road. 7th Division General Staff Branch War Diary, 11 January 1943, AWM52 1/5/14/45, AWM.

¹⁶⁹ The gun was surmised to be a 37mm firing AP-tipped HE shells at 40m. The rounds partially penetrated an edge in the armour to a depth of 7.5cm. On Guadalcanal the Japanese 47mm AT gun also penetrated the Stuart's frontal armour with ease. NGF, "Operations Using M3 Light Tanks in New Guinea," 17 February 1943, AWM54 577/7/29 [1], AWM; McLeod, "Report by Lt K.H. McLeod on Engagement of M3 Tanks 13 January 43 Sanananda Area," Appendix A, AWM54 44/1/5, AWM; Lieutenant Colonel Meredith Edison, USMC, "Japanese Antitank Tactics and Weapons," 7 November 1942, 370.2 #2, RG496 E40 B314, NARA.

lines.¹⁷⁰ The anticlimactic use of armour at Sanananda proved that terrain was the foremost consideration for the employment of armour and risks of using tanks out of their designated roles.

Infantry-tank operations were vital to the Allied breakthrough at Buna. Without armoured support, the breakthrough in Warren sector would have been unlikely. Eichelberger wrote to Sutherland he was 'glad [Wootten] has the tanks to help him. I do not believe that he or anyone else would have gone very far without them'.¹⁷¹ However, while armour proved decisive at Buna, it was an unmitigated failure at Sanananda. Despite significant improvements in coordination, understanding, and tactics, terrain ultimately decided the effectiveness of armour. The beachheads operations established basic principles which were employed in future campaigns. Tank tactics employed at Sattelberg in November 1943 were 'mainly of countermeasures arising from the lessons learnt during [the] Buna campaign'.¹⁷² Armour had a clear role to play in jungle warfare. However, definitive rules about armour in the jungle were difficult to establish because the M3 was not designed for the role in which it was employed.¹⁷³ While satisfactory results had been achieved through operational learning and adaptation, the effectiveness of infantry-tank operations needed strong foundations in training, coordination, and tactics.

Conclusion

Despite the logistical difficulties of deploying and sustaining supporting arms, a combined arms fighting force was crucial to Allied success. The Allied forces which advanced on the beachheads had few supporting weapons capable of enabling the neutralisation or destruction of the Japanese positions. The Allies first had to deploy supporting weapons, then work out the best way to apply them under difficult conditions which prevented the conventional application of techniques and tactics. These were adapted to suit the equipment and conditions 'peculiar to the jungle'.¹⁷⁴ Combined arms warfare progressed with the development and refinement of infantry tactics and techniques. However, had the Allies been permitted to build-up a combined arms force

¹⁷⁰ May, "Report on Action at Sanananda – 12 January", undated, AWM52 3/1/12/3, AWM.

¹⁷¹ Eichelberger to Sutherland, 20 December 1942, RG41 B1 F2, MM.

¹⁷² Lieutenant-Colonel D.D. Glasgow, CO 1st Tank Battalion, "Tank Tactics," 23 February 1944, AWM54 925/7/7, AWM.

¹⁷³ Post-campaign reports stressed the lessons from Buna and Sanananda could be no more than 'general principles' because of the logistical difficulties, equipment used, and terrain. However, they were illustrative of Japanese antitank tactics and the broader problems of combined arms coordination in jungle fighting. By the time the reports from the Papuan campaign had been fully digested, the 4th Armoured Brigade had successfully operated Matilda I tanks trained in infantry-tank cooperation in the Sattelberg campaign. "G" Armoured Corps, "Comments on Tank Employment," 30 December 1943, AWM54 925/7/7, AWM.

¹⁷⁴ Dice, "Notes from Theatres of War: New Guinea July 42 – January 43," undated, AWM54 519/6/51, AWM.

prior to attacking, the operations would have undoubtedly progressed quicker and with fewer casualties.

The evolution of combined arms approaches represents learning and adaptation at both the operational and tactical levels. First, in the operational commanders' recognition of the need for greater levels of fire support which led to the deployment of more artillery and armour. Second, in how unit and sub-unit commanders applied and tested tactics and techniques. The Allies' employment of artillery and armour evolved through the recognition of strengths and limitations in each arm and was fundamentally underpinned by a desire to maximise effectiveness and support infantry neutralising and destroying the Japanese defences. While the logistical demands of deploying and sustaining combined arms forces were significant, the beachheads proved that even in jungle conditions, artillery and armour were worth their literal weight.

Given the shortcomings of direct air support, artillery provided the most reliable and effective means of supporting infantry attacks. However, it faced many doctrinal, technical, and practical challenges. Deficiencies in guns and ammunition, limited observation and information about targets, and the lack of coordination with infantry prevented artillery from achieving significant tactical effects during the early phases. However, Allied artillerymen innovated and sought solutions to these problems. Command and communications were adapted, and observation was greatly expanded to enhance information and accuracy. Mutual confidence and understanding between infantry and artillery were gradually developed which permitted infantry to close with artillery concentrations and exploit its effects. Allied fire plans were adapted to the limited number of guns by emphasising concentrations against known targets rather than barrages. However, the effectiveness of artillery fire was fundamentally limited by shortages of suitable ordnance. This meant highly successful artillery plans like the 39th Battalion's at Gona could not be replicated on wider scale, and that even when sufficient intensities of fire could be achieved, it was difficult to achieve a sufficient neutralising or material effect.

Armour proved the other critical element of the Allies' combined arms approach. It provided infantry with much-needed mobile direct fire support. The deployment of ill-suited M3 Light Tanks was demonstrative of both the tactical desperation and logistical limitations faced by the Allies. Nonetheless, it is difficult to see how the Allies might have broken through the defences at Buna without them. Despite a lack of established methods for coordination and support, infantry-tank tactics were devised and adjusted as the battle unfolded. Early experiences demonstrated the need for a high level of mutual understanding and coordination. However, improvements in tactics, communications, and coordination could not solve the inherent vulnerabilities of the M3s being used in a role they were not intended for nor could it mitigate the limitations imposed by terrain.

Nevertheless, the Allies' use of tanks proved that armour could have a prominent role supporting infantry against prepared positions in the jungle as would be seen with great success throughout 1943.

Chapter Eleven

‘Nothing in the Book About It’:

Learning and Adaptation during the Beachhead Operations

The whole campaign was a military nightmare. We were called on brief notice when conditions became desperate. I could write a book on the lessons I have learned and I have a lot to pass on to any troops I may train in the future. So often the measuring rod of a unit's training depends on practice marches which do not fit one to fight the Japs in a swamp.¹

Lieutenant General Robert L. Eichelberger

CG US I Corps

Letter to Brigadier General Floyd Parks, CoS USAGF

1 February 1943

The ability of Allied commanders to recognise the limitations of their forces and challenge assumptions about environmental, operational, and tactical conditions was a critical factor in the Allies' victory at the beachheads. The preceding chapters have charted how command and control, logistics, and tactics evolved from November 1942 to the conclusion of the fighting in January 1943. The organisations, procedures, and techniques employed by the end of the campaign were vastly different to those used in the beginning. Victory was not solely dependent on these adaptations – the Japanese commitment to Guadalcanal and breakdown in supply were also important – nor were all adaptations successful, but they made Allied forces more effective and formed the basis of preparation for future campaigns in the Pacific.

The Allies' capacity to learn and adapt was determined by the four elements established in the thesis' framework. First, competence and leadership in command were crucial. Adaptation

¹ Lieutenant General Robert L. Eichelberger, CG US I Corps, to Brigadier General Floyd Parks, CoS USAGF, 1 February 1943, RG41 B1 F3, MM.

varied based on commanders' abilities to challenge assumptions about their own forces and the enemy, identify problems, and devise solutions. This was inherently linked to their understanding of the strategic, operational, or tactical conditions. Second, information about friendly and enemy forces shaped commanders' perceptions of the situation. Commanders who sought to understand the battlefield adapted more readily than those who did not. Third, information had to be disseminated to be made useful. This was affected by high personnel turnover, the difficulty of administration, and the unique circumstances in each sector. Fourth, doctrine, organisation, and equipment formed the foundations for many adaptations. Allied doctrine was sound, but the effects of jungle terrain required the considered application of forces and tactics.

Assessing the performance of Allied organisations – GHQ, AAF, NGF and Adv NGF – and the AMF and US Army combat formations clearly demonstrates how these factors shaped the ability to respond to the circumstances and meet Nagl's criteria for learning organisations. The ANF is not assessed because of its minor contributions to the campaign. Some Allied organisations actively adapted or shaped conditions in which adaptation could occur. Other commands remained unable to recognise problems or adapt effectively. GHQ tried to direct a battle it understood poorly which fundamentally shaped the high-pressure situation in which subordinate commands operated. It failed to appreciate the operational and tactical constraints on Allied forces, nor did it challenge its assumptions and expectations about the operations. The AAF proved responsive and innovative under vigorous leadership from Kenney. It readily adapted its equipment and techniques, organisation, and procedures to address the requirements of air supply, battlefield interdiction, and direct air support.

