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“With the utmost precision and team play”: The 3rd New Zealand Division and Operation ‘Squarepeg’

**A thesis presented in partial fulfilment of the requirements for the
Master of Arts (Defence & Strategic Studies)**

by

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ABSTRACT

This thesis examines the influences and course of the 3rd New Zealand (NZ) Division's preparations for Operation 'Squarepeg' in the Green Islands, in February 1944. It argues that as the largest New Zealand amphibious operation of the Second World War, 'Squarepeg' holds a key place in identifying the development of amphibious and jungle warfare doctrine within the New Zealand Army during the war. As such, it can indicate the abilities of the 3rd NZ Division to conduct combat operations in the South Pacific in 1944. The thesis shows that the New Zealand Army was unprepared for operations in the South Pacific, as it had neglected relevant inter-war developments.

The hasty formation of the 3rd NZ Division in 1942, as a response to Japanese expansion in the South Pacific, served to highlight the challenges that the division and its commander, Major-General Harold Barrowclough, had to overcome. The studying of foreign doctrine to supplement the dearth of New Zealand material was vital for the 3rd NZ Division's preparations for deployment. The thesis finds that matters were compounded by the influence of British military organisational standards despite the division operating in an American-run theatre of war. It provides details of the manner in which members of the division approached these issues while coordinating operations with the United States Navy. The importance of thorough training, a combined planning process, and stable relationships between commanders of all forces are identified as decisive factors to the outcome of operations in joint-combined theatres.

The thesis concludes that the 3rd NZ Division's preparations for Operation 'Squarepeg' were part of an incremental process of operational learning. This process, which was mostly successful, was unable to be properly tested on account of the division's reliance on foreign assistance, lack of resources, and a lack of domestic support. These findings may prove an important source of information for a region which will become of increasing military importance.

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ABBREVIATIONS

APD – Assault Personnel Destroyer

ASC – Army Service Corps

BCT – Battalion Combat Team

CB – (Naval) Construction Battalion

COMAIRSOLS – Commander, Air Forces, Solomon Islands

COMAIRSOPAC – Commander, Air Forces, South Pacific

COMAIRSQUAREPEG – Commander, Air Forces, ‘Squarepeg’

COMGENSOPAC – Commanding General, United States Army Forces in the South Pacific Area

COMSOPAC – Commander, South Pacific Area and South Pacific Forces

HQ - Headquarters

IJA – Imperial Japanese Army

IJN – Imperial Japanese Navy

LCI – Landing Craft, Infantry

LCI(G) – Landing Craft, Infantry (Gun)

LCP – Landing Craft, Personnel

LCT – Landing Craft, Tank

LOC – Line of Communication

LSD – Landing Ship, Dock

LST – Landing Craft, Ship

NZ – New Zealand

NZEFIP – New Zealand Expeditionary Force in Pacific

RCT – Regimental Combat Team

RNZAF – Royal New Zealand Air Force

SNLF – Special Naval Landing Force

SOPAC – South Pacific Area

SWPA – South West Pacific Area

US – United States (of America)

USMC – United States Marine Corps

USN – United States Navy

INTRODUCTION

The South Pacific campaign of 1942-44 was a most challenging and complex area of operations. At its heart lay the need to stop Japanese expansion into the South Pacific and to protect and strengthen the lines of communication between the countries of Australia, New Zealand, and the United States of America (USA). It therefore had a significant influence on subsequent events in the greater Pacific Theatre as it set the stage for subsequent moves into other areas by neutralising Japanese forces in the South Pacific. Additionally, the South Pacific campaign was one of the first areas in which the Allies were capable of successfully engaging the Japanese in jungle warfare, while also introducing the new operational concept of 'island hopping' through the skilful application of amphibious operations in an austere environment. It was an area in which the Allied powers learnt to defeat the Japanese in an operational theatre under United States Navy (USN) command – something which had not been achieved since the start of the Pacific War. In so doing, the South Pacific served as a test-bed for the introduction of successful military innovations and adaptations in particular in relation to the environment including in jungle warfare and amphibious operations.

Unlike operations in the Central Pacific, where United States (US) forces and commanders operated in a mostly unilateral theatre of command, especially in the employment of forces, operations in the South Pacific's Solomon Islands included a number of Allied units from the USA, New Zealand, Australia, and even Fiji. This brought the added difficulty of combined operations that were often multinational and within an inherently joint theatre. They required navy task forces, ground forces, and substantial air power from different nations, all with the goal of defeating the Japanese and establishing a military dominance in the South Pacific. This was made all the more challenging by the need to apply forces across a large theatre of operations by the combined use of amphibious operations and jungle warfare. These two considerations formed the central

characteristics of the campaign, however their application was at all times dictated by the selection of tropical islands suitable for the construction of airfields near to good natural harbours while still in close proximity to established bases. The South Pacific therefore imposed a number of challenges on operations, as the area was physically remote from developments abroad, had no modern ports and infrastructure, and the terrain and climates were extreme. It was an environment that was harsh and unforgiving to the undertrained and underprepared.

The operations which were subsequently conducted were significantly influenced by the geographic nature of the environment, and the South Pacific demanded proficiency in amphibious operations and jungle warfare as they formed the realms in which military force was to be applied for the attainment of air power in the campaign. Yet these were difficult aspects to master. Indeed the amphibious operation has often drawn the indignation of establishments and higher commands; the former Commandant of the US Marine Corps Robert H. Barrow once stated in relation to amphibious operations that, “many people from many nations have grappled with the problem, both in theory and in practice”, yet it remains a most difficult undertaking.¹ To be sure, modern commanders still view amphibious operations as “some of the most challenging that a military commander ever has to plan and conduct.”² In a similar vein jungle warfare, while never receiving the same attention, is recognised as “a highly specialized type of operation [sic]”, which requires thorough and extensive training and yet occurs in some of the worst places to fight a war.³ Thus not only did commanders and their forces in the South Pacific have to execute a type of military operation that strained the capabilities of forces, but they did this while conducting operations in one of the most challenging of natural environments.

¹ Robert H. Barrow, “Forward”, *Assault from the Sea: Essays on the History of Amphibious Warfare*, ed. Merrill L. Bartlett (Annapolis, Maryland: Naval Institute Press, 1983), no page number.

² Former Australian Chief of the General Staff, Lieutenant-General John Grey (ret.), “Opening Address by the Chief of the General Staff”, in *Australian Amphibious Operations in the South-West Pacific: 1942-45*, Edited Papers of the (Australian) Chief of Army History Conference 15 November 1994, ed. Glenn Wahlert (Canberra: Army Doctrine Centre, Department of Defence, 1995), 5.

³ US Army Heritage and Education Center (USAHEC), U423.5, R32, 1947-48, X37, Instructor Training Division, Military Monograph, Joseph D. Waters, “Training for Jungle Operations”, 25 February 1947, 1.

The Pacific is once again assuming importance in world affairs due to the emergence of Asia as the preeminent economic hub. It is expected that in due course, this may lead to a shift in the balance of military power.⁴ The environment that was mastered by military forces during the Second World War is therefore again of considerable interest to armed forces. The South Pacific is of particular interest to both Australia and New Zealand because of their geographical proximity and the assumed international relations leadership role in the region. Consequently, both the Australian Defence Force and New Zealand Defence Force have committed themselves to military developments which will adapt their force structure for the region.⁵ This will require knowledge of operating in tropical conditions and in performing amphibious operations. The South Pacific campaign of the Second World War provided New Zealand (NZ) with what is still its main experience of combined amphibious and jungle operations. The principal expeditionary force element involved in this area, was the 3rd NZ Division, which was part of the broader force known as the New Zealand Expeditionary Force in Pacific (NZEFP).⁶ The division was initially created in response to a need to conduct garrison duties in the South Pacific, namely Fiji, and later to take on offensive operations, with an eye towards service in the Solomon Islands. It served from 1942 to 1944 and conducted a total of three combat operations against Japanese forces on the island of Vella Lavella (September 1943), the Treasury Islands (October 1943), and the Green Islands (February 1944) – all involving the use of amphibious capabilities within a harsh tropical climate. The experiences of the 3rd NZ Division therefore provides New Zealand’s main experience of modern amphibious operations in this or any other theatre.

As the scene of some of the earliest Allied amphibious operations of the war, the South Pacific became a “test bed for the [amphibious] doctrine and tactics that had been

⁴ New Zealand Government, *Defence White Paper 2010* (Wellington: Ministry of Defence, 2010), 24.

⁵ For example, see Australian Government, *2013 Defence White Paper* (Canberra: Department of Defence, 2013), and New Zealand Government, *Defence White Paper 2010*.

⁶ See Reginald Hedley Newell’s work on the wider role and place of 3rd NZ Division within New Zealand’s war effort, “New Zealand’s Forgotten Warriors: 3NZ Division in the South Pacific in World War II” (PhD thesis, Massey University, 2008), iii. His thesis remains the best academic source on the history of 3rd NZ Division.

developed.”⁷ The 3rd NZ Division benefitted from knowledge and experience derived from American experience in the Solomon Islands in 1942-43 in what some have called, the evolutionary process of amphibious operations during the war in which all phases underwent steady development of techniques, tactics, and technology.⁸ For the New Zealanders, this evolutionary process reached its apex during Operation ‘Squarepeg’ in the Green Islands, and where they also reached their peak of jungle warfare adaptations. ‘Squarepeg’ was considered one of the best conducted amphibious operations of the Pacific War. At the time of its execution in February 1944, the USN commander Vice Admiral William Halsey hailed it as “a remarkably fine combined operation in every sense of the word”, as its execution was without issue and was a most refined undertaking.⁹ Consequently, Operation ‘Squarepeg’, remains a leading candidate for an historical case study of New Zealand amphibious operations and jungle warfare.

To a large extent, the division’s success in this operation stemmed from its many months of training, eventually amassing more than a dozen combat and training amphibious landings of battalion-size or larger (many more if smaller landings of platoon and company are included) during a 15 month period. Senior New Zealand Army commanders were confident that the 3rd NZ division was one of the more highly regarded Allied formations in the South Pacific Area, claiming that their American counterparts held the division in “the highest of opinion.”¹⁰ Indeed, had it not been for its disbandment in October 1944, the 3rd NZ Division may have played a greater role in the Pacific War, although it may have found itself relegated to secondary areas.¹¹ Despite these views, the division never undertook a lengthy combat operation nor was it involved in a prolonged

⁷ James J. Henry IV, “A Historical Review of the Development of Doctrine for Command Relationships in Amphibious Warfare” (MMAS. thesis, Fort Leavenworth, Kansas: US Army Command and General Staff College, 2000), 49.

⁸ Gordon L. Rottman, *US World War II Amphibious Tactics: Army & Marine Corps, Pacific Theater, Osprey Elite Series 117* (Oxford: Osprey Publishing, 2010), 5.

⁹ Archives New Zealand (ANZ), EA1, 625, Part 1, 87/19/7, NZ Forces – Campaigns and Actions – Actions involving the 3rd Division, Memorandum, Commander South Pacific to Commander in Chief United States Fleet via Commander in Chief United States Pacific Fleet, copy enclosed to Deputy Chief of General Staff to Secretary War Cabinet, 9 May 1944.

¹⁰ ANZ, AD12, 15, 28/15/1, Part 5, 2 NZEF reports – Operation Kiwi, June 1943 – July 1945, Lieutenant-General Puttick to Prime-Minister Fraser, 13 October 1943.

¹¹ ANZ, ANZ, WAI19, 1, S1 Major-General Barrowclough (Personal), March 1944 – August 1944, telegram to: TRINSED, From: ENZEDSOPAC, no. 1192.

battle, and as such these quotes remain speculative. What can be judged is that the division performed the tasks allocated to it quite adequately - a feat attained despite being engaged in types of warfare for which New Zealand was mostly unprepared before the commencement of hostilities.

Despite the great potential for research, few scholarly works on New Zealand's amphibious and jungle experiences during the Second World War have emerged, and the field remains relatively sparse compared to efforts in other nations. This is particularly so in the case of Australian efforts in the South-West Pacific Area, which have received increasing attention from scholars over the past two decades.¹² Australian historians have recognised the usefulness of their historical experiences during the 'war years' and have produced a steady stream of articles, study papers, conferences, and books on the subject. Two of the more important anthologies from these efforts remain *Australian Army Amphibious Operations in the South-West Pacific: 1942-45*, and *The Foundations of Victory: The Pacific War 1943-1944*.¹³ The former succeeds in relating the difficulties of conducting amphibious operations by a smaller power operating within a larger power's sphere of control. It also provides a glimpse into the many administrative issues arising from the need to integrate joint and combined forces. Its focus is unashamedly aimed at the Australian experience, and though linkages can be made to New Zealand, these are not conspicuous. In a similar manner, the latter work does well at conveying Australian experiences in meeting the doctrinal, organisational, and tactical challenges of jungle warfare, however it does not provide insight into New Zealand efforts. Other works touch on the role of Australian historical amphibious and jungle warfare efforts and how neglecting these risks wastage in future endeavours.¹⁴ Recently, journal articles dealing

¹² Works dealing with Australian efforts in jungle and amphibious training and operations include, Adrian Threlfall, "The Development of Australian Army Jungle Warfare Doctrine and Training, 1941-1945" (PhD thesis, Victoria University, 2008); John Moremon, "'A Triumph of Improvisation': Australian Army Operational Logistics and the Campaign in Papua, July 1942 to January 1943" (PhD thesis, UNSW, 2000).

¹³ Peter Dennis, and Jeffrey Grey, eds., *The Foundations of Victory: The Pacific War 1943-1944*, The 2003 Chief of the Army's Military History Conference (Canberra: Army History Unit, 2004); Glenn Wahlert, ed., *Australian Amphibious Operations in the South Pacific: 1942-45*, Edited Papers of the Australian Army Historical Conference held at the Australian War Memorial 15th November 1994 (Canberra: Army Doctrine Centre, Department of Defence, 1995).

¹⁴ See Albert Palazzo, "Maritime Strategy and the Operations of the Australian Army," in *Projecting Force: The Australian Army and Maritime Strategy*, eds. Albert Palazzo and others (Canberra: Land Warfare Studies

with Australia's experiences in the South West Pacific Area and how these can inform contemporary operations have been similarly well received. Peter Dean's article, "Amphibious Warfare: Lessons from the Past for the ADF's Future", presents a sound argument on the usefulness of past Australian amphibious experiences for future issues of the Australian Armed Forces.¹⁵ The utilising of historical Australian examples for contemporary issues continue to be expounded in working papers, such as those by Alan Ryan and Chris Field of the Australian Land Warfare Studies Centre, who have succeeded in presenting historical case studies for contemporary and future issues.¹⁶

While the Australian Defence Force has recognised the importance of history for the future, the New Zealand Defence Force has not. In part this is due to the lack of academic infrastructure within New Zealand, and those wishing to learn more of the subject are generally limited to oral histories and popular historians. These works are therefore mostly descriptive and non-academic, and offer few useful points for academic study and the modern military professional. Examples include Matthew Wright's *Pacific War*, which although using primary sources, is limited by its broad scope, short length, and an affinity to view events at face-value without delving into deep analysis.¹⁷ Megan Hutching and Bruce Petty are two others who have provided insights into the thoughts of New Zealand soldiers confronting the realities of amphibious and jungle combat in the Pacific. Their work suffers from a lack of context, and lacks analysis, however such is beyond the scope of their works' intention.¹⁸ Such assertions do not detract from the historical value of the

Centre, 2010), 5-15; Gavin Keating, *A Tale of Three Battalions: Combat Morale and Battle Fatigue in the 7th Australian Infantry Brigade, Bougainville, 1944-45* (Canberra: Land Warfare Studies Centre, 2007).

¹⁵ Peter J. Dean, "Amphibious Warfare: Lessons from the Past for the ADF's Future," *Security Challenges*, vol. 8, no. 1 (Autumn 2012: 57-76).

¹⁶ Alan Ryan, *'Putting Your Young Men in the Mud': Change, Continuity and the Australian Infantry Battalion*, Working Paper No. 124 (Canberra: Land Warfare Studies Centre, 2003); Alan Ryan, *Thinking Across Time: Concurrent Historical Analysis on Military Operations*, Working Paper No. 114 (Canberra: Land Warfare Studies Centre, 2001); Chris Field, *Testing the Tenets of Manoeuvre: Australia's First Amphibious Assault since Gallipoli, the 9th Australian Division at Lae, 4-16 September 1943*, Working Paper No. 139 (Canberra: Land Warfare Studies Centre, 2012).

¹⁷ Matthew Wright, *Pacific War: New Zealand and Japan 1941-45* (Auckland: Reed Publishing, 2003).

¹⁸ Megan Hutching, ed., with Ian McGibbon and Alison Parr, *Against the Rising Sun: New Zealanders Remember the Pacific War* (Auckland: HarperCollins Publishers, 2006); Bruce M. Petty, *New Zealand in the Pacific War: Personal Accounts of World War II* (London: McFarland & Company, 2008). Another similar book is Ian McGibbon's, *New Zealand and the Second World War: The People, the Battles and the Legacy* (Auckland: Hodder Moa Beckett Publishers, 2003).

works, yet it remains that nearly all these works have the general population as their core readership. This can diminish the value of military history when used for the purpose of 'the past as prologue' theory.

Other works suffer from a similar shortage of detail on the 3rd NZ Division, jungle warfare and amphibious aspects. The US Army's Official History on the Solomon Islands hardly mentions jungle training, and while amphibious aspects are done more justice, the work only mentions the 3rd NZ Division in its relation to US operations and effects therein.¹⁹ The work does, however, provide essential strategic background to the division's operation and its place within them, and is therefore essential to compare it with primary sources in order to form a complete perspective. The United States Marine Corps (USMC) history delivers a better understanding of combat experiences, but it does not venture into New Zealand efforts in jungle warfare, and instead the work largely focuses on general amphibious details as they related to the Americans.²⁰ Additionally, many books which although presenting good analytical work, do not have New Zealand efforts as a core analysis of their argument. Nevertheless, they form important contributions to international developments which effected the New Zealanders. John A. Lorelli's *To Foreign Shores* is a good example as its focus centres on US amphibious operations in the Second World War, and provides essential details on the beginnings of amphibious developments by American forces which later contributed to the training of the 3rd NZ Division.²¹ William L. McGee, assisted by Samuel E. Morison, has produced a fine contribution to the knowledge of amphibious operations in the Solomon Islands and the difficulties of supply in the theatre, however his work does not extend into 1944, and therefore is of assistance only in helping to establish the 3rd NZ Division's first two operations.²² Harry Gailey devotes a paragraph to American and New Zealand efforts in

¹⁹ John Miller, Jr., *Cartwheel: The Reduction of Rabaul, United States Army in World War II: The War in the Pacific* (Washington, D.C.: Center of Military History, US Army, 1990). In all, Operation 'Squarepeg' is devoted just over 3 pages of text (pages 313-315) within the US Army's Official History.

²⁰ Henry I. Shaw, Jr. and Douglas T. Kane, *Isolation of Rabaul, History of US Marine Corps in World War II, Vol. II* (Washington, D.C.: Historical Branch, G-3 Division, Headquarters, USMC, 1963).

²¹ John A. Lorelli, *To Foreign Shores: US Amphibious operations in World War II* (Annapolis: Naval Institute Press, 1995).

²² William L. McGee, *The Solomons Campaigns 1942-1943: From Guadalcanal to Bougainville, Pacific Turning Point, Amphibious Operations in the South Pacific, Vol. 2* (California: BMC Publications, 2002).

Operation 'Squarepeg' in his book *Bougainville 1943-1945*, and as such is dismissive of the operation's significance to the larger operational level at the time.²³ The best work on jungle warfare in the South Pacific, Eric Bergerud's *Touched With Fire: The Land War in the South Pacific*, remains a fine source on the tactical challenges faced by opposing forces in the Solomon Islands.²⁴ Once again, however, this author neglects the role of the 3rd NZ Division and omits it entirely. Even more recent works on the South Pacific campaign neglect or misstate the history of the 3rd NZ Division, or have no mention of training efforts and combat experiences of the division.²⁵

Looking at New Zealand's official sources, the most useful remains Oliver Gillespie's *The Pacific*, however it offers only descriptive information on 'Squarepeg', jungle warfare, and amphibious operations – analysis is underdeveloped or lacking entirely.²⁶ The divisional history volumes deliver narrative of the 3rd NZ Division's activities, however they provide little analytical discussions surrounding the division's jungle and amphibious performance in 'Squarepeg' and were aimed at veterans of the division.²⁷ The work by Jeffery Plowman and Malcolm Thomas, *New Zealand Armour in the Pacific 1939-45*, is an exception with its

²³ Harry A. Gailey, *Bougainville 1943-1945: The Forgotten Campaign* (Lexington: The University Press of Kansas, 1991).

²⁴ Eric Bergerud, *Touched with Fire: The Land War in the South Pacific* (New York: Viking, 1996).

²⁵ John Prados, *Islands of Destiny: The Solomons Campaign and the Eclipse of the Rising Sun* (New York: Nal Caliber, 2012).

²⁶ Oliver A. Gillespie, *The Pacific. Official History of New Zealand in the Second World War 1939-45* (Wellington: Department of Internal Affairs, War History Branch, 1952).

²⁷ H. L. Bioletti, *Pacific Kiwis: Being the Story of the Service in the Pacific of the 30th Battalion, Third Division, Second New Zealand Expeditionary Force* (Wellington: A. H. and A. W. Reed, 1947); A. H. L. Brinkman, *The 35th Battalion: A Record of Service of the 35th Battalion with the Third Division in the Pacific* (Wellington: A.H. and A. W. Reed, 1947); J. A. Evans, *Pacific Service: The Story of the New Zealand Army Service Corps units with the Third Division in the Pacific* (Wellington: A. H. and A. W. Reed, 1947); J. A. Evans, *The Gunners: An Intimate Record of Units of the 3rd New Zealand Divisional Artillery in the Pacific from 1940 until 1945* (Wellington: A. H. and A. W. Reed, n.d.); P. P. Henley, *Tanks, MMGs & Ordnance* (Wellington: A. H. and A. W. Reed, n.d.); Colin R. Larsen, *Pacific Commandos: New Zealanders and Fijians in Action: A History of Southern Independent Commando and First Commando Fiji Guerrillas* (Wellington: A. H. and A. W. Reed, 1947); F. Nicol, *Headquarters: A Brief Outline of the Activities of the Third Division and the 8th and 14th Brigades during their Service in the Pacific* (Wellington: A. H. and A. W. Reed, 1947); Clive B. Sage, *Pacific Pioneers: The Story of the Engineers of the New Zealand Expeditionary Force in the Pacific* (Wellington: A. H. and A. W. Reed, n.d.); E.V. Sale, *Stepping Stones to the Solomons: the Unofficial History of the 29th Battalion with the Second New Zealand Expeditionary Force in the Pacific* (Wellington: A. H. and A. W. Reed, 1947); E. V. Sale, *Shovel, Sword, and Scalpel: A Record of Service of Medical Units of the Second New Zealand Expeditionary Force in the Pacific* (Wellington: A.H. and A. W. Reed, 1945); K.L. Sandford, *Story of the 34th* (Wellington: A. H. and A. W. Reed, 1947); A. H. L. Sugden, *Pacific Saga: The Personal Chronicle of the 37th Battalion and its Part in the Third Division's Campaign* (Wellington: A. H. and A. W. Reed, 1947).

text on the conduct of New Zealand tanks during the operation, nevertheless it is a brief examination of a small aspect which deserves greater investigation.²⁸ The USN history, by Samuel Eliot Morison, is another excellent source of reference for ‘Squarepeg’, as it provides a detailed breakdown of vessels and units involved, as well as correctly placing the operation within the broader campaign at-large.²⁹ Despite this Morison does not expand upon the operation to any substantial degree, although bearing in mind the range of his topic this is understandable.

To be sure, there exists no work which bases its main argument around the 3rd NZ Division’s preparation and conduct in amphibious operations and jungle warfare and whether these were sufficient for it to successfully execute Operation ‘Squarepeg’ or to conduct further operations in the Pacific. Despite producing a benchmark contribution to the history of the division, Reginald Newell does not write extensively on preparations for ‘Squarepeg’ in his thesis, and to a large extent bases the chapter on ‘Squarepeg’ around one primary (American) source.³⁰ Newell’s recent book on Operation ‘Goodtime’ in the Treasury Islands is far more accomplishing on the subject of the division’s jungle and amphibious experiences. Yet he provides only three references to Operation ‘Squarepeg’ or the islands where it occurred, and any detail or context surrounding earlier New Zealand efforts in jungle and amphibious training which later contributed to success in ‘Squarepeg’ is largely omitted.³¹

This thesis seeks to fill a gap within available literature on New Zealand’s experience of amphibious operations and jungle warfare in the South Pacific during the Second World War. It utilises the most successful of the New Zealanders’ operations in the South Pacific to assess the preparation and performance of the 3rd NZ Division. New Zealand’s strategic

²⁸ Jeffrey Plowman and Malcolm Thomas, *New Zealand Armour in the Pacific 1939-45*, *Kiwi Armour No. 2* (Christchurch: Jeffrey Plowman, 2001).

²⁹ Samuel Eliot Morison, *Breaking the Bismarcks Barrier: 22 July 1942 – 1 May 1944*, *History of United States Naval Operations in World War II*, Vol. VI (Boston: Little, Brown and Company, 1989).

³⁰ Newell, “New Zealand’s Forgotten Warriors”.

³¹ Reg Newell, *Operation Goodtime and the Battle of the Treasury Islands, 1943: The World War II Invasion by United States and New Zealand Forces* (North Carolina: McFarland & Company, Inc., 2012).

context in the South Pacific along with its defence preparations in the inter-war years will be provided in order to provide a better understanding of the 3rd NZ Division's environment once it was formed and the difficulties it faced. In addition, the relevance of pre-war amphibious and jungle warfare developments to the framework of the 3rd NZ Division's operations in the South Pacific will be presented. This will permit a greater level of conceptual and practical knowledge of the demands for amphibious and jungle warfare operating methods in the South Pacific during the Second World War, especially in 1944. The completed study will present the actions, experiences, and results of the division's role in Operation 'Squarepeg'. This will include the role of planning to the main landing, the peripheral actions which were necessary to guarantee the safety of the operation and its task force elements, as well as the conduct of the division and its components once it landed in the Green Islands. The thesis will consider whether, through these experiences, the 3rd NZ Division had attained an adequate level of skill in amphibious operations and jungle warfare for the conduct of operations in the South Pacific. This shall allow a glimpse into the failures and successes of modern amphibious operations within a jungle environment, with a particular focus on the Solomon Islands.

CHAPTER 1

The South Pacific, New Zealand, and the Raising of the 3rd New Zealand Division

The road that led the 3rd NZ Division to Operation 'Squarepeg' in the Green Islands in February 1944 had its foundations in New Zealand's defence policy towards the South Pacific over the previous 40 years. The division's performance in Operation 'Squarepeg' reflected in part the pre-war experiences of the New Zealand Army. In essence, the political and strategic decisions of the past decades influenced the effectiveness of the 3rd NZ Division in February 1944. The history of New Zealand's pre-war strategic policy of defence, in conjunction with the New Zealand Army's pre-war levels of readiness and commitments in the South Pacific provides context of the 3rd NZ Division's force structure and operational approach for Operation 'Squarepeg'. New Zealand's pre-war defence strategy contributed to the division's hasty introduction to operational conditions in the South Pacific, which revealed the shortcomings of the New Zealand Army's preparedness for amphibious operations and jungle warfare, which had been neglected in the 1920-30s. The New Zealanders' unfamiliarity with operational and tactical demands in the South Pacific resulted in the division's training being hampered by inadequate resources and the great ambiguity over its *raison d'être*. The men of the 3rd NZ Division soon realised that their fight was to be one very different from their kinsmen in the Mediterranean, and this subsequently required a vast array of adaptations which were difficult to meet.

New Zealand's involvement in the South Pacific stretched back many years. Before the Great War, there were discussions regarding the focusing of military efforts in the Pacific in the form of offsetting British naval basing in the region, however this idea was soon

overcome by events in Europe.¹ In August 1914, a New Zealand expeditionary force captured German Samoa in New Zealand's first amphibious operation on foreign soil.² Though a successful operation, any lessons learned were largely forgotten, being overshadowed by the experiences at Gallipoli and the Western Front. With the defeat of Germany, the strategic outlook of the Pacific changed, as potential enemies were identified and evaluated, and in the process New Zealand, together with Australia, searched for a new strategic defence system.



Map 1: New Zealand and the Pacific – highlighting the main area of operations in the South Pacific 1942-44 (Source: New Zealand History Online/Nga koreo a ipurangi o Aotearoa.)

At the end of the Great War, the New Zealand Government took exception to Japan being granted possession of former German colonies in the Central and South Pacific as a result

¹ Gillespie, *The Pacific*, 2.

² Fred Waite, *The New Zealanders at Gallipoli* (Christchurch: Whitcombe and Tombs Ltd., 1919), 2-4.

of the peace conferences between the former belligerents.³ Subsequently, New Zealand and Australia, alongside Great Britain, eventually evaluated Japan as the primary threat in the Far East. This was highlighted in the findings of Admiral Viscount Jellicoe, Royal Navy, in his report on Far East defences in 1919, which was later submitted to the New Zealand government for examination. The Jellicoe report recommended that New Zealand join Great Britain and Australian for the maintenance of a Far Eastern Fleet, with the New Zealand contribution to include submarines and light cruisers.⁴

Jellicoe's recommendations became more acute after the failure to renew the Anglo-Japanese Alliance at the 1921 Imperial Conference, which was a matter of some importance for the Australian and New Zealand Prime Ministers and their representatives. The 1921 conference also reiterated that while cooperation among the different realms of the empire was important to imperial defence, the details of such policies were to be decided by each entity's parliaments, and thus each region was to maintain a minimum standard of independent defence.⁵ After deliberations, the measures thus discussed influenced New Zealand political efforts to strengthen Britain's, and therefore New Zealand's, position in the Pacific during the 1920s by investing large financial resources towards the strengthening of the Singapore naval base, which was foreseen as the lynchpin of the defence strategy. The idea of a New Zealand Naval Squadron proved too costly to implement, so the country committed itself to an indirect defence strategy as a means to offset the cost of defence. This was done despite the fact that New Zealand was aware that it had to maintain a minimum independent defence capability. Ultimately, even these limited efforts by New Zealand proved forlorn due to domestic indecision between alternating governmental parties and as a reaction to

³ Gillespie, *The Pacific*, 3.

⁴ "Lord Jellicoe's Report", *Evening Post*, XCIII, 93, 17 October 1919, 4, <http://paperspast.natlib.govt.nz/cgi-bin/paperspast?a=d&d=EP19191017.2.19.1&e=-----10--1----0-->.

⁵ Conference of Prime Ministers and Representatives of the United Kingdom, the Dominions, and India, held in June, July, and August, 1921, *Summary of Proceedings and Documents* (London: His Majesty's Stationary Office, August 1921), 6, 19, 29-31.

economic downturns, with the result that defence recommendations were largely neglected until it was too late.⁶

By the late 1930s, with tensions in the Pacific rising, New Zealand military planning (in accordance with British Imperial policy) advocated increased air and naval forces in the South Pacific, largely dismissing the need for, or inclusion of, a sizable land-contingent for operations in the region. As any increase in New Zealand's naval strength would take many years to implement, the government placed their efforts into the allocation of financial reserves to the projected Singapore naval base. In so doing, New Zealand neglected the maintenance of an adequate land force at home, and instead British imperial strength, primarily the Royal Navy, was entrusted to deter and prevent any foreign danger to New Zealand and the South Pacific.⁷ In light of this, New Zealand maintained a small army of just 593 regular officers and about 7,400 Territorial Force volunteers, with the army eventually rising to 15,000 in number in 1939.⁸ This small force, which was intended to form the basis of an expanded wartime army, adhered to British doctrine which was shaped from the experiences of the Great War and geared towards a conflict in Europe. As a result, by the outbreak of war in 1939 the New Zealand Army suffered from the effects of inadequate training, obsolete equipment, and a doctrine ill-suited to operations outside of European battlefields.

In 1939-40, New Zealand began dispatching forces to the war in Europe, including the 2nd New Zealand Expeditionary Force (2NZEF) which was raised for service in the Middle East and Europe. When, in 1940, New Zealand re-examined its greater security context and future role in the South Pacific, with interest in the possibility of a war against Japan, it was finally acknowledged that actions should be taken to strengthen the islands further

⁶ Gillespie, *The Pacific*, 3-4; Ian McGibbon, "The Constitutional Implications of Lord Jellicoe's Influence on New Zealand Naval Policy 1919-1930", *The New Zealand Journal of History*, vol. 6, no. 1 (April 1972), 57-80.

⁷ Gillespie, *The Pacific*, 3-10; Gerald Hensley, *Beyond the Battlefield: New Zealand and its Allies 1939-45* (North Shore, New Zealand: Viking and the National Army Museum, 2009), 32-51; Ian McGibbon, "New Zealand's Strategical Approach", in *Kia Kaha: New Zealand in the Second World War*, ed. John Crawford (Auckland: Oxford University Press, 2000), 11-15; Ashley Jackson, *The British Empire and the Second World War* (London: Hambledon Continuum, 2006), 463-472.

⁸ Hensley, *Beyond the Battlefield*, 36, 51.

north of the country, as they were believed vital to national security. After consultation with Britain, it was agreed that Fiji should be garrisoned by New Zealand forces. In order to accomplish this, land forces were needed to defend the Fijian islands in hopes of dissuading an invasion and opposing one if it happened. In October 1940 the 8th Infantry Brigade was built up for deployment to Fiji, where it would serve alongside elements of the Royal New Zealand Air Force (RNZAF) and local Fijian forces. The brigade included two and later three newly raised infantry battalions and ancillary units, however they were ill-equipped and undertrained with 2NZEF having consumed much of the best troops and equipment.⁹ These shortcomings would become a feature of the 3rd NZ Division throughout its existence. Further, conditions in Fiji were not conducive to the conduct of training exercises, as much effort had to be directed towards construction of defences, infrastructure, and facilities.¹⁰ Training took on a pattern of pre-war linearity and unimaginativeness that would have resonated with British Empire forces stationed far away in Malaya. Training exercises of any kind were a rare sight, and weapon familiarisation was strictly limited to the infantry, who then spent most of their time digging fortifications. Indeed, the few exercises conducted were limited to simple route-marches and even this was restricted to the use of certain roads.¹¹ Coordination of training was further hindered by difficulties of communications, which were described as 'impossible'.¹²

On the eve of war in the Pacific, New Zealand decided to reinforce its garrison at Fiji, however it was not until January 1942, that the garrison's strength was increased to two brigades. The 14th Infantry Brigade joined the 8th Brigade although many of the arriving units had little effective training, with some having been formed only a week prior to their embarkation.¹³ The brigade was commanded by Brigadier Leslie Potter, a 45-year-old regular soldier who during the Great War had graduated from the Royal Military

⁹ Gillespie, *The Pacific*, 10-24.

¹⁰ Bioletti, *Pacific Kiwis*, 9-10; Sage, *Pacific Pioneers*, 18; Gillespie, *The Pacific*, 24-28

¹¹ ANZ, WAI1, 1517, DAZ 121/9/B10/1(3), HQ 3 Division – Office Records – Appreciations operation orders, "Memorandum for: Headquarters 8 Brigade", 23 January 1942.

¹² Gillespie, *The Pacific*, 28.

¹³ Laurie Barber and Ken Henshall, *The Last War of Empires: Japan and the Pacific War* (Auckland: David Bateman Ltd, 1999), 19-26; Newell, "New Zealand's Forgotten Warriors," 22, 30.

College, Duntroon in Australia – small numbers of New Zealanders were sent to the college each year – before serving on the Western Front. Potter then held a succession of staff appointments during the interwar years, as well as being seconded to India for attachment to the British Army in 1925-27. He was serving in the 1st NZ Army Tank Brigade, when he was promoted to Brigadier and given command of the 14th Brigade in January 1942.¹⁴ Although he had no combat command experience, having been badly wounded as a platoon commander in 1917, his previous staff and instructional experience assisted him in his new command. Indeed, as the 14th Brigade was unprepared for its deployment to Fiji, much time was spent sifting through a plethora of administration issues, especially in organising heavy equipment and weapons which suited his staff experiences.¹⁵ Like its predecessor on Fiji, the newly formed brigade was predominantly involved in constructing defensive positions, and little training could be conducted. The troops were nearly all wartime volunteers or conscripts who had recently completed training, although most of the battalion commanders and senior officer appointments were held by regular soldiers.

In late 1941, Japan was poised to attack the British Empire, American and Dutch interests across South-East Asia, and the Pacific. The main Japanese focus remained the resource-rich Dutch colonies, and the strategically important British ports of Singapore and Hong Kong, with the occupation of the Philippines being an essential step to ensuring the successful defence and supply of these positions from the Central Pacific. Efforts that were directed towards the South Pacific were seen as important in order to shield, and complement, operations in other regions, especially New Guinea.¹⁶ When the Japanese attacked, a string of colonial outposts fell into their hands.¹⁷ The defeat of British Empire forces in Malaya and the capture of Singapore in February 1942 destroyed the basis of New Zealand's long-standing defence policy. At the time of Singapore's capitulation, New

¹⁴ ANZ, WAI1, 291, DA 406/85, 2NZE – Biography of Brigadier L. Potter.

¹⁵ Nicol, *Headquarters*, 70-71; Sugden, *Pacific Saga*, 11-12;

¹⁶ Parker, *The Second World War*, 87; Barber and Henshall, *The Last War of Empires*, 111.

¹⁷ An appreciation as to the scale of Japanese conquests may be gained from John Keegan's *Collins Atlas of World War II* (London: HarperCollins Publishers, 2006), 52-61.

Zealand had almost no defensive deterrents other than its physical isolation.¹⁸ Prime Minister Peter Fraser's statements to the Secretary of State for Dominion Affairs on 17 February 1942 displayed the uncertainty of the day; "The deterioration in the Pacific situation has been so rapid and disastrous that the problem[s] ... [are now] completely different from what ... [they were] only a few short weeks ago."¹⁹ Almost simultaneously, further Japanese advances had progressed into the South-West Pacific, including the capture of New Ireland and New Britain in January and February 1942.



Image 1: Brigadier Leslie Potter, DSO – Commander, 14th NZ Infantry Brigade. (Source: Allan Barns-Graham, *Brigadier L Potter, DSO, September 1943-44*, National Collection of War Art, Department of Internal Affairs, AAAC 898 NCWA 103.)

¹⁸ McGibbon, "New Zealand's Strategical Approach", in *Kia Kaha*, 13-15; Harry James Lepper, interviewed by Brenton Beach, 30 November 2007, Kippenberger Military Archives and Research Library (KMARL), NZ National Army Museum; Hensley, *Beyond the Battlefield*, 34-36, 43, 89. 177-181.

¹⁹ *Documents Relating to New Zealand's Participation in the Second World War, 1939-45*, Vol. III (Wellington: Department of Internal Affairs, War History Branch, 1963), "The Prime Minister of New Zealand to the Secretary of State for Dominion Affairs, 17 February, 1942," 224.

New Zealand Chiefs of Staff re-evaluated the importance of Fiji as New Zealand had recently signed an accord with Great Britain on which it assumed the responsibility for the defence of British possessions in the South-West Pacific.²⁰ In an appreciation dated 20 December 1941, the service chiefs stated that Fiji could afford valuable facilities to the Royal Navy and serve as an important “centre of cable communications.”²¹ They concluded that efforts would need to be increased to protect this possession. This created a crisis in New Zealand as the majority of trained soldiers had already left for the Middle East, and those that remained mostly consisted of Territorials or recent recruits intended to be sent to North Africa as reinforcements for the 2nd New Zealand Division. Land forces then available in New Zealand amounted to little more than the undertrained, underequipped, or unsuitable for active service in Fiji.

At the end of 1941, talks between Britain, New Zealand, and the US had led to an agreement (of sorts) on the state of defence in the South Pacific, to which the Americans confirmed that they would be increasingly involved, and agreed to assist New Zealand forces on Fiji.²² In March 1942, fears were heightened when the Japanese embarked upon a number of amphibious operations in the Solomon Islands that appeared to increase the threat to Fiji. These landings served to reinforce to the Allies the level of effectiveness of Japanese amphibious doctrine and abilities as a result of that country’s extensive amphibious developments from the 1920s onwards. Initially the Solomon Islands were seen as a means of interdicting Lines of Communication (LOC) between the US and the South Pacific, however, the ease of their advances led the Japanese to realise that they could enhance their control of the region if they used the islands as stepping stones to the eventual capture of the New Caledonian, Samoan, Tongan, and Fijian island groups. The retention of these would sever the LOC between the United States and Australia.²³

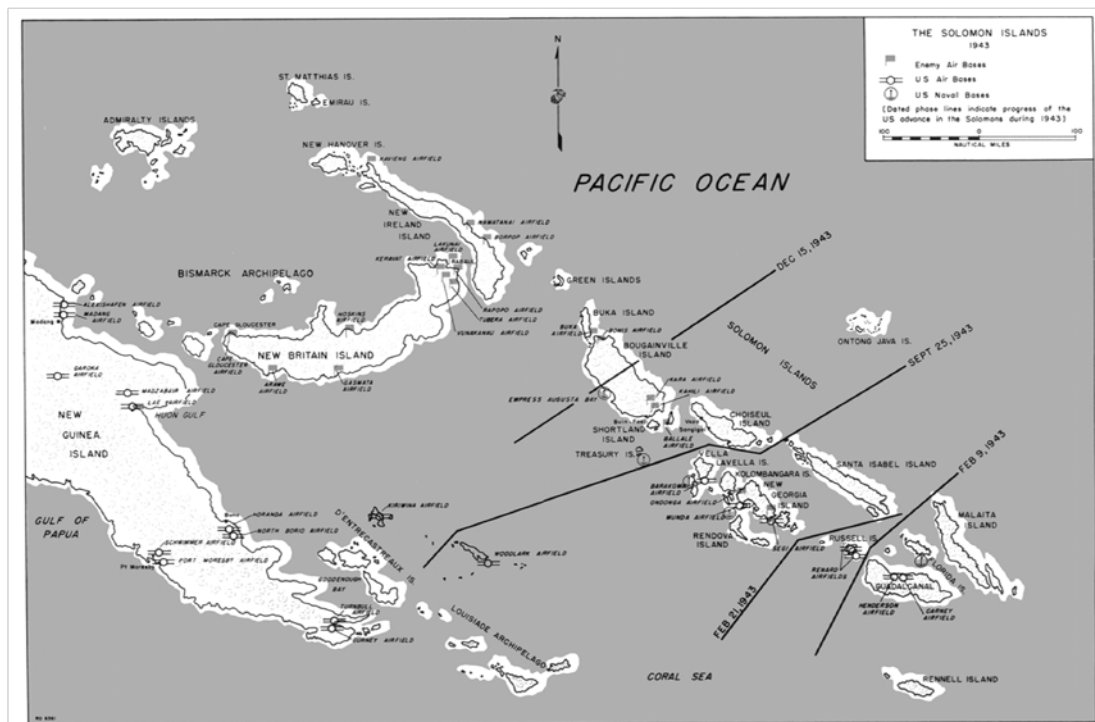
²⁰ ANZ, AD12, 13, 28/11, 2NZE reports – Operational control in Pacific, October 1941 – September 1946, “Defence of British Possessions in the South Western Pacific – Assumption of Responsibility by New Zealand”, 18 November 1941.

²¹ ANZ, WAI1, 1517, DAZ 121/9/B10/1(3), HQ 3 Division – Office Records – Appreciations operation orders, C.O.S. Paper No. 109, 20 December 1941, Organization for National Security, Chiefs of Staff Committee: “Defence of Fiji – Appreciation of the Situation (As at 20 December 1941).”

²² Hensley, *Beyond the Battlefield*, 161, 166.

²³ Barber and Henshall, *The Last War of Empires*, 111; Edward J. Drea, *Japan’s Imperial Army: Its Rise and Fall, 1853-1945* (Kansas: University Press of Kansas, 2009), 227.

These plans were rather hastily drawn up by the Japanese as a compromise between the Imperial Japanese Navy (IJN) and Imperial Japanese Army (IJA), and in this regard both services were underprepared for the requirements of operating at such great distances from major military bases, like Truk, in the Caroline islands, which had not been extensively developed during the interwar years due to constraints imposed under the League of Nations mandate for the islands in conjunction with international naval agreements.²⁴



Map 2: The Solomon Islands – the main area of operations for Japanese and American forces in the South Pacific in 1942-44, and for the 3rd NZ Division in 1943-1944 (Source: Charles D. Melson, *Up the Slot: Marines in the Central Solomons, Marines in World War II Commemorative Series* (Washington, D.C.: Marine Corps Historical Center, 1993), 2.)

Japanese plans in the Solomon Islands centred on maintaining littoral control. This called for the IJN and IJA to operate an extensive and fully integrated logistical network across the length of the Solomon Islands. This plan rested on Japanese forces having access to adequate naval facilities, merchant vessels, and landing craft, with which to establish and

²⁴ David C. Evans, and Mark R. Peattie, *Kaigun: Strategy, Tactics, and Technology in the Imperial Japanese Navy 1887-1941* (Annapolis, Maryland: Naval Institute Press, 2012), 426-427.

then maintain the supply of remote island garrisons and airfields.²⁵ In many ways, Japanese operating methods may be seen as an extension of British and American strategy in developing airfields on many hitherto unimportant South Pacific islands during the 1930s, ostensibly for 'commercial air services' in order to create an air-bridge.²⁶ With a network of advanced airfields along a series of island chains, connected by an effective maritime and aerial logistical system, the Japanese could commence a shipping interdiction campaign from the Solomon Islands against the US-Australian LOCs in the South Pacific.²⁷ The Japanese hoped that if they achieved disruption of the LOCs, New Zealand, as well as Australia, would be in a position of isolation and possibility greater vulnerability.²⁸

The New Zealand garrison in Fiji needed to consider the possibility of an hostile landing as part of the Japanese expansion southwards. The 14th Brigade's combat readiness suffered from the limited availability of modern weapons which hampered combined-arms integration. Additionally, it is evident that initiative at battalion level was stifled by brigade operational orders that propagated a strict rigidity in the conduct of training exercises. This included vague command parameters, which set forth a series of provisos that dictated when, where, and to what extent infantry commanders could exercise command over attached elements. This was especially true of the coastal artillery batteries, which were not to be deviated from their role in coastal defence despite the possibility of their firepower being required for other duties, such as support of infantry attacks, if there was actually an invasion.²⁹ In another feature common to British Empire troops engaged on garrison duties (such as those earlier stationed in Malaya), there was no centrally planned training programme. The separate corps in Fiji often lacked integrated training directives from higher commands and this resulted in individual units

²⁵ Carl Boyd, "Japanese Military Effectiveness: The Interwar Period," in *Military Effectiveness*, Vol. 2: *The Interwar Period*, 2nd ed., eds. Allan R. Millett and Williamson Murray (Cambridge: Cambridge University Press, 2010), 148-153.

²⁶ See A. F. Peachey, "Air Power and Problems of Sovereignty in the South Pacific 1935-41," (MA (Hons.) thesis, University of Canterbury, 1972), 10-24.

²⁷ Barber and Henshall, *The Last War of Empires*, 121-122.

²⁸ John Miller, *Guadalcanal: The First Offensive, United States Army in World War II: The War in the Pacific* (Washington, D.C.: Center of Military History, US Army, 1995), 2.

²⁹ ANZ, WAI1, 1517, DAZ 121/9/B10/1(3), "35 Bn Operation Order No. 1", Copy No. 30, 15 Jan 1942; "3Div. 2 N.Z.E.F. Operation Instruction No. 3", 14 May 1942; "Appreciation of the Situation for Artillery Units", n.d.

being left responsible for their own training efforts outside of their busy labour schedules. This proved difficult to establish, as a shortage of signals equipment hampered communications to such an extent that the New Zealanders were largely unable to train in infantry-artillery cooperation, or indeed any form of combined manoeuvres leaving units unfit for mobile operations. This environment therefore required the centralised control of forces as little training had been undertaken by the individual units which had fostered or encouraged the employment of combined-arms in battle. Consequently, training conditions in Fiji were counterproductive and worked against the improvement of training, for when training was conducted, Operational and Standing orders were limiting to field commands due to administrative restrictions; and when training could have been conducted by the individual units, their equipment or their commander's initiative was a limiting factor. The result of this situation was seen in a NZEF report to Army Headquarters, Wellington in August 1942, which stated that "none of the units from Fiji has had anything but the most rudimentary experience of tactical exercises in the field".³⁰

Fortunately, while the New Zealanders remained in Fiji, focussing on their base construction programmes, events further north occurred which relieved the pressure for the Allies. In May 1942 an IJN task force sailing for Port Moresby was defeated in the Coral Sea and then in June the IJN suffered a more significant defeat at Midway. These battles, with their heavy losses in aircraft carriers left the IJN's power projection much reduced.³¹ This rendered Japan's capability to simultaneously advance further into the South Pacific while resuming its advance in the Central Pacific difficult to achieve. The Japanese subsequently abandoned their ambitious plans and began to consolidate positions in the Solomon Islands to create an 'Outer Defence Perimeter' to serve as a buffer zone for its mandated territories in the Caroline Islands, including the naval base at

³⁰ ANZ, AD12, 15, 28/15/1, Part 1, 2NZEF reports – Operation Kiwi, July-November, "Re-Organization – 3Div", 20 August 1942.

³¹ Evan Mawdsley, *World War II: A New History* (Cambridge: Cambridge University Press, 2009), 226; Williamson Murray, and Allan R. Millett, *A War To Be Won: Fighting the Second World War* (Cambridge, Massachusetts: The Belknap Press of Harvard University Press, 2001), 192-195.

Truk, and occupied areas of New Guinea.³² At this moment, US forces grasped the initiative by launching an offensive in the South Pacific. This was to displace the Japanese from their forward bases, starting with Guadalcanal, and progress up the Solomon Islands' chain. Part of this process involved the strengthening of the US presence in the South Pacific including the relief of the New Zealand garrison in Fiji.

The establishment of American forces in the Pacific revealed that a division of command was required in order to ensure adequate control of the war's operations. After many long discussions, the US Joint Chiefs of Staff decided on a division of command in the Pacific. This resulted in the South-West Pacific Area, under US Army control, and the Pacific Ocean Areas, under the USN.³³ The USN further sub-divided the expansive Pacific Ocean Areas, into three subordinate areas, these being the North Pacific Area, Central Pacific Area, and the South Pacific Area. The South Pacific Area included among its boundaries New Zealand, New Caledonia, New Hebrides, Fiji, and the Solomon Islands – generally all the areas south of the equator, yet east of Australia and New Britain and the Admiralty islands. Thus New Zealand forces fell under the Commander, South Pacific Area and South Pacific Forces (COMSOPAC), which was initially Vice Admiral Robert L. Ghormley, USN, and later Vice Admiral William Halsey, USN.³⁴

In the process of US troops assuming the primary defence of the South Pacific, the New Zealand government flirted with the idea of providing an expeditionary force for operations in the South Pacific Area. The Americans welcomed such an idea, and advised that any potential New Zealand land force would likely fulfil garrison duties on important islands (as had been conducted in Fiji) in order to release US amphibious troops for further operations. To give an indication of possible New Zealand requirements, US Naval authorities proposed four contingents for overseas services, which varied in size from one

³² H. P. Willmott, *The Second World War in the Far East* (London: Cassell & Co., 2000), 94; Barber and Henshall, *The Last War of Empires*, 111.

³³ There was a third area, the Southeast Pacific Area, but this was under joint command and was administered differently to the other Pacific Areas.

³⁴ Louis Morton, *Strategy and Command: The First Two Years, United States Army in World War I: The War in the Pacific* (Washington, D.C.: Center of Military History, US Army, 2000), 244-263.

reinforced brigade group (the smallest) to a reinforced division of around 20,000 men.³⁵ Due to the expeditionary force's intended (and possible) roles, the Americans expressed their willingness that the New Zealand contingent be as strong as possible so as to fulfil the role of the US formations they would be replacing. However, the NZ Army made it clear that only Force 'A' (the smallest) or Force 'C' (a two-brigade division with ancillary elements) was being considered.³⁶ Vice Admiral Ghormley accepted these facts but expressed his disappointment at the New Zealanders' choice of Kiwi 'C' as it would not conform in size or composition to American divisions in the theatre. He realised that this would limit the NZ division's role.³⁷

The key decision-maker within the NZ Army was 52-year-old Chief of the General Staff, Lieutenant-General Edward Puttick, who actually had experience in the South Pacific. A regular soldier, during the Great War he had taken part in the New Zealand capture of German Samoa in 1914, and had subsequently served in the Middle East and on the Western Front in command and staff roles. After the war, he had served as a garrison force commander in Fiji in 1920.³⁸ Puttick decided that while the original role of the division would be garrison duty, measures should be made for it to then be used in an offensive role. When in August-September 1942 the 8th and 14th Brigades returned to New Zealand, Puttick determined to use these brigades with South Pacific experience as the basis for the formation of the 3rd NZ Division as there were no other alternative formations.

Although not the first choice, on 12 August Major-General Harold Barrowclough was appointed as the commander of the 3rd NZ Division. A 46-year-old Methodist,

³⁵ *Documents Relating to New Zealand's Participation in the Second World War, 1939-45*, Vol. III, Memorandum from Lieutenant-General Puttick to the Minister of Defence, 31 July 1942, "Overseas Operations", 351.

³⁶ ANZ, AD12, 15, 28/15/1, Part 1, S 28/15/1/G, "Use of NZ troops for Offensive Operations", Letter from Brigadier Stewart, Deputy Chief of Staff, to Lieutenant-Colonel Mead, Admin Headquarters, South Pacific Force, 18 August 1942.

³⁷ *Ibid.*, Draft cable to the Prime Minister's Department, 8 September 1942.

³⁸ David W. McIntyre, "Puttick, Edward", from *The Dictionary of New Zealand Biography*, in *Te Ara – Encyclopaedia of New Zealand*, pages 1-3, <http://www.teara.govt.nz/en/biographies/5p41/puttick-edward>; Newell, "New Zealand's Forgotten Warriors", 49.

Barrowclough had, like Puttick, many years of military service. He had been a school cadet before volunteering for the NZEF in January 1915 whereupon he was promptly promoted to sergeant and shortly thereafter was commissioned. He served in the Middle East for a few months, alongside a Captain Puttick (his future superior) and then served on the Western Front as a battalion second-in-command, company commander, and eventually acting battalion commander, being twice awarded for bravery. During the interwar years Barrowclough returned to his profession as a lawyer but continued to serve with the Territorial Force in command positions.³⁹ When he retired in 1931 he was a Colonel in command of a territorial brigade. When war broke out in 1939, he again volunteered and served with distinction as an infantry brigade commander in Greece and North Africa. In response to a request from Army Headquarters, Barrowclough was recommended to Puttick to command the new division by the commander of the 2NZEF, Lieutenant-General Bernard Freyberg, VC.⁴⁰

When he assumed command of the 3rd NZ Division, Barrowclough recognised that a serious redress of training was needed in order to prepare his new division for operations.⁴¹ His appointment, along with the revelation of the division's imminent move to the Solomon Islands, seemed to have instilled a new vitality throughout the division. Barrowclough and Puttick acknowledged that amphibious training could only be initiated under the aegis of the USN, however jungle warfare training was an aspect which the New Zealanders could conduct relatively independently and this formed the focus of the next few weeks. This was welcomed by all and the flurry of activity created an eagerness

³⁹ Steve Taylor, "Major General the Right Honourable Sir Harold Eric Barrowclough, KCMG, CB, DSO, MC, ED", *New Zealand Armed Forces Law Review* (2004): 20-29

⁴⁰ There remains some speculation around Freyberg's recommendation of Barrowclough. It is debateable whether a divisional commander would have been content with relinquishing his most able brigade commander at a time when the North African campaign was reaching its climax.

⁴¹ John Crawford, "Major General Sir Harold Barrowclough: Leadership and Command in Two World Wars", in *Born to Lead? Portraits of New Zealand Commanders*, eds. Glyn Harper and Joel Hayward (Auckland: Exisle Publishing, 2003), 144-163; John Crawford, "A Campaign on Two Fronts: Barrowclough in the Pacific", in *Kia Kaha*, ed. John Crawford, 143.

to get involved in training, although it was still unclear as to what would be the division's primary role.⁴²



Image 2: Seated portrait of Major-General Harold Eric Barrowclough, DSO, MC, 1943 – a born-and-bred New Zealander, Barrowclough was a hard worker, and he complained that his division's efforts were going unnoticed within the New Zealand press. (Source: "Major-General Harold Eric Barrowclough", New Zealand, Department of Internal Affairs, War History Branch: Photographs relating to World War 1914-1918, World War 1939-1945, occupation of Japan, Korean War, and Malayan Emergency, Ref: H-346/7/43-F, Alexander Turnbull Library, Wellington, New Zealand, <http://natlib.govt.nz/records/22734508>.)

Foreseeing the likely announcement of an offensive role, Barrowclough instituted a raft of changes, including the replacement of unfit, inadequate, or elderly officers by younger officers including some with recent operational experience in the Middle East.⁴³ Indeed, it was perceived that the new officers were not plagued by the static-mentality that had been a feature of service in Fiji.⁴⁴ Barrowclough's experiences in the Great War and again in Greece and North Africa must have reinforced to him the necessity for young leaders

⁴² Correspondences within ANZ, AD12, 15, 28/15/1, Part 1, including in particular: "Operations in the Pacific", communique from Lieutenant-General E. Puttick to the Honourable Minister of Defence, 2 November 1942; Letter from Deputy Chief of General Staff to Lieutenant-Colonel A. D. Mead, Administration Headquarters, South Pacific Area, Auckland, 31 October 1942. Newell covers the subject most adequately in chapter three of his thesis, "New Zealand's Forgotten Warriors", 41-72.

⁴³ Gillespie, *The Pacific*, 80; *Documents*, Vol. III, 350, Chief of the General Staff (Wellington) to the NZ Liaison Officer (London), 16 July, 1942; ANZ, AD12, 15, 28/15/1, Part 1, "Overseas Operations", 31 July 1942.

⁴⁴ Newell, "New Zealand's Forgotten Warriors", 76; Newell, *Operation Goodtime*, 28; Nicol, *Headquarters*, 21.

with sharp minds and superior levels of fitness. The replacement of older officers was a feature of Barrowclough's command style, and on at least three occasions he relieved or replaced a number of officers in the division, especially those from the infantry and artillery. On the face of it, Barrowclough insisted that these officers be replaced due to the demands of the operational environment, as older officers were limited by the hardships of the jungle. However, in a number of letters to Army Headquarters, Wellington, Barrowclough raised concerns that many New Zealand officers were not being given an opportunity to serve overseas, which had led to a number of officers either resigning their commissions or willingly accepting lesser commands within the 2nd NZ Division in the Mediterranean.⁴⁵ His letters openly displayed concern and despondency over these revelations, and he claimed that a significant reason for the 'officer problem' was attributable to an overabundance of New Zealand officers, and indeed the 3rd NZ Division registered a surplus of officers in most of its subunits while conversely showing a shortage of other ranks, often running into the hundreds.⁴⁶ Barrowclough did not expect veteran 2nd NZ Division officers to resign their commands, but he still believed that 'home-duty' officers should be given every opportunity to serve overseas (other than with the 2nd NZ Division), which could only mean service with the 3rd NZ Division. It deserves mention, then, when officers within the division were replaced, it was, at times, despite their operational performance in the position.

Upon assuming command Barrowclough found that many of the division's men were on leave while others remained in camps around the North Island. Perhaps not realising the extent of the division's dispersion, Army Headquarters considered (rather optimistically) that the 3rd NZ Division required at least six weeks of additional training before it could be considered fit for combat operations, as it had to be transformed into a mobile infantry division capable of offensive operations.⁴⁷ Barrowclough believed the six-week deadline beyond his division's capabilities, especially as its official War Establishment had not been

⁴⁵ Letters from Barrowclough to Puttick in ANZ, PUTTICK5 (Puttick Papers, Series 5), 1, 5, Chief of General Staff – Liaison Letters: General Barrowclough (3 Division) – 4 September 1942 – 17 March 1944.

⁴⁶ Ibid.

⁴⁷ ANZ, WAI1, 1517, DAZ 121/9/B10/1(3), Letter to Colonel Mead from the Deputy Chief of the General Staff, 1 September 1942; ANZ, AD12, 15, 28/15/1, Part 1, "Use of NZ troops for Offensive Operations", 18 August 1942.

decided, and there were many issues with obtaining sufficient artillery pieces and engineer components to properly equip the division, as some of these had to come from other brigade groups scattered across the country.⁴⁸ Barrowclough desired a three-brigade division, which was the standard adopted by the British imperial forces early in the war, but the New Zealand Government had neither the resources nor the will to fulfil this. Consequently, Barrowclough was forced to command a two-brigade division which it was hoped would still have sufficient combat power to operate against the Japanese.

