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A Battle to Win:
An analysis of Combat Effectiveness
through the Second World War experience
of the
21st (Auckland) Battalion

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Peter William Wood

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ABSTRACT

This study analyses the Second World War experience of the 21st (Auckland) Battalion to create a combat effectiveness model of unit-level ground combat for modern application. Most of the literature concerning combat effectiveness of land forces, and why combatants win or lose, has analysed very large military organisations, often of American, British or German origin. Little analysis has been set at battalion level or lower, and none on New Zealand troops. Much of the most important research has emphasised formulae, factors and coefficients to construct a mathematical model of combat to either account for victory in past battles, or to predict it for those in the future. This approach provides realism to computer-based simulations and games and is of assistance to Operations researchers, but it does not help historians or the general reader account for victory, nor does it help soldiers prepare for combat in the future.

This research uses combat analysis methodology to examine eight battles fought by the 21st (Auckland) Battalion in Egypt, North Africa and Italy between April 1941 and December 1943. It found that the 21st (Auckland) Battalion was raised specifically for war service, and was prepared for combat largely by its own men, some of whom had a modicum of inter-war Territorial army service, and a very few had First World War combat experience. It found that the battalion was ineffective in its earlier battles, but as it gained in experience, its combat effectiveness improved, despite changes in personnel due to casualties and furlough drafts. The research shows that novice Italian and German infantry units exhibited the same lack of combat effectiveness as the 21st (Auckland) Battalion did in its initial battles.

The study found that no battle examined was alike. Each was a battle to win, despite the odds. Superior strength was found to be a reasonable determinant of victory, but leadership and will to fight, along with the tactics employed and the terrain over which the battle was fought, all impacted significantly on the outcome of the battles analysed. The study found that the 21st (Auckland) Battalion, as a microcosm of all of the 2nd New Zealand Divisions infantry units, evolved towards a preference for night operations as a means of reducing vulnerability to enemy small arms fire, and as a way of achieving surprise over the enemy. It discovered that the willingness of New Zealand infantrymen to take over, rather than take cover, once their leaders had become casualties, was also a significant contributor to combat effectiveness.

DEDICATION

For Allan, Bill, Brian, Bryan, Clem, Don, Gordon and Jack and to all those who served in the
21st (Auckland) Battalion,

and

for all the other “PBI” of the 2nd New Zealand Division.

“Lest we forget”

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Glossary of Abbreviations, Tactical Terms and Axis Regimental Nomenclature

Abbreviations

Adv	Advance
Anzac	Australian and New Zealand Army Corps
Armd	Armoured
Arty	Artillery
A TK	Anti- Tank
BDE/ Bde	Brigade
BGS	Brigadier General Staff. An officer, of Brigadier rank, who was the senior operations staff officer on a corps headquarters.
BM	The Brigade Major. This senior major was the operations officer at brigade headquarters.
BN/ Bn	Battalion
Brig	Brigadier
BTY/ Bty	Artillery battery (six guns usually). The artillery equivalent of an infantry company.
CAPT/ Capt	Captain
CO	Commanding Officer
COL/ Col	Colonel
COMD/Comd	Command or Commander
COY/Coy	Company (as in A Coy, B Coy etc)
CPL/ Cpl	Corporal
CRA	Commander Royal Artillery. The senior artillery commander within division headquarters.
DIV/ Div	Division
DCM	Distinguished Conduct Medal
DOW	Died of Wounds
DSO	Distinguished Service Order
Fd Regt	Field Regiment (an artillery regiment of field guns)
FDL	Forward Defence Line. The most forward defensive positions.
GOC	General Officer Commanding (Divisional Commander). ‘The GOC’ is assumed to mean General Freyberg unless otherwise stated.
Gp	Group
Gren	Grenadier (German organisation such as Panzer Grenadier)
GSO	General Staff Officer (A staff officer at brigade, division or corps headquarters). A GSO1 was a staff officer of Lieutenant Colonel rank, a GSO2 a Major and a GSO3 a Captain.
Hrs	Hours (as in 0900 hrs)
Inf	Infantry
IO	Intelligence Officer
KIA	Killed in Action
LOB	Left out of battle
LTCOL/ Lt Col	Lieutenant Colonel
MAJ/ Maj	Major
MC	Military Cross

Med Regt	Medium Regiment (of artillery)
MG	Machinegun
MM	Military Medal
Mor	Mortar
NZEF	New Zealand Expeditionary Force
OC	Officer Commanding. Usually refers to the commander of a company sized organisation.
OP	Observation Post
OR	Other Ranks. Referring to all personnel from Private to Warrant Officer Class One/ Regimental Sergeant Major as a group, as distinct from the commissioned officers.
PBI	Poor Blood Infantry
Pdr	Pounder. Usually in relation to the 6 pdr anti-tank gun or 25 pdr field gun.
PIAT	Projector, Infantry, Anti-Tank.
Pl	Platoon
Posn	position
POW	Prisoner of War
Pte	Private
PW	Prisoner of War
Pz	Panzer
Regt	Regiment
Rft	Reinforcement
RSM	Regimental Sergeant Major. The senior Warrant Officer within a unit.
SA	Small Arms (pistol, rifles etc)
Sec	Section, as in a rifle section
SGT/ Sgt/Sjt	Sergeant
Sp/ Spt	Support
Str	Strength
SQN/ Sqn	Squadron. Tank or cavalry equivalent of an infantry company.
TF	Territorial Force
Tk(s)	Tank(s)
WIA	Wounded in Action
W/T	Wireless/ telegraph- often refers to a wireless set or message.

Tactical Terms¹

Combined Arms	The synchronized or simultaneous application of several arms- such as infantry, armour and artillery to achieve an effect on the enemy that is greater than if each were used in isolation or in sequence.
Decisively engaged	An engagement where a unit is considered fully committed and cannot manoeuvre to extricate itself. As a result, the action must be fought to a conclusion and either won or lost with the forces at hand.

¹ All definitions quoted are based closely or entirely on Headquarters Department of Army FM 1-02 *Operational Graphics and Terms*, September 2004, pp. 1-37, 1-53, 1-54, 1-61, 1-97, 1-108, 1-126, 1-130 and 1-135.

Defeat in detail	Concentrating overwhelming combat power against separate parts of a force in sequence rather than defeating the entire force at once.
Direct Fire	Gunfire directed on a target using the target itself as the point of aim.
Indirect Fire	Fire delivered on a target that is not itself used as the point of aim.
Key Terrain	Any locality or area, the seizure or retention of which, affords a marked advantage to either combatant.
Mission	The task that clearly indicates the action that is to be taken. In the modern context, the mission would also indicate the reason for the action.
Mutual support	That support which units (or positions) render each other against an enemy because of their positions relative to each other.
Objective	The specific target of the action taken. For example, a definite terrain feature, the seizing or holding of which is essential to achieving the mission.

Axis Regimental Nomenclature

German infantry and panzer regiments (roughly equivalent to Commonwealth brigades) contained three infantry (or panzer) battalions. These were designated using Roman numerals as the I, II and III battalions of whichever regiment they were from.

At Platamon for example, 21 Battalion was attacked by the *I Battalion of 304 Infantry Regiment* and the *I Battalion of 3 Panzer Regiment*. These are identified in the narrative and maps within this study as I/304 Inf Regt and I/ 3 Pz Regt.

The Italian forces had a similar system. At Miteiriya Ridge, 21 Battalion attacked *II/ 62 Battalion* of the *Trento Division*.

Introduction

The real thrust and blow, the object, the value is victory in battle.
- von Clausewitz, *On War*¹

Man does not enter battle to fight, but for victory.
- Ardent du Picq, *Battle Studies*²

In 2010 the New Zealand government confirmed that unit strength ground forces were the size it foresaw being committed to future conflicts. “Unit strength” equates to a battalion, of up to 800 troops.³ The 2010 Defence White Paper stated, in relation to the New Zealand Defence Force’s military capability, that any forces committed must be able to ‘fulfil a credible combat role.’⁴ It linked battalion sized ground forces to previous experience and combat effectiveness when it went further to state that:

Applying the lessons of recent operational experience, will improve the combat effectiveness, protection and sustainability of land forces... This should allow the NZDF to deploy troops in greater number, and for longer, than it can at present.⁵

The White Paper glossary defined combat as ‘military operations involving the use or threat of force, including lethal force, in order to impose will on an opponent or to accomplish a mission.’⁶ It did not define combat effectiveness. Perhaps it was thought the meaning was self-evident. Moreover, the White Paper did not state how combat effectiveness would be achieved, other than through the application of lessons learned from previous operations conducted at battalion level. There is no existing model upon which to determine the achievement of the Government’s intent. Further, there has not been a thorough study of any New Zealand infantry battalions to determine the causes of their success and failure in combat. This is a significant gap.

¹ Carl von Clausewitz (Michael Howard and Peter Paret, eds and transl.), *On War*, New York: Alfred A. Knopf, 1993, p. 423.

² Colonel Ardant du Picq, *Battle Studies: Ancient and Modern Battle*, 1868 (Transl. Colonel John N. Greely and Major Robert C Cotton), New York: The MacMillan Company, 1921, p. 94.

³ *Defence Review 2010*, Wellington: Ministry of Defence, 2010, p. 49.

⁴ *Defence Review 2010*, p. 11. My emphasis on the word “combat.”

⁵ *Defence Review 2010*, p. 55. My emphasis on “combat effectiveness.”

⁶ *Defence Review 2010*, p. 92.

Some studies, such as the United States publication *Infantry in Battle*, have based their structure around the Principles of War and provided simple battle narratives and maps to illustrate them.⁷ Although studies of this type are still relevant to conventional military operations, their principle flaw is that by cherry-picking examples from different units and battles to illustrate their points, they overlook the manner in which the principles themselves inter-relate and impact on each other, thereby shaping the final result, victory or defeat, in any one battle. *Therefore, such studies neither meet the need to define how combat effectiveness is to be achieved, nor how to measure its achievement.* As a result, this study focuses on one unit only and analyses a selection of battles it fought, irrespective of whether they resulted in victory or defeat. Indeed, defeats (and observations gleaned from their opposition's performance) can be equally instructive. It is also deemed necessary to base the study on a New Zealand battalion. By doing so, the risk of "discovering" what made the infantry of another nation successful and the possibility that it might not be appropriate to New Zealand, is avoided.⁸ A cherry-picking study along the lines of *Infantry in Battle* is not a methodical study either; a systematic analysis is required.

It is a reasonable deduction that the White Paper's expectation was for the New Zealand ground force to be an infantry, or a predominantly infantry one, committed to conventional combat more typical of the two World Wars or Operation *Desert Storm* from the Persian Gulf War in 1991, rather than peacekeeping or humanitarian assistance. This is because the New Zealand Army is structured predominantly in infantry battalions and because conventional combat is the more testing environment to which a battalion can be exposed. The research should therefore focus on an infantry battalion that actually undertook conventional combat. New Zealand has only deployed battalion sized infantry units, to sustained conventional combat, in the First and Second World Wars. Infantry battalion deployments after World War II - Malaya, Borneo and East Timor - were for counter-insurgency, stability or peacekeeping operations, not conventional combat. New

⁷ *Infantry in Battle*, Washington D.C: The Infantry Journal Incorporated, 1939, paperback edition, Quantico: Association of the United States Marine Corps, 2000. The book's 27 chapters include simplicity, scheme of maneuver and main effort, terrain, mobility and surprise.

⁸ Professor C.B Bridge, Lt. Col. G. Harper, and Dr I. Spence, 'The ANZAC Way of War', *New Zealand Army Journal*, No. 16, December 1996, pp. 5 and 14-15.

Zealand infantry deployments to Vietnam were company sized, and the New Zealand companies operated, generally, within an Australian or Anzac battalion. The two World Wars therefore provide the only sources from which a study focused on a New Zealand battalion engaged in sustained conventional combat could be based. Of the two World Wars, the Second provides a greater volume of useful archival material, war diaries and data necessary for a New Zealand based study into combat effectiveness at battalion level. The tactics and technology used in the Second World War are also more relevant to modern times.

The first key criterion for selection of the Second World War battalion to be followed in this study is that the unit must have had sustained experience of infantry combat. This requirement eliminates all of the infantry battalions of the 3rd New Zealand Division because they only participated in a small number of combat operations.⁹ It also excludes the 18th, 19th and 20th Battalions of the 2nd New Zealand Division (2 NZ Division), as they were converted into armoured regiments in late 1942 and no longer fought as infantry.

The second criterion for the selection of the unit to be studied is that its experience must expose itself for combat effectiveness analysis. This means that the unit would have ideally started as a demonstrably ineffective unit, but would have subsequently developed into a combat effective one. The rationale for this is that the ineffective phase would provide a useful starting point for identifying combat effectiveness deficiencies. The subsequent improvement would then make it possible to identify those factors that contribute to combat effectiveness.

The 21st (Auckland) Battalion of 2 NZ Division, referred to hereafter as 21 Battalion, is one battalion which meets the criteria. It remained an infantry battalion throughout the

⁹ The infantry units of the 3rd Division (which only consisted of two brigades) undertook a number of roles including coast-watching and intelligence gathering, however they only participated in three combat operations in the South Pacific of note: Vella Lavella, the Treasury Island and Green Islands. These combat operations were conducted over a much shorter timeframe, October 1943- January 1944, than the infantry battalions of 2 NZ Division. Reginald Hedley Newall, 'New Zealand's Forgotten Warriors: 3 NZ Division in the South Pacific in World War II', PhD in Philosophy, Massey University, 2008, pp. 125 and 356- 361.

Second World War. The battalion was described at one stage by its brigade commander, Brigadier Howard Kippenberger, as ‘... the unluckiest battalion in the Division... its morale was low and its discipline slack.’¹⁰ Of 21 Battalion’s initiation to combat in Greece, Kippenberger stated that the defence of the Pinios Gorge in April 1941 was ‘truly dreadful, the most deplorable I believe, in Australia’s or New Zealand’s military history.’¹¹ In addition, and most pertinent to this study, 21 Battalion fought its first two battles in Greece (including the battle at the Pinios Gorge) as an independent unit. This allows the analysis of effectiveness during its combat initiation to be isolated from the context of the remainder of the New Zealand Division. All the other battalions of the division fought in the same formation.

Eighteen months after the Pinios Gorge, the capture of the Halfaya Pass in November 1942 by 21 Battalion was a noteworthy victory. For the loss of only one man killed and one wounded,¹² this “city” battalion attacked emplaced infantry with just 110 men, killed seventy, took more than six hundred prisoners and opened the way for the Eighth Army to advance across the Egyptian border into Libya in pursuit of Rommel.¹³ This victory is all the more remarkable because it was conducted over open and exposed terrain by just two of 21 Battalion’s under strength rifle companies, which had been brought forward in the dark from their beds, with no time to prepare for the operation. Further, the “battalion” attacked without the support of artillery, tanks or even its own heavy weapons. 21 Battalion had undertaken an operation which the Commander of the British 4th Light Armoured Brigade had assessed was beyond the capacity of his own formation to perform, and so the New Zealand battalion had been committed to the attack instead.¹⁴ 21 Battalion was demonstrably combat effective in this battle.

21 Battalion was a Second World War creation like all other units of the 2nd New Zealand Division. The First World War battalions had been disbanded at the conclusion of that conflict and in the intervening period until the outbreak of the Second World War, a

¹⁰ Kippenberger, *Infantry Brigadier*, p. 113.

¹¹ McLeod, pp. 31- 32.

¹² Walker, *Alam Halfa and Alamein*, p. 468.

¹³ Entry for Nov 11, 21 Battalion War Diary November 1942. WAI 1 DA 54/1/35, NA.

¹⁴ Walker, *Alam Halfa and Alamein*, p. 467.

number of regionally based units were raised, although their strengths, roles and standards of efficiency declined markedly over the years, almost vanishing, as Chapter 2 will highlight. 21 Battalion did not produce any famous commanders of the likes of Kippenberger, nor did it have any Victoria Cross winners. Outwardly, it was rather ordinary, unlike the much higher profile 28 (Maori) Battalion of Cassino and Takrouna fame, or even 22 Battalion which is associated with the loss of the Maleme airfield on Crete.

In the Foreword to the unit's official history, General Freyberg wrote that 21 Battalion was one of the New Zealand Division's most battleworthy units.¹⁵ It earned the accolade as this study will show. 21 Battalion's improbable victory at Halfaya Pass demonstrates, among other things, that numerical superiority over the enemy was not essential to prevail in battle. It suggests also, that some of the preparations deemed necessary for a successful infantry attack, such as reconnaissance and the provision of fire support, are not always crucial either. Clearly, there are other factors apart from numerical superiority and adequate preparation, which determine whether an infantry battalion is victorious or defeated. These need to be identified within a study of combat effectiveness.

The aim of this study is to analyse 21 Battalion's combat performance in the Second World War, using that experience along with the relevant literature on infantry combat, to create a model that defines combat effectiveness and its associated factors for modern application. To achieve this and to develop the model, this study seeks to answer three key questions. They are:

- What is combat effectiveness and what factors contribute to achieving it?
- What factors determined whether 21 Battalion was combat effective or not in each of the battles analysed?
- Did 21 Battalion develop a particular style of fighting over time?

¹⁵ Joseph F. Cody, *21 Battalion*, Wellington: War History Branch, 1953, p. v.

The relevance of the third research question is to support the premise that those behaviours, tactics and practices which led the battalion to be combat effective caused an evolution in fighting style different from that used in the unit's earliest actions, when it was a novice organisation. As this is a study based on the combat effectiveness of an infantry battalion, it will focus solely on land combat. Combat effectiveness of naval and air forces will not be covered.

The hypothesis of this study is that combat effectiveness in battalion-level infantry operations is not solely dependent on superior strength or even better tactics, mobility or decision making. Rather, combat effectiveness is the result of the interaction between these and a range of other factors which impact on the combatants of both sides. These factors include terrain, leadership, the will to fight, the conditions of light and visibility, and even an element of luck. This study will progress from defining combat effectiveness and offering a framework model to develop and measure it, through to providing a list of factors for achieving or failing to achieve it, as it traces 21 Battalion's journey from being combat ineffective to battleworthy.

Chapter 1 will create a framework combat effectiveness model in order to provide a structure for the analysis of 21 Battalion's combat performance in the battle analysis chapters that follow after Chapter 2. The framework model developed is "tentative" only, because a key aspect of this study's methodology is that the subsequent examination of 21 Battalion, and its opponents, in each of the eight battles analysed, should ultimately confirm or modify the model, as well as identify the combat effectiveness factors within it, and the inter-relationships between them. The first section of the chapter develops a working definition for combat effectiveness. The second section is a review of combat effectiveness literature. It examines the four identified combat effectiveness methodologies, and contemporary British doctrine, to develop a model of fighting power. This is then developed into a framework combat effectiveness model. Chapter 1 does not attempt to define each of the factors relevant to any of the categories within the model. That occurs progressively through Chapters 3- 10.

Chapter 2 will define 21 Battalion in the context of New Zealand's defence forces prior to 1939. It records the unit's formation in 1940, and provides an analysis of the original membership of the unit. This chapter also outlines the unit's organisation for battle. Much of the data is summarised in Appendix A.

Chapters 3 to 10 are battle analyses; each is devoted to the analysis of one of eight selected battles where 21 Battalion was heavily involved. Some battles are linked, occurring within days of each other. Other battles have no relationship to each other, except for selection by the author on the basis that *sufficient information for analysis was available*, and because they were *deemed to be instructive on combat effectiveness*. They were, deliberately, not evenly spaced across the review period, nor designed to capture a selection from all of 21 Battalion's battles through to 1945. Training, exercises, reinforcement policies, leave, logistics and welfare were not analysed when making a determination of combat effectiveness, for after all, 'War, ultimately, is about fighting.'¹⁶ The battles examined in this study are listed in Table 0.1 below.

Each battle analysis chapter follows a standard format. The first section provides a lead up to the battle, introduces the combatants (21 Battalion and their opponent), determines 21 Battalion's mission, and then provides a summary of key events. The second section, a short one, describes the outcome of the battle, determines whether 21 Battalion was combat effective or not and provides a summary of the casualties and losses sustained by both sides, where this was able to be determined. It was not always possible to establish the exact numbers of enemy personnel, weapons or casualties, even though the battle outcome was known. The third section of each chapter is the analysis of combat effectiveness. It focuses on the identification of combat effectiveness factors, their interaction, and their combined impact on the battle outcome, for both 21 Battalion and their opponents. This is not as straightforward as it might seem, for as Williamson Murray wrote in *German Military Effectiveness*, the problem for intellectual history has

¹⁶ Keegan, *The Battle for History*, p. 66.

always been ‘to identify the link between cause and effect.’¹⁷ The conclusion of each chapter lists the combat effectiveness factors identified in the battle analysed, and answers the second key question raised in this study.

Chapter	Battle	Dates	Campaign
3	Platamon	14 - 16 April 1941	Greece
4	Pinios Gorge	18 April 1941	Greece
5	Bir Ghirba	21 November 1941	Egypt
6	Ruweisat Ridge	14 - 15 July 1942	Egypt
7	Miteiriya Ridge (El Alamein)	23 October 1942	Egypt
8	Halfaya Pass	11 November 1942	Egypt
9	Sangro	27 - 28 November 1943	Italy
10	Orsogna	14- 15 December 1943	Italy

Table 0.1: Battles analysed in this study

Although 21 Battalion was not disestablished until 2 December 1945,¹⁸ only selected battles as far as December 1943 are examined in this thesis. This was deliberate, for more important than covering the unit’s entire period of existence and making this study just an historical one, was the examination of battles which were instructive with respect to combat effectiveness and, of equal importance, for which sufficient reliable information was available.

Focusing on earlier battles can also be more instructive. In Lord Tedder’s view, and supporting the start of the examination from 21 Battalion’s earliest battles, the best lessons are to be drawn from the early stages of the war when ‘resources [are] in short supply. Mental and physical condition has not been hardened by battle. Illusions abound... The psychology and condition of the nation, the army and its commanders all reflect the mood of the period of peace preceding hostilities... Early and avoidable

¹⁷ Williamson Murray, *German Military Effectiveness*, Baltimore: The Nautical & Aviation Publishing Company of America, 1992, p. 196.

¹⁸ Cody, *21 Battalion*, p. 444.

calamities in war are the consequences of softness, myopia and unprofessionalism in peace.’¹⁹

Ultimately, a balance had to be struck between the four earlier battles when 21 Battalion was inexperienced (and ineffective) and later ones when it had become combat effective. The late 1943 battles of the Sangro and Orsogna confirmed 21 Battalion’s combat effectiveness, even after losing many veterans to the furlough drafts, and having absorbed significant numbers of inexperienced reinforcements to replace them. It was assessed that the Italian campaign battles fought by 21 Battalion after Orsogna could add few new combat effectiveness insights. Orsogna was deemed a suitable final battle (to analyse in this study) because it represented a significant test of combat effectiveness for 21 Battalion, more than any subsequent battle, for it successfully completed a night attack and then, as part of a combined arms team, withstood three counterattacks as Chapter 10 will show.

The eight battles examined, four from North Africa and two each from Greece and Italy, were conducted under different conditions, presenting diverse challenges. Greece was a series of reverses, in difficult terrain, while 21 Battalion (and 2 NZ Division) were still novices. The men were inexperienced then, but not war weary. The desert terrain in North Africa provided harsh living and fighting conditions, and it posed significant tactical challenges given the lack of cover and concealment available. Night operations proved to be a reasonable but not guaranteed antidote, although the Division learned that these required considerable planning and skill to execute properly. It was fortunate for 21 Battalion that its opposition in North Africa was predominantly Italian. By the end of the desert campaign, many of the most war weary were able to return to New Zealand, or perhaps had positions out of the front line so that they had some respite from the dangers and rigours of infantry combat. Although Italy provided its own tactical, terrain and climatic challenges, a significant difference was that the opposition was German, rather than Italian. Fortunately, the Germans, by then, in the two battles analysed, were

¹⁹ Quoted in David Fraser, *And We Shall Shock Them: The British Army in the Second World War*, London: Hodder and Stoughton, 1983, pp. ix- x.

deploying novice troops as forward security elements, whilst those in the main defence zones, were themselves war weary.

The Conclusion draws together the combat effectiveness factors identified in each chapter, re-visits, briefly, the framework combat effectiveness model offered in Chapter 1, and then presents a modified version. Factors identified during the four battles examined in 21 Battalion's "ineffective" phase (Chapters 3-6) are combined with those from when it was combat effective (Chapters 7-10) to provide 69 factors that impacted on 21 Battalion's combat effectiveness, and also that of the unit's opposition, in each battle. The Conclusion highlights the major themes identified and answers the three key research questions (noting that those factors that impacted on each battle were listed at the end of applicable chapter), before offering some general observations about Second World War infantry combat based on the eight battles analysed.

This study draws on a wide range of sources including official histories. As a point of difference however, it makes significant use of unpublished accounts and the War History Branch's campaign narratives, to create a New Zealand record from a single unit in battalion level infantry combat in the Second World War. Where possible, information from the German, Italian and Allied perspective has been incorporated to provide a more complete picture of events.

There is no guarantee of victory in any battle. Each and every one is a battle to win. There has been no research to date focused at battalion level combat effectiveness, especially in the New Zealand context. A model is needed, based on the experience of sustained infantry combat, to develop and maintain it. Therefore, based on the experience of sustained infantry combat, this thesis proposes a definition and a model that can serve to promote the development of Infantry unit combat effectiveness through modern training and education, and to meet the Government's policy requirements.

Chapter 1

Towards a Model of Combat Effectiveness

Historical examples clarify everything and also provide the best kind of proof in the empirical sciences.

- von Clausewitz, *On War*¹

Combat has been recorded in various ways since earliest times. Many original accounts were recited in Homeric verse or adorned Greek pottery, rather than in written form.² Since 400 BC, when Chinese generals are thought to have been the first to write of their experience and insights, military practitioners and theorists have taken it upon themselves to go beyond accounts of events and heroic deeds to try and make sense of the nature of war itself.³ Armies are expensive to raise and sustain.⁴ They are difficult to manoeuvre and command in battle. It, therefore, made sense for theorists and practitioners such as Sun Tzu, Carl von Clausewitz and Frederick the Great, to record how war might be waged more effectively in the future, based on their insights. Each theorist wrote about warfare in the context of their time, culture, experience and 'their social, economic and geographical circumstances.'⁵ They all committed to paper their thoughts on *how* to succeed in war generally, or battle in particular. Arguably, these theorists all traversed the area of combat effectiveness, although they invariably couched it in terms of achieving victory and set it within the context of waging war in general.⁶

¹ von Clausewitz, *On War*, p. 199. (see also pp. 200-201 about the *application* of an idea, the *explanation* of an idea, the *proof* of an idea etc)

² Robert Engen, *Canadians Under Fire: Infantry Effectiveness in the Second World War*, Montreal: McGill-Queen's University Press, 2009, p. 3. Martin van Creveld, *The Art of War: War and Military Thought*, London: Cassell, 2000, p. 14.

³ van Creveld, *The Art of War*, pp. 14-15 and 20. Colonel T.N. Dupuy, *Understanding War*, pp. 9-18. Colonel T.N. Dupuy, himself a military theorist, included Sun Tzu, Sextus Julius Frontinus, Flavius Vegetius Frontinus, Count Maurice de Saxe, Frederick the Great of Prussia, Napoleon, Baron Antoine Jomini, Carl von Clausewitz, J.F.C. Fuller, Alfred Thayer Mahan, Count Alfred von Schlieffen and Giulio Douhet in his brief list of practitioners and theorists. Colonel T.N. Dupuy, *Understanding War*, pp. 9-18.

⁴ David Rowland, *The Stress of Battle: Quantifying Human Performance in Combat*, London: The Stationery Office, 2006, p. xi.

⁵ Cyril Falls, *Ordeal by Battle*, London: Methuen & Co. Ltd., 1943, p. 4. Captain Hughes provided reasons for variations in a writer's views including, historical period, whether Oriental or Occidental, emphasis on strategy, tactics or both, and the author's experience, in Capt. Wayne P. Hughes Jr., *Fleet Tactics and Coastal Combat*, Second Edition, Annapolis: Naval Institute Press, 2000, p. 360.

⁶ As one example of writing about waging war in a particular time Bernard Brodie wrote one of the Introductory essays to *On War*, that much within Books Four to Seven 'belonged to a vanished past' and therefore a reader might progress through those chapters more quickly. von Clausewitz, *On War*, p. 199.

Purpose of this chapter

The purpose of this chapter is to develop, from the relevant literature, a framework combat effectiveness model that will provide the structure for a systematic examination of 21 Battalion's combat performance in the eight battle analysis chapters of this study. The first section of the chapter develops a working definition of combat effectiveness. The second section examines four distinct combat effectiveness approaches identified through the literature, and contemporary British fighting doctrine. Drawing the two preceding sections together, the third section develops a framework combat effectiveness model. It does not, however, attempt to list the combat effectiveness factors relevant to any of the categories within the framework model; these are identified progressively through the experience of 21 Battalion during each of the eight battle analysis chapters. This section also introduces a United States Army template as a means to standardise the analysis of terrain across each of the battles. Finally, the chapter includes a short review of selected New Zealand combat related literature. The purpose of the final section is to determine if any New Zealand combat literature indicates the need for any additional categories to the framework model, and to introduce some of the key sources that will be used in the battle analysis chapters.

Defining Combat Effectiveness

Combat effectiveness pertains to being successful in battle, it is about winning (or losing), and why this was so. *The only true measure is under actual battle conditions.* Combat effectiveness is defined in the *Oxford Essential Dictionary of the U.S. Military* as:

1. the quality of being effective in combat.
2. the abilities and fighting qualities of a combat unit.⁷

⁷ T.N. Dupuy, C. Johnson, G. Hayer, P. Taylor, J. Taylor, *Dictionary of Military Terms: A guide to the language of warfare and military institutions*, 2nd Edition, New York: The H.W. Wilson Company, 2003, p.60.

It could be argued that the definitions above are tautological. British doctrine offers a better definition. It defines combat effectiveness as ‘the ability of a unit to carry out its assigned mission, role or function.’⁸ A unit that is combat effective is able to complete, in contemporary terms, its assigned mission.⁹

Armed forces are raised, trained and employed with the expectation that they will win, that is, so that they are combat effective in any mission assigned.¹⁰ ‘Armed Forces fight to win...[however] there are degrees of success which should be weighed against both the physical and the human cost of operations.’¹¹ Being combat effective does not mean fighting at no cost in manpower or equipment. Combat causes, by its very nature, loss of personnel and equipment. It consumes resources. Effectiveness in combat requires some balance be achieved. As General Sir Rupert Smith observed, a tactical commander must engage in combat in such a manner ‘so as not to lose the force.’¹² Reflecting the same notion, David French’s discussion of British Army doctrine and organisation between the World Wars was called ‘How are You to Succeed without Causing Losses?’¹³ Casualties are always possible, even probable, in conventional combat. The point made by Smith and French is that forces must, in the course of completing their mission, attempt to do so with minimum loss. Part of the rationale for this is that they must still be capable (even with lowered capability as a result of achieving their mission) of conducting any immediate tasks resulting from the mission assigned. After securing an attack objective, for example, a unit must still be capable of defeating counterattacks or conducting exploitation beyond the objective.

A working definition of combat effectiveness, for use in this study, must therefore link tactical success with the requirement to be capable of completing further follow on tasks

⁸ United Kingdom Army Doctrine Publication- Land Operations 2005, p.186.

⁹ Roland V. Tiede and Lewis A. Leake, ‘A Method for Evaluating the Combat Effectiveness of a Tactical Information System in a Field Army’, *Operations Research*, Volume 19, Issue 3, May/ June 71, p. 595.

¹⁰ The notion that forces fight to win is reinforced in Sam C. Sarkesian, John Allen Williams and Fred B. Bryant, *Soldiers, Society and National Security*, Colorado: Lynne Rienner Publishers Inc. 1995, pp. 12 and 15.

¹¹ UK Army Doctrine Publication -Land Operations, 2005, p. 31.

¹² General Sir Rupert Smith, *The Utility of Force: The Art of War in the Modern World*, Allen Lane, London, 2005, p. 295.

¹³ David French, *Raising Churchill’s Army: The British Army and the War against Germany 1919- 1945*, Oxford University Press, Oxford, 2000, p. 12.

resulting from the original mission. The working definition of combat effectiveness for this study is, therefore: The ability of 21 Battalion to achieve its assigned mission, and still be in such a state that it completes subsequent tasks.

Ultimately, the study of combat effectiveness must include defeat as well victory, for even though one side wins, why the battle was lost by the opposing side can be equally instructive as the reasons it won.

Combat effectiveness is not the same as the term combat *power*, which is a measure of the total means of destructive force that a unit can apply against an opponent.¹⁴ Relative combat power is a strength comparator between opposing forces, usually based on manpower and weapon systems. While superior combat power over an opponent increases the likelihood of victory, it is still not a measure of effectiveness. Later in this chapter, the term *fighting* power will be introduced. It is similar to combat power.

Combat effectiveness is not the same as combat *readiness* either. Combat readiness describes a level of preparedness for battle. A combat ready unit is deemed to be at ‘such a manpower strength and scale of transport and equipment that it can fight immediately’, but that does not mean that it will win.¹⁵

Before reviewing combat effectiveness literature, it is worth noting the perspectives of Prussian Carl von Clausewitz, one of the world’s best known military theorists. In *On War*, von Clausewitz covered a vast canvas of the theory of war, from politics and strategy through to battle itself. While his best known statement is possibly that war is an extension of policy by other means, he also discussed matters related directly to combat.¹⁶ Von Clausewitz wrote about the significance of numerical superiority in battle. In his experience, primarily of Napoleonic battles, numbers mattered. He also noted the importance of bringing the greatest strength to the decisive engagement, and that the will to fight, and the morale of an army were improved if it had numerical superiority over the enemy. Von Clausewitz also observed that supremacy in battle (read combat effectiveness) could be achieved by better organisation and equipment (weapons

¹⁴ Foundations of New Zealand Military Doctrine, NZDDP- D 2004, November 2004, p. G-3.

¹⁵ UK Army Doctrine Publication -Land Operations, 2005, p.186.

¹⁶ von Clausewitz, *On War*, pp. 99 and 731.

primarily), by the use of novel tactics, superior mobility, or better use of terrain than an enemy, rather than just numerical superiority.¹⁷ Von Clausewitz concluded from the battles he examined that even though numerical superiority made victory more likely, *relative* superiority could be achieved through weapons, tactics and terrain. Colonel Huba Wass de Czege, a United States infantryman summarised von Clausewitz's position succinctly when he stated that 'Although numbers are important, relative combat power is determined in the main by the manner in which such potential strength and resources are brought to bear against an enemy.'¹⁸ Clearly, strength is a factor of combat effectiveness, however, victory is not determined simply by having numerical superiority.

The complexity of combat

Victory in battle cannot be guaranteed; only principles and techniques designed to improve the *chance* of success can be deduced. There is no single technique or formula which can *guarantee* victory. Warfare is too complex; there are too many variables as this quote from *Infantry in Battle* of 1939 attests:

The Art of War has no traffic with rules, for the infinitely varied circumstances and conditions of combat never produce exactly the same situation twice. Mission, terrain, weather, dispositions, armament, morale, supply, and comparative strengths are variables whose mutations always combine to form a new tactical pattern. Thus, in battle, each situation is unique and must be solved by its own merits.¹⁹

This point was reflected 40 years and one World War later by American soldier, historian and military theorist, Colonel Trevor Dupuy. He stated in *Numbers, Predictions and War* that he had isolated at least 73 "variables of combat" ranging from weapon effects and

¹⁷ von Clausewitz, *On War*, p. 335.

¹⁸ Colonel Huba Wass de Czege, 'Understanding and Developing Combat Power', unpublished paper Command and General Staff College Fort Leavenworth, 10 February 1984, p. 7.

¹⁹ Chapter 1: Rules. *Infantry in Battle*, Washington D.C: The Infantry Journal Incorporated, 1939, paperback edition, Quantico: Association of the United States Marine Corps, 2000, p. 1.

terrain factors, to weather and leadership.²⁰ These variables along with other findings by Dupuy will be discussed later within this chapter, for even though he wrote in a subsequent publication that *Numbers, Predictions and War* contained an ‘embarrassing plethora of typographical and computational errors’, his fundamental statement that combat contained many variables is still sound.²¹ Another American combat historian, Brigadier Samuel Lyman Atwood (S.L.A.) Marshall wrote in *Men Against Fire* that ‘Every new battle terrain presents a fresh variety of tactical problems and requires novel adaptations of old methods.’²² He also wrote that:

In battle there is very little order. Many times the course of events is shaped by the purest accident and much that one witnesses does not make sense.²³

No one battle is like another, indeed, chance even has an effect. It seems, therefore, that reducing battles to numbers is a purely academic exercise which runs contrary to the premise that all battles have ‘no traffic rules’ and ‘never provide exactly the same situation twice.’ *Clearly, therefore, combat effectiveness is not about applying particular winning techniques, for each battle unique and dynamic, and subject to a large number of factors that influence its outcome.*

Despite the unpredictability of each battle situation, superior strength over the opposition increases the likelihood of winning. Military practitioners and theorists Baron Antoine Henri de Jomini and Carl von Clausewitz, who disagreed on many things, agreed on this particular point.²⁴ The hypothesis that superior numbers increase the likelihood of victory is intuitive. It was tested by Faruk Yigit using the records of 660 battles listed in the United States Army’s Center for Army Analysis CDB90FT database. Yigit’s analysis supported the argument that superior strength is a valid ‘estimator of the battle outcome’

²⁰ Colonel T.N. Dupuy, *Numbers, Predictions and War: Using history to evaluate and predict the outcome of Battles*, London: MacDonald and Jane’s Publishers Ltd., 1979, p. 33. These are listed in Appendix B to this thesis.

²¹ Colonel T.N. Dupuy, *Understanding War: History and Theory of Combat*, UK edition, London: Leo Cooper, 1992, p. Xvii.

²² Brigadier General S.L.A. Marshall, *Men Against Fire: The Problem of Battle Command in Future Wars*, Revised Edition, Alexandria: Byrrd Enterprises, Inc., 1961, p. 107. He is usually referred to as S.L.A. Marshall, or just SLAM.

²³ Marshall, p. 180.

²⁴ Hew Strachan, *European Armies and the Conduct of War*, London: Routledge, 1991, p. 96.

but, significantly, not a guarantee.²⁵ His data also showed that an attacker was far more likely to succeed if their Force Ratio was greater than 1.5 times that of the defender.²⁶ Despite his focus on relative strengths, Yigit did acknowledge that the abilities of the combatants, not just Force Ratio, contributed to the probability of them winning.²⁷ It seems, therefore, that Joseph Stalin's statement 'quantity has a quality all of its own' has some merit.²⁸ Although superior numbers, and quality, are important to combat effectiveness, clearly there are more factors involved. These need to be determined for 21 Battalion, but before examining battles to identify the factors, it is necessary to review the relevant combat effectiveness literature in order to construct a framework model that will support the battle analysis chapters.