NGF and Adv NGF shared a complicated relationship. While NGF's understanding of the operations was not always accurate, it was more receptive to the perspectives of ground commanders. Adv NGF did not greatly influence Allied approaches, but it fostered conditions for commanders to develop suitable responses to their circumstances. At lower levels, learning and adaptation in AMF and US Army units occurred organically, though doctrine determined how this spread throughout formations. Units and formations developed different responses to the unique tactical and environmental circumstances they faced in each sector, determined by leadership, competence, training, and the equipment available to them. Without learning and adaptation, it is difficult to conceive how Allied forces might have secured a victory by persisting with the approaches employed at the beginning of the battles.

General Headquarters South West Pacific Area as a Learning Organisation

GHQ's conduct during the operations ultimately served as an impediment to learning and adaptation at lower levels. MacArthur and his staff persisted with unrealistic expectations about the operations which were influenced by antagonism between Australian and American high command, uncertainty over the Solomons operations, and overly optimistic or inaccurate interpretations of intelligence. GHQ showed little responsiveness to the difficult conditions reported by its subordinate commands. Its inability to challenge assumptions about Japanese strengths and intentions or about the capabilities of Allied forces resulted in tactical interference and undue pressure on subordinates. GHQ therefore failed to consistently meet Nagl's criteria for a learning organisation. This ultimately complicated the learning process for frontline commands as their opportunities for tactical freedom and resources were restricted.

	Criteria	GHQ SWPA
1	Does the organisation promote suggestions from the field?	Rarely
2	Are subordinates encouraged to question superiors and policies?	Rarely
3	Does the organisation regularly question its basic assumptions?	Rarely
4	Are high-ranking officers routinely in close contact with those on the ground and open to their suggestions?	Rarely
5	Are SOPs generated locally and informally or imposed from the centre?	Centrally

Figure 11.1: GHQ SWPA as a Learning Organisation.

GHQ's tendency to view tactical problems as an issue of command rather than issues of terrain, tactics, and resources stemmed from its perception of the events on the Kokoda Trail. Horner argues that MacArthur misinterpreted the challenging advance as a reflection of poor leadership and aggression rather than Japanese capabilities and the difficulties of mobility and supply.² This continued at the beachheads and explains GHQ's rigidity in its expectations of how the operations should have unfolded. GHQ believed NGF had sufficient forces to defeat the Japanese. The difficulties posed by terrain, the defences, supply and resource limitations, and the inexperience and exhaustion of Allied troops were misinterpreted as issues of command. Harding's performance was poor, but his relief did not fundamentally alter the tactical situation, and while Eichelberger was proactive in trying to overcome these challenges he remained under constant pressure from GHQ. This was further compounded by MacArthur's perceptions of risks in the SWPA and SOPAC which made time the imperative factor in the operations.³

² Horner, *Crisis of Command*, 261-265.

³ MacArthur to Blamey, 20 October 1942, 3DRL/6643 Item 2/47, AWM.

A key barrier to GHQ developing an accurate appreciation for the situation was its continual misinterpretation or dismissal of new intelligence. Willoughby's initial assessments that the Japanese were simply 'buying time' underpinned the assumption they would not attempt to hold the beachheads if pressed aggressively.⁴ Furthermore, he believed the Allies held decisive numerical and material advantages which supported GHQ's belief that no further resources were necessary to capture the beachheads.⁵ However, this overlooked actual conditions, where the Japanese could count on support troops to contribute to the defence, the Allies were dispersed against four distinct objectives, the terrain impeded concentration, and material advantages were curtailed by logistical constraints.⁶

GHQ's reluctance to acknowledge the conditions reported by field commanders further complicated the learning and adaptation process. MacArthur's tendency to think in 'broad sweeping strategic terms' prevented him from appreciating the complex challenges of attacking Japanese bunkers with small arms.⁷ His correspondence with Blamey and Eichelberger highlights a distorted perception of what was possible on the ground, and the conditions in which Allied forces were fighting.⁸ While Kenney believed MacArthur did not have 'preconceived ideas' it is difficult to reconcile this with his attitudes during the operations.⁹ Sutherland, Willoughby, and several staff officers from GHQ visited the beachheads but they appear to have been unwilling or unable to convince MacArthur of the true picture. GHQ's prickly responses when questioned by NGF and Adv NGF indicate its insularity. While Blamey himself was slow to appreciate the situation, he could have made stronger representations to GHQ to inform or reshape its outlook but instead sought to insulate Australian commanders from GHQ's negative influences. This may have been political as much as practical as Blamey sought to protect his position as Commander ALF from MacArthur.

GHQ demonstrated greater adaptation regarding logistics. The decision to establish COSC as a joint command contradicted established doctrinal practices but proved an effective response to coordinate logistics. COSC operated as the first truly combined command in the SWPA. It was especially important given limited air and sea transportation and the need to fulfil both American and Australian supply demands. However, while MacArthur acknowledged the importance of

⁴ See Willoughby's comments in GHQ SWPA MIS, "G-2 Daily Summaries #211-223," 19-30 October 1942, RG3 S2 B26 F4, MM.

⁵ GHQ SWPA MIS, "G-2 Daily Summary #246x," 23 November 1942 RG3 S2 B27 F3, MM.

⁶ Willoughby's suggested 'increasing intervention of...artillery' would break Japanese resistance when the Allies had only ten guns in action. GHQ SWPA MIS, "G-2 Daily Summary #246x," 23 November 1942, RG3 S2 B27 F3, MM; GHQ SWPA MIS, "G-2 Daily Summary #248x," 25 November 1942, RG3 S2 B27 F3, MM.

⁷ Horner, *Crisis of Command*, 263.

⁸ MacArthur to Eichelberger, 25 December 1942, RG41 B1 F2, MM.

⁹ Kenney Diary, 16 December 1942, RG54 B1 VIII, MM.

logistics to the advance on the beachheads, the proposal was led by Blamey.¹⁰ GHQ's endorsement of air transport was also a significant departure from conventional methods. The proposals by Kenney and Blamey about the potential to airlift troops and support the operations by air won support. This overcame some of the limitations to strategic mobility imposed by the environment, but also presented new challenges for supply.

Persistent pressure on subordinates and a poor appreciation of the conditions were not conducive to creating an atmosphere which encouraged critical reflection or adaptation. While GHQ rightly remained cognisant of the strategic picture, its interference at the operational and tactical levels placed undue pressure on subordinates to achieve a decisive result without adequate reconnaissance, preparation, or resources. GHQ's limited meaningful contact with subordinate commands and unwillingness to challenge assumptions ensured it remained ill-informed throughout the operations. However, the 'bloody grinding' head-on collision at Buna left a lasting impression on MacArthur which influenced his 'leapfrogging' offensives in the SWPA where he sought to avoid any more battles of attrition where possible.¹¹

The Allied Air Forces as a Learning Organisation

The AAF proved an innovative and adaptable organisation thanks to keen leadership at higher levels. While land-based air power was unable to achieve decisive results supporting ground forces, its operational and strategic effects destroying Japanese aircraft, establishing aerial superiority, and isolating the beachheads were crucial to Allied success. Kenney and the AAF were flexible in their pursuit of conventional tactical air power priorities which ensured the AAF was adaptable to the conditions. Openness to new ideas, frequent examination of air power's roles, and close liaison with subordinates and other commands ensured the AAF met Nagl's criteria for a learning organisation.

Kenney's background in technical development, administration, logistics, and aerial tactics positioned him well to address the AAF's many challenges. He reorganised the AAF along national lines and appointed competent commanders in key positions. Kenney's focus on increasing the number of operational aircraft was critical. Group-Commander William Garing, No.9 Operational Group RAAF, recalled:

¹⁰ Blamey continually highlighted the supply difficulties in Allen's advance in his communications with MacArthur during the September-October period. Blamey to MacArthur, 29 September 1942, AWM54 577/3/1; Blamey to Curtin 4 October 1942, 3DRL/6643 Item 2/47, AWM; Blamey to MacArthur, 5 October 1942, 3DRL/6643 Item 2/47, AWM.

¹¹ MacArthur, *Reminiscences*, 180; Mayo, *Bloody Buna*, 173.

If you wanted something in the squadron you simply got on the blower and you got it. That was the way that Kenney operated. Get it and get it fast and get that aeroplane into the air...his main thought was to get that aircraft back in the air and it was a war-winner.¹²

This was a prerequisite for aerial superiority and isolating the battlefield.

	Criteria	AAF
1	Does the organisation promote suggestions from the field?	Frequently
2	Are subordinates encouraged to question superiors and policies?	Frequently
3	Does the organisation regularly question its basic assumptions?	Frequently
4	Are high-ranking officers routinely in close contact with those on the ground and open to their suggestions?	Frequently
5	Are SOPs generated locally and informally or imposed from the centre?	Locally

Figure 11.2: AAF as a Learning Organisation.

Air warfare in the SWPA required the judicious application or adaptation of doctrine. Kenney informed Arnold:

...[the] distances involved, lack of suitable airdromes, weather, lack of sufficient [aircraft] for job and inadequacy of replacement schedule have made it necessary to improvise and adapt our procedure to meet existing conditions. These conditions were not all visualised when our standard procedure was drawn up.¹³

Furthermore, he was receptive to suggestions from subordinates and other services. Kenney frequently spoke with his commanders and air crews about problems, tactical developments, and suggestions for improvements. After reports Australian Beaufighters had mistakenly attacked American small ships near Cape Sudest, Kenney, accompanied by Garing, visited the squadron to address the matter. Close liaison with squadrons also led to considerable experimentation with technology, aircraft, and ordnance, such as the use of parafragmentation bombs against soft targets and converting medium bombers into commerce destroyers. Anti-shipping operations were aided by the development of skip-bombing techniques which were conducted in consultation with squadron leaders after conventional bombing proved ineffective. Kenney remarked he was:

...inventing new ways to win a war on a shoestring... We are doing things nearly every day that were never in the books... It really is remarkable what you can do with an airplane if you really try...¹⁴

While there was some resistance to new methods, the AAF successfully innovated with new and effective tactics throughout the campaign.