Perhaps to make up for the comparatively small size of his division, particularly in that it was limited to only six infantry battalions, Barrowclough began requesting greater artillery numbers to boost the division's firepower, as he believed the division was "inadequately supplied with Field Artillery".⁴⁹ His request for the standard divisional allotment of three field artillery regiments, was divergent from contemporary Australian recommendations, after experiences in New Guinea, which advocated only one field regiment for their new 'jungle' divisions. This made Australian divisions more mobile in jungle terrain and decreased logistical dependence. Conversely, the US Army did not alter its normal divisional structure for units destined for the Pacific, and these retained their full artillery complement.⁵⁰ Barrowclough thus clung to the American belief in employing massive firepower to win battles in the jungle rather than the Australian model which advocated greater tactical aggressiveness and mobility on behalf of their formations. This was a serious error by Barrowclough, as it introduced a fighting model which New Zealand could not possibly deliver in the South Pacific. His emphasis, however can be understood, as he believed that a lack of artillery restricted the only means by which "success in a modern war against a resolute well equipped enemy can be achieved" which was through a closer coordination between the infantry and artillery.⁵¹ Barrowclough's emphasis on artillery within a combined-arms framework reflected his experience of

⁴⁸ Ibid., "Re-organisation 3 Div.", organisational chart attached to a memorandum from the Minister of Defence, 31 July 1942.

⁴⁹ Ibid., "Re-organization – 3 Div.", Barrowclough to Army Headquarters, Wellington, 20 August 1942.

⁵⁰ John Moremon, "No 'Black Magic': Doctrine and Training for Jungle Warfare", in *The Foundations of Victory*, eds. Dennis and Grey, 80.

⁵¹ ANZ, AD12, 15, 28/15/1, Part 1, "Re-organisation of 3 Division", Barrowclough to Army Headquarters, Wellington, 27 August 1942; "Re-organisation 3 Division", 3 August 1942.

mobile warfare in North Africa, however his efforts were retarded by the retention of the relatively immobile Coastal and Heavy Anti-Aircraft Regiments, which had earlier formed part of the Fiji defences, as these limited the division's employability due to the guns' restricted mobility and greater logistical demand.⁵² Additionally, this complicated assortment of anti-aircraft, field, and coastal artillery regiments created a rather convoluted command, and there were calls for a senior artillery commander to coordinate the various artillery subunits, within the context of Barrowclough's own divisional headquarters.⁵³ Delays in meeting these request ultimately led to a unique divisional structure, which restricted the division's ability to conduct jungle and amphibious training with American forces.⁵⁴

Barrowclough realised that his troops also needed to be better equipped for service in the tropics. Standard-issue personal equipment had not been designed for service in the South Pacific. American and Australian experience of fighting in the islands demonstrated that a broad range of new clothing and equipment designed for tropical wear was required. For example, Barrowclough's staff procured chlorinating pills for the purification of ground water, cane knives, and bivouac tents with mosquito flaps. In addition, staff began procuring from American sources, which included gaiters to be worn by the infantry while on patrol; gaiters covered the lower legs in the bush, preventing sticks and stones from working their way into the boots, however it was possible to procure only enough for 25 per cent of the infantrymen which was far from required.⁵⁵ Further, the importance of adequate medical supplies in jungle operations was not overlooked, with efforts being taken to acquire 5,000,000 anti-malarial doses, as malaria had been shown to pose one of the greatest challenges to forces operating in the tropics.⁵⁶

⁵² Newell, "New Zealand's Forgotten Warriors", 57; *Documents Relating to New Zealand's Participation in the Second World War, 1939-45*, Vol. III, 368-371, Letter from Major-General Barrowclough to Lieutenant-General Puttick, 17 January, 1943; ANZ, AD12, 15, 28/15/1, Part 1, "Overseas Operations", 3 August 1942.

⁵³ *Ibid.*, "Re-organization – 3 Div.", Barrowclough to Army Headquarters, Wellington, 20 August 1942.

⁵⁴ Evans, *The Gunners*, 24, 103, 177-179.

⁵⁵ ANZ, AD12, 15, 28/15/1, Part 1, Cable to 3rd NZ Division from Army Headquarters, Wellington, containing minutes and report, 12 September 1942.

⁵⁶ *Ibid.*, Part 1, "Medical Supplies Required: 1200 Bed General Hospital"; "Demand for Anti-Malarial Drugs", 7 September 1942.

While these efforts were underway, the 3rd NZ Division conducted its first major exercise on 21-27 October 1942 in the Kaimai Range, west of the Bay of Plenty, in the upper half of the North Island, involving both its infantry brigades, totalling 11,073 officers and men.⁵⁷ The exercise was intended to test the division in aspects of jungle warfare, including the use of air support, communications, logistics, patrolling, and the suitability of the division's organisation, personnel and equipment. The Kaimai Range featured large tracks of thick, untracked bush covering steep hills, which enabled a simulation of jungle conditions.⁵⁸ The New Zealand Army was paying attention to events in the South Pacific, including with regular secondments of officers to the Australian and US forces. Showing that lessons of these other forces were being absorbed, the 3rd NZ Division's staff modelled the exercise after experiences in New Guinea, including labelling objectives after New Guinea place names.⁵⁹ Critically, New Zealand officers who had been present in New Guinea reported that an "unusually high standard of physical fitness" was required by all troops in jungle operations.⁶⁰

The Kaimai exercise demonstrated the accuracy of this statement when many men were found to have been inadequately hardened and therefore were as yet unsuitable for jungle fighting. Despite the best efforts of the 14th Brigade's troops, their progress slowed to a crawl with the onset of heavy rain, and caused morale to plummet among the men.⁶¹ Tracks turned into a quagmire, which necessitated the use of human chains to bring rations forward, and as a result, supply to the forward elements collapsed and many men were found to be searching for rations rather than actively participating in the exercise.⁶² This perhaps contributed to the infantry's glaring lack of small unit tactics as fire-lanes and fire-plans were neglected, and officers became overly concerned with the welfare of their men, at the expense of objectives, which led to the lighting of fires against regulations. Indeed, some men became 'prisoners' as a means to stop 'fighting' so that

⁵⁷ Ibid., "Order of battle 3 DIV, position as at 16 Oct 42".

⁵⁸ Crawford, "A Campaign on Two Fronts", 143; Gillespie, *The Pacific*, 85.

⁵⁹ Ibid., 85; Nicol, *Headquarters*, 108.

⁶⁰ Australian War Memorial (AWM), 940.5426pp, L641, "Lessons From Operations in New Guinea Nov.-Dec., 1942."

⁶¹ Bob Buckland, interview with author, 6 July 2012; Gillespie, *The Pacific*, 85-86

⁶² Evans, *Pacific Service*, 30-31; Gillespie, *The Pacific*, 86.

they could have a hot meal.⁶³ These examples vividly illustrated Barrowclough's concerns regarding the division's lack of tactical preparations while in Fiji, and supported his opinion that more time was needed for training.

To some extent, the tactical shortcomings that were identified in the Kaimai exercise, stemmed from difficulties in command and control, as communications equipment failed due to the hardships encountered in the bush, and it became impossible to maintain effective command of formations. These effects were exasperated by the failure of Army Headquarters to provide adequate wireless sets.⁶⁴ Signals, particularly wireless sets, were considered vital to operations as they provided flexibility and tempo, however the weight of the wireless sets issued to the 3rd NZ Division made them impractical and their performance was disappointing in jungle conditions. Nonetheless, wireless was still the best means of maintaining communication while manoeuvring through jungle terrain, since laying cable proved time consuming and required much effort. By the conclusion of the exercise both brigades appeared to be physically and mentally broken.⁶⁵ The exercise did, however reveal that small aggressively led formations could create effects out of all proportion to their size.⁶⁶ This drew attention to the great advantages offered to small units operating in jungle environments. Ultimately, as shown above, the Kaimai exercise corroborated the experiences reported by Allied forces in Malaya and New Guinea, and vindicated the examination of foreign doctrine. Among those elements identified as characteristic of jungle warfare was the importance of initiative and leadership by small unit commanders; the requirement for men to be physically and mentally fit; the inadequacy of units not so prepared; and the logistical challenge of supplies in jungle conditions.⁶⁷

⁶³ Nicol, *Headquarters*, 108; Evans, *Pacific Service*, 31-32; Gillespie, *The Pacific*, 86.

⁶⁴ ANZ, AD12,15, 28/15/1, Part 1, 2 NZEF reports – Operation Kiwi, July-November, "Special Equipment", 17 September 1942.

⁶⁵ Gillespie, *The Pacific*, 86-87.

⁶⁶ Sale, *Stepping Stones to the Solomons*, 32.

⁶⁷ For example, see Evans, *Pacific Service*, 30-31, and Gillespie, *The Pacific*, 86

In November 1942, the 3rd NZ Division departed New Zealand for New Caledonia to bolster defences on that island, and in preparation for a future move into the Solomon Islands. This was a departure from the pre-war expectation of the New Zealand Army's role as little forethought had been placed on requirements for expeditionary contingents operating within the confines of the South Pacific, and experiences gained during the Great War had been largely forgotten. The failure to plan for an expeditionary force operating in the Middle East and the South Pacific by the army, before the outbreak of war, contributed to the general lack of properly trained officers and men available for service in the South Pacific, and consequently, they lacked tactical skill and physical fitness. Their shortcomings were amplified by the shortage of heavy equipment, such as artillery, which served to highlight deficiencies in the division's War Establishment and training procedures for service in a tropical region. While many of the men had tropical experience as a result of service in Fiji, and to a much lesser extent, in the Kaimai exercise, the division was still not ready for jungle warfare. Importantly, the Kaimai exercise corroborated the findings of training pamphlets, and assisted in identifying the hardships and limitations of jungle warfare, chief among them being the difficulties encountered in communications, which were "very difficult to maintain in the forward area".⁶⁸ These points provided some indication of the adaptations which the division required before it could be deployed in combat, however these had yet to be fully implemented by the time of the division's departure from New Zealand. Ultimately, elements of the New Zealand Army were unprepared for operations in the South Pacific, thanks largely to pre-war defence policy which favoured placing resources alongside British Imperial defence strategy.

⁶⁸ War Office, *Field Service Regulations*, Vol. II: *Operations – General*, reprinted with amendments 1939 (Melbourne: McCarron, Bird & Co., 1939), 130; USAHEC, "Military Training Pamphlet No. 52, Forest, Bush, and Jungle Warfare against a Modern Enemy", War Office, Great Britain, August 1942.

CHAPTER 2

The Context of New Zealand Developments in Jungle Warfare & Amphibious Operations

To operate effectively in the South Pacific it was clear that the 3rd NZ Division would require proficiency in amphibious operations and jungle warfare. Initial indications formed from experiences in Fiji and the Kaimai exercise pointed to some of the shortfalls of the division, however the formation still had only limited experience in jungle-like conditions and as of yet no experience of amphibious operations. To a large extent, the experiences of other militaries would therefore have to inform the division's forays into these areas. American experience on Guadalcanal had shown the impact of the climate and terrain on the conduct of operations including limiting the use of mechanised vehicles and equipment. Indeed, such experiences were symptomatic of other examples from the British Army and other imperial forces in Malaya and South-East Asia. Before the 3rd NZ Division could tackle the demands of this operating environment, it had first to acquaint itself with actual jungle conditions and then also practice amphibious operations. In due course, foreign publications were obtained and studied, and these provided the division with suggestions for suitable adaptations and training methods. As will be shown, the limitations and effects imposed upon forces operating in the context of amphibious and jungle operations were generally universal, although the methods of adaptation could differ between organisations and countries.

The operating area of the 3rd NZ Division was located firmly within the tropical belt, near to the equator. The jungles of the Solomon Islands, which were the main operational area of the 3rd NZ Division, fall within the category of 'tropical rainforests': they are wet, humid, and hot. The islands' location near the equator resulted in daily downpours during

the morning and late afternoon, leaving the ground wet for all but a few hours in the middle of the day; the Green Islands themselves fall within four degrees of the equator. Some New Zealand units experienced over 3.5 inches of rain per day in the Solomon Islands. The resulting deluge left soldiers and equipment perpetually wet or damp.¹ These factors formed an environment that was hostile to the conduct of military operations, and movement in general, as thick brush, bamboo, and vines thrived in an environment that was “dense, dripping, dank, and dark” and with “[c]opious, year-round precipitation, torrid temperatures, and high humidity ...”²

Veterans of the South Pacific attest to the effects of rainfall, and admit to the difficulties of constantly being wet and the effects of this upon morale and wellbeing.³ This is understandable since lasting dampness caused skin irritations and sores to develop, leading to increased sickness rates amongst units, and which often led to troops being withdrawn from duty. Additionally, troops in rear areas were also prone to these same medical challenges, despite being behind the ‘front’. Jungle operations therefore required high standards of physical fitness and personal hygiene. Furthermore, moisture combined with high temperatures to destroy the equipment of the soldier, including textiles (uniforms and webbing), leather (boots and straps), wood (boxes) and cardboard (containers). Weapons were also affected as the high humidity accelerated the formation of rust, which placed an additional physical demand on the troops with more regular routine maintenance of their weapons and equipment. Further, the climate also hindered the control of operations by affecting communications equipment with the pervading humidity and moisture interacting with the cooling systems and wiring of electronic equipment and creating excessive amounts of precipitation so that transmitters and

¹ ANZ, WAI1, 1111, DAZ 128/1/16, 29 Light Anti- Aircraft (LAA) Regiment, November 1942 to June 1944, 29 LAA Regt War Diary 1-31 December 1943 to 29 February 1944, “Waterfall for February 1944”.

² Gillespie, *The Pacific*, 168; John M. Collins, *Military Geography: For Professionals and the Public* (Washington, D.C.: Brassey’s, 1998), 116.

³ Bob Buckland, interview with author, 6 July 2012.

electronic components could malfunction and eventually stop functioning altogether.⁴ These affects could be minimised but never eliminated entirely.

The islands of the South Pacific were either volcanic islands or coral atolls. The former provided the basis for rich dark soil to accumulate, and when combined with water, created a thick mud which prevents any great movement. Coral atolls often did not hold much soil cover, but rather a shellish sand intermingled with decomposed plants, and while this sometimes prevented thick mud from forming, it prevented the filtering of ground water leading to the creation of stagnant water pools. This led to increased risk of tropical diseases such as malaria. Additionally, water sources often carry bacteria and parasites which leave their hosts weakened and ineffective. While most rivers and streams in the region were not extensive or broad, their placement within an environment that already hindered movement and control made them especially limiting to operations. Vegetation was especially problematic as islands were covered with thick jungle, interspersed by mangrove swamps and the occasional plantation; other than a small part of Guadalcanal, there existed no large open spaces permitting the free manoeuvre of mechanised forces in the Solomon Islands. The pervading tropical rainforests mostly consisted of large trees, with branches that prevented sunlight from reaching the jungle floor. In areas where the canopy was less developed, sunlight was usually abundant, enabling a thick, dense undergrowth that included tall grasses, vines, and thick bush matted together to form a mesh of vegetation that constrained observation, orientation, and movement. As line-of-sight was reduced, auditory aids were frequently employed by soldiers – with New Zealand infantry favouring the use of whistles in the jungle. Movement was time-consuming, especially through secondary jungle, often requiring the use of machetes, which added another dimension to an

⁴ Stephen Bull, *World War II Jungle Warfare Tactics, Osprey Elite Series 151* (Oxford: Osprey Publishing, 2008), 4; US Army Heritage and Education Center (USAHEC), N-2133-13-2, "Operations of the 25th Infantry Division in the Central Solomons: New Georgia – Arundel – Vella Lavella, 16 August 1943 - 12 October 1943" (1943), 24, 40; Chris McNab, and Will Fowler, *The Encyclopedia of Combat Techniques* (Leicester, England: Silverdale Books, 2002), 124- 126; *Field Manual No. 72-20 Jungle Warfare* (Washington, D.C.: War Department, 27 October, 1944), 12 (hereafter cited *FM 72-20*); *Field Manual No. 90-5 Jungle Operations* (Washington, D.C.: Headquarters, Department of the Army (USA), 16 August 1982), 1 – 3, 2 – 7, 2 – 8, 5 – 15 (hereafter cited *FM 90-5*); Thomas B. Bennett, "Night Jungle Operations" (Fort Leavenworth, Kansas: US Army Command and General Staff College, 1993), 2; War Office, *Field Service Regulations*, Vol. II: *Operations – General*, 184.

already physically demanding procedure, and when this was the case, movement did not often exceed 500 metres per day. The dense bush also affected weapon utility, as vegetation blocked fields-of-fire, and hindered weapon sighting. These factors reduced commanders' ability to effectively control units and apply accurate fire control. This often delayed the conduct of operations and the effects which they hoped to create. The resultant delays and general extent of physical isolation at times increased confusion among soldiers.⁵ All these factors contributed to a lowering of a unit's fighting effectiveness.

When the climate and vegetation combined, it amplified the stress of operations, as physical fitness assumed greater importance in jungle areas than within temperate regions. The greater physical demands of operations in jungle areas could also lead to increased psychological stress. Indeed, claustrophobia, fear, disorientation, and sleep-deprivation were common for soldiers in the jungle. The environment was unfamiliar, and with limited visibility, just the noise of the jungle at night was frightening, and this often caused panic among troops unprepared for the environment.⁶ The psychological challenge also increased as a result of the close ranges at which combat with the enemy occurred within the jungle. Most firefights occurred within 30 metres, and thus the possibility of close-quarter and hand-to-hand combat increased. An additional challenge was that as the distances between combatants decrease, the levels of resistance towards killing (each other) were proportionally increased.⁷ Therefore, units operating in jungle conditions could sustain a higher degree of battle-fatigue casualties as a result of the distance at which engagements occur. American operations on New Georgia in 1943 showed that psychological casualties occurred more frequently when compared to similar

⁵ Harold A. Winters, et.al., *Battling the Elements: Weather and Terrain in the Conduct of War* (Baltimore: The John Hopkins University Press, 2001), 97-101, 232-235; J. P. Cross, *Jungle Warfare* (Barnsley, South Yorkshire: Pen & Sword Military, 2008), 14, 117-118; *FM 90-5*, 5 – 14; War Office, *Field Service Regulations*, vol. II: *Operations – General*, 184.

⁶ Cross, *Jungle Warfare*, 11; *FM 72-20*, 4 – 7; Bergerud, *Touched with Fire*, 70-71; Bob Buckland, Interview with author, 6 July 2012.

⁷ Dave Grossman, *On Killing: The Psychological Cost of Learning to Kill in War and Society*, revised ed. (New York: Back Bay Books, 2009), 44.

sized actions in other terrain types, such as the desert.⁸ During four months of combat on Guadalcanal the American 1st Marine Division sustained 227 psycho-related casualties, of which “War Neurosis” was eighth on the list of causes of casualties for the division, which equated to between 9.5 and 22.5 per cent of all non-environmental agency casualties depending on the classification.⁹ These issues may not have an immediate debilitating effect on troop efficiency, but they did cause a gradual erosion of physical and mental capabilities, which over time created a sense of lethargy in general activities and led to an inability to perform duties.



Image 3: Allan Barns-Graham, *Soldiers in the Jungle, 1943-1945* – illustrating a jungle environment of the South Pacific. (Source: National Collection of War Art, Department of Internal Affairs, AAC 898 NCWA Q391.)

⁸ Cross, *Jungle Warfare*, 50; Grossman, *On Killing*, 45-46. In his chapter on psychiatric casualties in war, Grossman draws largely on Richard A. Gabriel, *No More Heroes: Madness and Psychiatry in War* (New York: Greenport Press, 1986).

⁹ A further 314 cases were labelled “undetermined”. Owing to the variable contemporary classification of psycho-related casualties, a high percentage of these “undetermined” cases may have been as yet undiagnosed mental conditions, which would equate to 541 medical cases for the 1st Marine Division. Daniel A. Cyr, “Elemental Pursuits of Survival: The 1st Marine Division on Guadalcanal and New Britain,” (Ontario: University of Western Ontario, 2009), 276-279.

Jungle Warfare

The main factor determining success in jungle warfare was training, however, both the Allies and Japanese neglected training for jungle warfare before the war.¹⁰ Even once the war began many units intended to be deployed in the jungle continued to receive inadequate jungle training. While pre-war Japanese doctrine lent itself well to jungle warfare, contemporary Allied manuals were found wanting in the opening rounds of the conflict and solutions had to be discerned from failures experienced, which then required collation before they could be presented in a logical and clear manner. For the 3rd NZ Division this meant that until it was engaged in combat, and in lieu of its own jungle warfare doctrine, the primary source for jungle warfare remained the reports and experiences of Allied operations in New Guinea and the Solomons. This had added difficulties for the division, as it then had to adapt those foreign reports and recommendations into a working system for a uniquely organised division, such as it was, operating within an American controlled theatre. Consequently, an extended period of training was needed before the division was declared combat ready.

The foundation of the division's training was the British Empire doctrine that the NZ Army, in common with other British Empire armies, subscribed to. While there was no specific British Empire jungle warfare doctrine at the start of the war, Britain had a long heritage of operations in tropical climates, and indeed one of the first publications to cover "bush" or jungle warfare was released in 1907 by a serving British officer.¹¹ Nonetheless, such efforts were few and far between, and for the most part British interests in jungle warfare had been limited by the British Army's principal role of defending Great Britain, and the belief that the next conflict would take the form of

¹⁰ See Adrian Threlfall's, "The Development of Australian Army Jungle Warfare Doctrine and Training, 1941-1945", and J.P Cross's, *Jungle Warfare* as to the importance of training soldiers to operate in the tropics.

¹¹ William Heneker, *Bush Warfare: The Early Writings of General Sir William C.G. Heneker, KCB KCMG DSO*, ed. Andrew B. Godefroy (Kingston, Ontario: Directorate of Land and Concepts Designs, 2009), ix. Godefroy points out that *Bush Warfare* was probably influenced by Heneker's contemporaries, such as Charles E. Callwell's *Small Wars: Their Principles and Practice* of 1896.

mechanised warfare in continental Europe.¹² Another reason lay in the colonial mentality that local police forces and militias were better suited to perform operations in jungle areas: efforts were directed at combating “uncivilised tribesman”, and if the army was required to operate within a jungle context, established doctrine merely retorted that the enemy would be “subject to the general limitations already set out” for friendly forces.¹³ As a result, British commanders devoted little energy towards the study and development of jungle warfare training and doctrine. Indeed, the British Empire’s *Field Service Regulations (FSR)*, had scant reference to jungle operations or conditions despite the reality that the *FSR* was meant to be applicable to operations in all regions including where jungle would be encountered. Thus the *FSR* did not advocate any real jungle tactics, and are more notable for their omission of basic jungle warfare aspects, such as the failure to emphasise all-round defensive positions, instead merely stating that “bivouacs are usually enclosed by a perimeter.”¹⁴

The first significant publication in the British Empire to centre on the subject of jungle warfare, *Military Training Pamphlet No. 9 (India)*, appeared in 1940, however it was not widely circulated. The publication was made available mainly to garrison units in Malaya and Burma, but few units actually engaged in jungle training. The early defeats in the jungles of South-East Asia stimulated the British Army in the Far East to publish *Forest, Bush and Jungle Warfare Against a Modern Enemy* in August 1942. This publication, which was also made available to the Australian, New Zealand, and US forces, appears to have influenced the 3rd NZ Division, as the division’s training orders detail many of the same aspects, recommendations, and outcomes propagated within the work. It did not have answers for all tactical problems, and officers in the 3rd NZ Division took it upon themselves to use any available source of information, including Australian and American

¹² Daniel Marston, “Lost and Found in the Jungle: The Indian and British Army Jungle Warfare Doctrines for Burma, 1943-5, and the Malayan Emergency, 1948-60”, in *Big Wars and Small Wars: The British Army and the Lessons of War in the Twentieth Century*, ed. Hew Strachan (Oxon: Routledge, 2006), 86; Bull, *World War II Jungle Warfare Tactics*, 8.

¹³ War Office, *Field Service Regulations*, Vol. II: *Operations – General*, 183-85.

¹⁴ *Ibid.*, 185.

lessons learned documents, to find better solutions.¹⁵ Similar initiatives had been undertaken by a few units of the Malaya garrison in 1940-41, and these illustrated that progress could be made in the quality of jungle training even when official doctrine was lacking.¹⁶ These efforts revealed that many of the soldiers' fears of the jungle could be overcome by what is now called 'exposure therapy', whereby soldiers would be steadily exposed to the elements as part of a regular and realistic training programmes, which stressed navigational skill, physical, and mental toughening. This enabled soldiers to become accustomed to the jungle environment and their sense of isolation decreased. The findings were eventually correlated into a small training pamphlet entitled *Tactical Notes for Malaya 1940*. Despite *Tactical Notes* being widely circulated to British Empire units in South-East Asia, it seems to have little effect on NZ Army efforts when compared to the later published *Forest, Bush and Jungle Warfare*.¹⁷ In the end, although steps had been taken to readdress tactical shortcomings in 1940-41, these were insufficient, and the majority of British and British Empire forces were still largely unprepared for the demands of jungle warfare during the early period of the war.

The lessons of Malaya, and the first campaigns in Burma, vividly revealed the unpreparedness of British and Empire forces, and led to jungle reforms in May 1942. To a large extent these early defeats could be overcome by better tactics and training, and greater efforts were accorded to the practicalities of fighting. For example, officers with experience of fighting the Japanese in the jungle were interviewed and their first-hand accounts formed a significant part of early jungle instructions and pamphlets. Despite progress being made, these efforts largely occurred on a decentralised level, with individual divisions establishing jungle training centres in mid-1942, and in this regard the 3rd NZ Division could sympathise. However, the failure to implement extensive jungle training programmes by British and Empire divisions led to the premature and ultimately

¹⁵ T.R. Moreman, *The Jungle, The Japanese and the British Commonwealth Armies at War, 1941-45: Fighting Methods, Doctrine and Training for Jungle Warfare* (Oxon: Frank Cass, 2005), 11; Marston, "Lost and Found in the Jungle", 86; Bull, *World War II Jungle Warfare Tactics*, 9-10.

¹⁶ Marston, "Lost and Found in the Jungle", 86-87.

¹⁷ Moreman, *The Jungle*, 12-24; Gillespie, *The Pacific*, 122-124; ANZ, WAI1, 1149, DAZ 155/1/20, HQ 14 Infantry Brigade, January 1942 to July 1944, War Diary 14th Inf Bde, 1-31 August 1944, Appendix XII, "Notes from Brigadier's Conference"; KMARL, Acc. No. 1998.835 Official Papers kept by General Barrowclough, "Forecast of Vehicle Requirements, 2 July 1943."

unsuccessful Arakan Offensive of December 1942 in Burma, where it was discerned that Allied forces had yet to grasp the demands of jungle warfare. After a period of analysis and deconstruction, the British devised what would become a very efficient jungle warfare model with tactics that emphasised (among other considerations) manoeuvrability and aggression of patrolling and the fundamentals of leadership by officers at the front.¹⁸ Similar efforts were employed by the 3rd NZ Division when it was deployed to Guadalcanal in mid-1943, where constant jungle training was conducted. This demonstrated that the 3rd NZ Division benefitted from the earlier experience of British Empire forces, and as those forces had discovered themselves, jungle warfare was not something which was overcome without first being exposed to its effects in combat, and it required first-hand experience to implement a successful jungle training programme.

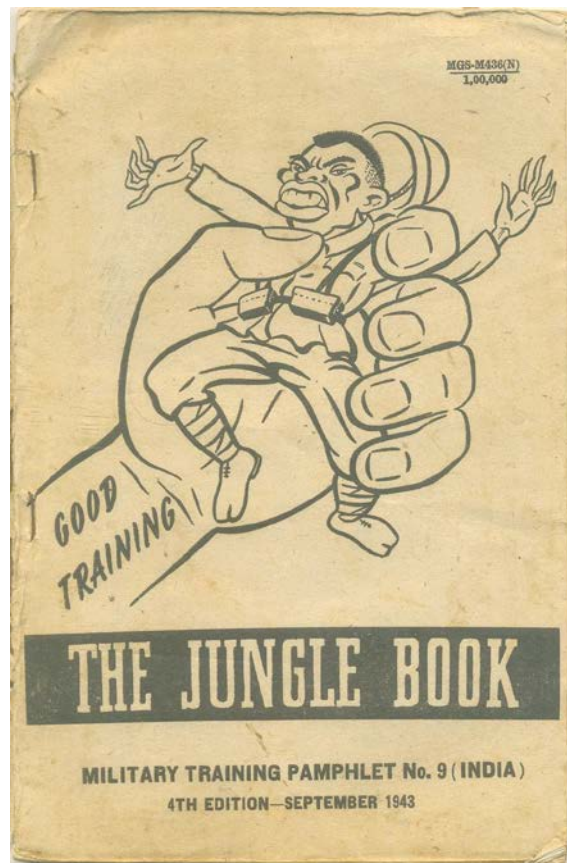


Image 4: *The Jungle Book* – a further development of earlier British and Indian experiences of fighting the Japanese in the jungle, greatly expanded upon earlier publications. (Source: “The Jungle Book – Military Training Pamphlet No. 9 (India)”.)

¹⁸ Marston, “Lost and Found in the Jungle,” 87-90; Robert Lyman, *Bill Slim: Leadership, Strategy, and Conflict, Osprey Command 17* (Oxfordshire: Osprey Publishing, 2011), 15-24; Alan Jeffreys, *The British Army in the Far East 1941-45, Osprey Battle Orders 13* (Oxfordshire: Osprey Publishing, 2005), 10-73.

Similarly significant to the 3rd NZ Division was the influence of American jungle warfare tactics and experiences in the early years of the Pacific War. The main jungle warfare publication at the start of the war was the US Army's *Field Manual 31-20 Jungle Warfare* (FM 31-20) of December 1941. FM 31-20 was based on experiences in the western hemisphere, including operations in Panama, and although it contained some useful information it was characteristic of many early Allied publications dealing with operations in the jungle in that it was not quite relevant to operations in the South Pacific. FM 31-20 suffered from a dearth of realistic jungle tactics, as few jungle exercises had actually been conducted by the time of its release in December 1941.¹⁹ Nonetheless, FM 31-20 went further than the *FSR* in introducing appropriate tactics for jungle warfare, and provided similar recommendations propagated by the British *Tactical Notes* and *Pamphlet No. 9*. However, these were not official doctrine throughout the British and British Empire Armies, as FM 31-20 was for the US Army. While this indicates that the US Army was ahead of other forces in issuing an official manual on jungle warfare, it failed to capitalise on subsequent experience, and army units found their tactics inferior in combat once engaged with the Japanese.

The early American operations against the Japanese showed that a serious overhaul of the jungle warfare doctrine was required. However, this was a difficult process, with both the US Army and USMC involved in jungle operations, and the next significant publication on the subject, *Field Manual 72-20, Jungle Warfare* (FM 72-20) actually was not produced until October 1944.²⁰ In the meantime, a series of jungle warfare information publications was released, such as within the US War Department Military Intelligence Division's *Information Bulletins* and *Intelligence Bulletins*. These publications, while not doctrinal handbooks, gave guidance on lessons learned and tactical methods. A key publication for forces in the South Pacific was *Jungle Warfare*, published by the USMC in 1943, which succinctly set forth the general considerations of jungle warfare's special features such as

¹⁹ Bull, *World War II Jungle Warfare Tactics*, 11-12;

²⁰ *Ibid.*, 12, 28; Melson, *Up the Slot*, 36; *Close-Up of Guadalcanal, October-November 1942: Verbatim Statements of Participants* (Washington, D.C.: War Department, February 1, 1943), 17.

the limited use of different arms in dense bush and the requirement of leaders to prepare their men “mentally for the shock of an ambush.”²¹ While the 3rd NZ Division may have been provided with copies of this publication, it would appear that the information provided by the US Army was the more important to the New Zealanders, as their degree of cooperation during the campaign was greater (particularly on New Caledonia and Guadalcanal), and therefore it would have been more appropriate to follow the suggestions of the US Army.

While the Allies attempted to come to grips with the demands of jungle fighting, the Japanese were considered to be the leaders in jungle warfare as a result of their victories at the start of the Pacific War. Japanese successes against the Allies in 1941-42 were a result of adapting existing tactics and methods to jungle conditions. In late 1940, the Japanese had established the Formosa Army Research Station which was tasked with examining aspects of future operations in South-East Asia and the South Pacific, including tactics, logistics, clothing, hygiene, and disease prevention. Although, few practical trials were conducted, a pamphlet entitled *Read Only This – And The War Can Be Won* was produced for troops destined for operations in Malaya and elsewhere.²² When compared to the British *Tactical Notes* and the American *FM 31-20, Read Only This* was largely bereft of tactical guidance, although it was adequate in conveying the demands of the jungle, and instructed troops on proper hydration, malaria, clothing and equipment, and ‘jungle craft’.²³ This suggests that the Japanese relied on using established tactical methods and applied them to jungle conditions, and thus never produced a specific jungle warfare doctrine.

This approach originally bore success for the Japanese as their pre-war doctrine focussed on the principles of surprise, attack, and manoeuvre which were elements more easily

²¹ USMC, *Jungle Warfare* (Quantico, Virginia: Marine Corps Schools, 1943), 20.

²² Bull, *World War II Jungle Warfare Tactics*, 12; Moreman, *The Jungle*, 25.

²³ Bull, *World War II Jungle Warfare Tactics*, 14-15.

applied to jungle operations than those stressed within Allied doctrines.²⁴ Indeed, it was observed by American intelligence that “[t]he Japanese have an unusual aptitude for overcoming terrain obstacles,” despite the fact that most Japanese soldiers received no specialised jungle training.²⁵ Japanese fondness for surprise, attack, and manoeuvre was encapsulated in their use of night attacks. Night attacks received special attention during training and this placed Japanese troops at an advantage as jungle warfare has been described as “the nearest to night fighting that troops will get during daylight.”²⁶ Japanese proficiency in jungle night operations led most American commanders to cancel their own night operations and revert (temporarily) to the defensive, with no soldier allowed out of their position, due to the fear of Japanese night attacks and penetrations.²⁷

Additionally, the tables of organisation and weapons were more suitable to jungle warfare than the ‘mechanised-inclined’ Allied armies. The Japanese had minimised transportation demands and the number and size of their artillery, with emphasis on small, portable light artillery and mortars that could be more readily used in jungle conditions.²⁸ In the opening campaigns of the Pacific War this generally provided the Japanese with superior manoeuvre capability and flexibility in rough terrain – and this

²⁴ Gordon L. Rottman, *Japanese Army in World War II: The South Pacific and New Guinea, 1942-43*, Osprey Battle Orders 14 (Oxford: Osprey Publishing, 2006), 27-29. This is not to say that the Allied forces did not include surprise, attack, and manoeuvre as important elements in battle, however the Allies definitely placed less emphasis on these three principles than did the Japanese.

²⁵ Military Intelligence Division, *Information Bulletin No. 6: Notes on Japanese Warfare on the Malayan Front* (Washington, D.C.: War Department, 9 January 1942), 2. In 1941, some Japanese units bound for the Philippines, East Indies, and Malaya received some form of jungle warfare training, however this does not appear to be the case of those Japanese troops encountered by the 3rd NZ Division in the South Pacific. See Charles A. Willoughby and Gordon W. Prange, *Reports of General MacArthur: Japanese Operations in the Southwest Pacific Area*, Vol. II – Part I (Washington, D.C.: Center of Military History, 1994), 38.

²⁶ Meirion Harries and Susie Harries, *Soldiers of the Sun: The Rise and Fall of the Imperial Japanese Army 1868-1945* (London: William Heinemann Ltd, 1991), 279-281; Cross, *Jungle Warfare*, 11; reports and summaries of operations by units of 8th Brigade within ANZ, WAI1, 1546, DAZ 151/9/1/15, HQ 8th Infantry Brigade – Office records – 8th Brigade Report on Operations No. 1 – Treasury Group (including USN reports and 8th NZ Brigade landing); ANZ, WAI1, 1618, DAZ 491/23/7, “Report on Operation in Treasury and Vella Lavella, October to November”.

²⁷ USAHEC, D767.98.N681942, *Notes on Jungle Warfare from the US Marines and US Infantry on Guadalcanal Island* (South West Pacific Theatre: War Department, December 13, 1942), 4.

²⁸ *Ibid.*, 20.

concept was later adopted by Australian 'jungle' divisions.²⁹ An example of Japanese support-weapons was the 'knee-mortar', a weapon more accurately described as a grenade discharger.³⁰ Being light and durable, it was an effective platoon-level support weapon for which the Allies had no equivalent. This weapon effectively bridged the gap between grenade and mortar, as it could be employed in less time than Allied 81mm and 3-inch mortars.³¹ Although inadequate fire-support was a frequent problem for Japanese units, the portability of their support-weapons enabled a degree of manoeuvre which Allied forces could not always equal.³²

Amphibious Operations

Jungle warfare was an essential aspect of warfare in the Solomon Islands, but it was only half the battle. In order for troops to operate within a jungle environment, they first had to be transported there, and for the great majority of soldiers in the South Pacific during the Second World War there was only one option – an amphibious operation. An amphibious operation may be defined as “an operation launched from the sea by naval and landing forces against a hostile or potentially hostile shore.”³³ The environment of the South Pacific with its dispersed island chains demanded mastery of amphibious operations, as well as jungle warfare. The New Zealand Army had some experience of landing troops on a hostile or potentially hostile shore, however not since 1914 when the landing in Samoa was undertaken and in 1915 when the New Zealand Division participated in the much larger landing at Gallipoli. While the New Zealand Army had generally not followed subsequent developments in amphibious operations, it was no

²⁹ Andrew Mollo, *The Armed Forces of World War II: Uniforms, Insignia and Organisation* (London: Orbis Publishing, 1981), 171, 254-255; Rottman, *Japanese Army in World War II*, 14-22; James W. Hammond, Jr., “US Division of World War II,” *WWII History*, vol. 10, no. 2, January 2011, 26; Bergerud, *Touched with Fire*, 307, 323; Jonathan M. House, *Combined Arms Warfare in the Twentieth Century* (Kansas: University Press of Kansas, 2001), 99-100; Kent Roberts Greenfield, Robert R. Palmer, and Bell I. Wiley, *The Organization of Ground Combat Troops, United States Army in World War II: The Army Ground Forces* (Washington, D.C.: Center of Military History, US Army, 1987), 343-348; Palazzo, “Organising for Jungle Warfare,” 92.

³⁰ Military Intelligence Division, *Special Series No. 19: Japanese Infantry Weapons* (Washington, D.C.: War Department, 31 December, 1943), 68.

³¹ Military Intelligence Service, *Intelligence Bulletin*, vol. 1, no. 1 (Washington, D.C.: War Department, September 1942), 58; USAHEC, D767.98.N681942, *Notes on Jungle Warfare*, 5. Robert Cashner, “The Dreaded Knee Mortar,” *WWII History*, vol. 9, no. 7, October 2010, 18, 21.

³² Military Intelligence Division, *Information Bulletin No. 6*, 1; Military Intelligence Division, *Information Bulletin No. 14*, 53.

³³ Department of Defence (Canada), *Land Forces*, Vol. 2: *Land Force Tactical Doctrine*, 1997, 7-5.

doubt possible able to draw on the post-Great War lessons of other nations including from early American experience in the South Pacific. As such, pre-war amphibious developments require investigation so as to provide the framework which supported the division's endeavours.

As amphibious operations were vital for the conduct of operations by the 3rd NZ Division in the South Pacific, the manuals which codified their conduct were important. However, the two primary manuals which the division utilised in its campaign suffered from a variance of definition on exactly what was an amphibious operation. During the war, the US Army limited the definition of an amphibious operation as an "expedition dispatched by sea for the purpose of making a landing assault on a hostile shore".³⁴ In contrast, the USN preferred to focus on the objectives to be attained in an amphibious operation rather than supply a definition within its own doctrine.³⁵ This is unsurprising since amphibious landings, especially those conducted against hostile shores during the Second World War, "were among the most elaborate operations ever undertaken".³⁶ While amphibious manuals differed to some extent between US services they did at least provide an indication as to 'Why' and to 'What' an amphibious operation was executed: the objective. Both the USN and US Army noted that amphibious operations could fulfil different objectives within different applications. For example, these included establishing a lodgement from which to seize or develop an airfield (like many operations in the South Pacific), a supporting operation to other missions, or to deny the use of facilities or ground to the enemy.

To complete these objectives an amphibious force must master a number a key elements. An important feature of an amphibious operation is the element of surprise. Surprise assists in capitalising on enemy weaknesses at the most advantageous location and time.

³⁴ US Army, *Field Manual 31-5 Landing Operations on Hostile Shores*, (Washington, D.C.: War Department, Government Printing Office, 1941), 1.

³⁵ Office of Naval Operations, Division of Fleet Training, *FTP 167: Landing Operations Doctrine 1938* (Washington, D.C: USN, Government Printing Office, 1938), 1.

³⁶ Jonathan M. House, *Combined Arms Warfare in the Twentieth Century* (Kansas: University Press of Kansas, 2001), 178.

The ability to choose the location and time enables the amphibious operation a unique ability to project force across a wide spectrum. Amphibious forces thus “seek to exploit the element of surprise and capitalize [*sic*] on enemy weakness by projecting and applying combat power [accomplished through ship-to-shore movement] at the most advantageous location and time.”³⁷ In order to benefit from on these abilities a commander must have access to a highly mobile and flexible force. This is accomplished through the creation of two main task groups; the amphibious task force, always a navy task organised formation, and the landing force, usually an army or marine task organised formation.³⁸ These, together, form the amphibious force which is task organised according to the requirements of the mission.³⁹ Task organised forces are thus key to ensuring that the commander has the necessary flexibility and responsiveness which the amphibious force requires to accomplish the mission ashore and at sea.⁴⁰ Further, task organised forces cater to the multi-mission requirements of amphibious operations in general. This understandably requires superior command and control capabilities to facilitate the accomplishment of multiple, and diverse missions, and the integration of joint forces.⁴¹

Expanding upon this, amphibious task forces and landing forces of the Second World War needed to attain synergy, which required a superior level of cooperation and coordination. Only through the attainment of mobility, flexibility, intelligence, and command and control procedures could a sufficient ‘supporting-supported’ relationship be comprehensively obtained between (and over) the services component commanders

³⁷ *JP 3-02*, Department of Defense (USA), *Joint Publication 3-02 Amphibious Operations* (Washington, D.C.: 10 August 2009), I-1. Hereafter referred to as *JP 3-02*. As the core elements of amphibious operations have remained relatively constant, modern doctrine provides the best overview of its applications (something which inter-war manuals normally did not accomplish). The efforts of the 3rd NZ Division may, therefore, be examined through the structure of both Second World War and modern-day doctrine.

³⁸ USMC, *MCDP 1-0 Marine Corps Operations* (Washington, D.C.: Headquarters USMC, Department of the Navy, 2011), 2-7.

³⁹ *JP 3-02*, xiii, II-6.

⁴⁰ To prepare for this challenge, US doctrine requires that LFs be organised so as to meet any threat envisaged and must be organised into three functional forms: 1) organisation for embarkation; 2) organisation for landing; 3) organisation for combat ashore. See – *Ibid.*, II-8, II-9.

⁴¹ *Ibid.*, I-4.

within an amphibious force.⁴² The success of ‘supporting-supported’ relationships could only be possible through close inter-service cooperation, which ultimately ensured, or sought to ensure, the correct development of concepts and the coordination of clear and assertive operating procedures. This, it was hoped, would ensure that the inherent complexities of amphibious operations were kept manageable, and thus fostered success. These were the fundamental concepts which the 3rd NZ Division adhered to during its adaptation and application of amphibious operations, however the roots of these concepts were matured from the pre-war developments of other nations.

As was the case with jungle warfare, the Japanese made the first use of amphibious forces in the Pacific campaigns. After the Great War, Japan expected a future war in the Pacific, and Japanese forces not only evaluated the role and methods of amphibious operations but surpassed Western nations in amphibious development between the wars. At the theoretical level, the IJA undertook amphibious landing scenarios at Staff College, and in training exercises at army, and divisional levels - this being more extensive than other militaries of the time. This process was aided by the 1924 publication of *Summary of Amphibious Operations and Operations Defencing Against Amphibious Attacks*, and after further amphibious exercises conducted in the second half of the 1920s the Japanese codified their amphibious theory in *Outline of Amphibious Operations* in 1932.⁴³ This garnished the ordinary Japanese officer with a greater understanding of the amphibious operation and its applications when compared to their Allied adversaries, and facilitated the many successful Japanese landings from 1937-1942. Despite advances in theoretical aspects of amphibious operations, the Japanese were frustrated by the divergent interests of the IJA and IJN, which resulted in a degree of parallel amphibious

⁴² Gregory A. Thiele does well in explaining the importance which Task Force ‘supporting-supported’ relationships have on the execution and outcome of amphibious operations. See “Operation Albion and Joint Amphibious Doctrine,” *Joint Forces Quarterly*, Issue 59 (4th quarter, 2010), 147-151.

⁴³ Allan R. Millett, “Assault from the Sea: The Development of Amphibious Warfare between the Wars – The American, British, and Japanese Experiences,” in *Military Innovation in the Interwar Period*, eds. Allan R. Millett and Williamson Murray (Cambridge: Cambridge University Press, 2007), 50, 67; Edward J. Drea, *In the Service of the Emperor: Essays on the Imperial Japanese Army* (Lincoln: University of Nebraska Press, 2003), 17-19.

developments (especially after 1932 and the growing conflict in China).⁴⁴ Both the IJA and IJN created their own independent amphibious forces, which produced a duplication of effort and a diversion of resources. Nonetheless, the differing operational roles of the IJN and IJA in the Western Pacific and China, respectively, had the effect of creating forces and craft that met different operational requirements. If used correctly these had the potential to complement each other. In the end, the IJA focussed on large amphibious landings, while the IJN focussed on small-scale amphibious assaults (not dissimilar from early USMC concepts). These two pathways were best represented by the development of landing craft and shipping parties by the IJA and special 'raider' units by the IJN.

In common with other militaries, the Japanese studied previous amphibious operations, such as Gallipoli, for solutions to the difficulties of amphibious operations. They discerned that previous amphibious operations had lacked the means of rapidly transporting men and materiel ashore. This initiated a drive in Japan for new amphibious forces and craft. Part of the solution lay in introducing motorised bow-ramped landing craft at an early date to facilitate ship-to-shore movement. The IJA led the way in this endeavour and as early as 1918 had initiated a programme to develop motorised landing craft. Their introduction allowed the IJA to conduct extensive amphibious exercises (up to three divisions) as early as 1921, which was some years before similar initiatives in other militaries.⁴⁵ The IJN was not to be outdone, and it pioneered the development of the roles and duties of naval task forces within an Amphibious Task Force during similar exercises. This focussed on such matters as the importance of escorting transports on their way to the landing beaches, and the navy's ability to provide effective ship-borne gunfire onto the shore.⁴⁶ In order for the Japanese to have conducted exercises at this early period, their command and organisational structures must have been sufficiently advanced to allow for such a complex series of amphibious exercises to be executed.

⁴⁴ Millett asserts that the IJA and IJN worked closely together, in practice. There was of course bound to be duplication of efforts when two different services were involved in the same developments. This assertion holds greater sway after the IJA rebuked the IJN's handling of Army troops at Shanghai in 1932. See – Millett, "Assault from the Sea", 67-68.

⁴⁵ Drea, *In the Service of the Emperor*, 15-17; McGee, *The Amphibians Are Coming!*, 4; Victor Krulak, *First to Fight: An Inside View of the US Marine Corps* (Annapolis: Naval Institute Press, 1984), 90-91, quoted in Lorelli, *To Foreign Shores*, 16; Millett, "Assault from the Sea ...", 65-67.

⁴⁶ *Ibid.*, 68.

These early exercises complemented theoretical thought and resulted in the publication of *Summary of Amphibious Operations* in following years, which assisted the Japanese in implementing a working system of command. By the time of the Shanghai Incident in 1932, further development of landing craft design meant the IJA was doctrinally supported and equipped with motorised, bow-ramped landing craft (some ten years before Allied forces were so equipped) while the IJN was pioneering naval task force support of larger amphibious task forces. Allan R. Millett has observed of this period that the Japanese “showed a sound appreciation . . . of the fundamental requirements for a successful opposed landing.”⁴⁷

The importance of the Japanese advances in amphibious operations was recognised by US forces, which were planning for a war in the Pacific against the Japanese. In 1937 an American officer who observed Japanese amphibious assaults in China made special note of the successful use of the bow-ramped landing craft, which at the time had no equivalent in the US forces.⁴⁸ The Japanese persisted with many types of landing craft designs, eventually leading to the introduction of the first all-purpose amphibious landing ship, the *Shinsū-maru* in 1935. This ship, and its successor, the *Akitsu-maru* altered amphibious shipping concepts and capabilities by enabling larger bodies of men and with more equipment to be quickly and effectively carried ashore, allowing for new tactical and operational possibilities.⁴⁹

Despite the great flexibility afforded by the *Shinsū-maru*, the IJA halted its construction in favour of general-purpose vehicle carrying craft designs. These varied in length from 9 metres to 15 metres, and were capable of carrying between 50-120 men or an equivalent load of cargo. These craft proved an excellent asset to amphibious operations, and were

⁴⁷ Millett, “Assault from the Sea”, 68.

⁴⁸ McGee, *The Amphibians Are Coming!*, 4. Krulak declared that such craft were “exactly what the Marines had been looking for ... boat[s] capable of transporting heavy vehicles and depositing them directly on the beaches.” See Victor Krulak, *First to Fight: An Inside View of the US Marine Corps* (Annapolis: Naval Institute Press, 1984), 90-91, quoted in John A. Lorelli, *To Foreign Shores: US Amphibious Operations in World War II* (Annapolis: Naval Institute Press, 1995), 16.

⁴⁹ Millett, “Assault from the Sea ...”, 81-82.

simple and reliable to operate. Indeed, on a number of occasions they were captured and used by New Zealand forces in the Solomon Islands.⁵⁰ While the IJA persisted with new types of landing craft, the IJN turned its attention to the means of quickly getting men and stores ashore by using existing warships, such as old destroyers, as the navy believed these were sufficient to land troops ashore without recourse to new and expensive landing craft.⁵¹ This was due in part to the IJN's operational requirements, which envisioned small 'raider-type' forces securing limited objectives in the islands of the Pacific, and because the IJA controlled landing craft production and was thus reluctant to divert resources at the navy's prerogatives. In response to these operational requirements, the IJN created battalion-sized units of naval infantry, the famed Special Naval Landing Forces (SNLF).⁵² The SNLF was a harbinger of many small-unit amphibious models that were eventually used in the South Pacific, and this reinforces the argument of Japan's leading role in pre-war amphibious warfare development.⁵³ In contrast, as the IJA theorised its use of amphibious operations on a larger scale, it created specialist Shipping Engineer Units for loading and unloading of shipping at beaches or ports (the SNLF did not require such logistical efforts due to their smaller size), and assisted in maintaining the speed and tempo of the amphibious operation. The value of such units to large scale amphibious operations was recognised by the Americans and led to the introduction similar units later in the Pacific War – both the Japanese and American units were vital to rapid expansion of the beachhead.⁵⁴

⁵⁰ Unfortunately, this may have also led to at least one friendly fire incident involving US pilots strafing a New Zealand operated 'barge'. See ANZ, WAI1, 1553, DAZ 157/9/85, 35 Battalion – Office records – Information on Vella operations, dated from 20 September 1943 to 31 December 1943, "Strafing of Barge – K 51-5", 35 Battalion Combat Team Headquarters, 16 October 1943.

⁵¹ *Ibid.*, 70; Drea, *In the Service of the Emperor*, 15.

⁵² A good example of the usefulness of SNLF type forces in the South Pacific was the 3rd Kure Special Naval Landing Force's *coup de main* on the island of Tulagi, the administrative capital of the Solomon Islands on 3 May 1942. See Frank O. Hough, Verle E. Ludwig, and Henry I. Shaw, *Pearl Harbor to Guadalcanal, History of U.S. Marine Corps Operations in World War II*, Vol. I (Washington, D.C.: Historical Branch, G-3 Division, Headquarters, USMC, 1958), 238; Miller, *Guadalcanal: The First Offensive*, 5.

⁵³ For a concise introduction to those units see Gordon L. Rottman, *US Special Warfare Units in the Pacific Theater 1941-45: Scouts, Raiders, Rangers and Reconnaissance Units, Osprey Battle Orders 12* (Oxfordshire: Osprey Publishing, 2005).

⁵⁴ Rottman, *US World War II Amphibious Tactics*, 20-22; ANZ, WAI1, 1149, DAZ 155/1/21, HQ 14 Infantry Brigade, January 1942 to July 1944, War Diary of Headquarters 14 Bde NZEFIP, "Covering Operations Vella Lavella from Sept 25 to Oct 9", Daily Intelligence Summary – 28 September, 1943.

Japanese contribution to amphibious operations was most readily seen in the use of specialised amphibious craft, which showed that amphibious landings could be undertaken using fewer landing craft than first thought.⁵⁵ This was a very real contribution to amphibious development internationally, as it proved the viability of amphibious forces in the modern era. The landing craft which were developed by the Japanese were thus a vital addition to the development of modern amphibious operations.⁵⁶ However, these findings may have also contributed to the Japanese tendency to undertake too much with too little, as was displayed during their ill-planned amphibious assault of Wake Island, in the Central Pacific, in December 1941, whereby confident Japanese amphibious forces were defeated in their first attempt to capture the island and its small American garrison.⁵⁷ Japanese amphibious theory worked despite its imperfections as demonstrated by the fact the Japanese successfully landed in no less than 10 locations in China during 1937-41. The presence of significant numbers of landing craft before the war enabled the Japanese military to become the most experienced entity in the conduct of amphibious operations, with even the Americans declaring that “the Japanese have had much experience and training in landing operations.”⁵⁸ For this reason, Japan entered the war well prepared, and could rightly be said to have been on par with amphibious developments in the USA “both in terms of operational forces and published doctrine”, though well in excess of its contemporaries in terms of experience.⁵⁹ In general, Japanese amphibious ship designs showed enough promise for the Allies to incorporate some of the capabilities when creating their own amphibious landing ships, especially the Landing Ship, Dock (LSD), and to a lesser extent the Landing Ship, Tank (LST) seven years later. As the Allies were to discover, the proper use of vessels such as the *Shinsū-maru*, LSD, and LST required intensive training in order to operate effectively in amphibious operations.

⁵⁵ Ibid., 62, 64-65.

⁵⁶ ANZ, WAI1, 1550, DAZ 154/9/8/6, 36 Battalion – Office records – Enemy tactics, “Capabilities of Japanese Military Barges”; Military Intelligence Service, *Information Bulletin No. 14: Japanese Ground and Air Forces* (Washington, D.C.: War Department, May 1942), 34; Millett, “Assault from the Sea ...”, 62, 64-65, 74-75; Brinkman, *The 35th Battalion*, 65.

⁵⁷ Gregory J.W. Urwin, *Facing Fearful Odds: The Siege of Wake Island* (Lincoln, Nebraska: University of Nebraska Press, 1997); Jim Moran, *Wake Island 1941: A Battle to make the Gods Weep, Osprey Campaign 144* (Oxfordshire: Osprey Publishing, 2011).

⁵⁸ Military Intelligence Service, *Japanese Ground and Air Forces*, 20.

⁵⁹ Millett, “Assault from the Sea,” 64-65.

US forces had good reason to follow Japanese developments in amphibious operations before the war. The USA had long anticipated a war with Japan, with the oft-revised Plan 'Orange' directing American strategic planning for war in the Pacific. 'Orange' called for the capture of a number of Japanese or Japanese-held islands in the Central Pacific and this led the USMC to assess amphibious operations in the interwar period. The USMC was the first to correctly identify the failures and successes of Great War amphibious operations, with the British-led operation at Gallipoli proving to be a particular source of interest, and it prompted much discussion around the necessity and importance of amphibious operations.⁶⁰ The culmination of these efforts resulted in the 1932 publication of writings from the lectures and seminars delivered at the Marine Corps School in the 1920s.⁶¹ This work, entitled *Marine Corps Landing Operations* was "the first American military publication devoted solely to amphibious problems".⁶² The publication also drew on ideas propagated within a study from 1920-21, "Advanced Base Operations in Micronesia", which served "as the basis for future training and wartime mobilization planning in the marine corps [sic]".⁶³ These two works contributed some important tactical considerations which would later become official doctrine in the 1930s, such as the idea of combat loading men and material onto transports before leaving port so as to meet the enemy ashore with the correct weapon systems.⁶⁴ With analysis of Great War case studies, the *Marine Corps Landing Operations* identified seven key concerns, which it was believed, were needed in order for amphibious operation to succeed: command relations, naval gunfire, air support, ship-to-shore movement, securing the beachhead, logistics and coordination.⁶⁵

⁶⁰ Orange was the colour assigned to Japan in war games before the Great War. Ronald Spector, "The Military Effectiveness of the US Armed Forces, 1919-39", in *Military Effectiveness*, Vol. 2: *The Interwar Period*, 2nd ed., eds. Allan R. Millett and Williamson Murray (Cambridge: Cambridge University Press, 2010), 78-79; Millett, "Assault from the Sea", 70-72; Joseph H. Alexander, "Hit the Beach!", *Military History*, vol. 25, issue 4 (Sep/Oct 2008): 31.

⁶¹ John A. Lorelli, *To Foreign Shores: US Amphibious Operations in World War II* (Annapolis, Maryland: United States Naval Institute Press, 1995), 13.

⁶² *Ibid.*, 13.

⁶³ *Ibid.*, 10-11; Millett, "Assault from the Sea," 72.

⁶⁴ Lorelli, *To Foreign Shores*, 11.

⁶⁵ Alexander, "Hit the Beach!," 35. Although not declared under the same titles, these seven principles still form the core of all amphibious operations to this day.

Around this time, the US Army and Navy Joint Board (hereafter Joint Board) published *Joint Overseas Expeditions* in 1933. Some have asserted that this was in fact the first doctrinal manual on amphibious operations.⁶⁶ However, the document was very much an abstract affair being largely limited to general aspects pertaining to army-navy operations overseas and to ensuring effective cooperation and coordination between the two Services.⁶⁷ More important to the development of American amphibious capability was the USMC's 1934 publication, *Tentative Manual of Landing Operations*, which proved to be the most influential written piece on amphibious operations. It succeeded in placing the requirements of the amphibious operation within a systematic framework of procedures and methods, and fundamentally altered the view of amphibious operations and their potential in modern warfare. It acknowledged that the combination of doctrine, joint cooperation, equipment, training, and command integration supported by a superior logistical network were fundamental to amphibious success. The *Manual* was adapted by both the USN and US Army, and published in their own manuals in 1938 and 1941, respectively.⁶⁸

The USMC *Manual* also provided the theoretical basis for six annual Fleet Landing Exercises from 1935-41. These joint exercises enabled the USN, USMC, and later also the US Army, to experiment with various aspects of amphibious operations including naval and air fire-support, fire control parties, isolation of the beachhead and objective area, and correct combat loading of forces aboard ships. The Fleet Landing Exercises illustrated the need for specialised landing craft, however these remained a rare commodity for American forces in the pre-war period (and lasting into 1943), despite the knowledge that such craft would be indispensable.⁶⁹ Although there continued to be some changes in doctrine, the basic formula which the *Manual* delivered remained unchanged throughout

⁶⁶ Henry IV, "... Command Relationships in Amphibious Warfare," 27.

⁶⁷ Joint Board, *Joint Overseas Expeditions* (Washington: Government Printing Office, 1933), 1, quoted in Henry IV, "A Historical Review of the Development of Doctrine for Command Relationships in Amphibious Warfare," 38; Millett, "Assault from the Sea," 73.

⁶⁸ These were the USN's *Landing Operations Doctrine 1938*, and the Army's *Landing Operations on Hostile Shores*.

⁶⁹ Millett, "Assault from the Sea ...," 77; William L. McGee, *The Amphibians Are Coming: Emergence of the 'Gator Navy and its Revolutionary Landing Craft, Amphibious Operations in the South Pacific in World War II*, Vol. 1 (California: BMC Publications, 2000), 4-6, 8.

the war. Richard B. Frank has described the manual as the “bible of amphibious landings in World War Two.”⁷⁰

As a part of defence planning for the British Empire, the New Zealand Army at first ascribed to British doctrine in relation to amphibious operations. Britain had a long history of amphibious operations with many successful examples, such as Quebec in 1759, as well as the most recent large-scale landing at Gallipoli. These had displayed some elements of modern amphibious operations to the British, such as the difficulty of maintaining adequate command structures and beach organisation.⁷¹ Further, the idea of using warships to carry assault troops to the beach, as the IJN, and later the USN, did with their Assault, Personnel Destroyers (APD) in the Pacific, was demonstrated by the British during their campaign against the French in 1759.⁷² Additionally, the British had also been among the first to conceptualise the need for special flat-bottomed landing boats. These and other initiatives pointed to British proficiency in amphibious warfare before 1914. Unfortunately, the shock of Gallipoli proved too much for the British establishment, and an aversion to anything amphibious was evident after the Great War.⁷³ The few amphibious operations that were conducted in the 1920s-30s were restricted to staff college exercises and there was little experience on which to base the study of amphibious operations, as they were too ill-planned and ill-supported to have much impact on British policy.⁷⁴ Additionally, some of these exercises were not directly intended to test amphibious capabilities, rather, they were a means of testing non-amphibious techniques and equipment such as radio communications.⁷⁵ Despite the establishment of working committees and joint boards, and the publication of official doctrine such as *The Manual of Combined Naval Military and Air Force Operations* –

⁷⁰ Richard B. Frank, “*The Amphibious Revolution*,” *Naval History* 19, no. 4 (August, 2005): 1.