Approaches to measuring Combat Effectiveness

The literature reveals four distinct approaches to measuring the combat effectiveness of land forces and for identifying the factors which determine victory, and defeat, in land combat. The first is based on tactical effectiveness, which is a measure of the quality of an army's doctrine and how well its units apply it to maximise their combat power. The second approach is a mathematical one. The origins of this approach can be traced to William Lanchester and his attrition equations.²⁹ Despite being pioneered by Lanchester, the approach was championed largely by American Colonel Trevor N. Dupuy, who modelled historical combat using complex formulae he derived in the course of his extensive research. In contrast, the third approach is the most simplistic. It is a crude measure based on the number of kills and casualties sustained by both sides, with the ratio determining which side was more combat effective than the other. The final approach to measuring combat effectiveness is a sociological one. This takes into account

²⁵ Faruk Yigit, 'Finding the important factors in battle outcomes: A statistical exploration of data from major battles', Masters of Science Thesis in Operations Research, Naval Postgraduate school, Monterey, California, 2000, p. 71. The battles examined covered almost 400 years, from the Netherlands War of Independence in 1600 through to the Israel- Lebanon War in 1982.

²⁶ Yigit, p. 64.

²⁷ Yigit, p. 71.

²⁸ Stalin's statement recorded in General Sir Rupert Smith, *The Utility of Force: The Art of War in the Modern World*, Allen Lane, London, 2005, p. 243. The notion of quality and quantity was attributed to Stalin in a compilation of Principles of War c. B.C. to 1968 in a list that also contained principles of war by Sun Tzu, Vegetius, Saxe, Napoleon and Jomini, Foch, Fuller and Liddell Hart. Hughes, pp. 357- 359.

²⁹ Dupuy, *Understanding War*, pp. 18- 20.

command, leadership and human factors including morale, cohesion, courage and fear. Each of the approaches will be described briefly in the sections that follow. It will be found that the four approaches actually reflect two fundamental perspectives. One reflects the “hard” factors, based primarily on numbers, weapons, procedures and tactics. The other perspective represents the “soft” (or human) factors based principally on command and leadership, cohesion, morale and the will to fight.

Tactical Effectiveness

The first approach to combat effectiveness is based on tactical effectiveness. It is of significance because this is a study of combat at unit level. The word tactics is derived from the ‘Greek *taktika*, meaning matters pertaining to arrangement’ of troops in relation to the enemy and how they are employed in battle.³⁰ *How* troops are employed in battle has a major impact on the outcome. The tactical level of war is described in current New Zealand military doctrine, and is generally accepted world wide, as the level of war which ‘is concerned with the planning and conduct of battle and is characterised by the application of concentrated force and offensive action to gain objectives.’³¹ Tactical effectiveness is about how well a unit applies its combat power at the tactical level.

Allen Millett and Williamson Murray created a construct for military effectiveness, where tactical effectiveness was a sub-set. Their construct is instructive, for it helps situate tactical (and combat) effectiveness within the overall context of military effectiveness. Their construct identified four levels, which were, from highest to lowest: political, strategic, operational and tactical. Each level contained a number of associated activities and factors, and even though each level was described discretely, they were intended to overlap, for they are dynamic and interact.³² Their tactical level included several factors: consistency of tactical approaches and concepts with strategic objectives and operational capabilities of the force; the extent to which the forces are able to integrate all arms; the degree to which doctrine emphasised surprise and exploitation; the

³⁰ Hughes, p. 7.

³¹ New Zealand Defence Force, *Foundations of New Zealand Military Doctrine: NZDDP- D 2004*, Headquarters New Zealand Defence Force, Wellington, November 2004, p.G-11.

³² Allan R. Millett and Williamson Murray (eds.), *Military Effectiveness Volume I The First World War*, Boston: Unwin Hyman, Inc., 1988, pp. 2- 11.

morale and degree of cohesion between all ranks of the force; and finally, the force's approach to training.³³ In Millett and Murray's estimation, leadership has a significant impact on unit performance in combat:

Conduct of battle is not simply a matter of doctrine and training. Effective unit performance in this most stressful of human experiences is above all a matter of personal character and of leadership in all its dimensions and intangibles.³⁴

Stephen Biddle subordinated leadership and sociological factors to the tactical employment of combat forces, thereby reducing the significance of the human dimension of combat effectiveness. In *Military Power*, he claimed that the cause of victory and defeat in the modern era (post 1900) was the use, or failure to use, the concept he called force employment. He stated that 'force employment, or the doctrine and tactics by which forces are actually used in combat- is centrally important, shaping the role of materiel factors and often predetermining winners and losers,' and not numerical superiority or technological advantage as commonly supposed.³⁵ Biddle argued that since 1914 the modern battlefield had become so lethal that the only way to survive and still be in a position to achieve offensive and defensive missions, was to adopt what he called the "modern system", where the forces engaged in combat used 'cover, concealment, dispersion, suppression, small-unit independent maneuver, and combined arms at the tactical level, and depth and reserves and differential concentration at the operational level of war.'³⁶ 21 Battalion's action at Halfaya Pass (recounted briefly in the introduction to this study, and which will be examined more thoroughly in Chapter 9) will disprove this statement, for only one of Biddle's criteria was met - small-unit independent maneuver. Biddle's major findings have attracted criticism from some

³³ Millett and Murray, *Military Effectiveness Volume I The First World War*, pp. 19- 26.

³⁴ Lt Gen (Retd) John Cushman, 'Challenge and Response at the Operational and Tactical Levels', 1914-45, in Millett and Murray, *Military Effectiveness Volume III: The Second World War*, Boston: Allen & Unwin Inc., 1988, p. 331.

³⁵ Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle*, New Jersey: Princeton University Press, 2004 p. ix.

³⁶ Biddle, *Military Power*, pp. 2- 3.

quarters.³⁷ Nevertheless, doctrine, tactics and the elements of Biddle's modern system have relevance to a study of unit level combat effectiveness.

Biddle's observations suggest several distinct but inter-related factors be considered in analysing 21 Battalion's combat effectiveness: the tactics employed by 21 Battalion (such as the use of combined arms, or achieving surprise over the enemy); the quantity and accuracy of small arms fire it produced (a function not only of the numbers, ranges and rates of fire of weapons, but also how they were employed); how well the unit was led in battle; and what the morale and will to fight of the unit was like.

In Biddle's view, technology and preponderance (greater numbers of combatants and weapons than the opponent) have less effect on determining the victor, than force employment does. Technology, in Biddle's opinion, has mainly 'increased the range over which exposure can be fatal.'³⁸ It will be shown in most instances, especially at night, that 21 Battalion's engagements were mostly at short range, which is where infantry, even today, has the greatest utility. The action at Bir Ghirba (discussed in Chapter 6), where 21 Battalion was singularly ineffective and was decisively engaged at long range by day, is a notable departure from the norm. Biddle's theory of force employment suggests that combat effectiveness is not solely a quantitative measure of manpower, weapons or technology differentials. It will also be affected by *how well* combatants employ their resources in combat, and the tactics they employ to bring fire to bear on the enemy.

Training of individuals and units is fundamental to achieving combat effectiveness. Ensuring that effective, rather than token, dated or irrelevant training is conducted is an

³⁷ A number of prominent commentators were given the opportunity within *The Journal of Strategic Studies*, Vol. 28, No. 3, June 2005 to review *Military Power*. Reviewers were: Eliot Cohen, 'Stephen Biddle on Military Power', pp. 413- 424; Lawrence Freedman, 'A Theory of Battle or a Theory of War?', pp. 425- 435; Michael Horwitz and Stephen Rosen, 'Evolution or Revolution?', pp. 437- 448; and Martin Van Creveld, 'Less than Meets the Eye', 449- 452. Stephen Biddle's rebuttal is contained within the same journal at 'Military Power: A Reply', pp. 453- 469. Although he does not refer to Biddle, Craig Stockings would disagree with him over the issue of technology, for Stockings would argue that the Australian success at Bardia in January 1941 was largely due to the technological advantage they enjoyed over the Italian defenders. Craig Stockings, 'Beyond the Anzac Myth: Relative Technological Advantage and the Battle of Bardia', *Journal of Battlefield Technology*, Volume 12, Number 1, March 2009, pp. 33- 39.

³⁸ Biddle, *Military Power*, p. 3.

important responsibility of commanders, although often overlooked, as the Italian defenders at Bardia found to their peril in January 1941.³⁹ Americans Sam Sarkesian, John Williams and Fred Bryant observed that ‘training is intended to develop the necessary skills to perform effectively on the battlefield.’⁴⁰ Samuel P. Huntington wrote that ‘... the direction, operation and control of a human organization whose primary function is the application of violence is the peculiar skill of the officer’ and also ‘...training must be directed to the sole end of efficiency in combat...’⁴¹ The onus for ensuring effective training is, therefore, on the commander of an organisation at every level. The senior officer at battalion level is the commanding officer (CO). His objective when not in battle must be to train his unit for combat.⁴²

Effective training is based on military doctrine for it provides the philosophical framework, complemented by Principles of War. Doctrine and the Principles should guide the tactics and procedures adopted which are varied, as required, to take into account the terrain and enemy situation encountered. ‘Doctrine is of no use if it remains in books.’⁴³ It must be understood, easily interpreted and trained on. Training should prepare for likely, or imminent, operations. If a unit is already deployed, then it should replicate actual or anticipated conditions of battle by conducting mission rehearsals so that maximum value can be obtained. Training also ‘contributes to the moral component [of Fighting Power] through its role in the development of confidence, motivation and leadership qualities.’⁴⁴ This became evident at the battle of Miteiriya Ridge (El Alamein), where training first emerged as a significant factor in 21 Battalion’s combat effectiveness, and which is examined in Chapter 7. Training must therefore feature in the analysis of 21

³⁹ Craig Stockings, ‘There is an idea that the Australian is a born soldier...’, in Craig Stockings (ed.), *Zombie Myths of Australian Military History*, Sydney: University of New South Wales Press Ltd., 2010, pp. 93- 115.

⁴⁰ Sarkesian, Williams and Bryant, p.17.

⁴¹ Samuel P. Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations*, Cambridge, Massachusetts: Harvard University Press, 1964, pp. 11 and 257.

⁴² Australian Army Manual of Land Warfare, Part Two Infantry Training Volume 1 Infantry Operations Pamphlet No.1: *The Infantry Battalion (All Corps)* 1983, p. 15-4. The CO’s aim is ‘to produce a battalion trained in such a way that it is, in every respect, fit for war.’

⁴³ Major Fitzgerald’s argument was that doctrine must be readable, easily understood and able to be applied in a practical sense down to sub-unit, platoon and section level. It is of no use if it only stays in the doctrine manuals and is not applied. Major D. Fitzgerald, ‘Lions Dulled by Dogma: Doctrine for *Sun* readers’, *British Army Review*, Number 120, December 1988, p. 95.

⁴⁴ British Army Doctrine Publication Volume 4 *Training*, DGD&D/18/34/65, December 1996, pp. 2-1 and 2-2.

Battalion's combat effectiveness, as it links not only to tactical proficiency, but to sociological factors as well.

Major David Fivecoat used the American 165th Regiment's combat record from the First World War to make his assessment of its *tactical effectiveness*. According to Fivecoat, tactical effectiveness was a 'subjective evaluation of a unit's ability to integrate all of the combined arms into a coherent system, conduct fire and maneuver, utilize surprise, and rapidly exploit opportunities.'⁴⁵ In this respect, his contention is similar to Biddle's, reinforcing *how* elements are employed, except that Fivecoat acknowledged the part played by sociological aspects as an enabler of tactical effectiveness. The basis of tactical effectiveness was a unit's organisation, the doctrine it employed, the firepower it could generate, and the communications systems it contained. These could, according to Fivecoat, be enhanced by a unit's doctrinal proficiency, its leadership and by its cohesion.⁴⁶

The Mathematical Approach

The second approach to combat effectiveness theory is a mathematical one. This approach attempts to determine timeless truths which should, theoretically at least, allow combat situations to be accurately replicated for training and analysis, and to determine the relative effect, or weighting, of each factor.⁴⁷ The mathematical approach is also useful for modelling the effect that different combinations of weapons, equipment, sensors and doctrine might have in determining the outcome of future or contemporary combat. This approach was pioneered by Frederick Lanchester, a British engineer.⁴⁸

Lanchester's laws of combat, originally derived to replicate aircraft attrition in the First

⁴⁵ David Fivecoat, 'Fine Conduct Under Fire: The Tactical Effectiveness of the 165th Regiment in the First World War', MA Thesis in Military Art and Science, U.S. Army Command and General Staff College, 2004, pp. 5 and 97. Tactical effectiveness 'is built upon the strengths and weaknesses of its organization, weapons systems, communications techniques and doctrine.'

⁴⁶ Fivecoat, p. 97. Unit cohesion was defined by Fivecoat as '... forces that create solidarity within military units and direct soldiers toward a common goal. The forces that create cohesion include morale, esprit de corps, motivation, shared goals, team work, and group pride.'

⁴⁷ Dupuy called these the 'Timeless Verities of Combat.' Col. T.N. Dupuy, 'Perceptions Of The Next War: Historical Perspective on Adjustment of Doctrine and tactics to Weapons', *Armed Forces Journal International*, May 1980, p. 49. Hughes, pp. 172- 173.

⁴⁸ Richard H. Brown, 'Theory of Combat: Probability of Winning', *Operations Research*, Volume 11, No. 3, May- Jun 1963, pp. 418 and 420. Biddle, *Military Power*, pp. 16- 17.

World War, were published in 1916. His key theory, the Lanchester N- Squared Law of Combat, was ‘that the effective combat power of two forces in conflict with one another is proportional to the effectiveness of their respective weapons times the square of their relative troop strengths.’⁴⁹ Numbers of weapons, along with their range and rates of fire would be important data to establish for this approach to be used in analysing 21 Battalion’s combat effectiveness.

At face value, Lanchester’s findings make sense, however, they are easily discredited when “results” are compared to realistic combat scenarios or historical battles, for they try to make a science out of the art of war.⁵⁰ If two groups of soldiers were firing at each other - one a group of ten, the other of one hundred- it is highly likely that the group of one hundred would win. Lanchester’s Laws support this. But, land combat is rarely that simple. As far as ground combat is concerned, Lanchester’s Laws resemble Napoleonic and American Civil War close range encounters, not truly reflective of the realities of the Second World War, or contemporary combat where vegetation, terrain features and buildings are just some of the obstructions to lines of observation and fire on the real battlefield. If the ten soldiers in this hypothetical scenario were better armed, concealed, dispersed and behind protective cover compared to the hundred exposed in the open- or any other range of permutations - the outcome would no longer be as certain as the straight numbers would suggest. While Lanchester’s laws seem logical, mathematically, studies by Turker Turkes, N.K. Jaiswal and D.L.I. Fitzpatrick have determined that they do not fit the results recorded within historical battle databases.⁵¹ That is the difference between actual combat and formulae, and demonstrates the weakness of the mathematical approach.

⁴⁹ Rowland, p. 3.

⁵⁰ Dupuy, *Understanding War*, p. 20.

⁵¹ Turker Turkes, ‘Fitting Lanchester and Other Equations to the Battle of Kursk Data’, Master of Science in Operations Research thesis, Naval Postgraduate School, Monterey, California, 2000. Dupuy, *Numbers, Predictions and War*, pp. 148- 150. N.K. Jaiswal found that one significant shortcoming of Lanchester’s equations was that they did not take into account the opponents manoeuvring on the battlefield. N.K. Jaiswal, *Military Operations Research: Quantitative Decision Making*, Boston: Kluwer Academic Publishers, 1997, p. 260. Dr. D.L.I. Fitzpatrick, ‘Do Lanchester’s Equations Adequately Model Real Battles?’, *RUSI: Royal United Services Institute for Defence Studies Journal*, 130:2, June 1985, pp. 25- 27.

The Second World War generated a significant quantity of data and has become the most studied war from a combat effectiveness perspective.⁵² Colonel Trevor N. Dupuy and staff of The Dupuy Institute constructed an extensive historical combat database which included force strengths, casualties inflicted and sustained, and weapons and terrain effects information.⁵³ The quantitative data was supplemented by qualitative data derived from a range of sources including war diaries, after action reports and interviews with participants from both sides in each battle. From all these sources, Dupuy was able to generate sufficient data from which to make an assessment of the relative combat effectiveness between any two combatants in the battles examined.⁵⁴ One of his most well known claims, taken up by a number of authors, including Martin van Creveld, was that German divisions were more combat effective than their American or British opponents.⁵⁵ Dupuy's methodology, and in particular his finding of German tactical superiority, was not without its detractors.⁵⁶ This aside, the analysis of an enormous number of battles led Dupuy to confirm what many others had known all along:

No two battles are alike. No matter how similar two combat situations may appear to be, there are inevitably many differences, no matter how slight in circumstances, and in the composition of the opposing forces. Anything that may

⁵² Engen, p. 5.

⁵³ 'In tribute to what Colonel Trevor N. Dupuy pioneered, and in an effort to pursue his goals, The Dupuy Institute continues to amass historical data and strives to refine their understanding of the complexities of modern warfare. The Dupuy Institute is committed to the original goals of the founders of operational research - the accumulation of recorded, detailed data from actual battlefield experience - and the utilization of actual battlefield experience to understand all dimensions of combat, including technological and human factors.' The Dupuy Institute, <http://www.dupuyinstitute.org/about.htm> accessed 17 July 2011.

⁵⁴ Dupuy, *Numbers, Predictions and War*, pp. 62, 95, 105. Most of Dupuy's analysis was at divisional level and above, occasionally at brigade level so unfortunately does not provide a direct comparison for 21 Battalion.

⁵⁵ Martin van Creveld, *Fighting Power: German and U.S. Army Performance, 1939- 1945*, London: Arms and Armour Press, 1983, pp. 5-9. Dupuy, *Numbers, Predictions and War: Using History to evaluate combat factors and predict the outcome of battles*, London: MacDonald and Jane's Publishers Ltd., 1979, pp. 104 and 106. The one exception to German superiority was the US 88th Infantry Division whose score put it in the middle of German effectiveness ratings, alongside the 3rd and 15th Panzer Grenadier Divisions and the XIII SS Corps. For more details about why the 88th Division was rated so highly, see Colonel T. N Dupuy and Gay Hammerman, 'The 88th Infantry Division and Combat Excellence', *Military Review*, October 1987, pp. 68- 79.

⁵⁶ French, pp. 8- 9. Dupuy provides a comprehensive rebuttal of criticism by Major John Sloan Brown in Colonel T.N. Dupuy, 'Mythos or Verity? The Quantified Judgment Model and German Combat Effectiveness', *Military Affairs*, October 1986, pp. 204- 210.

change between battles, or during a battle, may be termed a variable of combat, no matter what the reason for change or difference may be.⁵⁷

Noting the large number of variables that impacted on combat effectiveness, and no doubt wishing to highlight those which did the most to determine the outcome of battle in his opinion, Dupuy wrote that the key elements of combat effectiveness were ‘*probably* leadership, training/ experience, morale and logistics.’⁵⁸ By linking training and experience, Dupuy made the point, indirectly, that it was either combat experience, or the quality of training that replicates it, which made the difference to effectiveness. In other words, these were lessons learned. Dupuy also believed that success in combat was ‘directly influenced by the use a commanding officer makes of his manpower, time and space’ thus affirming, with particular significance to this study, the pivotal role of infantry unit commanders.⁵⁹ Dupuy also showed that a force’s “posture” relative to its opposition; whether it was above or below ground, attacking or in defence, also impacted on relative force strength, and therefore combat effectiveness. Quality of training, experience of units and their commanders, and the posture of the two opponents relative to each other, therefore needs to be included within the analysis.

Dupuy identified 73 separate variables of combat. These are listed in Appendix C. Dupuy’s variables are all relevant to combat effectiveness, although the data required to support them is daunting. Further, his mathematical approach relies on a significant amount of data being available on both combatants for a battle analysis to be conducted, including: troop numbers; types, quantities and ranges of weapons; terrain; and actual conditions of visibility. Such details are seldom obtainable, certainly in the battles that are the subject of this research, therefore, complex calculations will not be a feature of the analysis undertaken in this study.

Scholars and operations analysts who have examined combat effectiveness conducted their research by analysing historical combat databases, or as in von Clausewitz’s case,

⁵⁷ Dupuy, *Numbers, Predictions and War*, p. 32.

⁵⁸ Dupuy, *Numbers, Predictions and War*, p. 39. Dupuy’s use of italics.

⁵⁹ Dupuy, *Numbers, Predictions and War*, p.105. A simpler explanation of the QJMA (than obtainable from *Numbers, Predictions and War*) can be gleaned from Col. T.N Dupuy, ‘A Quantifiable Variable Predicting the Element of Surprise in Combat’, *Army*, May 1977, pp. 44- 51. My italics on the word ‘probably.’

they created their own, based on their personal research or experience.⁶⁰ In terms of this study, there are two significant issues with using existing historical databases. First, the battles examined and the databases the studies were based on were almost exclusively from large scale division or higher operations, not battalion level.⁶¹ Second, the databases do not include any data on New Zealand battles, unless one cares to base one's battalion level analysis on data for the *entire* Eighth Army at El Alamein or for *all* Allied forces involved at Monte Cassino, for instance. There is no known database of New Zealand battalion-level battles to draw upon; it was therefore necessary to gather the data required, from a range of sources.

Operations researcher, Philip Hayward, offered a definition for combat effectiveness which would be acceptable for a future-based assessment on a theoretical battle, rather than for an historical one like Dupuy. Hayward's definition was 'the ability to prevail in combat, to carry out the assigned [combat] mission successfully.'⁶² This coincides with the mission success focus of this study's working definition. Hayward qualified his definition of combat effectiveness however, by stating that the probability of a unit's success in combat was in relation to a "typical" or "most probable" enemy force, in a "typical" environment and whilst undertaking a "typical" mission.⁶³

Hayward argued that there is a strong relationship between combat effectiveness, the mission assigned to the unit, the environment where combat takes place, and the enemy. This suggests that combat power, on its own, is not an effective measure, for battle takes place on actual terrain against a real opponent, and these are not *typically* accounted for in assessments of combat power. What he was suggesting was that a comparison of force strength, as a measure of combat effectiveness was pointless without terrain and enemy

⁶⁰ A count of the battles listed at the back of *On War* suggests von Clausewitz examined 101 battles, engagements, encounters and sieges. von Clausewitz, *On War*, pp. 867- 870.

⁶¹ Stephen Biddle analysed Operation *Michael* from 1918, an operation involving three German Armies, and two British ones, Operation *Goodwood* from World War II, where the German strength alone included three infantry divisions and three panzer divisions, and Operation *Desert Storm* from 1991. Coalition troop strength in *Desert Storm* was 795,000. Biddle, *Military Power*, pp. 82- 85, 109 and 133. The HERO database for World War II battles used by Col T.N. Dupuy consisted of over 90 battles, none involving less than a division. Dupuy, *Numbers, Predictions and War*, pp. 234- 237.

⁶² Philip Hayward, 'The Measurement of Combat Effectiveness', *Operations Research*, 16:2, (1968), p. 316.

⁶³ Hayward, p. 319.

factors being taken into account. In addition to examining terrain's effect on each battle, it will be important to establish what 21 Battalion's mission was, for each analysis. This was not always clear, as operations orders were seldom able to be located, nor were missions recorded in the unit war diary or official history.

As an Operations researcher, Hayward's emphasis was on assessing the *potential* combat effectiveness of a unit through simulation and modelling, rather than deriving an actual measure based upon historical analysis. Nevertheless, the relationship he established between the enemy, the assigned mission (of both combatants) and mission accomplishment is sound and will be used, where applicable. In particular, as it relates to the setting for combat; the assignment of mission and allocation of resources to the unit will be key aspects, all of which ought to have been based upon intelligence, planning and coordination. A key determinant of 21 Battalion's combat effectiveness, irrespective of casualty ratios or tactical effectiveness, will be whether it successfully completed its assigned mission or not.

Mission Success and Ratio of Kills

The third approach to combat effectiveness theory provides a crude measure based on the ratio of casualties inflicted and sustained by opponents in combat. In 'Swinging the Sledgehammer: The Combat Effectiveness of German Heavy Tank Battalions in World War II', Major Christopher Wilbeck examined the combat effectiveness of German Tiger tank battalions.⁶⁴ Wilbeck used two criterion to determine their combat effectiveness; kills to losses, and mission success. Kills (by Tigers) and losses (of Tigers) provided simple measures for him to use, as the Germans maintained meticulous records for their Tiger tank battalions. Wilbeck's thesis received some criticism when it was suggested that his assessment was based on over-inflated German claims of tank kills rather than

⁶⁴ Major Christopher Wilbeck, 'Swinging the Sledgehammer: Combat Effectiveness of the German Heavy Tank Battalions in World War II', MA Thesis in Military Art and Science, U.S. Army Command and General Staff College, 2002.

actual losses.⁶⁵ Despite this, his measures are deemed suitable; however, his method highlights the risk of assessing combat effectiveness entirely, or largely, on casualty data.

Mission success was less straightforward for Wilbeck to determine than kill ratios, because German combat records did not always specify particular missions. When they did, they did not necessarily state if the mission was achieved. Wilbeck had to deduce this by reading official German and Russian after action reports and from the accounts of veterans.⁶⁶ The reality, though, is that such reports are seldom available. Nevertheless, a study of combat effectiveness needs to identify the mission assigned to 21 Battalion, and where possible, casualties sustained by them and their opponents.

Although he never stated it, a definition for combat effectiveness based on Wilbeck's thesis, would be "success in combat, through a positive kill ratio and mission accomplishment." Apart from Wilbeck's positive kill ratio criteria, this is consistent with this study's working definition. Wilbeck's research methods suggest that a proper examination of combat effectiveness requires a search beyond official records. Therefore, where available, the reports of 21 Battalion's opponents have been examined, supplemented by accounts of veterans from both sides, mindful of the comment about the potential for skewed casualty figures and accounts.

The Sociological Approach

The fourth approach is a sociological one. It is epitomised by Napoleon's dictum that "in war the moral is to the physical as three is to one."⁶⁷ This statement, often repeated, sometimes in slightly different form,⁶⁸ recognises that soldiers are humans with all their

⁶⁵ Michael Kenny, Re: German Unit Combat Effectiveness, <http://forum.axishistory.com/viewtopic.php?f=19&t=142995>, retrieved 28/03/2010 at 6:10 p.m.

⁶⁶ Wilbeck, 'Swinging the Sledgehammer', pp. 8- 10 and 129. It would appear the Germans were good record keepers. Determining loss ratios (numbers of opposition tanks destroyed: Tigers lost) was still difficult. Part of the problem was correctly determining opposition losses- a tank might not actually be destroyed; it could be recovered and repaired. Loss ratios also had to be adjusted to account for the high proportion of Tigers which were destroyed by their own crews rather than as a result of enemy action, once the vehicles had become disabled, or had been bypassed. Of the fourteen Tiger battalions, ten had more than 30% of their tanks destroyed by their own crews, four had more than 50%.

⁶⁷ Dupuy, *Understanding War*, p. 11.

⁶⁸ For example, 'Moral or morale?' *The British Army Review*, Number 141, Winter 2006/07, p. 55.

fears and frailties, and that they are nevertheless a significant determinant of success or failure in battle. Indeed, John McManus observed that ‘Man himself has always been the decisive factor in combat.’⁶⁹ The difference since Napoleon’s era is the dispersed battlefield resulting from increased range and lethality of weapons. Soldiers are no longer formed into tightly packed columns or ranks. Now they are dispersed almost every time they are needed and more than ever, commanders are reliant on the individual soldier’s motivation to fight. Brigadier Shelford Bidwell wrote of the “empty battlefield” that:

The individual soldier sees little more than the odd tank, or a comrade. The enemy is invisible and manifests itself only to fire. The soldier is taught and encouraged to take cover, a situation in which he may discard his leader and, if skilful, avoid taking part in the battle at all.⁷⁰

Bidwell noted that the true assessment of morale is not based on cheerful responses to visiting senior officers, its ‘real measure is performance in battle and the ability to stand up to prolonged operations, fear, fatigue and ill-health.’⁷¹ The capacity to overcome the horrors and privations of combat in order to keep fighting has been labelled the “will to fight”, *and it applies in spite of the most adverse human and environmental factors.*

Jonathan Fennell used the North African campaign as a case study to explore the relationship between morale and combat performance. Morale, he decided, was best summed up in a 1946 paper, written by Field Marshal Bernard Montgomery, which defined morale as ‘endurance and courage in supporting fatigue and danger... the quality that makes men go forward in attack and hold their ground on defence.’⁷² Fennell also made a strong case for the role of leaders in building and maintaining morale, and for the positive effect success in battle has on morale. Of course, the reverse in both cases would also be true.

⁶⁹ John C. McManus, *Grunts: Inside the American Infantry Combat Experience, World War II through Iraq*, New York: New American Library, 2010, p. 6.

⁷⁰ Shelford Bidwell, *Modern Warfare: A Study of Men, Weapons and Theories*, London: Allen Lane, 1973, pp. 126- 127.

⁷¹ Bidwell, p. 127.

⁷² Jonathan Fennell, *Combat and Morale in the North African Campaign: The Eighth Army on the Path to El Alamein*, Cambridge: The Cambridge University Press, 2011, p. 9.

In *The Basic Principles of Operational Art and Tactics (A Soviet View)*, Colonel Vasilii Savkin defined combat effectiveness as ‘the capability of troops to conduct decisive combat operations and fully accomplish the combat mission to destroy the enemy under any conditions.’⁷³ Savkin’s definition supports this study’s working definition. Like Napoleon, Savkin considered the morale and physical state of personnel to be as important as the unit being up to strength in manpower and weapons, that is, more important than combat readiness. Savkin reinforced the significance of the moral component in being combat effective, through the exercise of leadership and a focus on the maintenance of morale.⁷⁴ Combined with Dupuy, Bidwell and Fennells’ assessments, this leads one to conclude that there is a significant command and leadership component to combat effectiveness, and a separate, but related one, pertaining to the led, which accounts for morale and individual factors.

Synthesising the approaches

The combat effectiveness literature reviewed so far represents four different perspectives of what soldiers, military theorists and analysts believe are the determinants of victory in land combat. While they differ, they also overlap in certain common aspects, such as the significance of leadership and morale.

The work of two separate researchers, N.K. Jaiswal and Charles Hawkins, included the reduction of many factors into more manageable categories. They did this because they each recognised that the sheer number of combat effectiveness variables made assessment cumbersome. Jaiswal grouped his factors into four key categories; force strengths, human factors, operational variables and environmental variables.⁷⁵ Hawkins identified 25 variables which contributed to the Combat Effectiveness Value (CEV) of a unit.⁷⁶ He grouped his into three categories that equate to three of Jaiswal’s four, although Hawkins

⁷³ Vasilii YE Savkin, *The Basic Principles of Operational Art and Tactics (A Soviet View)*, Moscow, 1972, (transl and published by the US Air Force) U.S. Government Printing Office, p. 258.

⁷⁴ Savkin, pp. 103- 105 and 258- 259.

⁷⁵ N.K. Jaiswal, *Military Operations Research: Quantitative Decision Making*, Boston: Kluwer Academic Publishers, 1997, p. 258.

⁷⁶ Charles F. Hawkins, ‘Combat Effectiveness: A Brief Survey’, undertaken for the United States Marines Corps War Gaming and Simulation Center, 28 August 1990. <http://www.herolibrary.org/p55.htm> retrieved 28 Jan 2010.

did not include factors based on force strength. This is a shortcoming of his model, as force strength is a predictor of victory, as a number of sources have stated. In Hawkins' assessment, behavioural variables are the most important determinants of the CEV of a unit. His behavioural factors included leadership, morale, training, and [combat] experience, making his findings consistent with Dupuy, Savkin and, with respect to the significance of leadership, with Fivecoat, von Clausewitz and Dupuy.

The literature reviewed can be further reduced into two broad and interrelated aspects of combat effectiveness. The first reflects the 'hard' aspects, a tactical approach, which reinforces the impact of numbers of combatants, numbers and types of weapons, firepower, doctrine, tactics, and organisation. The second and equally valid approach is a sociological one which reflects the 'soft' aspects; morale, cohesion, teamwork and leadership. The hard and soft aspects need to be considered together for a valid and thorough analysis of combat effectiveness, not as alternatives.⁷⁷

The interaction of combat effectiveness factors, is supported by a range of authors and thus supports the notion of battle being dynamic.⁷⁸ This suggests that the analytical model developed to support this study must reflect this interaction. To explore and develop this, contemporary British fighting power doctrine is examined next.

Contemporary Fighting Power Doctrine

British military doctrine offers a model of fighting power that reflects the two broad approaches, outlined above, within its tactical (conceptual and physical) and sociological (moral) components. According to British military doctrine, fighting power provides an 'understanding of what constitutes the ability to fight and to succeed', it 'defines an

⁷⁷ Ali Cakan called these the objective and relative variables in his study of the impact of nationality on combat outcomes. He noted that the objective variables were easy to measure whereas the relative variables (such as leadership) were 'based on the judgement of military historians.' Ali Cakan, p. 12.

⁷⁸ A number of authors have linked factors. Brigadier J.G. Smyth, 'Ground: The Dictator of Tactics', *Military Affairs*, Vol. 8, No. 3, Autumn 1944, pp. 173- 176. Hew Strachan, 'Training, Morale and Modern War', *Journal of Contemporary History*, Vol. 41, No. 2, Apr. 2006, pp. 211- 227. T.H. E. Travers, 'Technology, Tactics and Morale: Jean de Bloch, the Boer War, and British Military Theory', *Journal of Modern History*, Volume 51, June 1979, pp. 264- 286. Andrew Haughton, *Training, Tactics and Leadership in the Confederate Army of Tennessee: Seeds of Failure*, London: Frank Cass Publishers, 2000.

Army's ability to fight.⁷⁹ In this respect, fighting power is linked to combat effectiveness, but it will be shown that it is insufficient, on its own, to support an analysis of it. According to British military doctrine, fighting power is made up of the interrelated components shown in Figure 1.1 below. It is assumed that weapons are considered to be a component of the “equipment” category.

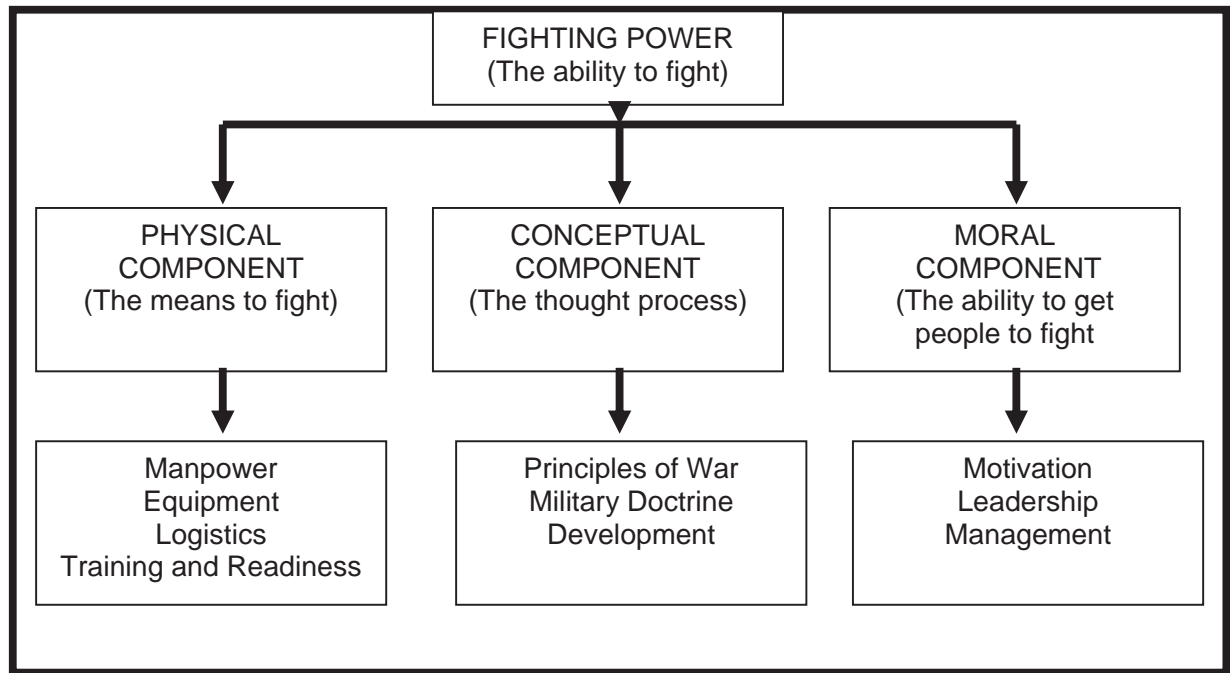


Figure 1.1: Fighting Power⁸⁰

The official British fighting power model at Figure 1.1 was adapted by Richard Hayman-Joyce. He argued that the model was useful, but not intuitive. The simpler version he provided, which grouped the conceptual and physical components together is shown in Figure 1.2 below.⁸¹ In Hayman- Joyce's model, it is deduced that weapons, tactics and the acquisition of intelligence are all components of the “means to fight”, even though they have not been specifically identified by him as such. His construct provides a different perspective of the moral component from the fighting power model in Figure 1.1. Whereas the official model's moral component emphasises the externalised factors of

⁷⁹ *Design for Military Operations: The British Military Doctrine*, 1996, no page number.

⁸⁰ Figure 3 “The Hierarchy of Fighting Power”, *Design for Military Operations*, no page number.

⁸¹ Richard Hayman- Joyce, ‘Fighting Power’, *The British Army Review*, Number 141, Winter 2006/07, p. 57. Hayman-Joyce's model built on a letter to the editor at Captain R.L. Hayman-Joyce, ‘Fighting Power’, *The British Army Review*, Number 132, Summer 2003, p. 55.

commanding, leading and managing as the means of getting men to fight, Hayman-Joyce’s model highlights the internalised “will to fight” and the human and psychological factors surrounding the motivation of individuals and small groups. Both perspectives are valid and will be carried forward into the framework model.

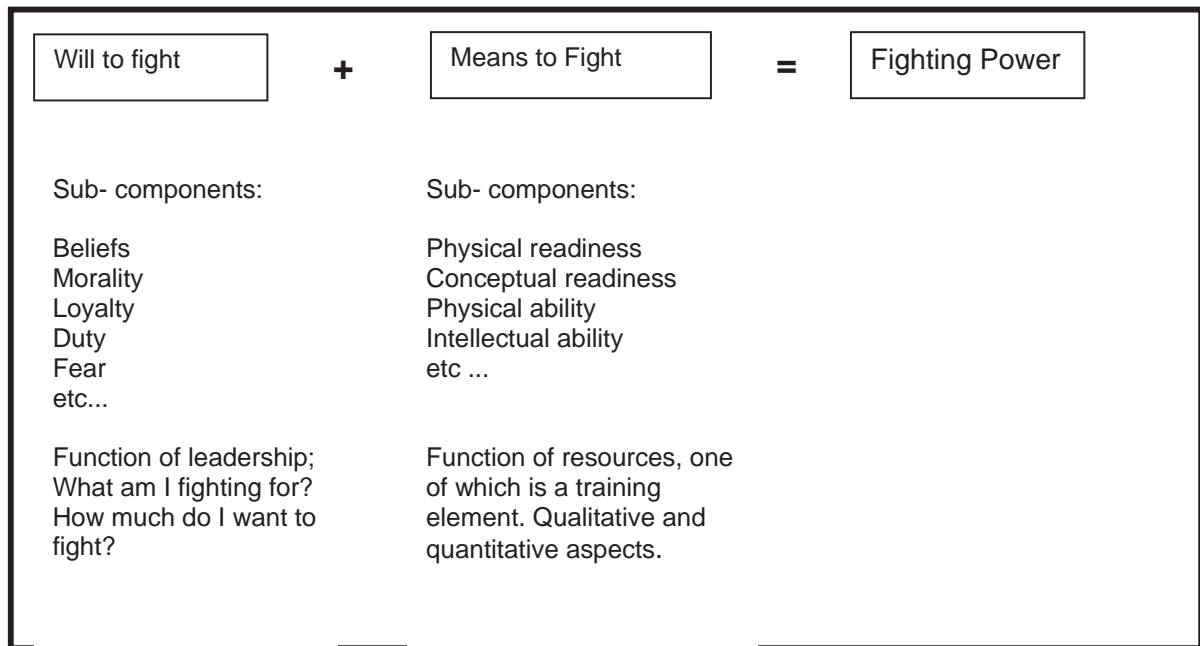


Figure 1.2: Hayman- Joyce’s alternative model of Fighting Power⁸²

Bringing the Approaches Together: Developing the Framework Model

The approaches to combat effectiveness reviewed so far, and more specifically the components that their proponents had each identified, can be condensed into four broad categories (as opposed to approaches) that provide this study with the means to systematically analyse a unit’s fighting power, and to identify those factors that contributed to it during each of the battles examined. Each has been derived by grouping similar components into a discrete category.