¹² Group-Commander William H. Garing, No.9 Operational Group RAAF, S00586, AAWFA.

¹³ Kenney to Arnold, 27 November 1942, RG54 B1 VIII, MM.

¹⁴ Kenney to Major General Muir Fairchild, Asst CoS Air Corps, 8 December 1942, RG54 B1 VIII, MM.

The AAF was also forward-thinking in the application of air power to mobility. Air transport offered a practical means of negating the difficulties of moving through jungle terrain on foot. Kenney faced opposition from GHQ but eventually convinced MacArthur of the viability of air transportation, first airlifting a regiment to Port Moresby in September then Hatforce to Wanigela in October. This gave Allied forces considerable mobility even though transport and supply capabilities were limited:

...the whole show has been a demonstration of how the war will be fought in this theatre... We have flown troops, mountain artillery, mortars, machineguns, jeeps, mowing machines and bull dozers into fields that back in the States no-one would dream of landing on.¹⁵

Air transport was the norm for moving units into combat during the beachhead operations and provided a crucial though often inefficient and unreliable supply line for the Allies.

The AAF demonstrated all the hallmarks of a learning organisation. Effective and competent leadership throughout the organisation actively challenged assumptions about air power in the theatre. Senior commanders were constantly analysing how problems could be overcome:

This show is an interesting one. There is nothing in the book about it, so you have to invent your methods and tactics as you go along but each time you learn how to do the next job easier and better. It is a real proving ground.¹⁶

While the AAF was unable to develop a solution to direct air support, it adapted organisationally to improve liaison and coordination between air and ground forces. Many of the necessary elements for improved air-ground cooperation were coming into effect by 1943. The adaptability of the AAF and Kenney's openness to expanding and experimenting with his air force was a crucial element to the Allies' success at the beachheads and forging the AAF's role in the theatre.

New Guinea Force and Advanced New Guinea Force as Learning Organisations

NGF and Adv NFG demonstrated mixed capacities as learning organisations, though their abilities to affect changes were limited by the available resources and their relationships with senior and subordinate commands. NGF and Adv NGF suffered from GHQ's pressure to quickly resolve the battles and Australian-American tensions. While Blamey and Herring were initially compliant in pressuring subordinates to quickly capture their objectives, they gradually recognised the difficulties faced by tactical commands and sought to insulate them from pressure as the stalemate developed. This created conditions in which tactical commanders could learn and adapt to their respective situations.

¹⁵ Kenney to Arnold, 10 December 1942, RG54 B1 VIII, MM.

¹⁶ Kenney to Arnold, 10 December 1942, RG54 B1 VIII, MM.

	Criteria	NGF	Adv NGF
1	Does the organisation promote suggestions from the field?	Often	Freq.
2	Are subordinates encouraged to question superiors and policies?	Rarely	Often
3	Does the organisation regularly question its basic assumptions?	Some.	Freq.
4	Are high-ranking officers routinely in close contact with those on the ground and open to their suggestions?	Rarely	Freq.
5	Are SOPs generated locally and informally or imposed from the centre?	Cent.	Locally

Figure 11.3: NGF and Adv NGF as Learning Organisations.

NGF and Adv NGF faced a number of serious operational and tactical problems. NGF dealt primarily with administrative, organisational, and logistical matters from Port Moresby, whereas Adv NGF functioned as the tactical command. This allowed them to focus on specific issues, but NGF and Adv NGF did not always share the same perspectives. NGF remained divorced from an accurate understanding of the situation because of its physical separation from the battlefield in a similar fashion to GHQ. Herring's capacity to understand and control the battles improved when Adv NGF relocated to Popondetta, which permitted him greater access to his subordinates across the battlefield.¹⁷ Herring corresponded frequently with Blamey and demonstrated a growing appreciation for the difficulties faced in each sector. In contrast, Blamey's replies suggest a slower realisation of the salient issues and limitations of the Allied forces. Blamey, like MacArthur, persisted with an inaccurate conception of the environment and its effect on manoeuvre and concentration. Blamey could not comprehend why Vasey did not attempt another the brigade-level envelopment against the Killerton Junction.¹⁸ The manoeuvres Blamey and MacArthur envisaged were simply not possible.¹⁹ However, like most Allied commanders, Herring continued to believe the Japanese had a 'breaking point', noting the collapse and withdrawal of Japanese forces at Oivi-Gorari and Buna Village.²⁰ Yet in most cases like Gona, Giropa Point, and Buna Mission, the defenders had to be destroyed one position at a time.

¹⁷ NGF's difficulties getting accurate and timely information from Harding and the 32nd Division was a major factor in the deterioration of the command relationship prior to Harding's relief. Also, despite the proximity of Adv NGF to the front, the terrain and limited infrastructure impeded lateral movement between formation headquarters and often required lengthy journeys by jeep or by plane.

¹⁸ The envelopment of Oivi-Gorari had been possible because of the flat ground and traversable jungles, whereas the Killerton Junction was bordered by impassable swamps. Blamey to Herring, 13 December 1942, 3DRL/6643 Item 2/135, AWM; Horner, *Crisis of Command*, 361.

¹⁹ It should be noted that Vasey had tried to manoeuvre the 21st Brigade from Gona against the western flank of the Sanananda positions but the east-west trails which supposedly existed disappeared into swamps.

²⁰ Buna Village had been evacuated by the Japanese and those forces withdrawn to Buna Mission, while at Gona the Japanese had to be almost completely eliminated. Adv NGF, "NGF Op Instn No. 53," 16 December 1942, AWM54 581/4/5, AWM.

NGF and Adv NGF's ability to influence the battles was limited by the availability of resources and the devolution of tactical decision-making to lower levels. Herring proved more a manager rather than a commander, but this suited the operations as it permitted formation commanders to pursue approaches they felt appropriate. Herring was involved in these determinations, though exerted little personal influence. However, Blamey's lack of approval of new tactical methods often highlighted his poor understanding of the situation. He feared Eichelberger's adoption of infiltration and attrition was resignation to 'sit down and... wait' and continually warned any delays were 'dangerous'.²¹ However, this was an important development in improving American combat effectiveness and morale. Shortly thereafter, Blamey recognised the operations would likely consume all Australian and American resources for the foreseeable future.²² Despite Blamey's unfeasible ideas about amphibious landings, his decision to employ armour was sound, practical, and set the terms for a decisive engagement.

Adv NGF sought to facilitate learning and adaptation by collecting and disseminating relevant information to its subordinates. Tactical approaches were distributed to all commands with "NGF Operation Instruction No.48" on 6 December.²³ The appendix summarised lessons learned by the Allies during the first three weeks of fighting. It recognised the devolution of responsibilities to lower levels and the centrality of small-unit tactics in jungle warfare, as well as the need to counter Japanese snipers. Adv NGF continued to disseminate general tactical observations until the conclusion of the campaign.²⁴ However, it could not impose uniform tactical approaches because of the disparate circumstances in each sector.

NGF made important organisational adaptations to improve air-ground coordination and logistics. The formation of the Air Operations Section addressed a serious deficiency in air-ground coordination.²⁵ The centralisation of air operational and intelligence matters also contributed to better coordination between NGF and ADVON5AF.²⁶ However, neither NGF nor ADVON5AF were able to overcome the practical problems of direct air support, though extensive trials were

²¹ Blamey to Herring, 11 December 1942, 3DRL/6643 Item 2/135, AWM.

²² Blamey to Shedden, 19 December 1942 cited in McCarthy, *Kokoda to Wau*, 620.

²³ Adv NGF, "NGF Operation Instruction No. 48: Buna-Gona Operations," 6 December 1942, AWM54 581/4/5, AWM.

²⁴ For example, see "NGF Operation Instruction No. 57" from 29 December 1942 which related to the conclusion of the Buna fighting and the shift to Sanananda, which elaborated on the use of enveloping manoeuvres to establish new positions from which to attack enemy strongpoints with infantry and artillery. Adv NGF, "NGF Operation Instruction No. 57," 29 December 1942, AWM54 581/4/5, AWM.

²⁵ This included a GSO I (Ops), II (Intel), and III (Admin) as well as clerical staff. In the event that a division would work directly with a separate air component, as happened at Milne Bay, a similar section was thought to be advantageous to air-ground coordination. GS (Air) HQ NGF, "Air Support in New Guinea, Sep 42 – Jan 43," MP742/1, 323/1/98, NAA..