⁷¹ Simon Foster, *Hit the Beach! Amphibious Warfare from the Plains of Abraham to San Carlos Water* (London: Arms & Armour Press, 1995), 11-21; Millett, “Assault from the Sea ...”, 51.

⁷² Britt Zerbe, “‘That most useful body of men’: Operational Doctrine and Identity of the British Marine Corps, 1755-1802,” 173.

⁷³ Brian Lavery, *Assault Landing Craft: Design, Construction & Operations* (Barnsley, United Kingdom: Seaforth Publishing, 2009), 8.

⁷⁴ National Archives and Records Administration (NARA), Washington, D.C., Record Group 127, Box 1, Folder 14, Records of the USMC, History and Museum Division, Subject File Relating to World War II, Africa General to Amphibious Doctrine and Operations, “Amphibious Operations, England: Period 1921-1940”, page 1.

⁷⁵ Millett, “Assault from the Sea,” 60-61.

Provisional in 1922, the British lacked in practical and theoretical amphibious foundations. Furthermore, Brian Bond and Williamson Murray have commented that the British displayed “a conspicuous lack of drive towards inter-arm and inter-service cooperation in the 1930s”, which was vital for amphibious operations.⁷⁶ Brian Lavery notes that the British Inter-Service Training and Development Centre, established to advance the “study and development of material, technique and tactics necessary for the success of opposed landings”, had no opportunity for practical experience of amphibious operations and therefore had to theorise about tactics.⁷⁷

The only real advance made by the British forces between the world wars was in the design of amphibious ships and craft, some of which were later copied by the Americans. The existence of successful landing craft designs while at the same time amphibious concepts remained under-developed illustrates the disjointed nature of pre-war British amphibious developments. Unfortunately, British experience of amphibious operations early in the Second World War was limited. Nonetheless, the New Zealand Army was able to gain access to British wartime reports and papers that provided insight into developing British concepts of amphibious operations (including raids) that would lead to successful amphibious doctrine in the latter part of the war.⁷⁸

Although the US, Japan, and Britain all had a long heritage of amphibious operations, none had made any special effort to develop joint or combined amphibious forces under naval control (SNLF apart).⁷⁹ Despite developing practical expertise in amphibious landings, the armies and navies failed to appreciate the complexities of amphibious operations which could only come about through large, testing, and integrated exercises and operations. Once the Pacific War began, however, the lessons of amphibious

⁷⁶ Brian Bond, and Williamson Murray, “The British Armed Forces, 1918-1939,” in *Military Effectiveness*, Vol. 2: *The Interwar Period*, 2nd ed., eds. Allan R. Millett and Williamson Murray (Cambridge: Cambridge University Press, 2010), 111-112.

⁷⁷ Lavery, *Assault Landing Craft*, 9-10.

⁷⁸ ANZ, WAI1, 1551, DAZ 155/9/2, HQ 14 Infantry Brigade – Office records – Amphibious, “Combined Operations, September 1942.”

⁷⁹ Millett, “Assault from the Sea”, 51.

operations soon became apparent. Early Japanese success ratified the vital, and viable, means of amphibious operations in the Pacific. It also revealed the key aspects of speed, tempo, and surprise – key elements required for any amphibious operations. In all of the successful Japanese operations involving amphibious landings, airpower played a key role in limiting the defender's ability to interdict and delay the attacking force. It also showed the risk of attempting opposed amphibious landings against even a small defending force. As such, the need for accurate intelligence was correspondingly highlighted, lest the amphibious force be shot out the water before it established a beachhead. Armed with these details, the Allies reinvigorated their own amphibious developments and provided indications of successful amphibious operations. For the Americans, these concepts were put to the test during Operation 'Dovetail' on the island of Koro in the Fijian Islands and later Operation 'Watchtower' on Guadalcanal in 1942. While the landings were successful, the operations illustrated the complexities inherent in amphibious operations, and the level of training that forces required.⁸⁰ This demanded that forces be involved in a constant state of amphibious development in order to stay abreast of developments and experiences.

These developments were further refined in subsequent landings in the southern Solomon Islands in 1943, starting with the occupation of the Russell Islands which showed the progress in joint cooperation between air, sea, and land forces, and the dictating role which the projection of airpower had in the region. The New Zealanders observed these landings and were able to benefit from the early experiences of the war by virtue of their late entry into the amphibious field. However, the 3rd NZ Division had the added disadvantage of having no control of its amphibious landing resources, the use of which was continually changing due to frequent refinements in doctrine and operating procedures. This hampered 'independent' amphibious development within the division, and coupled with a lack of British support and influence was a significant reason for the division to conform to American operating procedures, despite its British War Establishment. Additionally, the 3rd NZ Division lacked the resources to integrate British-

⁸⁰ William H. Bartsch, "Operation Dovetail: Bungled Guadalcanal Rehearsal, July 1942", *The Journal of Military History*, vol. 66, no. 2 (April, 2002): 443-476.

style amphibious training programmes with American procedures (as the Australians did at their amphibious training school), and this was another reason for the division to implement American amphibious doctrine and training procedures.⁸¹ For this reason, 3rd NZ Division had more to gain from assessing the experiences and recommendations of American sources. Indeed, the US Army's amphibious doctrine, FM 31-5 *Landing Operations on Hostile Shores*, which was based on USN publications, was strongly recommended to all officers of 3rd NZ Division, and 20 copies were distributed throughout the division in mid-1943. Its influence can be seen during amphibious exercises of the division, especially in the areas of air support control and beach organisation which eschewed US procedures.⁸²

Likewise, in the field of jungle warfare the division had access to reports on early war experiences. Japanese experiences showed that although they may have lacked a jungle warfare doctrine, their existing tactics, methods, techniques, equipment, clothing, and weapons accentuated their ability to adjust to the demands of jungle operations, and this served as a benchmark from which Allied forces could measure their own developments. The Allies were watchful of the effects that the jungle had on inadequately prepared forces operating in the tropics, especially surrounding the logistics and medical treatment which had caused dreadful casualty rates among Japanese personnel on Guadalcanal and Papua.⁸³ This was an essential part of the development process, as pre-war Allied manuals had been found wanting in the opening rounds of the conflict and solutions had to be discerned from failures experienced, which then required collation before they could be presented. The difficulties thus endured were representative of similar experiences by other militaries in the early phases of the Pacific War, but New Zealand had the added advantage of having access to foreign studies and reports on the nature of jungle warfare. These findings therefore supplemented the division's preparations for

⁸¹ Peter J. Dean, "Amphibious Warfare: Lessons from the Past for the ADF's Future", *Security Challenges*, vol. 8, no. 1 (Autumn 2012): 64-67.

⁸² ANZ, WAI1, 1551, DAZ 155/9/2, "FM 31-5 Landing Operations on Hostile Shores", 19 May 1943.

⁸³ Military Intelligence Division, *Information Bulletin No. 6*, 8; Military Intelligence Division, *Information Bulletin No. 10*, 60-62; Military Intelligence Service, *Intelligence Bulletin*, vol. 1, no. 1, 77-79.

jungle warfare, however Barrowclough was careful to apply these lessons only if he believed they were applicable to the South Pacific.

The process of analysing foreign suggestions was made more challenging by the insistence of the NZ Army Headquarters' for the division to maintain British War Establishments and structures. This limited the degree of adaptation which Barrowclough could incorporate into his division, and meant that large-scale reorganisation could not be readily implemented unless it mirrored official British recommendations, such as the structure of their 'jungle' divisions to which the 3rd NZ Division received information.⁸⁴ This highlights the unique place which the 3rd NZ Division's held in relation to jungle warfare and amphibious operations in the South Pacific, for until it was engaged in combat, and in lieu of its own developed jungle warfare doctrine, the primary source for jungle warfare remained the reports and experiences of Allied operations in New Guinea and the Solomons. This had added difficulties for the division, as it then had to adapt those foreign reports and recommendations into a working system for a uniquely organised division, such as it was, operating within an American controlled theatre.

⁸⁴ ANZ, AD12, 15, 28/15/1, Part 3, "New Establishments – Brigade and Divisional Support Companies", 26 May 1943.

CHAPTER 3

Further Training and First Combat Actions

Training is an essential part of any military unit's progression from novice recruitment to combat. It equips soldiers with the mettle and skill to conduct themselves successfully in combat over their enemies. To meet this, the training which soldiers undergo must represent the battlefield in which they will fight. For Barrowclough and the 3rd NZ Division this meant gaining proficiency in jungle warfare and amphibious operations. Unfortunately, the NZ Army had precious few experiences of either, and this resulted in an extended period of training before the division was prepared for the demands of its operational environment. The 3rd NZ Division had around 13 months, from the time it shipped to New Caledonia in December 1942 to its employment in Operation 'Squarepeg' in February 1944, in which to train, fight, and learn in the ways of amphibious operations within a jungle warfare environment. In this time it had to learn to combat the enemy and the climate, while constantly applying the lessons of its own experiences with the experiences of other organisations. This chapter addresses the difficulties that the 3rd NZ Division encountered during its period of jungle and amphibious training once it had left New Zealand in late 1942. This includes the division's first combat actions on Vella Lavella and the Treasury Islands, both of which equipped it with much needed lessons for combat in the region. Ultimately, the experiences combined to provide the division with the knowledge to plan, prepare, and conduct Operation 'Squarepeg' in 1944.

After the Kaimai exercise of October 1942, which had tested the 3rd NZ Division in aspects of jungle warfare, the division had precious little time to reorganise as it soon commenced its move to New Caledonia – an island 1,500 kilometres to the north-west of New Zealand – a process which lasted the better part of three months, ending in January 1943. By the time the division arrived on the Island, it had yet to undertake amphibious

training, and had only recently completed its first large scale jungle training exercise in the Kaimai Range in October 1942. The lack of amphibious training imposed definite organisational limitations on the division. For example, the New Zealanders had limited understanding of tactical loading of transports for a sea voyage and amphibious landing. In view of this, and to help the division in its initial training exercises, US Army officers were sent to assist with the division's loading preparations. These measures represented the basic operational amphibious requirements for all units destined for the South Pacific Area.¹ The skills which the US Army officers brought with them must have highlighted to Barrowclough the requirements which were demanded in the theatre, as he knew that intensive training was urgently needed in order for the division to be prepared for combat. Unfortunately, Barrowclough considered New Caledonia inappropriate for jungle training owing to the absence of fully-formed tropical jungle areas. The island did, however, have densely wooded areas which provided the troops with a full array of tropical diseases such as malaria carrying mosquitoes, as well as a heavy tropical climate which simulated the wetness of the Solomon Islands. While New Caledonia's vegetation was considered less than ideal for replicating jungle warfare, small training exercises were conducted, and these included small officer 'fact-finding' groups equipped with clipboard and questionnaires. These later progressed to platoon-level excursions into the countryside focussing on bush craft and survival – these all contributed important early lessons for the units eventually destined for the Green Islands.²

Amphibious training commenced almost immediately upon the division's arrival, although these efforts were affected by a shortage of landing craft which were required for planned US operations in the near future.³ The shortage of landing craft was a significant

¹ ANZ, PUTTICK5, 1, 5, Letter from Barrowclough, HQ NZEFIP to Puttick, Army HQ, Wellington, 2 January 1943.

² ANZ, AD12, 15, 28/15/1, Part 1, "Food Available for Personnel Lost in Tropical Areas"; KMARL, Acc. No. 2003.570, Interview of David Jillet, service number 72436, officer, Intelligence Section, 14th Brigade, 24 September, 2001.

³ Gillespie, *The Pacific*, 90-91; David Lindsey Snead, "Obscure but Important: The United States and the Russell Islands in World War II," *Faculty Publications and Presentations*, Paper 22, Department of History, Liberty University (2003): 9; Gailey, *Bougainville 1943-1945*, 11; Allan R. Millett, "The United States Armed Forces in the Second World War," in *Military Effectiveness*, Vol. 3: *The Second World War*, 2nd ed., eds. Allan R. Millett and Williamson Murray (Cambridge: Cambridge University Press, 2010), 59. The shortage of landing craft was also due to the factors related in earlier chapters, especially Chapter 3.

hurdle to the division's preparation for combat, though Barrowclough must have appreciated the Americans' scarcity of resources, considering his division's own supply situation. His new location on New Caledonia brought him into contact with the senior commands of the South Pacific Area, the most important of which were Vice Admiral Halsey as COMSOPAC, Lieutenant-General Millard F. Harmon, Commanding General, US Army Forces in the South Pacific Area (COMGENSOPAC), and Rear Admiral Richmond K. Turner, Amphibious Force, South Pacific (AMPHIBSOPAC).⁴ Although Barrowclough hoped that his new proximity to senior American commands in the South Pacific Area would encourage greater cooperation of forces, he was disappointed to find that landing craft were not available for large exercises until July 1943. This limited amphibious training to basic techniques which could be conducted on land until landing craft could be secured. The troops practiced climbing cargo nets slung over the sides of mock-up landing craft and ships, later extending to combat loading of stores and equipment onto transports when time and resources permitted.⁵

While the division waited for landing craft and implemented *ad hoc* amphibious training, it continued to receive reports detailing the activities and lessons of jungle warfare from other theatres, especially from Australian and British sources.⁶ However, Barrowclough largely dismissed suggested organisational changes for artillery in jungle warfare, such as incorporating smaller artillery complements, as he did not view these as conducive to the less hilly terrain of the Solomon Islands. Nevertheless, he did not ignore all advice and incorporated some tactical suggestions, such as the expanded use and role of automatic weapons at company and platoon levels for jungle patrols, as well as an increasing focus on aggressive junior leader initiatives within small unit tactics. Most of these measures reflected his insistence on maintaining the infantry's central role in jungle warfare, and he was convinced that the infantry's combat effectiveness was not to be purged for reinforcing other areas or units, such as artillery or supply. This created a conundrum, for while Barrowclough advocated increased numbers of artillery and supply units, he was

⁴ AMPHIBSOPAC was also Task Force 32, which later become Task Force 31.

⁵ S. H. Knowles, *A Saga of the 34th Battalion: 3rd Division, 2nd NZEF*, memoir, KMARL, 32; Nicol, *Headquarters*, 176; ANZ, AD12, 15, 28/15/1, Part 2, 2NZEF reports – Operation Kiwi, November 1942 – February 1943, cable from HQ NZEFIP to Army HQ, Wellington, 30 November 1942.

⁶ ANZ, AD12, 15, 28/15/1, Part 2, "Signals: Trg of for Jungle Warfare", 25 February 1943.

unwilling to provide these from the one group that had sufficient numbers to do so: the infantry.

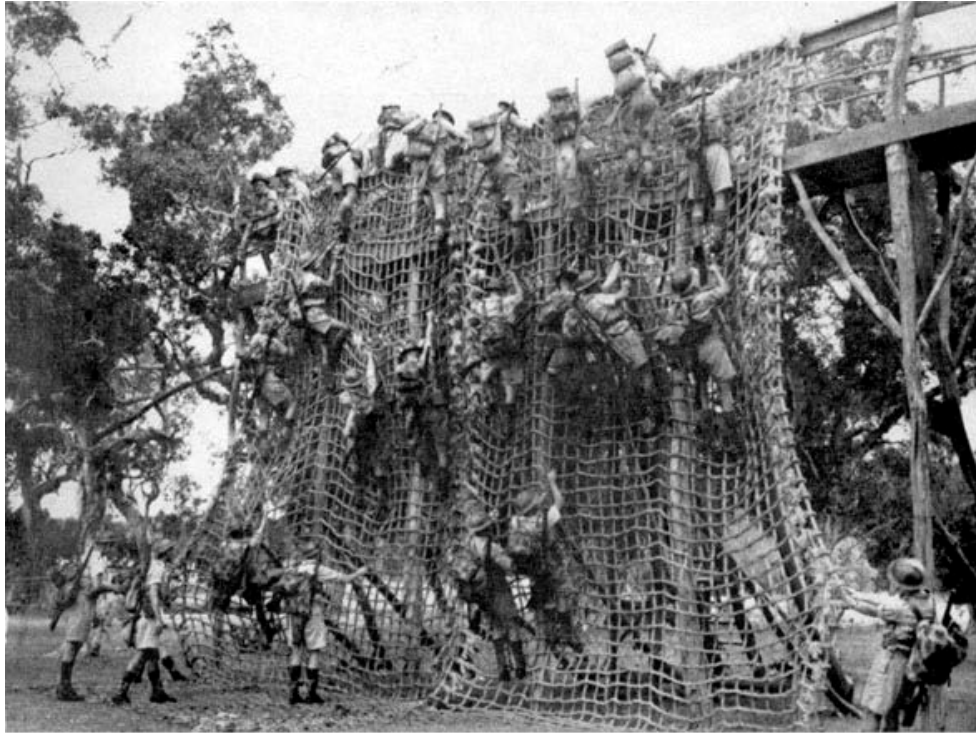


Image 5: Net climbing practice for members of the 3rd NZ Division in New Caledonia – ‘dry’ amphibious training was the first step for the 3rd NZ Division and activities such as this minimised the risk of casualties occurring while disembarking. (Source: Gillespie, *The Pacific*, New Zealand Electronic Text Collection, <http://nzetc.victoria.ac.nz/tm/scholarly/WH2Paci-fig-Wh2Pac11b.html>.)

Barrowclough received further guidance on the demands of jungle warfare from foreign reports which dealt with the training of signals personnel and their equipment. To this effect, the New Zealand Liaison Officer in Melbourne provided him with up-to-date Australian signals adaptations by the provision of training memorandums. Signals equipment and training remained a key area for the division as New Zealand forces serving in the South Pacific Area were hampered by a an acute shortage of maintenance parts and batteries for their British-made wireless sets, and any means which would improve their performance was thus a key topic of discussion.⁷ When considering the

⁷ ANZ, AD12, 15, 28/15/1, Part 2, “Notes on the Training of Signals Personnel for Jungle Warfare, Training Memos, Nos. 11 – 13”; ANZ, AD12, 15, 28/15/1, Part 3, 2NZE reports – Operation Kiwi, February 1943 –

implications of foreign jungle warfare reports upon his division, Barrowclough was selective in his adherence to their recommendations, mainly because of his own beliefs on the requirements for warfare in general, and sometimes due to factors of supply, outside his control. An example was Barrowclough's beliefs on the organisation of special 'jungle' divisions – largely dismissing the Australian model's advocacy of decreased artillery allotments and air-portable equipment as being designed for conditions in New Guinea, and thus different from the South Pacific.⁸ This may have been due to the experience of US Army divisions in the area, as they retained their normal allotment of artillery. This demonstrated that Barrowclough believed the South Pacific presented unique challenges to military forces that could not be easily compared to other theatres, and he favoured outcomes which tended to reinforce his personal experiences in North Africa.

Barrowclough was influenced in his decisions by reports from his division's 2nd Air Support Control formation, which was attached to American forces during the occupation of the Russell Islands, where it provided effective air-ground communications and control measures.⁹ However, the unit also made a note of general jungle warfare preparations and experiences and relayed its findings to Headquarters 3rd NZ Division from which Barrowclough disseminated it throughout the division.¹⁰ Observations by the unit centred on the difficulties of control for both air and ground forces, as well as the general experiences of troops, such as the need for infantry to dispense with heavy or unnecessary equipment (such as respirators). The findings relayed within were later incorporated into an amphibious training exercise by the 37th Battalion, with the New Zealand assault troops being advised to carry only combat equipment. This demonstrated

September 1944, "Notes on the Training of Signals Personnel for Jungle Warfare, Training Memos, Nos. 16-17"; "Signal Equipment – 2 NZEF IP: Supply Position as at 15 May 1943".

⁸ ANZ, AD12, 15, 28/15/1, Part 3, "New Establishments – Brigade and Divisional Support Companies", HQ 3rd NZ Division to Army HQ, Wellington, 26 May 1943.

⁹ ANZ, AD12, 15, 28/15/1, Part 1, "Air Support Control", Chief of the Air Staff, Air HQ, Wellington to HQ 3rd NZ Division, 9 October 1942; ANZ, AD12, 16, 28/15/2, 2 NZEF reports – Operation Kiwi, February 1943 – September 1944, "Location Statement of 3 NZ Div Tps in New Caledonia as at 0001 Hrs, 20 February 1943".

¹⁰ ANZ, WAI1, 1551, DAZ 155/9/2, "Report on Russell Island Expedition", 17 March 1943; "Comments on Operation Generally".

how the New Zealanders observed American experiences and were prepared to incorporate some of the American lessons learned into New Zealand procedures.¹¹

Despite these efforts, by 5 April training was still insufficient and it was particularly noticeable in the training of battalion and regiment commanders. The situation was to be improved through the execution of jungle warfare courses and tactical exercises, once the division had settled into its billets on New Caledonia. Nonetheless, Barrowclough felt “a little disturbed at the tactical ability disclosed by ... the Force and [was] particularly anxious [that the training courses] be attended by as many commanding officers as possible.”¹² One such example occurred on 12 April, when the 14th Brigade commenced an eight-day jungle course for officers from the infantry and intelligence corps in order to “study by practical experience the administrative and tactical problems confronting a forward Platoon of a forward Battalion of a landing force in establishing a beachhead [and] in subsequent operations during an advance through jungle type country.”¹³ One officer from each of the artillery, medical, engineer, and Army Service Corps were in attendance to make observations. Part of the exercise included the laying and disarming of booby-traps as encountered in jungle operations, use of machine guns for realistic battle noises, testing of rations, clothing, equipment, weapons, and vehicles for jungle-type conditions. The exercise revealed that the assaulting units’ heavy equipment was too bulky and also that some troops were inclined to loiter when deposited upon the beach. While the infantry generally disembarked and advanced without much difficulty, an artillery officer observing the exercise felt that based on the experience which the infantry had on disembarking with heavy equipment, he believed “that only repeated practice will evolve a satisfactory drill for landing [artillery] equipment.”¹⁴ Other lessons of the exercise concluded that the physical and mental strength of the soldier was paramount to success in jungle operations, as the climate and terrain imposed significant

¹¹ Ibid., “Report on Amphibious Trg, Section II: Preliminary Trg and Organisation”.

¹² ANZ, AD12, 15, 28/15/1, Part 3, “Commanding Officers,” HQ 3 NZ Div to Army HQ, Wellington, 5 April 1943.

¹³ ANZ, WAI1, 1553, DAZ 157/15/1-13, Historical record of 35 Bn, “Historical Record of the 35 Bn for April 1943”; ANZ, WAI1, 1551, DAZ 155/9/1/14/G, HQ 14 Infantry Brigade – Office records – Jungle warfare, “Report on Jungle Trg Course. Directed by Bde Commander 14 Inf Bde 2 NZEFIP,” Attached report to 14th Brigade’s infantry battalions, 16 May 1943.

¹⁴ Ibid., “Report on Jungle Trg Exercise, Appendix ‘C’: Report of Arty Representative.”

challenges on those involved. The report also stressed the importance of integrated planning, weapon and clothing suitability. This confirmed the lessons of American and Australian operational experiences, however, it seems that Barrowclough was hesitant to apply those recommendations without first conducting his own exercises and courses. Nonetheless, lessons learned were incorporated into subsequent jungle exercises whereupon techniques and methods were refined and applied in combat.¹⁵

Evidence that Barrowclough took particular note of American operational lessons was that the 3rd NZ Division replicated the combined-arms Battalion Combat Teams (BCT) and the larger Regimental Combat Teams (RCT) that were a feature of US Army infantry divisions. In 1942, the US Army Ground Forces had taken efforts to obtain flexibility and economy of their units in order to produce the most effective results with only the minimal of force. The Americans had watched developments elsewhere and had seen the increasing use of units from larger formations for tailor-made assignments, and away from organically tasked units tailored to meet a particular assignment. This resulted in the idea to form task force formations as opposed to type force formations, the product of which were the RCTs and the smaller BCTs, which normally consisted of infantry, artillery, tanks, and support elements built around an infantry regiment or battalion HQ.¹⁶ From these examples, Barrowclough established the infantry battalions as the core of his three BCTs, around which were attached the other elements to create independent formations within a Brigade Group (roughly equivalent to a RCT). The New Zealanders found that the BCT and Brigade Groups enhanced operational flexibility as unit composition could be tailored according to mission requirements, which allowed an 'Economy of Force' to be applied while simultaneously enhancing the effectiveness of each arm of service.¹⁷ The effectiveness of the BCT concept was illustrated in July 1943, when it featured in an exercise conducted by the 37th Battalion, which was the first formation to be selected to undertake the division's first realistic large scale amphibious training in Noumea Harbour; a fact that would establish this battalion as the leading amphibious exponent of the 3rd NZ

¹⁵ Ibid., "Jungle Course No. 2," 14th Inf Bde, 30 May, 1943; "Medical Report – Jungle Course," HQ 14th Infantry Brigade, 28 May 1943; Brinkman, *The 35th Battalion*, 30.

¹⁶ House, *Combined Arms Warfare*, 136-39.

¹⁷ ANZ, WAI1, 1149, DAZ 155/1/20, Appendix I, "Organisation of Combat Teams."

Division.¹⁸ The 1,139 strong 37th BCT included an infantry battalion, machine gun platoon, artillery battery, anti-aircraft artillery detachment, engineer platoon, medical troop detachment, and supply personnel. This exercise served as template for proceeding exercises by the division, including a large mock-amphibious assault by the 8th Brigade Group later in the month.¹⁹

The exercises that were conducted while the division was in New Caledonia served to introduce the New Zealanders to the requirements of amphibious operations and jungle warfare over an extended period. This assisted in the identification of features required for further training. Despite the incompleteness of its training, and soon after the completion of the above mentioned exercises, the 3rd NZ Division was declared combat ready and sailed for Guadalcanal in August 1943. The division sailed in three separate echelons over August and September. Before departing, each echelon spent time in Noumea Harbour practising preliminary net-drills and landings with full combat loads as part of a week-long training exercise.²⁰ While making their way northwards, the two brigade groups conducted amphibious exercises at the Allied base at Efate, in the New Hebrides, scenarios included landing reconnaissance parties ashore and taking an enemy airfield.²¹ The 14th Brigade Group's amphibious exercises occurred over three days, with

¹⁸ Newell, "New Zealand's Forgotten Warriors," 89; ANZ, WAI1, 1149, DAZ 155/1/19, HQ 14 Infantry Brigade, January 1942 to July 1944, War Diary 14th Inf Bde, 1-31 July, "Report on Amphibious Trg. Section III"; Gillespie, *The Pacific*, 101-102; Evans, *The Gunners*, 64, 111.

¹⁹ See documents in the following files for a detailed description of the 8th Brigade's exercise: ANZ, WAI1, 1549, DAZ 152/9/5/4, 29 Battalion – Office records – Tactical exercises, 26 July 1943 – 26 April 1944, "Organisation and Control of Beach Area"; ANZ, WAI1, 1551, DAZ 155/9/2, "General Instructions for Exercise CYCLOPS," "8th Infantry Brigade Operation Order No.1"; 3 NZ Div Operation Order No. 1, "Intention"; Appendix 6 to 3 Division Operation Order No. 1: "Signal Diagram"; ANZ, WAI1, 1549, DAZ 152/9/5/4, Appendix 8 to Brigade Operation Order No. 1: "Signal Diagram."

²⁰ KMARL, Acc. No. 1998.835, Official Papers kept by General Barrowclough, "Report on Operations – 3 NZ Div, August 1943 – December 1943"; Evans, *Pacific Service*, 61; ANZ, WAI1, 1553, DAZ 157/15/5, Historical Record of 35th Battalion, 16-18 August 1943; ANZ, WAI1, 1105, DAZ 126/1/12, War Diary of 17th Field Regiment, 1-31 August 1943; ANZ, WAI1, 1149, DAZ 155/1/20, War Diary of Headquarters 14 Bde NZEFIP, 1-31 August 1943, Vol. 1, Appendix VI, "USS President Jackson, Flagship, operation Order No. 10-43 with Ammendum to Appendix 5 of OO No. 10-43"; ANZ, WAI1, 1553, DAZ 156/15/5, Historical Record of 30th Battalion, 19 August 1943.

²¹ Henry I. Shaw, Jr. and Douglas T. Kane, *Isolation of Rabaul, History of US Marine Corps in World War II*, Vol. II (Washington, D.C.: Historical Branch, G-3 Division, Headquarters, USMC, 1963), 14; Gillespie, *The Pacific*, 117; ANZ, WAI1, 1149, DAZ 155/1/20, Appendix VI, "USS President Jackson, Flagship, Operation Order No. 10-43 with Ammendum to Appendix 5 of OO No. 10-43"; Miller, *Cartwheel*, 238.

each day progressing in complexity.²² The first day was an “individual ship landing exercise” with each BCT operating independently; each landed two infantry companies abreast behind which was located the Battalion Combat HQ Report Centre.²³ The first day stressed boarding of landing craft, boat formations, beach approaches, and tactical deployment once ashore. These had previously been practised by the soldiers on land, and were further developments of the procedures that they had learned. Naval sections of the Shore Parties controlled boat traffic and established radio and visual communications with their respective parent ship. The lessons of the first day were re-emphasised on the second day, with troops landing and establishing a defensive perimeter.²⁴ On the last day, the exercise was stepped-up to be a brigade sized combat landing of weapons, equipment, vehicles, and five days’ supplies. The brigade was required to establish a bridgehead in enemy territory and to maintain defensive positions overnight. One BCT effected the initial lodgement, while the other two extended the beachhead. There was added realism with participation by friendly and ‘enemy’ aircraft, including simulated bombing and strafing runs against transports and landing craft, as well as provision for naval gunfire support. Jungle tactics were applied once ashore, with the principle of all-round defence emphasised. Wireless sets were used to assist with fire-support coordination along the beachhead. Emphasis was placed on speedy task execution, as there was no pause between assault and support waves. The exercise ended the next morning with all personnel and stores re-embarked by the afternoon.²⁵

²² Brinkman, *The 35th Battalion*, 34; ANZ, WAI1, 1549, DAZ 152/9/5/4, “Exercise Efate: 29th Battalion Combat Team Operation Order No. 1, 8 September 1943”; ANZ, WAI1, 1149, DAZ 155/1/20, Appendix VI, “USS *President Jackson*, Flagship, Operation Order No. 10-43 with Ammendum to Appendix 5 of OO No. 10-43.”

²³ *Ibid.*, Appendix X, “No. 1 Combat Team operation Order No. 1 (Exercise No. 1), 19 August 1943.”

²⁴ *Ibid.*, Appendix VI, “USS *President Jackson*, Flagship, Operation Order No. 10-43 with Ammendum to Appendix 5 of OO No. 10-43”; War Diary of Headquarters 14 Bde, 20 August 1943; ANZ, WAI1, 1553, DAZ 157/15/5, Historical Record of 35th Battalion, 20 August 1943; Evans, *The Gunners*, 208.

²⁵ ANZ, WAI1, 1553, DAZ 156/15/5, Historical Record of 30th Battalion, 22 August 1943; ANZ, WAI1, 1105, DAZ 126/1/12, War Diary of 17th Field Regiment, 22 August 1943; ANZ, WAI1, 1149, DAZ 155/1/20, Appendix IX, “14 Bde Group Operational Order No. 1”, 21 August 1943; Appendix XI, “Signal Operating Procedure, PLD Signal Diagram No. 1”; Appendix I, Organisation of the Three Combat Teams, “Allocation of Personnel to Ships”; Appendix VI, “USS *President Jackson*, Flagship, Operation Order No. 10-43 with Ammendum to Appendix 5 of OO No. 10-43”; “Appendix 5 to Transport Division Two Operation Order 10-43: Air Support Plan”; ANZ, WAI1, 1105, DAZ 126/1/12, War Diary of 17th Field Regiment, 22 August 1943; ANZ, WAI1, 1553, DAZ 156/15/5, Historical Record of 30th Battalion, 22 August 1943; Nicol, *Headquarters*, 176-181.

At the conclusion of the exercise, New Zealand and American officers met in conference to discuss lessons learned. The Americans were particularly pleased with the New Zealanders' performance, but Barrowclough and others criticised some aspects – unfortunately, it appears that no written record of this conference exists within the division's records and thus no concrete examples can be given. Nonetheless, the assessment of the division's performance by the American officers was important as it served to highlight the standard of amphibious training of the New Zealanders up to this point, despite the exercise being the first in which a New Zealand brigade group had conducted an *actual* landing with all three of its BCTs. Additionally, it was the first time that the men landed in an area totally unknown to them, and thus this exercise more closely resembled combat conditions. It would have been highly satisfactory that the exercise was completed without "any avoidable hitch."²⁶



Image 6: New Zealand troops conducting an amphibious training exercise at Mele Beach, Efate, New Hebrides – illustrating the challenges of getting ashore from Landing craft.

(Source: Gillespie, *The Pacific*, New Zealand Electronic Text Collection, <http://nzetc.victoria.ac.nz/tm/scholarly/WH2Paci-fig-Wh2Pac13a.html>.)

²⁶ KMARL, Acc. No. 1998.834, Official War Diary of General Barrowclough, 24 August, 1943; ANZ, WAI1, 1105, DAZ 126/1/12, War Diary of 17th Field Regiment, "Manuals and Pamphlets", 2 August 1943; Knowles, *A Saga of the 34th Battalion*, 43.

On completion of the exercise the 14th Brigade Group and Headquarters 3rd NZ Division continued their move north and arrived off Guadalcanal on 27 August, with the 8th Brigade Group and rear elements arriving on 14 September.²⁷ Initially, the division was attached to the US XIV Corps under 56-year-old Major General Oscar W. Griswold, however, Barrowclough was soon informed that his division was to transfer to the First Marine Amphibious Corps. This was the first time Barrowclough had encountered the difficulties of the American command system “with its multiplicity of Headquarters and Services” which he felt was “extremely complicated” as conflicting orders would often be passed down to the New Zealanders from different American commands, which caused consternation for Barrowclough and his staff.²⁸ Indeed, he felt that the different American commands would often proceed in their own directions before coming together to discuss plans in coordination. Granting that these issues must have been an administrative irritant (to both the New Zealanders and Americans), Barrowclough seems to have had the presence of mind to realise that there was not much he, or NZ Army Headquarters, could do to influence American operational decision making. Indeed, Newell contends that Barrowclough “strove hard to avoid friction [with American commands]...”, and to this Barrowclough must be given his correct dues.²⁹ Although, Newell goes too far in stating “Barrowclough operated comfortably within the American command structure” as Barrowclough often felt restricted by the structure’s myriad chains of command.³⁰

Guadalcanal offered the first opportunity to train in terrain similar to the intended operational area. For this reason, jungle warfare courses and lectures were a key focus while on the island and field training commenced around 6 September, with patrols and inspections of old Japanese strongpoints and defensive positions testing the men’s

²⁷ Gillespie, *The Pacific*, 118.

²⁸ KMARL, Acc. No. 1998.834 Official War Diary of General Barrowclough, 9-10 September 1943.

²⁹ Newell, “New Zealand’s Forgotten Warriors,” 162.

³⁰ *Ibid.*, 162.

knowledge of jungle tactics.³¹ This also allowed troops to become accustomed to the more practical demands of jungle warfare, such as booby-trapping, fox-hole construction, and observation of enemy positions for artillery ranging. Further, increased anti-malarial measures were instituted which called for greater vigilance and discipline to the manner in which the soldiers lived and operated within the jungle. The Brigade and Division Signal Sections were also introduced to the difficulties of establishing communication networks in jungle conditions.³² These medical and signals efforts provided the first real examples (as opposed to just indications) of the conditions which the division would face once committed to combat on islands further north. Nevertheless, some training aspects were hampered by a lack of New Zealand-made jungle warfare equipment, such as being short 30,000 jungle 'suits', which necessitated the use of American stores.³³ This inevitably caused delays to the schedule of training and further highlighted the reliance upon US resources. Nonetheless, not all equipment shortages were negative: Having taken into account recent American experiences in jungle warfare, the division arrived on Guadalcanal with approximately one-third of the standard divisional vehicle War Establishment.³⁴ This was a response to the limiting nature that the jungle terrain had upon vehicles, and the smaller number of vehicles was considered adequate owing to the restrictions imposed.³⁵ Generally, the division's jungle training had progressed from its time in New Caledonia, however as Guadalcanal was the first time in which the soldiers had actually operated within the confines of the jungle, it is difficult to see how the division could have been sufficiently ready for combat. It must have been displeasing for Barrowclough then, when training was cut short upon the 14th Brigade Group receiving

³¹ ANZ, WAI1, 1105, DAZ 126/1/13, War Diary of 17th Field Regiment, September 1943; Brinkman, *The 35th Battalion*, 37; ANZ, WAI1, 1553, DAZ 157/15/6, Historical record of 35th Battalion, September 1943; Sugden, *Pacific Saga*, 63.

³² Brinkman, *The 35th Battalion*, 38; Evans, *The Gunners*, 66; ANZ, WAI1, 1105, DAZ 126/1/13, War Diary of 17th Field Regiment, 1-10 September 1943; KMARL, Harry James Lepper, interviewed by Brenton Beach, 30 November 2007; Nicol, *Headquarters*, 182.

³³ KMARL, Acc. No. 1998.834 Official War Diary of General Barrowclough, 9 September 1943.

³⁴ This equated to 682 vehicles. KMARL, Acc. No. 1998.835, Official Papers kept by General Barrowclough, Notes of Conference held at Division HQ, 5 July 1943.

³⁵ *Ibid.*; KMARL, Acc. No. 1998.834 Official War Diary of General Barrowclough 4 September 1943; ANZ, AD12, 16, 28/15/2, "Wireless Trucks," HQ 3 NZ Division to Army HQ, Wellington, 4 July 1943; Sale, *Stepping Stones to the Solomons*, 48.

instructions to prepare for a move to Vella Lavella, in the New Georgia group, to relieve American forces fighting on the island.³⁶

The training which had been undertaken by the division during August and September had revealed the level of its progress into an effective force for service within the South Pacific. Despite being forced to mostly practice mock amphibious landings on land, the division showed solid skills in its ability to land and establish a beachhead in a speedy manner. However, its performance within the realm of jungle warfare was less impressive owing to the unsuitability of terrain in New Caledonia, and issues of supply which continued once it arrived on Guadalcanal. This resulted in incomplete jungle training for some units that were to be sent to Vella Lavella, and it consequently caused a number of limitations to be identified during the division's first combat action.

In mid-1943, fighting in the New Georgia group of the central Solomon Islands was winding down, but before the Allied advance could continue, pockets of remaining Japanese resistance had to be eliminated. To avoid a prolonged battle, the Americans bypassed the largest Japanese garrison on the Island of Kolombangara, and landed on Vella Lavella on 15 August. This was the first 'island-hopping' operation of the war, and it effectively severed Japanese LOCs from their forces remaining to the south. As well as preventing a protracted land battle, the capture of Vella Lavella provided the Americans with an island within fighter range of Bougainville and Rabaul.³⁷ On landing, the US 35th RCT successfully established a beachhead and soon secured the surrounding area, before it was relieved by elements of the 3rd NZ Division's 14th Brigade Group, which had the mission of eliminating the remaining 500-700 Japanese.³⁸ An Advance Party containing officers from all units of 14th Brigade Group, had earlier reconnoitred the island, which they found to be of roughly circular shape 19 kilometres by 42 kilometres with a high central ridge about 600-920 metres high. The jungle was in many places thick and dense,

³⁶ KMARL, Acc. No. 1998.834 Official War Diary of General Barrowclough, 4 September 1943; ANZ, WAI1, 1149, DAZ 155/1/21, War Diary of Headquarters 14th Brigade, 7 September 1943.

³⁷ Miller, *Cartwheel*, 172-173.

³⁸ Gillespie, *The Pacific*, 127; ANZ, WAI1, 1149, DAZ 155/1/21, "14th Brigade Group Operation Order No. 1, 21 September 1943."

and encroached upon the shore of the island's many bays which were themselves enclosed by coral reefs, especially on the northern-side of the island. A few muddy tracks enabled movement inland, although these occasionally led into impenetrable mangrove swamps. ³⁹ It was in every sense a typical jungle-clad island of volcanic origin.



Map 3: Vella Lavella – movements of BCTs are indicated by the light and dark arrows.
 (Source: Sugden, *Pacific Saga*, NZ Electronic Text Collection,
<http://nzetc.victoria.ac.nz/tm/scholarly/WH2IP-Saga-fig-t1-body1-d8-x8-fig1.html>.)

After the Advance Party had made the necessary arrangements the main body of the brigade group landed on island's southern coast in three groups, between 14–25 September. The landings followed points established in a memorandum released by

³⁹ ANZ, WAI1, 1149, DAZ 155/1/21, War Diary of Headquarters 14th Brigade from 1 September – 30 September, Appendix I, "Move to Forward Area – Advanced Party, 12 September 1943", Appendix covering operations on Vella Lavella, "Brigade Commander's Report on the Operation."

Headquarters 3rd NZ Division, entitled “Amphibious Training”, in June 1943.⁴⁰ This document was issued “for the purpose of giving some guidance in the planning for amphibious training”, however, it did “not embody a complete doctrine on the subject.”⁴¹ It was in essence an edited collation of key points from American sources which the division believed important, although it added New Zealand observations. This small memorandum remained the ‘check-list’ for all planning related to amphibious operations until late 1943 and thus was an important milestone for New Zealand amphibious developments during the war.

Once the brigade and divisional elements had established themselves and after sufficient intelligence had been collected, Barrowclough and Brigadier Leslie Potter, commander of the 14th Brigade Group, “tentatively settled” on a plan to eliminate Japanese resistance.⁴² The plan took into account that Vella Lavella was at the edge of the American supply system in the Solomon Islands, and therefore operations were dictated by the ability to meet logistical supply-and-demand. In the end, Potter envisioned a standard pincer operation by two BCTs which advanced up the coast, performing small amphibious landings along the way. The third BCT remained in reserve. The intention was to bottle up the Japanese on the northern-tip of the island and then “eliminate all enemy on Vella Lavella.”⁴³ The BCTs could not advance overland as the jungle was too rugged, and Barrowclough expected progress to be “almost unbelievably slow” and was unsure exactly how long the operation would take.⁴⁴ As it eventuated, some infantry patrols only averaged around 450 metres a day.

⁴⁰ ANZ, WAI1, 1551, DAZ 155/9/2, “Amphibious Training”, 24 June 1943.

⁴¹ Ibid., “Amphibious Training Notes”, HQ 3rd NZ Division, 26 June 1943.

⁴² KMARL, Acc. No. 1998.835 Official War Diary of General Barrowclough, 19 September 1943; KMARL, Acc. No.2003.570 David Jillet, interviewed by Brenton Beach, 24 September 2003.

⁴³ Ibid., War Diary of Headquarters 14th Brigade 2 NZEFIP from 1 September to 30 September 1943, Appendix V, “14th Brigade Group Operation Order No. 1, 21 September 1943”; Bioletti, *Pacific Kiwis*, 71-72; ANZ, WAI1, 1523, DAZ 121/9/03 HQ 3 Division – Office records – 3 Division Operations, telegram to HQ 3rd NZ Division, 26 September 1943.

⁴⁴ ANZ, AD12, 15, 28/15/1, Part 5, HQ 3rd NZ Division to Army HQ, Wellington, 20 September 1943.

Movement began on 21 September, but due to a limited number of landing craft, the landings had to be accomplished through a series of legs, with the infantry companies moving first, then followed by the remaining troops, supplies, and ammunition.⁴⁵ Distribution of ammunition was important, as earlier experiences in jungle warfare had seen that a high volume of ammunition was needed for automatic-weapons. Grenades were also important during jungle engagements as they could be lobbed around trees and for this reason three grenades were distributed for each man, which was an added weight but a necessary one.⁴⁶ Other than this, the infantry companies carried the standard weapon load, including anti-tank rifles, despite the knowledge that these were unsuitable in jungle terrain. The New Zealand-made jungle hat was also in use for the first time and the soldiers praised its lightweight and durability.⁴⁷

Generally, all units followed the equipment recommendations established in the jungle exercises conducted earlier in the year. Tactically, and where possible, the BCTs advanced two companies up and one in reserve in the jungle. Once contact was established with the enemy, platoons were detached and attempted to outflank the enemy position; if they ran into covering-fire, the platoons retired and called for artillery support. If, as was often the case, communication could not be established between the forward observer and the artillery, the infantry companies disengaged and retired for the night into all-round defensive positions. The practice of halting *all* jungle movement during the night allowed the outnumbered, outgunned, and out of supply Japanese to exploit the hours of darkness. This was one explanation why the New Zealanders were unable to fix the Japanese into an area in which they could employ their superior firepower, particularly artillery. In this way, the New Zealanders continued the American practice of using the

⁴⁵ ANZ, WAI1, 1149, DAZ 155/1/21, War Diary of Headquarters 14th Brigade 2 NZEFIP 1-30 September 1943, 21 September 1943; ANZ, WAI1, 1149, DAZ 155/1/23, War Diary of Headquarters 14th Brigade 2 NZEFIP from 1 November to 30 November 1943, Appendix I, "14th Brigade Group – Report on Combat Operations – Vella Lavella, 29 October 1943"; Gillespie, *The Pacific*, 131; ANZ, WAI1, 1553, DAZ 157/9/85, "14th Brigade Group – 3 (NZ) Division: Report on Combat Operations – Vella Lavella, 29 October 1943," and details from 35th Battalion 'A', 'B', and 'C' Companies' Account of Operations; ANZ, WAI1, 1105, DAZ 126/1/13, War Diary of 17th Field Regiment, 25-26 September 1943; Evans, *The Gunners*, 70.

⁴⁶ ANZ, WAI1, 1553, DAZ 157/15/6, Historical record of 35th Battalion, 25 September 1943; Newell, *Operation Goodtime*, 35.

⁴⁷ ANZ, WAI1, 1553, DAZ 157/9/85, "An Account of Operations by 'A' Company, 35th BCT on Vella Lavella"; "35th BCT Operation order No. 1, 25 September 1943"; "35th BCT Movement Order No. 1, 22 September 1943."

night to reinforce defensive positions, and in so doing accepted that the night belonged to the Japanese.⁴⁸ Additionally, the reliance on artillery was similar to American tactics employed in New Georgia, where extensive artillery saturation of the objective area was conducted.⁴⁹ This suggests that the 3rd NZ Division had a similar tactical management of jungle engagements to the Americans. Indeed, the experience of artillery on Vella Lavella replicated the issues encountered by Allied forces elsewhere, especially in using wireless and its consequent unreliability in jungle conditions. Additionally, the performance and use of mortars emulated the statements of American troops, who found that smaller calibre mortars were extremely useful, while lambasting the heavier calibre mortars as unduly heavy and unwieldy.⁵⁰

Other tactics served to illustrate the inexperience of New Zealand troops, and highlighted the lack of proper jungle training which the 14th Brigade Group had received up till then. This included the use of established jungle tracks by New Zealand patrols, which allowed the Japanese to lay ambushes. The New Zealanders were well aware of American experiences on Guadalcanal, which had shown that jungle tracks should seldom be trodden, in case of enemy ambush, but with their limited jungle training the New Zealand infantrymen lacked the ability to operate with confidence away from the tracks. Such instances were characterised by patrols stumbling unawares across Japanese strongpoints and delaying positions. Indeed the first casualties of the operation occurred when a New Zealand patrol walked into an ambush along a jungle track.⁵¹ Patrolling featured heavily on Vella Lavella. Earlier experiences by the Americans, British, and Australians, together with the 3rd NZ Division's own training exercises had shown that infantry patrols required high levels of aggressiveness and initiative when operating in jungle terrain. However, despite the Japanese defenders equating to roughly one-fifth of the New Zealanders' strength, and despite intelligence sources suggesting that only half the Japanese were

⁴⁸ Bennett, "Night Jungle Operations", 11-16.

⁴⁹ NARA, 337-30, "Informal Report – Combat Ops – New Georgia Campaign (XIV Corps) – 37th Infantry Div.", n.d., 21-24.

⁵⁰ ANZ, WAI1, 1553, DAZ 157/9/85, "14 Brigade Group – 3 (NZ) Division: Report on Combat Operations – Vella Lavella, 29 October 1943", "Account of Operations by 'A', 'B', and 'C' Companies – 35th Battalion"; Brinkman, *The 35th Battalion*, 43-53; *Close-Up of Guadalcanal, October-November 1942: Verbatim Statements of Participants*, 22-23.

⁵¹ FM 72-30, 89.

actually armed, the New Zealanders favoured passive patrolling techniques.⁵² When ambush opportunities arose, such as on 27 September when two infantry platoons spotted an approaching column of Japanese troops, the New Zealanders instead decided to remain out of sight and withdrew, only to be later ambushed by the same Japanese force.⁵³ The soldiers had been taught booby-trapping and ambush tactics, and these could have effected a delay upon the Japanese.

The experience of Vella Lavella also revealed deficiencies in some of the New Zealanders' equipment. The issue of American jungle suits – dyed US herringbone uniforms with brown and green colours – was generally popular with the troops, as the suits were less conspicuous than the khaki coloured New Zealand battle-dress, but on the other hand the suits “did not help keep the body cool”.⁵⁴ Soldiers were also unimpressed with their New Zealand entrenching tools, despite these being identified as heavy and unwieldy during training, and many men carried the lighter American entrenching tools when possible. Steel helmets were not worn due to the heat and because the steel made scratching noises when moving through the undergrowth, respirators also went unissued as they were heavy and unneeded against the Japanese. Leather boots were issued and these proved quite inappropriate in the jungle as they rapidly deteriorated due to the humidity. The Infantry carried emergency rations, full water bottles, and one two-gallon water canteen between five men to reduce weight. Additional rations were brought up with subsequent flights of landing craft. The emergency rations were adequate for their intended purpose, but as the ability to transport regular rations to forward companies became sporadic, due to the rugged terrain and lack of landing craft, they were also a necessity. The disruption to supply lines led to some troops digging holes in the ground in search of drinking-water, which caused diarrhoea within a few days, leading to a growing number of men being sent rearward to the medical field station. While medical reports stated that the effects of the diarrhoea outbreak were not acute, it is likely that had the operation continued, increasing cases of cholera or dysentery would have appeared,

⁵² This was despite knowing that only half the Japanese garrison were armed. See ANZ, WAI1, 1553, DAZ 157/9/85, “35th Battalion Combat Team Operation Order No.1, 25th September 1943.”

⁵³ Brinkman, *The 35th Battalion*, 85.

⁵⁴ *Ibid.*, 42; Evans, *The Gunners*, 69; ANZ, PUTTICK5, 1, 5, Letter from Barrowclough to Puttick, NZ Army HQ, Wellington, 2 December 1943.

which would have further impacted on operational performance.⁵⁵ The irregular supply to forward companies affected ammunition levels, as troops took only one unit of fire with them which was insufficient for any prolonged firefight.⁵⁶ This left the forward units dependent upon a reliable system of resupply, which the brigade group did not possess, and contributed to the early withdrawals of patrols during firefights.

The supply problems had one further effect which was that New Zealand patrols resorted to “visiting native gardens and villages and taking the fruits and vegetables upon which the natives largely rel[ied] for their sustenance”.⁵⁷ Apart from showing a breakdown of discipline within those New Zealand units, and to which the officers and senior non-commissioned officers must be held accountable, the above instances of looting, makes it evident that the men were driven to resort to this by the continued issuing of emergency rations which they found to be tedious and, ultimately, inedible. The emergency rations were also calorie deficient and could not sustain soldiers operating in the jungle over prolonged periods. A subsequent medical report established that combat troops were suffering from “a condition of mild nutritional anaemia” which, while not posing an immediate risk to the troops, would not have helped the situation.⁵⁸ It was perhaps natural that men would turn to raiding native gardens but this threatened to undermine the islanders’ support for the New Zealanders. With a view to future operations,

⁵⁵ ANZ, WAI1, 1553, DAZ 157/9/85, “Historical record of 35th Battalion, September 1943”, “35th Battalion Combat Team Movement Order No. 1, 21 September 1943”, “14th Brigade Group Operation Order No. 1, 21 September 1943”, “An Account of Operations by ‘A’ Company, 35th BCT on Vella Lavella”; Sugden, *Pacific Saga*, 73.

⁵⁶ A unit of fire was, “A unit of measure for ammunition within a theatre from a tactical point of view, based upon experience in the theatre. It represents a specified number of rounds per weapon, which varies with the types and calibers [*sic*] of the weapons ... In general, it represents a balanced expenditure by various weapons under conditions of normal action. The unit of fire may be modified by theatre commanders as necessary for each individual theatre”. Ordnance Department (US Army), *Field Manual 9-6 Ammunition Supply* (Washington, D.C.: War Department, 15 June 1944), 4; ANZ, WAI1, 1553, DAZ 157/9/85, “35th Battalion Combat Team Movement Order No. 1, 21 September 1943.”

⁵⁷ ANZ, WAI1, 1089, DAZ 121.2/10, HQ 3 Division ‘A’, February 1943 to June 1944, War Diary 3rd (NZ) AA&QMG Branch, November 1943, “Looting of Native Gardens”, October 1943.

⁵⁸ KMARL, Acc. No. 1998.835 Official Papers kept by General Barrowclough, “Complaints Regarding Food”, 7 January 1944.

Barrowclough asked that all officers take steps to “put down the undesirable practice to which I have alluded.”⁵⁹



Image 7: Vehicles of the 3rd NZ Division travelling along one of Vella Lavella’s ‘jungle roads’ – the difficulty of traversing such roads was a key reason behind the 14th Brigade’s BCTs using landing craft to transport troop and supplies. (Source: “Army vehicles of the New Zealand Expeditionary Force on a muddy road in the bush, Vella Lavella Island, Solomon Islands”, Department of Internal Affairs, War History Branch: Photographs relating to World War 1914-1918, World War 1939-1945, occupation of Japan, Korean War, and Malayan Emergency, Ref: WH-0256. Alexander Turnbull Library, Wellington, New Zealand, [http://natlib.govt.nz/records/23250634.](http://natlib.govt.nz/records/23250634))

⁵⁹ ANZ, WAI1, 1089, DAZ 121.2/10, HQ 3 Division ‘A’, February 1943 to June 1944, War Diary 3rd (NZ) AA&QMG Branch November 1943, “Looting of Native Gardens”, October 1943.

The operation on Vella Lavella ended on 9 October. In a final acknowledgment to the New Zealanders' inactive night procedures, the remaining Japanese garrison, about 400 men, executed a skilful amphibious withdrawal during the night of 6-7 October. New Zealand casualties were four officers and 28 other ranks (O/R) killed, and one officer and 31 O/R wounded. Japanese killed were estimated to have been 200 plus.⁶⁰ The amphibious methods and procedures practiced by the 3rd NZ Division had not played a significant part in this operation as this was largely a shore-to-shore operation, however the fighting had espoused all the characteristics of jungle warfare, including the importance of individual leadership qualities, small unit actions, close-range combat skills, and physical ability. The experience showed that the New Zealanders required additional training to develop expertise in jungle operations – although this was not surprising as both the Australian and American forces had found that their troops also required further training after their first jungle operations. Issues highlighted included a lack of observation and poor situational awareness during the operation, which led to friendly units becoming isolated and reduced the effects of supporting arms in the BCTs.⁶¹ Moreover, the battle illustrated that New Zealanders followed many American jungle warfare tactics, despite the 3rd NZ Division (and its brigade groups) differing in composition and available resources.

The lessons of Vella Lavella, and particularly those of 14th Brigade Group, were recorded and transferred to the division, however, there was not much time to incorporate these before the rest of the division (8th Brigade Group) was to be involved in the capture of the Treasury Islands, the last combat action before Operation 'Squarepeg'. The capture of the Treasury Islands (Operation 'Goodtime') was a diversionary support operation for larger landings by the First Marine Amphibious Corps on Bougainville. Capture of the Treasury Islands assisted with the coordination, sustainability, and security of the main effort by establishing a forward staging area and a long-range radar site for air operations over

⁶⁰ ANZ, WAI1, 1523, DAZ 121/9/03, Telegram to Barrowclough, 9 October 1943; Gillespie, *The Pacific*, 138; KMARL, Acc. No. 1998.835, "Report on Operations – 3rd NZ Division, August 1943-December 1943", 31 December 1943.

⁶¹ ANZ, WAI1, 1553, DAZ 157/9/85, "An Account of Operations by 'A' Company, 35th BCT on Vella Lavella"; Sugden, *Pacific Saga*, 73.

Rabaul and Bougainville.⁶² The Treasury Group consisted of Mono and Stirling Islands, covered by dense jungle, and many streams.⁶³ Capture of Blanche Harbour was key, as it was one of the few natural deep-water harbours in the Solomon Islands.⁶⁴ The Japanese garrison in the Treasury Islands was believed to be small compared to the roughly 24,000 Japanese troops on Bougainville and the large numbers of aircraft located in the Shortland Islands, less than 24 kilometres away. The 3rd NZ Division's 8th Brigade Group was selected for the landing, with elements of its three BCTs to land at Falamai village and Stirling Island, to secure Blanche Harbour, while a smaller force landed on the northern side of Mono to establish a radar site (see Map 4).⁶⁵ This plan resulted in a dangerous divergence of forces among the 8th Brigade Group as it would be split between the southern and northern sides of Mono. Additionally, the presence of enemy aircraft units so near to the objective area, and which would be able to interfere in the operation, necessitated the attachment of additional anti-aircraft units to the brigade group.⁶⁶ Overwhelming force was needed in order to defeat any Japanese counterattack. To this end the operation included 4,608 New Zealanders, 1,966 Americans, together with over 30 vessels, which constituted the Amphibious Task Force that was to rendezvous off Mono Island early on 27 October.⁶⁷

⁶² Prados, *Islands of Destiny*, 312; Miller, *Cartwheel*, 226-228; ANZ, WAI1, 1618, DAZ 491/23/7, "Report on Operations – Treasury Islands (Op. Goodtime)", 30 November 1943; Gailey, *Bougainville 1943-1945*, 39; ANZ, WAI1, 1481, DAZ 121/9/21, HQ 3 Division – Office records – 3 (US) Marine Division – Operation order – Torokina – Bougainville Island, Operation Order No. 1.

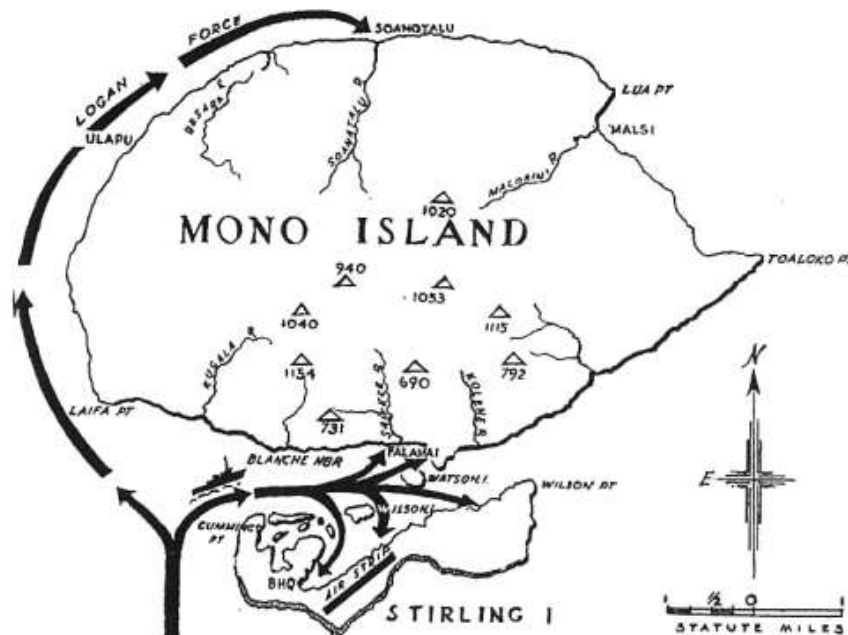
⁶³ ANZ, WAI9, 1, S14, Letter for Information of GOC 3rd Division, 8 October 1943.

⁶⁴ McGee, *The Solomons Campaigns 1942-1943*, 470; Miller, *Cartwheel*, 235-237.