The first category is Force Strength. This comprises the components, elements and variables identified in the literature which give a unit its strength, including the numbers of troops directly involved in the battle, the major weapon systems employed, and their

⁸² Richard Hayman- Joyce, ‘Fighting Power’, p. 57.

effects. This supports those researchers and theorists that indicated numerical strength was at least a predictor of victory.

The second category, of Tactics, Doctrine and Training, reflects the relationship between how a battle could have been fought, and the way it was under real circumstances, noting that ‘Doctrine is not an end in itself, and cannot of itself defeat the enemy.’⁸³ This category reflects what Fivecoat and others labelled “tactical effectiveness”, and Biddle called “force employment”. It also acknowledges the Millett and Murray findings about the significance of training as an element of fighting power.

The categories of Force Strength and Tactics, Doctrine and Training are the “hard” components of fighting power. These are most the easily quantified.

Two “soft” categories can be deduced from the literature reviewed so far. One is Command and Leadership (which reflects the leader), while a Sociological category reflects the internalised motivation of individuals and teams, which includes factors related to morale, teamwork, loyalty, cohesion and the “will to fight.” Although the two categories are considered separately in the battle analysis chapters, they are in fact intertwined, for as Cyril Falls acknowledged, the “moral element” ‘comprises both the function of leadership and the courage of the troops.’⁸⁴

Together, these four categories comprise the fighting power of a unit. Thus, as deduced from the above research, a model to portray each category (represented by one of the four pillars) contributing to the fighting power of a unit, is offered at Figure 1.3.

Many of the factors identified within the research were deemed to be inter-related. Millett and Murray noted how tactical aspects (such as surprise and training) impacted on morale and troop cohesion. Fivecoat acknowledged that sociological aspects were an enabler of tactical effectiveness. Dupuy recorded the effect that posture and tactics had on the relative strengths of two combatants. Both Bidwell and Savkin cited the relationship

⁸³ Major R.N. Bryson, ‘The Once and Future army’, *The British Army Review*, Number 120, December 1998, p. 87.

⁸⁴ Falls, *Ordeal by Battle*, p. 40.

between leadership and morale. Therefore, even though the four categories (represented by the pillars) of the fighting power model are shown separately, it is not intended that they, and the factors within them, be interpreted as mutually exclusive or unaffected by any others from a different category.

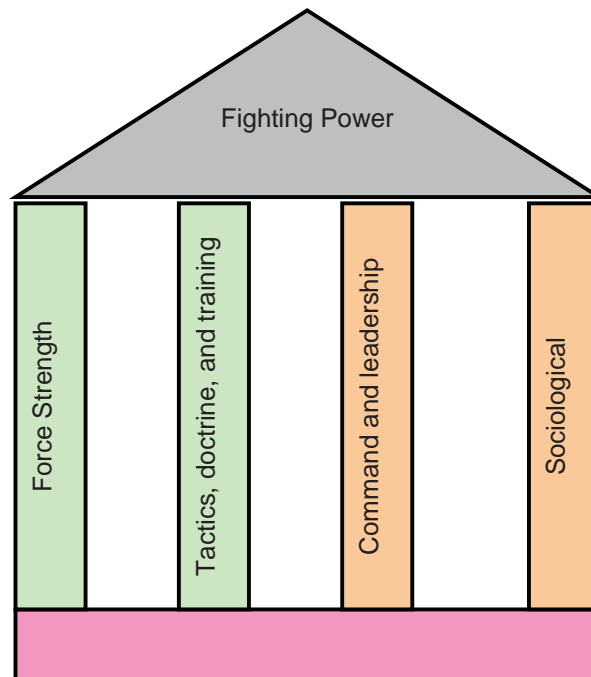


Figure 1.3: A Model of Fighting Power

The fighting power model proposed above is still not sufficient for an analysis of combat effectiveness. Noting that battle is a dynamic, a systematic analysis of combat effectiveness *must consider the fighting power of both opponents*, because combat effectiveness is always relative. Moreover, none of the fighting power categories in the model account directly for the effect of terrain, vegetation, season, visibility or weather's 'profound effect on the nature and course of combat.'⁸⁵ These effects provide a further battlefield dynamic, by masking, degrading or enabling movement, observation, and firepower. Engen wrote that tactical success proved elusive for Canadian infantry 'owing to the challenges presented by the terrain, the equipment, the enemy and the doctrine.'⁸⁶ Terrain and the combined effects of vegetation, season, weather, light conditions and

⁸⁵ Harold A. Winters, *Battling the Elements: Weather and Terrain in the Conduct of War*, Paperback Edition, Baltimore: The Johns Hopkins University Press, 2001, p. 4.

⁸⁶ Engen, p. 146.

visibility are significant, for *where* a battle was fought influences *how* the fighting was undertaken.⁸⁷ *Infantry in Battle* specifically identified terrain (linked also to weather conditions) as a variable of combat. It emphasised the impact of terrain, and the need for units to make the best tactical use of it, when it stated that ‘Maneuvers that are possible and dispositions that are essential are indelibly written on the ground’, and ‘Although small infantry units cannot choose terrain over which they will attack on or on which they will defend, they can make the best use of it.’⁸⁸ Dupuy’s variable effects lists 11 factors associated with the impact of terrain and weather on combat. (See Appendix C, categories B and C). Taken together, these additional variables constitute a further and necessary combat effectiveness category for this study; Battlefield Effects. The battlefield is neutral from the perspective that it does not take sides; however, as will be shown in each battle analysis, it has the effect of modifying the relative combat power of combatants, either permanently or temporarily, and therefore has a significant impact on combat effectiveness. It must, therefore, be reflected in any valid model or analysis of combat effectiveness.

So that the battlefield effects on combat effectiveness can be analysed in a consistent manner across each of the eight battles examined, the contemporary OCOKA template will be used. The template, based on U.S. Army doctrine, is used by the New Zealand Army to analyse the ‘military aspects of terrain to determine its effect on ... operations.’⁸⁹ OCOKA is a mnemonic made up from the first letter of each of the template’s five elements. The OCOKA template will be used to analyse battlefield effects in all subsequent battle analysis chapters. The elements are listed Table 1.1, accompanied by a brief explanation.

Observation and Fields of Fire	This element relates to how far forces can see and produce aimed fire with their weapons. Long fields of fire and good observation generally favour the defence, although they can be of assistance to an attacker for locating an enemy position and suppressing the defence with fire. Observation and fields of fire can be obscured by terrain, vegetation, weather and light. At night, weather and the amount of moonlight also have a significant impact on combat effectiveness.
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⁸⁷ Michael Burleigh, *Moral Combat: A History of World War II*, London: Harper Press, 2010, p. 361.

⁸⁸ *Infantry in Battle*, The Infantry Journal Incorporated, p. 1 and pp. 69- 78.

⁸⁹ Headquarters, Department of the Army, *Field Manual 34-140 Intelligence Preparation of the Battlefield*, Washington, DC, 8 July 1994, pp. 2-10 to 2-24. OCOKA stands for Observation and Fields of Fire, Cover and Concealment, Obstacles, Key Terrain and Avenues of Approach.

Cover and concealment	Cover is protection from the effects of direct and indirect fire (including blast effects and shrapnel) afforded by terrain masking, by occupying sangars or trenches, hardened bunkers or buildings. Cover usually provides an element of concealment. Concealment is the ability to be unobserved by an enemy. Terrain, vegetation and dark aid concealment of attackers and defenders, and also enhance surprise. Concealment can be achieved through the use of camouflage. Concealment does not necessarily provide cover (protection) from enemy fire.
Obstacles	Obstacles are natural or artificial barriers to movement of soldiers or vehicles. Natural obstacles can include ground slope, bodies of water, defiles and vegetation. Artificial obstacles are man made, such as barbed wire and mines (anti-tank and anti-personnel), the deliberate cratering of roads or the demolition of tunnels and bridges. In all cases, the delay created may be permanent or temporary. Much of the delay achieved is dependant on the extent of the obstacle, the ability of the defender to prevent its repair (or removal), and the attacker's ability to repair or circumvent it.
Key Terrain	Key Terrain includes Vital Ground. Vital Ground is that location which allows the possessor to achieve their mission. Locations that are designated as Key Terrain are those whose possession greatly assists a unit in achieving its mission.
Avenues of approach	Avenues of approach are the routes an attacker can use to get to, around or behind a defender. Some may be viable for tanks or vehicles, and others only for dismounted troops. A defender tries to deny as many avenues of approach as possible within the limitation of the troops and resources available.

Table 1.1: The OCOKA template for identifying battlefield effects on combat effectiveness

In addition to Battlefield Effects, there are two further categories relevant to a study of combat effectiveness, but which have not been reflected in the five related so far.

The first of these is the Operational Setting. This category represents the pre-conditions of battle, those factors largely beyond the control of the combatants, which were directed by a higher headquarters, such as the assignment of the unit's mission, determination of battle location (often a function of the mission) and the allocation of supporting arms, such as tanks and artillery. This replicates (in a single category only) Millett and Murrays' model,⁹⁰ which acknowledges that the tactical level of effectiveness overlaps, and is affected by, the operational and strategic levels. The Operational Setting category also reflects Hayward's linking of combat effectiveness to mission assigned, and by extension, to the resources (such as artillery, tanks and engineers) allocated in support of the unit being analysed.

The second additional category relates to chance, luck and von Clausewitz's concepts of friction and fog of war. Friction was first identified by von Clausewitz, when he was describing the nature of war. He wrote that:

⁹⁰ Millett and Murray, pp. 2- 11.

Everything in war is very simple, but the simplest thing is difficult. The difficulties accumulate and end by producing a kind of friction that is inconceivable unless one has experienced war.⁹¹

Friction, he stated, 'is the force that makes the apparently easy so difficult.'⁹² He also noted that a 'battalion is made up of individuals, the least important of whom may chance to delay things or somehow make them go wrong.'⁹³ Chance, mistakes, and friction, all serve to make combat a dynamic activity, and make the fog of war a factor worthy of examination in the battle analysis chapters. Ali Cakan's study identified that luck was a factor in combat.⁹⁴ Luck plays a part, and may ultimately decide, or at least influence, the final outcome of battle.⁹⁵ A further broad category is required, therefore, to account for luck, friction, chance or the 'fog of war.' A Fog of War category in the framework model will capture the appropriate combat effectiveness factors.

There are, therefore, seven broad categories, based on the literature reviewed thus far, that will allow each battle to be analysed for key combat effectiveness factors in a consistent and structured manner. It is emphasised that these are categories only, not the detailed combat effectiveness factors that each of the categories covers. Although some factors have already been touched upon within the literature reviewed, they have not been carried forward individually into the categories, as the identification of the factors (within each category), and how they impacted on 21 Battalion's combat effectiveness, is the output of each battle analysis chapter.

Battle is dynamic, and involves at least two opponents. Therefore, a significant limitation of the fighting power model offered in Figure 1.3 as a tool to analyse combat effectiveness, and one could argue the same for the models at Figures 1.1 and 1.2, is that they do not explicitly, or intuitively, take into account the fighting power of the opponent.

⁹¹ A fuller explanation of the concept of friction is to be found within von Clausewitz, *On War*, pp. 138-140. Training and doctrine are designed to reduce friction, however nothing can remove it entirely. Falls characterised weather as a cause of the friction in war. Falls, p. 45.

⁹² von Clausewitz, *On War*, p. 140.

⁹³ von Clausewitz, *On War*, p. 139.

⁹⁴ Ali Cakan's study found that luck can have a significant influence on the outcome of battles. Cakan, p. 50.

⁹⁵ Dupuy, *Understanding War*, pp. 29-30.

Both combatants must be reflected, for combat effectiveness is always relative. A framework combat effectiveness model, at Figure 1.4, attempts to achieve this requirement. The framework model is a start point- it will be updated on the basis of the battles analysed, and re-presented in the study's Conclusion, complete with factors identified. The framework model portrays combat as a clash of arms; the collision, if you like, of the fighting power of the two opponents, red and blue, (each affected, to some degree, by their own Operational Setting), and taking place at a particular time and location (represented by Battlefield Effects- green) and subject to the catch-all for luck, friction and chance, called Fog of War- indicated in the model by the grey area. The collision of all these dynamics, at one point in time and space- on the battlefield- is reflected in the circle labelled "Cbt E", where the outcome, being combat effective, or not, is determined.

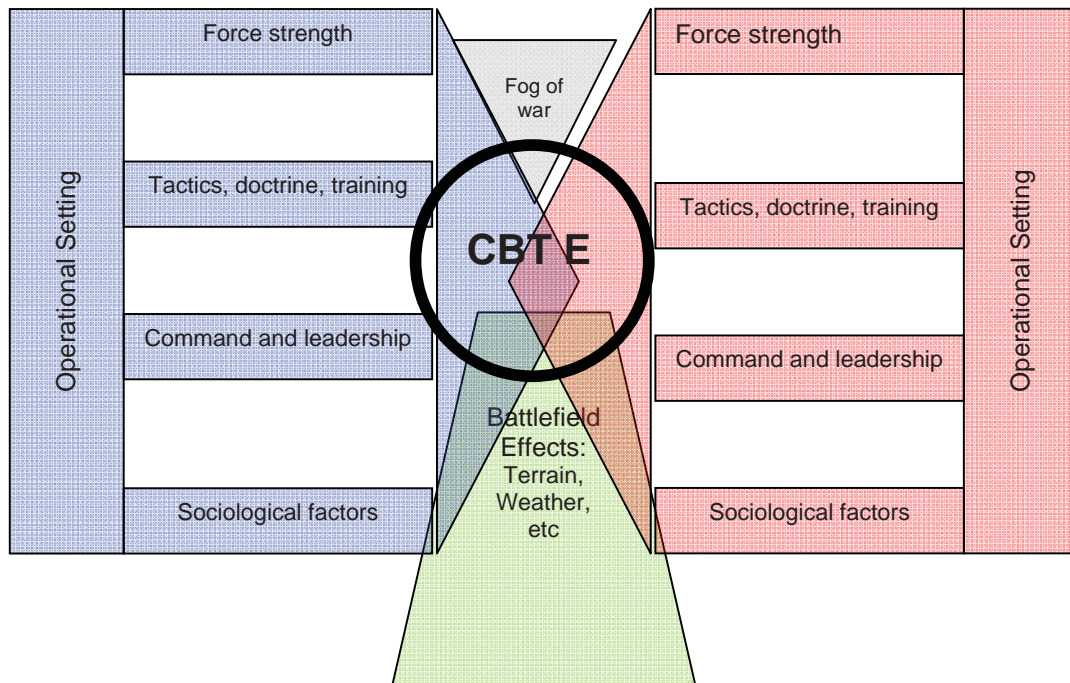


Figure 1.4: A framework model of Combat Effectiveness

Now that a framework model has been developed, the final section of this chapter reviews some of the relevant New Zealand Second World War literature. The aim of this final section is to determine whether New Zealand literature offers any further combat effectiveness insights than those already gleaned from the international arena in the previous sections of this chapter, or requires the framework model to be modified.

New Zealand Second World War combat literature

Apart from John McLeod's insightful *Myth and Reality*, there is a paucity of published analyses of New Zealand Second World War infantry combat. McLeod explored the Anzac myth and exposed some of the foibles and failings of New Zealanders at war. His study was across the entire 2nd New Zealand Expeditionary Force, and the 3rd Division, rather than on any one unit in particular. He also examined wider issues such as conscription, discipline and morale, rather than dissect combat performance.⁹⁶ His was more a social study than a battle analysis. Unit performance was commented upon occasionally. For instance, there was a short account of 21 Battalion's failure at the Pinios Gorge in Greece.⁹⁷

There has only been one scholarly study focused on a New Zealand Second World War infantry battalion. Pete Connor examined how the 24th (Auckland) Battalion acquired military experience and knowledge and then applied what it had learned to its subsequent operations. He found increased combat *experience* within the unit did not necessarily translate into improved combat *performance* overall. In particular, as it relates to this thesis, he concluded '... levels of experience [were] no 'silver bullet' in determining the fighting effectiveness of a unit.' What counted more was the nature of the experience and where that experience resided in the unit. As a result, the next chapter will identify those original unit members with previous combat (First World War) experience. Connor also concluded that the experience of combat could actually be an 'inhibitor to aggression' in some cases.⁹⁸ Clearly, experience is a factor, and will be reflected in the tactics, leadership and sociological components of the framework model.

Two authors who focused on the role of New Zealand infantry commanding officers in the Second World War provide insights into command and leadership at unit level. In "Commanding Officers of the Infantry Battalions of 2nd New Zealand Division," Roger

⁹⁶ John McLeod, *Myth and Reality: The New Zealand Soldier in World War II*, Auckland: Heinemann Reed, 1986.

⁹⁷ McLeod, pp. 31-35.

⁹⁸ Pete Connor, 'Finding Ways to Survive: 24 (Auckland) Battalion and the Experiential Learning Curve', M.Phil thesis, Massey University, 2007, pp. 152- 153.

McElwain reviewed the performance of 80 COs. He found that the key requirements for successful command on operations were ‘military experience, respect from the soldiers based on practical military knowledge and shared experiences, confidence, aggression, physical courage, command well forward [and] the ability to organise and carry out tasks.’⁹⁹ Successful unit command was about getting things done and exerting a personal influence on the battle.

Monty Soutar analysed the leadership of the six Maori COs of 28 (Maori) Battalion. He endorsed McElwain’s findings about COs generally, and in noting the tribal responsibility held by the Maori officers, he made the observation that ‘as officers, they had been entrusted with the added responsibility of bringing home alive as many of their kin as possible.’ Command was not about getting the task done at an unnecessary human cost; this is consistent with General Smith’s statement, and the caveat in this study for being combat effective, of the unit remaining in such a condition that it is able to complete follow-on tasks resulting from the mission. Soutar also noted that Maori tradition was for leadership to be from the front, and this resulted in a significant casualty rate among commanding officers.¹⁰⁰ A high casualty rate amongst infantry COs was not just a feature of the Maori Battalion; the same trend was found in all infantry battalions of the New Zealand Division.¹⁰¹

There have been a number of studies of General Sir Howard Kippenberger, one of New Zealand’s best known and most revered combat commanders.¹⁰² The early chapters of the account of his Second World War service deal with his efforts to create an effective

⁹⁹ Roger McElwain, “Commanding Officers of Infantry Battalions of the 2nd New Zealand Division” in Glyn Harper. and Joel Hayward, (eds), *Born to Lead? Portraits of New Zealand Commanders*, Auckland: Exisle Publishing Limited, 2003, p. 190. This was all commanding officers (less 28 Battalion) who had commanded for longer than two weeks. Factors included in his study included age at the time that the officers were in command, their length of time in command, military background and civil occupation prior to their active service.

¹⁰⁰ Monty Soutar, “Maori Commanders of 28 Maori Battalion”, in Harper and Hayward, pp. 205- 206. Soutar did not include the first two commanding officers, who were both *pakehas*, as his study focused on the Maori officers who commanded the unit.

¹⁰¹ Roger McElwain, “Commanding Officers of Infantry Battalions of the 2nd New Zealand Division” in Harper and Hayward, p. 185.

¹⁰² Glyn John Harper, , “Kip” Major General Sir Howard Kippenberger, KBE, CB, DSO and Bar, ED: A Study of Command’, PhD in Philosophy, University of New England, 1996. Glyn Harper, *Kippenberger: An Inspired New Zealand Commander*, Auckland: HarperCollins Publishers (New Zealand) Limited, 1997. Denis McLean, *Howard Kippenberger: Dauntless Spirit*, Auckland: Random House New Zealand, 2008.

infantry battalion.¹⁰³ A First World War veteran who continued to serve in the Territorial Force between the wars and who undertook a methodical study of military history, Kippenberger commanded the 20th Battalion with distinction in Greece and Libya. He made it abundantly clear within *Infantry Brigadier* that training was an essential activity for being combat effective when he wrote, for example, ‘many times in Greece I was thankful for our careful training in the procedure of issuing orders and our innumerable exercises and discussions on it.’¹⁰⁴ On Crete, Kippenberger was given command of 10 Brigade, a mixed force of composite troops; Greeks and his own 20th Battalion. In the Middle East he commanded the 20th Battalion again, in Libya. He was eventually appointed to command 5 Brigade, of which 21 Battalion was one of his three infantry units. With three battalions under his command, Kippenberger’s personal conviction that training was essential was applied within his brigade. His approach reinforced the need for training, experimentation and for the application of foresight into the type of operations likely to be undertaken, as a means to develop combat effectiveness.

Kippenberger’s belief in the value of training and experimentation was also held by one of his accomplished contemporaries, Major General Harold Barrowclough, whose Second World War service was with the 2nd New Zealand Division in the desert initially, but he then went on to command 3rd New Zealand Division in the Pacific. John Crawford wrote that ‘Barrowclough had established a reputation as a believer in hard training and had always taken a very close interest in the training of units under his command.’¹⁰⁵ His men experimented with their personal equipment in jungle conditions and ‘... developed Barrowclough’s ideas about mixed arms combat teams.’¹⁰⁶

Kippenberger and Barrowclough both believed in the value of training and each ensured that their subordinates took this further by experimentation so as to adapt their procedures, equipment and tactics to be combat effective in the type of operations anticipated, and in the terrain and climate they were deployed. Command direction to

¹⁰³ Major-General Sir Howard Kippenberger, *Infantry Brigadier*, London: Oxford University Press, 1949, pp. 1- 45.

¹⁰⁴ Kippenberger, *Infantry Brigadier*, p. 26.

¹⁰⁵ John Crawford, ‘A campaign on two fronts’, in John Crawford (ed.) *Kia Kaha: New Zealand in the Second World War*, paperback edition, Melbourne: Oxford University Press, 2002, p. 141.

¹⁰⁶ Crawford, ‘A campaign on two fronts’, p. 146.

undertake thorough training is an additional insight from the New Zealand literature. Denis McLean's study noted that Kippenberger:

immersed himself in bringing the battalion up to scratch. Day by day, week by week, he put them through their paces... weapons training, deploying, learning to move and act together, digging-in, the advance and the retreat, night manoeuvres...¹⁰⁷

Kippenberger brought his unit up to a high standard. By his energy and drive, his focus and insistence on high standards with the basics, he made it '... into a proud and effective 20th Battalion.'¹⁰⁸ The New Zealand combat experience therefore reflects the need for hard and thorough training and suggests that it is a top-down directed activity.

Haddon Donald started the war as a subaltern in the 22nd (Wellington) Battalion and rose to command the unit in May 1944.¹⁰⁹ He highlighted that one of the tactical adaptations which favoured the New Zealanders over the Germans was the change from day to night attacks. He attributed a run of New Zealand successes, particularly after El Alamein, to this change in tactics. Night attacks were difficult and confusing operations, therefore best undertaken by veteran troops who could cope with the unexpected, who were well led and were willing and able to seize the initiative in the midst of uncertainty. Donald highlighted the New Zealand soldiers' willingness to fight on during night operations when their own commanders became casualties, whereas in his experience, the Germans did not, being more likely to surrender instead. Donald wrote:

The Germans did not like night attacks and, when their chain of command broke down, they surrendered more readily. More than anything else, this highlighted the difference between Rommel's troops and ours. If our chain of command broke

¹⁰⁷ McLean, D., p. 141.

¹⁰⁸ McLean, D., p. 336.

¹⁰⁹ Jim Henderson, *22 Battalion*, Wellington: War History Branch, 1958, p. 476.

down, there was always someone prepared to take charge, carry on and eventually take the objective.¹¹⁰

This provided the New Zealanders with an edge which they were able to exploit repeatedly to their advantage. The tactical imperative for assaulting at night was to achieve surprise and to reduce the attacker's vulnerability to aimed defensive fire. It was designed to minimise one's own casualties. The unanticipated bonus from this tactic was that it exploited the German weakness described by Donald. *Use of initiative* by New Zealand officers and junior ranks, especially at night, is a recurrent theme in the battle analysis chapters that follow, particularly from Ruweisat Ridge onwards.

The opening campaigns in Greece and Crete, where New Zealand undertook its first military operations since 1918, re-affirmed that infantry combat was not an old man's game. In Greece, New Zealanders faced the reality of modern battle; German tanks and *stuka* dive bombers. On Crete, they faced other modern techniques; assault by parachute and glider-borne troops. As well as the mental strain, infantry movement was often on foot, over difficult terrain. It was tough going, even for young soldiers. The rigours of combat at battalion level and the physical and mental strain on battalion commanders were too much for the older officers. Lynn McConnell recorded:

One by-product of the failure... was the realisation by Freyberg that some commanders with First World War experience were too old for the changed conditions of war... "I should have replaced the old age group with younger men who, as a rule, although less experienced as fighting soldiers, stood up better to the physical and mental strain of a long and bitter series of battles."¹¹¹

Clearly, commanders must be robust, physically and mentally, to meet the challenges of infantry combat.

¹¹⁰ Haddon Donald, *In Peace & War: A civilian soldier's story*, Masterton: Fraser Books, 2005, pp. 203-204.

¹¹¹ Lynn McConnell, *Galatas 1941 Courage in Vain*, Auckland: Reed Publishing (NZ) Ltd, 2006, p. 101.

Wira Gardiner's account of the Maori Battalion raised two dissimilar but nevertheless pertinent factors relevant to the present research; fear, and the fighting quality of the enemy. Gardiner recorded that fear is common amongst all soldiers but 'all but about 3 percent to 5 percent succeed in concealing and controlling it, and [fear] was readily absorbed in a kind of exhilaration once the attack is (sic) under way.'¹¹² The management of fear is, again, but one factor in combat effectiveness, and which would reside within the Sociological category.

Gardiner's claims are hardly scientific evidence, however, they suggest fear is a normal reaction to combat which can be overcome, or at least controlled, by most men. Commentators such as Lieutenant Colonel Dave Grossman and John Keegan support this.¹¹³ Gardiner also observed that the attack itself, the very event that the men were dreading, provided the means for them to overcome their fear.

Gardiner's second pertinent observation was about the quality of German and Italian soldiers as combatants. This suggests that a variable of combat effectiveness is the relative fighting quality of the opponents. The fighting ability of the Germans and Italians varied widely as will become evident in the battles examined in the present research. By Gardiner's reckoning, Germans were 'held in respect as soldiers' for they were tough and aggressive fighters. Italians 'viewed surrender as a relief from the pressures and tensions of warfare and seemed to look forward to captivity' and were therefore, according to Gardiner, not well regarded.¹¹⁴ Gardiner's claims are gross generalisations, but they do offer pointers to quality of the opposition being a factor of combat effectiveness. "Quality" could be related to tactics, firepower, leadership, or will to fight. This will have to be determined for each of the battle analyses. One is left to wonder, for instance, how 21 Battalion might have fared at Halfaya Pass (Chapter 8) had their opponents been German rather than Italian.

¹¹² Wira Gardiner, *Te Mura o te Ahi: The story of the Maori Battalion*, Auckland: Reed Books, 1992, p.172. *Te Mura o te Ahi* means "the fires of hell".

¹¹³ Lieutenant Colonel Dave Grossman is an American soldier and psychologist. He is the author of *On Killing*, where he examined the psychological impact and barriers of soldiers killing other human beings. Lt Col Dave Grossman, *On Killing: The Psychological Cost of Learning to Kill in War and Society*, Revised Edition, New York: First Back Bay, 2009, pp. 50- 53. John Keegan, *The Face of Battle*, London: Penguin Books Ltd., 1978, pp. 70- 72.

¹¹⁴ Gardiner, *Te Mura o te Ahi*, pp. 173- 174.

Some authors have postulated certain national “ways of war.”¹¹⁵ One of the first was Russell Weigley who charted the American way of war from George Washington’s day. He concluded that the American way of war was based on a strategy of annihilation, largely because of its large resource base.¹¹⁶ This study does not attempt, on the basis of a single New Zealand combat unit, to define a distinctive New Zealand way of war. However, it does identify the style of fighting that the infantry of the New Zealand Division evolved to. Carl Bridge, Glyn Harper and Iain Spence cautioned against claiming a particular New Zealand or Anzac way of war, given similarities with the British and Canadians, without conducting a comparison with other Commonwealth armies first.¹¹⁷ That is beyond the scope of this study.

The world-wide literature on the Second World War is vast, and ‘no six years of history have been more written about than 1939- 45.’¹¹⁸ The largest single body of New Zealand Second World War literature is the country’s official history of that war. In April 1945, a War History Branch was established within New Zealand’s Department of Internal Affairs, with the specific task of producing this.¹¹⁹ The branch published 48 volumes in all. Nineteen of these were unit histories and nine were campaign histories. New Zealand Second World War literature focuses primarily on campaigns, the larger battles, and the experience of war; none provides a critical analysis of a particular unit’s combat actions.¹²⁰

¹¹⁵ Michael M. Citino, *The German Way of War: From the Thirty Years’ War to the Third Reich*, Lawrence, Kansas: University Press of Kansas, 2005. Bridge, Harper, and Spence, pp. 2-17. Brian M. Linn, “The American Way of War” Revisited’, *The Journal of Military History*, Vol. 66, No. 2, April 2002, pp. 501-530. Harper and Hayward, pp. 28- 32. Victor Davis Hanson, ‘The Western Way of War’, *Australian Army Journal*, Vol II, Number 1, Winter 2004, pp. 157- 164. Michael Evans, ‘Towards an Australian Way of War: Culture, Politics and Strategy, 1901- 2004’, *Australian Army Journal*, Vol II, Number 1, Winter 2004, pp. 177- 200. Ali Cakan, ‘Determining the importance of nationality on the outcome of battles using classification trees’, unpublished Masters Thesis, Naval Postgraduate School, Monterey, California, 2003. Gian P. Gentile, ‘A Strategy of Tactics: Population-centric COIN and the Army’, *Parameters*, Autumn 2009, pp. 5-17.

¹¹⁶ Russell F. Weigley, *The American Way of War: A History of United States Military Strategy and Policy*, New York: Macmillan Publishing Co., Inc., Second Printing 1975, p. xxii.

¹¹⁷ Bridge, Harper and Spence , pp. 11- 12.

¹¹⁸ John Keegan, *The Battle for History: Re-fighting World War II*, New York: First Vintage Books Edition, 1996, p. 118.

¹¹⁹ The Branch was headed by Editor in Chief, Major General Sir Howard Kippenberger.

¹²⁰ A “unit” in the context of this thesis is a battalion sized organisation.

New Zealand was the only Commonwealth country to produce battalion-level Second World War official histories. As New Zealand only deployed two divisions, the production of unit histories was feasible, but for other nations with much larger contributions, it was not. The New Zealand official histories were a record of events from a unit perspective, coupled with anecdotes. A free copy of each unit's official history was to be provided to every one of its former members.¹²¹ This was an editorial factor which minimised criticism over the preference for anecdote, and general interest over critical analysis. The annexes listing commanding officers, casualties and awards for gallantry are, arguably, of more use to the analyst than the main text. As a research tool, therefore, the unit histories are of use, albeit limited, for a study of combat effectiveness.

Of far more utility to the researcher are the War History Branch's comprehensive campaign narratives. They were never intended to be published. Rather, they were prepared to ensure the 48 volumes of official history, each being written by separate authors, working to differing publication deadlines, were as consistent as possible with respect to names, dates and accounts. The narratives drew on the mass of official information, reports, war diaries and correspondence which had begun to be assembled during the war.¹²² The narratives, all 82 unpublished volumes of them, are a mine of information.¹²³ They also contain a range of "Narrators Notes." An unintended consequence of these is to assist the contemporary researcher in identifying areas of ambiguity.¹²⁴ The narratives also include interesting marginalia from a range of senior

¹²¹ Official History of New Zealand in the War of 1939- 45, Progress Report No. 5, 23 October, 1946. Minutes and Memoranda. WA II 12/4b, NA. J.T. Campbell to Mr Wards, letter, 14th June 1953. Correspondence File, 21 Battalion [in Greece], WAI 3/7, NA.

¹²² Ian McGibbon, 'Something of Them is Here Recorded': Official History in New Zealand', in Jeffrey Grey (ed.), *The Last Word? Essays on Official History in the United States and British Commonwealth*, Westport, Connecticut: Praeger, 2003, pp. 60- 61.

¹²³ A complete set of the 82 volumes of campaign narratives is held at the Kippenberger Military Archives and Research Library at the Army Memorial Museum, Waiouru. In addition to the detailed chapters, they contain numerous maps, details of units, orders, intentions of higher command and enemy units.

¹²⁴ For example, a narrator's note points out the uncertainty over how many German panzers crossed the Pinios River in Greece and it offers some criticism (not carried forward into 21 Battalion's unit history) of the decision not to cover the forward demolition with troops, which ultimately allowed it to be cleared and then the panzers to pass through and surprise 21 Battalion. Narrator's Note: Para 33. Ian McL Wards, Campaign Narrative- 2 NZ Division, Volume IV- Campaign in Greece Part IV, page un-numbered but opposite p. 475.

officers who reviewed them.¹²⁵ Not surprisingly, the campaign narratives are cited frequently within the battle analysis chapters of this study.

Several former members of 21 Battalion were interviewed by the author between July 2006 and April 2011. Given that more than sixty years had gone by since the end of the Second World War and many veterans of 21 Battalion had passed away, the number who could be interviewed was extremely limited, and insufficient for use as a comprehensive component of this study. Those interviewed were all of advanced years. As a result, none of the interviewees were pressed for precise detail. Furthermore, Margaret Barter alerts the reader in *Far Above Battle* to the pitfalls of ‘remembered evidence, spoken and written’ for a veteran’s “memory” while weakened with age may also be unconsciously altered by what the interviewee has read, heard or talked about since the war. She warns memory can therefore be unreliable.¹²⁶ Further, not everyone in any battle sees very much of what is going on and ‘... it is very rare for any two observers to describe exactly the same event.’¹²⁷

Veterans interviewed by the author remembered their service in the unit fondly and stated they were proud to have been members of 21 Battalion. Apart from the foundation members of the unit, most of the remainder could equally have served in 18 or 24 Battalions, the two other Auckland infantry units of the 2nd Division. They recalled friends made and comrades lost, battles fought, German weapon superiority and general Italian inferiority. None recalled any particular nicknames, mascots or features to distinguish 21 Battalion from any other.¹²⁸

As the unit’s official history and the memories of surviving members were insufficient for a study of combat effectiveness based on 21 battalion’s experiences, it was necessary

¹²⁵ A frequent “contributor” to the marginalia of the campaign narratives was “H.K.K.” (Howard Kippenberger).

¹²⁶ Margaret Barter, *Far Above Battle: The Experience and Memory of Australian Soldiers in War 1939-1945*, St. Leonards, Australia: Allen & Unwin, 1994, p. xxii.

¹²⁷ Paddy Griffith, *Forward into Battle: Fighting tactics from Waterloo to Vietnam*, Chichester: Antony Bird Publications, 1981, p. 8.

¹²⁸ Allan Yeoman, interview, Kati Kati, 4 January, 2007; Bill Tucker, interview, Papararimu, 19 November, 2006; Bryan Mahon, interview, Auckland, 2 December, 2006; Clem Hollies, interview, Auckland, 18 July, 2006; Gordon Bainbridge, interview, Auckland, 3 December, 2006; Jack Birtwistle, interview, Auckland, 2 December, 2006; Brian Abbott, interview, Papararimu, 11 April 2011.

to search more widely for information. The campaign narratives were particularly useful for re-creating events, many of which had been overlooked or watered down in the official history, for locating key documents (such as orders and after action reports) and for gleaning information about the enemy 21 Battalion faced.

CONCLUSION

The real proof of combat effectiveness is combat. As stated by von Clausewitz, and quoted at the opening of this chapter, ‘Historical examples clarify everything and also provide the best kind of proof...’ 21 Battalion’s combat experience provides evidence of when it was combat effective, and when it was not; the unit’s record, in victory and defeat, provides the source for determining the factors that shaped the outcome.

The *Oxford Dictionary* definition of combat effectiveness is considered to be too narrow, and arguably tautological. Further, particularly as it relates to effectiveness, it offers no objective benchmark. This study has set the benchmark at mission accomplishment, which is consistent with British military doctrine.¹²⁹ It has also placed a caveat on this, so that the unit cannot be consumed or completely disorganised in achieving its mission, and still be deemed combat effective. To be combat effective, it must be capable of undertaking those actions that flow from the accomplishment of the mission; such as mounting patrols, defeating counterattacks, or handing over to another force. The unit must, therefore, retain sufficient means (personnel and weapons), and the command and control necessary, to undertake the follow on tasks. To this end, the working definition of combat effectiveness applied throughout this study is: The ability of 21 Battalion to achieve its assigned mission, and still be in such a state that it can complete subsequent tasks.

Battle is dynamic. There is no tactic or weapon that can guarantee victory. Numerical superiority improves the odds, but is no assurance. The review of literature has led to the elucidation of seven categories which have been developed into a framework model for the systematic analysis of 21 Battalion’s combat effectiveness, measured by meeting the

¹²⁹ United Kingdom Army Doctrine Publication- Land Operations 2005, p.186.

working definition, in eight selected battles. Rather than rely on the simplistic approach of mission success and ‘kills’, or the complicated and unrealistic scientific methodology of Dupuy, this thesis has created a framework model that will allow factors contributing to or detracting from 21 Battalion’s combat effectiveness to be derived relative to each opponent, and under different battle conditions. The model will be re-presented in the Conclusion, complete with modifications and combat effectiveness factors identified through the battle analyses.

The next stage of this study, before analysing combat effectiveness and identifying the relevant factors under battle conditions, is to introduce 21 Battalion. It is necessary to do this in order to understand the raw material used in the analysis of combat effectiveness, and to disabuse from the outset, any notion that 21 Battalion and the New Zealand Division were a professional, modern, well armed and combat experienced organisation before they were committed to action in Greece.

Chapter 2:

Developing the Fighting Spirit?

*Warfare comprises everything related to the fighting forces-
everything to do with their creation, maintenance and use.*
- von Clausewitz, *On War* ¹

21 Battalion was raised specifically for service in the Second World War. This chapter will describe the origin of the battalion, why it was raised from scratch, and the reasons it had to be trained and prepared for war by its own officers and men rather than by the small number of professional soldiers available. It will establish the role and utility of the infantry generally, and trace the decline of the country's land combat capability in the 1930s. The chapter will also describe 21 Battalion's structure as a precursor to the battle analysis chapters and will make clear the low level of previous military experience of the original members of the unit and the fact that the training they undertook in New Zealand and the United Kingdom did not adequately prepare them for the type of war they would fight. An understanding of this is necessary so that their lack of combat effectiveness during their initiation to combat in Greece (analysed in Chapters 3 and 4) can be viewed in context.