²⁶ GS (Air) HQ NGF, "Air Support in New Guinea, Sep 42 – Jan 43," MP742/1, 323/1/98, NAA.

conducted to improve air-ground recognition. While ground forces at the beachheads did not directly benefit from these experiments, they were an important part in the overall learning process to improve air support in the SWPA. Logistical improvisations also improved the capacity of air and sea supply lines to maintain sufficient quantities of supplies for the operations. However, it was the 'trial and error' development of Q and S&T sections at NGF which were vital to Allied success.²⁷ NGF's Q and G Staff continued to adapt the air supply system during the campaign though this sometimes highlighted the divorce between operational and tactical priorities.²⁸ While the system was imperfect and vulnerable, it proved a 'triumph of improvisation' and was largely successful in meeting the Allies' requirements for rations, ammunition, medical supplies, and equipment to fight the battles and sustain their forces.²⁹

NGF and Adv NGF also contributed to broader organisational learning as the AMF sought to centralise preparations for jungle warfare. While these efforts had little impact on the beachhead operations, it ensured operational and tactical experience from the campaign was not lost. This was spearheaded by Berryman with the goal of improving organisational efficiency and training standards throughout the AMF. Berryman recommended to Blamey:

...immediate action is necessary to ensure that lessons learned from operations in New Guinea should be made available to formations in Australia, in a manner in which it can be most readily absorbed by them and introduced into their training.³⁰

In October, two LHQ Training Teams were sent to Papua to interview personnel and collect reports which could be used to inform jungle training programmes.³¹ NGF's capacity to collect, analyse, and disseminate information was limited by thinly-stretched staff, but it made a concerted effort to collect as much information as possible.³² While AMF observers were not permitted to visit the beachheads due to constraints on transportation and supply, NGF directed that 'conferences should be held of staffs and regimental commanders to consider the lessons of the campaign and to submit recommendations in regard to training, equipment and organisation'.³³ NGF's collation of

²⁷ NGF Q Branch and Services, "Methods and Lessons Learnt during the Buna-Gona Campaign," 29 March 1943, AWM54 577/7/29 [8], AWM.

²⁸ NGF Q Branch and Services, "Methods and Lessons Learnt during the Buna-Gona Campaign," 29 March 1943, AWM54 577/7/29 [8], AWM.

²⁹ NGF Q Branch and Services, "Methods and Lessons Learnt during the Buna-Gona Campaign," 29 March 1943, AWM54 577/7/29 [8], AWM.

³⁰ Berryman to Blamey, "Provision of LHQ Training Teams," 26 September 1942, 3DRL/6643 Item 2/66, AWM.

³¹ Berryman to Blamey, "Provision of LHQ Training Teams," 26 September 1942, 3DRL/6643 Item 2/66, AWM; Adv LHQ, "Adv LHQ GS Instn No. 17 Subject: Training Teams," 21 October 1942, AWM52 1/2/1/4, AWM.

³² Berryman to Irving, 24 December 1942, PR84/370 Item 11/90, AWM

³³ Irving to Berryman, 21 December 1942, PR84/370 Item 11/90, AWM; Berryman to Irving, 24 December 1942, PR84/370 Item 11/90, AWM; Major-General Frank H. Berryman, BGS NGF, "Brief for GOC NGF," 30 January 1943, AWM54 577/7/29 [24], AWM.

operational experiences was part of the AMF's broader steps to develop greater institutional learning.

NGF and Adv NGF were somewhat effective as learning organisations. Generally, they benefitted from competent leadership which sought to manage the operations rather than interfere with them. Tactically, NGF could do little to innovate and adapt, but Adv NGF played a key role creating the conditions in which subordinates could pursue approaches suited to their circumstances. While Herring and Adv NGF were well-informed and possessed a good understanding of emerging issues, Blamey did not fully appreciate the tactical and environmental conditions. When Blamey finally visited Buna, he realised a 'miracle had been performed'.³⁴ However, NGF's flexibility to improve the coordination of air and logistical aspects were vital developments these were determining factors in the campaign's outcome.

Australian Military Forces Formations and Units as Learning Organisations

The varied types of learning and adaptation throughout AMF formations and units reflected the differences in training and experience between CMF and AIF forces and the varied tactical situations in which they fought. AIF units built on prior operational experience in Papua during which they adapted to conditions and varied equipment, tactics, and procedures. However, experiences from the Kokoda Trail and Milne Bay were not always applicable to the beachheads. CMF units had greater difficulty adjusting to the conditions as many had to contend with broader issues regarding leadership and training. Disparities in training and experience were reflected in how units adapted, with CMF forces focusing on developing basic principles and small-unit tactics, whereas AIF units engaged in more complex combined arms adaptations.

Effective and competent leadership throughout most AMF commands created the conditions necessary to encourage learning and adaptation. This was based on the recognition of the character of jungle warfare and decentralised command which permitted subordinates to fight their own battles. Vasey helped establish this perspective throughout the 7th Division through his sound appreciation of jungle warfare, but he initially miscalculated the Japanese capacity to resist. As a 'war of attrition' developed, Vasey realised he had underestimated his opposition:

I had no idea the Jap, or anyone, could be so obstinate and stubborn as he has proved to be....unfortunately the Jap is not playing to our rules.³⁵

³⁴ Robert Eichelberger to Emmalina Eichelberger, 13 January 1943, cited in Luvaas, *Dear Miss Em*, 54.

³⁵ George Vasey to Jessie Vasey, 30 November 1942, MS3782 Item 2/15, NLA.

This was an important observation, as contrary to conventional military logic and experiences on the Kokoda Trail, the Japanese refused to cede ground despite continual pressure from all sides. Vasey subsequently adjusted the division's tactical approach to limit frontal attacks and focused on maintaining manpower, morale, and supply. Constant contact between the 7th Division's officers ensured their views were acknowledged and provided a clearer picture of the battlefield. This ensured 7th Division headquarters had an accurate understanding of the conditions – if not a solution to the problems they faced. This was crucial to questioning assumption and developing new ideas.

	Criteria	AMF Forces
1	Does the organisation promote suggestions from the field?	Frequently
2	Are subordinates encouraged to question superiors and policies?	Often
3	Does the organisation regularly question its basic assumptions?	Frequently
4	Are high-ranking officers routinely in close contact with those on the ground and open to their suggestions?	Frequently
5	Are SOPs generated locally and informally or imposed from the centre?	Locally

Figure 11.4: AMF Formations and Units as a Learning Organisation.

Decentralised command ensured Australian brigade and battalion commanders had greater influence over how their units were employed compared to the Americans. 7th Division units adopted tactical approaches based on local conditions and their capabilities. Here, it was apparent the influential role brigade-level commands had in fostering adaptations. During the 16th and 25th Brigades' short involvement in the campaign each formation continued to develop methods and techniques for attack based on previous experiences.³⁶ Dougherty's 21st Brigade implemented battle drills as a means of maintaining impetus during attacks after sudden contact with mixed success, while the 39th Battalion developed highly-effective small-unit and combined arms tactics to reduce strongpoints.³⁷ Porter's 30th Brigade attempted to overcome the relative training deficiencies of its CMF battalions by instituting stalk and consolidate tactics and training programmes to teach small-unit tactics for attacking strong-points to improve combat effectiveness and reduce unnecessary casualties.³⁸ This mirrored the broader shift towards small-unit tactics throughout the Allied forces

³⁶ 16th Infantry Brigade, "Report on Operations in New Guinea: 16 Aust Inf Bde," AWM54 577/7/29 [15], AWM; 25th Infantry Brigade, "Some Notes on the New Guinea Campaign," AWM54 577/7/31, AWM.

³⁷ 21st Infantry Brigade, "Notes on Some Tactical Instn By Bde Comd," 20 November 1942, Appendix L, AWM52 8/2/21/18, AWM; 25th Infantry Brigade, "Some Notes on the New Guinea Campaign," AWM54 577/7/31, AWM; Honner, "Notes on and Lessons From Recent Operations in Gona and Sanananda Areas" undated, AWM54 581/7/19, AWM.

³⁸ Kessels, "Report on Operations in Sanananda Area 2 Dec 42 – Jan 43," undated, AWM54 581/7/13, AWM.

during December.³⁹ Wootten's 18th Brigade undertook a considerable range of adaptations as the formation developed infantry-tank tactics without prior experience, soft-spot infiltration, and new methods for attacking bunkers.⁴⁰ These adaptations were practical to the conditions but still largely based on the existing principles and tactics of British-Commonwealth doctrine.

Decentralised command meant no standard procedures were instituted, though information and observations about friendly and enemy tactics were collected and disseminated. 7th Division headquarters periodically issued information on tactics such as positional assaults and the need to follow-up grenade attacks on strongpoints.⁴¹ However, most of the lessons learned were formalised in brigade and battalion reports finalised after the campaign. These reports included observations on training, equipment, terrain, enemy tactics, and the tactical adaptations made to improve combat effectiveness. While broader AMF jungle training programmes and doctrine were developed, the 7th Division continued to refine its own 'lessons learned' and training while the division reformed during 1943.⁴²

Despite the difficulties of jungle warfare, the campaign reaffirmed fundamental principles of *FSR*. Commanders were cognisant that conventional assumptions about attack and defence were not suited to the jungle, but underlying doctrinal principles were still relevant. Prior to the 21st Brigade's deployment to Gona, Dougherty issued a memorandum reaffirming his ideas:

Statements such as the following have often been heard during the war:

"There is no front line and no rear area".

"Armies must fight as navies fight".

"The day of holding a line is done".