⁶⁵ Wilkinson was also Commander of Task Force 31 as it was the main amphibious task grouping in the South Pacific Area. Morison, *Breaking the Bismarcks Barrier*, 281-282; Rottman, *US World War II Amphibious Tactics*, 9; ANZ, WAI1, 1618, DAZ 491/23/7, "Report on Operations – Treasury Islands (Op. Goodtime)", 30 November 1943.

⁶⁶ ANZ, WAI9, 1, S14, Operations, October 1943 – April 1944, Letter from Barrowclough to Row, 18 October 1943; Letter for Information of GOC, 3rd NZ Division, 8 October 1943; Gillespie, *The Pacific*, 148; ANZ, WAI1, 1618, DAZ 491/23/7, "Report on Operations – Treasury Islands (Op. Goodtime)", 30 November 1943; Rottman, *Japanese Army in World War II*, 70.

⁶⁷ Gillespie, *The Pacific*, 145; McGee, *The Solomons Campaigns 1942-1943*, 477-480.



Map 4: The Treasury Islands – the dark arrows showing the points of attack for Operation ‘Goodtime’. (Source: Sale, *Stepping Stones to the Solomons*, New Zealand Electronic Text Collection, <http://nzetc.victoria.ac.nz/tm/scholarly/WH2IP-Step-fig-WH2IP-Step065a.html>.)

Planning was placed under Rear Admiral Theodore Wilkinson, USN, Commander, Third Amphibious Force, who had also planned and conducted the American landings on Vella Lavella. Operational planning was difficult as the USN had control over all its aspects, with cooperation hampered by the dispersal of US and New Zealand headquarters across different islands. This compounded communications, and led to confusion amongst shipping concerns which necessitated the reissuance of orders. Furthermore, liaison officers from attached units were often absent during the commencement of planning, and this again hindered shipping and loading plans as equipment could not be correctly calculated. This was not helped, when a shortage of landing craft prevented the 8th Brigade Group from having a floating reserve during the landings, something which was normally standard practice in American amphibious operations, and resulted in a down-sizing of the brigade’s BCTs. Once unit requirements from all the various formations had been fixed, amphibious rehearsals were able to be conducted over a three-day period

near Guadalcanal, after which the task force departed for the Treasury Islands on 23 October.⁶⁸

Four days later, the task force reached the assembly area and the assault troops were given the 'stand-to-order'. The landing craft approached the shore under cover of a preliminary naval bombardment by USN destroyers, however, the New Zealanders later criticised it as being "of little value" as most shells missed Japanese targets.⁶⁹ Fortunately, two of the USN's newly designed LCI gun boats were able to neutralise a number of Japanese shore positions before they could fire upon the exposed landing craft. Despite this, the fire-support rendered by the gun boats almost caused catastrophe on the beaches, when they opened fire without any form of fire control or warning, and resulted in two killed and two wounded New Zealanders.⁷⁰ Despite these setbacks, the troops landed on time and met minimal resistance; in part due to the efforts of a New Zealand Advance Party which had landed earlier and succeeded in severing Japanese line communications and prevented the garrison moving into defensive positions before the preliminary bombardment began. Once ashore the troops were able to test their newly issued New Zealand-made Khaki drill jungle 'suits', which were similar to the normal New Zealand battle-dress but with spray-painted green and brown camouflage blotches. The 'suits' were most unwelcome, and when the soldiers became wet, it caused the damp paint to rub-off leading to skin irritations.⁷¹

While the initial waves of assault troops met negligible resistance, subsequent waves were delayed by hidden, or previously thought destroyed, Japanese bunkers on the

⁶⁸ ANZ, WAI1, 1141, DAZ 151/1/25, War Diary Headquarters 8th Brigade, November 1943, Appendix 18: "Combined Operations – Notes on Training", 30 November 1943; Rottman, *US World War II Amphibious Tactics*, 23; Shaw and Kane, *Isolation of Rabaul*, 189; ANZ, WAI1, 1618, DAZ 491/23/7, "Report on Operations – Treasury Islands (Op. Goodtime)", 30 November; ANZ, WAI1, 1146, DAZ 154/1/22, War Diary 36th Battalion, entry for 23 October 1943; John N. Rentz, *Bougainville and the Northern Solomons, USMC Historical Monograph* (Washington, D.C.: Historical Branch, Headquarters, USMC, 1946), 93; ANZ, WAI1, 1546, DAZ 151/9/1/15, "Task Group 31.1, Report of Occupation of the Treasury Islands", 10 November.

⁶⁹ Rentz, *Bougainville and the Northern Solomons*, 96-97; ANZ, WAI1, 1550, DAZ 154/9/1, 36 Battalion – Office records – Report on operations – Treasury Group, "Report on Recent Operations: Observations and Lessons Learned", 22 December 1943.

⁷⁰ ANZ, WAI, 1546, DAZ 151/9/1/15, "36th Battalion Report on Operations, from 27 October to 9 November 1943".

⁷¹ ANZ, WAI1, 1618, DAZ 491/21/7, "Report on Operations – Treasury Islands (Op. Goodtime)", 30 November 1943; Bob Buckland, Sergeant in the 29th Battalion, interview with author, 6 July 2012.

beach, along with accurate Japanese artillery and mortar fire. Additional confusion resulted when New Zealand Shore Parties (composed of infantrymen) briefly refused to unload the ships, compounding the situation created by the Japanese shelling. The infantry redeemed themselves somewhat by overrunning Japanese artillery and mortar positions which had caused considerable damage to landing craft and had already delayed the unloading of some ships. The level of enemy fire directed on proceeding echelons was unusual, as the Japanese seldom paid much attention to rear echelons in the beachhead, and the initial difficulty in locating the guns is therefore understandable.⁷² The hasty attack conducted by the infantry was unlike the techniques employed on Vella Lavella, as the communications network was still established at this time, and thus the procedure of retiring and calling in fire support would have been impossible. To hesitate could have resulted in a direct hit on a landing craft which could have eliminated a whole infantry company or artillery battery. When New Zealanders had established their artillery and mortar positions, they were able to provide timely fire support, however, in at least one instance, miscommunication between the forward observer and the artillery led to the death of two men from the 36th Battalion, due to rounds landing short.⁷³

By evening, a continuous front had been established inland, although the New Zealanders perpetuated the habit of consolidating their positions at night in fear of Japanese attacks.⁷⁴ With the Japanese artillery neutralised, no further interference could be affected against the beachhead by the enemy garrison, and the remaining enemy withdrew to the northern coast of Mono. This posed some problems, as while the main landings were occurring, Logan Force, under the command of Major G. Logan, had landed on the northern coast to establish a radar site. Containing an infantry company, machine gun section, and American construction personnel and radar technicians, the unit had the most important and dangerous task of the entire operation. The New Zealand infantry established a small beachhead and constructed mutually supportive defensive positions,

⁷² Rottman, *US World War II Amphibious Tactics*, 30.

⁷³ ANZ, WAI1, 1550, DAZ 154/9/1, "Report on Recent Operations: Observations and Lessons Learned, 22nd December 1943."

⁷⁴ ANZ, WAI1, 1546, DAZ 151/9/1/15, Report on Operations by 36th, 34th, and 29th Battalions.

an important element if the small force were to survive. Additionally, the defensive positions were located along likely avenues of approach, and showed that the 8th Brigade Group's extended period of jungle training on Guadalcanal had made an impact on the soldiers' operating procedures, as opposed to the conduct of the 14th Brigade Group on Vella Lavella. The Japanese body withdrawing across the island now made a concentrated attack against Logan Force, but they were beaten off leaving over 70 of their dead in or near the New Zealand lines. This action signalled the end of all organised Japanese resistance in the Treasury Islands.⁷⁵

By early November, the 8th Brigade Group had secured the Treasury Islands at the cost of 40 New Zealanders killed and another 145 wounded.⁷⁶ In contrast to operations on Vella Lavella, the proportion of killed-to-wounded was less (1 killed: 4.5 wounded).⁷⁷ This may, in part, be due to the field hospital being located closer to the forward elements than had been done on Vella Lavella. Nonetheless, this did not mean salvation for all as the presence of Japanese snipers resulted in a high rate of officer casualties, eight within one battalion in the first 24 hours. Although total casualties sustained were light, new types of medical casualties were encountered with the first instances of 'shell shock' were reported – perhaps an indication of the added stress of jungle fighting on the first day.⁷⁸ Operation 'Goodtime' assisted the division in gaining vital experiences in jungle warfare and amphibious operations, the lessons of which were incorporated into a detailed

⁷⁵ Gillespie, *The Pacific*, 142-143, 154-157; Shaw and Kane, *Isolation of Rabaul*, 193. Groups of Japanese survivors continued to fight-on until 12 November, but by 3 November attention had turned towards consolidating the islands. ANZ, WAI1, 1546, DAZ 151/9/1/15, Report on Operations by 36th, 34th, and 29th Battalions; "Task Group 31.1, Report of Occupation of the Treasury Islands", 10 November; Sale, *Stepping Stones to the Solomons*, 59; McGee, *The Solomons Campaigns 1942-1943*, 485-486; Newell, "New Zealand's Forgotten Warriors", 133; ANZ, WAI1, 1146, DAZ 154/1/22, War Dairy of 36th Battalion, October 1943, Appendix 6: "Intelligence Summary", 31 October 1943; ANZ, WAI1, 1550, DAZ 154/9/1, "Report on Recent Operations: Observations and Lessons Learned", 22 December 1943.

⁷⁶ ANZ, WAI1, 1546, DAZ 151/9/1/15, "8th Brigade Report on Operations – Treasury Islands (Operation Goodtime)", 30 November 1943; "Report on Operations by 7th Field Ambulance, Appendix 'A': Statement of Casualties." There were a total of 327 NZ and US casualties from 27 October – 9 November (includes sick and injured).

⁷⁷ ANZ, WAI1, 1141, DAZ 151/1/26, War Diary 8th Brigade, October 1943, Appendix 14: "Memorandum to all ranks 8th Brigade Group", from Brigadier Row, 29 November 1943."

⁷⁸ ANZ, WAI1, 1146, DAZ 154/1/22, War Diary 36th Battalion, October 1943, Appendix 2: "Casualty returns", 27 October 1943.

report, “Notes on Planning Combined Operations.”⁷⁹ This report was well received, and its recommendations were implemented in the division’s final operation.

In closing, the period after the 3rd NZ Division left New Zealand, between late 1942 and August 1943, provided the division and its soldiers with vital experience in amphibious operations and jungle warfare, and it can rightly be called the ‘foundational period’ of the division; a time which furnished it with the necessary skillsets for successful operations in the South Pacific. However, this period was also somewhat restrictive to the division’s grooming of its amphibious and jungle warfare skills, as resources were limited, especially in regards the availability of landing craft, and the unsuitability of New Caledonia’s vegetation for properly replicating the environment of the Solomon Islands. These factors placed limits on the level of training which could be undertaken. Further, the operational demands were such that by the time of the division’s first combat action, some elements of the division were still not properly acquainted with the demands of the jungle. These factors were compounded as the division operated within a foreign command structure, which at times, was frustrating to work under in regards to making preparations for combat. Ultimately, the periods of training were just precursors to learning first-hand the demands of the operational environment.

The experiences on Vella Lavella and the Treasury Islands provided important lessons especially in regards to jungle tactics and logistics, and provided many subsequent suggestions and recommendations to the division’s training. Operation ‘Goodtime’ proved to be a greater learning tool for the landings in the Green Islands, as its operational features closely aligned to those which would occur in Operation ‘Squarepeg’. One of the more relevant lessons included the importance of having all the component commanders and staff present during the planning stage to facilitate coordination of resources. Other aspects included the need for large signals networks, as during ‘Goodtime’ the infantry had no direct link with the artillery, which forced messages to be passed through intermediary headquarters before fire support was granted. This caused

⁷⁹ ANZ, AD12, 15, 28/15/1, Part 5, “Notes on Planning Combined Operations”, 4 December 1943.

confusion at night as the forward elements relied on line communications, and if these were not laid, it was extremely difficult to send word to headquarters. Thus, most units maintained poor situational awareness during hours of darkness, once again leaving the Japanese to use it as they saw fit. This highlighted the need for rapid debarkation of support echelons and the establishment of a functional communications network to forward elements in the beachhead. Wireless performance in the field was unpredictable - some units claimed it was unreliable while others reported satisfactorily. Combat experiences also illustrated the need for flexibility and clear operating procedures in operations, as landing craft commanders had difficulty coordinating actions with Shore Parties in the Treasury Islands, while on Vella Lavella infantry were unsure how to deal with the enemy without recourse to significant firepower. This also applied to the coordination and integration of Naval Fire Control Parties with infantry ashore as there were some serious errors which resulted in friendly fire incidents. Cumulatively, these experiences furnished the division with vital lessons in amphibious and jungle aspects which were later incorporated into 'Squarepeg'.

CHAPTER 4

Planning Operation 'Squarepeg'

Due to the complex nature of amphibious operations during the Second World War they were organised into clearly defined phases in hopes of standardising their execution. As they normally involved two or more services, planning for such operations was crucial for cooperative decision-making between those joint forces. Unfortunately, American inter-war amphibious thought lacked adequate focus on unified planning, which was representative of service rivalry and practical and theoretical inexperience; however, it also reflected a limited understanding of amphibious operations' different phases and their place within the wider planning phase.¹ By 1944, US forces in the Pacific had begun to formulate an effective command system at the planning phase of amphibious operations. Though not without fault, this command system facilitated both unified planning and execution. Practitioners were assisted by formal publications issued by American commands that were disseminated to lower commands. This contributed to the efficiency of Operation 'Squarepeg's' planning phase, which was claimed to have "conformed in all essentials to the [established] Doctrine" that Barrowclough had received from Commander, Transports, Amphibious Force.² As such the planning phase of 'Squarepeg' represented a culmination of operational experiences and adaptations as it pertained to joint and combined staff aspects. The genesis of Operation 'Squarepeg', including its planning process, course of action, and eventual Operations Order were indicative of a system that oscillated around flexibility and adaptability to its operational environment.

¹ Alexander claims that the pre-war amphibious doctrine encouraged "joint and concurrent" planning at all times and levels, which hampered the implementation of unified command. This, by extension, would have led to incongruities among suggested courses of action. See Alexander, "Hit the Beach!", 35.

² USN Operational Archives, Washington, D.C., Series 1, Papers of Admiral Richmond Kelly Turner, USN (hereafter Turner Papers), Box 1, Folder 14, Incoming/Outgoing Correspondence, Letter from Turner to Barrowclough, undated .

By the end of 1943, the campaign in the Solomon Islands had been underway for nearly 16 months. The Japanese had been steadily pushed northwards towards their strategic centre of gravity, the anchorage of Rabaul, and were fighting a large American force on Bougainville. Meanwhile, in the neighbouring South-West Pacific Area, American and Australian forces conducted a series of amphibious landings on New Guinea's northern coastline commencing in September 1943.³ These events were based on a directive set down by the US Joint Chiefs of Staff which ordered the seizure of islands for the establishment of airfields in the South-West Pacific Area and South Pacific Area, and this formulated the development of General Douglas MacArthur's wider operational plan, 'Elkton III'.⁴ On 20 December 1943, General MacArthur and Vice Admiral Halsey discussed the details of the Joint Chiefs' directive and began to plan their next move against the Japanese. They proposed that elements of 'Elkton III's' plan of manoeuvre be brought under the umbrella of Operation 'Cartwheel', and called for landings on western New Britain, the Bismarck and Admiralty Archipelagos to the north. Part of the plan included a landing at Kavieng, on New Ireland, as it was believed a vital objective if Rabaul was to be further isolated and weakened from a double envelopment by MacArthur and Halsey.⁵

As it pertained to the South Pacific Area Command, operations against Kavieng required substantial resources, due to its distance from friendly ports and the possible strength of the Japanese garrison.⁶ Unfortunately, sufficient fleet support was unavailable, and thus a request for an interim operation was placed before Rear Admiral Wilkinson by Halsey on 22 December 1943, explaining that: "This delay in the execution of the [future Operation 'Forearm'] will work more to the advantage of the Jap bastards than to us as it gives them

³ Stephen R. Taaffe, *MacArthur's Jungle War: The 1944 New Guinea Campaign* (Lawrence, Kansas: Kansas University Press, 1998), 31-55.

⁴ 'Elkton' was envisioned as a three stage operation, of which operations occurring in 1944 represented the third and final stage. For a more detailed account of the strategic motives and planning behind this strategy, see Taaffe, *MacArthur's Jungle War*, 7-55; Morison, *Breaking the Bismarcks Barrier*, 369-372; Miller, *Cartwheel*, 19.

⁵ *Ibid.*, 26-27, 306-307.

⁶ The Japanese were estimated to have 7,500-8,500 men in the Kavieng area, increasing to 10,000-12,000 in all New Ireland. See ANZ, PUTTICK5, 1, 5, Chief of General Staff – Liaison Letters: General Barrowclough (3 Division) – 4 September 1942 – 17 March 1944, Letter from Barrowclough to Puttick, 6 January 1944; ANZ, WAI1, 1089, DAZ 121.1/1/14, HQ 3 Division 'G', February 1943 to June 1944, War Diary 'G' Branch, From 1-31 March 1944, Appendix VI, 3 NZ Div.: "Forearm-Warning Order No. 1", 8 March 1944.

an additional two months in which they can strengthen their defenses [sic].”⁷ Initially, Halsey did not want his forces’ inactivity to allow the Japanese a chance for respite, and he therefore sought advice for an interim operation to keep the enemy ‘off-balance’. Halsey thought the Green Islands a good candidate for this endeavour as it lay astride Japanese barge supply routes from Rabaul and Truk to Buka and Bougainville, and therefore would offer an ideal location from which Patrol Torpedo (PT) boats could sally forth and interdict enemy shipping. Conversely, Wilkinson believed the Green Islands too distant from Kavieng to provide adequate fighter cover for a future operation there, and for this reason his subordinate commanders suggested against capturing the Green Islands. Almost simultaneously, Halsey entertained the idea of bypassing Kavieng to avoid a costly confrontation, and this altered the dynamic of the Green Islands as an operational asset. In light of this, both theatre commanders decide to bypass Kavieng altogether, with the next major amphibious offensive against Emirau, in the St. Mathias Group, in May 1944. Once again Halsey advocated the possibility of occupying an island to the north of Bougainville in order to interdict Japanese barge traffic and to besiege Rabaul and Kavieng. Once again the Green Islands were suggested.⁸

On 23 December 1943, Rear Admiral Wilkinson together with senior USN and USMC commanders and their respective staffs, met in conference to discuss Halsey’s initiatives.⁹ Although these commanders did not initially favour an occupation of the Green Islands, by 28 December they concluded that the other alternatives should be disregarded as being too resource-intensive (Borpop Island) or offering lesser opportunities for future operations (Boang Island). The New Zealand Official History relates that it was Halsey’s operations officer, Colonel William E. Riley, who convinced Halsey that the Green Islands should be taken (against the advice of Wilkinson and his other component commanders).

⁷ Library of Congress, Naval Historical Foundation Collection, Washington, D.C., Manuscript Division, MSS48934, The Papers of Theodore Stark Wilkinson [hereafter Wilkinson Papers], Box 9, Folder 8, Correspondence and Speeches, Secret and Personal communiqué from Halsey to Wilkinson, with copies to Rear Admiral Fitch (USN), and Major-General Geiger (USMC), 22 December 1943.

⁸ Ibid., “Memorandum for Commander South Pacific. Subject: Intermediate operations to precede Forearm or its equivalent”, 28 December 1943; Miller, *Cartwheel*, 312-313; Morison, *Breaking the Bismarcks Barrier*, 370, 402-403, 423; Gillespie, *The Pacific*, 168-169; Lorrelli, *To Foreign Shores*, 192.

⁹ These included Rear Admiral Aubrey W. Fitch (USN), and Major-General Roy S. Geiger (USMC). Wilkinson Papers, Box 9, Folder 8, “Memorandum on Conference at COMAIRSOPAC on December 24”, 25 December 1943.

However, American documents, most notably Wilkinson's private papers, suggest that Wilkinson made the change in objectives over the period 22-28 December, and not because of an autocratic decision by Halsey, which would suit the latter's post-war myth. The confusion around Riley may have resulted from the fact that it was he who drafted the official memorandum and handed it to Halsey.¹⁰

Capturing the Green Islands allowed for easy air cover from already established airfields during any future amphibious landings; escort fighters operating from the Green Islands could suitably operate against Rabaul and Kavieng (even extending out to Emirau). In general, the Green Islands were viewed as offering "better prospects for airfield development and ... an excellent seaplane operating base" than the either Boang or Borpop.¹¹ The Green Islands also fulfilled the original premise of the plan by offering a better position to interdict Japanese supply routes to Bougainville, as the islands lay only 60 kilometres northwest of Bougainville. Thus, Wilkinson and his fellow commanders concurred with Halsey's original report of 22 December, and advised that the Green Islands be tentatively selected as the interim objective. Additionally, the idea of using the 3rd NZ Division (less one brigade) along with USN's Naval Construction Battalions and other supporting American units were noted at this time.¹² This was an important statement as it acknowledged that the division was still incapable of operating ashore independently. Furthermore, it highlighted the inherently joint-combined nature of operations in the South Pacific Area, even from the earliest stages of operational planning.

It is possible that Barrowclough first became aware of the operation unofficially from senior American commanders when they visited Headquarters 3rd NZ Division sometime between 20-27 December 1943, as Barrowclough first makes reference to the possibility

¹⁰Ibid., "Memorandum for Commander South Pacific. Subject: Intermediate operations to precede Forearm or its equivalent", 28 December 1943; Gillespie, *The Pacific*, 169.

¹¹ Wilkinson Papers, Box 9, Folder 8, "Memorandum for Commander South Pacific. Subject: Intermediate operations to precede Forearm or its equivalent", 28 December 1943, page 3.

¹² Ibid., page 4.

of the division being required for operations during this time, yet Barrowclough still claims that nothing “unusual emerged from discussion with any of these officers” which suggest he was expecting such advice.¹³ Finally on 29 December Barrowclough received a signal to report to Wilkinson’s headquarters on Guadalcanal. On 30 December, Barrowclough along with his Chief-of-Staff, and his Assistant Adjutant & Quartermaster-General (AA&QMG), who was the division’s senior logistics officer, flew from Vella Lavella to Guadalcanal, where upon they were informed that Wilkinson was in New Caledonia. This was perhaps an indication of the fragility of communications in the combined theatre of operations, as despite the importance of this meeting the senior commanders had not been informed of each other’s actual whereabouts.¹⁴ The next day, with Wilkinson still away, Barrowclough with his two senior staff officer met Rear Admiral George H. Fort and the rest of the staff of Headquarters Task Force 31 (Wilkinson’s task force) to discuss the construction of an airfield and forward supply base for Operation ‘Squarepeg’.¹⁵ This conference became an impromptu mission analysis as details were discussed in a general preliminary manner, including the (proposed) invasion date of 25 January, objectives, and the criteria for the end state ashore being determined. This first conference between Headquarters Task Force 31 and the 3rd NZ Division effectively served as the operation’s planning directive or Warning Order from which Barrowclough later relayed a brigade Warning Order to Brigadier Potter on Vella Lavella. These actions provided evidence of a latent amphibious operation planning process, as recognised in modern amphibious doctrine, even though it was not recorded as such.

One of Barrowclough’s first actions after the initial conference was to inform Lieutenant-General Puttick, NZ Chief of the General Staff, on 1 January 1944.¹⁶ Puttick had earlier reprimanded by Barrowclough for not advising him of the division’s employment the previous year. Barrowclough may have been reassuring Puttick that his (Puttick’s) interests were foremost on his mind. Alternatively, Barrowclough may have informed

¹³ KMARL, Acc. No. 1998.834, Official War Diary of General Barrowclough, 20-27 December 1943.

¹⁴ Ibid., 30 December 1943.

¹⁵ Task Force 31 was the operational arm of AMPHIBFORSOPAC, under Wilkinson, and as such all aspects of ‘Squarepeg’ came under its control.

¹⁶ ANZ, PUTTICK5, 1, 5, Telegram from Barrowclough to Puttick, NZ Army Headquarters, Wellington, 1 January 1944.

Puttick as a deliberate ploy by referring to his division's importance in the theatre, thereby signalling to Puttick that further discussion around the division's disbandment should be taken. On the same day, Barrowclough returned to Vella Lavella for an evening conference with his divisional staff and with Brigadier Potter, whose 14th Brigade was selected for the operation. Barrowclough maintained almost daily contact with his brigade commanders and it is evident that he wanted to ensure that Potter was well advised and that his brigade could complete training and be repositioned in time for the (then) deadline of 25 January 1944.

Planning and Intelligence-Gathering

The planning process which occurred between American and New Zealand personnel bore the hallmarks of commanders and staff who were by this stage familiar with amphibious operations. Wilkinson and his staff had presided over all South Pacific amphibious operations since January 1943, and while the New Zealanders were not as experienced as their allies, most of the divisional and brigade staffs had been involved in training exercises and combat landings. Through these experiences they had learned to appreciate the importance of joint and combined planning in amphibious operations, especially after a less than ideal state of affairs during Operation 'Goodtime'. Barrowclough felt that in order for the planning process to proceed effectively and efficiently, New Zealand and American staffs had to come together in the same location. This was partially achieved when Barrowclough shifted his Advanced Headquarters from Vella Lavella to Guadalcanal on 3 January 1944 (although this meant that his divisional headquarters was separated across Vella Lavella and Guadalcanal – a most difficult administrative situation).¹⁷ When Barrowclough left, Potter took over as Island Commander, Vella Lavella.¹⁸ This placed additional stress on his brigade staff as they were then simultaneously coordinating island administration (for both US and NZ units) and also the relocation of the brigade's elements in preparation for the coming operation.

¹⁷ ANZ, PUTTICK5, 1, 5, Letter from Barrowclough to Puttick, 6 January 1944.

¹⁸ ANZ, WAI1, 1092, DAZ 121.1/1/12, HQ 3 Division, War Diary 'G' Branch, From 1-31 January 1944, multiple entries 1-5 January 1944. Headquarters 3rd NZ Division opened on Guadalcanal on 5 January.

While the brigade's war diary does not state as much, this additional responsibility may have hampered the brigade's preliminary preparations for 'Squarepeg'.

Another component of amphibious operations planning was the need to assemble staff members with specialist skills and expertise. These requirements were seen in the composition of the Advanced Headquarters Planning Committee, which was created by Barrowclough especially for the purpose of handling the additional workload of the operation. From 3-5 January, selected officers from throughout the division joined Barrowclough on Guadalcanal to continue planning. These included the 3rd NZ Division's General Staff Officer 3 (Intelligence), as well as many of the division's principal logistics staff officers. An additional officer who had specialist knowledge of amphibious loading timetables – a most prized skill – was brought over from the 8th Brigade.¹⁹ Barrowclough and his staff were in regular contact with their American counterparts, although one frustration was the late appointment of Commander, Air Forces, 'Squarepeg' (COMAIR Squarepeg), on 20 January, which hampered planning for coordinating air support for the operation.²⁰ Nevertheless, Barrowclough would have been pleased with progress made, especially after the arrival of the 14th Brigade, and evidently there was a sense of confidence. On 11 January, Barrowclough formally advised Brigadier Dove (commander of the 8th Brigade) that his brigade was to be the Area Reserve for the coming operation.²¹ This would appear to suggest that Barrowclough himself did not think likely the possibility of the 8th Brigade actually being needed for the operation.

It was during these early days of January that Barrowclough, along with Wilkinson and his staff, developed the mission analysis for 'Squarepeg' to determine if there were any factors within the operation's plan that had not been addressed. While the New Zealand Official History points to Barrowclough's importance in this stage of planning, it was

¹⁹ Gillespie, *The Pacific*, 173; ANZ, WAI1, 1092, DAZ 121.1/1/12, HQ 3 Division, War Diary 'G' Branch, From 1-31 January 1944, entry for 3 January 1944.

²⁰ Ibid., "Summary of Events, 20 January 1944."

²¹ ANZ, WAI1, 1512, DAZ 121/9/A50/4/2, HQ 3 Division – Office records – Squarepeg operations, Letter from Barrowclough to Brigadiers Potter, L. Goss, and W. Dove, 11 January 1944.

unlikely that he did more than filling the role of an elevated ground advisor to Wilkinson. This should not detract from Barrowclough's overall influence, as he and his staff were the only ones at the planning conferences who were fully aware of the division's limitations and abilities and were thus best able to influence the landing force's concept of operations.

Unfortunately, circumstances outside of Barrowclough's control meant that several postponements occurred, so that the operation was put back and planning for all services involved had to be revised more than once.²² Consequently, the first Administration Order for the operation containing the (provisional) shipping lists and loading plans was not issued until 28 January. During the time it took for the Administration Order to be issued, the 3rd NZ Division had no choice but to continue planning preparations as best it could. However, "on account of lack of information" this was limited to preliminary planning aspects of multiple courses of action, the three most likely of which were discussed in a preliminary report issued on 11 January.²³ The important lesson gained from these examples was that continual planning at all levels was necessary even when faced with the prospect that most preliminary plans would need to have been adjusted.

From the very beginning of the planning phase it was recognised that adequate intelligence on the Green Islands was lacking. Allied planners did not have suitable information on the islands, their inhabitants, and the waters surrounding them. This was unlike many previous experiences in the campaign in the Solomon Islands which had been conducted with the assistance of effective information-gathering from British, Commonwealth, and American sources. These included 'coastwatchers' positioned on a number of islands controlled by the Japanese for the purpose of observing and conveying information. Similarly, the Americans had an "elaborate and coherent" intelligence

²² Gillespie, *The Pacific*, 171.

²³ ANZ, WAI1, 1553, DAZ 157/9/86, 35 Battalion – Office records – Information on Squarepeg Op, 16 January 1944 to 6 May 1944, "HQ 3 NZ Div. Administration – Preliminary Planning Stage, Square Peg Op, 15 Jan 44."

network in the Pacific, with a clear division of responsibility between the USN and Army.²⁴ Despite these resources, little information had been assembled on the Green Islands or the Japanese garrison, as no coastwatchers had been stationed there, and aerial reconnaissance proved to be inadequate owing to the density of the vegetation.²⁵ The failure of aerial photography to adequately allay Barrowclough's concerns was a disappointing note to the operation, as it revealed that despite huge resources and the most modern technology available, onsite surveillance and observation could not be totally supplanted.

For the planning process to continue, Wilkinson and Barrowclough required accurate data on the islands and its Japanese garrison, in order that they could identify and quantify force selection and decisive points. They appreciated that the Japanese used the islands as a staging-post for barges sailing between New Britain, Bougainville, and New Ireland, and could be expected to resist the landing to prevent isolation of their garrisons on those islands.²⁶ Consequently, Wilkinson and Barrowclough agreed that a reconnaissance-in-force was needed to gain information on suitable landing beaches, airfield sites, and enemy dispositions.²⁷ For security and planning reasons, the reconnaissance mission needed to occur 10 days before the main landing. This complicated planning, as postponements to the main landing required that the main amphibious force components be notified, in addition to the reconnaissance force elements, which had to be stood-down after being on standby.²⁸ The main intention of the reconnaissance was to "(a) Recce Green I. with a view to est[ablish] an Air Base and P.T. Base; (b) Recce landing facilities for craft and ships; (c) Make general terrain and hydrographical recce as may be practicable under the circumstances."²⁹ Japanese prisoners were to be taken if possible, but only if it did not require excessive efforts. It is curious that the capture of a Japanese

²⁴ 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*, vol. 16, no. 3 (2009): 330.

²⁵ Wright, *Pacific War*, 123-124; Gillespie, *The Pacific*, 170.

²⁶ Gailey, *Bougainville 1943-45*, 142-143.

²⁷ KMARL, Acc. No. 1998.834 Official War Dairy of General Barrowclough, 31 December 1943.

²⁸ KMARL, Acc. No. 1998.835 Official Papers kept by General Barrowclough, Letter from Barrowclough to Puttick, 6 January 1944; Gillespie, *The Pacific*, 170-171.

²⁹ ANZ, WAI1, 1151, DAZ 155/1/25, War Diary of Headquarters 14th Brigade, From 1-31 January 1944, Volume 1. Appendix VI: "C.O. 30 Bn 'Commando Raid.'"

servicemen was not a secondary objective, as the force had the strength and resources at its disposal to do so. Perhaps, the planners felt that this would encourage a prolonged firefight and lead to the discovery of the reconnaissance force, resulting in reinforcements being sent from Rabaul.

The USN's *Landing Operations Doctrine (FTP 167) 1938* (the doctrine to which the New Zealanders adhered), emphasised the importance of intelligence collection ahead of the main landing.³⁰ The Americans in particular were mindful of this requirement, as they were anxious to avoid a repeat experience of Tarawa in November 1943, when a failure to conduct adequate hydrographic reconnaissance had contributed to excessive casualties among the Marines.³¹ Such failure was enhanced by earlier operational experiences that had emphasised the importance of intelligence collection in creating the conditions for successful mission execution, a good example being the lessons of the Makin Island Raid controversy.³² The New Zealanders also would have been mindful of the bitter experiences of these earlier operations. The 3rd NZ Division could not afford excessive casualties as New Zealand did not have the reserves of manpower, or the political willpower, to withstand very heavy losses in the Pacific. The conducting of a thorough reconnaissance mission was therefore a high priority.

Possibly the key intelligence shortcoming was that details of the Green Islands' hydrography were vague. Preliminary reports advised that no landings should be attempted on the exterior of the main atoll, owing to extensive reefs and high cliffs, but there was still insufficient information relating to the possibility of better landing sites.³³ An indication of the deficiency of the available intelligence was that the Allies resorted to

³⁰ Office of Naval Operations, Division of Fleet Training, *FTP 167*, 6.

³¹ Wilkinson Papers, Box 9, Folder 8, "Memorandum for Commander South Pacific. Subject: Intermediate operations to precede Forearm or its equivalent", 28 December 1943, page 1; Kenneth Macksey, *Commando Strike: The Story of Amphibious Raiding in World War II* (London: Guild Publishing, 1985), 173, 198.

³² George C. Dyer, *The Amphibians Came to Conquer: The Story of Admiral Richmond Kelly Turner*, Vol. II (Washington, D.C.: Department of the Navy, Government Printing Office, 1972), 681.

³³ ANZ, WAI1, 1512, DAZ 121/9/A50/4/2 "Photo Intelligence Unit, 12th AAF Photo Intelligence Detachment, USAFISPA – COMSOPAC, APO 502. Green Island: Photo-Interpretation Study, 30 December 1943."

interviewing any known visitors to the islands in peacetime, with questions pertaining to tides and water depth being high on the agenda.³⁴ Most charts described the Green Islands as consisting of four islands which formed an oval shape with a central lagoon, with the largest island, Nissan, being the site of pre-war plantations and thus probably best suited for the construction of an airfield.³⁵ The islands were densely forested with the outer coastline having rugged cliffs as high as 60 feet and with many caves, which would have been a concern as caves could form natural defensive positions for the Japanese. Importantly, there was no evident source of fresh water, which had to be taken into account.³⁶ The suspected lack of water led to the New Zealanders putting aside precious cargo space for fresh water to be carried on landing forces ships.

For security reasons the reconnaissance mission was called a 'commando raid' in the hopes of deceiving Japanese intelligence as to the mission's true purpose. Potter nominated his brigade's 30th Battalion for the mission and Barrowclough readily agreed. The 30th Battalion was the only infantry unit without combat experience and Barrowclough was eager to give the battalion an opportunity to prove itself before the division was disbanded.³⁷ Some 322 men of the battalion were selected for the 'raid', along with attached mortar, signals, intelligence, and reconnaissance sections, medical personnel, engineers, and technicians, bringing the total force to 360 men, including 40 officers.³⁸ The types of technicians detailed to the force indicated the broad nature of the task to complete, as they included artillery officers, hydrographers, photographers, and native scouts. Although the 30th Battalion was without combat experience, it had

³⁴ Ibid., Commander Third Amphibious Force, Intelligence Section: "Objective Data – Green (Nissan) Island", 9 January 1944; "Interview with Capt. Fairfax Ross, A.I.F. (8 January 1944)"; South Pacific Force of the United States Pacific Fleet, Headquarters of the Commander, January 14, 1944. Nissan (Green) Island group – Objective data on: "Report of Interview with Capt. W.A. Forman, AIF"; "Report of Interview with Lt. A.C. Medlrum, RANVR(s)"; "Report of Interview with Bishop Wade"; "Report of Interview with Comdr. Robert Crookshank, RN (Ret)."

³⁵ Gillespie, *The Pacific*, 168.

³⁶ KMARL, Acc. No. 1998.835, Official Papers kept by General Barrowclough, Letter from Barrowclough to Puttick, 6 January 1944.

³⁷ KMARL, Acc. No. 1998.834, Official War Diary of General Barrowclough, entry for 1 January 1944; ANZ, PUTTICK5, 1, 5, Letter from Barrowclough to Puttick, 6 January 1944, page 1.

³⁸ The infantry elements included A, D, C Companies, and 1 Platoon from B Company of the 30th Battalion. See ANZ, WAI1, 1551, DAZ 155/9/1, HQ 14 Infantry Brigade – Office records – Commando raid – 30 Battalion Commando forces raid on Nissan, "30 NZ BN 'Commando' Force OO No. 1, 22 Jan 44."

undergone further jungle warfare and amphibious training that equipped it for such a mission.³⁹ Training in relevant areas was pushed by Headquarters 14th Brigade, which suggested that patrols train for landings on hostile beaches, establishment of beachhead and perimeter defences, collection of information, and beach reconnaissance.⁴⁰ Some of the training memorandums available to the battalion ahead of the reconnaissance-in-force contained lessons learned from the experience on Vella Lavella, showing that adaptations were incorporated after initial combat experiences.⁴¹

The infantry platoons were reduced to 25 men to accommodate the attached technicians and specialists on the raid.⁴² Where possible, their equipment was kept to a minimum, with landing craft taking only the required men, water, rations, weapons, and ammunition. Each man carried 48 hours of rations and full water bottles, with each company taking along emergency rations and two 2 gallon tins of water per section. As was the standard for jungle warfare, grenades and automatic weapon ammunition were a priority.⁴³ There appears to have been concern that the raiding force would encounter opposition ashore and so a divisional signals detachment accompanied the raid to maintain communication with headquarters to coordinate a quick withdrawal should this be required.⁴⁴ This was a precaution, however, as defended localities were to be bypassed where possible. In order to foster good relations with native islanders, and to prevent an accidental confrontation before the main landing, islanders were to be left alone “unless definitely hostile”.⁴⁵

³⁹ KMARL, Acc. No. 1998.835, Official Papers kept by General Barrowclough, Letter from Barrowclough to Puttick, 6th January 1944; Newel, “New Zealand’s Forgotten Warriors,” 137; *Officers’ Book 14th Brigade New Zealand Expeditionary Force in Pacific* (No publisher, n.d., no page number), book held in KMARL.

⁴⁰ ANZ, WAI1, 1151, DAZ 155/1/25, HQ 14 Infantry Brigade, January 1942 to July 1944, War Diary of Headquarters 14 NZ BDE, NZEFIP, From 1-31 January 1944, Volume 1, “Training Directives – Island Patrols”, 5 January 1944.

⁴¹ *Ibid.*, “Training Memorandum No. 2”, 14 Jan 44.

⁴² Gillespie, *The Pacific*, 170-171.

⁴³ ANZ, WAI1, 1551, DAZ 155/9/1, HQ 14 Infantry Brigade – Office records – Commando raid – 30 Battalion Commando forces raid on Nissan, “30 NZ BN ‘Commando’ Force OO No. 1, 22 Jan 44.”

⁴⁴ Gillespie, *The Pacific*, 174.

⁴⁵ ANZ, WAI1, 1551, DAZ 155/9/1, “30 NZ BN ‘Commando’ Force OO No. 1”, 22 January 1944.

Much like the planning for the main landing, conferences between the commanders and senior staff of the 30th Battalion, 3rd NZ Division, and Task Force 31 were held throughout January. Discussions raised probably contributed to the issuing of specially designed topography questionnaires to the raiding force, which assisted in the noting of observations and recording of data.⁴⁶ Strict security measures were enacted while preparations were underway, however numerous reports indicated that many officers and men indulged in breaches of security. This was quite a serious matter considering the risks to the raid, and was an indication of a general lack of operational security awareness amongst members of the 3rd NZ Division.⁴⁷ Around a week before departure, a course of action was finalised which called for the raiding force to make its way through the main channel at night, turn to starboard, land and establish a defensive position in Pokonian Planation. There they were to wait until sunrise before the force separated into two groups: one remaining at Pokonian to conduct base reconnaissance, while the other proceeded across the lagoon to reconnoitre Tangalan Planation and the possible airfield location. When tests were completed the two detachments were to regroup at Pokonian before re-embarking their landing craft to rendezvous with the awaiting destroyers.⁴⁸ The mission was to last no longer than 24 hours.

The reconnaissance-in-force provided an example of the New Zealanders' amphibious capability at this stage of the war. The mission began with a convoy of three APDs (old destroyers modified to carry around 185 personnel) and four escorting destroyers being assembled, onto which the troops embarked on 29 January. The presence of APDs indicated that speed during the movement phase was of the utmost importance, as APDs were faster and more seaworthy than the larger landing craft specifically designed for amphibious landings. The Landing Craft, Infantry (LCI) could carry the same number of personnel but were notoriously prone to excessive yawing and rolling in even moderate

⁴⁶ ANZ, WAI1, 1551, DAZ 155/9/4, HQ 14 Infantry Brigade – Office records – Unit reports Squarepeg Op (including signals report, “30th NZ Battalion, Report on Operations Jan/Feb 1944 – Green Island Group”, n.d.

⁴⁷ ANZ, WAI1, 1151, DAZ 155/1/25, War Diary of Headquarters 14th Brigade, From 1-31 January 1944, Volume 1. Appendix V: “Breaches of Security”, 25 January 1944.

⁴⁸ ANZ, WAI1, 1551, DAZ 155/9/1, HQ 14 Infantry Brigade – Office records – Commando raid – 30 Battalion Commando forces raid on Nissan, “30 NZ BN ‘Commando’ Force OO No. 1, 22 Jan 44.”

seas, as well as being about 25 per cent slower than APDs.⁴⁹ Once aboard, commanders held a final conference for the rehearsal later that night. However, despite these efforts the (first) rehearsal landing was abandoned as the original beach could not be identified in the darkness, and the troops were forced to land on another beach – evidence of the necessity for alternate plans, and the requirement for adequate communications to enact them between sea and ground units.⁵⁰ The near failure of the Rehearsal phase went unmentioned within the Action Report of Commander, Task Group 31.8, and it simply stated the “Rehearsal tactics were conducted at Vella the night of January 29 -30.”⁵¹ This was a blatant attempt by Captain Earle to brush over the culpability of the USN, as they were responsible for the mishap.⁵²

After the rehearsal, the task force sequenced its movement north by rendezvousing with two motor-torpedo boats. These same boats had earlier conducted preliminary soundings of the main channel on 10 January, and were thus able to provide navigational marks for the larger vessels of the Task Force.⁵³ This was an important task as heavy seas had seriously damaged two accompanying gunboats on 10 January.⁵⁴ On arrival off the Green Islands, the men descended into the lowered landing craft, and proceeded to the rendezvous area a few hundred yards offshore. It was decided that the landing craft would be towed through the main channel by a motor-torpedo boat in order to minimise noise. The landing craft operators cut their engines on approaching the main channel entrance and used the inward current to drift through almost silently before executing a near perfect landing. There was considerable angst during the movement through the narrow channel, as testified by an officer, who commented that “it would have been

⁴⁹ Gordon L. Rottman, *Landing Craft, Infantry and Fire Support, New Vanguard Series 157* (Oxford: Osprey Publishing, 2009); ANZ, WAI11, 1551, DAZ 155/9/2, HQ 14 Infantry Brigade – Office records – Amphibious, “Characteristics of Landing Craft likely to be used for Move to Forward Area”, 8 September 1943.

⁵⁰ Bioletti, *Pacific Kiwis*, 88-89.

⁵¹ NARA, Record Group 38, Box 126, Serial 00177, Records of the Offices of the Chef of Naval Operations, “Narrative of APD activities during raid and reconnaissance in Force—GREEN ISLANDS, B.S.I.”, 4 February 1944 in “Action reports covering operations of Task Force 31 from 28 January 1944, to 17 February 1944”, 24 March 1944.

⁵² Not incidentally, he was also Commander, Destroyer Squadron 45, which was the parent squadron of the four screening destroyers.

⁵³ Morison, *Breaking the Bismarcks Barrier*, 414.

⁵⁴ Robert J. Bulkley, *At Close Quarters: PT Boats in the United States Navy* (Washington, D.C.: Naval History Division, 1962), 147

disastrous if we had been fired upon ... as the 12 barges went through the gap.”⁵⁵ Within 30 minutes of boarding the landing craft the ‘commandos’ were ashore. Their training kept them in good stead as they established a firm defensive perimeter without a detectable sound – quite a feat on a moonless night in the jungle and with many men suffering from seasickness. Their success and speed can be attributed to the insistence on training for night amphibious landings, something which regular American forces did not ordinarily conduct.⁵⁶

Protection of the 30th Battalion’s headquarters was paramount as it contained the only link with the ships and therefore salvation in the event of a heavy Japanese attack. The soldiers and specialists dug-in and waited four hours until sunrise before setting off on their tasks. Some troops protected the specialists while others imitated raider tactics to deceive Japanese eyes. In addition, three landing craft with the battalion reconnaissance party journeyed along the edge of the lagoon, searching for suitable landing areas, and in the process discovered suspicious silhouettes near the waterline and decided to investigate.⁵⁷ Unfortunately, the landing craft pilots initiated a frontal approach and on nearing the shore, they came under Japanese fire at close range; one landing craft sustained 50 per cent casualties. The decision to investigate the suspicious objects was sound, and the apparent audacity of the small force served to convey the impression of a commando raid, but in retrospect the frontal approach was ill-advised and it was fortunate that the craft were able to withdraw without further casualties. This was a serious, yet simple, error by Commander J. MacDonald Smith, USN, and Lieutenant P. O’Dowd who had controlled the landing craft.⁵⁸

⁵⁵ Frank Rennie, *Regular Soldier: A Life in the New Zealand Army* (Auckland: Endeavour Press, 1986), 50. 3rd NZ Division documents use the words “barge” and “landing craft” interchangeably to describe smaller landing craft such as the Landing Craft, Vehicle, Personnel (LCVP). Where possible, this author has retained the original description of “barge” in order to adhere to the terminology of the day.

⁵⁶ Rottman, *US World War II Amphibious Tactics*, 6.

⁵⁷ The objects were actually two well camouflaged Japanese landing craft.

⁵⁸ MacDonald Smith redeemed himself by extracting his landing craft from the killzone while under fire, but O’Dowd paid for his carelessness with his life. Gillespie, *The Pacific*, 174-176; Bioletti, *Pacific Kiwis*, 91-94.

The area where this incident occurred was later engaged with mortar fire, and a counter-attack was launched. In late afternoon, three landing craft with one infantry company aboard sailed towards the enemy positions and engaged them with automatic fire. Unfortunately, on approaching the shore the landing craft were strafed by Japanese aircraft, probably operating from Rabaul. This demonstrated the precarious position which befell assaulting amphibious troops during the ship-to-shore or shore-to-shore phases of a landing. The Japanese air retaliation was serious enough for the small force to break radio silence and request air cover with the words, "Being heavily strafed. Request air support".⁵⁹ The attack shook the New Zealanders' confidence, and soon after they disembarked at the locality, the troops were recalled due to fears of further enemy aerial attacks.⁶⁰ This episode reinforced the belief that Japanese air strength in the region was not yet broken, and that consequently the main landing force would require the additional anti-aircraft assets which Barrowclough had advocated.

As night fell on 31 January, and with reconnaissance tasks completed, the men prepared to re-embark for the rendezvous with the returning destroyers. Quite astutely, the decision had been taken to place Wilkinson's Chief of Staff aboard one of the APDs on this night. The New Zealand senior officers had also taken the opportunity to observe conditions first-hand, with Potter and three of his staff officers watching from a destroyer.⁶¹ Their presence provided additional observation of operating conditions that may have affected the main landing. The returning landing craft encountered heavy seas which impeded the operating and recovery of the craft.⁶² This experience in conjunction with the rough surf encountered on 10 January further indicated the difficulty of landing on the beaches of the outer coastline.

⁵⁹ ANZ, WAI1, 1151, DAZ 155/1/25, War Diary of Headquarters 14th Brigade, From 1-31 January 1944, Volume 1, 31 January.

⁶⁰ Rennie, *Regular Soldier: A Life in the New Zealand Army* (Auckland: Endeavour Press, 1986), 54-55; Gillespie, *The Pacific*, 176;

⁶¹ ANZ, WAI1, 1151, DAZ 155/1/26, HQ 14 Infantry Brigade, January 1942 to July 1944, War Diary of Headquarters 14 NZ BDE, NZEFIP, From February 1 to February 29, 1944, Volume 1, diary entry 1 February.

⁶² NARA, Record Group 38, Box 126, Serial 00177, Records of the Offices of the Chief of Naval Operations, "Narrative of APD activities during raid and reconnaissance in Force—GREEN ISLANDS, B.S.I., 4 February 1944" in "Action reports covering operations of Task Force 31 from 28 January 1944, to 17 February 1944," 24 March 1944.

Once the raiding force returned to Vella Lavella, Barrowclough reported to the Prime Minister that “the whole operation was daringly conceived and splendidly carried out.”⁶³ Indeed, it was executed quickly and aggressively precisely as planned, despite the troops involved having being awake for the better part of two days by the time they landed. Their subsequent ability to perform their mission ashore was testament to their fitness and training. The value of the amphibious reconnaissance-in-force could be measured by the resources expended and the results, as the mission had cost only four men killed and nine wounded, but in so doing it acquired information and data that was “of inestimable value in planning the main operation.”⁶⁴

Final Planning

The information from the reconnaissance-in-force was quickly collated, and three days later Operation Order No. 101 – Operation Squarepeg was produced.⁶⁵ This operational order contained all information and methods of the coming operation, along with a detailed meteorological report, which was assisted by a Meteorological Section drawn from the RNZAF in order to maintain liaison with the air force and therefore allow for prompt sharing of information.⁶⁶ The only element missing was the proposed naval and air support plan – a symptomatic effect of the complex command structure of the South Pacific Area, which hampered cross-service planning.⁶⁷ The following day Wilkinson issued his Operation Order 2-44, which defined task organisation, navy, army and air components, echelons, escorts, movement, protection, communications, and other

⁶³ *Documents Relating to New Zealand's Participation in the Second World War, 1939-45*, Vol. III (Wellington: Department of Internal Affairs, War History Branch, 1963), “Letter from Major-General Barrowclough to the Prime Minister, 5 August 1944: Report on Operations – 3rd New Zealand Division, 1 January 1944 to 30 June 1944”, 447.

⁶⁴ *Ibid.*, 447.

⁶⁵ ANZ, WAI1, 1151, DAZ 155/1/26, War Diary of Headquarters 14 NZ Bde, From 1-29 February 1944, 4 February.

⁶⁶ ANZ, AD12, 15, 28/15/1, Part 1, Minute: “Meteorological Section – Kiwi”, 5 September 1942; Air Headquarters RNZAF, Chief of the General Staff: “Meteorological. Sec. – 3DIV”, 4 September 1942.

⁶⁷ These were, however, published over the following days.

components.⁶⁸ It provided all participants with a comprehensive outline of units, duties, and their respective responsibilities. Operation Order 2-44 was a masterpiece of organisational skill, although one had the ability to become bogged-down by its detail. Nonetheless, it was definitely *de rigueur*. Interestingly, despite the importance of the LSTs to the operation, no contingency plan for these ships was included in the initial issuance of Operation Order 2-44, and this was only included in a subsequent amendment.⁶⁹ Once again this indicated the difficulty of allocating resources from scattered commands, as even by 5 February, the allocation of ships to the operation had not been finalised.

Final preparations enabled the division to disseminate a special intelligence summary, on 9 February. This contained all relevant information gained from the reconnaissance-in-force, including the strength of the small garrison, which was (incorrectly) estimated to be 53-strong.⁷⁰ Furnished with the two Operation Orders, the special intelligence summary, and after a final conference with Barrowclough, Potter was able to issue his brigade's Operation Order No. 2, which was his final order for the amphibious landing on the Green Islands, on 9 February.⁷¹ The delay between the issuing of the division and brigade Operation Orders was most likely due to the need to finalise air and naval support plans, as well as loading times and schedules, which had not been relayed within Operation Order No. 101.

The key objectives stated within the various operation orders remained the securing of a suitable area for the construction of an airfield and PT boat base. This, along with the beach analysis conducted during the reconnaissance, directed the identification of the

⁶⁸ ANZ, WAI1, 1151, DAZ 155/1/26, War Diary of Headquarters 14 NZ Bde, From 1-29 February 1944, 4-5 February.

⁶⁹ DAZ 121.1/1/13, HQ 3 Division, War Diary 'G' Branch, From 1-29 February 1944, Appendix VII: "Amendment to CTF Operation Order 2-44".

⁷⁰ ANZ, WAI1, 1512, DAZ 121/9/A50/4/2, Headquarters 3rd NZ Div., "Special Intelligence Summary: Nissan Island", 9 February 1944.

⁷¹ ANZ, WAI1, 1151, DAZ 155/1/26, War Diary of Headquarters 14 NZ Bde, 1-29 February 1944, diary entry for 9 February; Gillespie, *The Pacific*, 178.

operation's Decisive Points; those points which held the chief lines of communication.⁷² In identifying the operation's key objectives, and by learning the geography of the Green Islands, the Decisive Points were acknowledged as the narrow southern channel separating Barahun Island and Nissan island, and Tangalan Plantation in the mid-section of Nissan's eastern coast (the area where the airfield were to be located – see Appendix VII).⁷³ This was recognised within Operation Order No. 101, which specified that all the Landing Craft, Vehicle, Personnel (LCVPs) of the eight APDs be employed to land 800 men, in one flight, in the Pokonian-Barahun area.⁷⁴ Thus, Potter had to direct 32 LCVPs from a moving PT boat, potentially under fire – apparently he did not suffer from seasickness.

Securing the channel was intended to ensure continued supply of the main force, and the future airfield at Tangalan Plantation, while the securing of Tangalan Plantation itself supported the construction of the airfield. Likewise, the holding of the main channel was paramount to impeding any potential Japanese amphibious counterattack, as it would face the same problems which had convinced the Allied forces to land in the lagoon and not along the outer shores of Nissan. Due to these factors, securing landing beaches nearer to the intended airfield site were the primary concern for the commanders. For example, of the landing areas centring on Tangalan, specifically the southern landing sectors (codenamed Green 1 and Green 2), the beach covering the southern portion of the intended airfield (Green 1) held primacy over the landing beach (Green 2) further south. Thus although both Green 1 and 2 beaches were to be secured for the unloading of LCIs and LSTs, the holding of Tangalan for airfield development remained an overriding objective for the operation.⁷⁵

⁷² John G. R. Wilson, "An Examination of Naval Surface Fires in Future Amphibious Operations" (Monograph, School of Advanced Military Studies, US Army Command and General Staff College, 1991), 8.

⁷³ ANZ, WAI1, 1553, DAZ 157/9/86, "Summary of Instructions Issued by Brigadier Potter, Commanding 14 NZ Inf. Bde.", n.d.

⁷⁴ ANZ, WAI1, 1092, DAZ 121.1/1/13, HQ 3 Division, War Diary 'G' Branch, From 1-29 February 1944, "3rd NZ Div. Operation Order No. 101 – Operation Squarepeg", 4 February 1944, 2.

⁷⁵ ANZ, WAI1, 1553, DAZ 157/9/86, "Summary of Instructions Issued by Brigadier Potter, Commanding 14 NZ Inf. Bde.", n.d.

Final planning preparations came in the form of detailed scale models and the issuing of improved aerial photographs of the Green Islands. All troops were given time to study the terrain and orientate themselves for the operation. This included multiple visits to the scale model in order to ensure the greatest possible knowledge of the area and objectives.⁷⁶ While aerial photography had proved to be disappointing for information on suitable landing beaches and airfield sites, the existence of numerous and detailed aerial pictures were probably key to enabling intelligence sections construct table models of the islands' topography, which soldiers found highly satisfactory and helpful. Final preparations also saw the attachment of naval fire control parties, interpreters, and liaison officers to the infantry battalions especially to enhance fire support should it be required.⁷⁷ There remained now only to prepare marching orders and await transports in the marshalling areas for the embarkation phase, which involved organising 73 ships of Task Force 31.



⁷⁶ ANZ, WAI1, 1553, DAZ 157/12/11, Historical Record of 35th Battalion, February 1944.

⁷⁷ Newell, "New Zealand's Forgotten Warriors", 144.

Image 8: One of the scale models created by NZ troops during the preparation for 'Squarepeg' – it was welcomed by the soldiers as it made them feel confident in their mission and the tasks expected of them. (Source: "Scale model of Nissan Island, Papua New Guinea, prepared by New Zealand Divisional Engineers in preparation for the landing and training of assault troops during World War II", Department of Internal Affairs, War History Branch: Photographs relating to World War 1914-1918, World War 1939-1945, occupation of Japan, Korean War, and Malayan Emergency, Ref.: 1/2-044775-F, Alexander Turnbull Library, Wellington, New Zealand, <http://natlib.govt.nz/records/23128808>.)

The planning phase of Operation 'Squarepeg' served to illustrate a refining of amphibious planning methods and a general increase in the level of amphibious knowledge by New Zealand commanders and their staff officers after experiences in the Treasury Islands. This resulted in a number of key improvements by those involved. The speed at which American and New Zealand commands commenced planning fostered early liaison efforts and co-location of key planning members on Guadalcanal. In so doing, Barrowclough was able to identify that the normal divisional staff was insufficient in dealing with loading plans while still remaining forward with the division, and thus a specialist planning and movement control staff was absolutely vital in supplementing the work of the division and brigade staff on Guadalcanal. This allowed Barrowclough to call upon a "very efficient planning and movement control staff which [broke] the back of most of [the] loading problems."⁷⁸ Another key element of the planning phase was the reconnaissance-in-force, without which planning could not have progressed beyond a preliminary stage. Its success helped to incorporate the experiences in jungle warfare from Vella Lavella. For example, the limitation placed on situational awareness in jungle warfare led to the creation of scale models, which greatly assisted in ground orientation and knowledge of the operational area, as well as boosting the soldiers' confidence and morale.

Despite the assistance which the reconnaissance-in-force provided for the planning phase author Reginald Newell contends that the basis on which the mission was ordered proved to be flawed because the island natives were not pro-Japanese.⁷⁹ This is debatable since

⁷⁸ PUTTICK, 1, 5, Chief of General Staff – Liaison letters: General Barrowclough (3 Division) – 4 September 1942 – 17 March 1944, Letter from Barrowclough to Puttick, 2 February 1944.

⁷⁹ Newell, "New Zealand's Forgotten Warriors", 144.

identifying the allegiance of the locals was one of many details which 'Squarepeg' required before the main amphibious landings could have been conducted. Moreover, the contention that the basis of the raid was flawed is a moot point, since this declaration is provided with the assistance of hindsight. Commanders cannot be criticised because they cannot see through the Fog of War. They may be applauded if they guess correctly without recourse to an activity such as a reconnaissance mission, but they must not be criticised because they sought to dispel the effects which the Fog of War had on the battlefield. Thus, the basis of the mission may have been false, but not flawed. Newell's analysis goes further and asserts that the composition of the raiding force was "odd – not small enough to be stealthy, nor big enough to deal with substantial opposition."⁸⁰ Here Newell misses the point: the commando force was neither intended for stealth nor prolonged battle. The mission was designed to be interpreted by the Japanese as a raid – the reconnaissance force was meant to be discovered, hence the planting of documents to substantiate the presence of the force. The troops were to imitate 'raid-type' actions while the specialists conducted their reconnaissance tests. If a smaller force, such as the one on 10 January, had been used to conduct the reconnaissance mission, the danger of this small force being destroyed would have increased as it lacked the means to defend itself against even a small enemy garrison. Indeed, as the locals were believed sympathetic to the Japanese, Barrowclough could not hope to land a small team without being noticed, and has this occurred the force would have need of some level of firepower for its defence.

Newell also suggests that the USMC's specialist reconnaissance teams would have been more suited to the reconnaissance mission, or in lieu of that, that the PT boats originally sent to ascertain the soundings of the two main channels leading into the lagoon, on 10 January, were far more suited to the mission which the 30th Battalion later conducted.⁸¹ The suggestion that USMC reconnaissance teams could have been used instead of 30th Battalion personnel, does not take into account the dynamics at work within the Pacific Ocean Areas. USMC scouts were adapted for reconnaissance missions, while the USMC

⁸⁰ Ibid., 143.