The Infantry Battalion

The purpose of infantry was then, and still is, to close with and kill the enemy.² Of all the combat arms, infantry alone is able to seize and hold terrain. The infantry remains the principle arm because of its utility, despite the occasional preeminence of other corps in an infantry division.³ He retains this, despite the reliance on technology, for '*wars are*

¹ von Clausewitz, *On War*, p. 108.

² Major General R.A. Smith, 'Fighting Instructions Edition 5, *The British Army Review*, Number 149, Summer 2010, p. 37.

³ See John A. English, *On Infantry*, New York: Praeger, 1981, p. xvii for further amplification of this point.

won on the ground, usually by small groups of fighters...'⁴ The life of an infantryman has always been uncomfortable, difficult and dangerous. The infantryman faces the brunt of the fighting.⁵ He therefore suffers the highest casualty rates.⁶ In recognition of this, the infantry was nicknamed the "PBI", standing for Poor Bloody Infantry.⁷ This label was coined because of the conditions the infantry have to endure, along with the highest casualty rate compared to other arms. Of British Second World War subalterns, whose life expectancy was just 30 days in 1944-5, Charles Whiting wrote that 'They were condemned men from the start, and they knew it.'⁸ Towards the conclusion of *Infantry in Battle*, the official post-war document highlighting the New Zealand experience of war, the infantryman's lot was categorised as 'hardship, danger, horror, filth, discomfort and sacrifice.'⁹ Well known comedian and the Second World War artillery veteran Spike Milligan recorded in his diary that 'We hear by the grapevine that our PBI are suffering fifty percent casualties. Thank God I'm not in the infantry.'¹⁰

An infantry battalion is not an inanimate object. It has a 'life.' It develops esprit de corps and a reputation. 21 Battalion had a reputation for being unlucky as already noted. 'Scotch' Patterson wrote of his experience in a New Zealand infantry battalion that 'discipline came from within rather than imposed from above.'¹¹ A battalion became a

⁴ McManus, p. 6.

⁵ James F. Dunnigan, *How to Make War: A comprehensive guide to modern warfare in the twenty-first century*, Fourth Edition, New York: HarperCollins Publishers Inc., 2003, p. 15.

⁶ Kippenberger, *Infantry Brigadier*, p. 236. In the Greek campaign, for example, the infantry battalions of 5 Brigade lost a total of 45 men killed, 57 wounded and 393 men were captured- a grand total of 497 casualties. By comparison, the artillery regiment supporting 5 Brigade lost 3 killed, 7 wounded and had 36 men taken prisoner, a total of 46 casualties. McClymont, *To Greece*, p. 487.

⁷ Richard Doherty, *Eighth Army in Italy 1939- 45: The Long Hard Slog*, Barnsley: Pen & Sword Books Ltd., 2007, p. 55. For a chronicle of the infantry of many nationalities in World War II, see Charles Whiting, *The Poor Bloody Infantry 1939- 1945*, London: Stanley Paul & Co. Ltd., 1987. Robert H. Ahrenfeldt, *Psychiatry in the British Army in the Second World War*, London: Routledge & Kegan Paul Ltd., 1958, p. 205.

⁸ Whiting, Author's Note, no page numbers.

⁹ Army Headquarters, *Infantry in Battle: Notes on the training and command of New Zealand infantry units*, 1950, Wellington: New Zealand Army, 1949, p.23.

¹⁰ Quoted within Matthew Parker, *Monte Cassino: The Hardest Fought Battle of World War II*, London: Headline, First Anchor Books Edition, 2005, p. 59.

¹¹ E.B. 'Scotch' Patterson, *Cassino to Trieste A soldier's story*, Wellington: Steele Roberts Ltd., Revised Edition, 2006, p. 11.

man's family.¹² Bryan Mahon, a 21 Battalion veteran stated '...in some sense your first loyalty was to the battalion.'¹³ Private Stanley Hunter of 7 Platoon, B Company, 21 Battalion wrote about "acceptance" of unit life when he recorded that:

It is marvelous how a fellow settles down to the life & more or less forgets all about his civilian work. In fact we feel more at home now than we did at Papakura.¹⁴

State of New Zealand Armed Forces in the 1930s

By 1939, the New Zealand Armed Forces had declined significantly in terms of numbers and quality from the condition it had been in twenty years earlier at the end of the Great War. Following the First World War, New Zealand had maintained a division sized army through compulsory military training. In 1931 the New Zealand government suspended the compulsory military service provisions of the Defence Act.¹⁵ The reasons were largely economic, but also 'because of the strong feeling in the world against militarism.'¹⁶ The military situation of the period was encapsulated by Glyn Harper when he stated the 1930s 'were without doubt the nadir of the fortunes of the New Zealand Army.'¹⁷ The situation was the same in Australia, where the government was 'under pressure to reduce defence expenditure', compulsory military training of rural Australians ended and the militia was 'reduced to a nucleus force, which was an optimistic way of describing an army of skeleton units which assembled for only a few days of continuous

¹² Henry (Jo) Gullett, *Not as a Duty Only: An Infantryman's War*, Melbourne: Melbourne University Press, 1976, p. 1. Jo Gullett started as a Private and finished the war as a Major, having commanded at company level. His father was H.S. Gullett, the noted Australian First World War official historian.

¹³ Bryan Mahon, interview, Auckland, 2 December, 2006.

¹⁴ Private S. Hunter to Ken Bowman, letter, 23- 12- 41. 2001.542, Documents, photographs of Italy and ephemera attributed to 66740 Private Stanley Hunter 21 Battalion, 2 NZEF, KMARL.

¹⁵ 'Report – N.Z. Military Forces', Memorandum for the Hon. Minister of Defence, December 1935, p. 1. Report New Zealand Military Forces Sinclair- Burgess 1935. AD1 Box 1665 239/4/13 second sequence, NA.

¹⁶ W. David McIntyre, *New Zealand Prepares for War Defence Policy 1919- 1939*, Christchurch: University of Canterbury Press, 1988, p. 113.

¹⁷ Lieutenant Colonel G. Harper, 'Major General Sir Howard Kippenberger and the Preparation for Command', *New Zealand Army Journal*, No 16, December 1996, pp. 61- 62.

training each year.’¹⁸ Even the British were not exempt from the reduction in military capability following the First World War for David Fraser recorded ‘Britain spent twenty-one years between 1918 and 1939 with an army in India and an army at home, neither seriously designed, trained, equipped or organised for major war and neither in the least bit ready for it.’¹⁹ He could have been describing the New Zealand (or Australian) situation. The regular staff of the New Zealand Forces was small, as Table 2.1 shows. The 76 officers of the Staff Corps and 134 Other Ranks of the Permanent Staff supported a defence headquarters and peacetime training function, but was inadequate for training an 19,000 strong division for war. Regular Forces at the disposal of the government in 1939, on the eve of the war, are shown in Table 2.1, with figures from 1935/ 1936 listed as well as a comparison.

	Officers		Officer Cadets		Other Ranks		Totals	
	1935/ 36	1939	1935/ 36	1939	1935/ 36	1939	1935/ 36	1939
New Zealand Staff Corps	63	76					63	76
New Zealand Permanent Staff					110	134	110	134
Royal New Zealand Artillery	17	17			159	257	176	274
Royal New Zealand Air Force	20				105		125	
New Zealand Permanent Army Service Corps					7	19	7	19
New Zealand Army Medical Corps					1	3	1	3
New Zealand Army Ordnance Corps	5	6			25	29	30	35
General Duties Section					5	3	5	3
Attached from the British Army/ Australian Army	1	1			1	1	2	2
Officer Cadets (in Australia)			16	15			16	15
Recruits					31	32	31	32
TOTALS	106	100	16	15	339	478	441	593

Table 2.1: New Zealand Regular Forces on the eve of the war²⁰

¹⁸ Jeffrey Grey, *A Military History of Australia*, Cambridge: Cambridge University Press, 1999, p. 121.

¹⁹ Fraser, p. 12.

²⁰ New Zealand Appendix to Journals of the House of Representatives 1939, Vol III, H- I, H-19 Defence Forces of the Dominion. Annual Report of the General Officer Commanding for the year ended 31st May, 1939. 1935 figures are taken from New Zealand Appendix to Journals of the House of Representatives

Under compulsory military training, the Territorial Force had averaged almost 20,000 men every year since 1918.²¹ They provided a strong base from which to raise and train a division for overseas service. The number of Territorials fell dramatically after the end to compulsory service in 1931. With this, New Zealand lost the backbone of an expeditionary division and a large cadre of men who could have trained the 2nd New Zealand Expeditionary Force upon mobilisation, given the limited capacity of the New Zealand Regular Forces. Authorised numbers (the maximum numbers allowable) of Territorials were reduced to 9,818, even though a wartime division's strength was 19,000.

New Zealand was in the grip of the Great Depression.²² By 1932 a moratorium had been placed on all training camps, exercises and equipment purchases. In 1933, the Regular (or Permanent) Force of the Army numbered just 82 Officers and 258 Other Ranks while the Territorials had been reduced to 706 Officers and 7197 Other Ranks.²³ This was a third of the pre-1931 numbers, the equivalent of a single brigade. There was an increase in defence expenditure in 1935, although it was primarily directed towards coastal defences and the air force rather than maintaining expeditionary land forces.²⁴ Service in the Territorial Force remained voluntary.²⁵ Public opposition to any form of conscription was strong.²⁶

The indicators from 1934- 35 are of a defence force that was shrinking, in terms of numbers of soldiers in uniform, and stagnating in terms of contemporary and emerging

1939, Vol III, H-Miscellaneous, H-19 Defence Forces of the Dominion. Annual Report of the General Officer Commanding for the year ended 31st May, 1936.

²¹ McIntyre, p. 113.

²² Peter Cooke, John H. Gray, Ken Stead, *Auckland Infantry: The Story of the Auckland (Countess of Ranfurly's Own) and Northland Regiments and of the Citizen Soldiers who served New Zealand*, Auckland: 3rd Battalion (Auckland (Countess of Ranfurly's Own) and Northland) Regimental association Inc., 2010, pp. 228- 229. McIntyre, pp. 100 and 111- 112. Major- General Sir Howard Kippenberger, 'The New Zealand Army', *Journal of the Royal United Services Institute*, Vol.102, Issue 605, 1957, p. 71. See also 'Defence Policy in the 1930s', *New Zealand's Heritage*, 6, 1971, p. 2405.

²³ Laurie Barber, *War Memorial A Chronology of New Zealand and World War II*, Auckland: Heinemann Reed, 1989, pp. 24- 25.

²⁴ Barber, *War Memorial*, p. 27.

²⁵ Minister of Defence to Mrs G. Fox, letter, June 6th 1935. Military Service in the Event of War- Enquiries. AD 1 270/1/26 Box 2321 (2nd Sequence), NA.

²⁶ N.Z. National Movement Against War and Fascism Auckland Provincial Council to The Hon. Minister of Defence, letter, 15/6/35. Military Service in the Event of War- Enquiries. AD 1 270/1/26 Box 2321 (2nd Sequence), NA.

tactical concepts. The Northern Command Training report for 1934- 35 recorded the themes of tactical instruction, and listed challenges faced by the Command. The command refresher course focused on defence of the Line of Communications (rear areas). Another group, presumably the Other Ranks, undertook signals training and section leading. While weekend training was popular with Territorials, attendance levels at the two week periods of concentrated training fell and this was 'most apparent in city units' where employment was a priority. The year's tactical study was defensive in nature; picqueting a route and defence of vital points, such as railheads.²⁷ Meanwhile, in the same year, Germany had introduced conscription and was therefore able to generate fifty two active and fifty one inactive divisions by 1939, and to mobilise more than three million men with military experience.²⁸

By 1936, the tactical direction had become more combat oriented, based on offensive rather than defensive concepts. That said, the standard to be achieved with a limited number of authorised training days was too ambitious to be effective. For instance a single day was devoted to platoon tactics, one for company tactics, one for a unit 'set piece scheme' and a fourth day for combined operations.²⁹ Single days allocated to each activity did not allow any more than the basics to be covered, and then only lightly. This represented a token effort and was not sufficient to generate the level of experience in tactics or skills necessary to raise a division in 1940 and to successfully lead New Zealand troops in combat in 1941.

A major reorganisation occurred in 1937 which focused the Defence Forces onto home defence, further reducing capability. Territorial numbers were reduced to 6,000. Major General Kippenberger assessed that the actual strength was 'about half that number.' In

²⁷ 'Training Report- Territorial Force- 1934- 35', Headquarters Northern Command 30/5/G to General Headquarters, N.Z. Military Forces, dated 18th June 1935. AD 1 210/1/14 Vol 2 Box 1506, NA. Most of the useful training was imparted to Territorials at their two-week camp which occurred once a year. Maximum attendance was therefore desirable. Poor attendance could indicate a lack of interest, a clash between the timing of the camp and other imperatives such as harvest or lambing, or possibly for city units, the inability to leave a job for fear of losing it. Other training was imparted during evening parades or the occasional weekend; however, the maximum military benefit (and efficiency) was achieved at camp, provided sufficient numbers attended.

²⁸ Fraser, p. 16.

²⁹ 'Instructions for Training 1936-37', HQ Southern Command Memo 9/720 dated 6th July 1936. Programmes All Districts. AD1 210/1/6 Box 1503, NA.

reality, therefore, New Zealand only possessed 3,000 of the 20,000 men it had just six years earlier, which represented a massive reduction in capability and corporate knowledge. Kippenberger also noted that Regulars and Territorials had little sympathy or support from the government or public, few businesses spared men to attend training, and worn equipment was never replaced.³⁰ The primary role of the Territorial Force became protection of New Zealand's ports. A secondary role was the 'production, in peace, of a field force of a strength sufficient to enable requisite expansion to be effected on mobilization.'³¹ Expansion was to come from a very small and inexperienced nucleus.

Attendance at the 1937 camp was better than 1936.³² The 1st N.Z. Infantry Brigade camp, based at Rotorua, included a brigade attack, confirming a change in tactical emphasis away from rear area defence. A comment in the report reinforced, however, the earlier statement about the standard achievable in a single day, when it noted that 'Insufficient preliminary study of the object for which the exercise was set [left] much to be desired.'³³ The ability to train progressively and realistically was lost in the six years since 1931.

Despite the increase in attendance at camp in 1937, all was not well. Morale in the Territorial Force was at an all time low and Major-General John Duigan, Chief of the General Staff, was an unpopular figure. In 1938, four senior officers made their concerns public in a manifesto which directly contradicted claims by Minister of Defence Fred Jones and the Chief of the General Staff that New Zealand forces were efficient and ready for combat.³⁴ The four Colonels were placed on the Retired List as a result of their actions, although Colonel Neil Macky was recalled for active service on the outbreak of the war and became 21 Battalion's first Commanding Officer. The harsh treatment the

³⁰ Major General Sir Howard Kippenberger, 'The New Zealand Army', *Journal of the Royal United Services Institute*, Vol.102, Issue 605, 1957, p. 71.

³¹ 'Reorganization of New Zealand Military Forces' New Zealand Military Forces Special General Order No. 296/1937 by Major-General J.E. Duigan, C.B., D.S.O., p. 4.

³² Annual Report on Training 1936- 1937', p. 2. Northern Command Memo 9/120/4/G dated 7th September 1937. Northern Military District Annual Report on Training 1936- 1937. AD 1 210/1/14 Vol 2 Box 1506, NA.

³³ 'Annual Report on Training 1936- 1937', p. 3. Northern Command Memo 9/120/4/G dated 7th September 1937. Northern Military District Annual Report on Training 1936- 1937. AD 1 210/1/14 Vol 2 Box 1506, NA.

³⁴ L.H. Barber, 'The New Zealand Colonels' "Revolt", 1938,' *The New Zealand Law Journal*, 6 December 1977, pp. 496- 497. The four Colonels were: F.R. Gambrill, N.L. Macky, C.R. Spragg and, A.S. Wilder. Barber, *War Memorial*, p. 31. McIntyre, pp. 184- 185.

four Colonels' received was portrayed in the New Zealand Herald (see Figure 2.1) which shows Defence Minister Fred Jones reporting, in the style of fascists on the other side of the world, to Prime Minister Michael Savage. Ironically, the cartoon reflects the deteriorating situation in Europe which ultimately caused New Zealand's defence preparations to be accelerated, although the priority was the defence of New Zealand ports and the Pacific Islands.³⁵



Figure 2.1: The Colonels' Revolt³⁶

By 1939 the Active Reserve of the Territorial force comprised 10,364 men, of whom only 4,731 were infantry.³⁷ Even if all 1939 Territorials, irrespective of corps, were enlisted

³⁵ McIntyre, pp. 187- 188.

³⁶ Gordon Minhinnick, *New Zealand Herald*, 1938. Graeme Hunt, *By Skill and Spirit: A History of the Auckland Officers' Club*, Auckland: Waddington Press Ltd., 2009, p. 67. McIntyre, p. 186.

into the New Zealand Expeditionary Force, it would still have been nine thousand men short of the numbers required for a division. This was a significant shortfall which would ultimately stretch New Zealand's resources and cause units to train themselves using the limited experience of the few First World War veterans and Territorials within them. As noted previously, the Territorial "experience", in terms of tactical value, was limited.

New Zealand possessed no Regular Force infantry battalions. New Zealand's seventeen Territorial battalions, organised into three brigades, were designated the 1st Division. Their task was home defence.³⁸ The New Zealand Government elected instead, on 6 September 1939, to raise a Special Force for overseas service, separate to the 1st Division. It was to be made up entirely of volunteers.³⁹ It was subsequently decided that a full division would be raised specifically for overseas service. The Special Force became the First Echelon of the 2nd New Zealand Expeditionary Force (2 NZEF) which would consist largely of what became known as the 2nd New Zealand Division, or New Zealand Division for short. Two subsequent brigade sized echelons would be raised to bring the division up to full strength incrementally. Each echelon was to consist of a full brigade and a one third slice of all remaining divisional units. 21 Battalion and all other units of the division were, for that reason, new units specifically raised for service in 2 NZEF.

Excluding the Maori and machinegun battalions, nine infantry battalions were raised, trained and deployed, three per brigade. Infantry battalions were recruited on a regional basis, as had been the practice for the First World War. The brigade and provincial affiliation of the nine infantry battalions of the New Zealand Division, and the echelons they were based upon are shown in Table 2.2:

³⁷ AJHR 1936 Vol III H- Miscellaneous, H-19 Defence Forces of the Dominion- Annual Report of the General Officer Commanding for the Year ended 31st May, 1936, p. 7. and AJHR 1939 Vol III H- I, H-19 Defence Forces of the Dominion- Annual Report of the General Officer Commanding for the Year ended 31st May, 1939, p.12.

³⁸ W.G. McClymont, *To Greece*, Wellington: War History Branch, 1959, p. 5.

³⁹ *Documents Relating to New Zealand's Participation in the Second World War 1939- 45: Volume 1*, Wellington: War History Branch, 1949, pp. 34- 35. W.G. McClymont, *To Greece*, Wellington: War History Branch, 1959, p. 2. Conditions for Territorial Forces meant men were liable for full-time service during the war and for up to twelve months afterwards. A member of the Territorials could not be compelled to serve overseas. 'Outline of Conditions of service in the Territorial Force and in the Home Guard', Brigadier A.E. Conway to Dr. K.A. Wodzicki, letter, 11th May 1942. Enlistment and Recruiting-Territorial Forces. AD 1 226/17/1 Vol 1 Box 1616, NA.

Province	4 Brigade	5 Brigade	6 Brigade
	(1 st Echelon)	(2 nd Echelon)	(3 rd Echelon)
Auckland	18 Battalion ⁴⁰	21 Battalion	24 Battalion
Wellington	19 Battalion	22 Battalion	25 Battalion
Canterbury- Otago	20 Battalion	23 Battalion	26 Battalion

Table 2.2: New Zealand Division battalion, brigade and echelon regional affiliation

Successive echelons could not enter camp and commence training until the previous echelon had departed overseas, due to lack of space and equipment.⁴¹ This resulted in the sequential rather than simultaneous raising of echelons as brigades. Brigades therefore contained battalions from each of the three major regions, rather than all being from the same one. The First Echelon entered camp on 3 October 1939. The Second Echelon, of which 21 Battalion was a part, entered camp on 12 January 1940. The Third Echelon entered camp 16 May 1940.⁴² Once the Third Echelon departed New Zealand, successive groups of men marched into camp for training as reinforcements for the New Zealand Division. In many cases, men were assigned to territorial units in the 1st Division once they had completed their initial training until they were old enough for overseas service, or until they were required for a reinforcement draft. Eventually they were allocated to a reinforcement draft and sent overseas. Echelon and reinforcement embarkation and arrival dates are shown Table A9 of Appendix A.

The purpose of reinforcement drafts, sent from New Zealand, was to keep the division up to strength by replacing casualties and other losses within the NZEF.⁴³ A battalion's worth of reinforcements was initially assessed as 6 officers and 311 Other Ranks.⁴⁴ In all, New Zealand sent thirteen drafts, comprising reinforcements for all units within the

⁴⁰ The Second Division's infantry battalion numbers started at 18 because the 1st Division had seventeen battalions. W.G. McClymont, *To Greece*, p. 5.

⁴¹ General Staff to C.G.S., A.G., Q.M.G. and D. of Mob[ilisation], Minute, 9th October, 1939. Training- 2nd N.Z.E.F.- Training- Advanced Training Coy. AD 1 305/1/2 Box 1276 Part 1, NA.

⁴² Barber, *War Memorial*, pp. 48, 56- 57, 63 and 70.

⁴³ Major- General W.G. Stevens, *Problems of 2 NZEF*, War History Branch, Department of Internal Affairs: Wellington, 1958, pp. 31 and 188.

⁴⁴ 2 NZEF Summary of War Establishments showing First Reinforcements, undated. Summary of First Reinforcements by Units. WAI 1 DA 1/9/SD83/20, NA.

NZEF. On arrival in Egypt, reinforcements for the rifle battalions were assigned to infantry depots at Maadi Camp, not directly to units. Depending on whether they were designated as northern, central or southern infantry reinforcements, they would be sent for training to one of the three affiliated depots.⁴⁵ A combined infantry depot was maintained, however, from April 1942 onwards.⁴⁶

The reinforcement flow to the Middle East, by date and numbers of men within them, was never smooth. Availability of shipping was a significant factor in setting sailing dates.⁴⁷ Manpower requirements in New Zealand for harvests, wharves and freezing works disrupted the flow and availability of men.⁴⁸ So did outbreaks of measles and influenza.⁴⁹ This meant that on many occasions, combat units were desperately short of men. The NZEF was advised in January 1942 that it should not expect any further reinforcements ‘for an indefinite period.’⁵⁰ The “indefinite period” lasted until June 1943, as is shown in Table A9 at Appendix A by the eighteen month gap between the 8th and 9th Reinforcements. This gap meant that for a significant portion of the heavy fighting in North Africa, the New Zealand Division was without reinforcements other than through battle and non-battle casualties returning to their former units.⁵¹ Numbers were made up by the occasional cull from rear areas.⁵² Although the severe shortage of reinforcements from New Zealand caused units to be committed to combat with steadily reducing numbers, it also meant that the battles in late 1942 (such as Miteiriya Ridge and Halfaya Pass) were fought largely by veteran commanders and troops.

⁴⁵ Stevens, *Problems of 2 NZEF*, p. 141.

⁴⁶ Entry for 18 April. War Diary NZ Infantry Training Depot Apr 42. DA 156/1/1, NA. Routine orders states that the depots amalgamated on 23 April 1942. Headquarters NZ Infantry Trng Depot Routine Orders 1/42 of 23 April 1942. War Diary NZ Infantry Training Depot Apr 42. DA 156/1/1, NA.

⁴⁷ Stevens, *Problems of 2 NZEF*, p. 192.

⁴⁸ Army Headquarters Wellington to HQ 2 NZEF, Memo D.305/1/155/G of 29 Mar 44, p.1. 2 NZEF-Headquarters 2 Division- Reinforcements- Training, WAI 1 DA 21.1/9/G3/2, NA.

⁴⁹ Chief of the General Staff (Wellington) to General Freyberg, telegram, 2 October 1940. *Documents Relating to New Zealand's Participation in the Second World War 1939- 45: Volume II*, Wellington: War History Branch, 1951, p. 28.

⁵⁰ Stevens, *Problems of 2 NZEF*, p. 46.

⁵¹ Non-battle casualties are those soldiers who become ill, injured or are killed in circumstances other than combat.

⁵² Kippenberger, *Infantry Brigadier*, p. 179.

The training standard of the reinforcements varied and was below expectations on some occasions.⁵³ Deficiencies were mainly in the areas of shooting, and for officers and junior NCOs, in tactics and troop leading.⁵⁴ These are and remain still, core infantry skills, and were indicative of a low base standard. Personnel called up from the 1st Division where they had been employed since recruit training often did not make the grade when assembled for training immediately prior to embarkation. The main reasons for failure were medical, being underage or overage, or having been transferred to another corps where the basic soldier skills had been allowed to deteriorate.⁵⁵ Deficiencies in core skills had to be made up at the infantry depots in Egypt or “on the job.”

21 Battalion

21 Battalion was formed on 12 January 1940. By that date the Battalion’s officers and prospective NCOs had attended preparatory training at Narrow Neck District School, Auckland, from 8 November 1939 and 9 December 1939 respectively. In just two months for officers and one for the NCO’s, both groups had been provided with a rudimentary understanding of the basic skills necessary to train the men who would shortly be under their command.⁵⁶

The New Zealand infantry battalion organisation for battle was based on the 1931 British battalion model.⁵⁷ The strength of the battalion was 32 officers and 744 Other Ranks, giving a total strength of 776 All Ranks. A detailed infantry battalion structure is shown

⁵³ Kippenberger, *Infantry Brigadier*, pp. 178- 179.

⁵⁴ Linton MC [Military Camp] Memo T/2, Report on 9th Reinforcements Stationed (in part) at Linton MC, dated 6/5/43, pp. 2- 3. 2 NZEF- Headquarters 2 Division- Reinforcements- Training, WAI 1 DA 21.1/9/G3/2 NA.

⁵⁵ Linton MC [Military Camp] Memo T/2, Report on 9th Reinforcements Stationed (in part) at Linton MC, dated 6/5/43, p.1. 2 NZEF- Headquarters 2 Division- Reinforcements- Training, WAI 1 DA 21.1/9/G3/2, NA. Department of Defence, Matter for Decision by Army Board: Soldiers Discharged as Under-age, D.312/2, dated 30th November 1939, Army Board Decisions 8-3-39 to 4-12-39.

⁵⁶ General Staff to C.G.S., A.G., Q.M.G. and D. of Mob., Minute, 9th October 1939 and Director of Mobilization to All Districts, Memorandum, 21st November 1939. Training- 2nd N.Z.E.F.- Training- Advanced Training Coy. AD1 305/1/2 Box 1276 Part 1, NA. See also Cody, *21 Battalion*, p. 1.

⁵⁷ Northern Military District to Army Headquarters, letter, 6th February 1940. Establishments- War- Special Force. AD1 325/1/1 Box 1353 Part 1, NA.

in 26 Battalion's official history.⁵⁸ It is that assumed 21 Battalion was identical. 21 Battalion's composition is shown at Table 2.3 below. The unit consisted of battalion headquarters, Headquarters Company and four rifle companies. A staff table showing the numbers of Rank and File (soldiers) within the battalion is at Appendix B. The staff table shows that only a 53% of the unit's total strength were the riflemen and Bren gunners; those who actually took part in close combat. In other words, almost half the men in the battalion did not participate in close combat or have a direct influence on the battle.

The basic building blocks of 21 Battalion were the rifle sections and platoons which made up each rifle company. Each rifle section consisted of ten men, commanded by a corporal. One member of the section was armed with the .303 Bren light machinegun. This weapon produced the majority of the section's firepower.⁵⁹ The remaining section members were armed with the First World War vintage bolt-action Lee Enfield .303 rifle. Rifle platoons consisted of three sections, and were commanded by a second lieutenant or lieutenant. In addition to the platoon commander, the platoon headquarters also included the platoon sergeant, runners, orderlies and soldiers to operate the platoon's two inch mortar and Boys' anti-tank rifle. The latter proved to be an ineffective anti-tank weapon.⁶⁰ In all, a rifle platoon at full strength had one officer and thirty seven (or thirty eight) men.

⁵⁸ Frazer D. Norton, *26 Battalion*, War History Branch, Department of Internal Affairs, Wellington, 1952.

⁵⁹ 'The Bren Light Machine Gun', *Journal of the Royal United Services Institution*, Vol 81, Issue 521, 1936, p. 103. A 'single light machine gun served by two men is the equivalent in firepower to 20 men armed with rifles: the limiting factor in multiplying the number being ammunition supply only.'

⁶⁰ It was not until March 1942 that New Zealand units were requested to comment on the effectiveness of the Boys anti-tank rifle. The report noted that the weapon was 'of little value whatsoever against tanks' but had some effect against soft skinned vehicles and machinegun posts. 5 Brigade noted that similar effects against such targets could be achieved by weapons the infantry already carried. Report on Boyes (sic) Anti-Tank Rifle, HQ 5 NZ INF Bde to HQ Adv 13 Corps, Memo, 14 Mar 42. Appendix G1 to 5 Brigade War Diary 1 March- 31 March 1942. WAI 1 DA52/1/27, NA. David French wrote that 'The most inadequate of all weapons that were issued to British infantry was the Boys anti-tank rifle...' which was 'effective only at short ranges against light tanks and armoured cars.' French, p. 88. See also Barry O'Sullivan and Matthew O'Sullivan, *New Zealand Army Personal Equipment 1910- 1945*, n.p: Willson Scott Publishing Ltd., 2005, p. 94.

Strengths expressed as: Officers/Other Ranks		Battalion HQ (4/43)			Total Battalion strength: 776 (32/744)	
		Headquarters Coy				
		HQ Coy HQ (1/6)				
1 Pl (Signals) (1/33)	2 Pl (Anti-Aircraft) (1/16)	3 Pl (Mortar) (1/17)	4 Pl (Bren Carrier) (1/29)		5 Pl (Pioneers) (1/20)	6 Pl (Admin & Transport) (2/92)
	A Company				B Company	
	A Coy HQ (2/10)				B Coy HQ (2/10)	
7 Pl (1/38)	8 Pl (1/37)	9 Pl (1/37)		10 Pl (1/38)	11 Pl (1/37)	12 Pl (1/37)
	C Company				D Company	
	C Coy HQ (2/10)				D Coy HQ (2/10)	
13 Pl (1/38)	14 Pl (1/37)	15 Pl (1/37)		16 Pl (1/38)	17 Pl (1/37)	18 Pl (1/37)
Rifle Coy strength: 5/122 each					Headquarters Coy strength: 8/ 213	

Table 2.3: Organisation of 21 Battalion in January 1940⁶¹

The rifle companies were supposed to be commanded by a major. Often they were commanded by a captain, as will become evident in the battle analysis chapters. Each company consisted of a small headquarters and three rifle platoons. Although each platoon had a Boys anti-tank rifle and a 2 inch mortar, the four rifle companies relied on the battalion's support weapons allocated from the Headquarters Company, and assigned supporting arms from other corps and units outside of the battalion, to provide the heavier firepower required in combat.

The battalion's integral support weapons and basic support and administration services were provided by Headquarters Company. The Signals Platoon operated some wireless sets, but mainly laid cable which provided a crude telephone link when the battalion was static, such as in defence. Radios, or wireless as they were known then, were not distributed within companies until the division reached Italy in late 1943. The Pioneer Platoon provided a light field engineer construction capability, mainly for field defences,

⁶¹ This is based on the assumption that all New Zealand infantry battalions had the same structure. Norton, *26 Battalion*, p. 12.

or to breach obstacles during an attack. The Administration and Transport Platoon operated the battalion's trucks and provided limited catering and supply functions. The Anti-aircraft Platoon was equipped with four Bren guns. Its role was to defend the battalion against attack by aircraft.

The battalion's indirect fire support was provided by the Mortar Platoon which was equipped with only two 3 inch mortars at the start of the war. The Carrier Platoon contained ten tracked Bren carriers, each mounting a Bren gun. These were 'bullet-proof, tracked carriers, whose principal roles were to reconnoitre and to move the crews and their light machineguns or anti-tank rifles across bullet-swept areas to a position where they could usefully be fired from the ground.'⁶² As the platoon had ten Bren guns, it was capable of generating as much firepower as a rifle company, could manoeuvre faster and was less vulnerable to enemy fire.⁶³

Additional combat support required by the battalion, principally in terms of heavy machineguns, artillery, anti-tank weapons and tanks, would be provided by 5 Brigade, from New Zealand Division units, or from specialist Allied elements outside the NZEF. Allocation of additional supporting arms was dependant on availability, the threat and other brigade or division priorities. Sometimes, as will be shown in chapter 4 (at Platamon) and in chapter 6 (at Bir Ghirba), the unit received very little additional heavy weapon support, and paid the price, confirming Pratten's assessment that a battalion's 'paucity of supporting weapons... meant a CO was beholden to [support from] units he did not always control when his troops encountered opposition that could not readily be dealt with by small arms.'⁶⁴ Experience gained on operations eventually resulted in anti-tank guns and larger calibre mortars being introduced into New Zealand infantry battalions to help overcome this weakness.⁶⁵

⁶² Gavin Long, *To Benghazi*, Australia in the War of 1939- 1945, Series 1 (Army) I. Canberra: Australian War Memorial, 1952, p. 128.

⁶³ Pratten, p. 132.

⁶⁴ Pratten, p. 137.

⁶⁵ F.L. Phillips and H.R. Gilmour, *The Twenty Fourth New Zealand Infantry Battalion: A Pictorial History*, Auckland: Richards Publishing, and Phillips and Gilmour, 1980, p. 142.

It is not known how many men served in 21 Battalion between 12 January 1940 and 2 December 1945.⁶⁶ A 1946 War History Branch memorandum stated 5,000 men passed through each battalion. On that basis, it was estimated a complete unit nominal roll, at three columns of names per page, would add 40 pages to each volume. The suggestion to include a complete nominal roll in each of the unit histories was therefore not adopted.⁶⁷ As a result, the number of men who served in 21 Battalion, and who they all were, cannot be ascertained. In 2009, when announcing 28 (Maori) Battalion had created a website, it was stated that the battalion had a full membership roll of 3600.⁶⁸ 21 Battalion's strength was the same as 28 Battalion's, and its losses in terms of killed, wounded and captured at 2190, only 420 lower than 28 Battalion's 2600.⁶⁹ It is possible, then, that the actual number of men who served in 21 Battalion was only in the order of 3,200 to 3,600, rather than the higher War History Branch estimate.

Personnel records, strength states, reinforcement embarkation nominal rolls and much of the administrative paperwork produced by military bureaucracies provides useful sources for examining the demographics and social makeup of military units. This has been undertaken successfully by Garth Pratten and Dr Patrick Brennan when examining, respectively, Australian and Canadian infantry commanding officers, and by David Langley in his thorough examination of The Royal West Fusilier Regiment in the First World War.⁷⁰ An analysis of the demographics of a New Zealand battalion has not been

⁶⁶ Associate Editor [Fairbrother] to Trevor Shaw [at that time author of 21 Battalion's official history], letter, 19 January 1949. War Histories 21 Battalion. IA 181/7/1, NA.

⁶⁷ War History Branch to Unit History Committees, Memo, 10 September 1946. War Histories 21 Battalion. IA 181/7/1, NA.

⁶⁸ 'Maori Battalion's history goes digital', *The Dominion Post*, 7 August 2009, p. A7.

⁶⁹ Cody, *21 Battalion*, p. 462. 21 Battalion's total casualties for the Second World War were 444 killed, 1172 wounded and 574 prisoners, a total of 2190. By way of comparison with the other two Auckland battalions, 18 Battalion had 319 killed, 747 wounded, 350 taken prisoner and 29 others who died under various circumstances. Their total loss was 1145. 24 Battalion had 440 killed, 1144 wounded and 610 taken prisoner. Their total loss was 2194. W.D. Dawson, *18 Battalion and Armoured Regiment*, p. 663 and R.M. Burdon, *24 Battalion*, p. 353. 21 and 24 Battalions' casualty numbers were similar. They were both greater than 18 Battalion's, for that unit (along with the two other 4 Brigade infantry battalions) were taken out of the line after El Alamein so that they could be converted to armoured regiments. They therefore missed the remainder of the North African campaign, and did not see action again until Italy, hence the smaller casualty rates.

⁷⁰ Dr Patrick H. Brennan, "Good Men for a Hard Job: Infantry Battalion Commanders in the Canadian Expeditionary Force", *The Canadian Army Journal*, 9.1, Spring 2006, pp. 9- 28. David Langley, *Duty Done: 2nd Battalion The Royal Welch Fusiliers in the Great War*, Caenarton, UK: The Trustees The Royal Welch Fusiliers Museum, 2001.

undertaken before. The only published analyses of personnel data are McElwain's research into New Zealand infantry commanding officers in World War II and McLeod's brief examination of the socio-economic status of officers and rank differentiations in the first three echelons of 2 NZEF.⁷¹

For this study, the personal files of one hundred of the original eight hundred members of 21 Battalion have been examined in order to determine the demographics of the unit up to the time of its first battles in Greece and Crete, and before it received its first reinforcements in Egypt at the conclusion of those operations. A random sample was created by selecting every tenth 21 Battalion name from a nominal roll of unit personnel who sailed to the United Kingdom on the battalion's troop ship "X 6". The personal file (PF) of each of the individuals selected was reviewed to obtain the relevant data. The names of the men in the sample are listed in the bibliography as "2nd Echelon: Sample of Original Members of 21 Battalion."

It is acknowledged that one hundred is only 12.5% of the eight hundred founding members of the unit. Rather than be a comprehensive analysis, the purpose of the survey was to establish the level of previous military experience (First World War and Territorial service) in 21 Battalion, and also to determine whether or not the unit was a city or rural unit. There was some thought that men from city backgrounds made less capable soldiers than their country counterparts. For example, one of America's most decorated First World War soldiers, Medal of Honor recipient Sergeant Alvin C. York, recorded in his diary that 'Them-there Greeks and Italians and Poles and New York Jews and some of the boys from the big cities hadn't been used to handling guns.'⁷² York's officers put his exemplary combat skills and superior marksmanship down to '...being a mountain boy and accustomed to woods and nature [and therefore] done all these things

⁷¹ Roger McElwain, 'Commanding Officers of the Infantry Battalions of 2nd New Zealand Division', in Harper and Hayward, pp. 177- 197. McLeod, *Myth and Reality*, pp. 156- 159. His sample was achieved by collating every fifth page from the embarkation rolls of the first three echelons. As such, it provided a reasonable cross-section of 2 NZEF but not of any particular unit.