...The principles of war remain constant but the ways of applying them vary...The means...whereby the fixed principles are applied depend on topography and modern scientific developments.⁴³

These sentiments echoed Porter, who warned of the potential to over-react to current conditions in the process of adaptation, citing that while every campaign had its own 'local colour', immediate reactions could 'unbalance the bases which should exist in every tactician's mind and which have existed in our *FSR*'s for so long'.⁴⁴ Porter argued a firm understanding of the 'essence' of the principles of war, rather than strict definitions and their application – such as reconceptualising what

³⁹ Kessels, "Report on Operations in Sanananda Area 2 Dec 42 – Jan 43," undated, AWM54 581/7/13, AWM.

⁴⁰ 18th Infantry Brigade, "Part II – Lessons Learnt in Cape Endiaderre-Giroa Point and Sanananda Area Ops," AWM54 581/7/31 [1], AWM.

⁴¹ 7th Division, "Firing Small Arms from the Hip," 25 December, Appendix C, AWM52 1/5/14/38; 7th Australian Division, "Notes for Information of All Front Line Units," 22 December 1942, AWM52 8/3/14/60, AWM.

⁴² For details of discussions within the 7th Division regarding war establishments, reinforcements, doctrine, training, hygiene and sanitation, and notes on combined arms jungle warfare see 7th Division General Staff Branch War Diary, February-March 1943, AWM52 1/5/14/46, AWM.

⁴³ Dougherty, "Notes," Appendix L, AWM52 8/2/21/18.

⁴⁴ Porter, "Notes on Recently Expressed Concepts of Tactics," 11 October 1942, AWM54 923/1/6, AWM.

‘attack’ or ‘defence’ could be in the jungle – was vital to an effective military organisation, and as such implicitly formed the bases for learning and adaptation.⁴⁵ He advocated it was ‘only by constant free thinking and the study of many aspects of [the tactics used in Papua] will we “get something”’.⁴⁶ Again, the importance of the influence and attitudes of brigade commanders in jungle fighting was significant. Captains Ian Ferguson and Donald Fairbrother, 2/2nd Battalion, similarly agreed that ‘although there are special aspects of Jungle Warfare needing specialised [training], the fundamentals laid down in [Infantry training and War 1937] still apply’.⁴⁷ As the ‘lessons learned’ from the Papuan campaign were formalised into doctrine, Vasey warned against ‘clouding Jungle Warfare with too much “hoodoo”’.⁴⁸ The basic principles of *FSR* and a high standard of personal and collective training had to complement specific adaptations to fighting in jungle terrain.⁴⁹

AMF forces generally demonstrated the qualities of learning organisations during the beachhead operations. Competent leadership at most levels and liaison between commanders ensured responsiveness and flexibility to the operational and tactical circumstances. Brigades and battalions developed tactics which suited the terrain, their forces, and their objectives. This meant there was little uniformity and few chances to coordinate the collection and dissemination of comprehensive material during the operations. Tactically, AMF units built on their previous experiences of jungle warfare, but the terrain, defences, and limited resources added further complications to the difficult task of attacking prepared positions through close country. Most commanders proved that while they firmly believed in the principles laid down in *FSR*, they were willing to question assumptions about their application and about their opponent, whose capacity to resist exceeded expectations. The observations and lessons learnt by the AMF in Papua formed the foundations of later Australian jungle warfare doctrine and training.

US Army Ground Forces Formations and Units as a Learning Organisation

I Corps’ assumption of command of American combat forces at Buna delineated two distinct periods of learning and adaptation. Initially, the 32nd Division’s ability to identify and adapt to problems was severely restricted by relative training disadvantages, lack of leadership, and the shock of first combat. As personnel familiarised themselves with the environment and combat, *ad hoc* small-unit adaptations emerged throughout the formation. However, when I Corps assumed

⁴⁵ Porter, “Notes on Recently Expressed Concepts of Tactics,” 11 October 1942, AWM54 923/1/6, AWM.

⁴⁶ Porter, “Notes on Recently Expressed Concepts of Tactics,” 11 October 1942, AWM54 923/1/6, AWM.

⁴⁷ Captain I.B. Ferguson and Captain D.N. Fairbrother, 2/2nd Infantry Battalion, “Notes on the New Guinea Campaign 4 Oct. to 10 Dec. 42,” 8 February 1943, AWM54 937/3/7, AWM.

⁴⁸ Vasey to Irving, “Jungle Warfare Pamphlet,” 13 March 1943, AWM54 937/3/33, AWM.

⁴⁹ Vasey to Irving, “Jungle Warfare Pamphlet,” 13 March 1943, AWM54 937/3/33, AWM.

command, a concentrated effort was made to identify tactical issues and devise solutions to them. This was also reflected in the flow of information from Buna to American forces training in Australia. This was a clear indication that I Corps was a learning organisation and highlights the significance of competence and leadership, information, and doctrine and training as conditions which affect the capacity of military learning organisations.

	Criteria	Harding	Eichelberger
1	Does the organisation promote suggestions from the field?	Rarely	Frequently
2	Are subordinates encouraged to question superiors and policies?	Rarely	Often
3	Does the organisation regularly question its basic assumptions?	Rarely	Often
4	Are high-ranking officers routinely in close contact with those on the ground and open to their suggestions?	Rarely	Frequently
5	Are SOPs generated locally and informally or imposed from the centre?	Centrally	Centrally

Figure 11.5: US Army Ground Forces Formations and Units as Learning Organisations.

The core leadership of the 32nd Division was largely inefficient during the first weeks at Buna because it failed to accurately understand the situation, challenge its assumptions about the operations, nor exercise initiative responding to problems. Harding had not cultivated the necessary leadership or tactical competence in his staff and commanders. Observer reports confirmed that training and leadership deficiencies were the major problems during this period.⁵⁰ Overconfidence and underestimation of Japanese strengths and capabilities contributed to the tactical inertia. American forces only slowly realised they faced an enemy who was prepared to 'die in place'.⁵¹ It is unclear how well Harding and some of his senior commanders understood the situation. Poor communication, insufficient information-gathering, and limited liaison prevented divisional headquarters from developing a clear picture of the battle. Likewise, several battalion and regimental commanders had little contact with their forward units. First-hand knowledge of conditions was vital to enabling learning and adaptation.

Tactical adaptation occurred slowly and sporadically without endorsement or input from higher levels of command. Harding was a modern proponent of infantry firepower, but he failed to find ways to bring this to bear at the beachheads. Yet he also dismissed US Army jungle warfare

⁵⁰ Handy, "Report of Military Observer in the Southwest Pacific Theater of Operations," 2 January 1943, #5, RG337 E15A B51, NARA; Parker, "Notes on Operations Near Buna," 2 December 1942, AWM 581/7/20, AWM; Knight, "Observations in the Southwest Pacific Theater," 2 April 1943, #5, RG337 E15A B51, NARA; Laux, "Observers Report," 20 February 1943, #7, RG337 E15A B51, NARA.

⁵¹ Harding to Herring, 28 November 1942, HQ I Corps G-3 Journal New Guinea Campaign, RG338 E330 B198, NARA.

doctrine as irrelevant.⁵² Harding's decision not to experiment with infiltration tactics was evidence of his inability to comprehend the tactical situation. However, at lower levels, minor adaptations such as the formation of mortar batteries, counter-sniper programmes, and the devolution of attacks to smaller units occurred. These developments formed the basis for Eichelberger's formalised policies. This indicates that while junior leaders were sometimes able to identify avenues for adaptation, it required the endorsement of senior commanders to prove successful. This was a by-product of the Americans' centralised command doctrine.

Eichelberger's major changes targeted the fundamental requirements for learning and adaptation: leadership, information, and doctrine and training. Eichelberger's leadership and the appointment of capable commanders was an essential first step in reinvigorating the formation. I Corps staff and the new regimental and battalion officers frequently visited front-line positions and developed a comprehensive understanding of the terrain and friendly and enemy positions which addressed a glaring weakness of Harding's command. Additionally, information-gathering patrols were scaled-up, and I Corps circulated captured enemy intelligence, tactical suggestions, and information about defences to its subordinates. These actions facilitated the adaptation and development of small-unit tactics.

American units gradually refined tactics and approaches. Hawkins described Buna as a 'very messy, frustrating, and sanguinary baptism of untrained troops in a completely new type of warfare', but it also marked the 'metamorphosis of a fighting force'.⁵³ Captured Japanese documents reflected the Americans' increasing proficiency in attack. Initially, the Japanese were unimpressed with American tactics and discipline:

The enemy has received almost no training. Even though we fire a shot they present a large portion of their body and look around. Their movements are very slow. At this rate they cannot make a night attack.⁵⁴

However, as American infantry employed firepower more effectively, patrolled more aggressively, and exploited terrain features for observation:

The nature of the enemy is superior and they excel in firing technique. Their tactics are to neutralise our positions with firepower, approach our positions under concentrated mortar fire. Furthermore, it seems that in firing they are using treetops. During daytime mess, if smoke is discovered we will receive mortar fire.⁵⁵

⁵² This refers to *Basic Field Manual FM31-20: Jungle Warfare*, which was published on 15 December 1941. Luvaas, "A 'Leavenworth Nightmare'," 192.

⁵³ Hawkins cited in Anders, *Gentle Knight*, 272.

⁵⁴ "Report of the Commanding General Buna Forces," Annex 2: G-2 Report, 61.

⁵⁵ "Report of the Commanding General Buna Forces," Annex 2: G-2 Report, 62.

The development of counter-sniper programmes and tactics for small-unit actions demonstrate American forces were able to identify problems and develop potential solutions to them under the right command conditions. However, the delays and casualties sustained by the division to achieve tactical competence could not be afforded in future operations.