⁸¹ Ibid., 144.

raiders were used for raids. As the pretence of 30th Battalion's mission was a 'raid', the utilisation of scouts was unsuitable since the pseudo-tasks given were different from a purely reconnaissance mission. Additionally, as the 'raid' was in fact to actually carry out reconnaissance tasks and since the specialists attached to the commando force carried out those activities, the scouts' role were being fulfilled. In the same manner, the USMC raiders would have been at a loss as the tasks demanded of the commando force were beyond the former's capabilities. Additionally, the majority of USN and USMC commanders believed that specially designed units for amphibious raids and reconnaissance missions were unnecessary, and that their tasks could be conducted by regular units with special training. Moreover, up to this point in time the use of amphibious raiding units in the Pacific theatre had not been very successful, and had approached disaster on more than one occasion – detractors pointed to Choiseul and Bougainville in particular.⁸² Thus, Barrowclough was merely echoing the general tone of commanders in the region by not employing specialist USMC reconnaissance teams.

In order to retain the elements of stealth and surprise, reconnaissance missions were usually executed in rubber boats instead of motorised craft, however rubber boats could not be used in the mission due to the hazardous surf conditions around the Green Islands.⁸³ Additionally, as motorised craft had to be used, there was good reason to believe that the noise which these would generate could have alerted the Japanese garrison. The presence of a 300-strong reconnaissance force was therefore necessary to ensure adequate protection of the specialist technicians against the alerted Japanese. Further, the reconnaissance force had to be sufficiently large so as to conduct the 'pseudo' raid actions with which to deceive the Japanese as to the mission's true purpose. It did not matter if the force was discovered as the Japanese would have been inclined to believe that the mission was most likely a distraction for an operation elsewhere. Newell ultimately argues that the end effect of sending such a large reconnaissance force was to alert the Japanese of the main landing and hence it increased potential opposition on 15

⁸² Macksey, *Commando Strike*, 173-178, 198-207; Gailey, *Bougainville 1943-1945*, 46-59.

⁸³ Rottman, *US Special Warfare Units in the Pacific Theater 1941-45*, 13; Newell, "New Zealand's Forgotten Warriors", 140.

February.⁸⁴ Although the Japanese dispatched two submarines with reinforcements aboard, this was inconsequential to the main landing, even if the Japanese had unloaded their full compliments onto the island group. The Allies knew the Japanese could not substantially reinforce an island garrison by submarine due to their limited size. Moreover, the Allies held air and naval superiority in the region, and therefore could have located and intercepted any significant Japanese surface reinforcement of the Green Islands.

These examples serve to illustrate the level of Barrowclough's appreciation of operational and tactical concerns as they related to the operation's amphibious and jungle aspects. They also highlight the level of coordination which the 14th Brigade's troops had with the USN landing craft crews. These features were translated into the complex operation and administration orders which the divisional and brigade staffs were able to produce and which complemented and supplemented the similar navy orders issued by Wilkinson for the main landing.

⁸⁴ Ibid., 144.

CHAPTER 5

Force Organisation

Incorporated into the planning process for Operation 'Squarepeg' was the task organisation of forces. This process is the attaching of dissimilar operating systems (units) into an integrated flexible grouping that is most appropriate, and most capable, of attaining the assigned objective or mission. This was an essential aspect of the operation, as the landing force had to confront an array of potential adversities. The selection and structure of units destined for Squarepeg were governed by three features: objectives, threats, and shipping space. As the operation would be taking place hundreds of kilometres away from the nearest Allied base, the New Zealanders were aware of the dangerously advanced position that the operation would place them in the region, and much effort was devoted to ensuring that the landing force was at peak operational strength for the tasks assigned to it. This required the detailed listing and organisation of all participating units, which were influenced by the accurate intelligence attained during the planning phase of the operation. 'Squarepeg' contained many 'firsts' for the 3rd NZ Division, including the use of armour and some types of artillery. Their structure and organisation were important to achieving the operation's objectives, and to the conduct of subsequent actions on the islands. Additionally, it is necessary to analyse the key units which were involved in 'Squarepeg', for they provide an indication of the level of adaptation which the 3rd NZ Division was able to incorporate at this stage of its commitment in the South Pacific. This assists in establishing the degree to which 3rd NZ Division's had incorporated the lessons of other Allied units in jungle warfare and amphibious operations. Lastly, the task organisation of units offers an indication of the tactical handling of forces by Barrowclough and 3rd NZ Division commanders.

The Japanese garrison on the Green Islands had never been substantial, reflecting that it was something of a backwater. Until the end of January 1944, only around 12 engineers and logistics personnel had been stationed there for convoy activity between Bougainville and New Britain.¹ These troops were unprepared for the reconnaissance-in-force, and the firefight which ensued on the evening of 31 January was probably against crews of passing Japanese landing craft and not garrison personnel. Indeed, unbeknownst to the Allies, the service output evacuated the islands on 2 February. The Allies originally estimated that only around 53 Japanese were on the islands, however, in response to the reconnaissance-in-force of 31 January, 123 reinforcements (all naval personnel) were dispatched by two submarines from Rabaul.² These were to reunite with the service output which returned to the islands a few days later. Unfortunately for the Japanese, rough seas hindered disembarkation and the landing was called off after only 77 reinforcements made it ashore. These reinforcements were likely part of the Japanese 8th Combined SNLF or a subunit of 89th Guard Unit.³ Guard units were intended to fulfil defensive duties and were mostly composed of reorganised SNLF members. Their only heavy equipment seems to have been one "Barrage" mortar, at least three grenade dischargers, two heavy machine guns, and three to seven 20mm cannons, of which three were the rare Type 97 20mm anti-tank rifles, which were more than adequate of dealing with the New Zealanders' Valentine tanks.⁴ Despite the aggressive reputation of the SNLF,

¹ ANZ, WAI1, 1092, DAZ 121.1/1/13, HQ 3 Division, War Diary 'G' Branch, From 1-29 February 1944, Appendix XVI: "Prisoner of War Interrogation Report No. 1", page 1.

² Gillespie, *The Pacific*, 178; ANZ, WAI1, 1512, DAZ 121/9/A50/4/2, Headquarters 3 NZ Div., "Special Intelligence Summary – Nissan Island", 9 February 1944.

³ Gary Nila, and Robert A. Rilfe, *Japanese Special Naval Landing Forces: Uniforms and Equipment 1932-45, Osprey Men-at-Arms* (Oxfordshire: Osprey Publishing, 2008), 12; Commander-in-Chief Pacific Ocean Areas Bulletin 11-45, 15 January 1945, *Japanese Naval Ground Forces: "Know Your Enemy!"*, 3-9, Navy Department Library, <http://www.history.navy.mil/library/online/japanesenavalgroundforces.htm>.

⁴ It is possible that the 30th Battalion erroneously reported the Type 97s as 20mm machine guns when they were captured, as the Type 97 were fully automatic and had likely never been encountered by the New Zealanders. This would account for the large number disparity of captured Japanese weapons between primary and secondary sources. ANZ, WAI1, 1552, DAZ 155/9/14/4/1, HQ 14 Infantry Brigade – Office records – List of captured Japanese arms and equipment and translation of captured Japanese document, Headquarters 14 NZ Inf Bde, to Headquarters 3rd NZ Div., "Captured Japanese Weapons," 1 March 1944; ANZ, WAI1, 1551, DAZ 155/9/4, HQ 14 Infantry Brigade – Office records – Unit reports Squarepeg Op (including Signals report), "30 NZ Battalion, 14 BDE, 3 NZ DIV, 2NZEF IP: Report on Operations Jan/Feb 1944 – Green Island GP"; Barrowclough reported six 20mm guns captured on 19 February. See EA1, 570, 86/11/1, Defence of Pacific – Nissan (Green) Islands 1944, Telegram from Barrowclough to Puttick, 19 February 1944; Official History sources differ between five and six 20mm guns captured. See Gillespie, *The Pacific*, 184; Henley, *Tanks, MMGs & Ordnance*, 221; Ian V. Hogg, and John S. Weeks, *Military Small Arms of the 20th Century*, 7th ed. (Iola, Wisconsin: Krause publications, 2000), 396.

by this stage of the war it was a spent force, although the individual Japanese soldier (or seaman) was still very much a fighter, and more than a match for the New Zealand soldiers they would soon face.

As mentioned, due to the proximity of the Green Islands to Japanese strongholds, particularly Rabaul, a primary concern of Barrowclough's was the enemy's ability to launch a counter-attack against his forces within a short period.⁵ His trepidations were not without foundation as the Japanese had recently transported 1,400 troops from New Britain to Bougainville despite Allied air and naval superiority in the region.⁶ This confirmed to Barrowclough that the Japanese were still capable of launching mid-sized amphibious operations. This belief was an important consideration for Barrowclough's task organisation of forces for 'Squarepeg', as it retained a directing influence over force capabilities and their place within the operation.

The issue of personnel for the 3rd NZ Division was one of the key limitations of its service in the Pacific. Apart from the general shortage of manpower affecting all the New Zealand forces, there was also the issue of maintaining personnel standardisation with British divisional structures, particularly as pertaining to contemporary War Establishments. The adherence to which, was at times, adjusted owing to the smaller two-brigade structure of the division, and saw some manpower elements, such as the divisional signals, reduced by around 20 per cent. The observance of British War Establishments even extended to upholding rank and staff appointments.⁷ This proved troublesome, for while British War Establishments may have been appropriate for the Mediterranean, the 3rd NZ Division was operating with US units within a US run theatre. As it eventuated, some officers of

⁵ Gillespie, *The Pacific*, 168; Morison, *Breaking the Bismarcks Barrier*, 413.

⁶ Gailey, *Bougainville 1943-1945*, 141.

⁷ For a sanitised version of accounts of the New Zealand manpower crisis, and how it affected the division, refer to *Documents Relating to New Zealand's Participation in the Second World War, 1939-45*, Vol. III (Wellington: Department of Internal Affairs, War History Branch, 1963), 337-435. Unedited correspondence and opinions can be found in letters between Puttick and Barrowclough within ANZ, PUTTICK5, 1, 5, Chief of General Staff - Liaison Letters: General Barrowclough (3 Division) - 4 September 1942 - 17 March 1944; ANZ, WAI19, 1, S1, Part 1-2, Major-General Barrowclough (Personal), April 1943 - August 1944; KMARL, Acc. No. 1998.834, Official War Diary of General Barrowclough; and KMARL, Acc. No. 1998.835, Official Papers kept by General Barrowclough.

the NZEFIP were outranked by American colleagues in the same positions because British War Establishments were in place.⁸ The inclusion of lower ranking New Zealand officers in staff appointments, affected combined staff planning as they could not be expected to hold equal command power within US establishments – it was also seen as somewhat presumptuous if ‘junior’ ranking New Zealand officers presented themselves to ‘senior’ US officers and expected to be treated on equal terms. As difficult as it was, Barrowclough was forced to uphold British practises in accordance with relevant War Establishments despite the problems it caused during combined operations.⁹ It appears, however, that due to the division’s friendly association with South Pacific commands, Barrowclough’s staff were able to maintain an amicable working relationship with their US counterparts.

Infantry

As discussed in Chapter Two, while Barrowclough had an excess of officers (though not always of good quality), a shortage of other ranks was noticeable.¹⁰ The most visible effect of this was the 3rd NZ Division’s unique two-brigade structure, which had to be retained because of the general shortage of troops. The problem was compounded by Barrowclough’s insistence on replacing men deemed ‘unfit’ for jungle warfare, which, while being in accordance with jungle warfare doctrine, was at odds with the type of replacements that he received.¹¹ New Zealand, as with almost every belligerent nation with conscription, had a medical grading system for its draftees. The New Zealand Army graded potential conscripts according to such factors as their age, physical health and mental aptitude into one of three grades, which in turn determined where they would serve and what roles they were accorded. Medical reports from 1944 indicated that there were many lower graded men (Grade III) within the 3rd NZ Division, despite concerns (including Barrowclough’s) that such men could not perform in jungle

⁸ ANZ, PUTTICK5, 1, 5, Letter from Barrowclough to Puttick, 4 September 1942; and Puttick’s reply on 10 September 1942. Admittedly, some of these issues were later rectified.

⁹ Puttick, at Army Headquarters, Wellington, was unwavering in his belief that Barrowclough should retain traditional British WE, in accordance with Empire and Commonwealth practices.

¹⁰ For Barrowclough’s comments on the quality of some of the officers received from New Zealand, see his letter to Puttick, dated 31 January 1943, within ANZ, PUTTICK5, 1, 5.

¹¹ ANZ, AD12, 15, 28/15/1, Part 1, “Operations in the Pacific”, 2 November 1942.

conditions.¹² The presence of such troops equated to lower combat effectiveness rates for the division. The absence of any prolonged combat was the most likely cause for this fact not being immediately felt.

Had prolonged combat occurred, the presence of lower medically graded troops would have been most readily felt in the infantry units. For the operation this would mean the 14th Brigade's three infantry battalions (30th, 35th, and 37th). All three of the infantry battalions had undergone extensive jungle and amphibious training since the end of combat operations on Vella Lavella. The most important organisational change for the battalions was the abandonment of the task-organised BCT structure with its integrated battlefield operating systems. The official history claims this was due to the former's tendency to "develop a multiplicity of commands during operations", however it also represented a tendency of higher echelon commanders to exert tighter controls over subordinate units.¹³ The abandonment of the Combat Team structure was a radical departure from normal operating procedures, especially as the Americans continued to use such task organisation for their operations. The establishment of a well-connected signals network among the battalions, the brigade, and the division was one method in which Barrowclough and Potter sought to alleviate such detractors.

The battalions had also suffered a serious strength reduction due to shipping limitations, resulting in too few reinforcements being sent northward. At least one battalion deployed with only 614 men; the battalion's War Establishment was 932 men, of whom ordinarily some 840 men would be deployed, with the other 10 per cent placed in the Left out of Battle ('LOB') component to serve as the basis for rebuilding the battalion in the event of heavy losses. Therefore, the battalion was some 200 men short when deployed. This may suggest why the 37th Battalion's mortar platoon was intended to be used as a rifle platoon

¹² Grade III personnel were normally restricted to service within New Zealand, while Grade II were reserves for formations serving overseas. ANZ, WAI1, 1085, DAZ 115/1/10-12, War Diary of Deputy Director Medical Services 2NZE IP, January - March 1944, "Analysis of Medical Boards, January 1944"; "Analysis of Medical Boards, February 1944"; "Analysis of Medical Boards, March 1944".

¹³ Gillespie, *The Pacific*, 178.

on D-day. These shortcomings were partially offset by the attachment of additional combat support, combat service support, and medical detachments from other units.¹⁴ Nonetheless, the comparative shortage of infantrymen in an environment that was infantry-intensive must have been of some concern. To compound matters, as Barrowclough had abandoned the BCT concept for 'Squarepeg' the artillery was only to act "in support" of the battalions.¹⁵ The artillery was therefore placed under Brigadier Potter's control. This arrangement led to an overall loss of combat power by the battalion commanders. The loss of firepower was substituted somewhat by allowing the battalion commands to request naval fire support (independent of brigade command) through their attached Naval Forward Observation Officer once they landed.¹⁶ Moreover, generous allotments of liaison and forward observation officers in the first wave of landing craft was intended to ensure that battalion commands had recourse to fire support thus disabled through the disbandment of BCT structure. Battalion commands did not have direct communication with air support.

As the demands of jungle warfare had been mostly identified by 1944, organising the infantry battalions for operations ashore required relatively minor refinements in relation to tactics and equipment.¹⁷ One of the main lessons of earlier operations emphasised again, in the lead-up to this operation, that "troops must receive a high degree of individual training to prepare for jungle warfare."¹⁸ This resulted in an increased training regime for 14th Brigade troops. Other adaptations evident were the large numbers of hand grenades and automatic weapon ammunition allocations for the battalions. For example, the 35th Battalion was to carry ashore 2,060 grenades and 49,000 rounds of .303

¹⁴ ANZ, WAI1, 1553, DAZ 157/9/86, "Summary of Instructions Issued by Brigadier Potter, Commanding 14 NZ Inf. Bde.", n.d.

¹⁵ Ibid.; ANZ, WAI1, 1551, DAZ 155/9/4, HQ 14 Infantry Brigade – Office records – Unit reports Squarepeg Op (including Signals report), "37 NZ BN Squarepeg Operation", 27 February 1944.

¹⁶ ANZ, WAI1, 1151, DAZ 155/1/26, War Diary of Headquarters 14 NZ Bde, 1 - 29 February 1944, Appendix V, "14 NZ Inf Bde OO No. 2 – Operation Squarepeg, 9 February 1944," page 4.

¹⁷ This was admitted within a US Army report which claimed that present "methods of training for jungle warfare are both adequate and sound." See NARA, Record Group 494, Box 68, USAFISPA/South Pacific Base Command, 1942-46, Records of US Army Forces in the Middle Pacific, 1942-46, Combat Reports and Lessons, Joint Operations, "Subject: Lessons Learned from Joint Operations," Serial AG 370.2 T (1-21-44) from Headquarters, XIV Corps to Commanding General, South Pacific, 21 January, 1944, page 8.

¹⁸ USAHEC, D767.98.N681942, *Notes on Jungle Warfare*, 1.

for its light machine guns, distributed through its first line ammunition.¹⁹ In addition, the battalions each carried over 2,000 rounds for their 2- and 3-inch mortars, with each rifle company allocated 192 2-inch mortar rounds for its integral use.²⁰ This was an increase in the standard allocation and reflected reports from a number of sources, including American experiences on Guadalcanal. These had shown that infantry companies needed mortars for immediate and direct support, and that ammunition supply needed to be increased for operations.²¹ This still did not satisfy everyone though, and many soldiers resorted to stealing pistols for their personal defence.²²

Tropical effects on soldiers had also been recognised and recommendations made: Units were authorised to maintain jungle suits, underwear, towels, mosquito nets, and boots, all of which were issued at 10 per cent above normal levels, while socks were to be held at 25 per cent above normal levels. What this meant for the individual infantryman was that each had two sets of jungle 'suits', two pairs of jungle boots, three pairs of socks, 10 days' supply of Atebrine tablets (to combat malaria), and three days rations.²³ This was part of a deliberate effort to ensure that men were able to sustain their health in the enervating tropical climate for longer than had been the case on Vella Lavella, where shortages of these items caused medical problems. The boots on issue were American-type fabric jungle boots with rubber soles, as the experience on Vella Lavella had also demonstrated the need to dispense with the standard-issue leather boots. Additionally, the men had to wear boots at all times in order to prevent infections from coral and other cuts which were common in jungle conditions. The 14th Brigade also fared far better by the provision of American-made jungle 'suits', being spared the uncomfortable New Zealand-made jungle uniforms that had previously been used by the 8th Brigade in the

¹⁹ ANZ, WAI1, 1553, DAZ 157/9/86, "HQ 35 NZ Bn., Distribution of 1st Line Ammunition, 6 February 1944."

²⁰ Ibid. The British designed 2-inch mortars were inferior to the similar American 60mm mortars in terms of weight of shell, but they were lighter. A crucial feature in jungle warfare.

²¹ The importance of, and demand for, the mortar in jungle warfare is noted many times within USAHEC, D767.98.N681942, *Notes on Jungle Warfare*.

²² ANZ, WAI1, 1505, DAZ 121/9/A28/12, Headquarters, Squarepeg, Administrative Order No. 3, 26 February, 1944.

²³ ANZ, WAI1, 1553, DAZ 157/9/86, "3 NZ Division Administration Instruction, 21 January 1944"; ANZ, WAI1, 1553, DAZ 157/9/86, "35 NZ Bn Administration Order No. 1, Appendix 'D': Clothing and Personal Equipment."

Treasury Islands.²⁴ The men also benefitted from better provision of rations than in earlier operations. However, this had the disadvantage of increasing the weight of the infantryman's load, which was to be a cause of some complaint by the men and their officers.²⁵ Indeed, the load must have been quite substantial, for the men left all respirators and anti-gas equipment in baggage trains, and yet it still warranted complaint.²⁶

At least one battalion was to take anti-tank rifles ashore, however these were not carried with the assaulting waves, and instead were brought ashore from the LSTs in subsequent waves (to be left at company headquarters and not carried on patrol). These bulky weapons had proven unsatisfactory on Vella Lavella and their inclusion in the operation is quite astounding considering that they had originally been considered for replacement by Type 69 Grenades in 1943, however their relegation to subsequent waves showed a slight improvement over past operations.²⁷ It is apparent that the main reason for retaining these weapons was the possibility that they might be needed in the event of a Japanese counter-attack from forces offshore. This suggests that Barrowclough's inclusion of additional combat elements were directed against possible future Japanese counterattack and not the Japanese on the Green Islands.²⁸ In another departure from the jungle warfare tactics of the Americans, the New Zealanders did not incorporate specialist demolition teams (engineers) within their infantry platoons for use against Japanese defences and to assist in cutting trails through dense vegetation. This showed a marked variance to US practices, which increasingly included greater numbers of assault demolition teams within their infantry battalions and companies.²⁹ The New Zealanders

²⁴ Newell, "New Zealand's Forgotten Warriors", 176.

²⁵ ANZ, WAI1, 1553, DAZ 157/12/11, Historical Record of the 35th Battalion, February 1944.

²⁶ ANZ, WAI1, 1151, DAZ 155/1/26, War Diary of Headquarters 14 NZ Bde, From 1- 29 February 1944, Appendix II: "Bde Adm Information (Preliminary) on Nissan Is. Operation"; "Administrative Order No. 1 – Squarepeg Op. Appendix 'A'."

²⁷ ANZ, WAI1, 1551, DAZ 155/9/2, HQ 14 Infantry Brigade – Office records – Jungle warfare, "Comparison of Points from Reports of First and Second Jungle Courses", page 4.

²⁸ ANZ, WAI1, 1553, DAZ 157/9/86, 35 Battalion – Office records – Information on Squarepeg Op, 16 January 1944 to 6 May 1944, Appendix 'B' issued in conjunction with 35 NZ Battalion Administration Order No. 1 (Squarepeg), "Allocation of Equipment and Vehs. 1st Ech.", 9 February 1944.

²⁹ ANZ, WAI1, 1551, DAZ 155/9/2, "Comparison of Points from Reports of First and Second Jungle Courses", page 5; Gordon L. Rottman, *World War II Infantry Assault Tactics, Osprey Elite 160*, (Oxfordshire: Osprey Publishing, 2008), 49-50.

gave no explanation for the difference of opinion, however, their attitude changed somewhat as engineers were attached at battalion-level for 'Squarepeg'.

Supporting Arms

The question of armoured support for the 3rd NZ Division was a topic much discussed, and Barrowclough had vehemently pushed for the inclusion of an armoured component since the division's creation. After many delays, permission was finally granted and the balance of the 3rd NZ Division Tank Squadron arrived on Guadalcanal on 26 September 1943.³⁰ With the arrival of the tanks, Barrowclough was pressed to make use of them less his efforts to Army Headquarters in Wellington, appeared unnecessary and disruptive – quite embarrassing considering the lengths he pursued. This proved easier said than done, as although the division now had its organic armoured unit, it was only one squadron of 19 tanks composed of 12 Valentine Mk. IIIs, each equipped with a 2-Pounder main gun, and seven Valentine Mk. III Close-Support tanks equipped with 3-inch howitzers. The Valentine had long been declared obsolete on European battlefields owing to the small size of its main gun and its slow cross-country performance, but the tank found a new lease on life in the Pacific, where it was considered adequate against the Japanese.³¹ To employ this new asset, the New Zealanders studied the use of armour on Guadalcanal and New Georgia, particularly in the tanks' ability to deal with strongpoints, and to make headway through jungle undergrowth.³²

In clearing jungle undergrowth it was recognised that medium tanks were more suited for the role, as they had the weight and power to punch through vegetation. The retiring of the USMC's light tanks in mid-1944 for much the same reasons, also supported the New

³⁰ ANZ, AD12, 15, 28/15/1, Part 4, 2 NZEF reports – Operation Kiwi – June – September 1943, "HQ Memo", 12 August 1943; ANZ, WAI1, 1549, DAZ 152/9/5/4, Appendix to 8th Brigade Operation Order No. 1: "Composition 8th Brigade Group"; Henley, *Tanks, MMGs & Ordnance*, 29.

³¹ Plowman, and Thomas, *New Zealand Armour in the Pacific 1939-45*, 41, 48; KMARL, Acc. No. 2005.381 Personal narrative of Brian John Potts, 3rd NZ Division Tank Squadron; Gillespie, *The Pacific*, 186; Rottman, *Japanese Army in World War II*, 37.

³² NARA, Record Group 407, Entry 427, Box 1172, Records of the Adjutant General's Office, WW II Operations Reports 1940-48, Pacific Theater, "Lessons from the Solomons".

Zealanders decision to use Valentine medium tanks.³³ The decision to employ tanks in Operation 'Squarepeg' was pragmatic for a number of reasons. The operation was risky, and the New Zealanders were 'out on a limb'. Reports had indicated the presence of Japanese tanks on nearby New Britain and Kavieng.³⁴ The tanks were thus insurance, and guaranteed some form of combat independence and defensive firepower if the Japanese launched an amphibious counterattack (like they had done on Guadalcanal). As it was already presumed that enemy strength in the Green Islands were minimal, the squadron's attachment supports this conclusion. Additionally, experiences in New Georgia and Bougainville had showed that Japanese levels of resistance were becoming stronger as the Allies drove closer to Rabaul, this suggested that heavier weapon systems and heavier firepower were needed in order to overcome enemy resistance.³⁵

Despite Barrowclough's personal advocacy on the need for the tanks, plans for their employment were severely restricted due to limited shipping space, and only ten tanks and certain support elements were ultimately selected for the First Echelon.³⁶ The significance of these tanks to the operation was evident as crews and vehicles were allocated across three different landing craft (LST 446, LST 447, and LCI 445) so as to ensure against a total loss of armour if the convoy was attacked.³⁷ To coordinate the tanks once they were ashore an LCI containing service support and headquarters elements landed before the main body of the squadron arrived. This also ensured that the tanks landed only after the beachhead had been secured and once facilities were ready to receive them.³⁸ These measures assisted the planned employment of the tanks

³³ Steven J. Zaloga, *US Marine Corps Tanks of World War II*, Osprey New Vanguard (Oxfordshire: Osprey Publishing, 2012), 14-17.

³⁴ ANZ, WAI1, 1092, DAZ 121.1/1/10-13, HQ 3 Division, War Diary 'G' Branch, From 1 November 1943 to 29 February 1944, "Daily Intelligence Summary" for the months November, December, January, and February; KMARL, Acc. No. 1998.834 Official War Dairy of General Barrowclough, 31 December 1943.

³⁵ NARA Record Group 407, Entry 427, Box 1172, "Lessons from the Solomons". For example, the battle for New Georgia saw the use of Japanese heavy artillery, while a number of Japanese tanks were located on Bougainville. See Ronnie Day, "The Battle for New Georgia", *After the Battle*, No. 98 (1997), 10, 12, 17; Justin Taylan, "The Japanese Tanks of Bougainville", *After the Battle*, No. 147 (2010), 30-36.

³⁶ Henley, *Tanks, MMGs & Ordnance*, 41.

³⁷ LCIs carried some of the Tank Squadron's personnel, but for obvious reasons not the tanks themselves.

³⁸ *Ibid.*, 41; ANZ, WAI1, 1151, DAZ 155/1/26, War Diary of Headquarters 14 NZ Bde, From 1-29 February 1944, 14th Brigade Operation Order No. 2 – Operation Squarepeg, Appendix V: "14 NZ Inf Bde Landing, 2nd Transport Group", 9 February 1944.

once ashore by facilitating their disembarking and correct positioning. In this regard, it was agreed that the Valentines be distributed amongst the 35th and 37th Battalions at Tangalan, whose commanders were to direct them in support of infantry operations. The positioning of the tanks at Tangalan was logical as the area provided room for manoeuvre and defence of the airfield. It had the added effect of concentrating all armour assets in a single location to simplify command and control. Additionally, the tank squadron was initially placed under brigade command, which enabled Potter to use the tanks at his discretion, and ensured that they remained a dynamic resource once landed.³⁹ The third infantry unit, the 30th Battalion did not receive armoured support. As it was to operate in an area known to be too swampy for tanks, it received 'Bren' carriers in lieu of armoured support to assist its operations. Australian experiences in New Guinea had demonstrated that the lightly armoured, open-topped carriers could not be used in the forward area without risking unacceptably high casualties.⁴⁰ This limited their combat role and relegated the vehicles to logistic tasks, and their crews to dismounted infantry roles.

The distribution of the tanks to the 35th and 37th Battalions was noteworthy as armour-infantry tactics had not previously featured within the 14th Brigade. The infantry were thus given short, yet intense, training in armour-infantry cooperation with particular focus on combined-arms methods of eliminating strongpoints in the jungle. The tank squadron had already conducted two months of jungle training with the 8th Brigade on Guadalcanal, so it was mostly a case of the infantry working with the tanks, to which regular familiarisation courses were held. Various attack formations were examined and live ammunition was used for exercises. A number of initiatives were undertaken to facilitate armour-infantry cooperation including a telephone placed at the rear of the tanks to allow infantry to communicate with the tank commander. The squadron also studied American armour tactics from Guadalcanal and practiced target identification in the jungle. Eventually a standardised system was established whereby infantry would advance until meeting resistance whereupon the tanks were called-up - the tanks formed up in two lines of two with the infantry behind. The tanks advanced and engaged the

³⁹ ANZ, WAI1, 1092, DAZ 121.1/1/13, HQ 3 Division, War Diary 'G' Branch, From 1-29 February 1944, Appendix 'A' to 3 NZ Div. Operation Order No. 101.

⁴⁰ Phillip Bradley, "The Battle for Buna," *After the Battle*, No. 162, November 2013, 2-27.

enemy, alternating between the first and second lines as required.⁴¹ These tactics were similar to methods eventually devised by the Americans for use on Bougainville in February 1944, and were themselves a development of armour tactics used on New Georgia.⁴² Amphibious training also required great attention, and it was vital that armoured crews were acquainted with the processes of combat loading and unloading at speed. This was duly achieved after a number of amphibious exercises on beaches surrounding Guadalcanal, some of which Barrowclough attended. Administrative and quartermaster issues were fairly well coordinated thanks to six months of amphibious training by brigade and division staffs, and their loading timetables and schedules appreciated the incorporation of heavy vehicles to the execution of the main landing.⁴³

Keeping with the trend of applying increased firepower for operations was the division's use of artillery. However, the division's early uncertain employment in the Pacific, coupled with the general shortage of artillery pieces in New Zealand, had resulted in artillery remaining an issue for the division.⁴⁴ The shortages of artillery had drawn the ire of Barrowclough on many occasions as he believed large numbers of artillery provided the best chance for success in battle. As noted earlier, Barrowclough did not concur with Australian practices of decreasing the number of artillery pieces for jungle operations, pointing as he did to the fact that the Americans maintained full artillery complements in their divisions in the Pacific. Evidently he was unaware that the Americans had planned to procure lighter and smaller artillery for jungle operations, but decided against this due to administration issues, despite the General Staff's approval for the change on tactical grounds.⁴⁵

⁴¹ KMARL, Acc. No. 2005.381, Personal narrative of Brian John Potts; Henley, *Tanks, MMGs & Ordnance*, 32-34.

⁴² Harry Yeide, *The Infantry's Armor: The US Army's Separate Tank Battalions in World War II* (Mechanicsburg, Philadelphia: Stackpole Books, 2010), 100-105.

⁴³ KMARL, Acc. No. 1999.801, Diary: Pacific Campaign – WWII, James W.B. Allison.

⁴⁴ Gillespie, *The Pacific*, 48. New Zealand did not have the industrial capacity to produce its own artillery pieces. See J.V.T. Baker, *The New Zealand people at War: War Economy, Official History of New Zealand in the Second World War 1939-45* (Wellington, New Zealand: Historical Publications Branch, Department of Internal Affairs, 1965), 134-137.

⁴⁵ Richard M. Leighton, Robert W. Coakley, *Global Logistics and Strategy 1940-1943, United States Army in World War II* (Washington, D.C.: Center of Military History, US Army, 1995), 297, 411; Greenfield, Palmer, Wiley, *The Organization of Ground Combat Troops*, 339-350.

Notwithstanding Barrowclough's opinions on the need for large numbers of artillery in jungle warfare, early reports on the use of artillery in the jungle advocated lengthy barrages, albeit concentrated on comparatively small target areas. It was noted that the value of artillery in jungle operations was threefold: the explosions removed foliage, destroyed or damaged enemy positions, and demoralised the enemy.⁴⁶ However, some of the shortcomings of artillery use in jungle, including greater frequency of 'drop shorts' because of the limitations in observation and dense vegetation, caused anxiety among infantry who feared fratricide by artillery batteries. Thus, while Barrowclough increased the artillery support available for the operation, including deploying the 144th Independent Battery, equipped with 3.7-inch howitzers, along with the 17th Field Regiment, equipped with the standard 25-pounder field guns, this was not universally supported at the time. Special precautions had to be implemented to allay the infantry's fears including having artillery liaison officers accompany each battalion headquarters, with further forward observation officers deployed alongside the infantry in the frontlines. The artillery liaison officers reported to their designated infantry battalion headquarters a few days prior to embarkation to foster cooperation and understanding.⁴⁷ Further assurances were accorded by landing Headquarters 3rd NZ Division Artillery and 4th Survey Troop for coordinating artillery efforts on the islands.

Due to shipping limitations, artillery was landed gradually in subsequent echelons. In total on 15 February, the 17th Field Regiment landed one battery (the 37th Field Battery) of eight guns and the 144th Independent Battery did likewise, these being distributed to Tangalan and Pokonian. The 12th and 35th Field Batteries brought another 16 guns in the Second Echelon on 20 February.⁴⁸ The artillery was gathered under Potter's brigade command for initial operations. Although not expressly stated, this clearly concentrated

⁴⁶ ANZ, WAI1, 1091, DAZ 121.1/1/8, HQ 3 Division, War Diary 'G' Branch, From 1-30 September 1944, "Report of 37th (US) Div in MUNDA Ops with covering note by 3 Div.," 6.

⁴⁷ ANZ, WAI1, 1151, DAZ 155/1/26, War Diary of Headquarters 14 NZ Bde, 1-29 February 1944, 14th Brigade Operation Order No. 2 – Operation Squarepeg, Appendix V: "14 NZ Inf Bde Landing, 2nd Transport Group", 9 February 1944.

⁴⁸ ANZ, WAI1, 1512, DAZ 121/9/A50/4/2, Appendix 'F' to 3 NZ Operation Order No. 101, "Allocation of Vehicles to Ships – 1st Echelon"; "Allocation of Vehicles to Ships – 2 Echelon."

artillery employment under a higher headquarters, and which assisted in adapting to the American belief of extended barrages by as many guns as possible. Fortunately, the small size of the Green Islands facilitated this method of operating, as the guns' range covered the entire island group. Additionally, such a centralised grouping assisted sustainability as it ensured efficient use of limited resources while still supporting tactical plans. While these factors were vital for operations, it stripped the infantry battalions of significant firepower and flexibility.

The inclusion of the 144th Independent battery, with its 3.7-inch howitzers, showed that serious thought was given to the types of defences that could be encountered. The howitzers provided the force with added flexibility especially when it came to attacking any enemy bunkers as its howitzers were able to reach higher angles of fire and with a heavier high-explosive shell than was possible with 25-pounder field guns of the field regiment. The howitzers were also purposely designed to be broken-down into smaller components for ease of movement over rough terrain. One drawback of the 3.7-inch howitzers, however, was their limited range. In order for the battery to maximise its range, its two troops had to be divided on Barahun Island and Pokonian so that in the event of a fire mission, the howitzers would fire over the heads of the alternate troop to its south or north. This required superior levels of communication as coordination of the howitzers' firing pattern was complicated by the separation of the troops across different locations. Before the howitzers could be sighted, which itself required significant clearing efforts in the jungle, they first had to disembark from the LSTs on which they travelled. For the troop located on Barahun this necessitated a complex unloading and loading schedule for the LSTs could not beach at Barahun and thus the troop's four howitzers had first to land at Pokonian and then re-embark aboard smaller LCTs (their shallower draft allowing them to move closer to the beach at Barahun).⁴⁹ Time was essential in this stage as delays caused by effectively having to land twice in one day resulted in a postponement to the timeframe in which artillery support could be provided to the infantry.

⁴⁹ Evans, *The Gunners*, 192-196.

In addition to these, four guns of the 53rd Anti-Tank Battery were included in the First Echelon to be used in the event of a Japanese seaborne counter-attack. As well as providing anti-tank defence, the anti-tank guns boosted shore defence against landing craft, and the plan was for the battery to cover the main channel entrance south of Barahun Island. For this role the battery had experience in the direct fire support role and had conducted regular training shoots over the previous months.⁵⁰ It therefore added an important degree of flexibility as direct fire support weapons against ground and sea targets.

Furthermore, the landing force was to include air defence units, including anti-aircraft artillery, for use in the event of Japanese aircraft disrupting the landing or ground operation. Barrowclough appeared to be concerned that enemy air attacks represented the greatest danger to the operation. This was influenced by the relative proximity of Rabaul to the Green Islands and also New Zealand experience of air attacks in the Treasury Islands where there had been regular duals between aircraft and anti-aircraft gun crews.⁵¹ Having taken this into account, Barrowclough included the 29th Light Antiaircraft Regiment.⁵² This regiment had previously been portioned out to the division's two brigades, but for 'Squarepeg' the individual batteries would come under regimental control. A full two batteries of light anti-aircraft guns (24 of the 40mm Bofors guns and over 480 personnel) were included in the First Echelon. This represented a sizable proportion of shipping and shows the concern that Barrowclough held over being able to repel Japanese air attacks.⁵³ To complement air defences, the US Army's 967th Antiaircraft Artillery Gun Battalion was detailed to provide eight 90mm guns and their crews, to be

⁵⁰ ANZ, WAI1, 1092, DAZ 121.1/1/13, HQ 3 Division, War Diary 'G' Branch, From 1-29 February 1944, Operation Order No. 101.

⁵¹ ANZ, WAI1, 1111, DAZ 128/1/15, 29 LAA Regt War Diary, 1-31 January 1944, "Lessons of Treasury Campaign", 4 January 1944.

⁵² *Ibid.*, "Summary for January 1944".

⁵³ DAZ 155/1/26, War Diary of Headquarters 14 NZ Bde, 1-29 February 1944, "Preliminary Information for Squarepeg Operation, Appendix 'C' to HQ 14 NZ Bde 14/3/S of 1 February 1944 – Personnel Table – 1st and 2nd Transport Groups."

landed on D-day, to provide cover against high altitude bombers.⁵⁴ Once ashore, anti-aircraft units were sited at two decisive points – Pokonian and Tangalan – to protect the Landing Force Headquarters and the airfield.

The need to coordinate the effects of these systems, while maintaining an integrated approach with sizable naval and air components was beyond the capabilities of the normal brigade signals detachments. This called for a greater number of signal units to facilitate the establishment of a complex signals network on the Green Islands, and included additional sections from 3rd NZ Division Signals.⁵⁵ Nearly all headquarter units had their own integral communication sections. However each of these were reinforced by wireless detachments from Division Signals – most likely due to the inconsistency of the formers' own wireless sets. This was most evident in the Advance and Rear Brigade Headquarters, each of which were allocated one New Zealand-made ZC1 wireless set (see Appendices IV and V). These sets were intended to fulfil the demands of higher-level headquarters, however, their use also necessitated division signals personnel to be distributed to the brigade's battalions, as the infantry's organic No. 48 Sets did not have the same frequency settings as the ZC1.⁵⁶ This may also have been an attempt to sure-up the infantry's communication capabilities, as just under a month before D-day, a training memorandum was issued which confirmed that the No. 48 Sets did not meet requirements in jungle conditions. Despite this, and in lieu of a suitable replacement, they continued to be used.

⁵⁴ This unit is incorrectly recorded as the 976th Antiaircraft Artillery Gun Battalion within the US Army official history. See Miller, *Cartwheel: The Reduction of Rabaul*, 313.

⁵⁵ Nicol, *Headquarters*, 242.

⁵⁶ ANZ, WAI1, 1551, DAZ 155/9/4, "Report on 'K' Sec Sigs During Squarepeg Ops 15 – 20 Feb 1944", 7 March 1944; Nicol, *Headquarters*, 246-249.



Image 9: New Zealand troops with No. 48 Sets on Vella Lavella – at this point in time, wireless radios were still in a state of development, and the No. 48 Sets were generally limited to 1.5 kilometres when operating in the jungle. (Source: “World War 2 New Zealand troops, with local guides, Vella Lavella, Solomon Islands”, Department of Internal Affairs, War History Branch: Photographs relating to World War 1914-1918, World War 1939-1945, occupation of Japan, Korean War, and Malayan Emergency, Ref.: WH-0216-F, Alexander Turnbull Library, Wellington, New Zealand, <http://natlib.govt.nz/records/23143054>.)

Further attempts were made to downplay the inefficiency of the No. 48 Sets by suggesting that regular maintenance would allow the wireless sets a “fair go”.⁵⁷ This must have been disappointing for the soldiers, as they had pointed-out the shortcomings of the No. 48 Sets on Vella Lavella, in September 1943. Curiously, the division was not supplied with more effective American-made wireless equipment as by 1944 the US Army had some very useful types available. Indeed, the No. 48 Sets were actually American copies of the British WS No. 18, and therefore one must wonder at the ability to procure these

⁵⁷ ANZ, WAI1, 1091, DAZ 121.1/1/12, HQ 3 Division, ‘G’ Branch War Diary, From 1-31 January 1944, Appendix XI: “Training Memorandum No.2: Use of No. 48 Sets”, 18 January 1944.

while not other American-made types.⁵⁸ Issues such as these meant that the division would have to rely on line communication for the coming operation. Fortunately, these were more reliable in tropical conditions than wireless technologies, and there was no shortage of cable. Nevertheless, line communication was susceptible to frequent breakages in the jungle, in which case elements without wireless communications, had to resort to runners, which allowed the Japanese to capitalise on their sniping abilities and thus impede movement. Factors such as these would paralyse the centralised control of resources, especially with the disappearance of the BCTs, and thus Barrowclough must have hoped for a quick end to the operation.

Adding to these challenges was that the Green Islands lacked even basic infrastructure, including no roads. Barrowclough therefore included in the landing force the Headquarters 3rd NZ Division Engineers, and two engineer field companies, one of which was equipped with heavy earth-moving machinery.⁵⁹ This represented the majority of the division's engineer units – more than would normally be allocated for an operation involving only one infantry brigade. Their priority was as follows: 1) Beaching of LSTs and preparing shore approaches and dump areas; 2) Assist in preparation for heavy anti-aircraft positions; 3) Assist in preparation of radar sites; 4) Assist in preparations for light anti-aircraft units, construction of dugouts for medical units, construction of signal dugouts, and construction of roads and tracks.⁶⁰ In order to better meet the demands of the operating environment, the engineer units undertook a reorganisation prior to 'Squarepeg'. The reorganisation took into account the conditions of amphibious and jungle operations, which required substantial use of heavy earth-moving equipment, particularly bulldozers, as they were deemed essential to the rapid unloading of LSTs and construction of dispersal tracks and movement areas within the jungle. It was

⁵⁸ The US Army official history makes no distinction between the American-made No. 48 Sets and their 'master-copy', the British-made No. 18 Sets. See George Raynor, and Dixie R. Harris, *The Signal Corps: The Outcome (Mid-1943 Through 1945), United States Army in World War II: The Technical Services* (Washington, D.C.: Center of Military History, US Army, 1991), 193. It should also be noted that by 1944, the No. 48 Sets (British No. 18 Sets) had been superseded by the better No. 38 Sets. See Gordon L. Rottman, *World War II Battlefield Communications, Osprey Elite* (Oxfordshire: Osprey Publishing, 2010), 29-30

⁵⁹ ANZ, WAI1, 1092, DAZ 121.1/1/13, HQ 3 Division, War Diary 'G' Branch, From 1-29 February 1944, Appendix 'A' to 3 NZ Div. Operation Order No. 101: "Order of Battle".

⁶⁰ *Ibid.*, Operation Order No. 101, "Engineers", 3.

recommended that three field companies be maintained for the two-brigade division, of which one (the 26th Field Company) was reorganised and reequipped as a Heavy Equipment Company.⁶¹ This reorganisation was significant as it showed the level of adaptation which occurred within the division. Further modification occurred at unit level, with, for example, the 26th Field Company based on a modular design with each of its three platoons able to work independently, which permitted attachment or detailing to other units such as the infantry battalions. Despite efforts to better accommodate the division to service in the South Pacific, Barrowclough was limited by his independence from Army Headquarters, and as such any reorganisation was on an experimental basis, with Barrowclough subsequently declaring to Army Headquarters that “no attempt has been made ... to rewrite the Eng[ineer] War Establishments and War Equipment Tables.”⁶²

In addition to his own engineers, Barrowclough also had access to USN engineers in the form of the 22nd Naval Construction Regiment with three Construction Battalions (CBs – ‘Seabees’). These specialist battalions were created after early operational experiences, including on Guam and Wake Island, in response to the engineering demands of amphibious operations in the Pacific. They were composed of highly qualified and skilled personnel, who were also able to defend themselves in hostile conditions. They thus differed from regular engineers, as they were usually older, skilled artisans with access to

⁶¹ ANZ, AD12, 15, 28/15/1, Part 5, 2 NZEF reports – Operation Kiwi, June 1943 to July 1945, Advance Headquarters 3rd NZ Division Engineers to General Staff Officer Engineers, Army Headquarters, Wellington, “Re: Re-Organisation 3 NZ Div. Engrs”, 26 January 1944.

⁶² As Puttick had strictly refused to give his permission to changing War Establishments. Ibid., Headquarters 3rd NZ Division to Army Headquarters, Wellington, “3 N.Z. Div. GS Notes – Reorganisation of Div Engrs”, 8 February 1944.

specialist equipment for their unique roles.⁶³ The CBs would lead the construction of the airfield and as such elements of all three CBs were to land at Tangalan on 15 February.⁶⁴

For storage, movement, and maintenance of supplies and ammunition, Barrowclough authorised the deployment of Headquarters 3rd NZ Division ASC (Army Service Corps), a reinforced motor transport company, ammunition section, and light aid detachments (mechanical workshops). These units had the task of organising the supply dumps along the landing beaches. Indeed, the 16th Motor Transport Company was the sole supply agency operating for all NZ and US units for the initial landing.⁶⁵ The speed at which the supply dumps could be established directly affected the speed at which the beachhead could be expanded (see Appendix VI). Logistics and ordnance personnel therefore played a greater role than they would in 'normal' operations. Fortunately, Barrowclough had been convinced of the need for large numbers of logistics personnel ever since the Kaimai exercise of 1942, which had demonstrated the difficulty of supplying forward elements in thick bush. This required increased efforts by logistical trains to supply the troops with all matters of equipment and ammunition. The greater responsibility which befell logistic trains in this environment resulted in an expanded complement of combat service support personnel to perform most of the division's supply, repair, and recovery work independently of the Americans. This was necessary as the division had (mostly) British vehicles and equipment, other than American-made Jeeps, and were thus isolated from the American logistical system, especially in relation to ammunition and spare parts. A temporary organisation called "Squarepeg Workshops" was an amalgamation of elements from the 29th Light Antiaircraft Regiment workshops, the tank squadron workshops, and

⁶³ The excellent wartime publication "*Can Do!*" by William Bradford Huie, originally published in 1944, now reprinted, is a most insightful glimpse into the mission of the Seabees. See William Bradford Huie, *Can Do! The Story of the Seabees*, BlueJacket Books (Annapolis, Maryland: Naval Institute Press, 1997). An important contribution to the Seabees conception and utilisation can be found within Joseph C. Zimmerman, "The Construction of Airfields during the New Georgia Campaign of 1943-44: Lessons Learned by the United States Naval Construction Battalions" (MA thesis, East Tennessee State University, 2008).

⁶⁴ ANZ, WAI1, 1092, DAZ 121.1/1/13, HQ 3 Division, War Diary 'G' Branch, From 1-29 February 1944, 3 NZ Div. Operation Order No. 101 – Operation Squarepeg, Appendix 'E' to 3 NZ Div. Operation Order No. 101: "Allocation of Personnel to Ships – 1st Echelon", 4 February 1944.

⁶⁵ *Ibid.*, Appendix 'A' to 3 NZ Div. Operation Order No. 101: "Order of Battle"; ANZ, WAI1, 1151, DAZ 155/1/26, War Diary 14th Infantry Brigade, Appendix 'A' to Administrative Order No. 1: Squarepeg Op, "Supplies", sheet 2.

light aid detachments formed for this operation by pooling of resources under unified command.⁶⁶

The crucial role of logistics to the operation was also seen in designation of the division's senior logistics staff officer, Lieutenant-Colonel P.L. Bennett, as Shore Party Commander.⁶⁷ The Shore Party was the key instrument in preventing congestion in the landings areas, and their contribution was vital to attaining objective in a speedy and judicious manner (see Appendix VI). Bennett was responsible for ensuring the unloading of American landing craft and the distribution of supplies. In addition, officers from 16th Motor Transport Company were appointed as Assistant Shore Party Commanders at four of the five landing beaches.⁶⁸ This marked a departure from the USN's *Landing Operations Doctrine*, which stated that the Assistant Shore Party Commander should be the Beachmaster, who ordinarily was a naval officer in charge of the naval section of the Shore Party, as he advised the Shore Party Commander on naval matters.⁶⁹ These appointments provided the New Zealanders with a degree of independence in the unloading process, and also prevented the placing of New Zealand infantry under American supervision on the beaches. To assist in these measures, ASC officers would have been located in the Headquarters section of the Shore Party which exercised control over the landing beaches during the debarkation, assault, and consolidation stages of the landing. The placement of specialist ASC officers in the Headquarters of the Shore Party was essential in coordinating the efforts of unloading parties on the beaches, wherein the New Zealanders had experienced setbacks in the Treasury Islands.⁷⁰ Despite a full complement of combat service support personnel, infantrymen were still required within the Shore Parties for the unloading of landing craft, as they had in the division's two

⁶⁶ ANZ, WAI1, 1412, DAZ 121/9/A50/4/2, Headquarters 3 NZ Div., "Temporary Organization – Squarepeg Workshops", 29 January 1944

⁶⁷ Ibid., Headquarters 3 NZ Div., "Administrative Order No. 4 – Squarepeg op", 7 February 1944

⁶⁸ Evans, *Pacific Service*, 110. The fifth Assistant Shore Party Commander was from the 93rd Naval Construction Regiment.

⁶⁹ Office of Naval Operations, Division of Fleet Training, *FTP 167*, 34.

⁷⁰ McGee, *The Solomons Campaigns 1942-1943*, 485-486; Newell, "New Zealand's Forgotten Warriors", 133; ANZ, WAI1, 1146, DAZ 154/1/22, War Dairy of 36th Battalion, October 1943, Appendix 6: "Intelligence Summary, 31 October 1943".

previous operations.⁷¹ The appointment of New Zealand officers as assistants to the Shore Commander therefore assisted in controlling these, mostly, unwilling infantrymen.



Image 10: Archival image of an officer and sergeant of the 3rd NZ Division's ASC confer at a beach supply dump – The men in the background are NZ soldiers requisitioned for unloading duties. The officer in the foreground pointing provides a good view of the camouflaged jungle 'suit'. (Source: "Beach Master and a New Zealand sergeant at Tangalan Plantation, Nissan Island", Department of Internal Affairs, War History Branch: Photographs relating to World War 1914-1918, World War 1939-1945, occupation of Japan, Korean War, and Malayan Emergency, Ref.: WH-0506, Alexander Turnbull Library, Wellington, New Zealand, <http://natlib.govt.nz/records/22734056>.)

A particular consideration for the success of the operation was the medical services. New Zealand medical units of the NZEFIP had developed a reputation for their work in the Pacific, with many American servicemen having been treated by New Zealand medical

⁷¹ ANZ, WAI1, 1412, DAZ 121/9/A50/4/2, Headquarters 3 NZ Div., "Administrative Order No. 3 – Squarepeg op", 5 February 1944.

personnel in New Caledonia.⁷² Medical units for Squarepeg included a medical headquarters, two field ambulances (large company equivalent formations with over 200 men each), a field surgical unit, a malaria control unit, hygiene unit, and a mobile dental section.⁷³ This was a significant concentration of medical personnel as there was a shortage of fully-trained New Zealand medical staff for overseas service.⁷⁴ This emphasised the importance that the New Zealand Army placed on medical personnel in jungle warfare, and the lengths to which they pursued in order to minimise non-combat casualties. The additional emphasis on medical services was partly the result of a realisation that troop sanitation and anti-malarial measures in the forward positions had been inadequate in previous operations, with an estimated 20 per cent of men having become 'sick' casualties requiring hospitalisation.⁷⁵ American experience showed that high rates of disease casualties amongst troops in the combat zone were to be expected, with close to 40 per cent of casualties being the result of malaria.⁷⁶ Measures for 'Squarepeg' included strict anti-malarial discipline and the spraying of water pools to suppress the mosquito threat, with additional measures of prohibiting the wearing (or non-wearing) of certain articles of clothing, such as a ban on short trousers and sleeveless shirts at night.⁷⁷ These measures were extremely successful and only 114 malaria cases were recorded for the month of February across the entire NZEFIP in areas forward of New Caledonia.⁷⁸

⁷² Mary Ellen Condon-Rall, and Albert E. Cowdrey, *The Medical Department: Medical Services in the War Against Japan, United States Army in World War II: The Technical Services* (Washington, D.C.: Center of Military History, US Army, 1998), 108-109.

⁷³ ANZ, WAI1, 1092, DAZ 121.1/1/13, HQ 3 Division, War Diary 'G' Branch, From 1-29 February 1944, Appendix 'A' to 3 NZ Div. Operation Order No. 101: "Order of Battle".

⁷⁴ ANZ, WAI1, 1085, DAZ 115/1/7, War Diary of Deputy Director of Medical Services NZEFIP, October 1943, Appendix IV: Letter to ADMS 3 (NZ) Div. re (a) "Allocation of medical officers to NZEFIP", 10 October 1943; ANZ, WAI1, 1085, DAZ 115/1/10, War Diary of Deputy Director of Medical Services NZEFIP, January 1944, "Medical Officers NZEF IP", 16 January 1944.

⁷⁵ ANZ, WAI1, 1149, DAZ 155/1/20, Appendix XII: "Notes from Brigadier's Conference"; ANZ, AD12, 16, 28/15/2, "Estimated Constant Sickness Rate", 1 July 1943. A total of 445 disinfectant sprayers were distributed amongst 14th Brigade Group.

⁷⁶ Condon-Rall, and Cowdrey, *The Medical Department: Medical Services in the War Against Japan*, 109.

⁷⁷ ANZ, WAI1, 1085, DAZ 115/11, War Diary of DDMS, February 1944, "Refresher Course in Malaria Control for Unit Squads", 1 (NZ) Malaria Control Unit; ANZ, WAI1, 1505, DAZ 121/9/A28/12, HQ 3 Division – Office records – Orders, instructions and regulations – Northern landing force and Squarepeg admin orders, Headquarters Squarepeg, "Administrative Order No. 1", 19 February 1944; Headquarters Squarepeg, "Administrative Order No. 3", 26 February 1944.

⁷⁸ ANZ, WAI1, 1085, DAZ 115/11, War Diary of DDMS, February 1944, Attachment No. 1 to War Diary, "Report for the Month of February 1944", 23 March 1944, page 4.

Earlier experiences had shown that once troops had landed, it would not be long before the tropical climate would cause skin infections amongst their ranks. Barrowclough was mindful of these effects and additional instructions for medical evacuations were distributed before the operation. These emphasised the prompt establishment of Regimental Aid Stations to facilitate evacuation – provision was even made for air evacuations. To assist in the processing of casualties, medical personnel were organised into a functioning ‘chain’ of medical stations within the beachhead.⁷⁹ Such precautions had not been taken on Vella Lavella, and these efforts indicated the progression of the New Zealanders in the processing medical cases in the tropics, as well as signalling their intention of removing casualties from the battlefield as soon as possible. Further, it highlighted the importance that the division placed on saving casualties – a sense of fear surrounding the possible loss of soldiers to infection or poor medical treatment seems to have been an underlying tone within divisional documents. This was understandable given the manpower limitations then affecting the New Zealand forces.

Another important feature of the 3rd NZ Division’s medical preparations for ‘Squarepeg’ was the arming of New Zealand Medical Corps personnel – a significant event in New Zealand military history. It was one of the few times in which this country has officially and willingly disregarded the laws and rights, and protection thereto offered, by the Geneva Conventions, Hague Conventions, and their Protocols. In communiqués between the 3rd NZ Division and the NZEFIP’s Deputy Director of Medical Services, the loss of rights and protection was not mentioned nor alluded to before the operation commenced, and it must be considered that those responsible had hitherto discussed the repercussions of arming medical personnel. The US Army had armed its medical personnel since 1942, and this action was another instance of the division incorporating American adaptations.⁸⁰ The New Zealanders were careful to note, however that the arming of medical personnel was not reflective of jungle warfare, rather the opponents that were faced.

⁷⁹ ANZ, WAI1, 1553, DAZ 157/9/86, Appendix ‘I’ to Administration Order No. 1: “Evacuation Plan for D-Day.”

⁸⁰ Condon-Rall and Cowdrey, *The Medical Department: Medical Services in the War Against Japan*, 112, 164, 168-69.

As construction of an airfield was one of the main reasons for launching the operation, it was a basic requirement that some form of air control functions be included in the landing force. These elements were to have a primary role in coordinating and directing air assets, and were intended to simplify and standardise control for the invasion and afterwards. All air assets, including for fighter cover of the landing, were to come under the command of Brigadier-General Field Harris, USMC, who was appointed Commander, Air Forces 'Squarepeg' (COMAIRSQUAREPEG). Harris had served in a similar capacity in Bougainville and this appointment suited his experience.⁸¹ One of his staff, Lieutenant-Commander M. L. Shields, (USN Reserve), was attached to Barrowclough's headquarters as Officer-in-Charge of Fighter Direction and Radar.⁸² While Shields fell under the authority of Harris, he was also appointed Radar Officer for COMAIRSQUAREPEG, which was (confusingly) under the authority of Wilkinson "for all matters of policy and responsibility for radar functions."⁸³ This was an attempt to unify command under Wilkinson as Commander, Task Force 31, but in reality it meant that Harris directed (but not controlled) all air activities in direct support of the operation, as he fell under the authority of Barrowclough in his capacity as Commander, Landing Force, while radar tasking and coordination rested under Wilkinson.⁸⁴ Additionally, Barrowclough did not have any authority over Harris in his capacity as General Officer Commanding, 3rd NZ Division, and thus all orders to Harris had to pass through Wilkinson as Commander, Task Force 31. In addition, a specialist USN amphibious team, 'Argus 7', was to land on D-day to establish radar sites and communication facilities so as to enable land-based fighter control as early as possible.⁸⁵ The value of such control elements was deemed vital, and the number of 'Argus 7' personnel in the First Echelon was increased in a later Operation

⁸¹ Shaw, and Kane, *Isolation of Rabaul*, 510.

⁸² ANZ, WAI1, 1092, DAZ 121.1/1/13, HQ 3 Division, War Diary 'G' Branch, From 1-29 February 1944, Appendix X: Operation Memoranda No. 26: "Instructions regarding Fighter Direction and Radar Control", 12 February 1944.

⁸³ Ibid.

⁸⁴ Ibid., Appendix 'B' to 3 NZ Div. Operation Order No. 101: "Squarepeg Landing Force (Chain of Command)".

⁸⁵ Lieutenant-Commander Shields also commanded Argus 7. See "Relief of Argus 7", From General Officer Commanding, Green Island [Major-General Barrowclough], to Commander, South Pacific, 16 May 1944, <http://argusunits.wordpress.com/argus1-12/argus-unit-7/#jp-carousel-1035>. For a short exposé on Argus personnel see James S. Hunter, and Max Hodge, "Radar Cues the Navy Fighters", *Popular Mechanics*, March 1946, 120-125.