⁷² Tom Skeyhill (ed.), *Sergeant York: His own life story and war diary*, New York: Doubleday, Doran and Company, Inc., 1928, p. 190.

jes (sic) by instinct, like an animal when it is cornered.’⁷³ The presence of large numbers of conscripted townsmen was, for instance, attributed by some as the reason for the breakdown in German soldiers’ morale and discipline in the First World War.⁷⁴ British General Sir David Fraser was certain that city soldiers were less capable than rural men when he wrote:

They were mostly townsmen: open country and darkness, the natural environments of the soldier, were entirely alien. They had, in many cases, never been far from home.⁷⁵

Data relating to 21 Battalion’s demographics, pre-war military experience and occupation gathered from the sample is shown in Appendix A. The sample generated thirty nine pre-enlistment occupations. Only one man was from the Permanent Forces, suggesting a very low number of professional soldiers in the unit. 51 percent of the sample had no previous military experience at all and 44 percent had one or more years of service in the Territorial Force. Only one member of the sample had First World War service. The unit, therefore, had limited previous war experience, but a reasonable percentage had basic skills gained from service in the Territorials.

Most men in the battalion were aged between 20 and 39. Surprisingly, only 34 percent were in the 20- 24 age group. It had been assumed by the author that a higher percentage of men would have been in that age bracket, possibly stemming from the nineteen year old Vietnam War soldier generalisation. Clearly, a good proportion of men were in the 25- 34 age group. The majority of men in the sample were single (78 percent) and only 10 percent were from rural occupations: one bushman, two timber workers and seven farmers. The two largest occupation groups in the sample were labourers and drivers of various vehicle types. It was, therefore, a “city” battalion, and largely made up of tradesmen, drivers and factory workers, rather than from clerical or retail occupations.

⁷³ Skeyhill, p. 275.

⁷⁴ Richard Holmes, *Acts of War: The Behaviour of Men in Battle*, London: Cassell Military Paperbacks, 2004 (First published by Jonathan Cape, under the title *Firing Line*, 1985), p. 132.

⁷⁵ Fraser, p. 98.

21 Battalion's original men may have been of the "townsmen" class referred to disparagingly by General Fraser, however this thesis will show that being city men did not prevent them from adjusting to army life or to the "open country and darkness." In fact, it will demonstrate that even though it took two years experience to get there, they eventually excelled in night attacks.

The originals of 21 Battalion had a factory-floor and union mentality early on. Some men had difficulty dealing with authority, but that would not be unusual, even with rural members. One incident offers an insight into a battalion made up primarily from factory workers and labourers from towns. When the government ruled in 1940 that men in uniform could not take liquor from hotels, some 150 soldiers (mainly from 21 Battalion) gathered on the parade ground at Papakura Camp after 'No beer no drill' placards had been placed around the camp. The "meeting" was addressed by a soldier, just like a union representative would do in a factory. When Colonel Macky arrived, he instructed the men to disperse and they did so. The matter ended there.⁷⁶

Previous combat experience within 21 Battalion was largely confined to the officers. Eight of its key command appointment holders had First World War experience. (Table 2.4) Combat experience was therefore present at influential levels within the battalion. The unit's official history recorded that it 'was fortunate' for having this pool of experience during the battalion's early development.⁷⁷ The First World War veterans had significant impact in terms of preparing the battalion for war, and naturally, their teaching reflected their previous experience.

⁷⁶ Cody, *21 Battalion*, pp. 3 and 4.

⁷⁷ Cody, *21 Battalion*, p. 2.

Lieutenant Colonel N.L. Macky, MC
Major E.A. Harding, MC
Major R.R. MacGregor
Captain C.A. LeLievre
Captain R.W. Harding, MM
Captain G.J. Howcroft, MC
Captain A.C. Trousdale, MC
Captain J.V.M. Cauty, MM

Table 2.4: 21 Battalion key appointments with First World War experience⁷⁸

21 Battalion's initial training took place in Papakura Camp. More advanced training was to be undertaken in the Middle East when the Division had assembled there. Army headquarters only allowed eight weeks for infantry battalions to train in New Zealand. Moreover, the eight weeks were directed to be five day weeks only, with weekends off duty, so that 'the training programme should be based on 40 days'.⁷⁹ Training was to be carried out under the direction of officers and NCOs with previous military experience, although the numbers with that were limited, as already stated, within 21 Battalion. Assistance from the Permanent Staff at Narrowneck would have been of some help; however, any who might have helped the unit were effectively side-lined by Macky:

Reports given me [sic] by officers, serving in Northern District at the time, indicate that he [Macky] was always difficult. He was prone to question instructions, to fail, on occasions to carry out orders and generally to be a law unto himself. He objected to having the assistance of the District School Instructors, considering that he was capable of training his own officers and

⁷⁸ Cody, *21 Battalion*, pp. 2-3.

⁷⁹ 1st Echelon Special Force Training Directive for Infantry (Rifle) Battalion. Chief of General Staff to Headquarters Northern, Central, Southern Military Districts, Memorandum, 15th September, 1939, pp. 1- 4. Training- 2nd N.Z.E.F.- Training- Advanced Training Coy. AD 1 305/1/2 Box 1276 Part I, NA.

N.C.O.'s without specialized help. He openly and before junior officers derided the Staff... Generally he was impulsive and at times indiscreet.⁸⁰

Lest Macky be judged too harshly on this, Grey noted that in Australia, '... there were other tensions within the army caused by rivalry between the officers of the Staff Corps and those of the citizen forces.'⁸¹ 21 Battalion's situation was similar to the British Expeditionary Force in the First World War, when the New Armies had to train themselves, 'bringing to the task strong civilian preconceptions as to how an army should operate and behave.'⁸² Basic training turns civilian recruits into soldiers. Basic infantry training provides 'an adequate level of training in such things as weapon handling and minor tactics', and is also designed to 'inculcate the military ethos within recruits.'⁸³ It gets men fit, prepares them to react instinctively to commands, and reinforces that their role is to kill the enemy.⁸⁴ The aims of basic training for New Zealand echelons as directed by Army headquarters were:

the production of hard physical fitness, skill in the use of weapons and the *development of the fighting spirit*. These objects will not be achieved unless comparative [sic] hardships are undergone in training.⁸⁵

It is instructive to contrast 21 Battalion's initial training and experience with German infantry. The Germans suffered 'rough, even brutal initial training.'⁸⁶ Guy Sajer's preparation for service in the *Gross Deutschland Division* consisted of a punishing series of tests of physical stamina and endurance, live firing battle inoculation activities which killed several men, and digging trenches which they had to remain in while tanks drove

⁸⁰ Headquarters Northern Military District to Army Headquarters, official letter 42/1590 dated 2nd March 1942, p. 1. 20053, Neil Lloyd Macky, PF, NZDF Archives.

⁸¹ Grey, *A Military History of Australia*, p. 143.

⁸² Major R.N. Bryson, 'The Once and Future army', *The British Army Review*, Number 120, December 1998, p. 71.

⁸³ Holmes, p. 36.

⁸⁴ Burleigh, p. 367.

⁸⁵ 1st Echelon Special Force Training Directive for Infantry (Rifle) Battalion. Chief of General Staff to Headquarters Northern, Central, Southern Military Districts, Memorandum, 15th September, 1939 pp. 1- 4.. Training- 2nd N.Z.E.F.- Training- Advanced Training Coy. AD 1 305/1/2 Box 1276 Part I, NA. My use of italics.

⁸⁶ Fraser, p. 108.

over the top of them.⁸⁷ One German veteran recorded that ‘we survived... because of this hard training... the advantage of our armed forces lay in this monstrous training... You carried out all orders automatically... you stood erect and shot... You acted automatically as a soldier.’⁸⁸ German basic training priorities were, in order of importance: ‘combat training, firing, lectures, drilling, sports.’⁸⁹ This training certainly made them tough, but, as later chapters in this study will show, it did not always make them effective.

Compared to the Germans, the New Zealand infantry training regime of drill and route marching was very tame. New Zealand training, much like the British, did not focus on realistic combat preparation to develop the fighting spirit. The realities of this deficiency would become evident in Greece. However, there is nothing to as good as recent combat experience to develop combat effectiveness. Combat experience from Greece, Crete and later battles would be gathered and incorporated into training and leader selection as the war drew on.

No detailed account of 21 Battalion’s training in New Zealand exists. It is assumed that it generally followed the guidance issued to the First Echelon infantry battalions, although Macky and his officers modified it to a degree based on their previous war service. 21 Battalion ceased training on 13 March (after nine weeks), when the unit was declared to be on Active Service and then sent on two weeks pre-embarkation leave. Embarkation was delayed by four weeks, and a further three weeks training was undertaken during that time. Therefore, no more than twelve weeks in total was devoted to training.⁹⁰

Training was expected to include shooting, weapon handling and drill, with tactical training not to be conducted above platoon level.⁹¹ It was supposed to focus on

⁸⁷ Guy Sajer, *The Forgotten Soldier*, London: Sphere Books Edition, 1977, pp. 200- 206. “Inoculation” in this sense included having weapons fired overhead or in close proximity to soldiers as they negotiate obstacles, crawl under barbed wire, usually with explosives being detonated in close proximity. It is designed to replicate the sounds and feel of close combat.

⁸⁸ Stephen G. Fritz, *Frontsoldaten: The German Soldier in World War II*, Lexington: The University Press of Kentucky, Paperback edition 1977, p. 24.

⁸⁹ U.S. War Department, *Handbook on German Military Forces*, Technical Manual TM- E 30-451, 15 March 1945, p. I- 71.

⁹⁰ Allan Yeoman, *The Long Road to Freedom*, Auckland: Random Century New Zealand Ltd, 1991, p. 4.

⁹¹ Cody, *21 Battalion*, pp. 2 and 5.

individual, section and platoon level training, which would be within the competence of the 21 Battalion officer and NCOs to teach and supervise. All members of 21 Battalion qualified on the range with the .303 rifle, and received some training with the Bren gun. The unit disregarded the restriction on training above platoon level. The motivation for this was likely to have been to provide some training benefit for platoon and company commanders, to allow Macky an opportunity to employ his Headquarters Company and to work with other corps. Neither Cody nor Yeoman provided any examples of what higher level tactical training was conducted. The official history simply recorded:

Three times a week there was night training. In addition, full battalion exercises were held frequently and included operations with Divisional Cavalry and engineer detachments training at Papakura.⁹²

The “advanced” training the battalion undertook was done with the best of intentions, however, as Army Headquarters noted, ‘In some cases, too ambitious a programme of advanced training has been undertaken in view of the time available, with a result that the elementary training of the troops has not been sufficiently thorough.’⁹³ This suggests that there were concerns at the low standard of basic skills achieved by some men. It is a perennial problem; how much time to spend on soldiers and small group skills (where more senior officers and NCOs often have little part to play) and higher level training, where the junior soldiers and NCOs usually derive minimal benefit.

Training at too high a level was not the only impediment to attaining a solid grounding in basic soldier skills. A 1942 assessment noted ‘we have been inclined to lean on drill as a means of inculcating discipline and morale, and to devoting too much time to the *theory* of weapons training’ rather than live field firing in a tactical setting or battle inoculation.⁹⁴ Worse still, however, was the significant amount of administration which had to be undertaken, such as the issue of uniforms and boots, pay books and equipment,

⁹² Cody, *21 Battalion*, p. 6.

⁹³ Army Headquarters to All Districts, Memorandum, 9th January, 1940. Training- 2nd N.Z.E.F.- Training-Advanced Training Coy. AD 1 305/1/2 Box 1276 Part 1, NA.

⁹⁴ Lieutenant Colonel Hunt (General Staff) to List X, Memorandum, 13th March, 1942. Training- Recruits-General File- Instructions Re. AD 1 305/1/65 Box 1278, NA. My use of italics.

and preparation of wills. This all consumed valuable training time and took the edge off developing a “fighting spirit.”⁹⁵ In addition to time lost to administration, parades and parade rehearsals reduced the time devoted to training even more. The battalion participated in a number of significant parades. Drill was deemed to be ‘necessary for discipline and moral effect, esprit- de- corps and smartness of turnout’, but was not meant to be excessive.⁹⁶

Training was further hampered by lack of adequate clothing, weapons and equipment.⁹⁷ 21 Battalion was advised two weeks after its men arrived in camp that it was to lose four of its six Bren Carriers so that the Divisional Cavalry could train on them.⁹⁸ Inoculations caused the ‘greatest interruption’ to the 2nd Echelon, so much so that the General Staff requested they be administered aboard ship rather than during training.⁹⁹ Yeoman recorded the effect of the inoculations and the interruption to training when he noted in his diary ‘2/2/40. We have all just been inoculated. The whole camp is in bed.’¹⁰⁰ “Basic” training for 21 Battalion was, at best rudimentary and it did not meet the requirement for the “development of fighting spirit” anticipated by Army headquarters.

Although the Second Echelon sailed for the Middle East where it was expecting to join the First Echelon, it was diverted instead to the United Kingdom. While there, units of 5 Brigade undertook further physical and tactical training, which included route marches, mock attacks, and defensive exercises. At the time, 5 Brigade also included 28th (Maori) Battalion as a fourth infantry unit because it had sailed as part of the same convoy as the Second Echelon. The week 11- 17 November 1940, shown in Table 2.5, indicates typical activities undertaken when the unit was in the United Kingdom (Table 2.5):

⁹⁵ Cody, *21 Battalion*, pp. 1- 7.

⁹⁶ 1st Echelon Special Force Training Directive for Infantry (Rifle) Battalion. Chief of General Staff to Headquarters Northern, Central, Southern Military Districts, Memorandum, 15th September, 1939, p.1. Training- 2nd N.Z.E.F.- Training- Advanced Training Coy. AD 1 305/1/2 Box 1276 Part I, NA.

⁹⁷ Cody, *21 Battalion*, pp. 4 and 6.

⁹⁸ General Staff to Headquarters Northern Military District, Memorandum, 1st February, 1940. 1st Echelon Special Force Training Directive for Infantry (Rifle) Battalion. Chief of General Staff to Headquarters Northern, Central, Southern Military Districts, Memorandum, 15th September, 1939. Training- 2nd N.Z.E.F.- Training- Advanced Training Coy. AD 1 305/1/2 Box 1276 Part I, NA.

⁹⁹ Lieutenant Colonel General Staff to D.G.D.M.S., Minute (copy, undated). Training- 2nd N.Z.E.F.- Training- Advanced Training Coy. AD 1 305/1/2 Box 1276 Part I, NA.

¹⁰⁰ Yeoman, *The Long Road to Freedom*, p.3.

11	Company training in billet area.
12	Range practices.
13	Thomson machine gun fired by all companies. Also 3" mortar shoot.
14	All companies fired A/T rifle Boyes [sic] course. Also 2" mortar course.
15	Rifle range for one company.
16	Parade in morning. Leave in afternoon. Mr West-Watson's dance in the evening.
17	Church parade. Leave in the afternoon.

Table 2.5 Extract from 21 Battalion War Diary 11- 17 November 1940¹⁰¹

While the battalion was based in the United Kingdom, it had an operational role along with the rest of the Second Echelon units, against possible German invasion. Some time was devoted to deployments to the east coast where defensive positions were taken up against possible landings by German parachutists.¹⁰² Even though the threat was real, it can be seen in hindsight, that little of training value was derived. While it was based in the United Kingdom, the battalion received ammunition and equipment to bring it up to war establishment and to make up for the shortfalls from New Zealand.¹⁰³ The strength state for 3 November 1940 showed that the battalion numbered 35 officers and 618 soldiers, a total of 653 All Ranks.

It was during this period in the United Kingdom that the "Trousdale effect" was first noticed. Major Trousdale had observed (and probably others had also) in brigade exercises, where only three infantry battalions were required, that more often than not, it was 21 Battalion which was left out and replaced by 28 (Maori) Battalion.¹⁰⁴ This was the so-called "Trousdale Effect." It would be reasonable to expect that all battalions would take it in turn to be excluded, but apparently this was not so. Trousdale attributed this

¹⁰¹ Entries for 11- 17 Nov 40. 21 Battalion War Diary, WAI 1 DA 54/1/11, NA. The battalion was billeted at Camberley during this time.

¹⁰² Entries for 18- 20 Jul 1940. 21 Battalion War Diary, WAI 1 DA 54/1/7- 14, NA.

¹⁰³ Entries for 27 Jun and 15 Aug, 21 Battalion Chronology. WAI DA 54/11/1 17177 Pt. 1, NA. W.G. McClymont, *To Greece*, p. 37.

¹⁰⁴ Allan Yeoman, interview, Kati Kati, 4 January 2004.

situation to antipathy between Macky and his brigade commander Brigadier James Hargest. It is possible that there was ill-feeling between the two, because Macky had already commanded at battalion and brigade level in the Territorials prior to dismissal for his part in the “Colonels’ Revolt”. Macky may have been disappointed at only being given a battalion, when he might have expected to be appointed to brigade command like Hargest.¹⁰⁵ Also, as noted earlier with respect to relations with the Permanent Force, Macky could be a difficult customer.¹⁰⁶ Hargest may have found it easier to have Macky’s unit play “enemy” rather than deal with him during the exercise. Whatever the cause, the trend continued into operations when 21 Battalion was excluded from the brigade (and indeed the division) in the opening stages of the Greece campaign. When the division went forward in Greece, 21 Battalion was tasked to remain behind to guard the docks at Piraeus.

On 12 January 1941, 5 Brigade sailed for the Middle East in a convoy of twenty-one troopships, escorted by a battleship, two cruisers and twelve destroyers. Whatever training the battalion had conducted while in the United Kingdom, it was the last that it would conduct before being committed to action in Greece, although the men of 5 Brigade and 21 Battalion were not to know this as they sailed for Egypt.

CONCLUSION

21 Battalion was a wartime creation. There had been significant loss of First World War combat experience, with valuable lessons from that war that were not passed on. Only a small number of men in 21 Battalion had previous war service, and about half had some experience in the Territorial Force. This all helped, although the necessity for administration and the tendency to undertake advanced training rather than focus on core skills, detracted from soldiers achieving a thorough grounding in basic soldier skills and

¹⁰⁵ Macky certainly pressed to be appointed a Brigade Commander after he returned to New Zealand in 1942. In the same correspondence, the Commander Northern Military District also noted that Macky had advised of his difficult relationship with ‘his Brigade Commander in England. [Hargest]’ Headquarters Northern Military District to Army Headquarters, official letter 42/1590 dated 2nd March 1942. 20053, Neil Lloyd Macky, PF, NZDF Archives.

¹⁰⁶ Headquarters Northern Military District to Army Headquarters, official letter 42/1590 dated 2nd March 1942, p. 1. 20053, Neil Lloyd Macky, PF, NZDF Archives.

development of the fighting spirit. The demographics establish that 21 Battalion was a unit of “townsmen”, with very limited previous military experience.

21 Battalion’s training was rudimentary, but on par with the remainder of the Second Echelon. Like their Australian counterparts, they had been despatched overseas with little training only, anticipating that more advanced training would be undertaken in Egypt ahead of being committed to action.¹⁰⁷ By comparison, German infantry training was tough and realistic.¹⁰⁸ The tactics the Germans had practiced were beyond the experience of 21 Battalion’s First World War veterans, or even those with more recent Territorial service.

No matter how realistic recruit or indoctrination training was, it could not properly prepare a soldier for the realities of combat.¹⁰⁹ German soldiers underwent training that was *realistic* and *brutal* in their attempt to recreate the conditions of combat. New Zealand soldiers were never provided with the former and would not have accepted the latter for they were, according to an official report written after the Second World War, from peoples ‘who have an aversion to war,’ who are ‘not “military minded” and approaches the Army with some misgivings.’¹¹⁰ By 1941, the Germans had considerable combat experience. It now remains to be seen how 21 Battalion performed in Greece and whether it was combat effective during its combat initiation where it faced veteran troops of the 2nd *Panzer Division*.

¹⁰⁷ Grey, *A Military History of Australia*, p. 151.

¹⁰⁸ Fritz, pp. 16 and 22-23.

¹⁰⁹ Burleigh, p. 368.

¹¹⁰ Army Headquarters, *Infantry in Battle: Notes on training and command of New Zealand infantry units*, p. 23.

CHAPTER 3

PLATAMON: 14- 16 APRIL 1941

*Any position in which an army means to await the enemy's attack
should obviously be one that offers the solid advantages of terrain,
which will in turn serve to multiply the army's strength.*
- von Clausewitz, *On War*¹

*'The fight for the castle began at nightfall....
Very fierce resistance, and terrible country.'*
- Colonel Balck, Commander *Battlegroup 2*,
*2nd Panzer Division*²

21 Battalion disembarked in Egypt on 5 March 1941, having sailed with 5 Brigade from the United Kingdom.³ Twenty four days later, the unit, along with the New Zealand Division, arrived in Greece as part of an Allied contingent, known as Lustreforce.⁴ The Force was tasked with supporting the Greek Army in the defence of Greece in the event that the Germans invaded. They did. The New Zealand Division, less 21 Battalion, departed for the front. 21 Battalion was detailed, instead, to remain behind and guard the Piraeus docks, near Athens. On 9 April, 21 Battalion was ordered forward from the docks to Platamon, where it was to establish a defensive position. The position would have met von Clausewitz's standard for it did provide, as will become evident, the ability to withstand attacks by a considerably stronger force.

This chapter analyses the battle of Platamon, the first of two defensive battles undertaken by 21 Battalion in Greece.⁵ 21 Battalion fought this battle as an independent unit, detached from the New Zealand Division and without any other allied units in close

¹ von Clausewitz, *On War*, p. 488.

² I. McL. Wards, "Panzer Attack in Greece", *The Other Side of the Hill*, Wellington: War History Branch, Department of Internal Affairs, 1952, p. 5.

³ Entry for 3.3.41. 21 Battalion War Diary 1- 31 Mar 1941. WAI 1 DA 54/1/15, NA.

⁴ Entry for 29.3.41. 21 Battalion War Diary 1- 31 Mar 1941. WAI 1 DA 54/1/15, NA.

⁵ The village of Platamon was actually located to the rear (south) of the ridge. The Germans referred to the battle site as Pandleimon, which was the name of a village higher up the ridge to the west, close to where C Company was located.

proximity to provide it support.⁶ This battle provides the first opportunity to identify combat effectiveness factors that were present, and those that were not, and which can be also derived from the German perspective.



Map 3.1: Greece⁷

⁶ Peter Ewer, *Forgotten ANZACs: The Campaign in Greece, 1941*, Carlton North: Scribe Publications Pty. Ltd., 2009, p. 142. Ewer assessed the terrain as 'topographically strong' but that there were far too few troops to defend it.

⁷ McClymont, *To Greece*, facing p.85.

THE COMBATANTS

Battlegroup 2

21 Battalion was opposed at Platamon by *Battlegroup 2* of *2nd Panzer Division*. Their task was to ‘defeat the enemy and thrust through to Larissa.’ To achieve this *2nd Panzer Division* separated into two battlegroups. *Battlegroup 2* was ordered to advance along the coastal route, via Platamon, and placed under the command of Colonel Hermann Balck, Commander *3 Panzer Regiment*. Balck’s instructions were to ‘defeat the enemy on the hills of Pandeimon, and push on to Larissa through the Tempe Gorge or farther south.’⁸ The combined arms organisation of his battlegroup included:⁹

2 Motorcycle (MC) Battalion (a motorcycle mounted infantry battalion of four companies)

3 Panzer Regiment (less one Battalion) [The panzer elements at Platamon consisted of Regimental HQ, the light Troop and *I Panzer Battalion*]

I/ 304 Infantry Regiment [1st Battalion of *304 Infantry Regiment*]

2/38 Anti Tank Unit

7/74 Artillery Regiment

21 Battalion

At Platamon, on 10 April, Macky received a letter from General Freyberg giving the battalion’s tasks and an assessment that 21 Battalion should ‘expect [enemy] infantry only, as the country was impassable to tanks.’¹⁰ That same day, 5 Brigade’s Intelligence

⁸ 2 Pz Divisional Order, 1815 hrs, 15 Apr 41. Appx 33, Appxs to 2 Pz Div Admin Diary (Greek Campaign). WAI 1, DA 438/21/4. NA. German reports generally refer to the Platamon battle site as Pandeimon. Note the variation of spelling for “Larissa” in German quotes.

⁹ The organisation of Battlegroup 2 has been derived from a number of sources including: McClymont, *To Greece*, facing pp. 245- 250 and fn 1 on p.245. Wards, “Panzer Attack in Greece” p. 5. I. McL Wards, Campaign Narrative- 2 NZ Division, Volume IV- Campaign in Greece- Part III and Appendices, May 1953, KMARL, pp. 308- 318.

¹⁰ Report on Operations 21 Battalion in Greece by Lt-Col N.L. Macky (Prepared after return to New Zealand and circulated privately), p.5. WAI 1 DA 54/10/19, NA.

Officer delivered a letter of welcome from Brigadier Hargest, and written orders to the battalion. 21 Battalion's tasks were:

- (a) To prepare the approaches to THE TUNNEL,¹¹ CASTLE HILL and HILL 226 for defence. You will build defences along the line indicated in the plan which will be delivered to you by the B.I.O. [Brigade Intelligence Officer]
- (b) To defend the position, from which there will be NO retirement.
- (c) Your force will be so disposed as to deny the approaches to the enemy; to defend CASTLE HILL, HILL 226; and to counter-attack should either be captured.
- (d) You will make provision for defence against landings from boats at least a mile in rear of your positions.¹²

On the eve of battle, the threat assessment was still that if the enemy used the coastal route, then 'it would be with infantry only on account of the terrain.'¹³ This assessment highlights the naivety of the New Zealanders at this stage of the war, where they believed that 21 Battalion could achieve its mission without anti-tank support or additional artillery. At 1500 hours on 14 April, General Freyberg visited the 21 Battalion position and instructed the unit 'to hold at Platamon until instructed to the contrary.'¹⁴ The inability of German tanks to use the route was reinforced by the General.¹⁵ The battalion's official history recorded, after the fact, that Colonel Macky 'was not so sure, but did not press the point.'¹⁶ The campaign narrative simply stated 'It does seem that anti-tank guns (4 Bde at Servia had a whole battery to spare) could reasonably have been

¹¹ The train track passed under the ridge via a tunnel. The track from Katerini crossed over the ridge.

¹² Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 297. This detail is not included in the campaign narrative or 21 Battalion's official history.

¹³ Cody, *21 Battalion*, p. 49. This was despite a reconnaissance undertaken which indicated that tanks could use the route. Wards, Campaign Narrative-Part III and Appendices, p. opposite 297.

¹⁴ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 304. Some observers recorded Freyberg's visit as almost a farewell. Dutton's recollection of the visit was: 'Can't remember who else was with him [Freyberg], or what instructions he gave, except that when he said goodbye he seemed to imply "Well, that the last I'll see of you chaps."' G.A. Dutton, to J.F. Cody, dated 16/7/50. Correspondence concerning 21 Battalion's part in Greek Campaign. WAI 1 DA 54/10/20, NA.

¹⁵ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, facing p. 297.

¹⁶ Cody, *21 Battalion*, p. 49.

sent to Platamon.’¹⁷ The threat assessment at brigade and division level was poor, but it was not until further actions had been fought, and experienced gained, that more accurate evaluations would be made. Intelligence gathering, and subsequent enemy assessments, were weak at this early stage of the war.

The evidence suggests Macky received a number of orders, both written and verbal, prior to the battle.¹⁸ This is at odds with his subsequent claim that he received few instructions and which he may have advanced, after the fact, to explain the unit’s performance.¹⁹ The two key directions he received were consistent; to hold Platamon, and not to expect German tanks. On 14 April, 21 Battalion’s organisation for battle was:

21 Battalion:	(Lieutenant Colonel Macky)
A Company	(Captain McClymont)
B Company	(Captain Le Lievre)
C Company	(Captain Tongue)
D Company	(Captain Trousdale)
Mortar Platoon	(Lieutenant Wilson)
Bren Carrier Platoon	(Lieutenant Dee)

In Support:

Artillery Troop (an Observation Post party and four 25 Pounder field guns)
Engineer section
A detachment from Divisional Signals (two men and one Number 11 wireless)-
this was 21 Battalion’s sole means of communication with higher headquarters.

The lack of support arms allocated to 21 Battalion made it particularly vulnerable, and almost totally self reliant, except for the artillery troop it had been allocated. By way of contrast, 25 Battalion of 6 Brigade, located to the west of Mount Olympus, was allocated an additional rifle company (from 24 Battalion), two of 6 Brigade’s machine gun

¹⁷ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, Narrator’s Note para 5, facing p. 297.

¹⁸ Brigadier Hargest to [Lieutenant Colonel] Macky, dated 9th April 1941, 5 Infantry Brigade War Diary (Micro 2798). WAI 1 DA 52/1/16, NA.

¹⁹ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, Narrator’s Note para 9, facing p. 298.

platoons and twelve 2 pounder anti-tank guns. In addition, the weight of New Zealand artillery support was directed to 25 Battalion's front.²⁰ 21 Battalion, therefore, was significantly under-resourced given the mission it was assigned and the enemy it would face, and this resulted in a comprehensive and prolonged test of its combat effectiveness at Platamon.

SUMMARY OF KEY EVENTS

At 1820 hours on 14 April, shortly after General Freyberg's visit ended, German vehicle movement was detected to the front of 21 Battalion. These were the forward elements of *2 Motorcycle Battalion* which was leading *Battlegroup 2's* advance south towards Platamon.²¹ The New Zealand artillery troop engaged. A New Zealand Bren gun opened fire, indicating to the Germans that the ridge was occupied, but, significantly, not giving away the strength or extent of the defending force, as the whole position did not engage.

The battle at Platamon passed through three distinct stages. These will each be described in turn. From the attacker's perspective these were: a battalion attack by *2 Motorcycle Battalion* at first light on 15 April; a regimental attack by *I/3 Panzer Regiment* and *2 Motorcycle Battalion* during the evening 15 April; and finally, a regimental Attack by *I/3 Panzer Regiment*, *I/304 Infantry Regiment* and *2 Motorcycle Battalion* at dawn on 16 April. Map 3.2 shows 21 Battalion's dispositions, the direction of the German advance towards Platamon, and subsequent attacks.

2 Motorcycle Battalion Attack 15 April

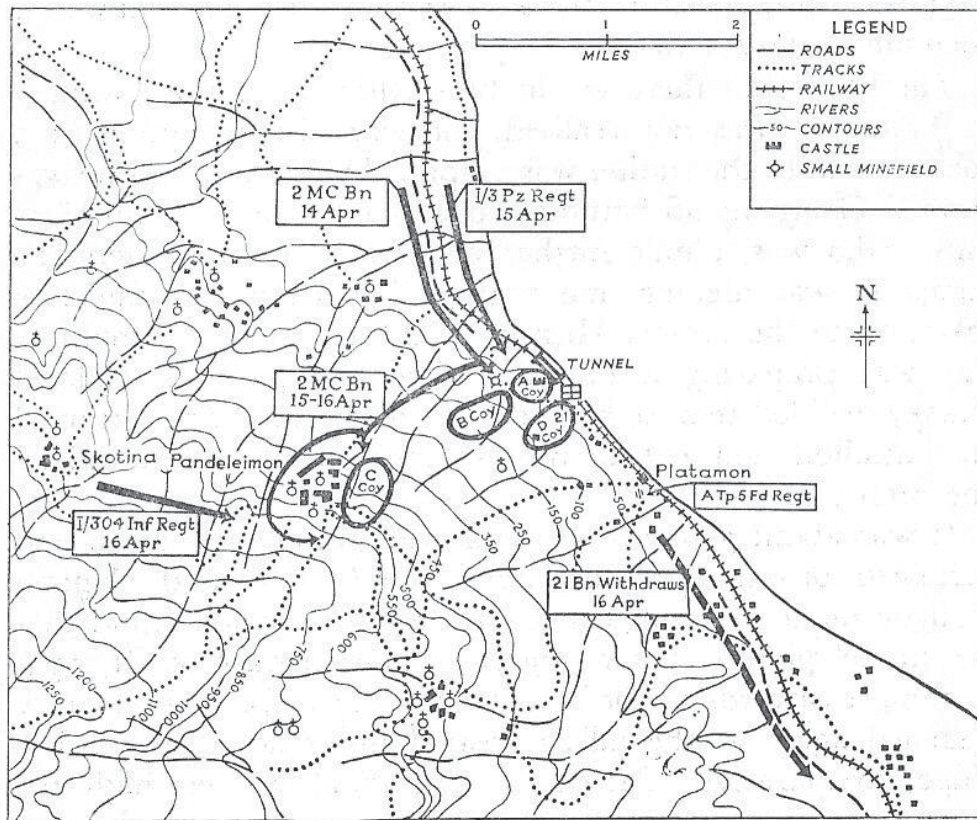
The German reaction to coming under fire from Castle Ridge on 14 April was to close up *2 Motorcycle Battalion* and bring its artillery forward in preparation to support an attack. The German commander (not Balck at this point) assumed the New Zealand position was defended, although only lightly held.²² He did not, however, launch an immediate

²⁰ Pete Connor, *Finding Ways to Survive*, p. 33.

²¹ Wards, "Panzer Attack in Greece", p. 3.

²² Balck did not get forward until 1400 hours the following day. Wards, "Panzer Attack in Greece", p. 4.

assault from the line of march, intending instead, to attack the next morning. Well camouflaged defensive positions masked the true breadth of the position.²³ Limited defensive small arms fire and lack of heavy direct weapons fire from the New Zealanders reinforced this assessment further.²⁴ Had an immediate attack been conducted, he might have learned more about the true extent of the New Zealand position before last light, and then made better plans for the next day.



21 BATTALION POSITIONS, PLATAMON

Map 3.2: 21 Battalion dispositions and German attacks at Platamon²⁵

2 *Motorcycle Battalion's* objective was the castle itself. The attack was preceded by a heavy bombardment, but it was only fired onto the area of the castle (A Company's general location), thus failing to neutralise a significant portion of the New Zealand

²³ Major General F.W. von Mellenthin, *Panzer Battles 1939- 1945: A Study of the use of armour in the Second World War*, London: Cassell & Co. Ltd., Second Edition, 1956, p. 31.

²⁴ Wards, "Panzer Attack in Greece", p. 4. This, and the sound of demolitions, reinforced the notion that only the castle area of the ridge was defended.

²⁵ Cody, *21 Battalion*, p. 41.

position.²⁶ The attack was not supported by direct fire. Therefore, as the dismounted motorcycle troops emerged from the scrub forward of the New Zealand platoons, they came under intense rifle and Bren gun fire from A and B Companies who were not effectively suppressed. As a result, the leading German company sustained such heavy casualties that *2 Motorcycle Battalion* fled back to the cover of the scrub.²⁷ The company of *2 Motorcycle Battalion* sent to neutralise B Company's fire so that the attack towards A Company could be resumed, was itself pinned down, and had to send a patrol out to determine the actual flank of 21 Battalion, which they were then able to report extended all the way up to Pandeimon. Finally, the reconnaissance troops had done their job properly. No 21 Battalion positions were penetrated during this attack, although the Germans got close enough for one of the New Zealand platoons to use improvised hand grenades against them.²⁸ This initial attack, based on poor intelligence (a failure to acquire it), and lacking adequate direct fire to support it, failed. What it did provide, was information about the extent of the layout, location of weapons systems. The Germans may have wondered about the lack of retaliatory artillery fire, however, would not have known, at this juncture, that 21 Battalion was not supported by effective anti-tank weapons. This attack constituted, in the end, a reconnaissance by fire.

Balck arrived on the scene at 1400 hours and at once set about reorganising the attack.²⁹ Finding that *2 Motorcycle Battalion* had lost momentum when the attackers had gone to ground in the scrub forward of the New Zealand position to avoid the effects of small arms fire, he gave instructions for it to be withdrawn, reformed and then sent on an enveloping movement of the New Zealand left flank at Pandeimon. The tanks, located in the rear beyond Katerini, were called forward immediately.³⁰

²⁶ W.J. Gorrie to J.F. Cody, letter, dated 3.7.50, Correspondence concerning 21 Battalion's part in Greek Campaign. WAI 1 DA 54/10/20, NA.

²⁷ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 307.

²⁸ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 307. McClymont, *To Greece*, p. 246. Lt Southworth (7 Platoon, A Coy) used improvised grenades made from gelignite. The battalion did not have any hand grenades.

²⁹ Wards, "Panzer Attack in Greece", p. 4.

³⁰ Wards, "Panzer Attack in Greece", p. 4.

Regimental Attack 15 April

The second German attack did not commence until the evening, as it had taken until 1800 hours for *3 Panzer Regiment* to come forward from Katerini on the congested single route available. The New Zealand official history states that Balck's plan was to envelop the New Zealand left flank at Pandeileimon, employing three companies *2 Motorcycle Battalion* as dismounted infantry, simultaneously with an attack on the centre approach by one of the tank companies.

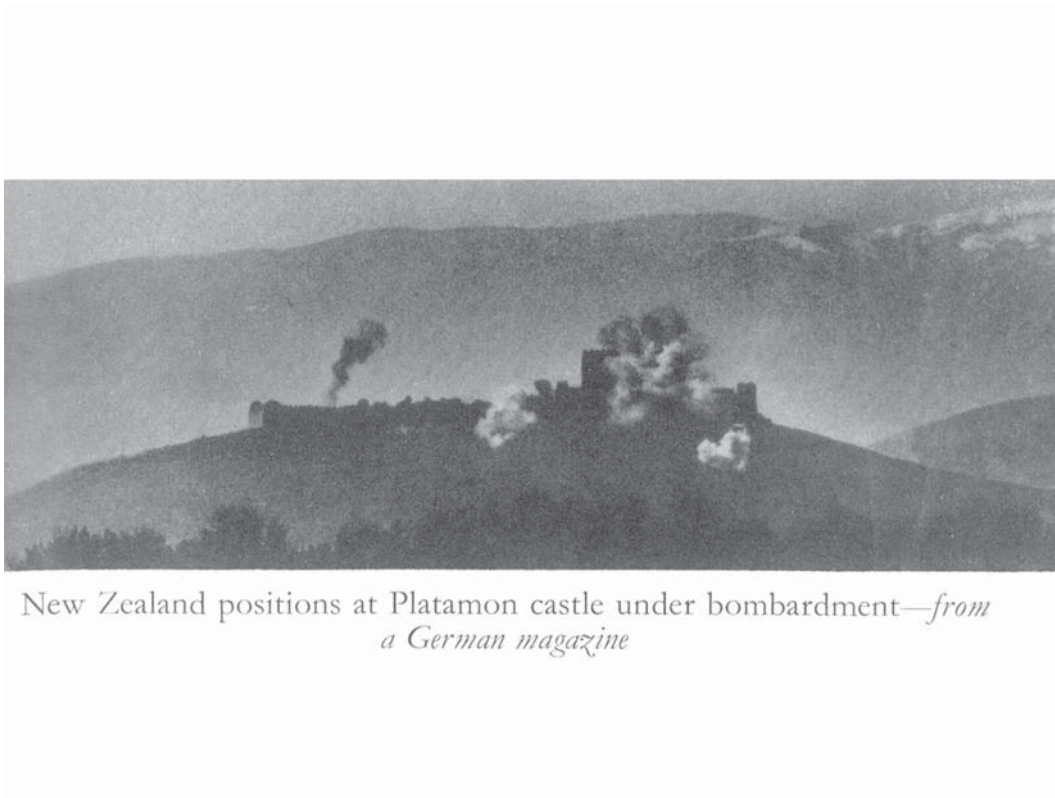


Figure 3.1: German bombardment of the Castle at Platamon- as viewed from the German approach³¹

The *2 Motorcycle Battalion* plan of attack for Pandeileimon was to encircle C Company. One company was to approach from the flank and rear, while its other two companies attacked C Company from the front.³² The German companies had closed on C Company by 1900 hours. At dusk, 14 Platoon (C Company) which had been in widely

³¹ McClymont, *To Greece*, facing p 302.

³² Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 310.

dispersed unsupported section posts was attacked and forced off its position. The Germans were only able to secure a small portion of their intended objective. 14 Platoon, which had earlier been pushed off its position, had, by 0100 hours on 15 April, been re-positioned between 13 and 15 Platoons. It had given up ground held previously in favour of a less dispersed company position.

The tank attack on the centre approach towards A and B Companies commenced an hour behind 2 *Motorcycle Battalion's* uncoordinated attack onto C Company. The German *Light Tank Platoon* (five Panzer Mark II tanks) attempted to penetrate the position, supported by fire from static positions of other panzers from *I/3 Panzer Regiment*.³³ Light tank platoons typically acted as a scout organisation for a panzer regiment. In this case they were employed in the attack, supported by the fire of the heavier tanks firing from static positions 1200 yards short of the castle. 'The [light] tanks were accompanied by infantry and these were severely dealt with and many casualties inflicted.'³⁴ All five Panzer Mark IIs shed tracks or broke track assemblies and had to be abandoned by their crews as a result.³⁵ The panzers were impervious to the unit's small arms and Boy's anti-tank rifle fire.³⁶ High explosive fire from 21 Battalion's mortars and artillery made no impression on the tanks either. It was, in fact, the difficult terrain which prevented the tanks from penetrating the position, not 21 Battalion's firepower.³⁷ A second group of seven tanks (probably Mark IIIs) attempted to get between forward platoons, but they too were thwarted because of the rugged terrain rather than by the defenders' fire. At last light, the tank attack was abandoned.

³³ Wards, "Panzer Attack in Greece", pp. 4-5.

³⁴ Chapter 7, Greece, p. 9 (number in margin reads p.16.) 21 Bn War History. Shaw T.R., 21 Battalion Unit History: Chapter 7 Greece-Preliminary Draft and Chapter 6- move to Greece. WAI 1 DA 54/15/3, NA.

³⁵ Report by 3 Pz Regt, Section 6- Reports by Various formations of 12th Army. WAI 1 DA 438/21/4, NA.

³⁶ The Boys anti-tank rifle was five feet in length and weighed 36 pounds. It could penetrate approximately half an inch of armour at three hundred yards. John Weeks, *Men Against Tanks: A History of Anti- Tank Warfare*, London: David & Charles (Publishers) Limited, 1975, p. 32. Gordon Halsey recorded that the Boy's was 'found to be useless at anything but removing the paint off the German *panzers*.' Gordon Robert Halsey, 'The Greek Campaign: 'Freyberg's circus enters the imbroglio'', Master of Philosophy thesis, Massey University, 2005, p. 143.

³⁷ Activities of 21 Battalion during Greek Campaign, Apr 1941, Yeoman A.A., eye-witness account. WAI 1 DA 54/10/2, NA.

The 2 *Motorcycle Battalion* attack on C Company ceased at last light also. Later, a large German patrol swept through C Company firing in all directions, presumably in an attempt to draw fire, which it did not succeed in doing.³⁸ There was no further enemy action against C Company during the night, however the *Motorcycle Battalion* was joined by its fourth company, and the entire battalion remained in close proximity to C Company, ready to continue the attack at first light. The Germans attributed the failure of the regimental attack to secure its entire objective to a lack of coordination between the companies attacking on different axes.³⁹

Macky had misinterpreted (or misreported) the terrain effect on the tanks in favour of New Zealand firepower when he reported by wireless that night:

tanks have withdrawn in face of our harassing fire. Present position quiet except for infiltration left flank. Casualties slight but finding it difficult to prevent entry of tanks.⁴⁰

While the attack may have halted because of the dark, the infantry of both sides remained at close quarters. A Company was subjected to sporadic shell fire, and shots fired by B Company soldiers at suspected enemy movement were returned by German sniper fire.⁴¹ German infantry infiltrated behind B Company and, as already noted, a patrol swept through C Company on a reconnaissance by fire. The proximity of German troops to B and C Companies throughout the night ensured those companies were spared from German artillery fire. During the night, Balck called forward further reinforcements; an infantry battalion (*I/ 304 Infantry Regiment*), plus more artillery and engineers.⁴² Macky did not have this luxury.

³⁸ C.J. Bosworth to Mr Wards, letter, 6/12/52. Correspondence File, 21 Battalion [in Greece]. WAI 3/7, NA.

³⁹ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 310. Wards, "Panzer Attack in Greece", p. 5.

⁴⁰ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p.11.

⁴¹ Cody, *21 Battalion*, p.55.

⁴² Wards, "Panzer Attack in Greece", p. 5.

Regimental Attack and the 21 Battalion Withdrawal 16 April

The regimental attack resumed at dawn. *2 Motorcycle Battalion*'s objective was to secure the high ground in C Company's area and from there to roll up 21 Battalion from the Pandeimon flank.⁴³ *I/ 304 Regiment*, called forward during the night, was to attack C Company's rear.⁴⁴ C Company was therefore to be attacked by two battalions. A second attack, towards the castle position on the main ridge into the gap between A and B Companies, was to be mounted by infantry supported by tank fire from static positions. Both attacks were intended to be conducted simultaneously, which would enhance the psychological effect, and split the resources of the defence between two major attacks.

The attack commenced with dismounted motorcycle troops, supported by machine guns and mortars this time, attacking C Company from the west (rear) and north. The attack almost failed, the fighting being described by the Germans as 'bitter'. Only the arrival of *I/ 304 Regiment* allowed the attack to succeed.⁴⁵ Almost surrounded, Captain Max Tongue decided it was time to withdraw C Company. The attack had by this time already resulted in the capture of two of his company's rifle sections (of 15 Platoon). Tongue's second-in-command (Captain Harry McElroy) advised Colonel Macky of C Company's predicament, however he had not requested permission to withdraw before the field telephone line went dead. At the same time, intense German tank and artillery fire pounded Castle Ridge, preceding an assault by German infantry.⁴⁶ The situation was dire; C Company appeared to be overrun, D Company (to the battalion's rear) was taking small arms fire from the high ground C Company had been holding, and most of B Company had been pushed off its defensive position. Only A Company was still firmly in place.

⁴³ Entry for 16 Apr 1941, 21 Battalion Chronology. WAI 1 DA 54/11/1 (17179 Pt 1), NA. The chronology records that C Company was almost surrounded and that the Germans were attempting to 'drive a wedge between C [Company] and rest of Bn.'

⁴⁴ Hermann Balck, General der Panzertruppe a. D., *Ordnung im Chaos [Order in Chaos]*, Osnabruck: Biblio Verlag, 1981, [transl. from German text by Claire Nelson], p. 321.

⁴⁵ Wards, "Panzer Attack in Greece", p. 6.

⁴⁶ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 314.

Wards recorded that a wireless message from 21 Battalion to ANZAC Corps HQ at 0900 hours had indicated the ammunition 'posn serious', and at 0940 hours it advised the left flank of the unit was seriously threatened.⁴⁷ The situation was grim and was about to get worse, but the New Zealanders stood their ground.

While Macky notified Corps Headquarters of the situation over the wireless, German tanks advanced on the centre approach. They attacked with two tank companies forward at this point, maximising their frontage, shock effect, and the chance of finding a useable route onto the ridge. The right flank tank company closed in on the ridge. Balck ordered the tanks to advance 'regardless of the terrain', once he had identified movement which indicated that the New Zealanders were withdrawing.⁴⁸ German tanks appeared to be making headway, as five got onto the saddle between the companies, cutting off B Company's intended withdrawal route.⁴⁹ Macky made up his mind. At 1015 hours a final wireless message was sent from the battalion:

W/T sta[tion] 21 NZ Bn closing down. Getting out.⁵⁰

The battalion then withdrew. This was not a pre-planned and orderly manoeuvre. It was conducted in haste. Men were ordered to leave blankets and coats behind 'in order to run.'⁵¹ *3 Panzer Regiment* reported 'Large stores of canned food and tents were left behind, signs of a hasty, panic- stricken flight.'⁵² D Company headquarters was advised of the withdrawal by Colonel Macky as he was passing through.⁵³ The wireless was destroyed rather than carried out. The battalion's telephone cable and significant

⁴⁷ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 314.

⁴⁸ Report by 3 Pz Regt (2 Pz Div), Reports from Various Formations of 12th Army (Greece). WAI 1, DA 438/21/4. NA. von Mellenthin, p. 33.

⁴⁹ Report on Operations 21 Battalion in Greece by Lt-Col N.L. Macky (Prepared after return to New Zealand and circulated privately), p.9. WAI 1 DA 54/10/19, NA.

⁵⁰ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 315. Most likely what the receiving signaller recorded, not necessarily the exact words used by 21 Battalion.

⁵¹ N.R. Flavell to J.F. Cody, letter, dated 2.7.50, Correspondence concerning 21 Battalion's part in Greek Campaign. WAI 1 DA 54/10/20, NA.

⁵² Report by 3 Pz Regt (2 Pz Div), p. 7. WAI 1 DA 438/21/4, NA.

⁵³ A. Ferguson, letter, undated, enclosed within letter from W.J. Gorrie to J.F. Cody, dated 16/7/50, Correspondence concerning 21 Battalion's part in Greek Campaign. WAI 1 DA 54/10/20, NA.

quantities of equipment, including digging tools, were left behind.⁵⁴ Although not recorded specifically within 21 Battalion's War Diary or official history, it can be deduced that the battalion also left its two mortars behind. The evidence for this is drawn from Major General F.W. von Mellenthin's account, quoting from Balck's private papers, which stated that the New Zealanders left their "heavy weapons" behind on the position at Platamon.⁵⁵ Further, 21 Battalion's mortars were not referred to at all in New Zealand official or private accounts of the subsequent fighting at Pinios Gorge, tending to support the deduction that they were left behind at Platamon. Loss of the wireless, telephone cable, digging tools and mortars were to have a significant impact on 21 Battalion's combat effectiveness at Pinios Gorge, the unit's next battle.

During its withdrawal, in some disorder initially, 21 Battalion was vulnerable to German ground and air forces. As A, B and D Companies withdrew from the position, they were joined by the bulk of C Company. Meanwhile the 25 pounders had been engaging a German medium battery when Lieutenant Lawrence Williams was advised that a withdrawal was being undertaken; he then got his guns out of action.⁵⁶ Colonel Macky had intended the battalion occupy a new defensive line near the Platamon station, however the ground was judged to be an insufficient obstacle to tanks, so he decided the entire unit would cross the Pinios River and take up a new defensive position within the gorge near Tempe. The battalion's withdrawal, on foot, was covered as far as the Pinios River by the Carrier Platoon and a single 25 pounder, hardly sufficient had they been actively pursued by a panzer regiment.⁵⁷ Although it took a long time for the battalion to cross the Pinios River, using a barge (which the New Zealanders then sank to deny the

⁵⁴ Cody, *21 Battalion*, pp. 57- 58 and 63.

⁵⁵ von Mellenthin, p. 33.

⁵⁶ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 315. Ordinarily the guns would have been forewarned and possibly taken some guns out of action earlier so they could be re-positioned rearwards in order to provide some artillery covering fire for the withdrawal.

⁵⁷ Report on Operations 21 Battalion in Greece by Lt-Col N.L. Macky (Prepared after return to New Zealand and circulated privately), p.10. WAI 1 DA 54/10/19, NA, and D.R. Paul to Mr Cody, letter, 24.9.50, Correspondence concerning 21 Battalion's part in the Greek campaign. WAI 1 DA 54/10/20, NA.

river crossing to the Germans), the unit was unmolested throughout, and was able to reach Tempe at the western exit of the gorge by dusk on 16 April.⁵⁸

21 Battalion was lucky that *Battlegroup 2* did not pursue them. All the leading tanks of *Battlegroup 2* had broken tracks which blocked the track up to the ridge. Presumably, 2 *Motorcycle Battalion* had left its motorcycles well in rear (as they had dismounted from them for the attacks) and was therefore not in a position to pursue the New Zealanders either. In attempting a bypass, earlier, one tank was destroyed by a mine.⁵⁹ This caused further delays while German engineers swept the entire track for other mines. 3 *Panzer Regiment* reported that ‘small parties of infantry had followed up the English on foot, driven them completely from the ridge...’ This appears, however, to be a statement regarding the infantry closing on Castle Ridge itself, rather than pursuing the New Zealanders towards the Pinios River.⁶⁰ German infantry were exhausted by their overnight outflanking movements and were therefore unable to pursue the New Zealanders.⁶¹ The Germans eventually resorted to blasting gaps and towing tanks over the ridge, the terrain was so difficult. Twenty five tanks were clear of the ridge by 1100 hours on 17 April, well after 21 Battalion had arrived at Tempe. Two companies of German tanks finally reached the Pinios River by midday on the 17th, where they had to halt, as the river was impassable.⁶²

German aircraft were in the area, but appeared to be employed on other tasks for the battalion chronology noted, ‘Planes overhead but not worried.’⁶³ Allan Yeoman wrote that there was ‘no aircraft menace at the time.’⁶⁴ Sporadic shelling of the New Zealand withdrawal route may have been attempted, but is not recorded. 21 Battalion managed to escape destruction at Platamon because *Battlegroup 2* were unable to follow them up due

⁵⁸ Paragraph 3, ‘Platamon and Penios (sic) Gorge Demolitions’, p.2. F.W.O. Jones to Mr J.F. Cody, letter, 4th December 1950. Correspondence concerning 21 Bn in the campaign in Greece. WAI 1 DA 54/10/20, NA.

⁵⁹ Balck, *Ordnung im Chaos*, p. 322.

⁶⁰ Report by 3 Pz Regt, Section 6- Reports by Various formations of 12th Army. WAI 1 DA 438/21/4, NA.

⁶¹ von Mellenthin, p. 33.

⁶² Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 318 and von Mellenthin, p. 33.

⁶³ Entry for 17 Apr 1941, 21 Battalion Chronology. WAI 1 DA 54/11/1 (17179 Pt 1), NA.

⁶⁴ Entry for 15/16 Apr. Eye witness accounts, Yeoman, A.A., Activities of 21 Bn during Greek Campaign, Apr 1941, p. 2. WAI 1 DA 54/10/2, NA.

to a combination of terrain difficulties, the exhaustion of the German infantry, and also because German aircraft who might have attacked them, were assigned elsewhere.

OUTCOME

Mission Achievement

Despite getting clear of the position almost intact and having defeated the initial German attacks, 21 Battalion did not achieve the mission it had been assigned. It did not retain Platamon ridge and therefore could not deny the coast road from the location specified in its orders. Further, it had disobeyed the order for no retirement. 21 Battalion could never have defended indefinitely against half a panzer division, despite the favourable defensive terrain. It did not have the combat power. In its favour, the Battalion did achieve a significant amount of delay over a much stronger opponent and, by good luck rather than by good planning, it was able to get away from the position largely intact and with minimal casualties for an action that had lasted for almost 40 hours between the arrival of the lead German elements at 1820 hours on 14 April and the unit's hasty departure from the position at approximately 1015 hours on 16 April. 21 Battalion had been combat effective up until the decisive regimental attack on 16 April.

Casualties Sustained

21 Battalion's casualties were minimal, which is remarkable given the beating they received from small arms, tank and artillery fire over a 40 hour period. The figures demonstrate that properly dug in and camouflaged infantry can survive significant fire directed at them. Casualties sustained by 21 Battalion and *Battlegroup 2* are shown in Table 3.1 below:

	Personnel				Tanks
	KIA and DOW	WIA	PW	Total Casualties	
21 Battalion	8	10	18	36 ⁶⁵	
<i>Battlegroup 2</i>				262 (assessed)	1 ⁶⁶

Table 3.1: Casualties sustained at Platamon

Casualty figures have been drawn from a range of sources. 21 Battalion Casualty Lists provide numbers of personnel lost in Greece.⁶⁷ Assuming 18 men became prisoners (PW)- the two sections of C Company- and using 36 as the total number of casualties, the number of wounded in action (WIA) is deduced as ten. 3rd *Panzer Regiment* only reported that 5 men were captured from 21 Auckland Rifle Battalion.⁶⁸

Battlegroup 2 personnel casualties are estimated as 262. This estimate is based on Balck reporting that his forward units received 25% casualties.⁶⁹ This would include dead and wounded, however numbers of each cannot be confirmed. It is assumed that Balck was referring to 2 *Motorcycle Battalion* and so the number of 262 in Table 3.1 is based on 2 *Motorcycle Battalion*'s strength of 1050. Although the estimated casualty figure appears high, Balck reported after Platamon that there were '...149 wounded in hospital at Katerini and a large number still with forward troops.'⁷⁰ No tanks were destroyed or disabled by New Zealand fire. One Mark II tank was lost to a mine on the track immediately forward of 21 Battalion. Despite numerous tanks breaking down, only that single tank was actually destroyed. 3 *Panzer Regiment* reported that the tank was 'completely burnt out.' Every other tank was a "mobility" casualty because they had 'shed their tracks on the boulders or split their track assemblies' and two became bogged

⁶⁵ Entry for 16 Apr, 21 Battalion Chronology. WA II 1 DA 54/11/1, NA. The entry records 35 OR casualties and Lt Mackay killed.

⁶⁶ This panzer was destroyed by a mine, not 21 Battalion's firepower.

⁶⁷ Miscellaneous Items- Casualty Lists 21 Battalion, pp. 1- 6. WAI 2/44, Box 58, NA.

⁶⁸ Apparently the PWs disclosed that 22 and 23 Battalions were also part of the brigade. Entry for 16 Apr 41, Extracts from 18 Corps Intelligence Report (Greek Campaign). WAI 1 DA 438/21/4, NA.

⁶⁹ The figure 1050 is given and Balck's claim of 25% casualties are both taken from Wards, "Panzer Attack in Greece", pp. 5- 6.

⁷⁰ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 317 and Wards, "Panzer Attack in Greece", p. 6.

in a swamp.⁷¹ It is assumed that they were all eventually recovered, and therefore cannot truly be classified as casualties.

The figures show a significantly higher casualty rate amongst the attackers and illustrate the vulnerability of attacking dug in defenders over open ground, by day, when the defence has a strong will to fight, and their fire has not been fully suppressed. The figures do not show, and this is simply because none of the panzers penetrated the New Zealand position, the overwhelming tank superiority of the Germans when the defenders had no effective anti-tank weapons.

ANALYSIS OF COMBAT EFFECTIVENESS

Operational Setting

The overall German strategy for Greece was based on the need for a quick decision, which was in keeping with their 'preference for short, decisive campaigns.'⁷² This necessitated the employment of the blitzkrieg tactics which had served the Germans well in previous campaigns.⁷³ Paddy Griffiths has written that the success of blitzkrieg lay in 'moving a mechanised force through an enemy's front line before he had time to consolidate it, and then playing havoc in his rear areas...'⁷⁴ 21 Battalion's defence prevented penetration and the creation of "havoc" for 21 Battalion, and more so for the remainder of Lustreforce which was still north of Larisa. The terrain, as the Allies would find with Italy, was good for defence and at odds with the German imperative for a quick

⁷¹ Report by 3 Pz Regt (2 Pz Div), Reports from Various Formations of 12th Army (Greece). WAI 1, DA 438/21/4, NA.

⁷² J.P. Harris, 'The Myth of Blitzkrieg', *War in History*, Volume 2, Number 3, 1995, p. 344. Harris argues that the idea that the Germans espoused a "blitzkrieg" doctrine in World War II is spurious and that it has only become known by that title after the fact. See also Robert M. Citino, *The German Way of War: From the Thirty Years' War to the Third Reich*, Lawrence, Kansas: University Press of Kansas, 2005, p. 311.

⁷³ War Diary of HQ 1 Australian Corps 6 Mar- 24 Apr 41, Appendix F to 1 Aust Corps Op Intn No. 4, para 3. Freyberg Papers: War Diary ANZAC Corps 1940- 41. WAI 8/9, NA. Also, Peter Ewer, p. 142. See note in margin 'Blitzkrieg in the Greek mountains' within Herman Balck, 'Translation of taped conversation with General Hermann Balck 13 April 1979', unpublished, Battelle Columbus Laboratory Tactical Technology Center, Ohio, July 1979, p. 11.

⁷⁴ Griffiths, *Tactics from Waterloo to Vietnam*, p. 90.

result, where flat or rolling terrain was better suited.⁷⁵ The topography in Greece, with its constricted routes, as 21 Battalion's defence at Platamon demonstrated, was not ideal for a blitzkrieg war of speed and manoeuvre.

Larisa was the German objective at the operational level.⁷⁶ The capture of Larisa by striking through Platamon provided them with an opportunity to encircle the Allies.⁷⁷ The Germans and the senior Allied commanders both considered the coastal route to Larisa through Platamon and the Pinios Gorge, but each drew different conclusions about its utility for tanks, and assigned forces on that basis. A realistic understanding on enemy capabilities and terrain effects is therefore an essential tool for intelligence staff and commanders. The coastal route was the shortest route to Larisa, a point which appears to have been overlooked by Allied planners.⁷⁸ The coastal route also allowed for a simultaneous and supporting advance across country by mountain troops which would not be restricted to roads like the panzer or mechanised forces, and which could ultimately appear behind any locations that blocked the tanks.

The British and Allied forces appreciated the combat power of the German forces, but they underestimated the willingness of German commanders, at the operational and tactical levels, to negotiate difficult terrain which the Allies would at this stage of the war consider impassable.⁷⁹ Clearly they did not appreciate the mind set of German commanders, their willingness to utilise almost any and every route, or the mobility of their panzers, for they had not faced them previously. This provided the Germans with an edge.

⁷⁵ Charles Cruickshank, *Greece 1940- 1941*, Newark: University of Delaware Press, First American Edition, 1979, p. 142.

⁷⁶ Balck, *Ordnung im Chaos*, p. 321.

⁷⁷ Gerhard Schreiber, Bernd Stegemann, Detlef Vogel, Germany and the Second World War Volume III: *The Mediterranean, South- East Europe, and North Africa 1939- 1941*, Oxford: Clarendon Press, 1995, p. 509.

⁷⁸ Narrator's Note to Para 16, Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 257.

⁷⁹ Connor, *Finding Ways to Survive*, p. 41. This has similarities to British reluctance to use the jungle in Malaya and Burma. The Japanese did, usually to bypass road bound British and allied units.

This battle showed that the site directed by New Zealand Division headquarters for 21 Battalion to fight from was a sound choice. However, their analysis of the threat and therefore the allocation of sufficient and appropriate resources for 21 Battalion to achieve its mission, was flawed. This led to 21 Battalion becoming combat ineffective. The mission assigned to 21 Battalion was not within their capacity to undertake given the strength and composition of *Battlegroup 2*.

Force Strength

The nominal strength of any unit engaged in fighting must be adjusted from its authorised strength to account for casualties sustained previously through combat or from illness, for personnel left out of battle, and those whose employment, especially in a headquarters or administrative capacity, did not contribute directly to combat.⁸⁰ Any elements (personnel or key weapons) detached or positioned where they did not influence the action must also be subtracted in order to determine true relative strengths. Similarly, the numbers of tanks, mortars and guns are counted, but not their crews.

The records show that 618 members of 21 Battalion deployed to Greece, although this was not the actual number engaged in combat at Platamon.⁸¹ Of the 618, nine officers and men were left behind in Athens when the battalion departed for Platamon.⁸² A further 95 personnel did not participate in the fighting, simply because of their role. These included the battalion's second in command and the battalion's administrative and transport personnel of two officers and 92 men. It is assessed, therefore, that the "fighting" or "bayonet strength" of the battalion at Platamon was actually 514 men.⁸³ From this total, the complete strength of D Company, approximately 104 men, must also be subtracted as

⁸⁰ This same logic was applied by N.C. Phillips with respect to German strength states in New Zealand's official history of the Italian campaign. See fn 1 to N.C. Phillips, *Italy Volume I: The Sangro to Cassino*, Wellington: War History Branch, 1957, p. 99. It will be applied throughout the remaining battle analysis chapters.

⁸¹ Chapter 6 -To Greece, p. 2. 21 Bn War History. Shaw T.R., 21 Battalion Unit History: Chapter 7 Greece-Preliminary Draft and Chapter 6- move to Greece .WAI 1 DA 54/15/3, NA. The total was made up of 37 officers and 581 men.

⁸² John M. Stevenson to J.F. Cody, letter, 13th February, 1951. Correspondence concerning 21 Battalion's part in the Greek Campaign. WAI 1 DA 54/10/20, NA.

⁸³ Sailing strength, less the Battalion 2IC, the battalion's administrative and support personnel and the nine LOBs.

the company was sited on the rear slope of Castle Ridge and therefore could not, and did not, contribute at all to the fighting on the forward slope of Castle ridge or in C Company's location. Thus the bayonet strength of the battalion at Platamon is assessed as 410 men. This total includes battalion headquarters, Mortar Platoon and three rifle companies only.

	Bayonet Strength (Infantry)	Medium Mortars	Artillery	Tanks
21 Battalion (3 companies only)	410	2		
A Troop			4	
Battlegroup 2: ⁸⁴				
2 MC Battalion Attack 15 Apr (three companies only) ⁸⁵	561	6	16	
Regimental Attack 15 Apr (four companies 2 MC Battalion)	748	6	16	34 ⁸⁶
Regimental Attack 16 Apr (eight companies- 2 MC and I/304 Battalions)	1496	12	16	34

Table 3.2: Relative strengths at Platamon

Battlegroup 2 was significantly stronger than 21 Battalion. Its nominal strength has also been reduced to reflect only those elements involved in each encounter so that the numbers are consistent with 21 Battalion. Attacking strengths of *Battlegroup 2* comprised mainly the forward motorcycle, infantry and panzer elements, and their supporting

⁸⁴ Strengths are based on Wards, "Panzer Attack in Greece", p. 5. Panzer regiment tank strength was stated as 100, the reinforced MC battalion 1050 men, infantry battalion (I/ 304 Infantry Regiment) 1026 men and the artillery (I/ 74 Artillery Regiment) twelve 105 mm and four 150 mm guns. A second source recorded that the attack on 16 April was made by 100 tanks, two infantry battalions, twelve 105 mm guns and four 150mm guns 'as well as other artillery and technical units.' Donald S. Detwiler (ed.), *World War II German Military Studies Volume 13 Part VI. The Mediterranean Theater*, New York: Garland Publishing, 1979, p. 98. These figures are considered (much like the New Zealand upper end figures) to include all the non-combatant elements as well. Infantry bayonet strengths have therefore been based on the basis of rifle companies.

⁸⁵ This is based on three full strength rifle companies at 4 officers and 183 men each, a total of 187 men per company.

⁸⁶ The official number of tanks involved was 100 as indicated in footnote 84. The official number was based on the total numbers of tanks within *I/3 Panzer Regiment*. However, it is assessed that the actual number able to participate, due to frontage and terrain, was no more than two tank companies, the maximum number committed by Balck in the regimental attack on 16 April. Tank companies each contained five light tanks and 12 mediums tanks (4 in each of the three tank platoons). The maximum number committed to each attack would therefore have been 34. Tank strengths of panzer companies are based on Charles C. Sharp, *German Panzer Tactics in World War II*, np: George Nafziger, c.1998, pp. 26-27 and 32.

artillery and mortars. The strength varied in each of the attacks as shown in Table 3.2. It has not been possible to adjust the figures within *Battlegroup 2* for casualties sustained in each attack. Casualties prior to Platamon are assumed to have been minimal.

Although its assault was focused on A Company, 2 *Motorcycle Battalion* attacked with just one company forward, with a strength of no more than 187 men. As the leading company emerged from the scrub, as many as 200 defenders (A and B Companies combined) engaged them with small arms fire. The effect was devastating on the attackers. The ratio of fire, approximately 1:1 was significantly altered in favour of the defence- hence it being quoted as the superior form- because of the *relative* superiority of being protected in trenches when the attacker is in the open. 21 Battalion's defensive *posture* was superior to that of the attackers, who were above ground, exposed. The difficult axis of assault prevented the Germans bringing forward direct fire support weapons, and there was no ground which overlooked the objective (other than higher up the ridge towards Pandeimon), where a fire support position could have been established and thus claw back some of the numerical disadvantage, by suppressing those infantry (primarily of B Company) who were not being attacked directly, but were contributing to the defensive small arms fire unmolested. The Germans did not make effective use of their artillery for neutralisation or destruction either. In fact, Balck stated that his 'artillery was doomed to be useless.'⁸⁷ For the size of the objective (and 21 Battalion would experience this at Bir Ghirba- Chapter 5), there was too little artillery to suppress the area effectively. The use of panzers in the second attack was an attempt to overcome this limitation, in conjunction with turning the New Zealand flank.

By the time of the regimental attack at dawn on 16 April, the Germans had a 3:1 attacking ratio (based on rifle companies alone) and they employed supporting weapons (finally) and tanks as well. The odds were now much more favourable for the attacker.

The analysis of this battle has shown that posture- whether one is attacking or in defence- was a significant combat effectiveness factor. Initially, 21 Battalion was able to hold off

⁸⁷ Balck, *Ordnung im Chaos*, p. 321.

the significantly larger *Battlegroup 2* because being in defence improved its strength relative to the attackers. However, once *Battlegroup 2* got more troops into the fight, by the use of envelopment and simultaneously employing the panzers, they were able to overcome 21 Battalion's defences. 21 Battalion's small arms fire was devastating against *2 Motorcycle Battalion*. Bayonet strength, due to the siting of D Company in depth behind the ridge where it was unable to contribute to the battle, was a detractor from 21 Battalion's combat effectiveness in this battle.

Battlefield Effects

Castle Ridge was an ideal location from which to delay a German advance east of Mount Olympus, as it was a natural choke point and because it was dominating ground that lay astride the enemy's main approach. With the slopes of Mount Olympus on its left and the sea to its right, the site appeared to be safe from envelopment. The ridge's steep forward slope and thick vegetation made it difficult to mount a massed infantry attack on a broad front from the north. The battlefield effects on the combat effectiveness of New Zealand and German forces at Platamon, derived using the OCOKA template, are summarised in Table 3.3 below.

Observation and Fields of Fire	<p>Castle Ridge overlooked the plain along which the Germans approached. Observation was good enough for artillery fire to be called on German movement, and gun positions were observed as far as 11,000 yards forward of the battalion.⁸⁸ 21 Battalion was unable to press home this advantage due to its small number of mortars (two) and field guns (four).</p> <p>A Company, on the right, had excellent fields of fire, although only at short range. When German infantry emerged from the vegetation forward of the defenders, they did so into open ground just short of the fighting pits allowing the New Zealanders to sweep the area with aimed small arms fire to deadly effect. As a result the Germans were unable to break into any of the A or B Company positions. Yeoman stated that the infantry never got closer than 50- 100 yards from the New Zealand positions for:</p> <p style="padding-left: 40px;">once they had to leave the scrub for the open top of the knoll they came under fire. The section posts of A Company had excellent fields of fire. But enemy tanks</p>
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⁸⁸ Report of "A" Troop 27 Bty, 5 Fd Regt, NZ by Lt L.G. Williams. Report attached to L.G. Williams to J.F. Cody, letter, dated 11th July 1950, Correspondence concerning 21 Battalion's part in Greek Campaign. WAI 1 DA 54/10/20, NA. See also Chapter 7 Greece, p. 8 (p. 15 in left margin). 21 Bn War History. Shaw T.R., 21 Battalion Unit History: Chapter 7 Greece-Preliminary Draft and Chapter 6- move to Greece. WAI 1 DA 54/15/3, NA where it records that 'The arty did some wonderful shooting... Lt Wilson with his mortars was just in his element.'

	forcing their way through the foothills to the N[orth] and crashing through the scrub were able to keep hull down and come within 2 – 300 yards of A Coy. ⁸⁹
Cover and concealment	Cover, or protection from bullets and shrapnel, was gained through trenches dug by the battalion. As a result, the battalion's casualties were light despite the heavy artillery, mortar and tank fire sustained. ⁹⁰ Even though the ground was hard, adequate cover was able to be developed because the battalion had digging tools (shovels and picks) and they had engineers with explosives to help prepare fighting trenches. In addition, they had had sufficient time to complete these preparations before the enemy arrived.
Obstacles	<p>The ground itself was the major obstacle to the attackers. It impeded dismounted infantry movement, frustrated their attempts to attack in a coordinated and overwhelming mass and prevented tank attacks from breaking into and beyond the platoon positions. Tanks were forced to keep to the track until very close to the platoons, however they were still unable to penetrate the New Zealand position. Other than the single tank casualty caused by an antitank mine, all other tank "casualties" were caused by the terrain.</p> <p>Only a limited quantity of man made obstacles were possible as the battalion was allocated very little in the way of barbed wire or mines. The engineer obstacle tasks completed at Platamon were the demolition of the railway tunnel, placement of a small antitank minefield and crater on the forward slope of the ridge near the crest, and another small crater on the track on the reverse slope of the hill.⁹¹</p>
Key Terrain	<p>The Vital ground was Castle Ridge. Had the Germans captured this then the battalion position would have been lost. Key Terrain included the high ground near Pandeimon (as it offered the enemy a means to bypass the battalion), the tunnel, Castle Hill and Hill 226. The tunnel was significant because if captured it would have allowed the Germans to penetrate <i>beneath</i> 21 Battalion and to attack it from the rear, and ultimately it would have provided a suitable passage for the heavy elements of <i>Battlegroup 2</i>. Although Castle Hill and Hill 226 were threatened, often, they were retained until the entire position was abandoned by the defence.</p> <p>The loss of the Key Terrain near Pandeimon afforded the Germans the advantage of being able to attack down towards the Vital Ground, although they were unable to exploit this straight away as the men were exhausted from their night approach march and the stiff fighting. It was the loss of this Key Terrain that highlights the failure of 21 Battalion to designate a force, probably D Company in depth, to 'counter-attack should either [key Terrain] be captured' as stated in the battalion's orders.</p>
Avenues of approach	Macky correctly identified the most likely German approaches and disposed itself to cover them. The battalion's dispositions meant that it could defend against attacks from both approaches simultaneously. Denial of the centre approach to tank and infantry threats was effective, even if terrain was the cause of the tanks failure to break into the position, rather than defensive fire. The left approach was not able to be denied effectively, as this really required greater numbers of infantry and more firepower. As it was, <i>2 Motor Cycle Battalion</i> and <i>I/ 304 Regiment</i> had to be employed simultaneously in order to capture C Company's position on the left.

Table 3.3: OCOKA terrain analysis for Platamon

⁸⁹ Yeoman A.A., Activities of 21 NZ Bn during Greek Campaign, Apr 1941. WA II 1 DA 54/10/2, NA.

⁹⁰ Report on Operations 21 Battalion in Greece by Lt-Col N.L. Macky (Prepared after return to New Zealand and circulated privately), p.18. WAI 1 DA 54/10/19, NA. Macky stated the casualties were 'very light in view of the artillery fire to which we were subjected.'

⁹¹ T.W.O. Jones to J.F. Cody, letter, 4th December 1950, Correspondence concerning 21 Bn in the campaign in Greece. WAI 1 DA 54/10/20, NA. Jones commanded the Engineer Troop at Platamon.

Overall, the terrain favoured the defence. 21 Battalion had occupied suitable terrain from which to undertake its mission, and it was successful initially. The location provided long range observation to defenders. Further, and as can be seen in Figure 3.2, the steep and broken nature of the slope leading up from the plain disrupted attacks by panzers and by massed infantry. Although these effects prevented penetration of the defence from the front, the open flank meant envelopment in the area of Pandeimon was inevitable given the overall numerical superiority of the Germans. This battle has shown that terrain can be a significant barrier, raising the level of combat effectiveness of any force protected by it, but only for as long as an enemy cannot penetrate, envelop or bypass it.



Figure 3.2: The New Zealand view north from Castle Ridge towards Katerini and the *Battlegroup 2* avenue of approach ⁹²

⁹² Cody, *21 Battalion*, facing p. 82.

Tactics, Doctrine and Training

21 Battalion was ordered to defend at Platamon. The terrain upon which they were to achieve this mission was dictated to them in written orders. Further, the battalion was given specific tasks to defend Key Terrain (Castle Hill and Hill 226 in particular) and notably, they were ordered to 'build defences along the line indicated in the plan.'⁹³

Macky recorded after the battle that the pre-dug positions had constrained his tactical choices.⁹⁴ Platamon, and the Castle Ridge terrain that he was allocated, was undoubtedly the best area to block the Germans on the coastal route between Katerini and Larisa.

Taken in conjunction with the withdrawal of all their motor transport, 21 Battalion was forced into a static defence with limited options for manoeuvre, other than by foot or through the employment of the unit's Bren carriers. An early draft of the battalion's history suggested that the unit might have undertaken the defence differently at Platamon when it stated:

The wiring and other work done by 26 Bn was quite helpful. It committed the bn to a type of defence which it might have departed from had there been time.⁹⁵

The author of the draft did not suggest what the other type of defence that might have been. Allan Yeoman, a platoon commander in C Company, recorded it was difficult to devise a defence plan at Platamon but 'if we tied ourselves to well-dug weapon pits, the enemy would pour through between our section posts and not even be seen.'⁹⁶ Certainly, the defence might have been more aggressive and should have accepted that it could not

⁹³ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 297.

⁹⁴ Report on Operations 21 Battalion in Greece by Lt-Col N.L. Macky (Prepared after return to New Zealand and circulated privately), p.4. WAI 1 DA 54/10/19, NA. A company from 26 Battalion had already commenced digging trenches on the site prior to 21 Battalion's arrival at the position. When 21 Battalion got there, the company returned to 26 Battalion. Norton, *26 Battalion*, pp. 30- 31.

⁹⁵ Chapter 7: Greece, p. 4 (pp 7-8 in the left margin). 21 Bn War History. Shaw T.R., 21 Battalion Unit History: Chapter 7 Greece-Preliminary Draft and Chapter 6- move to Greece. WAI 1 DA 54/15/3, NA. It is assumed that he obtained the comment from Macky or another officer who was at Platamon. This comment was not carried forward from the draft into 21 Battalion's official history.

⁹⁶ Yeoman, *The Long Road to Freedom*, p. 22.

have blocked every route.⁹⁷ Gordon Halsey's assessment, that '21 Battalion was not wanting in courage, but during the night 15/16 April they displayed a lack of aggressive patrolling', is a key indicator of the primary tactical failure of the New Zealand defence.⁹⁸ Their other significant tactical failings were in the area of early warning and designating a counterattack force, or at least to direct companies to achieve this locally.

Soldiers today would classify the tactics employed by 21 Battalion of defending terrain from fixed points as "area defence." Area defence focuses on the retention of terrain from static, but mutually supporting positions, where the aim is to destroy the enemy by fire. Even though area defence is primarily mounted from fixed positions, defenders are not supposed to be passive. They must maintain the initiative by taking the fight to the enemy. That they did not, apart from use of artillery and mortar fire, is the fault of their CO, and his lack of contemporary combat experience. Had the defence been more aggressive, with fighting patrols and ambushes (and D Company, from its reverse slope position, effectively out of the battle, could have provided these), then the Germans would not have had the freedom to re-position themselves at night ready for attacks the following morning. The requirement for the defenders to undertake local counterattacks was also part of the defensive plan, and should also have been given in orders to the companies.⁹⁹ No counterattacks were undertaken.