I Corps and USAGF Observers demonstrated broader organisational learning capacity by collecting relevant information from the battlefield to inform the training of American forces. The 163rd Regiment arrived in Papua with additional training and knowledge of jungle warfare derived from the 32nd Division's experiences. Buna Forces relayed information which highlighted critical tactical lessons. In mid-December Eichelberger wrote to Fuller regarding preparations:

When you arrive up in this jungle you will find it rising up in front of you, to haunt you, the spectre of all those things you have failed to teach your men...You can figure out any number of combinations and I would so train my troops because just as sure as night follows day you are going to be up against it someday...These ideas I give you because I have been able to get near enough to a village to throw a rock into it and yet have not been able to capture it.⁵⁶

The regiment arrived at Sanananda and immediately instituted counter-sniper and patrol programmes, and tactical drills for attacking strongpoints. The formation subsequently did not suffer the casualties and loss of morale the 32nd Division endured during its first weeks at Buna.

American forces made a concerted effort to institutionalise the learning experience of the beachheads. A significant number of post-campaign reports were submitted by staff sections of 32nd Division and I Corps headquarters, and a number of USAGF observers who had been attached to the American forces at Buna. The 163rd Regiment was the only formation to submit a detailed report on tactical observations from the campaign, though all formations noted the major issues faced in their after action records.⁵⁷ I Corps took the campaign lessons seriously and instituted a six-month training programme focusing on the chain of command, unit cohesion, and small-unit tactics.⁵⁸ At its conclusion, only one of twenty-one companies tested was deemed unsatisfactory in these areas.⁵⁹

Despite the difficulties of the campaign, experience confirmed many American commanders' confidence in their doctrine. The principal challenge was in its application. Terrain and the

⁵⁶ Eichelberger to Fuller, 14 December 1942, RG41 B1 F2, MM.

⁵⁷ These matters are all covered in: Bowen, "Memorandum: Lessons Obtained in the Buna Campaign," 1 February 1943, 300.6 HQ I Corps Memos, RG338 E339 B272, NARA.

⁵⁸ John Shortal, "Hollandia: A Training Victory," *Military Review* 66 no.5 (1986): 42.

⁵⁹ Shortal, "Hollandia: A Training Victory," 42.

disposition of enemy forces required the novel application of well-known principles.⁶⁰ Colonel Herbert Laux, USAGF Observer, reported:

...the application of tactical principles used in jungle warfare in New Guinea is radically different from those taught in our service schools. There is practically no distribution in depth and little chance for manoeuvring expect through infiltration by patrols.⁶¹

Another observer concluded:

My faith in our teachings and our tactical doctrines remains unshaken. I am convinced that they are essentially sound, and that our chief danger lies in failing to apply them.⁶²

I Corps' G-2 report stated 'failures were in execution, not in the fundamentals of standard training and operations'.⁶³ This mirrored the AMF's reflections on the campaign.

The ability of American forces to learn and adapt was contingent upon training and leadership. Ineffective leadership and relative training disadvantages impeded the ability to solve tactical problems. Gradually, small adaptations were made to address some of these issues, but the most significant improvements occurred after the American 'command crisis'. The changes made by I Corps targeted areas which were fundamental for military learning and adaptation. This saw concerted efforts to establish competent and effective leadership at all levels, to improve the collection and dissemination of useful information, and develop tactical knowledge and confidence. American forces therefore displayed uneven but evolving traits of military learning organisations.

Conclusion

The beachhead operations presented a tremendously difficult learning experience for the Allied forces. As the first major offensive encountering extensive prepared position in the Pacific, the scale and complexity of the challenges had not been anticipated. During the operations, Allied forces demonstrated mixed capacities to learn and adapt in-theatre. This was contingent upon four fundamental elements: competence and leadership, the collection and analysis of information, the transmission of relevant information throughout an organisation, and doctrine and training. These four elements determined an organisation's ability to meet Nagl's criteria for learning organisations. The ability of each command and organisation to meet these criteria is summarised in Figure 11.6.

⁶⁰ Eichelberger to Parks, 1 February 1943, RG41 B1 F3, MM; Eichelberger, *Jungle Road*, 50.

⁶¹ Laux, "Observers Report," 20 February 1943, #7, RG337 E15A B51, NARA.

⁶² Handy, "Report of Military Observer in the Southwest Pacific Theater," 2 January 1943, #5, RG337 E15A B51, NARA.

⁶³ "Report of the Commanding General Buna Forces," Annex 2: G-2 Report, 54.

Criteria	GHQ SWPA	AAF	NGF	Adv NGF	Aus 7 Div	US 32 Div	
						Harding	Eichelberger
1. Does the organisation promote suggestions from the field?	Rarely	Frequently	Often	Frequently	Frequently	Rarely	Frequently
2. Are subordinates encouraged to question superiors and policies?	Rarely	Frequently	Rarely	Often	Often	Rarely	Often
3. Does the organisation regularly question its basic assumptions?	Rarely	Frequently	Sometimes	Frequently	Frequently	Rarely	Often
4. Are high-ranking officers routinely in close contact with those on the ground and open to their suggestions?	Rarely	Frequently	Rarely	Frequently	Frequently	Rarely	Frequently
5. Are SOPs generated locally and informally or imposed from the centre?	Centrally	Locally	Centrally	Locally	Locally	Centrally	Centrally

Figure 11.6: Summary of SWPA Commands as Learning Organisations.

The ability of commanders to challenge their assumptions about the operations – the capabilities of their own and enemy forces, the terrain, and Allied operational and tactical approaches – was critical in identifying problems and devising alternate solutions. This was dependent upon how accurately commanders understood the circumstances of the battle. It is clear that lower echelons with capable leaders were far better at identifying and adapting to operational and tactical challenges than the higher levels of command. Proximity to the operations, the acquisition of accurate information, and frequent liaison with subordinate commanders improved the capacity for formations to adapt. In contrast, higher formations like GHQ and NGF failed to understand the reality of the battles relayed to them by ground commanders and were resistant to changing how they prosecuted the operations. Senior commanders had to accept that the commanders on the ground knew the conditions better than they did. At the highest levels commanders often refused to acknowledge or could not conceive the conditions nor their effects on the conduct of the operations being reported to them.

Commanders had a vital role in establishing conditions which facilitated subordinates to adapt based on their local situation or actively encouraged adaptations through the dissemination of information commanders latitude to pursue tactical approaches which suited their local conditions. The effect of the different command doctrines regarding centralised control also determined the extent to which subordinates could successfully adapt and spread these approaches through their commands. While learning and adaptation occurred sporadically throughout the American forces, it was most successful when endorsed by senior leaders, whereas Australian forces demonstrated a greater capacity to adapt organically at all levels. Australian brigade-level commanders in particular excelled in fostering localised approaches which could be formalised and filtered down to sub-units because of the general tactical competence of the commanders and the independence derived from decentralised command. The experience of the 32nd Division again reflects the centrality of leadership, information, and training to learning and adaptation. The two distinct periods of command between Harding and Eichelberger reflect a period where the American forces could identify problems but not devise solutions, followed by a concerted effort to improve information-gathering and tactical approaches which increased combat effectiveness.

While jungle fighting appeared to pose innumerable practical challenges, the beachheads served to confirm the soundness of Australian and American doctrinal principles. The key challenge was for commanders to apply these principles within the unique context of jungle fighting. The lessons and experiences from Papua formed the basis of Australian and American doctrine and training in the Pacific for the campaigns of 1943-1944 and reflected broader trends for institutional learning and adaptation within the USAGF and AMF.

Conclusion

‘No More Bunas’: Victory at the Beachheads

At Lae and Salamaua it is probable that [the] defences will be more highly developed than those we met in the Buna-Sanananda area. To defeat the enemy it is necessary to capture the beaches and the quickest way would be a direct attack with a properly equipped and trained amphibian force and for successful employment of such a force air superiority and naval superiority would be required...For an attack from inland to succeed we must have superior artillery and plenty of ammunition to reduce the enemy defences...Even if the operation followed the same general lines as at Buna, where small craft were used to assist in the maintenance of the force, roads would still be necessary for wheel transport to take the required quantities of ammunition and stores forward to units. Consequently we need to continue the development of the small craft organisation and the methods for distribution inland from the beach. For the purpose engineers and large quantities of native carriers will be required.⁶⁴

**Major-General Frank Berryman
MGGS NGF**

**“Operations in New Guinea: Brief for GOC NG Force”
30 January 1943**

The beachhead operations were arguably some of the most difficult battles fought by Allies during the war in the Pacific. The challenges encountered, ranging from doctrine and training, interoperability and coalition warfare, command and leadership, logistics, and tactics had few simple solutions. For much of the time the Allies lacked the ‘straw’ – the troops, supplies, and firepower – needed to assault prepared positions. This placed a premium on learning and adapting to employ the resources available effectively to overcome the difficulties faced. The Allies’ victory under such trying conditions and with limited resources suggests far greater complexity than is immediately apparent given the battles’ common characterisation as a bloody, grinding collision. Contrary to the

⁶⁴ Major-General Frank Berryman, MGGS NGF, “Operations in New Guinea: Brief for GOC NG Force,” 30 January 1943, AWM54 577/7/29 [34], AWM.

notion that the Allies stubbornly committed to the same clumsy methods and practices, there was a concerted effort to learn and adapt to the unique and challenging conditions of the beachheads.