Order amendment.⁸⁶ To facilitate the quick establishment of land-based fighter direction, radars were given priority in selection of sites, and COMAIRSQUAREPEG could order other units to vacate areas if deemed necessary.⁸⁷ Another part of COMAIRSQUAREPEG's role was the directing of fighter cover for the Task Force at sea and once it had reached the Green Islands. There were four Fighter Director Units on different USN ships – a necessary precaution in case of the loss of an entire ship's crew.⁸⁸ At least one Director Unit was accompanied by a senior night fighter controller from Marine Fighter Squadron (Night) 531 (VFM (N) 531), a supporting USMC squadron. Although unmentioned in USN official history, this controller must have been part of the detached radar and fighter-director unit of VFM (N) 531, which made possible night patrols by the USMC aircraft operating from Bougainville.⁸⁹

Task Force organisation for Operation 'Squarepeg' incorporated many combat lessons of the South Pacific particularly as regards finding the most effective organisation for jungle warfare, however these were tarnished by the disbandment of the BCTs, which resulted in a loss of independence for the battalion commands, and reduced the battalion's integral firepower and flexibility. Such effects were intended to be minimised through the implementation of a complex signal network that permitted increased centralised control at brigade and division level, while still retaining combat effectiveness down to lower levels. Unfortunately, primary documents show that signal communications was one area in which the division was sorely insufficient for operations in tropical climates. Thus, the centralised control of resources was prevented from reaching its true potential. Additionally, the disbandment of the BCT concept was a backwards step in contemporary

⁸⁶ ANZ, WAI1, 1522, DAZ 121/9/PO/1, HQ 3 Division – Office records – Administration orders – Squarepeg operation, "Amendments to Appendix E, 3 NZ Div. Adm Order No. 2 – Squarepeg Op: Allocation of personnel to ships 1st Echelon", n.d. Argus units played a vital role in Pacific War and their history is continued by members of the public at <http://argusunits.wordpress.com/>. The website contains many photos and primary documents, and should prove indispensable to any researcher interested in the subject.

⁸⁷ ANZ, WAI1, 1092, DAZ 121.1/1/13, HQ 3 Division, War Diary 'G' Branch, From 1-29 February 1944, 3 NZ Div. Operation Order No. 101 – Operation Squarepeg, 4 February 1944.

⁸⁸ ANZ, WAI1, 1552, DAZ 155/9/13, HQ 14 Infantry Brigade – Office records – 3 C.T.F. 31 Operation Order No. 2-44, page 4.

⁸⁹ Morison, *Breaking the Bismarcks Barrier*, 418. Morison only states that there was a radar and fighter-director unit from a "Marine Ventura night squadron" on the Green Islands, but he does so in such a way as to indicate that this happened after-the-fact. Additionally, he does not identify to which unit they belonged, nor if they had accompanied the initial landing or had landed in subsequent echelons.

developments in warfighting, such as that by US Combat Teams in the Pacific, and German *Kampfgruppen* in Europe, as it curtailed freedom of action for battalion commands through the elimination of integrated weapon systems. This decision, though contradictory to developments elsewhere, was generally in accordance with the British 'Way of War' which favoured centralised command and control of resources, and which was best exemplified by Bernard Montgomery's 'Set-Piece Battles' of North Africa and Normandy, where he showed a propensity for detailed planning and methodical preparations, and spent significant time with his staff managing his resources.⁹⁰ When viewed in this regard, the centralised control of resources favoured by Barrowclough was in accordance with the *Materialschlacht*, "the slow build-up of superior manpower and supplies before engagement".⁹¹ This provided him with a better means of controlling scarce resources, however this method of command was compounded by complex command parameters, especially those which pertained to formations that assisted in coordinating the actions of units across services.

The task organisation of New Zealand units also points to the handicaps which the division faced in the South Pacific, particularly those affecting the supply of manpower and resources. It was clear that Barrowclough was hoping to achieve something akin to US force structures which had been tested in the Pacific hitherto the operation. In this manner the overall structure and attachment of units for Squarepeg indicated a similar organisational level with a US infantry division headquarters, and Regimental Landing Team for amphibious operations in late 1942. The 1942-model division was an example of an early adaptation to new warfighting demands, such as the inclusion of the independent Combat Teams.⁹² The adherence to the 1942-model may be viewed as

⁹⁰ Keith Grint, *Leadership, Management and Command: Re-thinking D-Day* (Hampshire: Palgrave Macmillan, 2008), 26; Stephen Hart, "Montgomery, Morale, Casualty Conservation and 'Colossal Cracks: 21st Army Group's Operational Technique in North-west Europe, 1944-45", *Journal of Strategic Studies*, 19 (1996): 133, in Jeremy Black, ed. *The Second World War*, Vol. II, *The German War 1943-45* (Hampshire: Ashgate Publishing, 2007), 296.

⁹¹ Terry Brighton, *Masters of Battle: Monty, Patton and Rommel* (London: Viking/Penguin Books, 2008), 4.

⁹² Combined Arms Research Library, Digital Library, World War II Operational Documents, N-6148, Headquarters I Provisional Corps, Task Force 'A', 4 November 1942: "Notes on Training of an Amphibious Division, Annex No. 1: Organisation of An Amphibious Division", 47-49. <http://cgsc.contentdm.oclc.org/cdm/compoundobject/collection/p4013coll8/id/2525/rec/1>. These notes

indicative of the New Zealanders lack of resources, which prohibited the division from embracing the later developed American amphibious organisations, which were more resource heavy and which the US could maintain. In short, the New Zealanders could not adapt to later-type US amphibious divisional structures, as these often made use of plentiful resources which the 3rd NZ Division simply did not have access to. Barrowclough believed that his division's combat effects could best be maximised through the above means of control examined in the chapter. Additionally, the small size of the Japanese garrison minimised the chances that such a centralised means of control would be undone during the landing period, as it was unlikely that the enemy could have affected a major setback upon the landing force.

were based on a report prepared by Headquarters 9th Infantry Division at Fort Bragg, North Carolina, 30 October 1942.

CHAPTER 6

Proceeding to the Green Islands

Operation 'Squarepeg', like other amphibious operations, required a set of supplementary phases to lay the ground work for the success of the main landing. The true extent of the operation's complexity is realised when viewing these supplementary phases as part of a larger effort. Unlike more modern Australian and US doctrinal publications, there were no terms which separated these additional phases of Operation 'Squarepeg' in 1944, however, it is possible to compartmentalise the supplementary activities of Task Force 31 and its landing force into a number of phases and actions.¹ These can be identified as the embarkation phase, rehearsals, the movement of the task force towards the Green Islands, and the shaping efforts of escorting USN destroyers, fighter aircraft, and nearby naval task forces, which included shielding the landing force from enemy actions.² In a similar manner to the elements of the amphibious task force and the landing force around the Green Islands, the units involved in the supplementary phases required an adaptive 'supporting-supported' relationship.³ This meant that the force components in the supplementary phases were to address the needs and capabilities of all those involved in order to ensure a cooperative effort. They sought to achieve the necessary conditions for the protection and enhancement of Task Force 31's ability to attain its objectives on landing, while still maintaining sufficient resources to execute their own 'supporting' objectives. The efforts required for the main landing was

¹ These include *JP 3-02*, and the Australian Defence Doctrine Publication, *3.2-Amphibious Operations*, 2nd ed., *Operations Series* (Canberra: Defence Publishing Service, Department of Defence, 2009), hereafter referred to as *ADDP 3.2*.

² Shaping operations, activities, actions, and tasks seek to enhance the friendly force's position vis-à-vis the enemy in the battlespace while also hindering the enemy's ability to respond in kind. The ultimate goal is to set favourable conditions for the success of operations by denying or inhibiting the opponent freedom to manoeuvre through such means as physical and conceptual disruption and dislocation. For a more in-depth discussion see – Department of Defense, *Joint Publication 5-0 Joint Operation Planning* (Washington, D.C.: Department of Defense (USA), 11 August 2011); and __, *Joint Publication 3-0 Joint Operations* (Washington, D.C.: Department of Defense (USA), 11 August 2011).

³ See – Chapter 2 for further discussion of the 'supporting-supported' relationship in amphibious operations.

not to detract from the efforts required to complete supplementary phases. Ultimately, the successful incorporation of these phases within the greater operational plan lay in the ability to coordinate and control them in a unified manner. This required clearly defined command boundaries and careful management of assets, attained through experience and necessary authority. It cannot be denied that the soldiers, sailors, and airmen of the South Pacific Area certainly had combat experience, however for all the benefits which this brought, the chain of command was still beset by rigid command structures.

The embarkation phase may be viewed as containing those efforts involved in the process of moving troops from their billets to the assembly stations on the embarkation beaches, and then loading them upon designated shipping. This was essential to the ordering of troops, equipment, stores, and vehicles and the correct loading of these directly influenced the landing schedule by ensuring the suitable organisation of units upon landing. The completion of this phase was therefore a mark of competently trained amphibious units, and representative of in-depth administration planning. Fortunately, by this stage of its war, the 3rd NZ Division had practiced the administrative procedures of amphibious landings during theoretical and actual training exercises over the previous year in New Caledonia as well as gaining some operational experience in the 'Goodtime' landings. Such was the importance of planning and logistics for an amphibious landing that many of the exercises had focussed largely on these issues, with the proper loading of stores and personnel being high on the agenda.⁴ 'Squarepeg', however, presented new challenges as the operation was of an unprecedented scale for the New Zealanders, included some units that had never operated together before, and (unlike previous operations) required the embarkation of units at separate locations on different islands. To confront these challenges, divisional and brigade staff officers were engaged in drafting of embarkation and loading timetables from early on in the planning phase. This required copious inventory lists and personnel standardisation checklists (including the calculation of square feet that each piece of equipment required) in which to guide unit

⁴ ANZ, WAI1, 1553, DAZ 157/15/1, Historical record of the 35th Battalion, 20-30 April 1943; ANZ, WAI1, 1139, DAZ 151/1/15, HQ 8 Infantry Brigade, January 1942 to June 1944, War Diary of HQ 8 Inf Bde from 1 March to 31 March 1943, Vol. 1, No. 3; ANZ, WAI1, 1551, DAZ 155/9/2, HQ 14 Infantry Brigade – Office records – Amphibious, "General Instructions for Exercise CYCLOPS."

commanders in preparing their men for the movement. When implementing such far-reaching administrative regulations, it helped to have in place procedural guidelines that would streamline the whole process. In this regard, staff and commanders were assisted by the fact that embarkations were approached as a regular landing operation except with all the men, stores and vehicles assembled in reverse-order on the beach. This extended to the designation of embarkation beaches on maps and orders in a similar way to landing beaches (see Appendix VIII). For example, a shore party destined for Red Beach on Nissan Island was to assemble at an embarkation beach whereat all troops landing at Red Beach were gathered. In effect this meant that troops only needed to become familiar with one landing and loading template.⁵ Finally, the provision of all unit loading times and mustering areas to the entire landing force facilitated the speedy loading and organisation of troops on the embarkation beaches as all knew their place within the greater scheme of things. This minimised misunderstanding and delays that could have occurred if each brigade had been issued with different types of embarkation orders and loading templates for the spacing of cargo on board landing craft, especially if there were exchanges of personnel between units.

For all the advantages that this method of planning brought to the operation it did, however, result in a difficult administrative process as it necessitated the issuance of numerous Administration Orders. Details were continually changed in the process of consultation with USN personnel and ships, as all units had to be involved in the process. Indeed, so frequent were these revisions that it led to a number of unhappy comments by the New Zealanders (although not directly to the Americans). The effects of these changes led to units being assigned to ships as they became available, which complicated matters, as units were dispersed across vessels of different types – APDs, LCIs, and LSTs – all with different loading methods and debarkation procedures.⁶ Additionally, some vessels, such as the APDs, were actually slightly overloaded as the standard New Zealand infantry battalion had a heavier deadweight of around three tons more than a US infantry battalion, despite the latter possessing 125 men more than the former, plus additional

⁵ The extent of the inventory lists, allocation of personnel and vehicles.

⁶ A good example comes from 144th Independent Battery which travelled in eight separate vessels, of three different classes. See Evans, *The Gunners*, 192.

.50 calibre machine guns and 37 mm guns.⁷ This compounded matters as no real load reconfiguration could be undertaken once transports left Guadalcanal, and incorrect loading had the potential to cause considerable delays during debarkation in the Green Islands. The embarkation phase therefore required careful planning in order to minimise the potential errors that may have occurred as a result of units being dispersed across different ships.

As it happened, 'Squarepeg's' embarkation phase had a nonlinear timeline which made the planning all the more difficult. This was seen in the loading of the First Echelon LSTs that carried vehicles, artillery, radar components, stores, men, and construction material, which commenced on 7 February (only two days after Operation Order 2-44 appeared). Meanwhile the loading of LCIs, which carried only personnel, commenced loading on 12 February. This method of preparation and loading continued as LSTs from other echelons also received their Loading and Embarkation Orders in a staggered manner, days before they departed.⁸ This manner of loading was necessary due to the variation of cargo capacity among the vessels, with the larger LSTs requiring more time to organise their holds. These efforts became even more difficult when it was considered that some units were dispersed across multiple echelons and, sometimes, different islands. In addition, the synchronisation of the embarkation process had to be incorporated into the performance characteristics of the ships, such as that the transports departed from Guadalcanal on different dates according to the speeds of the vessels; the LSTs departed first on 11 February as they were the slowest, followed the next day by the LCIs, and finally the fast-moving APDs on 13 February.⁹

⁷ ANZ, WAI1, 1491, DAZ 121/9/41/2/Q, HQ 3 Division – Office records – Ammunition and weapons – Comparison NZ and US, "Comparison of Weapons and First Line Amn", n.d.; ANZ, WAI1, 1092, DAZ 121.1/1/13, HQ 3 Division, War Diary 'G' Branch, From 1-29 February 1944, Appendix 'E' to 3 NZ Div. Operation Order No. 101: "Allocation of Personnel to Ships – 1st Echelon".

⁸ ANZ, WAI1, 1092, DAZ 121.1/1/13, HQ 3 Division, War Diary 'G' Branch, From 1-29 February 1944, diary entry 7 February.

⁹ ANZ, WAI1, 1089, DAZ 121.1/1/15, HQ 3 Division 'G', February 1943 to June 1944, War Diary 'G' Branch, From 1-30 April 1944, Appendix I: Seizure and Occupation of Green Is., "Report of Third Amphibious Force, Commander Third Amphibious Force to Commander-in-Chief US Pacific Fleet: Seizure and Occupation of Green Islands, 15 February to 5 March 1944", 16 April 1944, 3-4.

A key success to this whole phase was liaison with the USN, to which small groups of Unit Receiving Parties, composed of men from New Zealand and American units destined for particular ships, were sent a number of days before actual embarkation was to begin. This facilitated communication and understanding of each other's requirements and limitations. In conjunction with the thorough training undertaken by the soldiers beforehand, the Unit Receiving Parties showed merits in the speedy organising and loading of equipment, with everyone concerned showing marked improvement in the ability to conduct such activities with an economy of effort. Ultimately, the embarkation phase encountered no issues and it was deemed a great success.¹⁰



Image 11: Destined for combat – troops of the 35th Battalion wait to load stores onto LCI 443 in preparation for their departure to the Green Islands (Juno Beach, Vella Lavella, 12 February 1944). The two gangways evident here were the sole means by which to board and leave the LCI, and when in use, the men were very exposed to the effects of enemy fire. (Source: “New Zealand World War II soldiers loading stores into infantry landing craft, Vella Lavella, Solomon Islands”. Department of Internal Affairs, War History Branch: Photographs relating to World War 1914-1918, World War 1939-1945, occupation of Japan, Korean War, and Malayan

¹⁰ ANZ, WAI1, 1553, DAZ 157/9/86, Appendix ‘C’ issued in conjunction with 35 NZ Bn Administration Order No. 1 (Squarepeg), “Duties of Unit Receiving Parties”, 9 February 1944; *Officers’ Book 14th Brigade New Zealand Expeditionary Force in Pacific*, no page number.

After embarking units from Guadalcanal, the Main Body (see Appendix I for break-down of units) proceeded north to embark the final contingents that were awaiting on Vella Lavella. Once the last units had embarked, the APDs regrouped for a rehearsal of the main landing, which occurred without incident at 1100 hours, on 14 February. Only the first wave of troops actually landed with their equipment during this rehearsal which meant that many units of the landing force did not receive an opportunity to refine aspects of their landing procedures.¹¹ The failure to allow all units an opportunity to land with a full combat load may not have hindered the planning of battalion and regimental officers as they were more concerned with the ability of craft to work together in formation approaching the shore and that units had the correct stores upon landing. However, it may have affected the ability to refine platoon and sections techniques, especially in the handling of equipment onto the beach and dealing with the surf, had an issue have arisen with some of the boat team. Further, it denied junior officers and non-commissioned officers (NCOs) an opportunity to evaluate their men's ability at the most basic tactical level before a combat action, as medical reports had shown that the NZEFIP had suffered a slight rise of mental stress cases after the revelation of Operation 'Squarepeg' to the soldiers.¹² Such issues were vital for small unit success in amphibious landings, since it could affect boat team organisation, as displayed by the preparations for the Normandy landings later that year, where many weeks were set aside for boat team positioning and exit techniques from landing craft.¹³

At the conclusion of the rehearsal, the transports began their journey north to the Green Islands. The movement of the Main Body encapsulated the complexity of hosting

¹¹ ANZ, WAI1, 1151, DAZ 155/1/26, War Diary of Headquarters 14 NZ Bde, From 1-29 February 1944, "Operation Instruction No. 3", 10 February 1944.

¹² ANZ, WAI1, 1085, DAZ 115/1/11, War Diary of DDMS, From 1-29 February 1944, "Combined Monthly return of NZ patients in Hospitals, C.C.Ss, and Field Ambulance Reception Stations in the NZEFIP Area during the month of February 1944", page 2.

¹³ Jonathan Gawne, *Spearheading D-Day: American Special Units of the Normandy Invasion*, 3rd Ed. (Paris: Histoire & Collections, 2001), 84-90.

multinational contingents as several vessels had men of both nationalities aboard. Measures were in place to minimise the risk of miscommunication and ill-discipline. Those that had a majority of 3rd NZ Division soldiers had New Zealand officers in charge of the troops. These officers proceeded to the ships ahead of the embarkation so as to establish a relationship with the crews which assisted in ensuring the maintenance of order and discipline of the men in accordance with both New Zealand military code and USN code.¹⁴ This was a difficult assignment for those New Zealand officers as they had to become accustomed to USN regulations and their application to New Zealand troops during the voyage as stated within the many Administration Orders. There was a certain level of technical difficulty in knowing how New Zealand and USN regulations differed, and it must be thought that officers with a lack of staff experience were at a loss to their appointment. Fortunately, Barrowclough had experience of such administrative codes through his frequent contacts with American commanders, and he ensured that those Administration Orders which were disseminated contained clear instructions.

As the New Zealand officers attempted to maintain the standards of their troops on board, the USN crews had their hands full in attempting to follow the navigational directions laid down within Operation Order 2-44. Among the more important details of this order was the sequencing of waypoints for the individual Task Units along their way to the Green Islands. The ships had to maintain a strict schedule while sailing in formation, deviating only when stated in the orders.¹⁵ This resulted in a complex movement plan, as the large size of the Main Body, coupled with the dispersion of units across islands, required that the movement phase be divided into no less than 16 waypoints around which the vessels were to orientate and organise themselves.¹⁶ This was necessary in order to avoid congestion of shipping along certain narrows and to account for the different speeds at which each vessel was able to sail. Unfortunately this

¹⁴ ANZ, WAI1, 1553, DAZ 157/9/86, 35 NZ Battalion Administration Order Nos. 4-5(Squarepeg): "Embarkation on APDs", 12-13 February 1944;

¹⁵ ANZ, WAI1, 1552, DAZ 155/9/13, HQ 14 Infantry Brigade – Office records – 3 C.T.F. 31 operation order No. 2-44, "Part One to Annex (A) to Commander Task Force 31 Operation Order 2-44: General Instructions," page 1.

¹⁶ ANZ, WAI1, 1092, DAZ 121.1/1/13, War Diary 'G' Branch, from 1-29 February 1944, Appendix XI: CTF 31 Operation Order 2-44, "Part 3 to Annex (A) to Commander Task Force 31 Operation Order No. 2-44: Movement Instructions. Movement Chart 5."

also made the convoys easier to detect and intercept for the Japanese (and indeed a Japanese reconnaissance plane spotted Task Force 31 off the coast of Bougainville, on 14 February, and shadowed it on its way north).¹⁷

Another feature of the movement phase was the sequencing of Transport Units in the task force. On sailing north, the APDs had departed the embarkation areas last, but then leapfrogged the other vessels to reach the Green Islands ahead of the LCIs and LSTs. This was intended to limit the duration that the slower vessels were on station off the objective as it allowed the troops in the APDs' landing craft to land and prepare the beaches before the LSTs and LCIs commenced their run to shore. It also ensured that the vessels arrived as their "respective services were needed and depart[ed] as soon as those were concluded".¹⁸ Further aspects of the movement phase included procedures to be undertaken in the event of a vessel becoming damaged on passage to the objective area. In such an eventuality, damaged LSTs were to be towed to the Green Islands or beached on the nearest island.¹⁹ The towing of a damaged vessel was a risky action, as it reduced the speed of the towing vessel and thus endangered it to further enemy attacks. This indicates the value of the LSTs to the operation, as Wilkinson was prepared to risk the loss or damaging of other vessels for a chance to save a LSTs.

A final aspect of the movement phase dealt with the disposition of the individual ships within each Task Unit. The Task Unit formations were presented in simple diagrams, and depicted the ships being positioned around circular grids of 2,600-3,657 metres in diameter, with the destroyers positioned on the edges, so as to form picket lines against

¹⁷ Gillespie, *The Pacific*, 180.

¹⁸ ANZ, WAI1, 1089, DAZ 121.1/1/15, War Diary 'G' Branch, From 1-30 April 1944, Appendix I: Seizure and Occupation of Green Is. Report of Third Amphibious Force, "Seizure and Occupation of GREEN ISLANDS, 15 February to 15 March 1944", 3.

¹⁹ ANZ, WAI1, 1552, DAZ 155/9/13, HQ 14 Infantry Brigade – Office records – 3 C.T.F. 31 operation order No. 2-44, "Part One to Annex (A) to Commander Task Force 31 Operation Order 2-44: General Instructions," page 3.

enemy sea and air attacks.²⁰ All transports were also carefully spaced in order to minimise target grouping for Japanese submarines and aircraft, and to allow room for manoeuvre if the convoy was attacked. Spacing ranges depended upon the type of transports in each convoy, with APDs spaced further apart and LCIs and LSTs closer together. The most likely explanation for this was that the APDs (being faster than landing craft) could use their speed to manoeuvre their way out of danger, while the LCIs and LSTS were slow and cumbersome and thus the grouping of defensive fire into a dense mass provided the best means by which to defeat aerial attacks – similar to the manner in which bomber formations maintained tight aerial groupings to fend-off fighter attacks. Additionally, the LSTs (which American crews ridiculed to mean ‘Large Slow, Target’), had barrage balloons attached to their superstructure. These, flown at 2,000 feet, were attached by way of thick steel cable which, it was hoped, would dissuade any Japanese pilots from attempting a low level dive-bombing of the vessels.

While the transports of the Main Body made their way towards the Green Islands, other activities were underway to ‘shape’ the operational environment. The shaping operations included sequential and simultaneous actions that sought to establish the preconditions necessary for Task Force 31 to maintain all of its capabilities while in the waters surrounding the Green Islands. The areas surrounding the Green Islands, including the Northern Solomon Islands, and New Britain were given particular attention by Allied air formations. Efforts focussed on disorientating or neutralising Japanese ability to interfere or respond to the main landing. This fostered the necessary conditions for the completion of the operation’s objectives.²¹ Sequentially designed shaping operations started with the ‘commando raid’ of 31 January, and later ended with simultaneous air sorties, naval demonstrations, and naval screenings closer to the date of the invasion. Other shaping operations executed alongside other phases included immediate close air screening, direct fighter cover, and minesweeping actions for Main Body of Task Force 31.

²⁰ ANZ, WAI1, 1092, DAZ 121.1/1/13, War Diary ‘G’ Branch, from 1-29 February 1944, Annex (A) to Commander Task Force 31 operation Order No. 2-44, Movement Instructions, Part 4: “Cruising Dispositions AT, ALI, ALS (First Echelon)”; Part 5: “Cruising Dispositions AT, ALS (Second Echelon)”.

²¹ *ADDP* 3.2, 1 – 5.



Image 12: LSTs of the Third Transport Unit, Main Body, on their way to the Green Islands – notice the barrage balloons attached to the two vessels in the background. (Source: Henley, *The Tanks*, 40, NZ Electronic Text Collection, <http://nzetc.victoria.ac.nz/tm/scholarly/WH2IP-Tank-fig-WH2IP-TankP009a.html>.)

The air support for 'Squarepeg' was quite extensive and included strikes by shore-based aircraft of Task Force 33 against Rabaul in an attempt to prevent any Japanese naval or air response to the landings. Over the landing area itself, land-based aircraft were to provide air cover and direct air support, as well as artillery spotting planes. These operations required greater cooperation with other services than the strikes over Rabaul as aircraft flying in direct support over the Green Islands were directed through COMAIRSQUAREPEG yet still controlled by Commander, Aircraft Solomons (COMAIRSOLS). This created some command and control challenges as COMAIRSOLS fell under the Commander, Air Forces South Pacific, (COMAIRSOPAC) over which Wilkinson held no authority. Thus Wilkinson had to implement careful preliminary coordination guidelines and procedures when using

COMAIRSOLS assets.²² Needless to say, Barrowclough held no sway in these dealings and it served to further emphasize his division's reliance on American structures for operations. During the early hours of 15 February, while the convoy was approaching the landing area, a Japanese reconnaissance aircraft broke through the air screen and shadowed Task Group 31.4 (the Main Body), after which the task group was attacked three times by enemy aircraft.²³ These attacks almost caused a serious setback to the operation when a formation of 32 Japanese aircraft attempted to bomb the task group, but attacked the naval escort units instead of the transports. Another attack occurred shortly after dawn on LST 446 of the Third Transport Unit (31.4.3).²⁴ Although only minor damage was suffered, this LST was one of two carrying the Valentine tanks; if it had been lost it would have represented a grave deterioration of the landing force's combat power. Though these aerial attacks did little damage to the main body itself, they caused consternation for the New Zealanders spread throughout the convoy and at times there was "too much of a thrill".²⁵

As these events showed, air shaping actions alone could not guarantee security of the Main Body, and additional efforts were required. Destroyer units of Task Force 31 were to rotate duties during the landing to ensure a constant screening force to be maintained East and West of the Green Islands.²⁶ In addition to these, cruisers and destroyers were deployed in screening formations to the East, North, and South of the Green Islands in

²² COMAIRSOLS' own command and control boundaries were at times difficult to discern, as although Task Force 33 had US Army Air Forces aircraft attached, they were not under the operational control of COMGENSOPAC, since they fell under COMAIRSOLS, which itself reported directly to Halsey as COMSOPAC, even though it was controlled by COMAIRSOPAC. See Shaw, and Kane, *Isolation of Rabaul*, 455-460.

²³ Refer to Appendix I for a break-down of the different Task Groups and Task Units in Task Force 31. NARA, Record Group 38, Box 126, Serial 0052, Commander Destroyer Squadron Forty-Five to Commander-in-Chief, US Fleet, 16 February 1944: Action Report – Covering operations of Task Unit 31.4.1 (First Transport Unit of First Echelon to Green Islands) from 13 February to 16 February 1944.

²⁴ KMARL, Acc. No. 2005.381, Personal Narratives: Pacific – WWII, recollections of Corporal Brian John Potts 49041, 3rd NZ Division Tank Squadron, page 2; NARA, Record Group 38, Box 126, Serial 00177, Commander Task Force Thirty-One to Commander-in-Chief, US Fleet: Action reports covering operations of Task Force 31 from 28 January 1944 to 17 February 1944, Enclosure (J): CO LST 446 Conf. ltr. LST446/A12-1, serial 67 of 27 February 1944, Action report, 15 February 1944 from Commanding Officer LST 446.

²⁵ Brinkman, *The 35th Battalion*, 67-68.

²⁶ ANZ, WAI1, 1552, DAZ 155/9/13, HQ 14 Infantry Brigade – Office records – 3 C.T.F. 31 Operation Order No. 2-44, page 4.

two Task Forces during the operation.²⁷ These units had departed before the Main Body of Task Force 31 was underway so as to allow for the screens to arrive at their patrolling stations at the correct times. On the morning of 15 February, the screening formations succeeded in attracting the attention of most of the Japanese pilots who had been sent out in search of the transports with some of the warships suffering serious damage. However, by the time the Japanese had realised their error the transports had already passed-by. The efforts of the naval screening formations had ensured adequate protection from air, surface, and submarine threats (of which a number had been reported) and diverted attention away Task Force 31 during its most vulnerable period.

In addition to naval and air escorts and screens, three minesweepers were deployed to clear the southern entrance to the lagoon at the centre of the landing operation. This was to ensure freedom of manoeuvre for the landing craft during their ship-to-shore stage. The minesweepers, escorted by two Landing Craft, Infantry (Gun) (LCI(G)) were to be one of the first units of Task Force 31 to commence operating at the objective. The LCI(G)s were modified LCIs equipped with vastly increased firepower to support friendly troops and suppress the enemy, and each of the two LCI(G)s detailed for 'Squarepeg' carried one 3-inch gun, two 40mm Bofors, four 20mm cannons, and six .50 calibre heavy machine guns.²⁸

Unfortunately, during the voyage two of the minesweepers suffered problems with their power generators and fell behind (they delayed the main landing by 20 minutes, having originally being scheduled to arrive at the channel entrance at 0540 hours). Lieutenant J. Chevalier, USN, was the commander of the minesweeping unit, and he blamed his immediate commander for not allowing the minesweepers enough time to equip gear, assume positions, and approach the passage within the original plans. In the event, the minesweepers actually arrived at the channel entrance 40 minutes late, as the landing craft were approaching the entrance, and in order to not interfere the leading

²⁷ Ibid, 3.

²⁸ Rottman, *Landing Craft, Infantry and Fire Support*, 22-23.

minesweeper allowed the landing craft to enter first.²⁹ The minesweepers, therefore, only commenced their activities after the landing craft were through the passage and had started landing troops at Pokonian.³⁰ Meanwhile the two accompanying LCI(G)s were left out on a limb as they had received “no [new] order” and they therefore carried on their duties as directed in the original Operation Order.³¹ To the credit of the crews and their commanders the gunboats did not falter and they remained on station as directed. Task Force 31 had arrived.



Image 13: A late war picture of LCI(G) 67 stranded on a beach at Okinawa in 1945 – the 3-inch gun and at least one of the 40mm Bofors may be seen, as well as the landing craft’s emblem on the superstructure which appears to be a mermaid. (Source: NavSource Online: Amphibious Photo Archive, <http://www.navsource.org/archives/10/15/150067.htm>.)

²⁹ This course of events has been described incorrectly within some sources. See Wright, *Pacific War*, 128; Brinkman, *The 35th Battalion*, 68.

³⁰ ANZ, WAI1, 1552, DAZ 155/9/13, HQ 14 Infantry Brigade – Office records – 3 C.T.F. 31 Operation Order No. 2-44, Annex (E) to Commander Task Force 31 Operation Order 2-44: “Minesweeping Plan”; ANZ, WAI1, 1089, DAZ 121.1/1/15, War Diary ‘G’ Branch, From 1-30 April 1944, Appendix I: “Seizure and Occupation of Green Is. – Report of Third Amphibious Force, Commander Third Amphibious Force to Commander-in-Chief US Pacific Fleet, 16 April 1944: Seizure and Occupation of Green Islands, 15 February to 15 March 1944,” page 3.

³¹ NARA, Record Group 38, Box 126, Serial 00177, Records of the Office of the Chief of Naval Operations, Records Relating to Naval Activity During World War II, WW II Action and Operational Reports, TF 30.8.1 to TF 31, Action Reports Covering Operations of Task Force 31 From 28 January 1944 to 17 February, Forwarding of., Enclosure (G) the Commanding Officer to the Commander Task Force 31, 19 February 1944: “Minesweeping Operation.”

The successful embarkation of troops, the conducting of rehearsal landings, the efforts of escorting naval and air forces all helped to create the conditions necessary for the task force to reach the Green Islands relatively unscathed and with its fighting power intact. The success of the embarkation phase was an outcome of the New Zealanders' administrative focus during their amphibious training on New Caledonia, and it reaffirmed the necessity of regular staff exercises by all officers and senior NCOs involved in the formulation of unit shipping lists. This was one aspect where the 3rd NZ Division had a degree of independence as it was able to conduct such exercises without the help of the USN. However, this was not the case for the rehearsal stage, and a total reliance on USN assets meant that the New Zealanders could not provide themselves with the level of refinement which they probably had the potential to achieve if all landing force elements had been given the opportunity to undertake rehearsal landings with all their heavy equipment and gear. The movement of the task force from Guadalcanal to the Green Islands had maintained unity of strength and in this regard it achieved its intention of preserving the task force's full range of abilities, as vessels did not become entangled, and no collisions were recorded. The shaping phase of the operation was a more complicated matter, and its judgement is the least flattering.

The shaping phase demonstrated the highly developed nature of American operational art at this stage of the war, with its integrated approach of land, sea, and air units to operations in the South Pacific Area. These operations largely succeeded in isolating the Green Islands by 15 February, yet they failed to protect the Main Body against enemy air attacks, when it was at its most vulnerable and when there was definite lack of air cover for the slower landing craft. The Japanese managed to break through the screening cordons of the supporting task forces on no less than three occasions which caused confusion amongst the Main Body. The screening forces did, however, prevent the enemy from making a fatal attack against important shipping elements, such as the LSTs which contained the 3rd NZ Division's most vital equipment. The presence of barrage balloons in conjunction with inexperienced Japanese pilots, however, certainly played a role in that. Some of the screening forces did suffer serious damage but they fulfilled their shielding

functions to the Main Body admirably. In addition, the delay caused by the minesweepers illustrated the difficulty of coordinating efforts across a combined amphibious operation, whereby a failure or delay by one element will affect the actions of other units in the area. It also displayed the inability of New Zealand to provide even the most basic naval supporting functions necessary for amphibious operations, such as the provision of small minesweepers, as it did not have the resources necessary to maintain a full range of activities across all three services in both the Pacific and Europe.

In the end, there is only so much that can be done by surface units to interdict air power. The failure of the screening cordon fell within the responsibilities of COMAIRSOLS and its aircraft, but COMAIRSOLS was supported by an 'opt-out' clause within the Air Support Plan, which related that the command execute its duties "insofar as practicable".³² COMAIRSOLS was still expected to provide against surprise enemy air attack, supply daytime fighter cover over the Green Islands once the landing was underway (night cover only as practicable), and provide air interception in protection of convoys en route to the Green Islands. Ultimately, the clause created a discord between expectation and delivery. In providing an aerial screening cordon COMAIRSOLS was only moderately successful, and indeed it appeared to have failed in certain aspects of force protection as damage was inflicted upon one of the transports.

The wording of directives allowed an already complicated command system to become bogged down by its own bureaucracy. For example, during the movement phase, several 'bogeys' were contacted over radar, to which air cover was requested, but which was unforthcoming. In light of such failures, it was later suggested that in the future each Transport Unit within a Task Force be assigned fighter cover, as faults within communications and areas of responsibility were exposed during operations. To this failure must be added the performance of Japanese efforts to interdict the task force, which in light of the heavy air raids against Rabaul since November 1943, must be judged

³² ANZ, WAI11, 1092, DAZ 121.1/1/13, War Diary 'G' Branch, From 1-29 February 1944, Appendix XI: CTF 31 Operation Order 2-44, "Annex (A) to Commander Task Force 31 Operation Order No. 2-44: Air Support Plan, Squarepeg Operation."

as a show of resilience on behalf of pilots and ground crew, who by 1944 were suffering from a shortage of most things. Even so, Japanese naval retaliation was disappointing and they failed to make use of their formidable heavy cruiser force then at anchor at Rabaul. This could have exploited the relatively disjointed performance of COMAIRSOLS' ability to project power and protect transports during the long voyage to the Green Islands. These issues aside, the 3rd NZ Division had executed a near perfect embarkation and it was now in the hands of the USN until it reached the shores of Nissan Island.

CHAPTER 7

Accomplishing ‘Squarepeg’

The landing phase is by far the most dangerous and complex part of an amphibious operation: men, fully-loaded, must scramble down nets into awaiting landing craft, while being peppered by sea spray and the tilting of the sea, and hope that their training will prevent them from being thrown from the net or crushed between vessels. Then they must avoid the shifting of cargo and equipment, and land, sometimes under fire, but usually without all their weapons, ammunition, and commanders. Indeed, as one former USMC officer has dryly recorded, “Instead of an orderly tactical displacement, the beachhead often resembles a shipwreck.”¹ This is one effect of a phase that brings together a myriad of force-types and commanders, all of which must ensure that their combined efforts are directed towards completing the objective ashore. A key feature of the landing in the Green Islands was therefore the need to attain a “seamless link between all force elements”.² While the planning phase dealt with a considerable part of this requirement, it remained to be seen if all that planning would actually amount to something.

As an amphibious landing, Operation ‘Squarepeg’ required that Wilkinson deposit the landing force ashore as soon as possible so as to ensure the rapid build-up of combat power. He was supported in this goal by the presence of experienced crews and commanders. Once on dry land, it was Barrowclough’s responsibility to ensure that the Green Islands came under Allied control forthwith. The challenges that this would bring required the implementation of the lessons learned from the 3rd NZ Division experience on Vella Lavella and the Treasury Islands. Barrowclough and his division’s approach to

¹ Joseph H. Alexander, “Across the Reef: Amphibious Warfare in the South Pacific”, in *The Pacific War Companion: From Pearl Harbour to Hiroshima*, ed. Daniel Marston (Oxford: Osprey Publishing, 2005), 196.

² *ADDP* 3.2, 4 – 9, 4 – 10.

confronting these reveals a great deal about the ability of the 3rd NZ Division to conduct combat operations in the South Pacific. As Barrowclough had already been advised that his division would be slowly withdrawn to meet New Zealand's other war commitments, he knew that this operation would likely represent the last such action by the division. This phase would demonstrate the outcome of the 3rd NZ Division's months of training in New Zealand, New Caledonia, New Hebrides, Guadalcanal, and the combat lessons of Vella Lavella and the Treasury Islands. It would thus be the benchmark of his performance and the performance of his division in the war.

Amphibious Operations

Although shadowed by Japanese aircraft throughout the night, and with some vessels developing "engineering" trouble, the voyage to the objective area was a success.³ On arriving off the islands, all naval elements had to orientate themselves so as to assist the landing force in the attainment of its objectives ashore. To this end, two PT boats had conducted a final investigation of the channel before the Main Body arrived off the Green Islands around 0500 hours on 15 February. To ensure secrecy of these movements, radio silence was maintained until the first waves left the embarkation area.⁴

While Wilkinson must have known that his task force had been discovered, maintaining radio silence eliminated any opportunity for the island garrison to monitor Allied communications. If the Japanese had monitored Allied communications they may have heard that a preliminary naval bombardment, along with subsequent naval fire support, was to be provided by Destroyer Division 89 (four destroyers) and two LCI(G)s.⁵ After completion of their pre-landing bombardment, at least one destroyer was assigned to

³ NARA, Record Group 38, Box 126, Serial 00177, Commander Task Force 31 to Commander-in-Chief, US Fleet, 24 March 1944: Action Reports covering operations of Task Force 31 from 28 January 1944 to 17 February, forwarding of Enclosure (F): Commander, L.S.T. Group 15, Flotilla 5 (Commanding LSTs of Third Transport Unit, Main Body, Task Force 31), to Commander-in-Chief, United States Pacific Fleet, 18 February 1944: Action Report, Occupation of Green Island, 15 February 1944, Part V.

⁴ ANZ, WAI1, 1553, DAZ 157/9/86, "14 NZ infantry Brigade Operation Order No. 2, with Appendices, 9 February 1944."

⁵ ANZ, WAI1, 1552, DAZ 155/9/13, CTF Operation Order 2-44, Annex (C) to Commander Task Force Thirty-One Operation Order No. 2-44: "Naval Gunfire Plan", page 1.

support each infantry battalion, with each destroyer allocated 400 5-inch shells per landing beach Fire Support Sector.⁶ These figures show that Wilkinson still believed in the importance of naval gunfire support, and was supported in this belief by a recent US Army report which had stressed the value of naval gunfire in opposed landing bombardments (although the same report noted the danger of controlling naval gunfire in the close-support role).⁷ It is highly speculative that the destroyers would have been effective if they had been called upon to support the ground troops, as they received firing orders for both the preliminary bombardment and any subsequent fire support from him; Barrowclough or Potter therefore had to channel any requests for naval gunfire support through Wilkinson. This delayed requests for timely fire support, but it was hoped that the provision of spotter aircraft (from Task Force 33) – a significant development over the New Zealanders' previous landing – would ensure accurate, as well as timely, identification of targets and therefore timely fire support response.⁸ These techniques showed signs of influence from earlier US reports into jungle warfare.⁹

As the task force lay offshore, Wilkinson (perhaps in conjunction with Barrowclough) decided to abandon the preliminary naval bombardment sometime between 0500-0600 hours (primary documents do not exactly specify when). Wilkinson claimed that this was due to concern for the safety of the natives. However the cancellation of a naval bombardment in an amphibious operation for humanitarian reasons was quite rare in the Second World War. If this was indeed the main reason for the bombardment's

⁶ Ibid., page 4; ANZ, WAI1, 1092, DAZ 121.1/1/13, War Diary 'G' Branch, From 1-29 February 1944, Appendix 'C1' to 3 NZ Division Operation Order No. 101: "Naval Fire Support."

⁷ NARA, Record Group 494, Box 68, USAFISPA/South Pacific Base Command, 1942-46, Records of US Army Forces in the Middle Pacific, 1942-46, Combat Reports and Lessons, Joint Operations, "Subject: Lessons Learned from Joint Operations," Serial AG 370.2 T (1-21-44) from Headquarters, XIV Corps to Commanding General, South Pacific, 21 January, page 2.

⁸ ANZ, WAI1, 1089, DAZ 121.1/1/15, War Diary 'G' Branch, From 1-30 April 1944, Appendix I – Seizure and Occupation of Green Islands, Report of Third Amphibious Force, Serial 00222, Commander Third Amphibious Force, to Commander-in-Chief, US Pacific Fleet, 16 April 1944: "Seizure and Occupation of Green Islands, 15 February to 15 March 1944", page 10; ANZ, WAI1, 1552, DAZ 155/9/13, HQ 14 Infantry Brigade – Office records – 3 C.T.F. 31 operation order No 2-44, Annex (F) to Commander Task Force 31 Operation Order 2-44: Air Support Plan – Squarepeg Operation, page 2.

⁹ NARA, Record Group 494, Box 68, USAFISPA/South Pacific Base Command, 1942-46, Records of US Army Forces in the Middle Pacific, 1942-46, Combat Reports and Lessons, Joint Operations, "Subject: Lessons Learned from Joint Operations," Serial AG 370.2 T (1-21-44) from Headquarters, XIV Corps to Commanding General, South Pacific, 21 January, page 4.

cancellation, Barrowclough and Wilkinson deserve credit for breaking the mould and averting unnecessary destruction. The cancellation also pre-empted, albeit unintentionally, the future findings of the USN: namely, that prolonged preliminary naval bombardments did not readily generate desired results against a well-entrenched enemy, and that the practice of naval bombardment kept ships on station which were then increasingly vulnerable to air attack.¹⁰ Moreover, sustained preliminary naval bombardments took from amphibious operations one of their greatest attributes, the element of surprise. Thus on an island which had been occupied by the enemy for a number of years, and which was known to contain only a small garrison, a preliminary naval bombardment was unnecessary, especially as close-in fire support could be rendered by smaller, more flexible, gunboats.

According to Wilkinson's alternative plan (again the level of Barrowclough's involvement in the naval orders is unknown), if the preliminary naval bombardment was cancelled for any reason, the LCI(G)s were to advance their schedule and shepherd the first wave of landing craft through the channel and provide overwatch for the landing. Unlike the destroyers, which could not deviate from their pre-designated fire sectors, the LCI(G)s could engage targets anywhere along the beach.¹¹ Moreover, they were able to use their discretion in firing upon enemy positions, which made them a far more dynamic and immediate source of fire support. In the Treasury Islands uncoordinated fire from LCI(G)s had nearly killed several New Zealanders, yet the willingness of Barrowclough and Potter to make use of them on this occasion suggests that the effects of the fire support outweighed the dangers. Indeed, the LCI(G)s soon showed their greater flexibility when re-tasked to investigate reports of enemy activity nearby on Sirot, where they exchanged

¹⁰ Wilson, "An Examination of Naval Surface Fires in Future Amphibious Operations", 20. In fact this had been proved long before, at Gallipoli, as Wilson points out on page 13-14.

¹¹ ANZ, WAI1, 1552, DAZ 155/9/13, HQ 14 Infantry Brigade – Office records – 3 C.T.F. 31 operation order No. 2-44, "Part One to Annex (C) to Commander Task Force 31 Operation Order 2-44: Naval Gunfire Plan," page 1.

fire with Japanese troops.¹² Their ability to provide substantial firepower within short notice justified their inclusion in the operation.

The movements of the LCI(G)s were indicative of the fluid nature of the ship-to-shore stage, and accordingly, Brigadier Potter positioned himself on board a PT boat during this stage so as to monitor the flow of subsequent landing craft ashore. Potter sought to be in control of operations by staying abreast of developments around him. To this end, his positioning off the beach during the initial stages of the landing was suggestive of his style of command. Nonetheless, it was still difficult to maintain control over his forces. Archival sources are conflicting in locating Potter during this stage, which indicates that there was a certain level of confusion amongst the landing force. Some sources indicate that Potter and his staff were not aboard a PT boat but were actually on LCI 433, which subsequently landed on Blue 1 Beach (Pokonian) when disembarkation of the APDs' landing craft had finished – thus placing him ashore around 0805-0845 hours (see Appendix VII).¹³ However, a later amendment to Operation Order 2-44 changed this version of events and stated that Potter was to be placed aboard a PT boat, but this is not conclusive.¹⁴ The 14th Brigade's War Diary also stated that Potter went ashore from a PT boat at 1000 hours at the Advance Brigade Headquarters at Tangalan. Accounts that

¹² ANZ, WAI1, 1089, DAZ 121.1/1/15, War Diary 'G' Branch, From 1-30 April 1944, Appendix I: Seizure and Occupation of Green Islands, "Seizure and Occupation of Green Islands, 15 February to 15 March 1944", 16 April 1944, 6; ANZ, WAI1, 1092, DAZ 121.1/1/13, War Diary 'G' Branch, From 1-29 February 1944, Appendix XVII: "Intelligence Summaries, Squarepeg Intelligence Summaries, A – Operations, Part I – D-Day (Up to 151800L)."

¹³ Sources placing Potter on Beach Blue 1, from LCI 433, include Appendix 'E' to 3 NZ Division Operation Order No. 101: Allocation of Personnel to Ships – 1st Echelon; Appendix 'C1' to 3 NZ Division Operation Order No. 101: "Naval Fire Support"; Appendix 'I' 3 NZ Division Operation Order No. 101: "Landing Plan." Another source states Potter landed on Beach Red 1, while Newell asserts that the Advance Headquarters for 14th Brigade was also located at Tangalan, but the Personnel Table for the First and Second Transport Groups show that no staff from Headquarters 14th Brigade landed on Beach Red 1 from an LCI, thus eliminating it as an option. Additionally, it would make sense for Potter to establish his advance headquarters near to Barrowclough and not across the lagoon at a time when communications between the two could not be assured. To add to the confusion, the Landing Schedule from the brigade's Operation Order planned for Potter to land at Green 1 at 0750 from a regular landing craft and not a PT boat (this was later amended). See ANZ, WAI1, 1151, DAZ 155/1/26, War Diary of Headquarters 14 NZ Bde, 1-29 February 1944, Appendix 'A' to 14 Brigade Operation Order No. 2: "14 NZ Brigade Landing Schedule", page 3; Newell, "New Zealand's Forgotten Warriors", 146; ANZ, WAI1, 1553, DAZ 157/9/86, "14 NZ infantry Brigade Operation Order No. 2, with Appendices," 9 February 1944.

¹⁴ DAZ 121.1/1/13, War Diary 'G' Branch, from 1-29 February 1944, Appendix IV: "Amendment to CTF 31 Operation Order 2-44", 7 February 1944.

placed him aboard an LCI would appear likely as a PT boat would lack the required space for a brigade headquarters and its bulky communications equipment. Yet it may have been that Potter, along with a handful of staff, transferred to a PT just before LCI 433 disembarked most of the brigade's staff (the Rear Brigade Headquarters) at Blue 1, which would account for his later landing on Red 1 with the Advance Brigade Headquarters at Tangalan in the War Diary. Such a move would have ensured that Potter continued to receive updates on the landing's progress, since elements of his brigade were yet to land by the time LCI 433 beached.

As Potter attempted to remain up-to-date with the events unfolding around him, the ship-to-shore stage began when the first wave of assault troops loaded aboard landing craft at 0620 hours. A 20 minute delay to H-hour (landing hour), until 0650, resulted in the landing craft having to circle in the formation area, which was not ideal as it left them exposed to enemy air attack. Indeed, almost as soon as the landing craft crews received orders to begin their run to shore, Japanese dive-bombers of about squadron strength ambushed the Main Body of the task force at 0643 hours.¹⁵ This delay had been caused by the late arrival of the minesweepers to the main channel entrance, and resulted in the attack occurring as the first waves of landing craft left the departure line on their way to the beach (radar was unable to detect the approaching aircraft due to the presence of friendly fighters in the area).¹⁶ If there had been no delay, this attack would have occurred as the landing craft were returning to their APDs, without assault troops on board, thus minimising the risk of casualties. Additionally, as the first wave was caught on its way to the landing beaches, the second wave of troops were on deck in preparation for the landing craft to return to the APDs. These vessels were thus prevented from

¹⁵ NARA, Record Group 38, Box 128, Serial 0010, Commander Task Unit 31.4.3 (Commander Destroyer Division Four), to Commander-in-Chief United States Fleet, 17 February 1944: Report of Anti-Aircraft Action off Green Islands on 15 February 1944, Part II.

¹⁶ NARA, Record Group 38, Box 126, Serial 00177, Records of the Office of the Chief of Naval Operations, Records Relating to Naval Activity During World War II, WW II Action and Operational Reports, TF 30.8.1 to TF 31, Action Reports Covering Operations of Task Force 31 From 28 January 1944 to 17 February, Forwarding of., Enclosure (G) the Commanding Officer to the Commander Task Force 31, 19 February 1944: Enclosure (F), Commander Destroyer Squadron 22 to Commander-in-Chief, United States Fleet, Subject: "Action Report, February 15, 1944"; The Executive Officer to the Commanding Officer, Subject: "Executive Officer's Report on Air Action Covering Period from 0143 to 1130, 15th February 1944".

performing evasive manoeuvres due to crowded decks and by the fact that they had to remain within the transport area for the returning landing craft.

Fortunately, no serious damage was inflicted upon the LSTs, however, some problems typical of amphibious operations were identified from the incident. For example, when Allied aircraft engaged the Japanese intruders, anti-aircraft gunners were sometimes forced to withhold fire in fear of hitting friendly aircraft. This prevented the ships from employing their full array of anti-aircraft armaments. Despite these fears LST gunners still reported the discharge of over 8,000 rounds of 40mm, 20mm, and .50 calibre ammunition in around 18 minutes.¹⁷ These examples illustrated the need for an integrated air defence plan while the task force was in the objective area, for it was clear that no coordination plan among the Allied fighter aircraft and anti-aircraft gunners had been decided. Furthermore, this incident displayed the relative impotence of anti-aircraft fire from ships and landing craft, and reinforced the need for screening aircraft.

This attack was the last significant attempt by the Japanese to interdict the landings. Indeed, after some months of Allied attacks against Rabaul's airfields, the Japanese were in the process of withdrawing their aircraft from the area, with the last remaining operational aircraft at Rabaul returning to Truk with their pilots between 20-25 February.¹⁸ Any hopes that the Japanese may have been able to delay the landing through air interdiction were dashed when COMAIRSOLS was able to put up 42 Allied aircraft over the landing area by 0658 hours. This effectively precluded any further enemy aerial interference in the landings.¹⁹ The presence of Allied aircraft over the Green Islands showed that COMAIRSOLS had the ability to project airpower in support of landing

¹⁷ NARA, Record Group 38, Box 126, Serial 00177, Action Reports Covering Operations of Task Force 31 from 28 January 1944, to 17 February 1944, 24 March 1944, Serial 0016, , The Commander, L.S.T. Group Fifteen, Flotilla Five, to the Commander in Chief, United States Pacific Fleet, Subject: "Action Report, Occupation of Green Island, 15 February 1944", 18 February 1944, 2. In addition to the ammunition expended by the LST anti-aircraft gunners, some of the escorting destroyers discharged their 5" guns in hopes of bringing down the Japanese aircraft, however these measures also failed to bring any credible results

¹⁸ Ronnie Day, "The Air War for Rabaul," *After the Battle*, No. 133 (2006), 27.

¹⁹ NARA, Record Group 38, Box 128, Serial 0010, Commander Task Unit 31.4.3 (Commander Destroyer Division Four), "Report of Anti-Aircraft Action off Green Islands on 15 February 1944, Part II."

operations at great distances from established airfields, and vindicated the extensive efforts which had been accorded to bombing Japanese airfields at Rabaul over previous months. While aircraft circled overhead, the 30th Battalion landed at 0655 and secured the main channel entrance to provide “free passage of the balance of [the] expedition.”²⁰ The other two battalions of the brigade were authorised to reinforce the 30th Battalion had it encountered significant enemy resistance at the channel entrance.²¹ This indicated that Wilkinson and Barrowclough viewed the channel entrance as a decisive point on the battlefield, the control of which, would ensure the success of the entire landing. Given their recent acquaintance with the area during the commando raid, the troops of 30th Battalion were assigned to secure the channel, which facilitated their situational awareness and movement.²²

The first two companies of the 30th Battalion established a perimeter around Pokonian without opposition, and were followed soon thereafter by a third infantry company. These companies then advanced southwards, three abreast, as an attached observation party from 144th Independent Battery laid its own telephone line to enable effective communication with the field artillery should the requirement emerge.²³ Meanwhile, the battalion’s remaining rifle company landed on Barahun and secured the northern-side of the channel. All three of 30th Battalion’s companies that landed at Pokonian communicated with battalion headquarters by telephone, while ‘B’ Company on Barahun communicated via a No. 48 Set. This was an interesting choice of communication since telephone line required careful placement and once laid were easily cut in the jungle. This decision also revealed the process behind the battalion commander’s assessment of the

²⁰ Like the other two battalions, the 30th Battalion was composed of infantrymen, elements of the Brigade Carrier Platoon, one platoon of the Brigade MMG Company, a detachment of engineers, and attached artillery forward observation officers, navy forward observation officers, and naval liaison officers. ANZ, WAI1, 1551, DAZ 155/9/4, HQ 14 Infantry Brigade – Office records – Unit reports Squarepeg Op (including Signals report), “30 NZ Battalion Report on Operation Jan/Feb 1944 – Green Island Op.”

²¹ Ibid., “30th Battalion Report on Operations Jan/Feb 1944 – Green Island Group”; “37th Battalion Squarepeg Operation”, 27th February 1944; “35th Battalion Report on Squarepeg Operation”, 2 March 1944.

²² Ibid., “30 NZ Battalion, 14 Brigade, 3 NZ Division, 2NZEF IP: Report on Operations Jan/Feb 1944 – Green Island Operation”, n.d.

²³ ANZ, WAI1, 1089, DAZ 121.1/1/15, War Diary ‘G’ Branch, 3rd NZ Division, 1-30 April 1944, Appendix I: Seizure and Occupation of Green Is, Report of Third Amphibious Force, “Commander Third Amphibious Force, to Commander-in-Chief US Pacific Fleet: “Seizure and Occupation of Green Islands, 15 February to 15 March 1944”.

situation: as underwater cable could not be laid for some hours, the use of wireless was the only viable option for a company that was essentially isolated from the rest of the battalion. It was also indicative of the shortage of radios during the war. In the end, the use of line communication in the 30th Battalion's area seems to have had few negative effects as the companies, and the artillery observation party, reached their night positions and established telephone contact well ahead of time, which may be attributed to the absence of enemy opposition and the familiarity of the area by members of the battalion who had been on the reconnaissance raid.



Image 14: A view to stern on board a landing craft (possibly LCIs) as it passes through the main channel into the lagoon – waves breaking over the channel reef may be seen on the left (Pokonian Planation is just out of view), while Barahun Island is located on the right. (Source: “Convoy of New Zealand ships enters into the lagoon at Nissan Island, Papua New Guinea”, New Zealand, Department of Internal Affairs, War History Branch: Photographs relating to World War 1914-1918, World War 1939-1945, occupation of Japan, Korean War, and Malayan Emergency, Ref: 1/2-041551-F, Alexander Turnbull Library, Wellington, New Zealand, <http://natlib.govt.nz/records/23244658>.)

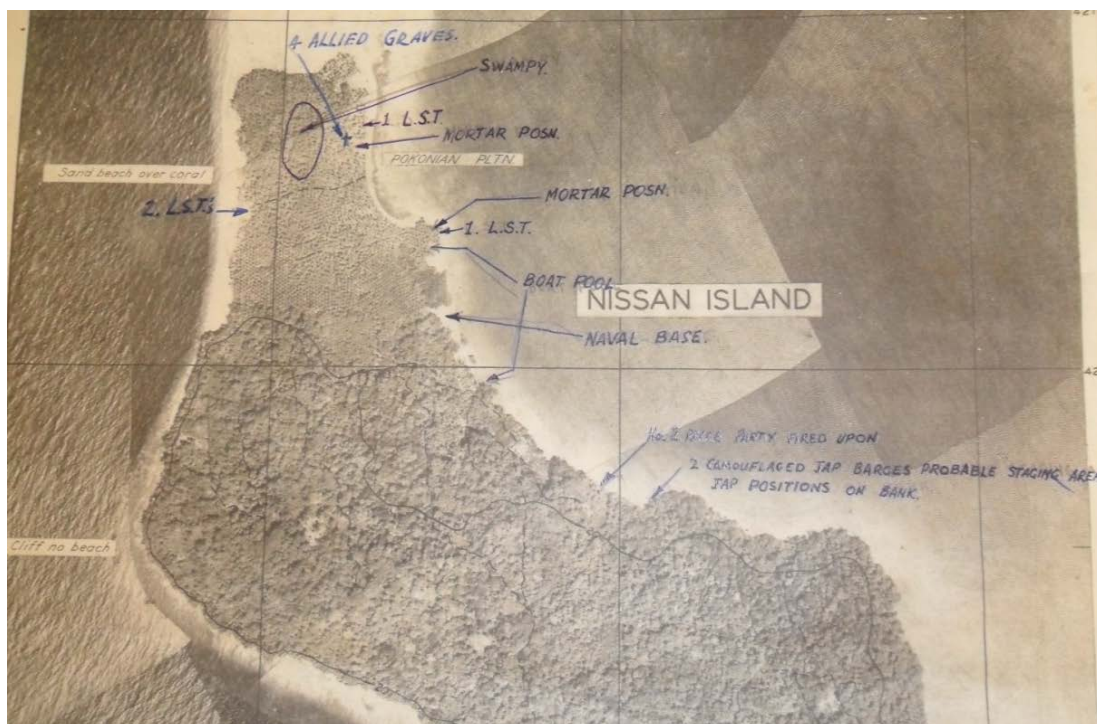


Image 15: Aerial photograph of Blue Beaches at Pokonian – the dense vegetation is clear to see, however a number of jungle tracks (lined in black) are visible in the photograph. These were used by the natives, the Japanese, and soon the New Zealanders. (Source: ANZ, WAI15, 35, Pacific – Maps of Green Island (Nissan and Pinipel, miscellaneous.)

At the same time as Pokonian was being secured, the 35th and 37th Battalions landed unopposed on their designated beaches at 0745 and secured the Tangalan Plantation.²⁴ Thus all three battalions fulfilled their primary task within two hours, and without serious opposition. With the beachheads secured the LSTs and LCIs carrying other units and stores were able to unload their stores for the development of the airfield. The ability of the larger landing craft to unload their cargo in such a short space of time, rested on the infantry battalions' ability to maintain a high level of tempo as they had only 25 minutes to secure their beachheads before the arrival of the first LCIs.²⁵ Matters were not helped, then, when battalion commanders were ordered to furnish at least one unloading detail at any given time, ranging in size from 40-250 men. Thus, regardless of Barrowclough's insistence on maintaining infantry strength at war establishment levels, the situation was

²⁴ Shaw and Kane, *Isolation of Rabaul*, 511.

²⁵ ANZ, WAI1, 1092, DAZ 121.1/1/13, War Diary 'G' Branch, From 1-29 February 1944, Appendix XI: CTF 31 Operation Order 2-44, "Annex (B) to Commander Task Force 31 Operation Order No. 2-44: Debarkation Plan."

such that at least one company of every infantry battalion was forced to act as a Shore Party. The task of these infantry unloading details became more complex by the carrying of dissimilar units and equipment aboard LSTs, and different methods of unloading were required depending on these factors. For example, the LSTs destined for Red and Green Beaches carried air control units, which required men to unload several jeeps, trucks, and heavy wireless equipment, while those headed for Blue Beaches carried the majority of the headquarters and signals personnel of the division so that there was more tentage, administrative stores, signal wires, and wireless sets to be unloaded.²⁶



Image 16: 'Getting 'em ashore' – a Valentine tank of the 3rd NZ Division (towing a US 90mm anti-aircraft gun) drives off an LST onto a coral and earth-made pier constructed by New Zealand engineers, 15 February 1944. (Source: "World War II vehicles, equipment, and troops landing on Nissan Island, Papua New Guinea", New Zealand, Department of Internal Affairs, War History Branch: Photographs relating to World War 1914-1918, World War 1939-1945, occupation of Japan, Korean War, and Malayan Emergency, Ref: 1/2-044755-F, Alexander Turnbull Library, Wellington, New Zealand, <http://natlib.govt.nz/records/22720410>.)