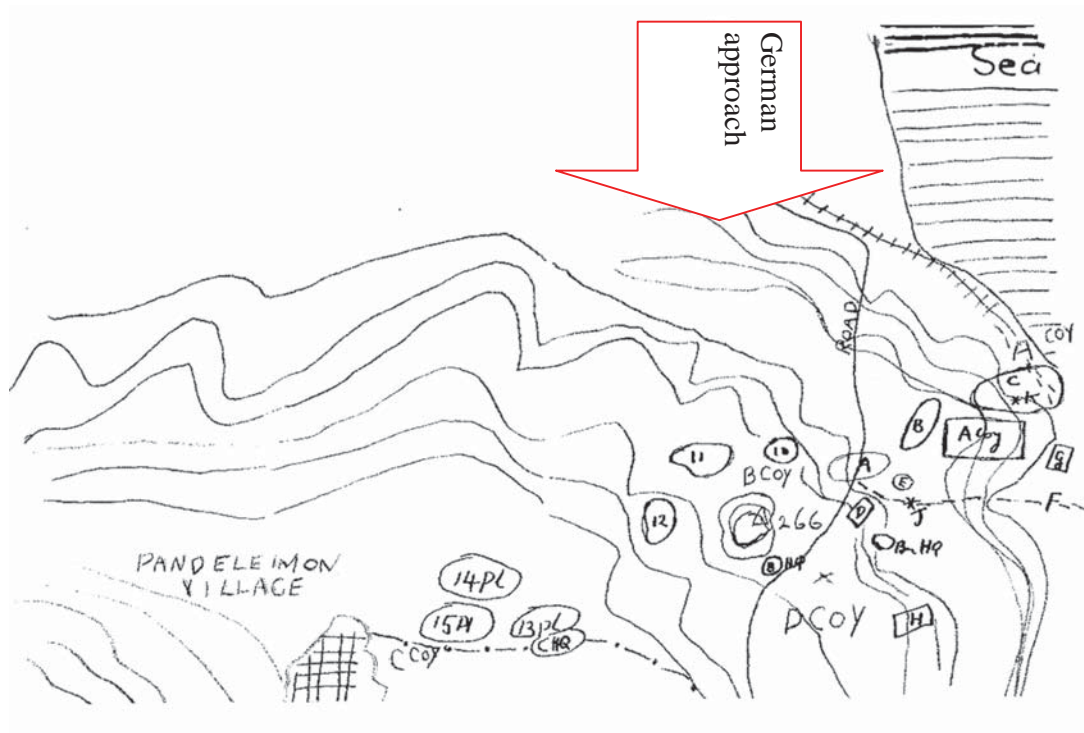
21 Battalion's defences consisted of a series of platoon posts, as shown in the sketch drawn by 21 Battalion Adjutant Garth Dutton at Map 3.3. Little depth was able to be achieved within companies as terrain and vegetation caused the three forward companies to be sited towards the crest of Castle Ridge, where they would at least have some fields of observation and fire. D Company was, therefore, sited in depth on the reverse slope of the ridge. Whilst protected from enemy fire, it was not able to contribute directly to the defence from that position. It should therefore have provided the early warning observation posts and patrols forward, and been tasked with counterattack. That it was

⁹⁷ It seems that New Zealanders were adept at ordering counterattack forces be employed, but not actually rehearsing them, such as in Crete. The ad hoc ones, again such as at 42nd Street in Crete, seem to have been more effective.

⁹⁸ Halsey, p. 147.

⁹⁹ Army Field Manual Volume I- Combined Arms Operations- Part 2, *Battlegroup Tactics*, Issue 1.1, November 1998, p. 7-4.

not, suggests a defence based upon basic procedures rather than combat experience. As it was, the “basics” were good enough to survive the initial attacks, because the New Zealand infantry remained in place and delivered effective small arms fire, and since initial German assaults were poorly planned and coordinated and undertaken by day when they could be successfully defeated with aimed small arms fire.



Map 3.3: 21 Battalion defences at Platamon¹⁰⁰

Compared to the other infantry units of 5 Brigade, 21 Battalion was allocated far fewer supporting arms, did not place out adequate early warning to detect enemy approach and maintained a passive defensive posture until forced to make a hasty withdrawal in contact. Unlike 22 and 23 Battalions, 21 Battalion did not make a plan for the withdrawal. Despite Halsey’s claim that the 21 Battalion withdrawal was orderly, and the campaign narrative’s statement that it was ‘smooth and rapid’, it was not.¹⁰¹ D Company was only made aware of the withdrawal as Macky passed by the company

¹⁰⁰ G.A. Dutton to J.F. Cody, letter, 16/7/50, p. 3. Correspondence concerning 21 Battalion’s part in the Greek campaign. WAI 1 DA 54/10/20, NA. Arrow showing German direction of approach added.

¹⁰¹ Halsey, p. 147. Wards, Campaign Narrative- Campaign in Greece- Part III and Appendices, p. 315.

headquarters.¹⁰² The 25 pounders were only advised of the withdrawal after it had got underway.¹⁰³ A withdrawal had not been prepared for. No orders were issued. Non-essential equipment had not been removed in anticipation as it had by 22 and 23 Battalions. As a result, crucial equipment was abandoned. This had an adverse impact on its performance at Pinios Gorge, where radios, mortars and digging tools were sorely missed.¹⁰⁴ Overall, the defence was reactive to the dictates of *Battlegroup 2* and then when the Battalion did have to vacate the position, in haste, some essential equipment was left behind.

Although they were veterans, the initial German attack was poorly planned and executed, with the result that the *2 Motorcycle Battalion* attack on the centre approach failed. Their reconnaissance ahead of *Battlegroup 2* was hardly stealthy; it relied on being fired upon. It was not until the experienced and decisive Balck came forward that the Germans mounted a serious threat. Given their poor performance, it is possible that they had become complacent, or that they were overconfident. Alternatively, *2 Motorcycle Battalion*, as a reconnaissance element, had not mounted a battalion sized dismounted attack, and the need to do so may have exposed this lack of experience. The evidence suggests momentum in the attack is maintained by command action rather than relying on pre-set combat drills, even when possessing superior doctrine and combat power.

German attack doctrine stressed the use of infiltration to exploit gaps between enemy posts. High expenditure of ammunition was supposed to create the impression that infiltrating elements were in strength, and so add to the state of alarm within the defence. Other than the one patrol noted, the Germans did not make good use of infiltration, despite their doctrine for it. Even small numbers of troops infiltrated between B and C Companies by night could have played havoc from behind A, B and C Companies and unhinged them sooner. German doctrine also stressed the use of infantry support weapons

¹⁰² A. Ferguson to J. F. Cody (enclosed within a letter from W.G. Gorrie to J.F. Cody, 3.7.50, Correspondence file 21 Bn campaign in Greece. WAI 3/7 21 Battalion, NA.

¹⁰³ Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 315.

¹⁰⁴ Ewer, p. 171.

in the attack.¹⁰⁵ As already noted, the Germans failed to employ support weapons on the centre approach at Platamon initially, but later made good use of them at Pandeimon on 16 April. This was central to the success in capturing Pandeimon, as the troops were exhausted. In all, it took the Germans 36 hours to assemble the forces needed to defeat 21 Battalion and mount an effective attack.

New Zealand's advantage lay in solidly constructed trenches- based on First World War tactics- which minimised the effects of German direct and indirect fire (the low casualty rates support this), and by production of effective small arms fire. Macky ensured 21 Battalion had covered the major avenues of approach, including Pandeimon, within the size and weapon limitations of his independent force. Effective concealment enhanced surprise and caused a succession of delays as the Germans had to re-configure assaults. A passive posture, while absorbing successive attacks, ensured that the Germans would inevitably gain and retain the advantage, once they had determined the extent and limitations of the defence.

This battle demonstrates that the dispositions and basic defensive tactics employed by 21 Battalion- preparing defences astride a constricted route, with adequate observation and fields of fire- were sufficient to undertake their mission, but only up to a point. 21 Battalion had sufficient time and resources (digging tools and explosives) to prepare a deliberate defence. They were, however, far too reactive- failing to patrol actively or counterattack at all. This is assessed as being attributable to lack of combat inexperience- they did the basics right, but could not plan ahead. The battalion's use of concealment coupled with the German's lack of reconnaissance and poor coordination of the wings of its attacks improved 21 Battalion's combat effectiveness and caused valuable extra delay. Failure to assign tanks or anti-tank guns limited the combined arms effectiveness of 21 Battalion, in that the unit had no effective anti-tank defence, and so was therefore totally reliant on its own weapons. Inevitably, *Battlegroup 2's* overwhelming strength and employment of envelopment, so that they could avoid the worst of 21 Battalion's small arms firepower, proved the deciding factors.

¹⁰⁵ Dr Stephen Bull, *World War II Infantry Tactics: Company and Battalion*, Oxford: Osprey Publishing, 2005, pp. 7-8.

Command and Leadership

In order to command, a commander must be able to convey his orders and instructions to subordinates.¹⁰⁶ Field telephones between battalion and company headquarters allowed Macky to achieve this within 21 Battalion. He only had wireless contact with higher headquarters, not to his rifle companies. By way of contrast, Balck's preference was to give orders verbally as a means to maintain speed.¹⁰⁷ He resorted to wireless only to keep in touch with his dispersed units. Due to the nature of the terrain, neither commander was able to move across or see much of the entire battlefield. Pandeimon, being located higher up castle ridge, was a blind spot for them both. They could both therefore only personally influence events in the Castle sector, and had to rely on subordinates at Pandeimon.

Macky did a creditable job in preparing the defence of Platamon, but he did little to influence events once battle was joined, other than to order the firing of the demolition in the tunnel. No patrols or counterattacks were ordered, nor were anti-tank guns requested once tanks had been reported to corps headquarters on 14 April. The degree to which the battalion's morale was boosted by Macky's leadership is unknown. Macky never recorded that he ever visited his troops, although contact with them in battle is known to boost morale. He maintained contact with his companies by field telephone. His companies reported everything in 'good order' despite the artillery fire they had endured.¹⁰⁸ That night, with enemy infiltrating the Platamon position, his company commanders advised him 'troops in good fettle'; in fact Macky was confident enough that he went to bed.¹⁰⁹ Nowhere in his account of events at Platamon does he record changes of disposition, or the ordering of patrols. He exhibited a very "hands off" approach once battle was joined, which was quite different to that employed by Balck:

¹⁰⁶ Army Field Manual Volume I- Combined Arms Operations- Part 2, *Battlegroup Tactics*, Issue 1.1, November 1998, p. 4-1.

¹⁰⁷ Herman Balck, 'Translation of taped conversation', April 1979, p. 57.

¹⁰⁸ Report on Operations 21 Battalion in Greece by Lt-Col N.L. Macky (Prepared after return to New Zealand and circulated privately), p.7. WAI 1 DA 54/10/19, NA.

¹⁰⁹ Report on Operations 21 Battalion in Greece by Lt-Col N.L. Macky (Prepared after return to New Zealand and circulated privately), p.8. WAI 1 DA 54/10/19, NA.

Balck was an energetic and capable officer. He and the unit he commanded in France had played a crucial role in crossing the Meuse River.¹¹⁰

In one episode when Balck's officers complained about continuing an attack, he said 'In that case I'll take the place on my own!' He moved and the regiment followed.¹¹¹ Clearly Balck was a man of action, and by his example he could inspire his men, even if they were exhausted. It can be deduced from the above, at Platamon (and later at Pinios Gorge), Balck would have been urging his men forward. At Platamon, he assigned 2 *Motorcycle Battalion* troops a dismounted task, and when they complained, he told them 'You can cry all you like but take the long way around and come from the rear.'¹¹² Balck's conduct, and the pressure he applied, contrasts with the lack of drive applied by Macky. None of this was new to Balck- having had similar combat experience previously, his "intuition" and drive provided the momentum to have exhausted troops push into the New Zealand positions.

Macky was limited by his First World War frame of reference and by the lack of realistic and testing defensive operations training in the build-up to the Greek campaign, even when in the United Kingdom. Having won an MC in the First World War, he was a brave man, but he does not appear to have been energetic in the defence at Platamon, and this was reflected in his unit's reactive response. On the other hand, the energetic and hard driving Balck was able to call forward additional units, plan and orchestrate attacks and impose his character on his battlegroup. Balck was the better performing commander of the two. He used his physical presence and command authority to organise offensive action that gained and retained the initiative and ultimately, despite ground and coordination difficulties, made him the eventual victor.

The analysis of this battle highlights ability to exercise command (be it by telephone, wireless or through verbal instructions) and the location of a commander so he gains

¹¹⁰ Ewer, p. 167.

¹¹¹ Guderian, p. 108.

¹¹² Balck, 'Translation of taped conversation', April 1979, p. 12.

situational awareness, are significant combat effectiveness factors. Without these a commander cannot command effectively. In both cases, the commanders were exercising forward command. The key difference in effectiveness was however, Balck's drive and his recent combat experience.

Sociological Factors

21 Battalion's morale plummeted when they were singled out on arrival in Greece to remain at the Piraeus docks as guards, while the rest of the division moved north to prepare for battle.¹¹³ It improved upon them being committed to action. The battalion's morale immediately prior to combat at Platamon was reported as positive, as one battalion member observed:

I think that the time of waiting was one of great suspense for us all. We could hear the boom of gunfire in the distance gradually getting nearer. The morale of everybody was very good, although we seemed to be urinating more often than in normal times.¹¹⁴

Waiting for the enemy to close is always a time of trepidation. The physiological reaction of increased frequency of urination is a normal reaction by men anticipating combat.¹¹⁵ As a commander, Macky was not immune from worry himself. He was, nevertheless, confident that his battalion would perform well at Platamon (or so he reported afterwards):

¹¹³ 'There was a near riot next morning' after being advised they were being left behind to guard the docks. Cody, *21 Battalion*, p. 36.

¹¹⁴ A. Ferguson, letter, enclosed with W.J. Gorrie to J.F. Cody, letter, 3.7.50, Correspondence concerning 21 Battalion's part in the Greek campaign. WAI 1, DA 54/10/20, NA.

¹¹⁵ Peter Watson, *War on the Mind: The military uses and abuses of psychology*, London: Hutchinson & Co (Publishers) Ltd., 1978, p. 231.

On the eve of battle I had no qualms as to the battalion acquitting itself. But I did feel a responsibility to see they were “blooded” properly and that all reasonable precautions had been taken.¹¹⁶

To be fearful prior to battle is normal. There is evidence to suggest that fear is actually worse in subsequent actions. Somehow, the first battle is novel, and fear is felt immediately prior. One America study has recorded the over-eagerness of green, or novice, units, noting that ‘A soldier who is part of a green unit was buoyed by the presence of comrades he trusted and by the confidence typical of green units.’¹¹⁷ Another writer characterised the feeling as ‘apprehensive enthusiasm.’¹¹⁸ The fear comes on earlier in subsequent battles.¹¹⁹ This will be evident at 21 Battalion’s next battle, at the Pinios Gorge.

Group cohesion, leadership and self-preservation are significant factors in motivating soldiers to fight.¹²⁰ Despite their lack of combat experience, it is assessed that the confidence 21 Battalion had in themselves and their leaders, based upon the First World War record of their commanders and the unit having been together for sixteen months, was a significant factor in them holding firm at Platamon, despite repeated German assaults. They did not break. Whenever they were facing towards the enemy, even when German tanks and infantry were attacking and very close, and with a small portion of C Company displaced, 21 Battalion held firm until ordered by Macky to withdraw. It was only when the enemy appeared to be simultaneously getting in behind them from the left flank, that they were given the command to withdraw. Combat effectiveness factors identified in this battle include morale and small group cohesion. This translated into a positive will to fight, including the successful defence against the first attacks, even though Platamon was 21 Battalion’s initiation to combat.

¹¹⁶ Report on Operations 21 Battalion in Greece by Lt-Col N.L. Macky (Prepared after return to New Zealand and circulated privately), p.7. WAI 1 DA 54/10/19, NA .

¹¹⁷ Peter S. Kindsvatter, *American Soldiers: Ground Combat in the World Wars, Korea and Vietnam*, Lawrence: University Press of Kansas, 2003, p. 69.

¹¹⁸ Betty Glad, (ed.), *Psychological Dimensions of War*, Newbury Park, California: SAGE Publications, Inc., 1990, p. 231.

¹¹⁹ Holmes, pp. 216- 217. Holmes based this finding on the comments of members of the 2nd Parachute Regiment in the Falklands Islands who fought at Goose Green initially, and then at Wireless Ridge.

¹²⁰ Glad, pp. 225- 226.

Fog of War

Platamon provides examples of where the fog of war, friction and luck each played a part in the outcome of the battle. For the attackers, the fog of war was compounded by ineffective ground reconnaissance prior to the first attack. This meant that 2 *Motorcycle Battalion*'s initial attack was poorly prepared, which resulted in an additional 24 hour delay for *Battlegroup 2*. Because infantry and panzer units moved at different speeds, and were operating in widely separated areas, attacks which Balck would ordinarily have been able to coordinate on the spot in person (as he did at the Meuse) were made more difficult. This was von Clausewitz's friction of war, which made the usually simple that much more difficult. At Platamon, 'To Balck's annoyance, contact was lost during the night between tanks, infantry and motor cyclists, and it was not possible to synchronise the attack.'¹²¹ The impact was the attack had to be resumed next day, causing an additional 12 hours delay.

21 Battalion was lucky that *Battlegroup 2* was unable to follow them up after the withdrawal from Platamon. Had the Germans been able to, with ground or air forces, then 21 Battalion might not have reached Pinios Gorge without further casualties, if at all. Although 21 Battalion did not know it, the Germans had launched a force by boat, well to the unit's rear. Only bad weather caused the landing to be abandoned by the Germans.¹²² Had the Germans landed, 21 Battalion would have had to break contact earlier in order to ensure it could get back to the Pinios Gorge. The loss of telephone contact between C Company and Macky resulted in his uncertainty over the fate of that company. This increased his perception that the unit might be rolled up from that flank and hastened his decision to withdraw. Macky could not see the situation for himself. 21 Battalion's biggest piece of luck was that the terrain effectively blocked German panzers from getting onto the ridge from the very first regimental attack. Had tanks got onto the ridge and in rear of 21 Battalion, it is assessed that the defence would have collapsed psychologically- just the effect the Germans desired. The fog of war therefore delayed the

¹²¹ Wards, "Panzer Attack in Greece", p. 5.

¹²² Wards, Campaign Narrative- Campaign in Greece -Part III and Appendices, p. 318.

inevitable forcing of the route by *Battlegroup 2*, but also ultimately prevented the destruction of 21 Battalion.

CONCLUSIONS

21 Battalion's performance at Platamon was creditable, although it did not complete its mission to the letter. Its combat power was less than that of *Battlegroup 2*, yet it was combat effective early on, for it defeated a number of significant attacks, remaining steadfast in its prepared fighting positions during barrages, assaults and night time probes, until it was enveloped and threatened with being cut off. Combat effectiveness factors identified, from the performance of both 21 Battalion and *Battlegroup 2* at Platamon, are shown in Table 3.4.

Category	Combat Effectiveness factors identified
Operational Setting	<ul style="list-style-type: none"> • Accuracy of threat assessment • Decision on where to fight • Allocation of sufficient resources • Suitability of assigned mission (capacity to achieve)
Force Strength	<ul style="list-style-type: none"> • Bayonet strength • Posture • Effective use of organic firepower
Battlefield Effects	<ul style="list-style-type: none"> • Occupation of suitable terrain • Terrain effects on mobility (blocking and disrupting) • Long range observation
Tactics, Doctrine and Training	<ul style="list-style-type: none"> • Sufficient time and resources to prepare • Passive/ reactive nature of the defence (21 Battalion lack of combat experience) • Generation of high volumes of fire • Use of envelopment (by Germans) to avoid 21 Battalion fire • (Failure to conduct) adequate reconnaissance. (Germans) • (Failure to) employ combined arms (Germans initially, 21 Battalion at all, apart from some artillery) • Adequate and suitable dispositions
Command and Leadership	<ul style="list-style-type: none"> • Combat experience of commander

	<ul style="list-style-type: none"> • Drive of the commander • Exercise of forward command • Ability to exercise command • Situational awareness
Sociological	<ul style="list-style-type: none"> • Morale • Small group cohesion • Will to fight
Fog of War	<ul style="list-style-type: none"> • (Un)willingness to undertake action on own initiative- Failure to conduct adequate reconnaissance by 2 <i>Motorcycle Battalion</i> (fog of war) • Communications failure (fog of war) • Inability to coordinate between elements (friction)

Table 3.4: Combat Effectiveness factor identified at Platamon

Key factors which allowed 21 Battalion to remain combat effective for so long were the terrain advantage (which both contained and reduced German combat power), the employment of basic defensive tactics (which protected them from the worst effects of German firepower while ensuring they could generate sufficient themselves) and sociological factors- the men from the city, the “townsmen”, stayed and fought as section and platoon groups, until ordered to retire. Superior training and previous combat experience are discounted as combat effectiveness factors for 21 Battalion in this battle. 21 Battalion enjoy numerical superiority initially, and the terrain helped support this until the flank threat from Pandeimon emerged. Macky’s leadership was adequate; solid, but reactive and leading to a passive defence.

German combat power was only able to be generated slowly because of the terrain forcing it to move in a column from Katerini to Platamon, and then the difficult axes of assault onto 21 Battalion from the front and flank. This limited their combat effectiveness against 21 Battalion. German tactics were poor until Balck assumed control. With his organisational skills, drive and intuition based on previous combat experience, Balck literally drove his exhausted men, in spite of the terrain difficulties for infantryman and panzer alike, at the New Zealanders. German subordinate commanders did not seem up to it. The New Zealanders had blocked the blitzkrieg for a time.

21 Battalion utilised standard area defence tactics, probably as ambitious an operation as could be undertaken competently by unsupported and untried infantry. 21 Battalion's patrolling and early warning was very limited. These features, characteristics of novice infantry in defence, will re-emerge later in this study, but by Italian and German troops, at Halfaya Pass in 1942 and at the Sangro in 1943.

Interesting threads to emerge include the psychological tipping point for the New Zealanders, how the unplanned withdrawal became a rout, and the effect on the Germans of the absence or loss of key leaders. The motorcycle infantry fell back when their company commander was killed and the whole operation against 21 Battalion was disjointed until Balck arrived. Another general observation is that little combat activity occurred at night, by either side, other than the German positioning of troops and harassing fire.

Finally, some factors emerge about the impact higher headquarters have on combat effectiveness. Headquarters are, after all, supposed to set subordinate organisations up for success, not failure. General Veiel allocated Balck a considerable amount of combat power by way of a combined arms force that gave him a lot of flexibility (although he would have liked more artillery no doubt). In the end, this enabled *Battlegroup 2* to be combat effective. By contrast, the New Zealand Division showed a poor appreciation for the threat that could emerge at Platamon, and as a result did not allocate any tanks or anti-tank guns to 21 Battalion. Worse, was the complete disinterest by division and corps headquarters over 21 Battalion's plight. Though inexcusable, it is understandable, for those two headquarters were themselves novice organisations, still learning, and struggling for the very survival of Lustreforce in Greece.

CHAPTER 4

PINIOS GORGE: 18 APRIL 1941

‘Where the weaker side is forced to fight against the odds, its lack of numbers must be made up by the inner tension and vigor that are inspired by danger. Where the opposite occurs, and despair engenders dejection instead of heroism, the art of war has, of course, come to an end.’
- von Clausewitz, *On War*¹

‘We were dog tired and had inadequate arms and ammunition.’
- E.G. Smith, Platoon Commander, 21 Battalion²

After the battle at Platamon, 21 Battalion withdrew to Tempe at the western exit of the Pinios Gorge in order to establish a further block position astride the route to Larisa.³ They were joined at Tempe by elements of the Australian 16 Brigade. The Pinios Gorge, or the Vale of Tempe as it was also known, was the second and most significant of two major natural chokepoints between Katerini and Larisa. It had been the site of battles as far back as 480 B.C. when the Greeks used it to defend against invading Persians.⁴ The Pinios Gorge was a constricted route of approximately eight kilometres length from the eastern entry point to where the gorge opened onto a plain between Tempe, Evangelismos and Makrykhorion. The Pinios River was ‘30 or 40 yards’ wide and flowing ‘deep and swift.’⁵ The gorge was ‘ideal for defence, sheer walls each side, railway running parallel on the right, river in centre and road on the left against other wall of gorge.’⁶

This chapter analyses the battle of Pinios Gorge, but only from the perspective of 21 Battalion and *Battlegroup 2*. It does not examine the part played by 16 Brigade other than

¹ von Clausewitz, *On War*, p. 337.

² E.G. Smith to J.F. Cody, letter, undated. Correspondence 21 Battalion historian. WAI 1 DA 54/10/20, NA.

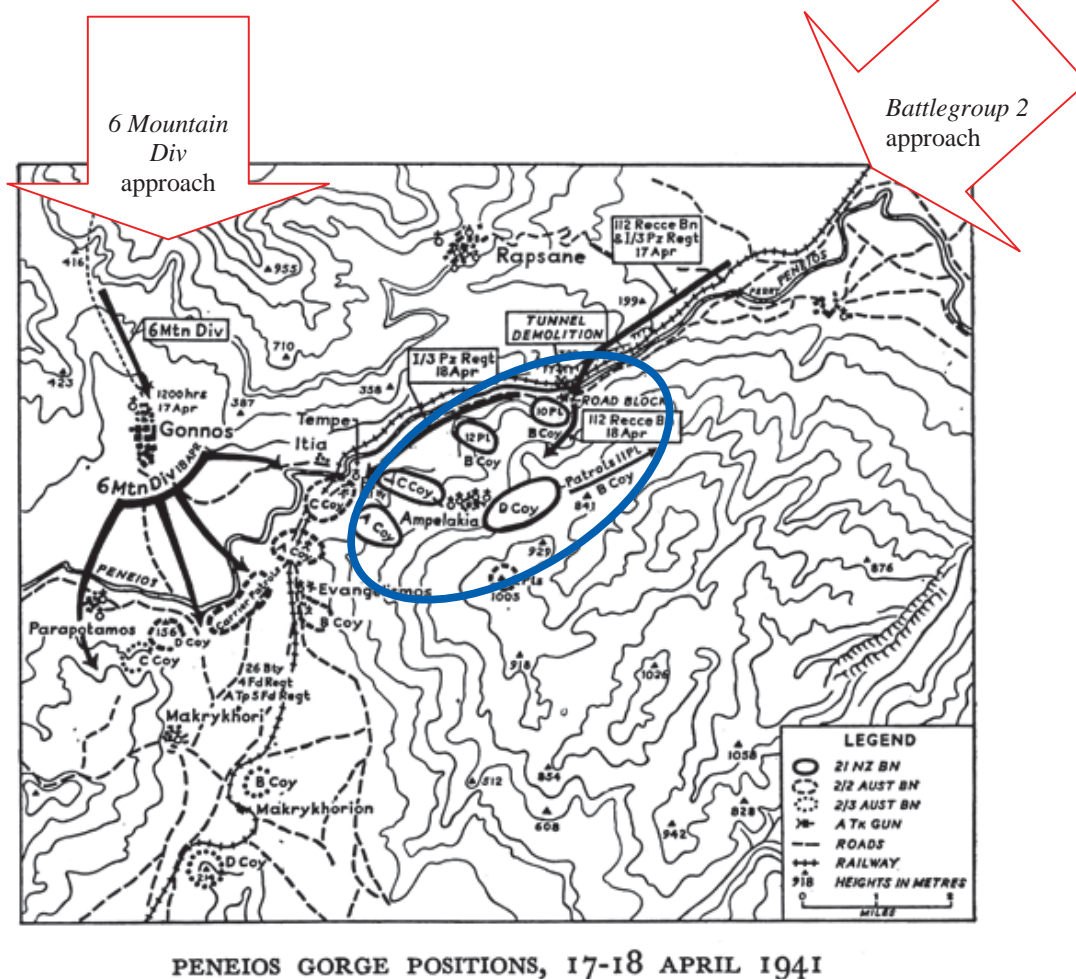
³ Some documents and account use Peneios rather than Pinios. The Germans used Larissa rather than Larisa.

⁴ ‘The forgotten Anzacs’, *Sunday Star Times*, 24 April 2011, p. C8.

⁵ Narrative: Ch 7 Greece, p. 14 (page number on left margin is p. 22) 21 Bn War History. Shaw T.R., 21 Battalion Unit History: Chapter 7 Greece-Preliminary Draft and Chapter 6- move to Greece. WAI 1 DA 54/15/3, NA.

⁶ Entry for 18 Apr 1941. 21 Battalion Chronology. WAI 1 DA 54/11/1 (17179 Pt 1), NA.

to provide context, nor does it cover *6 Mountain Division's* operations in any great detail. The purpose of analysing this battle is to establish why such a short time after 21 Battalion had held off the considerably stronger *Battlegroup 2* at Platamon, it was rendered ineffective by a much smaller force, even though the unit was now in a brigade setting, had been reinforced with anti-tank guns and was deployed in suitable defensive terrain in a natural chokepoint. This chapter examines, in particular, the effects of terrain (this time in dissipating combat power), the impact on combat effectiveness of the loss of key equipment, and the psychological effect of *6 Mountain Division's* operations.



Map 4.1: 21 Battalion defensive positions at Pinios Gorge⁷

⁷ Cody, *21 Battalion*, p. 59. The two arrows indicating the direction of approach of Battlegroup 2 and 6 Mountain Division and the blue oval have been added for this study. 21 Battalion's positions are indicated by the small labelled goose-eggs (of the original) within the blue oval.

THE COMBATANTS

Battlegroup 2

21 Battalion was opposed by elements of Balck's *Battlegroup 2* at the Pinios Gorge. They approached the gorge from the north east (from the top right corner of Map 4.1) and were immediately impeded by the Pinios River which prevented them entering the gorge. The troops closing on the Pinios Gorge consisted of two ad-hoc groups rather than the formal battalion and regimental organisations they had faced at Platamon. The northern group of (dismounted) motorcycle troops, supported by tanks initially, advanced west along the northern bank of the Pinios. The southern group, consisting of tanks and infantry, crossed the river eventually and followed the road into the gorge, where they confronted elements of 21 Battalion. The northern group consisted of:

Cycle Squadron (Company) of *112 Recon Unit, 6 Mountain Division*⁸
Panzer Company, I/3 Panzer Regiment

The southern group consisted of:

Six tanks of *I/3 Panzer Regiment*⁹
No 7 Company, II/ 304 Infantry Regiment (following the panzers)
Two patrols, *8/800 Brandenburg Regiment* (advancing along the hilltops)

⁸ I. McL Wards, Campaign Narrative- 2 NZ Division, Volume IV- Campaign in Greece- Part IV, December 1953, KMARL, p. 470. This *Mountain Division* unit had attempted unsuccessfully to find a mountain crossing to Gonnos and after descending towards the east end of the Pinios Gorge had been taken under command by *I/3 Pz Regt* and used as scouts on the northern bank of the Pinios.

⁹ W.E. Murphy, *2nd New Zealand Divisional Artillery*, Wellington: Historical Publications Branch, 1966, p. 61. Entry for 18 Apr and annotated on sketch map. A.A. Yeoman, Activities of 21 NZ Bn during Greek Campaign, Apr 1941. WAI 1 DA 54/10/2, NA. Yeoman, whose platoon was located on the high ground above the gorge, recorded in that he saw 18 tanks advancing along the gorge road. Wilson reports that he saw 'several tanks and half-track troop carriers.' It is possible that Yeoman, from his vantage point, mistook some half tracks for tanks. Yeoman's location is marked on Map 4.1 as 'Patrols 11 Pl B Coy.' Wilson to Shaw, letter, dated 4/11/49. Wilson EG Tempe to Cyprus Apr- May 1941. WAI 1 DA 54/10/17, NA.

It was a significantly smaller force than had opposed 21 Battalion at Platamon. There were, however, three key differences, all to the advantage of the Germans. First, the northern group was able to bring high volumes of direct fire against the New Zealand defences from across the river, whereas there had been no direct fire support from any flank at Platamon. Second, German tanks were able to penetrate the New Zealand defence because there were no terrain barriers to block the panzers from entering the gorge. Third, 21 Battalion was threatened with being cut off by *6 Mountain Division* from the direction of Gonnos. This added to the psychological pressure on CO 21 Battalion and his men, who were now no longer novices, but still not veterans, and who were tired and much less prepared for defensive operations than they had been at Platamon.

21 Battalion

General Thomas Blamey, commander of the ANZAC Corps in Greece, decided that a brigade sized force was required to defend the Pinios Gorge area in order to prevent the Germans reaching Larisa. 16 (Australian) Brigade was given the task. The formation, of which 21 Battalion was to be a part, was designated “Allen Force” after the brigade’s commander Brigadier Arthur “Tubby” Allen. Allen’s instructions were to prevent the Germans occupying Larisa from the east through the Pinios Gorge. 2/2 Australian Infantry Battalion was the first of Allen’s battalion’s to reach the gorge. They were veterans of fighting in Bardia and Tobruk in December 1940 and January 1941¹⁰. On arrival at the gorge, Macky and CO 2/2 Battalion (Lieutenant Colonel Fred Chilton) confirmed 21 Battalion’s responsibility for the defence of the western end of the gorge, just as the Greeks had decided two millennia before.¹¹ 2/2 Battalion would be positioned further to the west again, to cover the rear of 21 Battalion and the approach from the north across the Pinios River. 2/2 Battalion’s company positions are visible in Map 4.1 as the “goose-egg” shaped markings with broken lines lining the south bank of the Peneios River from Tempe to almost Parapotamos. 21 Battalion was now part of a brigade defence, although the brigade commander and his staff had yet to arrive and so the two

¹⁰ Kevin Baker, *Paul Cullen, citizen and soldier: the life and times of Major-General Paul Cullen AC, CBE, DSO and Bar, ED, FCA*, Dural, NSW: Rosenberg Publishing Pty Ltd, 2005, pp. 52- 58.

¹¹ ‘The forgotten Anzacs’, *Sunday Star Times*, 24 April 2011, p. C8.

commanding officers had to determine the initial defensive scheme and dispositions themselves.

On the morning of 17 April, Chilton and Macky, accompanied by Lieutenant Colonel Parkinson (Commanding Officer 4 Field Regiment- Major Stewart's commanding officer), Major Stewart, Lieutenant Williams and Lieutenant Longmore conducted a reconnaissance of the western section of the gorge. There was some disagreement between the two infantry COs over who was in overall command of the force until Brigadier Allen arrived. A further point of difference between the two was over the disposition of the anti-tank guns. Macky wanted them sited to the west of the battalion where they could fire on tanks emerging from the gorge. Chilton wanted the anti-tank guns sited in the valleys towards the rear of the 21 Battalion position where they could fire enfilade (flank) shots at the tanks before they emerged from the gorge.¹² As the anti-tank guns had reported to Chilton, he sited them within the 21 Battalion location. Such a disagreement was natural, for opinions would be divided over where best to position the guns, and neither man was an expert.

For the period that 21 Battalion defended at Pinios Gorge, they came under command at different times of Anzac Corps HQ, 2nd New Zealand Division and 16 Brigade. This led to confusing command arrangements and left the battalion fending for itself.¹³ There is no record of the battalion having received Anzac Corps Operations Instruction Number 1 of 16 Apr 41, NZ Division Operation Order Number 3 issued on the same day, or 16 Brigade orders. The Corps instruction was distributed to the NZ Division and to 16 (Australian) Brigade, but not to 21 Battalion. It is doubtful therefore that 21 Battalion was aware of the bigger picture and the overall scheme of defence, or plans for withdrawal.

¹² Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 464.

¹³ G.A. Dutton, to J.F. Cody, dated 16/7/50. Correspondence concerning 21 Battalion's part in Greek Campaign. WAI 1 DA 54/10/20, NA. Captain Garth Dutton was the battalion's Adjutant. He recalled that at Platamon 'we were transferred to Australian command and then back to N.Z. command and so on, every day or so, just nobody's baby in fact.' The confusion is amplified further in Narrator's Note; Para 55. Wards, Campaign Narrative- Campaign in Greece- Part IV, facing p. 485.

21 Battalion oriented its defence to deny a German advance through the gorge from the east. B Company was deployed forward and 'somewhat dispersed' into platoon locations that could not give each other mutual support.¹⁴ 10 Platoon (Lieutenant Rose) was placed well forward, opposite the railway tunnel on the north side of the river, guarding a large crater demolition which blocked road access for vehicles and tanks through the gorge. 11 Platoon (Lieutenant Yeoman) was tasked to patrol forward of Ambelakia village, so was well above the gorge, forward of D Company. 12 Platoon was sited on its own, covering the road ahead of C Company. The 10 and 12 Platoon positions are the forward "goose-eggs" in Map 4.1.C. As 11 Platoon was dispersed, its general location is indicated in Map 4.1 by the arrow to the right of D Coy, marked "Patrols 11 Pl B Coy."

C Company was located centrally while A Company, located behind it, was designated reserve, and held in rear behind a ridge. D Company was allocated high ground overlooking the gorge. The company positions are clearly visible on Map 4.1.

The four anti-tank guns deployed towards the western end of the gorge were sited where they could fire side on shots at enemy tanks from behind high ground, and would theoretically be protected by the infantry positioned forward of them.¹⁵ Anti-tank shots into the side of the panzers would strike the weaker armour and therefore be more likely obtain a kill. Further, positioning the antitank guns to a flank placed them in the panzer's blind spot, outside the arc of fire of its main gun.

The artillery gun line was established just south of Evangelismos. The guns were dug in and the position camouflaged. Three artillery Observation Posts were established on high ground in order to observe enemy and call in fire. 21 Battalion was part of a combined arms defence although a number of factors which will become evident, prevented the defensive battle being executed on a combined arms basis.

¹⁴ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 466.

¹⁵ McClymont, *To Greece*, pp. 317- 319 describes the detailed layout of the anti-tank guns.

21 Battalion's organisation for battle was similar to Platamon except it had been strengthened by the allocation of supporting artillery and by the siting of four anti-tank guns towards the rear of its position. It was weakened by the 36 casualties sustained at Platamon and loss of key equipment, particularly the battalion's only wireless, all of its telephone cable, its digging tools, and its mortars. 2/2 Australian Battalion of 16 (Australian) Brigade was able to produce sufficient spare cable, much of it acquired from the Italian's they had been fighting in Libya.¹⁶ This enabled a single telephone line to be connected between the two battalion headquarters. Communications were tenuous at best. The organisation of 21 Battalion at Pinios Gorge was:

21 Battalion:	(Lieutenant Colonel Macky)
A Company	(Captain McClymont)
B Company	(Captain Le Lievre)
C Company	(Captain Tongue)
D Company	(Captain Trousdale)
Carrier Platoon	(Captain Dee)

In location: ¹⁷

L Troop, 7 NZ Anti-tank Regiment, four 2 Pounder Anti-Tank guns
(Lieutenant Longmore)

Artillery Observation Post (Captain Nolan) located in the high ground
towards Ambelakia¹⁸

In Support: ¹⁹

26 Battery, 4 NZ Field Regiment (Major Stewart)

A Troop, 5 NZ Field Regiment (Lieutenant Williams)

Macky understood the need to prevent enemy movement towards Larisa. On arrival at Tempe, the direction given to him by Brigadier Clowes, Commander Corps Royal

¹⁶ Baker, p. 53.

¹⁷ 'In location' refers to units not under command of 21 Battalion, but sited within the battalion's area in order to perform their function and to be protected by the infantry elements.

¹⁸ Murphy, 2nd *New Zealand Divisional Artillery*, p. 59. Nolan located his OP on high ground on the Tempe- Ambelakia track overlooking the gorge. He had telephone communications to the artillery only.

¹⁹ Refers to units not under command of 21 Battalion, but whose task was to support it (usually from the rear, as was the case with artillery).