As Berryman's brief prior to operations against Lae and Salamaua suggests, experiences at the beachheads laid a foundation for future operational considerations. The warning encapsulated the major problems the Allies had faced regarding preparations, intelligence, supply, and fire support.⁶⁵ There was a concerted effort to fully resource future operations with land, sea, and air forces and logistics to avoid campaigns which were costly in time and casualties. MacArthur himself famously resolved that there should be 'no more Bunas', a mentality which underpinned his 'leap-frogging' approach along the New Guinea coast in order to avoid protracted and costly battles during Operation Cartwheel between June 1943 to March 1944.⁶⁶ The beachheads therefore provided the genesis for how the war in the SWPA would be fought.

Several significant conclusions can be drawn from the study of the operations. Strategically, the beachhead operations demonstrated the interrelated nature of operations in the Pacific and the need for greater coordination and cooperation across theatre commands moving forward in 1943. Despite Guadalcanal assuming greater significance, the beachheads were inextricably linked to the Solomons.⁶⁷ While high command had remained anxious about the outcome in the Solomons and transposed this pressure upon its subordinates to capture the beachheads quickly, it was a valid, though poorly handled concern. Victory at the beachheads provided the foothold in Papua to support the Allied offensive against Rabaul to break the Bismarck Barrier.⁶⁸ Milne Bay and Port Moresby were secured as airfields for bombers, while the Dobodura complex provided a forward base for fighter and attack aircraft. Meanwhile, the development of Oro Bay permitted Lilliput convoys to transport over 60,000 tons of supplies and 3,802 troops between December 1942 and June 1943 into the forward area.⁶⁹ The development of these base areas allowed Allied forces to prepare for the next phase of the offensive into the Huon Peninsula to achieve Tasks Two and Three outlined by the 2 July Directive.^{70 71}

⁶⁵ Berryman, "Operations in New Guinea: Brief for GOC NG Force," 30 January 1943, AWM54 577/7/29 [34], AWM.

⁶⁶ MacArthur cited in Willoughby, *MacArthur: 1941-1951*, 96.

⁶⁷ GHQ SWPA MIS, "G-2 Daily Summary #190," 28 September 1942, RG3 S2 B26 F3, MM.

⁶⁸ Dean, *MacArthur's Coalition*, 208-209.

⁶⁹ D.M. Stevens, "The Role of Maritime Power in the New Guinea Campaign 1942-43," *Australian Defence Force Journal* 113 (1995): 21.

⁷⁰ Task Two included the 'seizure and occupation of the remainder of the Solomon Islands, Lae, Salamaua, and north-eastern New Guinea', while Task Three involved the 'seizure and occupation of Rabaul and adjacent positions in the New Guinea-New Ireland area'. JCS, "Joint Directive for Offensive Operations in the Southwest Pacific Area," 2 July 1942, Appendix E, Morton, *Strategy and Command*, 619-620.

Despite the strategic significance of the victory and its enabling effects for future offensives, the beachheads highlighted the complexities of coalition operations in the Pacific. The complexities of coalition warfare were affected by recurring issues related to the personalities involved – divisive ones like Sutherland, Willoughby, and even to a lesser extent Vasey and Hopkins – and collaborative ones like Herring, Eichelberger, and Johns – to doctrinal inconsistencies, and perceptions of favouritism or vested interests. Success was found when Australian and American personnel embraced cooperation rather than competition and saw problems and solutions as part of a shared situation, such as within COSC or the burgeoning partnership between NGF and 5AF.

The close cooperation and integration of army formations and units at the tactical level which happened at Buna and Sanananda and saw Australians and Americans fighting side by side would not reoccur. It was clear that full integration of a truly Allied force would not be achieved nor be acceptable to many parties. Foremost of these was MacArthur and GHQ. MacArthur had needed the Australians in 1942, but when Lieutenant General Walter Kreuger's Sixth Army entered the theatre he established Alamo Task Force which answered directly to GHQ and was separate from the ALF. This was one of MacArthur's 'subterfuges' which alienated the Australians within the SWPA.⁷¹ This was part of a broader trend by the Americans to re-establish independence, as seen in Kenney's reorganisation of the AAF in late 1942 and the erosion of COSC by mid-1943. On the one hand, the American push toward national task forces helped to avoid the complexities of inter-Allied command arrangements. However, it also demonstrated an unwillingness at the highest levels to embrace cooperation and collaboration.

The beachheads were particularly significant in validating the potential of air power. While the AAF's ability to deliver direct support to ground forces had been disappointing, it had achieved impressive effects isolating the battlefield, disrupting Japanese shipping, and destroying Japanese aircraft on the ground. 5AF reaffirmed its reputation after its failure to halt the Japanese convoy which enabled their advance on Wau shortly thereafter during the Battle of the Bismarck Sea between 2-4 March 1943, which saw the full realisation of the AAF's anti-shipping tactics and techniques which had begun to crystallise during the beachhead operations. The AAF also demonstrated the utility and value of air transportation in moving units into battle where overland transportation had been impractical. The AAF's reinforcement of Wau in January 1943 and the

⁷¹ The JCS' approval of the Eltkon Plans confirmed the SWPA's objectives as: 'the establishment of airfields on Kiriwina and Woodlark Islands, the seizure of Lae-Salamaua-Finschhafen-Madang and occupation of western New Britain (Cape Gloucester), and the seizure of the Solomon Islands, including the southern portion of Bougainville'. JCS to GHQ SWPA, "NR: 2407," 28 March 1943, 98-GHQ1-3.2, RG407 E427 B582, March 1943, NARA.

⁷² Gavin Long, *Australia in the War of 1939-1945: The Final Campaigns*, Vol. VII (Canberra: Australian War Memorial, 1963), 599.

airborne landings at Nadzab in September reaffirmed how useful the mobility afforded by air transport to ground forces could be in New Guinea.

The beachhead operations proved that jungle warfare against a modern adversary would require considerable manpower, munitions, and equipment. Jungle fighting bore little resemblance to the sporadic skirmishing against irregular opponents which formed the basis of jungle warfare doctrine prior to 1942. The beachheads highlighted the effects of jungle terrain on command and control, concentration of force, and the application of firepower. Commanders asserted that the USAGF's and AMF's core doctrinal principles were applicable to jungle warfare but needed to be applied differently, rather than establish new principles entirely. However, the tactics and techniques used by infantry, artillery, armour and engineers began to take on distinct characteristics which reflected limitations imposed by jungle terrain on visibility, communication, and control, and the sudden and close-quarters nature of jungle combat.

Battles in the jungle devolved into 'miniature wars' where the battlefield was discontinuous, dispersed, and important tactical decisions and actions occurred at lower levels than open warfare.⁷³ Senior officer at formation level were fundamental to the learning and adaptation process, whereby they could facilitate, direct, or formalise adaptations to tactics and techniques throughout their formations. Corps and divisional commander remained important in setting the attitudes and intent of their subordinates and supporting them, but had limited tactical influence. Brigade, regimental, and battalion commanders were more influential in fighting the battles and determining the tactics and techniques required to destroy the enemy and achieve objectives. At sub-unit level, the techniques used by companies and platoons could determine the outcome of individual engagements. Crucially, the operations demonstrated the need to develop initiative, confidence, and aggression tempered with sound tactical knowledge in the junior leaders who were critical in these engagements. Despite supposedly stark national differences, Australian and American forces learned and adapted along similar lines as they identified problems and sought solutions. Australian and American forces both adapted tactics which focused on small-unit attacks, infiltration, and patrolling, and developed similar techniques to respond to the distinctive features of the Japanese defences.

The desperate and costly campaign culminating at the beachheads required the Allies to digest the lessons of the past six months and to rebuild and retrain their ground forces for jungle warfare. It was clear that the Allied force which entered Papua in 1942 had not been adequately prepared for the environment or the type of combat they encountered. Operational experience had

⁷³ Eichelberger cited in Luvass, "A 'Leavenworth Nightmare'," 221.

only bridged some of the gaps. Adapting to the conditions had required the costly process of units acclimatising to their environments and learning through trial and error. Realistic and rigorous preparations became a hallmark of the Allied campaigns in 1943. The rehabilitation of the 6th and 7th Divisions and retraining of the 9th Division, recently returned from the Middle East, on the Atherton tablelands in north Queensland became a priority for the AMF.⁷⁴ This force – organised as I Corps – would become the Australian's main strike weapon for the coming campaigns. The most recent lessons from Papua were integrated into AMF-wide training, and the personal experiences of commanders was used to inform formation and unit training. The practice of establishing training instructions and guidelines for variations in tactics, techniques and procedures to meet local conditions became common. Meanwhile the institutionalisation of learning advanced as the necessary organisations and processes emerged. Adv LHQ processed reports which were fed to the Training Centre (Jungle Warfare) at Canungra and LHQ Training Teams.⁷⁵ Meanwhile, I Corps continued to oversee the training of American forces and rebuilding the 32nd Division in Rockhampton, with a specific focus on developing patrolling, infiltration, concealment, fire discipline, night operations and sanitation, which had been deemed lacking. The division had to be rebuilt from 'the bottom up', but when it next entered combat at Saidor in 1944 its performance was a 'great improvement' to that at Buna.⁷⁶

Allied forces demonstrated a concerted effort to learn and adapt during the beachhead operations. This process was crucial in areas which significantly influenced the outcome of the operations, such as the use of air power, logistics, and battlefield tactics. Conversely, areas in which the Allies' performance was poor, such as high command's handling of the operations, demonstrated a lack of learning and adaptation. The capacity of Allied organisations' to learn and adapt was based on four key elements: competence and leadership, accurate and useful information, the dissemination of information, and doctrine and training. These elements determined whether organisations could meet Nagl's criteria for military learning. Fundamentally, the ability to learn and adapt rested on the capacity of individuals and groups to challenge assumptions and expectations about the environment and the capabilities and limitations of enemy and friendly forces. This was most pronounced at lower tactical levels where commanders understood conditions and were receptive to the suggestions and reports of subordinates. Commanders at higher levels were less receptive to the conditions reported and their effects on the operations. The ability of organisations and individuals to recognise these issues facilitated the conditions in which learning and adaptation could take place. Although not always successful, a

⁷⁴ Blamey to Lieutenant-General John Northcott, CGS AMF, 3 January 1943, 3DRL/6643, Item 2/23, AWM.