²⁶ ANZ, WAI1, 1151, DAZ 155/1/26, War Diary of Headquarters 14 NZ Bde, 1-29 February 1944, Appendix 'A' to 14 Brigade Operation Order No. 2 – 14 NZ Brigade Landing Schedule, pages 1-9.



Image 17: 3rd NZ Division troops aboard USN LCVPs at Pokonian Plantation – this view shows the relatively flat gradient of the landing beaches at Pokonian and gives an indication of the terrain which the soldiers faced upon ‘hitting’ the beach. In relation to the previous photograph, these craft are located at the top-right, somewhere near “1 LST” label. (Source: “New Zealand troops in assault landing craft at Pokonian Plantation, Nissan Island. New Zealand.” Department of Internal Affairs. War History Branch: Photographs relating to World War 1914-1918, World War 1939-1945, occupation of Japan, Korean War, and Malayan Emergency. Ref: WH-0477-F. Alexander Turnbull Library, Wellington, New Zealand. <http://natlib.govt.nz/records/23104301>)

Such was the nature and complexity of amphibious operations, even when opposition was not encountered, there were some organisational issues that emerged. One of the more unfortunate occurred at 0930 hours, when congestion on the main landing beach resulted in the majority of the 24th Field Ambulance being landed on the wrong beach. The men were required to haul some 20 tons of equipment along the coastline to their designated assembly area which left them behind schedule and fatigued. It was fortunate that the landings went unopposed as casualties (which originally could not be evacuated until the landing of the 4th and 6th waves at Pokonian and Tangalan respectively) would have been without adequate medical facilities. This would have further hampered congestion in the landing areas. Further, the site of the main dressing station was found

to be surrounded by swamp, which made it unsuitable for the reception and evacuation of casualties, and this necessitated a move of location – mostly by hand.²⁷ Other units were landed without vehicles or personal equipment as they had received scant consideration during the planning phase. One of the worst cases of organisational overlook occurred to the men of the 14th Brigade's Medium Machine-Gun (MMG) Company, who upon finding themselves without vehicles, were forced to carry 120lbs above their personal equipment whenever they moved.²⁸ This was in addition to the company's requirement to provide unloading parties at the beaches, and the company commander considered the matter worthy of investigation.

Another difficulty which was only partly anticipated was the lack of fresh water in the area of the landings. The lack of fresh water exceeded earlier predictions and created problems for the troops. This forced water allocation to be reduced to one gallon per day but this was less than half of the required level for troops manoeuvring in the tropics.²⁹ Infantry patrols pushing out through dense and humid bush found the going particularly hard as they soon consumed their water allocation.³⁰ In such cases men took to drinking coconut milk to substitute their water intake, but these were scarce, or they resorted to drinking from doubtful water sources such as native wells.³¹ It was not surprising that while there were no battle casualties on the first day, the first five sick cases of the operation were admitted to hospital on that day. This was an ominous sign because despite efforts to improve jungle equipment and provisions after the high number of sick casualties incurred on Vella Lavella, it was evident that soldiers were still susceptible to

²⁷ ANZ, WAI1, 1135, DAZ 140.1/1/11, 24 Field Ambulance, April 1943 to July 1943, War Diary of 24th NZ Field Ambulance, From 1 February 1944- To 29 February 1944, Monthly Report: 24th NZ Field Ambulance, February 1944, page 3.

²⁸ ANZ, WAI1, 1152, DAZ 155.7/1/7, War Diary 14 NZ Infantry Brigade, MMG Coy, 1-29 February 1944, Monthly Summary.

²⁹ ANZ, WAI1, 1135, DAZ 140.1/1/11, 24 Field Ambulance, April 1943 to July 1944, War Diary of 24th NZ Field Ambulance, 1-29 February 1944, diary entry 22 February.

³⁰ ANZ, WAI1, 1152, DAZ 155.7/1/7, War Diary 14 NZ Infantry Brigade, MMG Coy, 1-29 February 1944, entry for 16 February 1944.

³¹ Sugden, *Pacific Saga*, 90; ANZ, WAI1, 1553, DAZ 156/15/11, Historical Record of 30 BN, February 1944, entry for 18 February 1944.

tropical disease and sickness. Indeed, sick casualties continued to climb after the first day, and by the end of the month at least one unit had almost half its men on sick parade.³²

Despite the difficulties encountered, without having to contend with opposition, the New Zealanders were able to complete the lodgement stage at 1030 hours when Red and Green Beaches were joined. The battalions continued to push out from the landing areas and by 1900 hours all three had reached their phase lines. The only action by ground forces on the first day was a short fire mission by the Independent Battery's howitzers at Pokonian, which assisted the LCI(G)s in destroying a couple of Japanese landing craft situated in the vicinity of Sirot Island. The ability of this troop's howitzers to coordinate its fire support with the LCI(G)s indicated the efforts of the communication sections which were able to lay telephone cable and then connect it to the brigade network within a few hours of landing. In addition, the unloading work of the battery's personnel, who had only a single jeep available after landing, was accomplished despite the mud, vegetation and coral at Pokonian. At the same time the New Zealanders were able to assert that the Japanese garrison was not in a position to launch a counter-attack, as natives advised that most of the garrison was located in the southern part of Nissan, and on Sirot and Pinipel Islands to the north.³³

The lack of ground opposition in the landing area meant that efforts could be directed towards establishing defensive positions and continuing the unloading and distribution of stores.³⁴ By the end of the first day 5,806 personnel and 4,344 tons of supplies and equipment had been landed.³⁵ Barrowclough was pleased with the day's results and sent a celebratory message to Lieutenant-General Puttick declaring "3 NZ DIV less 8 Brigade Group successfully landed GREEN Island this morning. Opposition practically negligible. NO air attacks yet on landing. NEW ZEALAND troops once again in the van[guard] of

³² ANZ, WAI1, 1152, DAZ 155.7/1/7, War Diary 14 NZ Infantry Brigade, MMG Coy, 1-29 February 1944, sick parades for 28-29 February 1944.

³³ Sugden, *Pacific Saga*, 86, 90.

³⁴ KMARL, Acc. No. 2005.381, Personal Narratives: Pacific – WWII, recollections of Corporal Brian John Potts 49041, 3rd NZ Division Tank Squadron, page 3.

³⁵ ANZ, WAI1, 1092, DAZ 121.1/1/15, War Diary 'G' Branch, From 1-30 April 1944, Appendix I: Seizure and Occupation of Green Is. – Report of Third Amphibious Force, page 8.

SOPAC area.”³⁶ The troops were also aware that they were now the “further advanced of any Allied troops in the S[outh] W[est] Pacific [sic].”³⁷ The Landing Force had accomplished its ship-to-shore movement and lodgement phases without any serious losses or delays. Yet the battle was not over as the enemy garrison had still to be found.

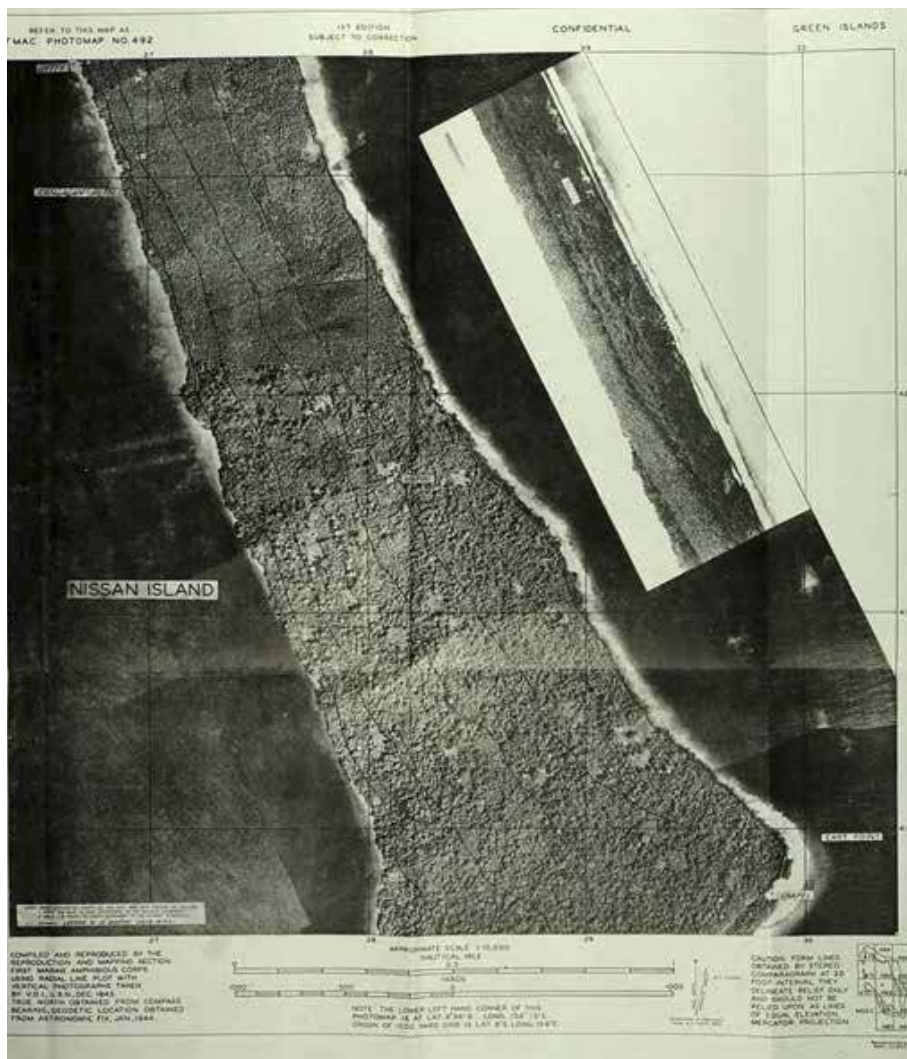


Image 18: Aerial photograph of Southern Tangalan Plantation – Green 1 and 2 beaches are located at the top of the photograph, while Halis village is just out of picture towards the bottom. (Source: ANZ, WAI15, 35, Pacific – Maps of Green Island (Nissan and Pinipel, miscellaneous.)

³⁶ ANZ, EA1, 570, 86/11/1, Intercept form Barrowclough, Serial No. 32 523, “MOST SECRET and PERSONAL for General Puttick”, 15 February.

³⁷ Auckland War Memorial Museum Library, MS 2004/78, “Papers Relating to World War II Serviceman William John Richard Townsend,” personal diary January-May 1944, diary entry 15 February 1944.



Image 19: LCI 443 and LCI 444 deposit troops of the 35th Battalion at Tangalan sometime around 0810 hours, 15 February 1944 – this photograph, taken at one of the Red Beaches, shows the type of stores which the soldiers had to unload and the seemingly disorganised activities that this created. The soldiers exiting down LCI 444's gangways are mostly from the 35th Battalion. (Source: "Unloading of men, vehicles and equipment on Nissan Island, Papua New Guinea", New Zealand, Department of Internal Affairs, War History Branch: Photographs relating to World War 1914-1918, World War 1939-1945, occupation of Japan, Korean War, and Malayan Emergency, Ref: 1/2-044746-F, Alexander Turnbull Library, Wellington, New Zealand, <http://natlib.govt.nz/records/22801187>.)

Jungle Warfare

The following five days ashore were focussed on the expansion stage. The first night was spent reorganising in preparation for the next day's advance, however these were interrupted when the Japanese bombed the island during the night. Unlike the earlier attacks against the convoy, the night raids did not appear to have been part of a concerted enemy air attack, and added only nuisance value. While Japanese night raiders regularly attacked island garrisons in the South Pacific, it does indicate effective night fighter cover could not be achieved or coordinated between the COMAIRSQUARPEG and COMAIRSOLS. The primary responsibility for coordinating fighter cover over the Green Islands (in support of Task Force 31) lay with the Fighter Director Units. These were

directed in their duties by the *South Pacific Fighter Direction and Radar Control Doctrine*, as provided within Communication Plan 1-44.³⁸ This was not a doctrine in the formal sense of the word, but it did establish all matters of command, control, and organisational parameters, and which extended to the procedures of directing aircraft in different contingencies. Additionally, it recorded all responsibilities for the direction of aerial and radar activities in the operational area under COMAIRSQUAREPEG. After February these units became responsible to Barrowclough, however during the actual landing these units remained under the direction of Wilkinson.

On the morning of 16 February, Potter called together his three battalion commanders and issued a new Operation Instruction to cover actions out to D+5 (20 February).³⁹ Potter appreciated that the execution of the landing had gone better than expected and his instructions were to push on to the final objective area around the southern portion of Nissan Island where the main part of the Japanese garrison was known to be. While the landing had been achieved almost seamlessly, there was understanding that the situation could change in the ensuing jungle advance in which the troops would need to contend with poor situational awareness, sluggish resupply, limited movement, and the likelihood of small unit actions.

³⁸ ANZ, WAI1, 1092, DAZ 121.1/1/13, War Diary 'G' Branch, From 1-29 February 1944, South Pacific Force of the United States Pacific Fleet, Headquarters of the Commander, Communication Plan 1-44, Appendix D to Commander South Pacific Force, Communication Plan 1-44, 1 February 1944, pages 1-4.

³⁹ Operation Instructions, were distinct from Operation Orders by being less formal and extensive, and were usually intended to fulfil a certain phase, objective, or mission within the greater Operation Order. They normally dealt with a particular issue of immediate concern, and not of a long-term duration involving the employment of units outside those already included in the actions detailed within the document. ANZ, WAI1, 1151, DAZ 155/1/26, War Diary of Headquarters 14 NZ Bde, From 1 to 29 February 1944, entry 16 February 1944.

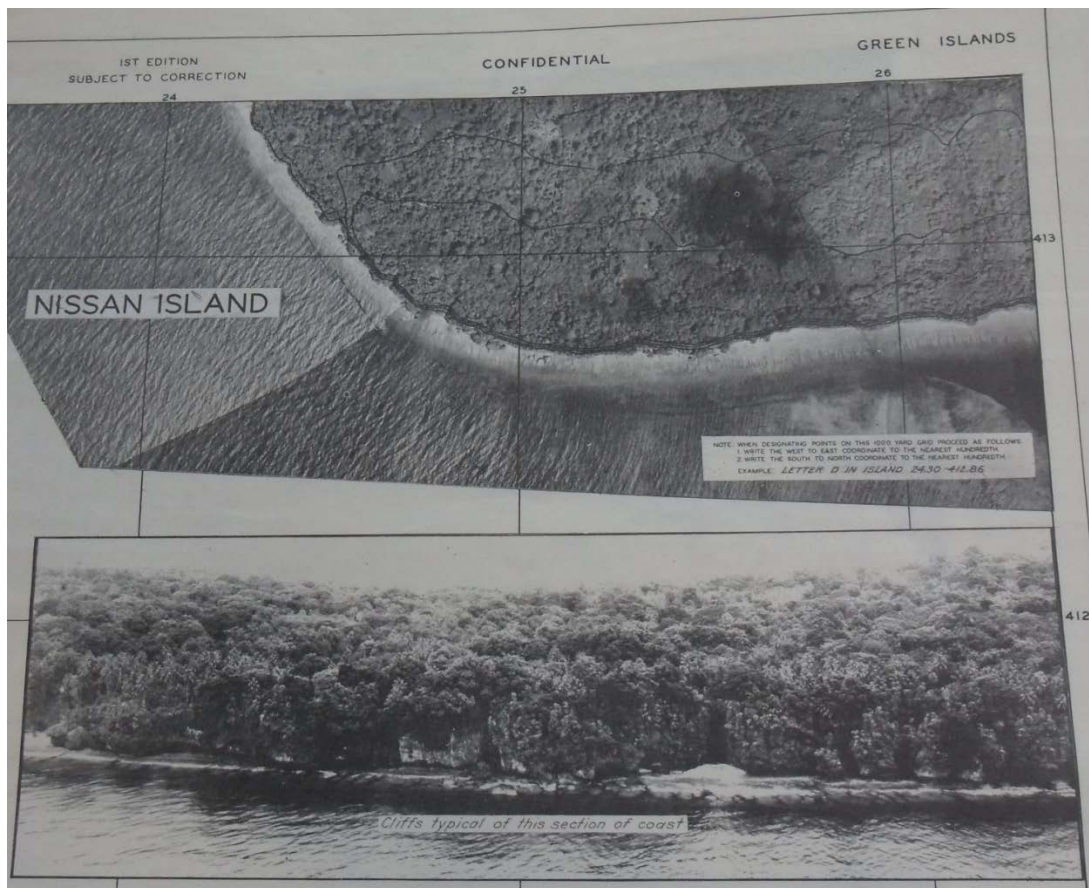


Image 20: Cliffs overlooking the ocean – most of Nissan Island was ringed by 12 metres cliffs which made patrolling along the beaches precarious for the infantry and restricted movement to within the jungle. (Source: WAI15, 35, Pacific – Maps of Green Island (Nissan and Pinipel, miscellaneous.)

In accordance with Potter's instructions, the 35th Battalion continued to advance southwards towards the village of Halis, while the 37th Battalion pushed northwards towards the northern end of Nissan Island. Valentines tanks were available on both fronts and they moved to assist with the advance.⁴⁰ The tanks' power and weight enabled them to plough through dense jungle and clear tracks for the infantry which could then be upgraded for use by jeeps and trucks. The jeeps performed liaison-type missions, including carrying wireless equipment, water and rations, while the trucks carried heavier equipment and stored the men's packs.⁴¹ At the same time, the majority of the 30th Battalion continued to progress South on an axis of advance where the ground was

⁴⁰ The 37th Battalion was not included in the Operation Instruction, and it continued its advance in accordance with the brigade's Operations Order.

⁴¹ Brinkman, *The 35th Battalion*, 69-70.

swampier, which prevented the infantry from operating with tanks and motor transport. Instead, 'Bren' carriers (tracked mechanical vehicles) were employed on transportation and resupply duties. These could not be used in place of tanks in the forward area as the lightly armoured 'Bren' carriers were known to be too vulnerable in close-quarters jungle warfare.⁴² Their employment showed that although the lessons of jungle warfare from early in the Pacific War had pointed to a marked reduction in motor transport within infantry divisions, vehicles continued to have a use in jungle environments with suitable terrain.⁴³

While the main amphibious task force was in the process of withdrawing, to assist in the expansion operations part of the Americans' Fourth Transport Group with six Landing Craft, Tank (LCT) remained on call. These were extremely useful at ferrying heavy equipment over shallow waters, however Barrowclough did not have operational control over them, and permission had to be granted from the US Naval Base commander.⁴⁴ The LCTs provided a level of mobility to Barrowclough's manoeuvre elements (tanks) and certain offensive support systems, such as the artillery, but his lack of operational control over them hampered his ability to quickly shift assets from one side of the island to the other. The first use of the LCTs was a landing by 'B' Company of the 30th Battalion, a platoon of the 14th Brigade's MMG Company, the Brigade Defence and Escort Platoon, and the Brigade Field Security Section on nearby Sirot Island at 0840 hours, 17 February, to eradicate a small enemy force there (see Appendices XII and XIII). While there had not been a bombardment ahead of the main landing, this time artillery set up in the main landing area shelled Sirot Island for seven minutes ahead of troops going ashore. The importance of fire support to reduce casualties was illustrated by the fact that the company-sized force was accompanied by a forward observation party of the 144th Independent Battery that could call for artillery fire if required. The landing was, however delayed for 30 minutes. No explanation for the delay was recorded, but it is likely that

⁴² Sugden, *Pacific Saga*, 89.

⁴³ Garth Pratten, *Australian Battalion Commanders in the Second World War*, Australian Army History Series (Port Melbourne, Australia: Cambridge University Press, 2009), 202-203.

⁴⁴ ANZ, WAI1, 1552, DAZ 155/9/13, HQ 14 Infantry Brigade – Office records – 3 C.T.F. Operation Order No. 2-44, Task Force Thirty-One, Office of the Commander, 5 February 1944: Operation Order No. 2-44, page 4.

permission to use two LCTs for the move was slow to be organised as it had to be approved by the Commander, Naval Base.⁴⁵

Similar to the main landing, the troops waded ashore on Sirot against no opposition and established a perimeter before forming themselves into platoon-sized patrols. Like the other islands, Sirot was covered with thick vegetation, the terrain was flat but rose gradually towards the coast up to the height of 10 metres. Movement by the patrols adhered to techniques described in jungle warfare manuals, with two platoons (and a third in reserve) pushing forward each covering a 90-metre front. Special emphasis was placed on maintaining constant visual contact – a feat difficult to achieve in the dense jungle – but contact was soon lost and the men resorted to blowing whistles.⁴⁶ This replicated Australian experiences in Papua, where neighbouring platoons could be less than 50 metres away from each other, and they still could not know where they were.⁴⁷ Not long after advancing into the jungle the New Zealanders encountered resistance from Japanese riflemen and then with enfilading fire from well-camouflaged machine gun positions. The Japanese were renowned for construction of well-positioned, well-camouflaged bunkers that could be hard to detect as they sat below the level of the undergrowth. Such was the density of jungle on Sirot that on a number of occasions the New Zealanders and Japanese came face-to-face, only a few yards away from each other. Clearing Sirot cost the New Zealanders five men killed and three wounded (the first casualties of the operation). As was common in jungle warfare, junior leaders attempting to control the close-quarters fighting and direct sub-unit attacks on bunkers bore the brunt, with casualties including one lieutenant, a sergeant, two corporals, and a lance-corporal.⁴⁸ While the scale of the fighting was comparatively small, the intensity at small-

⁴⁵ ANZ, WAI1, 1551, DAZ 155/9/4, "Report on Sirot Operation", Headquarters 14 Defence Platoon, 28 February 1944; "Report on Operations Jan/Feb 1944 – Green Island GP: Sirot Op", B Company 30th Battalion, 22 February 1944.

⁴⁶ ANZ, WAI1, 1151, DAZ 155/1/26, War Diary of Headquarters 14 NZ Bde, From 1-29 February 1944, Appendix VI: "Report on Sirot Operation", 28 February 1944; ANZ, WAI1, 1551, DAZ 155/9/4, 30 NZ Battalion Report on Operations, "Sirot Op", 22 February 1944.

⁴⁷ Bioletti, *Pacific Service*, 107-108; Pratten, *Australian Battalion Commanders in the Second World War*, 181.

⁴⁸ Although far from the number of casualties sustained by the Australians at Buna (Papua), in 1942, the results reveal a similar pattern of high casualties among officers and NCOs. See Bradley, "The Battle for Buna", 2-27.

unit level, including the requirement to attack bunkers with suppressive machine gun fire and grenades, was such that one shaken platoon needed to be rested and at least one man was evacuated as a psychiatric casualty.⁴⁹

On the main island, the New Zealanders continued advancing over the proceeding days. The men were better prepared and equipped than the men in previous operations which helped to sustain them. Particularly welcomed was the American supplied 'J' rations (for jungle ration) which contained food stuffs that were lighter to carry, more palatable and with higher calorific contents (such as tinned meat, porridge, chocolate, dried fruits, and powdered milk). The 'J' rations were substantially better than the ubiquitous 'K' rations that had previously been issued. It is understandable therefore that the infantry were largely pleased with this aspect of the operation. The higher quality of rations did much to decrease fatigue and increase energy levels in the soldiers. In addition, on at least one of the avenues of advance it was possible to use trucks to transport men's packs which lessened the physical demands and energy consumption for those troops. Troops who were required to carry heavy backpacks complained about the fact, although they understood that it was understandable that they should carry enough to be self-sufficient. This last point reaffirmed the need for soldiers to be strong and physically fit for both amphibious operations and jungle warfare.⁵⁰

A problem that emerged early in the advance on Nissan was the general inadequacy of wireless equipment in jungle conditions. It was not uncommon to set up a radio only to discover that it was not working. To compound the problem, signal line communications also often failed as lines laid alongside tracks fell victim to bulldozers' tracks or vehicles' wheels. The communication problems hampered efforts to coordinate movement in the operation, and resulted in a complex messaging system as commanders sought ways to

⁴⁹ ANZ, WAI1, 1551, DAZ 155/9/4, HQ 14 Infantry Brigade – Office records – Unit reports Squarepeg Op (including Signals report), 30 NZ Battalion, 14 Brigade, 3 NZ Division, 2NZE IP, "Report on Operations Jan/Feb 1944 – Green Island Operation", n.d; Bioletti, *Pacific Kiwis*, 108-109.

⁵⁰ ANZ, WAI1, 1551, 155/9/4, unit reports of No. 1 Platoon, MMG Company; 'K' Section Signals; the 30th, 35th, and 37th Battalions.

get their information sent, including using runners; sometimes commanders even relied on neighbouring units to provide a messaging service. Conversely, static units generally reported their wireless performance to be satisfactory. These units had been able to better maintain their radio equipment when compared to infantry units, which were forced to carry them through swamp and jungle – an extremely laborious job. The work of the infantry was made all the more difficult through the detailing of infantrymen to Shore Parties, however, this appeared to have facilitated the movement and establishing of other units ashore.⁵¹

Attempts to make contact with the main Japanese garrison, were fruitless. The only 'contact' during this time occurred in areas that were believed to have been cleared by the advancing battalions, only to find that Japanese snipers had gone to ground and would then emerge to shoot at support personnel as they were beginning their clearing and transportation tasks. This proved such a hindrance to base development that Barrowclough issued a special divisional Operation Instruction, ordering the locating and destruction of all enemy from areas which had previously been presumed cleared.⁵² The presence of these Japanese 'stay-behinds' demonstrated the delays that small numbers of soldiers could have on operations. The diversion of infantry patrols to eradicate enemy snipers must have been distracting for Potter and his battalion commanders, especially on the southern front as the force was approaching the site of the remaining Japanese garrison (believed to be approximately 70 men) located somewhere towards the southern coast, around the villages of Tanaheran, Torahatup, and the Catholic Mission. The latter was believed to be the site of the Japanese headquarters. A comprehensive attack was needed in order to confront and eliminate these locales. This was addressed by Potter during a commanders' conference on 18 February. The plan of attack decided upon called for a double-envelopment by the 30th and 35th Battalions to be preceded by an artillery barrage in the morning, to be joined later by mortars and machine guns, and

⁵¹ ANZ, WAI1, 1111, DAZ 128/1/15, War Diary of 29 NZ Light Antiaircraft Regiment, From 1-31 January 1944, "Lessons of Treasury Campaign, 29 Lt A.A. Regt", page 10.

⁵² ANZ, WAI1, 1092, DAZ 121.1/1/13, War Diary 'G' Branch, From 1-29 February 1944, Appendix XII – 3 NZ DIV Operation Instruction No 54. Instructions to Comd 14 NZ Inf Bde: "Action Against Snipers in the Halis Area", 18 February 1944.

lastly followed by a steady infantry-tank advance.⁵³ The New Zealanders suffered a setback when an attempt to move the tanks forward to the start-lines of the 35th Battalion was thwarted by a coral fault line, which had created a steep fissure, and prevented movement forward. They were subsequently ordered to move, via LCTs, to Blue Beach and come under the command of the 30th Battalion. Whereas in the previous days the 35th Battalion had used tanks to spearhead the advance of the infantry, the 30th Battalion distributed the tanks in accordance with guidelines laid-down after earlier training on Guadalcanal, so that when they advanced the infantry would fan out slightly ahead of the tanks to act as their eyes and ears and call on the for fire-support when required.⁵⁴

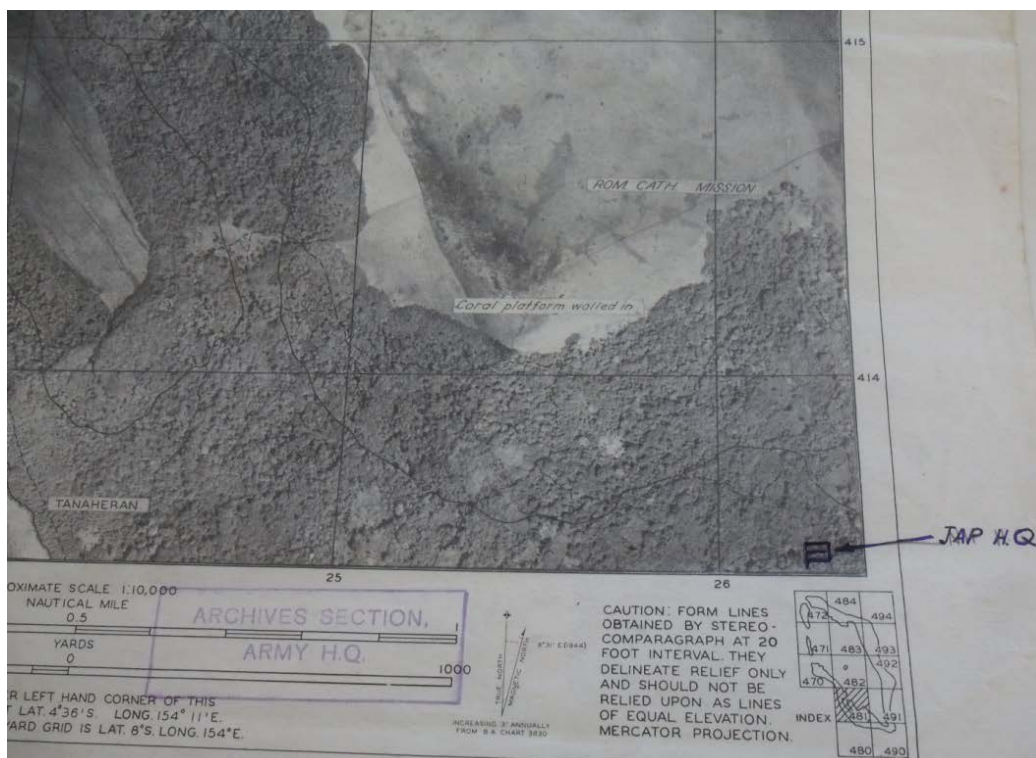


Image 21: Aerial photograph of the Southwest corner of Nissan Island – it shows the area immediately south of the Roman Catholic Mission, with the original location of the Japanese garrison’s headquarters indicated in the lower left. (Source: ANZ, WAI15, 35, Pacific – Maps of Green Island (Nissan and Pinipel, miscellaneous.)

⁵³ ANZ, WAI1, 1553, DAZ 157/9/86, “Summary of Instructions Issued by Brigadier Potter, Commanding 14 NZ Inf. Bde. – Narrative of Events, Fri. 18 FEB. 44.”

⁵⁴ Bioletti, *Pacific Kiwis*, 112.

On 19 February, the 30th and 35th Battalions commenced their attack against the Mission area. After advancing for one hour, and without any contact, the New Zealand infantry reached and secured the Mission area, finding only enemy documents and supplies. Evidence of hasty evacuation was to be seen – trenches, rations, documents, and weapons – all indicated enemy activity. At first the New Zealanders expressed astonishment that the Japanese were able to escape the pincer attack, but they later convinced themselves that the Japanese must have evacuated, just like they had done on Vella Lavella.⁵⁵ How else could they explain the capture (or abandonment) of such an extensive amount of enemy materiel around the Mission area, which included six 20mm guns, two mortars, six machine guns, 150 rifles, 150,000 rounds, and two radio sets. Indeed, the capture of such equipment surely signalled the end of any potential delay (from the Japanese garrison) to the construction of the airfield.⁵⁶ In contrast to procedures on Vella Lavella where battalion headquarters had coordinated the artillery fire, Potter and his brigade headquarters coordinated the artillery barrage on the Mission - as two battalions were involved in the attack, the use of a brigade headquarters was a necessity since the battalion headquarters would have been overtasked without additional staff members.⁵⁷

In preparation for the barrage, artillery gunners had registered the Mission over the previous days in order to render immediate close support if called upon from forward observers. The artillery's ranging of the Mission along with the preliminary bombardment (the 30th Battalion's mortar platoon fired-off 900 rounds in under 30 minutes⁵⁸), indicated the New Zealanders' intentions, and in hindsight this gave the Japanese forewarning of the attack. Knowing that Japanese strength was minimal, the decision to use a 30 minute artillery barrage was systematic of a casualty averse organisation, which the 3rd NZ Division was, however the reasons for doing so were understandable as infantry establishments were already low. Nonetheless, the Japanese also failed to exploit this

⁵⁵ ANZ, WAI1, 1092, DAZ 121.1/1/13, War Diary 'G' Branch, From 1-29 February 1944, Appendix XVII: Intelligence Summaries, Squarepeg Intelligence Summaries, A – Operations, Part V – From 181800L to 191800L, pages 3.

⁵⁶ Information on captured Japanese material found in *Ibid.*, 3-4.

⁵⁷ ANZ, WAI1, 1551, DAZ 155/9/4, "35th Battalion Report on Squarepeg Operation, 25th February 1944."

⁵⁸ Bioletti, *Pacific Kiwis*, 111.

opportunity to bottle-up the attackers in a killing zone, and indeed even failed to prepare extensive booby-traps, something which their equipment actually facilitated through such features as pull-type grenades for use as trip-wires.⁵⁹

The 'Battle of Tanaheran Village'⁶⁰

With the Mission area cleared and the New Zealanders believing that the Japanese had evacuated, the troops were engaged in construction activities and passive patrolling while unit boundaries and headquarters were reorganised. This resulted in patrols from different units being sent out in search of suitable locations within a very small island perimeter. Consequently, there was some rush to 'discover' the best sites for base camps. However, within a short time, the 'evacuation' theory of the Japanese was disproved. On one such patrol on the morning of 20 February, the Brigade Carrier Platoon, acting in a dismounted role, was fired upon from thick bush while it halted for lunch near Tanaheran Village around 1100 hours (see Appendices XIV and XV).⁶¹ The platoon's members were caught by surprise as they had not expected enemy in the area. The New Zealand official history attempts to relate that the remaining Japanese were discovered while in the process of executing a brigade plan, which envisioned patrols retracing their steps from the Mission area towards the landing beaches. Nonetheless, it is evident from reports of this contact that no such plan existed, and consequently the Japanese were discovered completely by accident (as indicated by the above example).⁶² Initially the platoon attempted to flush-out the Japanese, possibly expecting some stranded and disorganised troops, but they were soon met by heavy automatic fire, which led them to withdraw.

⁵⁹ Military Intelligence Service, *Intelligence Bulletin*, vol. II, no. 1 (Washington, D.C.: War Department, September 1943), 1-15; Military Intelligence Division, *Intelligence Bulletin*, vol. II, no. 4 (Washington, D.C.: War Department, December 1943), 21-26; Gordon L. Rottman, *World War II Axis Booby Traps and Tactics, Osprey Elite 100* (Oxfordshire: Osprey Publishing, 2009), 51-52.

⁶⁰ The following paragraphs provide the first accurate account of the largest contact between the New Zealanders and the Japanese. Reports from the battle often omit mention of important details, or simply misreport them, it thus required the comparing and contrasting of no less than 11 sources. This includes the use of reports from the 14th Brigade, 30th and 37th Battalion, 14th Brigade MMG Company, Brigade Carrier Platoon, and 'G' Branch 3rd NZ Division Headquarters. As most of these reports contained contradictory information, the comparing and contrasting of units' war diaries, narrative of events, daily intelligence summaries, daily progress maps, incoming/outgoing communications, reports to higher headquarters, reports on operations, and then the relevant official histories, was necessary.

⁶¹ Gillespie, *The Pacific*, 185.

⁶² *Ibid.*, 185.

After composing themselves, the carrier platoon attempted to ascertain the enemy's strength and location, but it encountered intense fire from hidden enemy positions at ground level and in the tree tops, resulting in two casualties, one of which could not be recovered (an attempt to rescue the wounded man resulted in a further two casualties). The intensity of the enemy fire indicated that prepared defensive positions had been encountered. The platoon formed a cordon line around the suspected enemy position, while attempts were made to contact brigade headquarters.⁶³ What followed was the most testing action of the entire 'Squarepeg' operation.

The challenges of jungle warfare now became evident as communication between the engaged units, battalion headquarters, and brigade headquarters broke down. Signal lines had been cut, and wireless sets refused to function correctly. The New Zealanders were forced to resort to using runners, the first of which took nearly an hour to cover 800 metres before he reached a company of the 30th Battalion at 1215 hours. This unit then radioed the information to battalion headquarters, while the runner continued on his way to brigade headquarters, however, the density of the jungle was such that he only reached it two hours later. Indeed, the same issue was seen in the 35th Battalion's sector when one of its companies made contact with same group of Japanese to the south of the Brigade Carrier Platoon's location (see image 21 on page 176 and Appendices XIV-XV), but could not establish radio contact with the battalion either and was forced to send a runner to inform its battalion headquarters of the situation.⁶⁴ During this time the 30th Battalion adjutant was dispatched to the scene, along with linesmen who laid cable as they went – in the hope of rectifying the lack of communication. Once the adjutant arrived, he was surprised to see that the area had been reinforced by an MMG Platoon and two tanks.⁶⁵ As if to further illustrate the difficulties of coordinating large formations in a unified manner within the jungle, unbeknownst to the 30th Battalion, these reinforcements had been contacted by an Armoured Corps liaison officer who was with

⁶³ ANZ, WAI1, 1551, 155/9/4, "Report on Action at Tanaheran", Headquarters 14th Brigade Carrier Platoon, 28 February 1944.

⁶⁴ Brinkman, *The 35th Battalion*, 74-75.

⁶⁵ The report by the commander of the 30th Battalion mentions that there were five tanks present at this time, but the Tank Squadron's history records that only two tanks were sent forward.

the carrier platoon when it was ambushed by the Japanese. He had managed to contact the tank squadron by radio before the runners reached their respective destinations (indeed, these reinforcements had arrived at Tanaheran at the same time that the first runner reached 30th Battalion headquarters).⁶⁶

As the battle was joined, the MMG Platoon relieved some of the carrier platoon, which proceeded to rescue the isolated casualty. To assist in this task, the tanks provided canister shot against *possible* enemy strongpoints. No enemy had actually been sighted at this point in the battle indicating that this area of Nissan Island had particularly dense vegetation. The Japanese reacted to this by laying-down a wall of mortar fire, while their snipers effectively blinded the tanks by disabling their periscopes (the crews already being disadvantaged by the Valentine's poor vision from within the turret). In the event it was decided to withdraw to earlier positions once the casualty was rescued at around 1700 hours. In doing so the MMG platoon abandoned four Vickers machine guns on account that they could not be evacuated safely, which highlighted the difficulty of dismantling and re-siting heavy weapons in the jungle.⁶⁷ The difficulty of using heavy machine guns in the jungle was already known from Australian experiences in New Guinea, yet the 3rd NZ Division continued to employ Vickers machine guns in offensive roles.⁶⁸ After a limited withdrawal, it was agreed that infantry were needed before any attack on the enemy position should begin. The carrier and MMG platoons simply did not have the training or the experience to complete such a task. At this point, further runners were dispatched. In a confusing situation, the runners reached 'D' Company, but it could not establish communication with its battalion headquarters. Evidently the company commander, Major Arthur Bullen, did not have the freedom of command necessary to use his initiative, and he only acted when his battalion commander ordered him to move two platoons to the site of the contact, where upon they were joined by a platoon of

⁶⁶ ANZ, WAI1, 1151, DAZ 155/1/26, War Diary of Headquarters 14 NZ Bde, 1-29 February 1944, "Narrative of Events", entry for 20 February, page 6. Gillespie, asserts that word did not reach Headquarters 30th Battalion until 1400 hours, which means the 14th Brigade's documents or the Official History are incorrect, either one is plausible. See Gillespie, *The Pacific*, 185.

⁶⁷ These machine guns were ostensibly left under the protection of the nearby tanks. See ANZ, WAI1, 1551, DAZ 155/9/4, "Tanaheran Village Action, 20 Feb 44", by Lieut. E. H. Ryan Platoon Commander, No. 1 Platoon, M.M.G. Coy.

⁶⁸ AWM, 940.5426pp, L641, "Lessons From Operations in New Guinea Nov.-Dec., 1942", page 3.

mortars. Bullen reached Tanaheran at 1530 hours, but waited for line communication to be established with his battalion commander, after which he assessed the situation and decided to bombard the enemy with mortars and heavy machine gun fire before closing with infantry.⁶⁹ The plan of attack emphasised the New Zealanders preference and use of superior firepower in overcoming opposition in the jungle.



Image 22: Vickers MMG in a firing-position – this hazy photo from 14th Brigade troops on Vella Lavella illustrates the size of the weapon. The difficulties that this would cause in siting the weapon system in the jungle is evident. (Source: “Soldiers and guns in the jungle at Maquana Bay, Vella Lavella, Solomon Islands, during World War II”, New Zealand, Department of Internal Affairs, War History Branch: Photographs relating to World War 1914-1918, World War 1939-1945, occupation of Japan, Korean War, and Malayan Emergency, Ref: 1/4-020431-F, Alexander Turnbull Library, Wellington, New Zealand, [http://natlib.govt.nz/records/23215127.](http://natlib.govt.nz/records/23215127))

⁶⁹ Ibid., “Battle of Tanaheran 20 Feb 44”, 30th Battalion, 22 February 1944.

Before the attack could begin, a further withdrawal was required as there was fear that some mortar rounds might 'drop-short' on New Zealand troops (due to their proximity to Japanese positions). However, even conducting a fighting withdrawal of this limited nature was difficult in the dense jungle and it took another two and one-half hours to complete. In the meantime, the New Zealanders had moved to fix the Japanese against the coast so as to prevent their escape – an encirclement that rarely occurred in jungle warfare. With the enemy unable to withdraw, the mortar barrage began at 1730 hours after which the infantry advanced in 20 metres bounds with the use of grenades and automatic fire. The New Zealanders used the suppressing fire to flank Japanese firing positions until they were only 20 metres away. At this point daylight was beginning to fade, and there were fears that the Japanese would use the cover of darkness to escape; at 1840 hours, the platoons fixed bayonets and followed Bullen, who personally led the two infantry platoons and the MMG Platoon in a frontal assault against the Japanese positions. Fighting took place at close-combat, sometimes as little as four or five yards, but it succeeded – 60 Japanese dead were found on the battlefield. None of the enemy were taken alive.⁷⁰ For his actions in organising and directing the attack, Bullen was awarded the Distinguished Service Order.⁷¹

The 'Battle of Tanaheran Village', as it was dubbed, resulted in two New Zealand dead and eight wounded. This total included two officers wounded and another killed – further evidence of the high attrition rate of junior officers when in action against the Japanese.⁷² Despite succeeding in eliminating the main enemy garrison, the performance of the New Zealand troops in this battle could only be described as disjointed. Among the most prominent issues pertained to the failure of communications. It appears that by this stage of the operation, forward deployed units had given-up hope in their wireless sets'

⁷⁰ ANZ, WAI1, 1092, DAZ 121.1/1/13, War Diary 'G' Branch, From 1-29 February 1944, Appendix XVII: Intelligence Summaries, Squarepeg Intelligence Summary, From 211800L to 231800L; ANZ, WAI1, 1551, DAZ 155/9/4, "Tanaheran Village Action, 20 Feb 44", by Lieut. E. H. Ryan Platoon Commander, No. 1 Platoon, M.M.G. Coy.

⁷¹ Auckland War Memorial Museum, Cenotaph Record of Major Arthur Beecher Bullen, http://muse.aucklandmuseum.com/databases/Cenotaph/27725.detail?Ordinal=1&c_surname_search=bullen&c_warconflict_search=%22world+war+ii,+1939-1945%22.

⁷² ANZ, WAI1, 1152, DAZ 155.7/1/7, War Diary of 14 NZ Infantry Brigade, MMG Coy, 1-29 February 1944, diary entry for 20 February 1944; ANZ, WAI1, 1551, 155/9/4, "Report on Action at Tanaheran", Headquarters 14th Brigade Carrier Platoon, 28 February 1944.

reliability, and used line whenever possible. However, the tactical unsuitability of maintaining line communication with each advancing formation was also apparent, and lack of information nearly resulted in a friendly fire incident between patrols of the 35th Battalion and the 30th Battalion. Inevitably, units turned to the use of runners, but this was slow and dangerous with Japanese snipers able to target runners throughout the battle. Additionally, the use of runners proved very taxing for soldiers who had by this date become “very weary” and were “far from fresh in their mud and sweat-soaked jungle suits.”⁷³ After nearly five days of combat patrols, the men were “apt to ‘see’ Japs behind every tree, and imagination [became] very strong.”⁷⁴ The inability to effectively visually locate Japanese soldiers, only added to the mystique of the enemy, and created very nervous soldiers, which led to accidental shootings as a result of poor fire-discipline.⁷⁵ The battle also revealed the limitations of non-infantry units in jungle warfare. The performances of the Brigade Carrier Platoon and the Brigade MMG Platoon provide good examples: these units had mainly trained in fire support roles, and while succeeding at fixing the Japanese pocket they could not act as manoeuvre elements – they were out of their depth acting as light infantry in the jungle. This was further reinforced when Major Bullen assumed command of the battle upon his arrival (although to be fair he was also the ranking officer in the area). Additionally, he refused offers to incorporate the carrier platoon into his attack plan.⁷⁶ He therefore restricted their role to cordoning off a section of frontline, and only to “be prepared to advance along the coast” if need be.

While the battle was reaching its climax, the Second Echelon of the operation was also arriving, bringing additional troops and heavy equipment to strengthen the island’s defence and contribute to airfield and base construction. The Japanese did not interfere with the Second Echelon’s arrival, and Barrowclough rightly pointed out that this

⁷³ ANZ, WAI1, 1553, DAZ 156/15/11, 30th Battalion Historical Record February 1944, entry for Friday 18 February 1944.

⁷⁴ Auckland War Memorial Museum Library Collection, MS 2002/155, Gordon Adams, Papers Relating to War Service in the Pacific, 1944-1945, Personal War Diary, no page number.

⁷⁵ ANZ, WAI1, 1092, DAZ 121.1/1/13, War Diary ‘G’ Branch, from 1-29 February 1944, Appendix XVII: Intelligence Summaries, Squarepeg Intelligence Summaries, A – Operations, Part II – From 151800 to 161800L, page 2.

⁷⁶ Evans, *The Gunners*, 85; Henley, *Tanks, MMGs & Ordnance*, 124-125.

indicated “[the] enemy inability to take any effective counter measures in this area.”⁷⁷ The failure to interdict the subsequent echelons was a direct result of the high operational tempo which the Allies maintained in the South Pacific by that stage, especially against Rabaul, and from which the Japanese evacuated their remaining aircraft a few days after the 3rd NZ Division landed.

With the main enemy garrison on Nissan eliminated and the jungle cleared for airfield development, the last combat actions befell elements of the 37th Battalion. Parts of the battalion were tasked with clearing the northernmost island of Pinipel, and a sizable reconnaissance force landed on 21 February upon which it discovered evidence of Japanese occupation.⁷⁸ The 37th Battalion dispatched two infantry companies, a section of 3-inch mortars, a section of MMGs, an intelligence section, and medical personnel to clear the Japanese from Pinipel. In a change from earlier operations, each man carried only 24 hours rations, but with a further six days stored onshore. One ZC1 Set was brought along for communication back to battalion headquarters on Nissan. The infantry’s No. 48 sets were probably left behind as they had proved troublesome in the jungle, and had a shorter range than the ZC1. The New Zealanders landed unopposed, however on advancing around 45 metres inland they were fired upon by the Japanese. These Japanese survivors were called upon to surrender by American-Japanese interpreters that had been attached to the force but their only answer were a few grenades thrown in the direction of the New Zealanders. Platoons therefore formed stop lines and alternated between sweeping and fixing the enemy according to their relative positions to the coast and the Japanese. The New Zealanders killed 14 Japanese for the cost of four of their own wounded. Unlike previous engagements, no officers or NCOs were wounded during the fighting. On hearing of this last action, which marked the end of the conquest of the atoll, Wilkinson sent a short telegram congratulating Barrowclough on his division’s efforts. Fittingly, he used the phrase “Veni. Vidi. Vici.” – a reference to the famous quote by Julius Caesar, “I came. I saw. I conquered.”⁷⁹ At a comparatively

⁷⁷ ANZ, PUTTICK5, 1, 5 letter from Barrowclough to Puttick, 20 February

⁷⁸ Sugden, *Pacific Saga*, 90-91.

⁷⁹ ANZ, WAI19, S14, Operations, October 1943 – April 1944, telegram from CTF 31 to GOC Squarepeg, 21 February 1944.

small cost in lives – ten killed and a further 21 wounded – the New Zealanders had achieved the capture of a strategically important island group.⁸⁰

Base Development

The battles of Tanaheran and Pinipel ended combat operations for the division, however, the eradication of the Japanese garrison was but one of three of the operation's objectives. The completion of the operation's other objectives, construction of an airfield and PT boat base, occurred concurrently with efforts to destroy the Japanese on the Green Islands. While the combat activities were predominantly conducted by the New Zealanders, the construction activities were allotted to both New Zealand and American forces. New Zealand engineers focussed on army base facilities, roads, and tracks out to the forward area. Construction of the airfield and PT boat base were American responsibilities although under the authority of Barrowclough, in his capacity as Commander, Landing Force. Airfield construction was largely left to the USN naval construction battalions, while naval activities were placed under the American-staffed Commander, Naval Base (Green Islands). Barrowclough's primary role was to ensure the uninterrupted development of both these objectives and to coordinate their activities alongside the employment of the 3rd NZ Division so as to assure that no duplication of effort or conflicting activities resulted. To a large extent this relegated Barrowclough to an administrative role.

As combat and support units settled into their designated sectors, they faced similarly difficult conditions and challenges in clearing the bush and digging fox holes with axes and shovels. The dense vegetation, coral ground, and mud (in some places) formed a new 'enemy'. The work was tedious and back-breaking in the heat of the tropics, and some of the men found that it was too hot to labour for more than half-an-hour at a time. Despite these challenges, construction parties maintained their work schedule as well as contributing to the unloading of LSTs that continued to bring equipment and supplies for

⁸⁰ The casualty figure rises to 37 (killed and wounded) if including American casualties.

the islands' development.⁸¹ The scale of construction and the challenges encountered, justified the inclusion of significant numbers of engineers, and demonstrated that without adequate facilities, and the skills to construct them, the projection of force ashore within an austere environment would be difficult to attain or maintain.

While combat troops had been pacifying the islands, support personnel had pushed on with constructing the advanced PT base. Such was the pace of construction that by D+2 the first PT boat sortie from the Green Islands was launched. With the construction of more facilities and the arrival of more PT boats, these sorties had increased in tempo until on 29 February PT boats from the Green Islands joined destroyers in making two daring sorties into Rabaul Harbour. This action confirmed the operational significance of 'Squarepeg' and was an indication of just how quickly the islands had been developed into an offensive base.⁸² The airfield was a more complicated affair, and it took two full days to complete a detailed survey of its environs and proposed layout, before construction proper could begin.⁸³ The airfield construction programme then commenced at fervent pace, with floodlights set-up to allow the naval construction battalions to maintain a 24 hour work schedule. Unfortunately, frequent disruptions occurred at night when Japanese 'raiders' would fly over the islands dropping bombs, forcing a complete halt to all construction activity. The state of the airfield remained the most important concern for Barrowclough, above that of the Japanese garrison (its presence worrying only insofar as it could interfere with airfield construction). To this Barrowclough sent detailed daily dispatches to Wilkinson on the airfield's development, noting such things as the progress of clearing, grading, and runway covering. This allowed Wilkinson and COMAIRSOLS to informatively plan air operations. The fighter strip was to open by the 20 March, and initially construction was on schedule, but after the tenth day, heavy rains began falling which caused delays to most construction activities on the uncompleted

⁸¹ Henley, *Tanks, MMGs & Ordnance*, 220-221; ANZ, WAI1, 1135, DAZ 10.1/1/11, 24 Field Ambulance, April 1943 to July 1944, War Diary of 24 Field Ambulance, From 1-29 February 1944, diary entry 20 February.

⁸² ANZ, WAI1, 1089, DAZ 121.1/1/14, War Diary 'G' Branch, From 1-31 March 1944, entry for 1 March.

⁸³ ANZ, WAI1, 1092, DAZ 121.1/1/13, War Diary 'G' Branch, From 1-29 February 1944, entry for 17 February.

airfield.⁸⁴ There was some concern that this would cause serious delays to the opening of the airfield, but the construction of the fighter strip was in fact finished ahead of schedule. The first landing was on 4 March when an American fighter aircraft made an emergency landing, and this was followed two days later by 36 fighters, that now landed on a fully functioning airfield.⁸⁵

The success of the airfield's construction had accelerated the proposed date on which the Green Islands was to become a separate Island Command, passing from the responsibility of Wilkinson. This in effect signalled the end of Operation 'Squarepeg'. With the fighter strip functional, the islands secured, and the PT base fully operational, Wilkinson passed command of the Green Islands to Barrowclough, on his appointment to Island Commander on 4 March.⁸⁶ Barrowclough's amiability with his senior American commanders, particularly Halsey, Wilkinson, and Lieutenant-General Millard F. Harmon (COMGENSOPAC), was evident in his appointment to Island Commander Squarepeg, as this allowed him to bypass the chain-of-command and report directly to COMSOPAC.⁸⁷

Barrowclough was pleased with his division's performance in Operation 'Squarepeg'. He reported to Lieutenant-General Puttick, in Wellington that it had been a "Really fine effort by troops engaged who are now convinced that they can beat Japs [sic] in jungle fighting."⁸⁸ However, the success of his men and the recognition of his peers were not sufficient to save his division. The conclusion of 'Squarepeg' effectively ended all amphibious and jungle training by the 3rd NZ Division. Manpower shortages in New Zealand industry and declining political support for land operations in the Pacific resulted

⁸⁴ KMARL, Acc. No. 1998.834, Official War Diary of General Barrowclough, entries 25 February – 2 March 1944.

⁸⁵ Gillespie states that the fighter strip opened on 6 March, however the war diary of 'G' Branch clearly records 5 March as the date of opening. See Gillespie, *The Pacific*, 190; ANZ, WAI1, 1089, DAZ 121.1/1/14, War Diary 'G' Branch, From 1-31 March 1944, entry for 5 March.

⁸⁶ Library of Congress, Manuscript Division, Papers of Theodore Stark Wilkinson, Box 8, Folder 8, Personal File, Diaries, 1944, diary entry for 4 March 1944.

⁸⁷ Order of Battle Branch, *Order of Battle of the United States Army Ground Forces in World War II Pacific Theater of Operation: Administrative and Logistical Commands, Armies, Corps, Division* (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1959), 190.

⁸⁸ EA1, 570, 86/11/1, Telegram from Barrowclough to Puttick, 21 February 1944.

in the 3rd NZ Division being steadily withdrawn from the forward area with the intention of disbanding it. Battalion and company manoeuvres would continue during March and April 1944 but these were primarily to keep the troops on their toes and out of mischief. Indeed, by April the first consignments of men were returning to New Zealand for reallocation to industry.⁸⁹ Other troops would be dispersed between home forces and the 2nd NZ Division in Italy. Within a short time only a cadre remained, and finally the 3rd NZ Division was disbanded on 31 October 1944.

The invasion of the Green Islands had proved a resounding success. It had required the cooperation of the USN and New Zealand Army on an unprecedented operational scale and Halsey commented that “the entire Green operation was thoroughly planned and was executed with the utmost precision and team play”.⁹⁰ The naval task force had succeeded in transporting the New Zealanders ashore, whereon they proved their skill in amphibious operations by unloading the better part of a brigade in two hours. The men continued to show promise over the next few days, with the troops generally being more confident, aggressive, and displaying a greater ability to move through the jungle.⁹¹ This was joined by the testing of new units and new commanders in combat. Their efforts were assisted by a better logistical system that resulted in higher combat effectiveness, as deduced by the timely completion the landing and lodgement.⁹² Barrowclough also succeeded in *administering* the land, sea, and ground components of the operation after the landing phase and this points to a reliable network of command and control through all levels. Even though actual combat did not last very long, there were still some lingering issues which appeared as a result of the New Zealanders’ handling of tactical situations.

⁸⁹ ANZ, WAI1, 1549, DAZ 152/9/5/4, “29th Battalion Defensive Exercise No. 1, Operation order No. 1”, March 1944; “29th Battalion Exercise No. 2, General Instructions”, 29 March 1944; Gillespie, *The Pacific*, 199.

⁹⁰ ANZ, WAI9, 1, S14, Commander, South Pacific to Commander in Chief, United States Fleet, “Seizure and Occupation of GREEN ISLANDS, 15 February to 15 March 1944.”

⁹¹ ANZ, WAI1, 1551, DAZ 155/9/4, “37th Battalion Squarepeg Operation, General Observations: Communications”; “35th Battalion Report on Squarepeg Operation”, 25 February 1944.

⁹² The 37th Battalion had completed its lodgement (phases 1 and 2) on Red Beaches by 1400 hours, 15 February. See ANZ, WAI1, 1551, DAZ 155/9/4, Headquarters 37 NZ Battalion, 27 February 1944: “37 NZ BN Squarepeg Operation”, 5.

On a basic level, the New Zealanders reiterated their practice of closing ranks and forming defensive perimeters during the hours of darkness. These nightly practices indicated that the New Zealanders had admitted that they held no initiative against the Japanese at night. This allowed the Japanese to exploit the New Zealander's nightly inactivity to relocate, reorganise, and reposition themselves for the inevitable advance each morning, which they evidently did the night before the attack on the Mission area. This timid operational approach was not however restricted to the New Zealanders, and both the Australians and the Americans reverted to the defensive at night; with the same inevitable consequences as that found on the Green Islands – the Japanese would capitalise on this period of inactivity to reassert or reinforce their own positions.⁹³

Of further concern was the abandonment of the Battalion Combat Team concept for 'Squarepeg'. Some sources show that the title "Battalion Team" was in fact still used for the operation. This suggests that the BCT concept was only partially adjusted, despite Barrowclough's call for greater centralised control. An important factor to consider in assessing the 'abandonment' of the BCT was the degree of control that the battalion commands exercised over the attached elements, and not 'if' the elements were attached. An example of this was the use of armour in the operation. The Valentines were attached to infantry battalions under permission of the 14th Brigade, and were only under battalion command for the duration of a specific objective, thereupon they reverted to brigade command, and eventually divisional command after the conclusion of mobile operations. Thus the battalions did not have tanks under their control and they had to apply to higher command for their use. A similar point may be raised in regards to the use of artillery. As such, the 'abandonment' of the BCT concept was neither dropped nor totally implemented, as battalion commanders still had engineer, supply, fire-support, and medical sections directly attached to their units for the duration of combat operations. Barrowclough, therefore, failed to implement a truly holistic approach – either to retain total centralised control or to place authority in the hands of subordinate commanders. This left the battalions with insufficient means by which to conduct

⁹³ Pratten, *Australian Battalion Commanders*, 209-210.

independent operations, and consequently, bonded them to the fragile communication network then in place on the islands.

The decision to include armour in the operation showed that Barrowclough and his armoured officers had carefully used American experiences as a model to which the 3rd NZ Division should aspire. Additionally, it illustrated that Barrowclough had recognised the advantages which the use of tanks brought in the jungle, and he sought to include these capabilities into his division's employment on the battlefield. The inclusion of the tank squadron could have been a force enhancer as it was a means to fortify an already understrength division.⁹⁴ In some respects this deduction is correct, however the use of armour as a force multiplier is somewhat restricted in jungle warfare, as close fire support could be provided by other means such as air support and artillery, although air support was less effective and the artillery relatively immobile. The tanks, meanwhile, provided greater flexibility and immediacy to the infantry than either air support or artillery, however, they too were restricted by the terrain, as was shown by the Valentines taking no part in the attack on the Mission on 19 February. A common feature between the New Zealand and US use of armour, was their dissimilar tank tactics vis-à-vis the Japanese, with the latter having a very narrow view of armour employment and intentions.⁹⁵ Newell has claimed that Japanese experiences of using armour in China was an indication of the tank squadron's potential application in 'Squarepeg'.⁹⁶ This is misleading, for while it is apt to draw a link between Japanese use of tanks in Malaya, Burma, Philippines, and New Britain where jungle environments were regularly encountered, China had dissimilar geography and infrastructure to the South Pacific. The use of tanks in China is therefore incomparable to experiences in the South Pacific. Additionally, the Japanese use of armour on Pacific islands was ineffectual to the battles in which they took part, offering virtually no operational changes to the outcomes thus effected. For the New Zealanders in 'Squarepeg', the tank squadron's utility was appreciated, as tanks were used to exploit the initial lodgement, and then find, fix, and strike the enemy. Ultimately, the 'Battle of

⁹⁴ This paragraph makes use of pages 148-49 of Newell's, "New Zealand's Forgotten Warriors".