⁷⁵ For a detailed account of this process, see: Pratten, "The AMF as a Learning Organisation," 278-279.

⁷⁶ Eichelberger to Sutherland, 9 January 1943, RG41 B1 F3, MM; Blakely, *32nd Division*, 147.

persistent effort to learn and adapt organisations, procedures, and techniques was a critical factor in the Allies' victory. This set a foundation for a continued process of organisational learning and adaptation by the Allies in the theatre.

Appendix 1: Japanese Dispositions, c. 26 November 1942.¹

Command Area	Commander	Formations and Units	Strength
All Areas	Maj-Gen. Kensaku Oda ² Maj-Gen. Tsuyuo Yamagata	-	
			≈ 10,000
South-East (Giruwa)	Lt-Col. Hatsuo Tsukamoto	144th Infantry Regiment	Main Strength
		144th Infantry Regiment Reinforcements ³	500
		41st Infantry Regiment	1 Company
		Takasago Volunteer Unit	
		Takeda Unit (Hospital Unit)	
			≈ 1,000
Central (Track Junction)	South Seas Force HQ Col. Yosuke Yokoyama	41st Infantry Regiment	400
		15th Independent Engineer Regiment	300
		I/55th Mountain Artillery Regiment	
		47th Field Anti-aircraft Artillery Battalion	2 Companies
		South Seas Medical Unit	2,500
		South Seas Force Field Hospital	
		Line-of-Communication Hospital	
		Murase Battalion	800
			≈ 4,500
Rear (Sanananda)	Lt-Col. Yoshinobu Tomita	Lines of Communication Units	
		Naval Construction Units	500
		South Seas Force Cavalry	
			≈ 900

¹ From: Bullard, *Japanese Army Operations*; Headquarters US Army Japan, *Japanese Monograph Series No. 37*.

² Colonel Yosuke Yokoyama of the 15th Independent Engineer Regiment assumed command of the Sanananda area while Colonel Hiroshi Yamamoto took command at Buna. Major-General Oda was appointed to command all forces on 8 December. Oda arrived at the Mambare River on 14 December and ordered Major-General Yamagata to assume responsibility for the defence of Buna. Yamagata also organised the withdrawal of Japanese forces from Sanananda in January.

³ Arrived from Rabaul on 21 November. A large proportion of the group were assigned to front line defence, while the rest were stationed in reserve north of the track junction.

Basabua (Gona)	Maj. Tsuneichi Yamamoto	Yamamoto Unit (Construction/Transport)	600
		Uchida Unit (Hospital Unit)	60
		Nakamura Unit (Takasago Volunteers)	
		Mori Unit (Hygiene Unit)	
		Yamazaki Unit (Infantry)	80
		Soda Unit (41st Infantry Regiment)	69
			≈ 800
West of Gona	Maj. Kikumatsu Miyamoto	I/41st Infantry Regiment	100
Buna ⁴	Col. Hiroshi Yamamoto	144th Infantry Regiment Reinforcements	700
		III/229th Infantry Regiment	700
		38th Mountain Artillery Regiment	1 Company
		47th Field Anti-aircraft Artillery Battalion	1 Company
	Capt. Yoshitatsu Yasuda	5th Special Naval Landing Party	800-900
		Construction Units	800-900
			≈ 3,000

Appendix 2: Japanese Reinforcements in the Mambare-Kumusi Area, December 1942.⁵

Area	Arrived	Commander	Unit	Strength
Kumusi	2 December	Maj-Gen. Yamagata	Headquarters 21st Independent Mixed Brigade	-
			III/170th Infantry Regiment	400
Mambare	14 December	Maj-Gen. Oda	Headquarters 21st Independent Mixed Brigade	21
			I/170th Infantry Regiment	450
			Machine Cannon Company	65
			Assorted Support Units	61

⁴ Army units took responsibility for the defence of the Cape Endaiadere-New Strip-Old Strip area (Warren sector) and naval units defended the Buna Village-Buna Mission area (Urbana sector).

⁵ From: Bullard, *Japanese Army Operations*; Headquarters US Army Japan, *Japanese Monograph Series No. 37*.

Appendix 3: New Guinea Force Order of Battle, Beachheads Area, November 1942-January 1943

Area	Command	
Papua and New Guinea	NGF	
	Gen. Thomas Blamey Lt-Gen. Edmund Herring (from 9 Jan. 1943)	
Beachheads	Adv NGF	
	Lt-Gen. Edmund Herring Lt-Gen. Robert Eichelberger (from 9 Jan. 1943)	
Buna	32nd Infantry Division (US)	
	Maj-Gen. Edwin Harding Brig-Gen. Albert Waldron (from 2 Dec. 1942)	
	US Buna Forces	
	Brig-Gen. Clovis Byers (from 5 Dec. 1942) Lt-Gen. Robert Eichelberger (from 16 Dec. 1942)	
	Warren Force	Urbana Force
	Brig-Gen. Hanford MacNider Col. J. Tracey Hale (from 23 Nov. 1942) Col. Clarence Martin (from 2 Dec. 1942) - Headquarters 128th Regiment - I/126th (-) - I/128th - III/128th - 2/6th Independent Company - Section 1st Mountain Battery 2/1st Field Regiment (from 22 Nov. 1942) - Manning Troop 2/5th Field Regiment (from 22 Nov. 1942) - Hall Troop 18th Brigade Brig. George Wootten - 2/9th Battalion (from 16 Dec. 42) - 2/10th Battalion (from 21 Dec. 42) - 2/12th Battalion (from 27 Dec. 42) - X Squadron, 2/6th Armoured Regiment (from 16 Dec. 1942)	Lt-Col. Herbert A. Smith Col. John Mott (from 27 Nov. 1942) Lt. Col. Melvin McCreary (from 3 Dec. 1942) Col. John Grose (from 4 Dec. 1942) Col. Clarence Tomlinson (from 6 Dec. 1942) Col. John Grose (from 20 Dec. 1942) Col. Merle Howe (from 14 Jan. 1943) - II/128th - II/126th (from 23 Nov. 1942) - Headquarters 126th Regiment (from 4 Dec. 1942) 127th Regiment (from 10 Dec. 1942) Col. Edward Grose Col. Merle Howe (from 14 Jan. 1943) - I/127th - II/127th - III/127th

West of the Girua River	7th Division (AUS)	
	Maj-Gen. George Vasey	
	Gona	Sanananda
	25th Brigade Brig. Kenneth Eather - 2/25th Battalion - 2/31st Battalion - 2/33rd Battalion - 3rd Battalion (from 23 Nov. 1942) 21st Brigade (from 26 Nov. 1942) Brig. Ivan Dougherty - 2/14th Battalion - 2/16th Battalion - 2/27th Battalion - 39th Battalion (from 3 Dec. 1942) 14th Brigade (from 1 Jan. 1943) Lt-Col. Geoffrey Matthews - 36th Battalion - 55/53rd Battalion	16th Brigade Brig. John Lloyd - 2/1st Battalion - 2/2nd Battalion - 2/3rd Battalion US Soputa Forces (from 23 Nov. 1942) Col. Clarence Tomlinson Maj. Bernd Baetcke (from 4 Dec. 1942) Maj. Richard Boerem (from 7 Dec. 1942) - Headquarters 126th Regiment (until 4 Dec. 1942) - I/126th (-) - II/126th (until 23 Nov. 1942) - III/126th 2/1st Field Regiment (from 22 Nov. 1942) - Hanson Troop 30th Brigade (from 6 Dec. 1942) Brig. Selwyn Porter - 49th Battalion - 55/53rd Battalion - 36th Battalion (from 18 Dec. 1942) - 2/7th Cavalry Regiment (from 18 Dec. 1942) - 3rd Battalion (from 1 Jan. 1943) - 39th Battalion (from 1 Jan. 1943) 21st Brigade (from 18 Dec. 1942) Brig. Ivan Dougherty - 39th Battalion (until 1 Jan. 1943) 163rd Regiment (from 1 Jan. 1943) Col. Jens Doe - I/163rd - II/163rd - III/163rd 18th Brigade (from 5 Jan. 1943) Brig. George Wootten - 2/9th Battalion - 2/10th Battalion - 2/12th Battalion - B Squadron, 2/6th Armoured Regiment

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