⁹⁵ Gordon L. Rottman, Akira Takizawa, and Peter Dennis, *World War II Japanese Tank Tactics*, Osprey Elite, (Oxfordshire: Osprey Publishing, 2008), 15-24, plates B and C, 61.

⁹⁶ Newell, "New Zealand's Forgotten Warriors", 149.

Tanaheran Village' would have proved far more costly had it not been for the close support of the tanks.

'Squarepeg' had tested the 3rd NZ Division with a complex operation that required coordination of sea, air, and ground forces. The division confronted the challenges successfully, and although there were some errors made during the completion of these, they were insignificant to the overall outcome of the operation. As Barrowclough rightly pointed out:

Success in operation NOT to be gauged by extent fighting and casualties but by smoothness with which large numbers of troops and great quantities of material got ashore on open beaches into roadless jungle and put into immediate operation. From this standpoint work of planning staffs excellent and troops splendid in carrying plans into effect.⁹⁷

⁹⁷ EA1, 570, 86/11/1, Dispatch from Barrowclough to Prime Minister, 29 February.

CONCLUSION

Operation 'Squarepeg' was the nearest the New Zealand Army ever came to realising a large-scale amphibious operation involving the modern integration of air, sea, and land forces in the Second World War.¹ It was also the culmination of years of experience, not only for the New Zealanders, but from the many foreign sources on which the division drew for inspiration, guidance, and logistical assistance. This shows that the conduct of an operation is influenced by factors stretching back many years, and reinforces the idea that operations do not take place in isolation, but are the products of the organisation from which it stems. For the 3rd NZ Division this meant a slow and jittery formation as the previous 20 years of New Zealand military experience did not compare with situation in which it then found itself. This necessitated the attaining and studying of foreign reports in order to provided knowledge of the general requirements which the operational environment demanded. This resulted in the gaining of relatively new amphibious and jungle ideas and concepts without having to conduct lengthy field tests. In putting this into practice, New Zealand's experience of operations in the South Pacific was generally similar to the experience of other nations in jungle warfare and amphibious operations. Nonetheless, attempts to provide a fully adaptive doctrine for operations in the South Pacific were hindered by a number of factors. These included a lack of resources and combat opportunities, a complete reliance on US support, and by the NZ Army Headquarters insistence on maintaining British war establishments for a New Zealand division operating within an American run theatre. This prevented the 3rd NZ Division from attaining a definite 'edge' in operations.

This may also be explained when viewed as a product of the tactical dissimilarity of amphibious operations and jungle warfare, which were opposed to each other at a basic tactical level. Amphibious operations required centralised and coordinated control of

¹ 'Squarepeg' cannot be claimed to have been a large amphibious operation in terms of other amphibious endeavours in the Second World War, however, it may be deemed so in a modern sense.

dissimilar assets in an environment that required cooperation from at least two but normally three services. This could not be achieved if forces lacked reliable communications. Jungle warfare on the other hand undeniably lay within the realm of the army, and largely within the infantry. It promoted delineated forms of execution and encouraged, indeed required, broad-based initiative at junior levels as communications could not be established at the best of times. It thus posed problems to the manner in which training was conducted and in the way that soldiers approached battle and conceived their place within it.

Additionally, the manner in which the challenges of jungle warfare were approached revealed certain characteristics of the 3rd NZ Division and its operating procedures. In terms of force organisation, it was clear that Barrowclough favoured the allocation of resources based on his personal assumptions and experiences. These sometimes conflicted with the experience of other institutions that advocated for smaller more mobile divisional units which often required increasingly decentralised control. In this manner, Barrowclough often contradicted himself by insisting on maintaining certain capabilities which he believed were required due to the demands of South Pacific, while at other times, he rejected findings that supported a reduction in combat strength based on lessons in jungle warfare. His insistence on maintaining large numbers of field artillery, (and earlier an armoured regiment), while also insisting on the inclusion of a larger than normal allocation of combat service support units and equipment for a two brigade division is a case in point. This shows that Barrowclough was attempting to adapt foreign doctrines in order to best complement the New Zealand way (or his way) of conducting operations in the South Pacific. What this showed was that while Barrowclough favoured the pooling of resources under his command, he never became involved with combat actions during 'Squarepeg', and only seldom did he instruct Potter in directions of conducting the battle. Thus, while 'Squarepeg' was the first time that Barrowclough had control over a combat operation in the Pacific, brigade command remained the key instructional element to subordinate forces. This suggests that Barrowclough had attempted to decide on a method of field control which would have suited both the

demands of the environment and the capabilities of his men, yet was unable to properly satisfy either one.

The operation also revealed the state of amphibious developments in the Pacific at the beginning of 1944, and helped to locate the New Zealanders' place within them. This was especially true when examining the preparation and conduct of the operation's naval aspects (for both the reconnaissance-in-force and the main landing), which were organised along the US Army's *FM 31 – 5 Landing Operations on Hostile Shores*.² This manual had been tested on a number of occasions during the Pacific War and was found to be useful, however, by 1944 portions of the manual had been superseded in practice, especially as related to the control of sea and ground forces during different phases of a landing. Further evidence in the retaining of certain elements of the manual were to be found in the organisation of the Naval Task Groupings, which had largely retained their composition and duties as directed in the 1941 edition, and differed only in the event of new equipment coming into service (such as the LST). While this proved the viability of some aspects of pre-war amphibious development, it also highlights the developmental stage of amphibious operations at the time. It thus becomes apparent that 'Squarepeg' and the performance of the troops involved is an example of the adaptations undertaken by forces in the South Pacific during the war, as well providing a record of foreign militaries' approach to a doctrine undergoing steady change in its development and execution in wartime. As such, the operation may be viewed as occurring on the precipice of early and late war American amphibious doctrine: a time when the Americans had almost perfected the amphibious operation, in terms of technical and conceptual adaptations, but had yet to reach the efficiency displayed in the landings of 1945. Consequently, 'Squarepeg' serves as a historical milestone at the juncture between the developments of Second World War amphibious doctrine.

The importance of having a fundamentally sound and combat tested doctrine was also confirmed during the operation. This was most evident in the manner in which the

² See US Army, *Field Manual 31–5 Landing Operations on Hostile Shores*, 18-24.

planning phase unfolded. In regards 'Squarepeg', all planning was combined under Wilkinson, both for simplicity and due to the greater complexity inherent in the operation, which resulted in a more efficient planning process. These developments foreshadowed improvements to the conceptual components of fighting power (doctrinal procedures, and tactics) which may substitute for the inadequacies of the physical component (force composition and size), by providing a greatly enhanced approach to the preparation and conduct of an operation. Although the New Zealanders did not confront significant numbers of Japanese troops, they still faced a difficult fight owing to the terrain, climate, and determination of the small island garrison. This they overcome through the close cooperation and coordination with American forces, while showing a steady progression in their own amphibious and jungle skills. Wilkinson claimed that 'Squarepeg' was the finest amphibious operation that the Third Amphibious Force (Task Force 31) ever conducted.³ It was a fitting comment to the outcome of New Zealand's largest operation of the Pacific War.

With both Australia and New Zealand having acknowledged that amphibious-driven capabilities must dictate the defence future for the next two or more decades there stands reason to take note of 'Squarepeg' and its lessons. Both Australia and New Zealand have confirmed that their militaries will reorganise to meet the demands of operating in the South Pacific through restructuring and the acquisition of new capabilities.⁴ In New Zealand, the short-term goal is to have a Joint Amphibious Task Force in place by 2015, with a central focus being to respond to security challenges in the South Pacific over the next 25 years.⁵ The NZDF is therefore wedded to a future which has the security of the South Pacific at the forefront of its defence plans. The New Zealand *Defence White Paper 2010* has already identified a requirement which Barrowclough would have known all too well, "that New Zealand's involvement in international security operations will almost always be as a partner in a coalition ..."⁶ And thus it is apparent that future operations in the South Pacific will need to be amphibious capable, and will occur within a combined

³ Morison, *Breaking the Bismarcks Barrier*, 416.

⁴ Australian Government, *2013 Defence White Paper*; New Zealand Government, *Defence White Paper 2010*.

⁵ New Zealand Ministry of Defence, *Defence Capability Plan* (Wellington: Defence House, 2011), 12.

⁶ New Zealand Government, *Defence White Paper 2010*, 32.

setting. Accordingly, New Zealand has a vested interest in the experiences and preparations of modern amphibious forces that have operated in the South Pacific; the 3rd NZ Division.

In terms of the South Pacific the NZDF has an opportunity to exploit a wealth of information which has traditionally been overlooked. Additionally, it is imperative that such a study takes place sooner rather than later, for according to Carl von Clausewitz, the further in the past an example is taken, the less it can be exploited for use in the future.⁷ This does not discount the use of historical examples spanning hundreds of years, yet it is to say that as warfare changes so too do the examples. It is imperative that the military profession absorb from the past as much as is relevant while it is still largely applicable, and in regards the Second World War in the Pacific the preparations and experience of the 3rd NZ Division during Operation 'Squarepeg' provides an example of a New Zealand formation coming to grips with operating procedures of foreign nations while still attempting to maintain an organisational identity of its own.

⁷ Carl von Clausewitz, *On War*, eds. and trans. Micheal Howard, and Peter Paret (New York: Everyman's Library, and Princeton University Press, 1993), 203.

APPENDICES

Appendix I

Task Organisation of First, Second, and Third Echelons, Task Force 31 – (according to Operation Order 2-44, 5 February 1944, and Amendments to Operation Order 2-44, 7 and 9 February 1944)

Commander, Task Force 31 – Rear Admiral Theodore S. Wilkinson

(a) Main Body – First Echelon (31.4) – Rear Admiral Theodore S. Wilkinson

(1) First Transport Unit (31.4.1) – Captain Earle

Transport Division 12 less *Manley, Dent*, plus *Noa*

(*Stringham* (Flagship), *Talbot, Waters, Noa*) – Commander Sweeney

Transport Division 22 less *Schley, Herbert*

(*Kilty* (Flagship), *Crosby, Ward, Dickerson*) – Commander Mattie

Destroyer Division 89 (*Fullam, Guest, Bennet, Hudson, Halford*) – Captain Earle

(2) Second Transport Unit (31.4.2) – Captain Hurff

LCIs 433, 357, 358, 359, 360, 434, 436, 443, 444, 445, 446 – Commander Smith

Destroyer Division 43 plus *Sigourney*

(*Waller, Pringle, Saufley, Philip, Renshaw, Sigourney*) – Captain Hurff

Aircraft Rescue Boats C24375, C24431

Menominee

(3) Third Transport Unit (31.4.3) – Commander Pahl

LSTs 446, 70, 207, 220, 354, 447, 472 – Commander Vilhelm K. Busck
Sioux

Destroyer Division 90 plus *Conway, Eaton*

(*Conway, Eaton, Anthony, Wadsworth, Terry, Braine*) – Commander Pahl

- (4) Fourth Transport Unit (31.4.4) – Lieutenant Pattishall
 LCTs 134, 139, 146, 318, 574, 915
 LCM Bowser Boat
 PC 1129, SC 1266
 APCs 23, 33
- (5) Screen (31.4.5) – Captain Hurff
 Destroyer Squadrons 22, 45 less *Cony*
- (6) Minesweeping and Landing Support Unit – Lieutenant Chevalier
 YMS 238, 222, 243
 LCI (Gun) 67, 70
 One Motor-Torpedo Boat (PT Boat)
- (7) Landing Force – Major-General Barrowclough
 3rd New Zealand Division (less 8th Brigade Group and Detachments in later Echelons)
 967th Antiaircraft Artillery Gun Battalion, less Batteries 'C' and 'D'
 Battery 'C', 362nd Antiaircraft Artillery Searchlight Battalion (Less elements)
 Battery 'A', 283rd Coast Artillery (Harbour Defence) Battalion (Less elements)
- Naval Base Unit No. 11 designated elements of:
- Base Unit 4P
 - Headquarters 22nd Naval Construction Regiment,
 33rd, 37th, and 93rd Naval Construction Battalions
 - PT Boat Base 7
 - Communication Unit 39
 - Hydrographic Survey Unit
 - Boat Pool No. 12
 - Bomb Disposal unit
 - Mine Disposal Unit
- Air Unit designated elements of:
- Headquarters COMAIRSQUAREPEG
 - Marine Aircraft Group 14
 - Argus 7

Acorns 9 and 10 (air base development groups)

(8) Search Unit

2 Torokina MTBs

(b) 2nd Echelon (31.5) – Rear Admiral George Fort

(1) APD Unit (31.5.1) – Commander Taylor

APDs (*Stringham, Talbot, Waters, Noa*) – Commander Sweeney

(*Kilty, Crosby, Ward, Dickerson*) – Commander Mattie

Destroyer Division 90 plus *Halford*

(*Anthony, Wadsworth, Terry, Braine, Halford*) Commander Taylor

(2) LST – LCI Unit (31.5.2) – Captain Earle

LSTs 390, 39, 117, 118, 123, 247, 269, 334, 353, 166, 71 – Commander
Cutler

LCIs 223, 65

Destroyer Division 89 less *Halford* plus *Renshaw, Sigourney*

(*Fullam, Guest, Bennet, Hudson, Renshaw, Sigourney*)

McConnell (Commander Escort Division 11), *Baron*

PC 1126

Menominee

(3) Landing Unit

Detachments 3rd New Zealand Division

Batteries 'C' and 'D', 967th Coast Artillery Battalion (Antiaircraft
Artillery)

Battery 'A', 283rd Coast Artillery Battalion (Harbour Defence), less
Detachments

Battery 'C', 362nd Searchlight Battalion, less Detachments

Detachments Naval Base unit No. 11

Detachments Air Unit

(c) 3rd Echelon (31.6) – Captain Carter

(1) Transport Unit – Captain Carter

LSTs 446, 40, 70, 120, 220, 341, 354, 447, 460, 472 – Commander
Vilhelm K. Busck

LCIs 333, 66, 330

Destroyer Squadron 22 less *Cony, Renshaw, Sigourney*

(*Waller, Saufley, Pringle, Philip, Conway, Eaton*) – Captain Hurff

Sioux

(2) Landing Unit

Detachments 3rd New Zealand Division

Detachments Battery 'C', 362nd Searchlight Battalion

Detachments Naval Base Unit No. 11

Detachments Air Unit

(d) MTB Squadrons

MTB Squadrons Torokina (18 MTBs) Lieutenant Commander Taylor

(Including MTB Squadron 10 – Lieutenant Commander Gibson)

(e) Service Unit – Lieutenant Young

Menominee, Sioux

(f) Reserve – Brigadier Goss

8th New Zealand Brigade Group

Naval Base Company 7

Appendix II

Order of Battle – Landing Force. (Source: ANZ, WAI1, 1092, DAZ 121.1/1/13, Appendix 'A'
to 3 NZ Division Operation Order No. 1)

SECRET
4 Feb 44.

APPX "A" to 3 NZ DIV OO NO 101

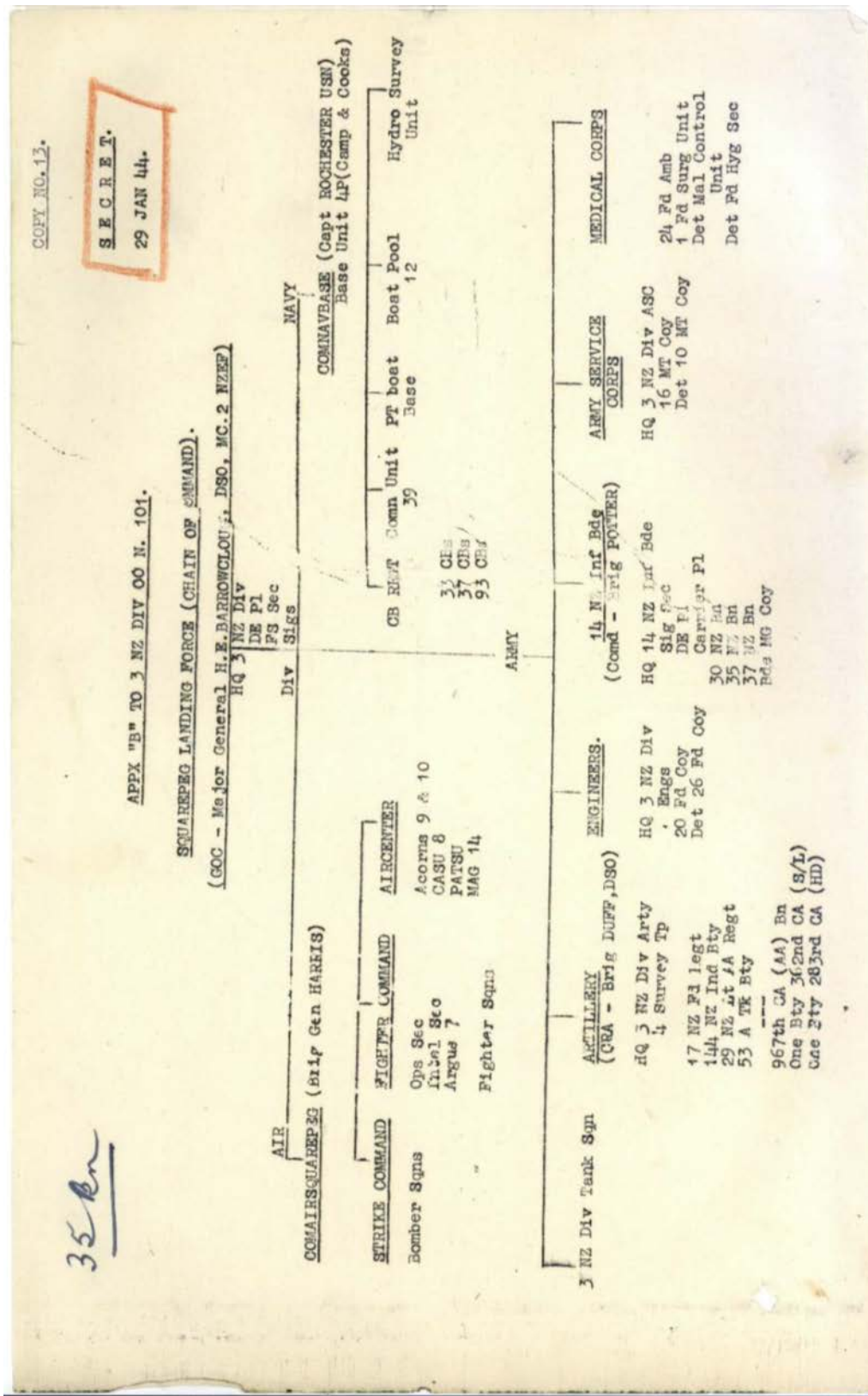
ORDER OF BATTLE
HEADQUARTERS LANDING FORCE

HQ 3 NZ DIV
(including 3 D & E
Pl and 4 FS Sec)
3 NZ DIV SIGS.

<u>NZ FORMATIONS AND UNITS</u>	<u>US ORGANIZATIONS</u>
3 NZ DIV TK SQN	COMAIRSQUAREPEG :
HQ 3 NZ DIV ARTY	Strike Command
4 Survey Tp	Bomber Sqns
17 NZ Fd Regt	Fighter Command
144 NZ Ind Bty	Fighter Sqns
29 NZ Lt AA Regt	Argus 7
53 A Tk Bty	
HQ 3 NZ DIV ENGS	AIRCENTER :
20 Fd Coy	Acorn 9
26 Fd Coy	Acorn 10
Det 37 Fd Flk Coy	Casu 8
	Patsu
HQ 14 NZ INF BDE	Four VMF - Ground Ech
(including "K" Sec Sigs,	One VMSB - Ground Ech
Def Pl, 37 LAD)	One VMFB - Ground Ech
30 NZ Bn	One VSB - Ground Ech
35 NZ Bn	Two VF - Ground Ech
37 NZ Bn	
Bde Carrier Pl	
Bde MG Coy	
HQ 3 NZ DIV ASC	NABU 11
16 MT Coy	Base Unit 4-P
Det 10 MT Coy	Comm Unit 39
	PT Base 7
	Boat Pool 12
MEDICAL HQ (ADMS)	Hydro Survey Unit
22 NZ Fd Amb less one Coy	HQ 22 NC Regt
24 NZ Fd Amb	33 NC Bn
1 Fd Surgical Unit	37 NC Bn
Mal Control Unit less Det	93 NC Bn
6 Fd Hygiene Sec less Det	
Det 10 Mobile Dent Sec	ARMY
SQUAREPEG WSHOPS (incl Amn Det)	967 AAA Gun Bn
5 NZ PRO COY less Det	Btry A 362 AAA (SL) Bn
	Btry C 283 CA (HD) Bn
	Provisional Services of Supply.

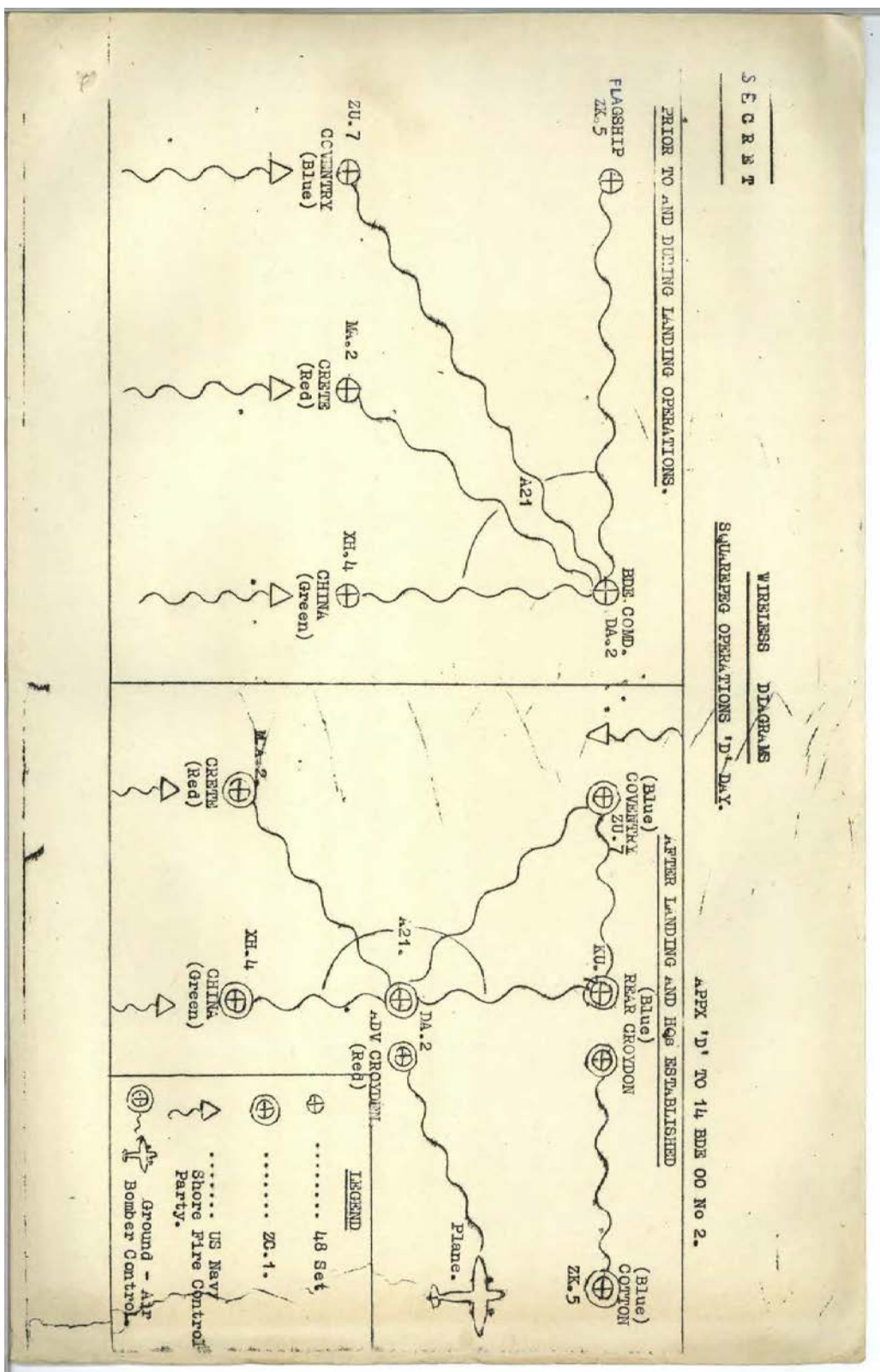
Appendix III

Landing Force Chain of Command. (Source: ANZ, WAI1, 1553, DAZ 157/9/86, Appendix 'B' to 3 NZ Division Operation Order No. 1)



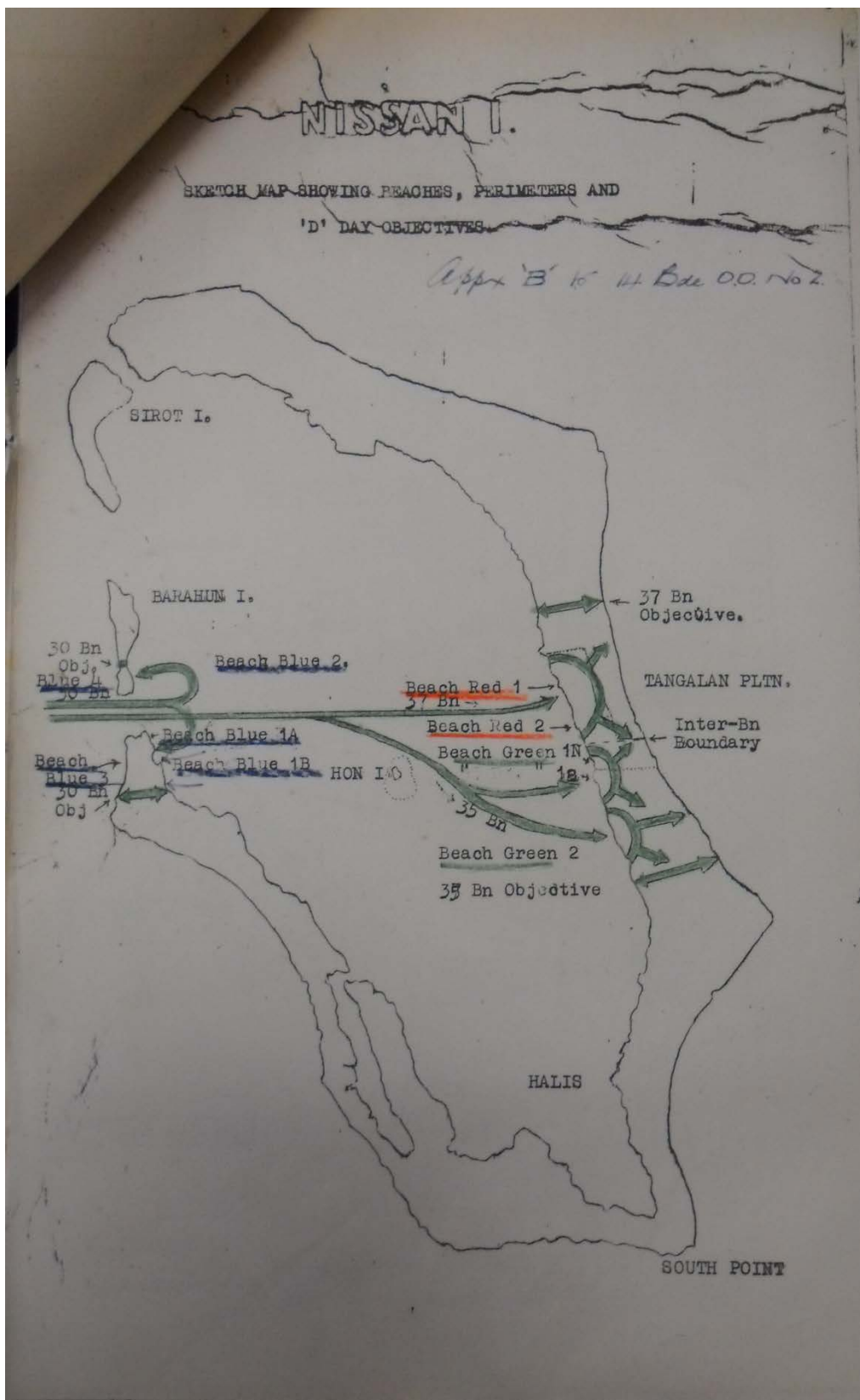
Appendix V

Wireless Diagram for D-day. (Source: ANZ, WAI1, 1151, DAZ 155/1/26.)



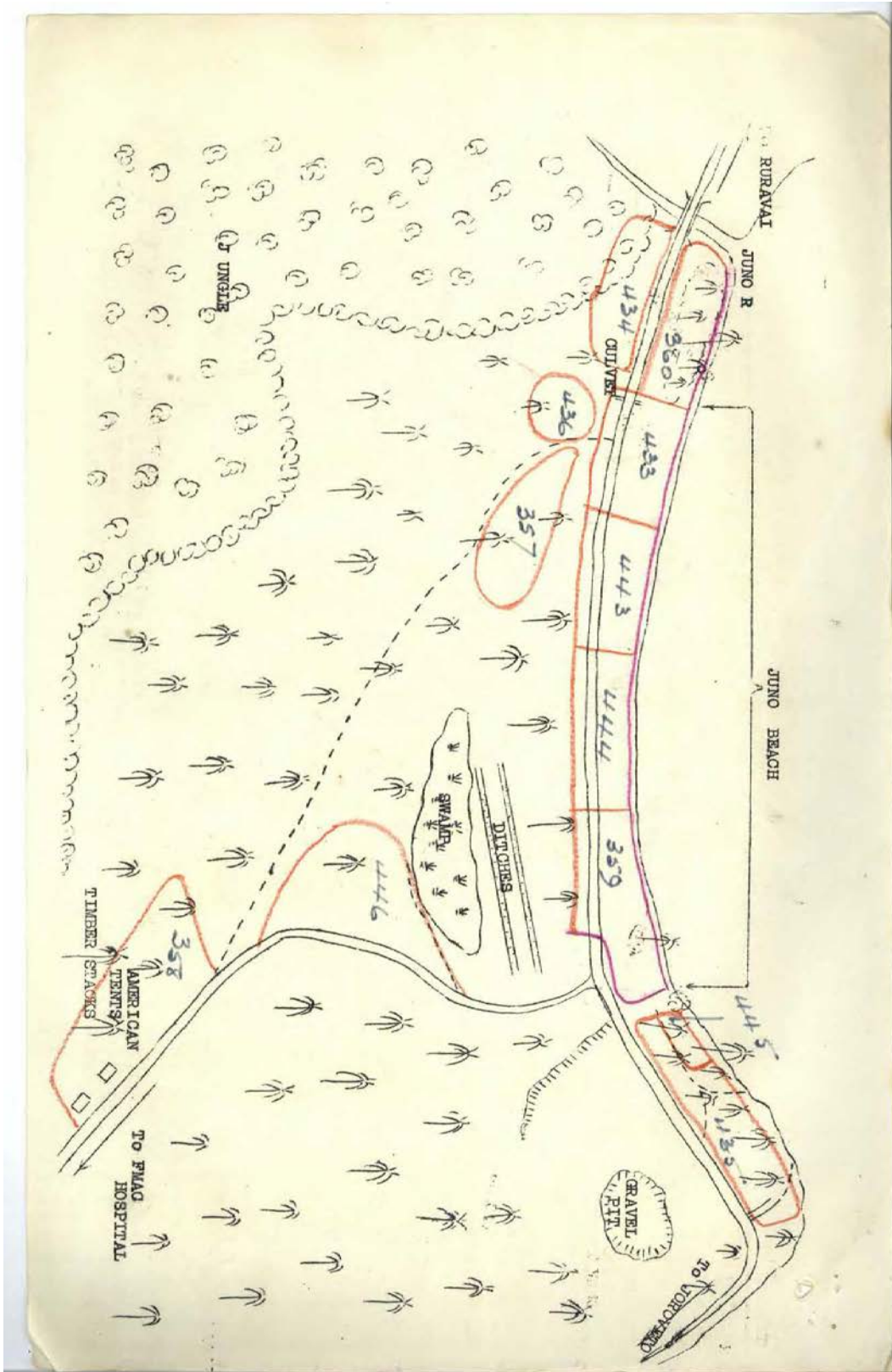
Appendix VII

Map showing landing beaches on Nissan Island. (Source: WAI1, 1553, DAZ 157/9/86.)



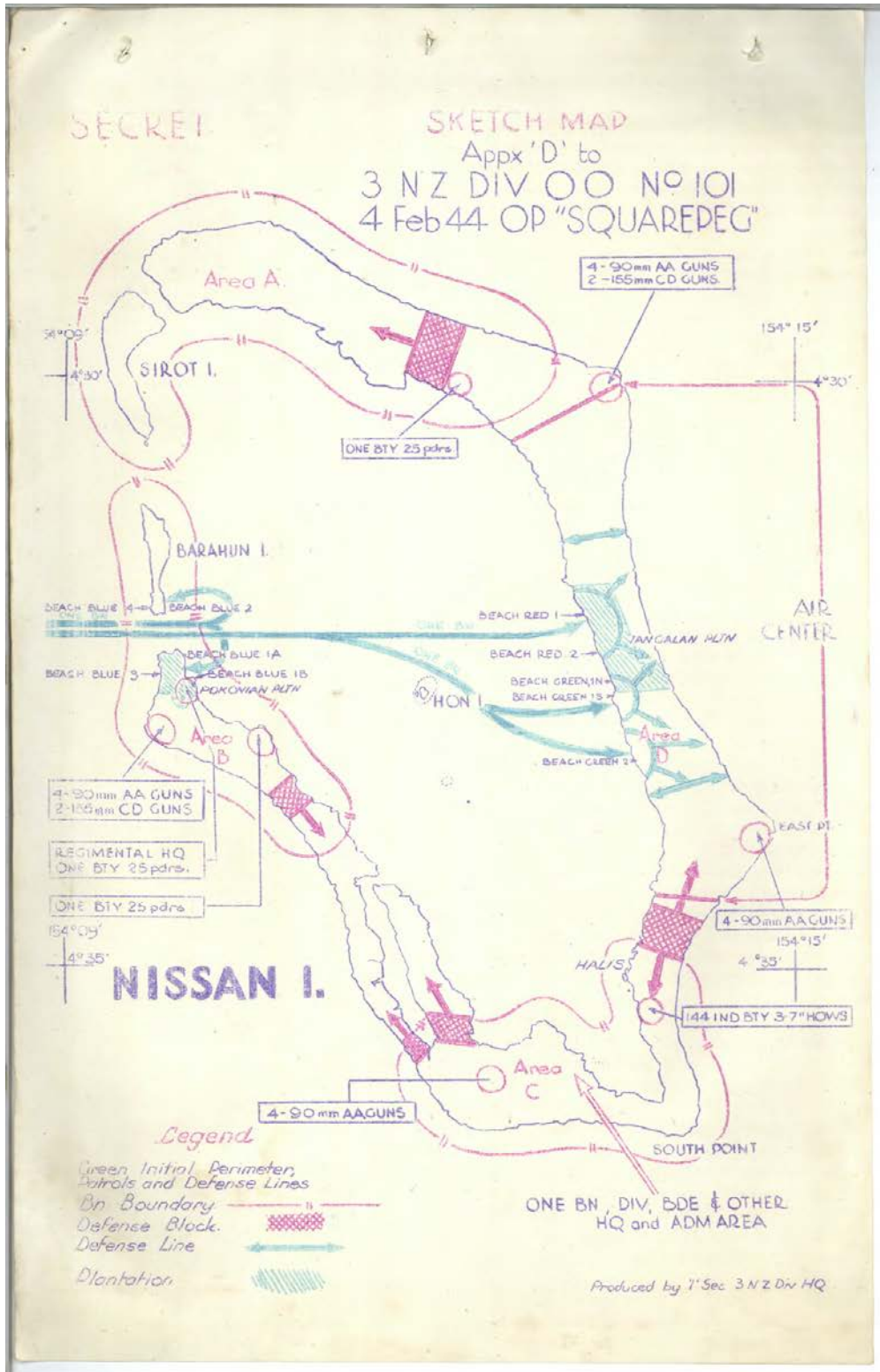
Appendix VIII

Map of embarkation sectors on Vella Lavella for units destined for the Green Islands.
(Source: ANZ, WAI1, 1151, DAZ 155/1/26, LCI Embarkation Zones Juno Beach.)



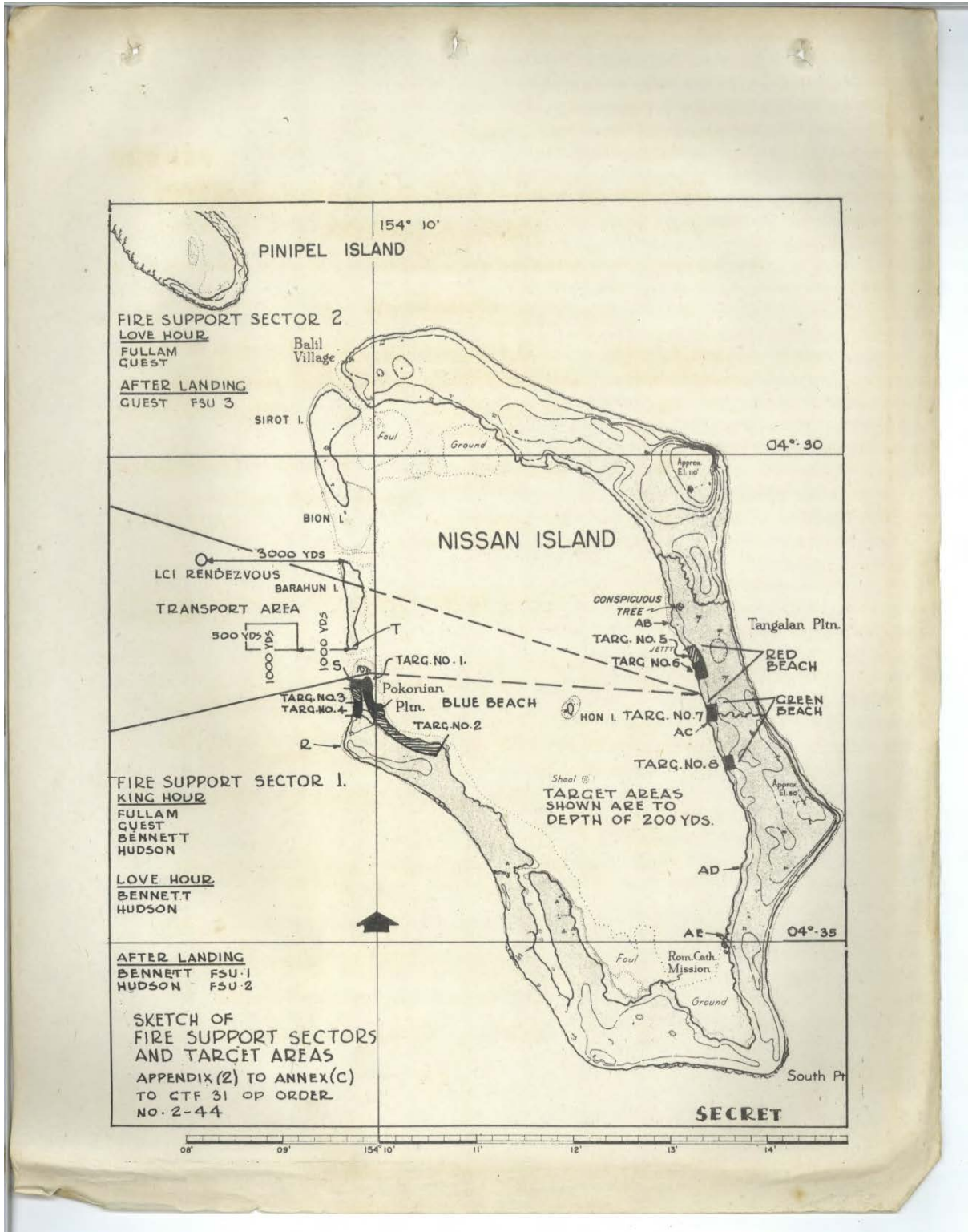
Appendix IX

Map showing initial landing areas and intended defence sectors upon the securing of Nissan Island. (Source: ANZ, WAI1, 1092, DAZ 121.1/1/13, Appendix 'D' to Operation Order No. 101, 4 February 1944)



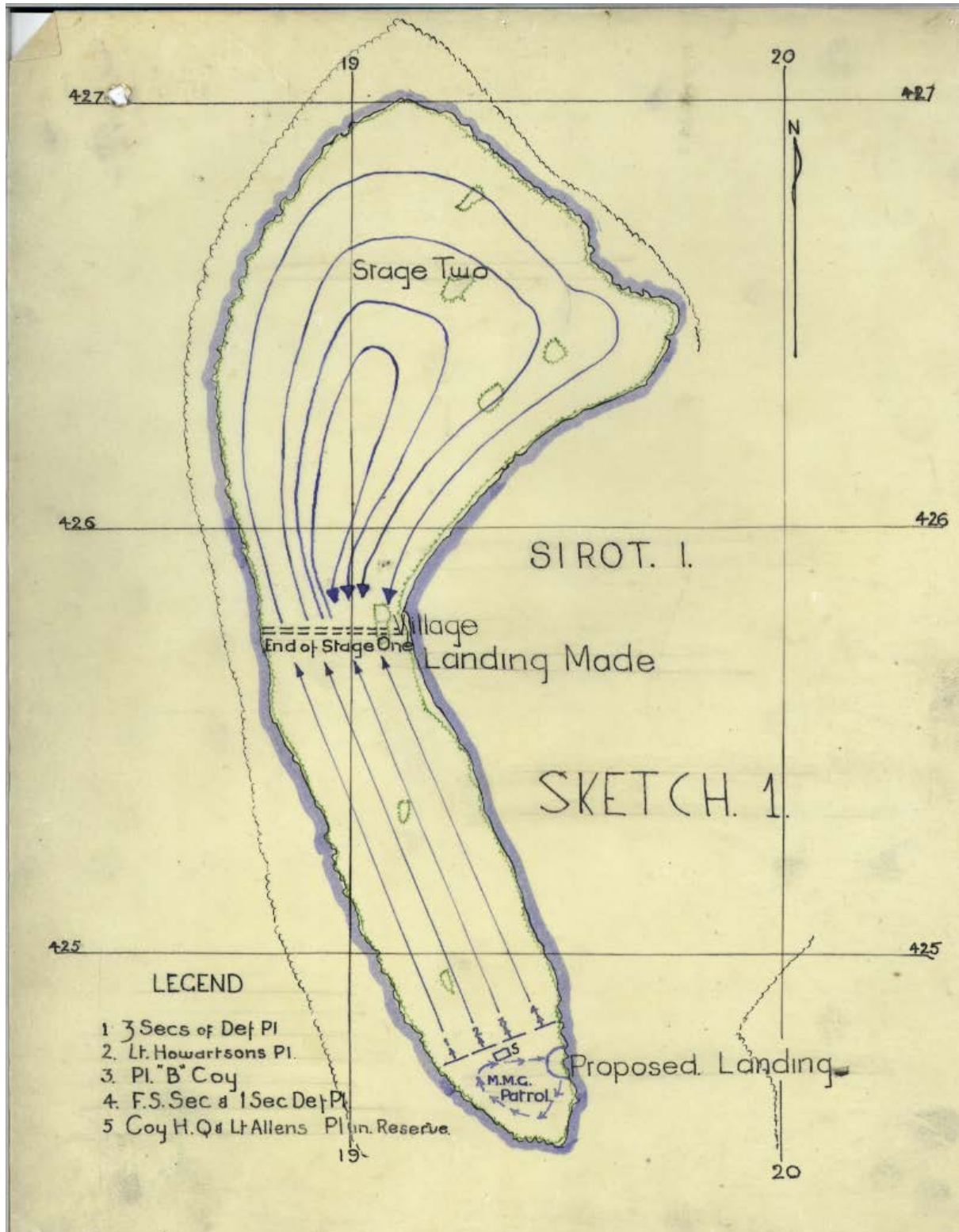
Appendix X

Fire Support Sectors and Target Areas for the Proposed Pre-landing Naval Bombardment.
 (Source: ANZ, WAI1, 1092, DAZ 121.1/1/13, Appendix (2) to Annex (3) to CTF 31
 Operation order No. 2 - 44)



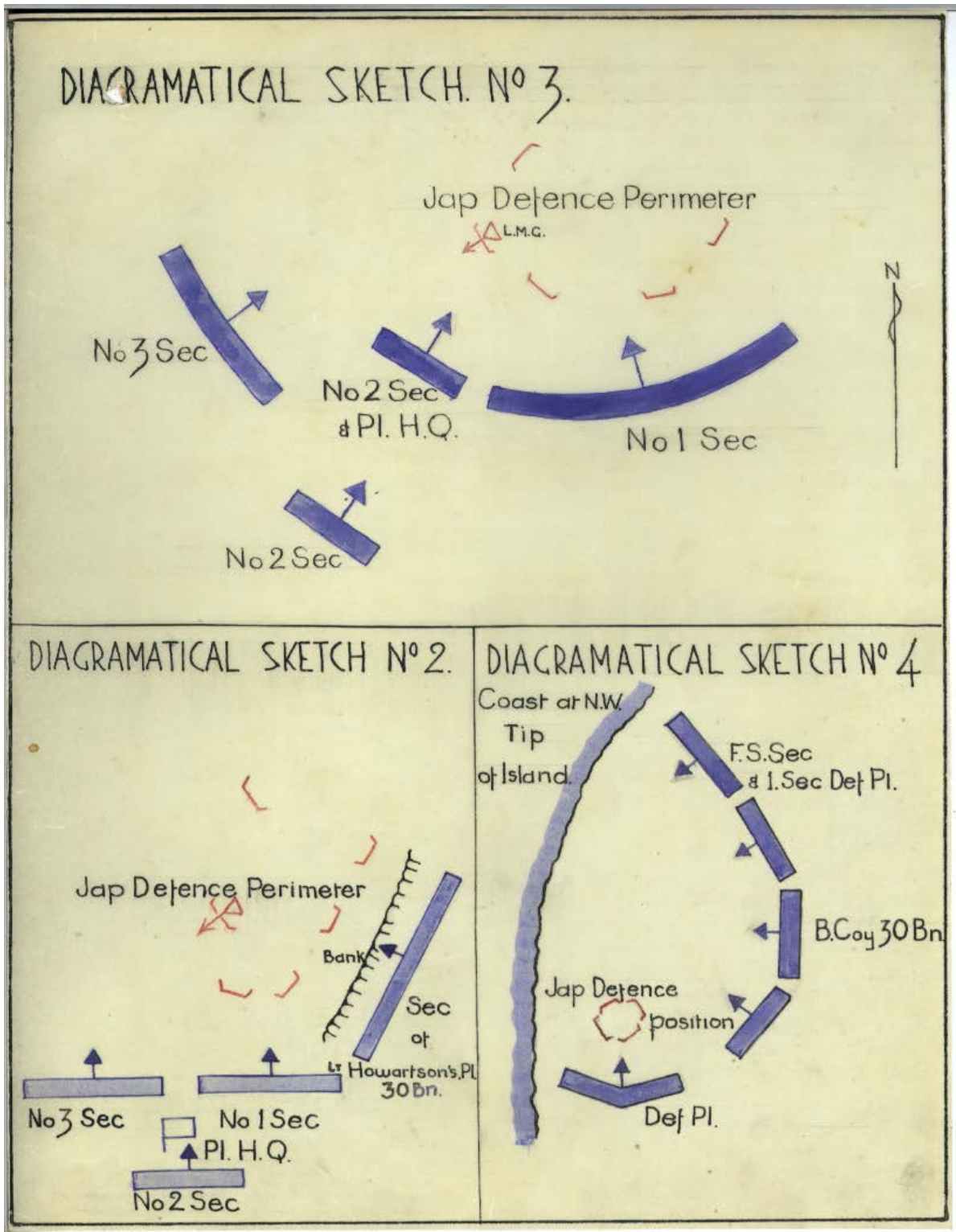
Appendix XII

Planned patrol routes by units on Sirot Island, 17 February 1944. (Source: ANZ, WAI1, 1551, DAZ 155/9/4.)



Appendix XIII

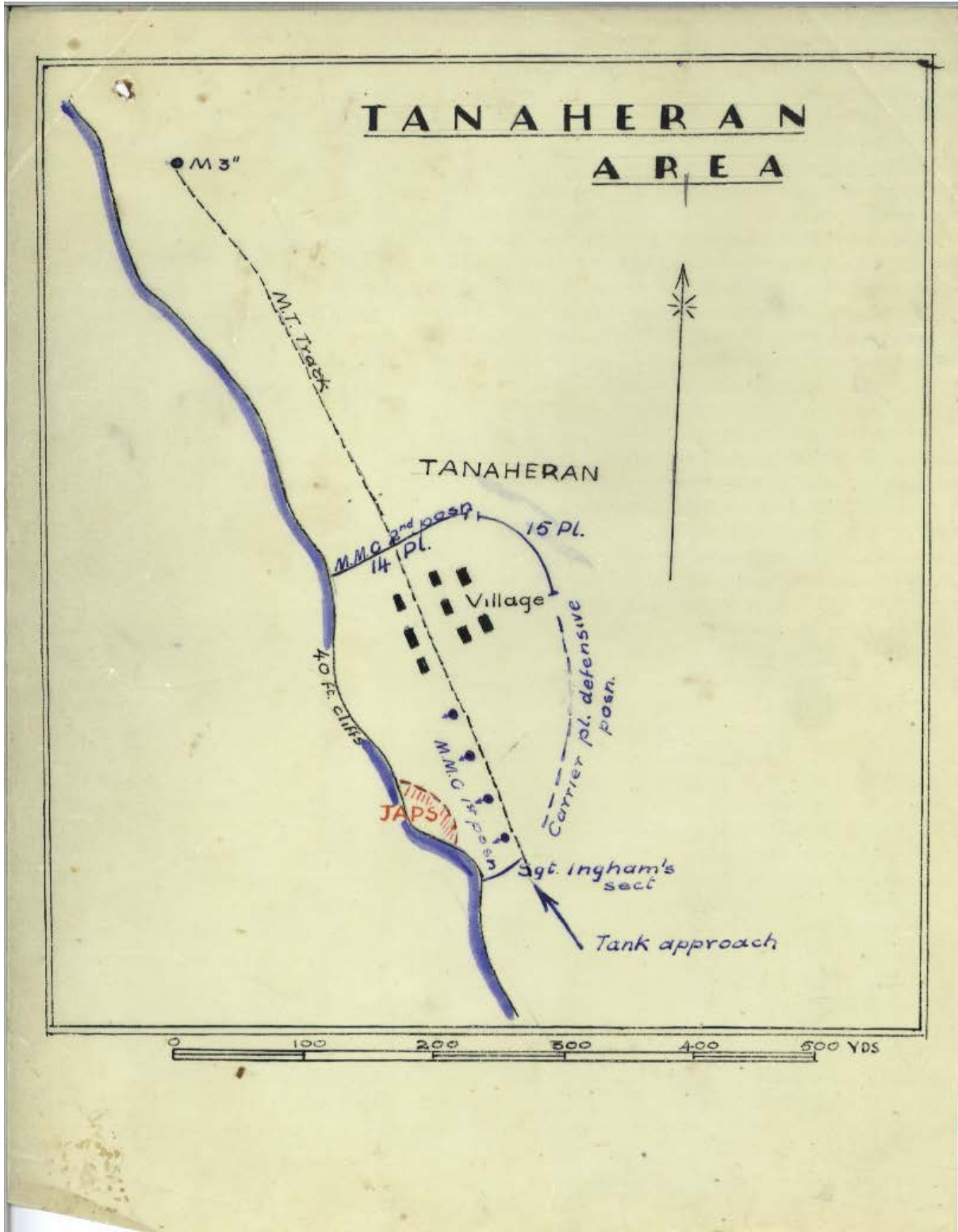
Sketch showing the tactical dispositions of units engaged on Sirot. (Source: ANZ, WAI1, 1551, DAZ 155/9/4.)



Appendix XIV

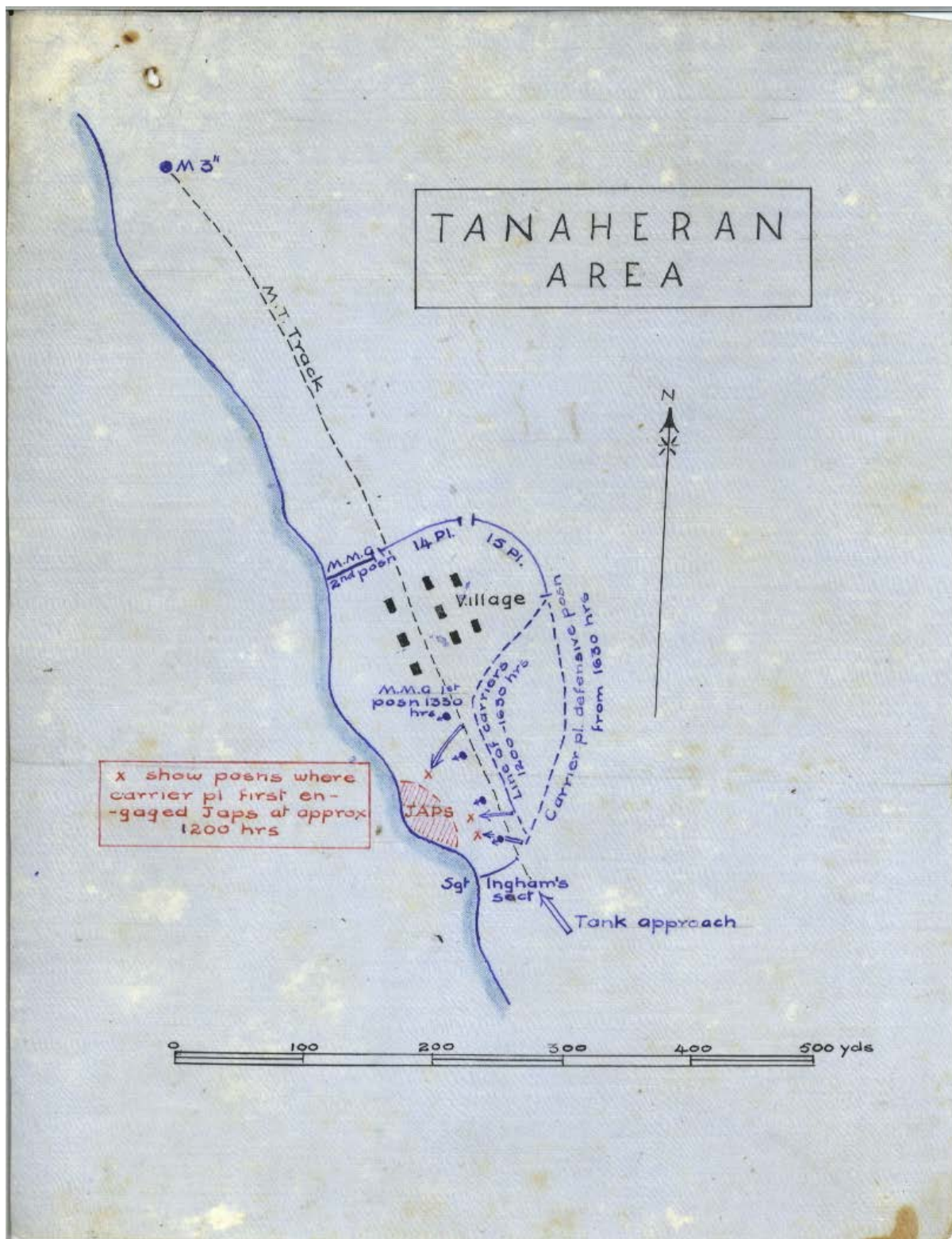
Dispositions of New Zealand and Japanese units before the final attack at Tanaheran.

(Source: ANZ, WAI1, 1551, DAZ 155/9/4.)



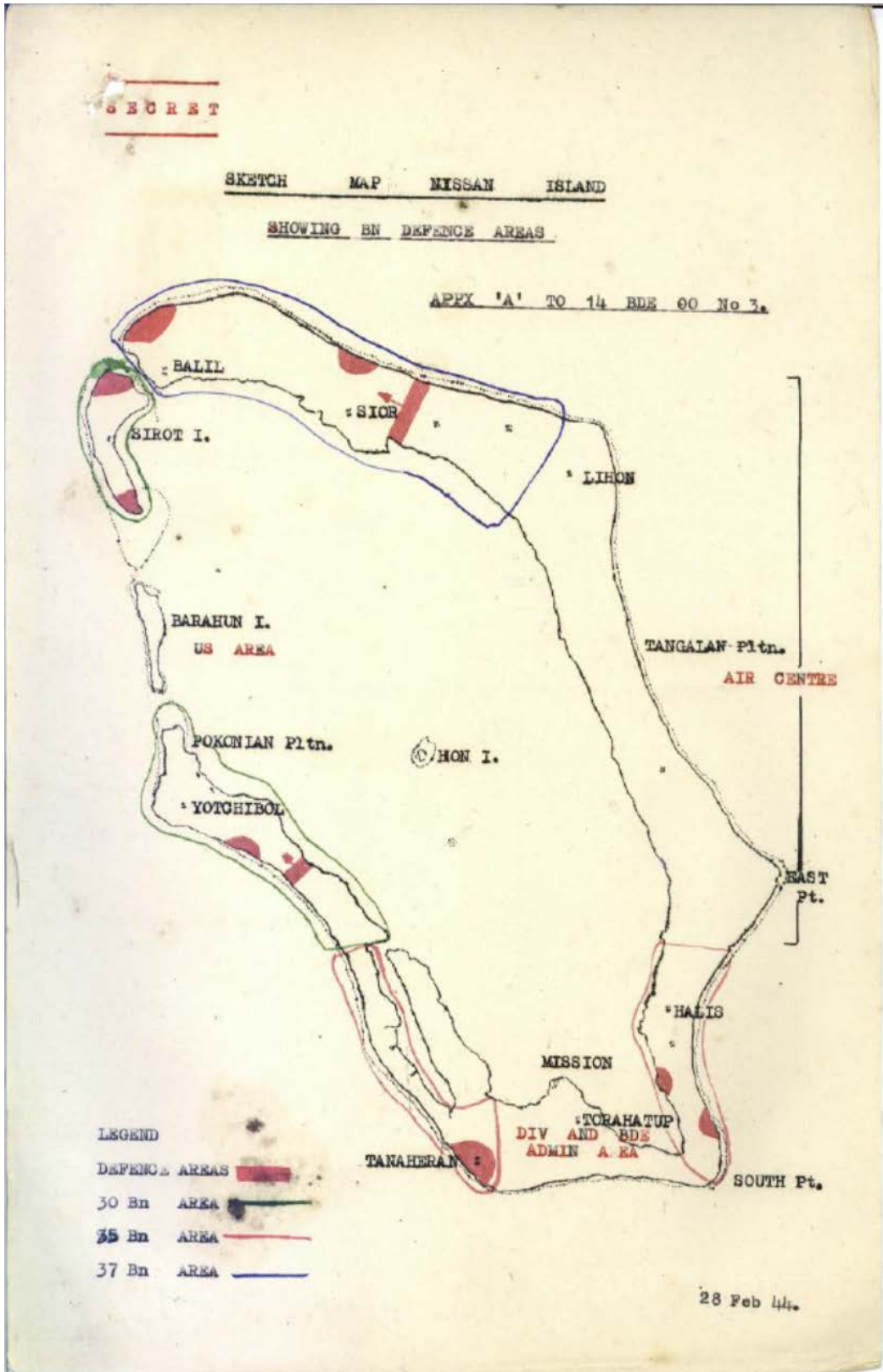
Appendix XV

Dispositions and movement in the final attack on the Japanese garrison. (Source: ANZ, WAI1, 1551, DAZ 155/9/4.)



Appendix XVII

Unit positions for defence of the Green Islands, March 1944. (Source: ANZ, WAI1, 1092, DAZ 121.1/1/14.)



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WAI11, 1091, DAZ 121.1/1/7-9. HQ 3 Division 'G', February 1943 to June 1944.

WAI11, 1092, DAZ 121.1/1/10-13. HQ 3 Division 'G', February 1943 to June 1944.

WAI11, 1105, DAZ 126/1/11-16, 17th Field Regiment, September 1942 to July 1944.

WAI11, 1107, DAZ 126/1/24-32, 17th Field Regiment, September 1942 to July 1944.

WAI11, 1111, DAZ 128/1/6-16, 29 Light AA [Anti-Aircraft] regiment, November 1942 to June 1944.

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WAI11, 1146, DAZ 154/1/19-22, 36 Battalion, January 1942 to July 1944.

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