Artillery who had been sent forward to assess the situation, was that it was 'essential to deny the gorge to the enemy till 19th April even if it meant extinction.'²⁰ Brigadier Allen arrived at Tempe on the afternoon of 17 April. He approved the 2/2 and 21 Battalion dispositions.

SUMMARY OF KEY EVENTS

Battlegroup 2 approached the gorge from the east in two groups on 17 April. The *Cycle Squadron of 112 Recon Unit* (moving dismounted), followed by a tank company of *I/3 Pz Regt* approached along the railway line on the north side of the river. 10 Platoon fired from across the gorge at the northern group as the Germans attempted to bypass the blocked railway tunnel. The tanks following behind the dismounted motorcyclists then engaged 10 Platoon from across the river. The weight of this tank fire from the other bank forced the New Zealand platoon 200 metres back up the ridge away from the gorge, highlighting at this early stage in the battle the vulnerability of New Zealand infantry positions to tank fire generally, and to direct fire from *across* the river. Macky withdrew 10 Platoon, 'the men having been three days without rest.'²¹ They were not replaced, so the demolition was then unobserved.²² As a result the eventual German breaching of the obstacle was not opposed or even known to 21 Battalion.²³ This was a fundamental error which Macky later admitted when he wrote the obstacle was 'rendered unobservable when this platoon had to be withdrawn... had we created an effective block which could be held under observation and preferably by artillery then the tanks would never have got out of the gorge.'²⁴

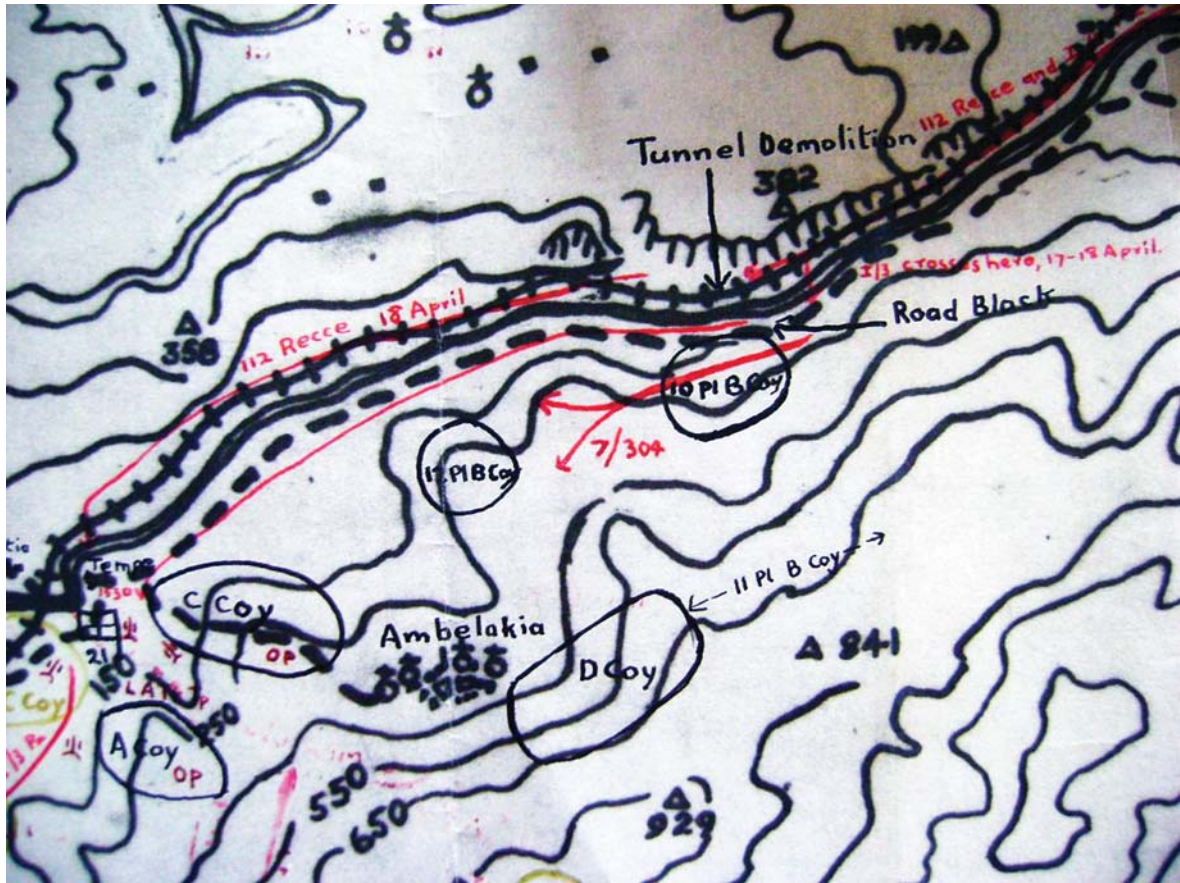
²⁰ McClymont, *To Greece*, p. 251. General Blamey, ANZAC Corps Commander, dispatched Clowes to visit 21 Battalion at Platamon and ascertain the situation because of the reports received. By the time Clowes was able to get forward, 21 Battalion was already crossing the Pinios River. Gavin Long, Australia in the War of 1939- 1945 Series 1 (Army), *Greece, Crete and Syria*, Canberra: Australian War Memorial, 1953, pp. 95- 96.

²¹ McClymont, *To Greece*, pp. 321- 323.

²² Narrator's Note: Para 33. Wards, Campaign Narrative- Campaign in Greece- Part IV, facing p. 475.

²³ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 475.

²⁴ Macky to L. McL Wards, letter, dated 9th February 1954. The letter is Macky's comment on Ward's narrative on the campaign in Greece. 21 Battalion [in Greece]. WAI 3/7, NA.



Map 4.2: Detail of 21 Battalion dispositions, Pinios Gorge²⁵

At first light on 18 April, the *Cycle Squadron* continued its advance along the north bank to a point opposite C Company and 12 Platoon where it was halted by machine gun, mortar and artillery fire from the south bank.²⁶ From first light until at least midday on 18 April, the Germans on the north bank were 21 Battalion's focus. One commentator wrote 'We were happy in our work as we felt well able to deal with infantry.'²⁷ Morale was good- the men had plenty of targets across the river but were not under direct threat

²⁵ Wards, Campaign Narrative- Campaign in Greece- Part IV, facing p. 461. The map original is in colour, no additional symbols have been added. This map from the campaign narrative clearly shows the tunnel demolition and the crater (the latter being labeled road block). 10, 11 and 12 Platoon are clearly widely separated. C Company is shown as a single goose-egg, although its platoons are known to have been sited in individual locations within the area indicated. 21 Battalion's headquarters location is indicated by the small flag-like symbol between C and A Companies, just south of Tempe village.

²⁶ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 475.

²⁷ Letter quoted in Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 476.

themselves, from the east. By this time, the northern group had almost reached a position towards the rear of 21 Battalion, but on the opposite side of the gorge.

Balck's southern group had been halted by the Pinios River on 17 April, unable to cross into the gorge itself, for there was no bridge, and the New Zealanders had destroyed the only barge. However, German reconnaissance parties, actually two officers 'in underwear and high boots',²⁸ located a small island in the Pinios River that offered the possibility of assisting in a tank crossing. The approximate crossing point is indicated on Map 4.2 by the words towards the top right, in red font, "I/3 crosses here, 17-18 April." Balck decided to risk one tank in a trial crossing.²⁹ It got across. Each tank crossing took 30- 60 minutes thereafter. Once three tanks had crossed they closed up on the crater where they were successfully blocked by the extent of the unguarded demolition.³⁰ At dawn on 18 April, *No 7 Company of 304 Regiment* crossed the Pinios on kapok floats. While one platoon provided local security, two platoons worked to clear the crater demolition, without interference, so the tanks could proceed into the gorge itself.³¹ Figure 4.1 shows panzers wading the Pinios River.

Although 21 Battalion's fighting at the Pinios Gorge on 18 April was largely against *Battle Group 2*, it was conducted against the back drop of the much larger movement towards the Pinios River by troops of *6 Mountain Division* whose thrust was directed behind 21 Battalion against the remainder of Allen Force, primarily upon Chilton's 2/2 Battalion. This threat behind the Battalion, from the direction of Gonnos to the north, started to shape 21 Battalion perceptions. From first light on 18 April, enemy were seen at Gonnos. German infantry were reported moving into Itia, immediately across the river from 21 Battalion. Although 21 Battalion had been directing artillery and Bren fire against Germans across the river near Itia, German machine guns kept up a steady fire on

²⁸ Balck, *Ordnung im Chaos*, p. 323.

²⁹ It is significant to note that the crossing of the Pinios was directed by Colonel Balck, who had also been instrumental in the crossing of the Meuse at Sedan whilst he was commander 1st Rifle Regiment. von Mellenthin, pp. 13- 14.

³⁰ von Mellenthin, p. 34.

³¹ McClymont, *To Greece*, p. 324 and Wards, *Campaign Narrative- Campaign in Greece- Part IV*, p. 475.

the ridges occupied by the battalion's companies.³² They also swept 'the re-entrants between the spurs where the anti-tank guns were sited.'³³ Sited for an attack from the east, 21 Battalion's positions were exposed to direct fire from the northern side of the gorge.

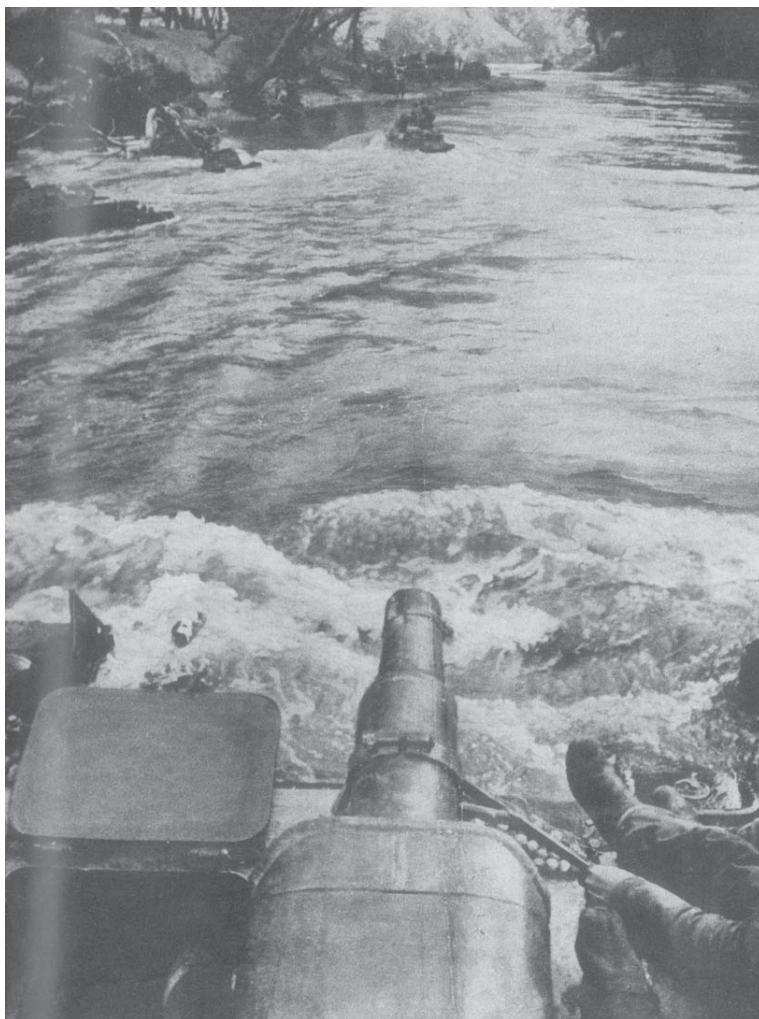


Figure 4.1: German tanks wade the Pinios River³⁴

It was while these events were occurring on the flank and towards the rear of 21 Battalion that Macky held a conference with his company commanders on the morning of 18 April.

³² Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 474.

³³ Report on Operations 21 Battalion in Greece by Lt-Col N.L. Macky (Prepared after return to New Zealand and circulated privately), p.11. WAI 1 DA 54/10/19, NA.

³⁴ James McNeish, *The Sixth Man: the extraordinary life of Paddy Costello*, Auckland: Random House New Zealand, 2007, facing p. 144.

He was acutely aware of the movement of significant numbers of Germans from the direction of Gonnos and the infantry movement on the north bank of the gorge from the direction of Platamon, but unaware of the plans and the Allied intentions at brigade, division or corps level. He therefore gave his company commanders instructions 'that if completely cut off and overwhelmed, those left would make out in small parties to Volos.'³⁵ Rather than withdraw back towards Larisa as a cohesive unit to continue the delaying action, Macky's plan envisaged cross country movement towards the coast. It was designed to save the battalion rather than complete the mission. Macky's intention was not passed to 2/2 Battalion or 16 Brigade.

Tanks against Infantry

By 1200 hours on 18 April the crater demolition on the south bank of the river was cleared and six German tanks began to advance through the gorge supported by dismounted infantry of *No 7 company*.³⁶ The tanks were first observed by 12 Platoon B Company, who until then had been firing at Germans on the north bank. When the tanks appeared, German supporting fire from the north bank intensified.

The tanks were able to bypass 12 Platoon B Company who were not able to deny their movement. When the tanks were observed already beyond the forward elements of his company, Captain Clem Le Lievre ordered B Company to withdraw up into the hills towards D Company.³⁷ The withdrawal of 12 Platoon B Company meant that 13 Platoon B Company was surprised by tanks which appeared from behind the ridge previously occupied by 12 Platoon. Artillery fire was called in by Captain Henry Nolan whose OP in the hills above was able to observe the tanks. The artillery fire only slowed the German tanks up. The tanks got so close to 13 Platoon's ridge that they were forced to fire uphill, reducing the effectiveness of their fire against the platoon's shallow sangars.³⁸

³⁵ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 476.

³⁶ Wards, Campaign Narrative- Campaign in Greece- Part IV, pp. 477 and 482. German records are unclear about whether the tanks were escorted by one or two platoons of *7/304 Infantry Regiment*. Those troops not escorting the tanks are understood to have remained back at the road demolition.

³⁷ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 477.

³⁸ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 478.

Meanwhile, C and B Companies (less 13 Platoon) withdrew uphill away from the gorge to avoid enemy fire.

At approximately 1400 hours Captain Robert McClymont visited Battalion Headquarters where he was ordered to withdraw A Company into the hills and act as a rearguard for the battalion as if they were going to be followed up, although this was a faulty assessment as Larisa was the German objective. At 1530 hours 13 Platoon was captured by German infantry trailing the tanks and who had been slowly moving across country over the undefended ground previously occupied by B, C and D companies.³⁹ Lieutenant Mervyn O'Neill had already briefed his platoon that they would surrender if this situation arose.⁴⁰ His casualties up until then were just one killed and two wounded.

The situation by then was that all 21 Battalion's rifle companies were withdrawing up the hills, with the exception of Lieutenant William Southworth's platoon, which withdrew down the road to 2/2 Battalion and then fought alongside them.⁴¹ Any plan by 21 Battalion to re-group and move cross country to Volos as a unit was thwarted by the general confusion as companies became separated and eventually mixed in amongst withdrawing Australian troops. Passing by C Company's vacated positions, the German tanks entered the anti-tank gun killing areas.

The Anti-tank Battle

The anti-tank guns at the rear of 21 Battalion's position did not receive any information from the infantry about the progress of the tanks, although the anti-tank gunners knew from the sound of battle that tanks were approaching. The forward gun, L1 was knocked

³⁹ Wards,, Campaign Narrative- Campaign in Greece- Part IV, p. 479.

⁴⁰ O'Neill to I. McL. Ward, letter, 19th February 1953, p. 4. 21 Battalion [in Greece] WAI 3/7, NA. See also Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 479.

⁴¹ S. Wick, *Purple Over Green: The History of the 2/2 Australian Infantry Battalion 1939- 1945*, pp. 97-98103. *Purple over Green* records Southworth was subsequently killed on Crete and that he received a NZ award for his action with the Australians at the Pinios Gorge. 21 Battalion's official history states he was awarded an m.i.d. and also that he was killed on 22 May 1941 leading a patrol beyond Xamoudhokori; none of the patrol returned. Cody, *21 Battalion*, pp. 38, 69- 70 and 92.

⁴¹ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 485.

out by machine gun fire from the north bank of the river, even though it was sited in defilade to the tank approach.⁴² L4 (under command of Sergeant Cavanagh) engaged three tanks at 100 yards range, firing 28 shells, knocking out two tanks. His gun probably crippled a third tank, before he and his crew were suppressed by troops from 7/304 *Infantry Regiment* who appeared over the spur above them.⁴³ Neither L2 nor L3 destroyed any tanks. Australian troops reported that L2's crew (L2 was sited in their area) removed the gun's breechblock and withdrew, although the New Zealand artillery official history disputes this. It is possible that a Knights Cross was awarded to a German for action against L3 or L4 indicating that at least one crew engaged in close combat with German infantry.⁴⁴ The anti-tank battle, such as it was, was over very quickly for the anti-tank gunners had been stripped of their infantry protection. They were left exposed and vulnerable.

OUTCOME

Mission Achievement

21 Battalion did not achieve its mission. It did not deny the Pinios Gorge. It is difficult to determine the exact time the battalion ceased to exist as a formed body; perhaps it never was from the time it occupied its position within the gorge. Timings are scant within the sources. McClymont provides the best indication when he recorded that German tanks emerged from the gorge at 1500 hours on 18 April.⁴⁵ 21 Battalion was dispersed and did not re-group until Crete. Even then its numbers were severely reduced due to the losses suffered in Greece so it was relegated to a minor role only in that campaign.

⁴² Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 479.

⁴³ Cavanagh and his crew escaped but were captured later heading towards Larisa.

⁴⁴ McClymont, *To Greece*, p. 326 and fn 2.

⁴⁵ McClymont, *To Greece*, p. 332.

Casualties and Losses Sustained

21 Battalion's casualties in this battle were significant, although they were primarily sustained through capture. Casualties sustained by 21 Battalion and *Battlegroup 2* are listed in Table 4.1 below:

	Personnel				Tanks
	KIA and DoW	WIA	PW	Total Casualties	
21 Battalion	6	16	217	239	
Battlegroup 2	7	16		20	4

Table 4.1: Casualties sustained at Pinios Gorge

The Northern group of a cycle squadron of *112 Recce Unit* lost 4 KIA and 10 WIA. On the south bank, New Zealand anti-tank gun L4 caused 3 KIA and 6 WIA from the two tanks they destroyed.⁴⁶ German tank losses comprised of the two destroyed by L4 and two lost attempting to cross the Pinios river. It is assumed all other tank casualties were recovered.⁴⁷

ANALYSIS OF COMBAT EFFECTIVENESS

Operational Setting

A key operational factor at the Pinios Gorge was the enveloping movement made by 6 *Mountain Division*. The division's commander General Ferdinand Schoerner ordered on his own initiative the move to Gonnos through the mountain with the aim of cutting off the Allies at Tempe. The movement was not coordinated with Colonel Balck.⁴⁸ It was effective nevertheless. The day before the battle, troops of 21 Battalion could plainly see the movement of German troops 'infiltrating along and down... the other side of the

⁴⁶ Appendix B to 6 Mtn Div Battle Reports (Greek Campaign). WAI 1, DA 438/21/4. NA. Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 483.

⁴⁷ Report by 3 Pz Regt (2 Pz Div), p.8. Reports from Various Formations of 12th Army (Greece). WAI 1, DA 438/21/4, NA. Two tanks were lost attempting to cross the river, the crews escaped.

⁴⁸ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 472.

river.’⁴⁹ The physical and psychological threat posed by a large number of mountain troops menacing the flank and rear of 21 Battalion was a significant factor in 21 Battalion’s performance as subsequent sections within this chapter will demonstrate.

21 Battalion was ordered to defend at the Pinios Gorge. It had been allocated additional resources in the form of anti-tank guns, even if they were reporting to Chilton. They were still supporting 21 Battalion. Additional artillery was available, although the steep sides of the gorge limited its ability to support 21 Battalion. Coordination with higher headquarters (16 Brigade) was non-existent after Brigadier Allen’s initial visit to confirm locations. At different times, 21 Battalion was under command of Anzac Corps HQ, the New Zealand Division and 16 Brigade. This led to a chronic failure in the passage of information both ways including delivery of plans and orders from above. 21 Battalion was therefore ignorant of the intentions at brigade level and above, and superior headquarters were similarly unaware of 21 Battalion’s situation or intentions. These failures can be attributed to the lack of communications options available to 21 Battalion, and to the inexperienced headquarters staffs at all levels, who were under significant pressure to coordinate the passage of Lustreforce past the Larisa bottleneck.

Factors which detracted from 21 Battalion’s combat effectiveness at the Pinios Gorge included lack of headquarters oversight, and the low level of experience of headquarters staffs. The decision on where to fight was reasonable, as was the allocation of additional resources. In both cases, these factors which would ordinarily have increased 21 Battalion’s combat effectiveness, were wasted. The strength of the position as a natural defence was unhinged by Schoerner’s decision to walk his division over Mount Olympus, by the destruction of most of the anti-tank guns before they could engage the panzers, and by the inability of the field guns with their flat trajectory shells to fire into the gorge due to its very steep sides.

⁴⁹ E.G. Smith to J.F. Cody, letter, undated. Correspondence 21 Battalion Historian. WAI 1 DA 54/10/20, NA.

Force Strength

The same methodology used to determine relative strengths for Platamon was employed to calculate relative strengths at the Pinios Gorge. 21 Battalion numbers were reduced by the strength of D Company at Ambelakia and by 11 Platoon B Company, located forward of D Company. Starting with a figure of 410, the strength of 11 Platoon (30 personnel) and the casualties from Platamon which were calculated previously as 36 were subtracted, leaving a ‘bayonet strength’ of 344 men for 21 Battalion. *Battlegroup 2* strengths for infantry were assessed as best case (no casualties) for a cycle squadron in the northern group and one platoon and two patrols only in the southern group. Relative strengths at the Pinios Gorge are shown in Table 4.2.

	Bayonet Strength (Infantry only)	Medium machine guns	Medium Mortars	Artillery	Anti-tank guns	Tanks
21 Battalion	344	Nil	Nil			
Artillery				24		
Anti-tank guns					4	
<i>Battlegroup 2:</i>						
Northern group (<i>Cycle Squadron, 112 Recce Unit of 6 Mountain Division</i>)	100 (estimate only)	unknown	unknown	16		12 (only as far as the tunnel)
Southern group	40 ⁵⁰	unknown	unknown	As above		6

Table 4.2: Relative strengths at Pinios Gorge

Although 21 Battalion’s bayonet strength was 344, its column formation by platoons left it vulnerable to defeat in detail, with each platoon being no more than 30 strong. The first example of this was 10 Platoon at the road demolition. The platoon strength was 30 at best. It was engaged early on from across the Pinios River by the cycle company and a tank company. The infantry overmatch by the Germans was at least 3:1 in their favour. The New Zealanders could not withstand the tank fire either.

At the Pinios Gorge overall, however, the German infantry were outnumbered approximately 2:1 (344 defending against 140 infantry) which should have favoured 21

⁵⁰ Based on the strength indicated in Wards, “Panzer Attack in Greece”, p. 7. The platoon strength has been estimated at thirty and the two patrols as five men each, giving a total of 40.

Battalion given their defensive posture, but at the point of each attack, it was actually the tanks which were most effective against the small groups of isolated defenders, not the small infantry escort from *No 7 Company, II/ 304 Infantry Regiment* accompanying them.

The tanks, even though small in number, proved decisive once they had crossed the river and could actually close with the New Zealand positions. They had been unable to achieve this at Platamon. As the defenders had no weapons capable of defeating the tanks before they reached the anti-tank guns at the *rear* of the battalion, the panzers were able to clear the New Zealand infantry from their positions and force them into the hills. The small number of German infantry accompanying the tanks was then able to clear the ground with little opposition. 12 Platoon (Finlayson) and 13 Platoon (O'Neill) were unable to withstand the tanks, and so the German infantry supporting the panzers caused them to disperse (Finlayson) or be captured (O'Neill). *3 Panzer Regiment* recorded afterwards that:

Our infantry, were only 3 sections strong and not equipped to deal with this situation but they did notable work. They climbed like goats and cleared out the enemy positions, under cover of the fire of the leading tanks.⁵¹

At each decisive point as the southern group advanced, they had significantly greater combat power than the troops they were fighting, in other words, their relative strength was greater and they were more combat effective. The tanks had firepower, in terms of weight of fire and range, and they had protection afforded by their armour. As a result, the German infantry only had to mop up, they were never required to attack and clear positions.

Other than the fact that the New Zealanders were attacked by a larger force overall, part of the German capability overmatch was due to the paucity of medium machine guns,

⁵¹ Report by 3 Pz Regt (2 Pz Div), p. 9. WAI 1 DA 438/21/4. NA. The account stating “3 sections” tends to support the infantry accompanying the tanks being of platoon strength only.

artillery and anti-tank weapons assigned to 21 Battalion. The New Zealand infantry battalion structure was based upon the British model, which arose from reforms of the 1930s. These aimed to make infantry battalions more mobile and to ‘simplify their tactics by reducing the number of different weapons in the battalion.’⁵² As a result, battalions were heavily reliant on higher headquarters assigning them additional support, which hinged around those same staff making an accurate assessment of the threat.

Bayonet strength was a key detractor from 21 Battalion’s combat effectiveness at the Pinios Gorge. D Company and 11 Platoon B Company were sited where they could not contribute to the battle. This was a tactical error which reduced the number of men who could actually contribute to the battle. This led to an inability to generate organic firepower. Had more troops been sited where they were able to fire across to the north bank to suppress enemy interdiction from that location, forward companies may not have had to flee up hill to escape. Another factor was capability overmatch. This could have been a key determinant at Platamon, except the terrain there blocked the tanks. At the Pinios Gorge (and it will come up again in the final battle analysis in Chapter 10), the presence of just a few tanks easily penetrated the defence. 21 Battalion had no effective response to the tanks. This demonstrates that some weapons systems, such as tanks, can have a huge impact on a battle, even if there are only a few of them, when there is no weapon or physical obstacle to stop them. The relative strength that a capability overmatch provides is significant.

Battlefield Effects

The Pinios Gorge was a natural chokepoint approximately eight kilometres long. The Germans would have to pass through the length of the Pinios Gorge. This presented 21 Battalion with a different situation to Platamon, where the defensive position had been astride the German advance. Theoretically, there was only one avenue of approach open to the panzers and vehicles of *Battlegroup 2*: through the gorge along the road. However,

⁵² Shelford Bidwell and Dominick Graham, *Firepower: British Army Weapons and Theories of War 1904-1945*, London: Allen & Unwin (Publishers) Ltd., 1892, p. 193.

the north bank of the river paralleling the gorge road on the south bank was also suitable for infantry to use, and the ability of the attackers to apply high volumes of suppressing fire onto the defenders from the *north* side of the gorge proved decisive.⁵³

The 21 Battalion defensive positions were sited on the south bank of the gorge which contained ‘almost vertical walls 1000 feet high.’ The valleys were lightly forested with oak, chestnut, beech and plane trees, so offered little in the way of concealment.⁵⁴ The river was 30- 50 metres wide where it flowed through the gorge, and fast flowing.⁵⁵ How and when battlefield effects impacted on 21 Battalion’s combat effectiveness and resulted in the destruction of the battalion is summarised in Table 4.3 below.

Observation and Fields of Fire	<p>An examination of the map reveals that the best lines of observation and fields of fire were <i>across</i> the gorge rather than along it, apart from the basin between C Company’s ridge and 11 Platoon B Company, immediately below Ambelakia.⁵⁶ Fields of fire at the southern end of the gorge were limited to either the north side of the river or as far forward as the next ridge.</p> <p>B Company was the forward company. 10 Platoon was located well forward initially and separated from 12 Platoon by a major ridge (unoccupied) running down from spot height 841, and therefore isolated.⁵⁷ 10 Platoon had good observation and fields of fire across the river from the demolition site. The platoon was able to engage the tanks and infantry opposite the platoon which had been advancing on the north bank following the railway line towards the tunnel. The enemy fired back. German fire superiority was the deciding factor at the demolition site. 10 Platoon could not withstand combined tank, machine gun and mortar fire directed at its exposed position. 11 Platoon had a good view of events within the gorge, but was out of effective weapon range so could not influence events, and without a radio or telephone, could not pass on information.⁵⁸ 12 Platoon did not have a good view of the road or the gorge, for the panzers were able to pass 12 Platoon before they were observed.⁵⁹</p> <p>D Company was located high up near the village of Ambelakia. It was tasked with covering</p>
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⁵³ Baker, p. 67. Wards wrote that ‘Much of the ease with which the handful of tanks and infantry moved through the gorge was due to the activities of 112 Recce Unit on the northern bank of the Pinios.’ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 483.

⁵⁴ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 462. Wards described the valley being barely wide enough for the road (on the south bank) and the railway (on the north).

⁵⁵ Long, p. 106.

⁵⁶ Map Europe 1:250,000 LARISA (Map G5, of July 1943). WA II 5 G5, NA. Good observation and fields of fire from the south to the north bank is supported by a report by Commander I/3 Pz Regt (Lt Col Decker) who reported that the cycle squadron on the northern bank ‘was much hampered by the flanking fire from the south bank.’ Appendix B 13, I/ 3 Pz Regt Report, 6 Mtn Div Battle Reports (Greek Campaign). WAI 1 DA 438/21/4, NA.

⁵⁷ Map Europe 1:250,000 LARISA (Map G5, of July 1943). WA II 5 G5, NA.

⁵⁸ Entries for 17/18 and 18 [Apr]. A.A. Yeoman, Activities of 21 NZ Bn during Greek Campaign, Apr 1941. WAI 1 DA 54/10/2, NA. and Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 476.

⁵⁹ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 477.

	<p>down the valley to the gorge road. They had very good observation but were too far from the gorge valley to influence the battle and had no wireless or telephone communications to pass information about enemy movement.</p> <p>C Company was deployed with 13 Platoon on the flat ground at the base of the ridge covering the gorge road, while 14 and 15 Platoons were located on the ridgeline above. The flat area forward of the ridge towards 12 Platoon B Company was covered in olive trees and vineyards, all the way up to Ambelakia. 13 Platoon (Lieutenant O'Neill) had good fields of fire across the river and from first light on the 18th his platoon engaged German infantry they could observe across the river opposite them.⁶⁰</p> <p>Three anti-tank guns were sited in the re-entrant between A and C Companies and one was sited on the flat ground west of A Company, covering the gorge exit. The first three were sited further forward than Macky wanted. The anti-tank guns had short but clear fields of fire to the gorge road. Like the infantry, the guns were able to be observed from across the river. If not detected initially, their distinctive firing signature would enable them to be observed from across the river once they started to engage tanks.</p> <p>Artillery was used extensively in support of 21 Battalion, although onto the north bank rather than within the gorge itself. Artillery could not cover the forward demolition, due to the steep sides of the gorge.⁶¹</p>
Cover and concealment	<p>Holding a major defile, in depth and with good fields of fire, the defence should have been a strong one, however the lack of cover for B, C and A Companies weakened the defence. This was caused by insufficient time to prepare adequate defences, the lack of digging tools (left behind at Platamon) and the presence of enemy throughout most of the short preparation phase. The most significant factor was the orientation of the ridges that B, C and A Companies occupied, which not only left little cover from enemy fire, but also meant platoons and companies could be cleared piecemeal from the east and ultimately led to the fragmentation of the battalion as troops sought to escape the effects of the fire from forward and across the river.</p> <p>The defences were not as well prepared as those at Platamon, 'many of the infantry companies did not dig in until after dark, and the first signs of the enemy were noted in the late afternoon.'⁶² Lieutenant O'Neill highlighted the typical infantry predicament of attempting to dig in with a lack of digging tools, whilst undertaking competing defensive tasks and all in the presence of the enemy:</p> <p style="padding-left: 40px;">Digging was impossible but by working throughout the night, when not on patrol, we built up forward of us just enough protection to get by. The spoil was camouflaged by weed. I know that my night's work with a pen knife and finger nails just raised the parapet high enough to lie behind it. For an hour or so we had shared a crow-bar between us but with darkness came sounds of German infiltration on the other side of the river so that noiselessness had to be our watchword in our labours.⁶³</p> <p>Inadequate protection from shrapnel and direct fire caused by difficulty entrenching was compounded by the exposed nature of the ridges occupied by the companies. The battalion</p>

⁶⁰ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 476.

⁶¹ Narrative: Ch 7 Greece, p. 15 (p.23 in the margin). Shaw T.R., 21 Battalion Unit History: Chapter 7 Greece-Preliminary Draft and Chapter 6- move to Greece. WAI 1 DA 54/15/3, NA. See also Macky, N.L., Report on operations of 21 Battalion in Greece (Prepared after return and circulated privately), p. 11. WAI 1 DA 54/10/19, NA.

⁶² Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 469.

⁶³ Wards, Campaign Narrative- Campaign in Greece- Part IV, Narrator's Note to para 28.

	<p>position was particularly vulnerable to enemy direct fire from high ground across the gorge.⁶⁴ The nature of the gorge was such that the forward slopes, crests and rear slopes of all 21 Battalion's ridgeline positions were able to be observed and fired upon from the north bank. There was no vegetation for concealment or 'reverse slope' to provide cover. This is why 10 Platoon was forced by weight of enemy fire at the demolition site, to withdraw 200 metres <i>up</i> the ridge and <i>away</i> from the gorge.⁶⁵ As was the case with 10 Platoon, the other platoon and company positions were forced due to the exposed ridgelines to disperse up hill away from the gorge rather than to withdraw rearwards, where they could have regrouped as a unit.</p>
Obstacles	<p>There were a number of obstacles in the 21 Battalion area and on the approaches to it which were sufficient to block tanks. On the north bank at the eastern end of the gorge, the railway tunnel had been blocked.⁶⁶ This obstacle remained effective throughout the battle, although observation was not maintained on it. As the tunnel was unable to be cleared, German movement forward of it was limited to foot traffic only which meant tank fire could not be directed on the main 21 Battalion positions from across the river.</p> <p>On the south side, the Pinios River was a significant natural obstacle, whilst the demolition defended initially by 10 Platoon was a major tank barrier. The Germans crossed the Pinios nevertheless and were able to clear the demolition without 21 Battalion being aware. Macky admits that situating the demolition so far forward where it was isolated and failure to maintain observation on it was 'the major mistake at Pinios (sic).'⁶⁷ The German river crossing was a risky undertaking and it took considerable time. It took even more time for the Germans to clear the obstacle. It would have taken them a lot longer had they had to complete these operations under fire.⁶⁸</p>
Key Terrain	<p>A key decision when defending a major defile is whether the defence should be based on the entry or exit point, or both. Macky and Clowes discussed this very issue on the battalion's arrival at Tempe and decided that defending the exit was the best option, particularly as the Germans could attack from the Gonnos area in the battalion's rear and trap the unit within the gorge if it defended forward at the entry point.⁶⁹</p> <p>The Vital Ground for the defence of the gorge was the exit from the gorge including the Tempe area. Key Terrain included the entry point (in the vicinity of the demolition), the tunnel on the north bank at the eastern end, the bridge at Itia and the lower slopes of the</p>

⁶⁴ Wards, Campaign Narrative- Campaign in Greece- Part IV, Narrator's Note (2) (a) to Para 14. Wards made the assessment that the battalion was exposed to the high ground 'just across the gorge' on the north side of the river. I have made the deduction that they would have been exposed to direct fire from the north bank, not just observation.

⁶⁵ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 469 and Cody, 21 Battalion, pp. 65-66. The platoon joined 12 Platoon.

⁶⁶ The tunnel had to be blocked through the expedient of towing a box car into the tunnel and immobilizing it by blowing its wheels and undercarriage off with explosive as most explosive was required for the bridge demolition where the railway line crossed the river between Tempe and Itia. F.W.O. Jones to J.F. Cody, letter, 4th December 1950. Correspondence collected by J.F. Cody concerning [the] part of 21 NZ Battalion in Greece. WAI 1 DA 54/10/20, NA. Lieutenant Jones was the engineer commander.

⁶⁷ Macky to L. McL Wards, letter, dated 9th February 1954. 21 Battalion [in Greece]. WA II 3/7, NA , Notes on campaign in Greece, paras 14 and 19. Macky, N.L., Report on operations of 21 Battalion in Greece (Prepared after return and circulated privately), p. 11. WAI 1 DA 54/10/19, NA.

⁶⁸ Artillery could not fire onto the brought down on the demolition because of the steep sides of the gorge at that point and due to the 'peculiar lie of the land.' Murphy, 2nd New Zealand Divisional Artillery, pp. 58- 59 and Macky, N.L., Report on operations of 21 Battalion in Greece (Prepared after return and circulated privately), p. 11. WAI 1 DA 54/10/19, NA.

⁶⁹ Cody, 21 Battalion, p. 61.

	main ridges near the road occupied by 12 Platoon (B Company) and C Company. It is assessed that D Company (being too high up the ridge) and A Company (being behind the Vital Ground) contributed little to the defence as a result.
Avenues of approach	<p>Macky correctly assessed the enemy would approach from the Gonnos area, and from the east through the gorge. Anti-tank guns were sited to cover this, although the artillery official history records:</p> <p style="padding-left: 40px;">The anti- tank gunners, however, had been led to believe that tanks would appear, if at all, only on the other side, along the railway line, and were taken by surprise when the tanks suddenly appeared on their side of the river and at very close range.⁷⁰</p> <p>The eastern approach along <i>north</i> bank did not receive sufficient attention by the New Zealanders, for the effect this approach would have on the defence was not appreciated. While the tunnel demolition effectively prevented this approach from use by tanks, it was still viable for infantry. Further, the priority given by way of company dispositions to blocking the eastern approach, over the ability to fire onto the north bank, resulted in a column orientation which increased vulnerability to fire from the flank (north) and reduced the battalion's capacity to counter it.</p> <p>The likely approach of infantry along the high ground towards Ambelakia was correctly assessed. Lieutenant Yeoman's platoon had to engage enemy moving along the goat tracks towards Ambelakia.⁷¹ However, the positioning of a complete company at Ambelakia, in addition to Yeoman's platoon, was questionable and certainly reduced the number of troops available to deny the gorge itself.</p> <p>The other avenue of approach was from the direction of Gonnos. This became a distraction. The attack across the river towards the rear of 21 Battalion was actually a feint, consisting of shelling of the nearby positions and the movement of <i>I/143 Mountain Regiment</i>, designed to focus the attention of the defenders away from the main crossing attempt further west.⁷² It worked.</p>

Table 4.3: OCOKA terrain analysis for Pinios Gorge

The steep sides of the gorge limited New Zealand combat power and eroded potential combined arms effectiveness for 21 Battalion. New Zealand artillery fire was unable to engage enemy within the gorge and the steep sides also made it difficult for infantry not located in immediate proximity of the road to observe or fire, effectively eliminating them from the battle. The impact of battlefield effects in this battle was to reduce 21 Battalion's combat effectiveness.

⁷⁰ Murphy, 2nd *New Zealand Divisional Artillery*, pp. 58- 59 and Macky, N.L., Report on operations of 21 battalion in Greece (Prepared after return and circulated privately), p. 61. WAI 1 DA 54/10/19, NA.

⁷¹ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 478.

⁷² Extracts from 6 Mtn Div War Diary (Greece and Crete) Entry for 2230 hrs, Thu 17 Apr 41, p. 6. German Army Documents on the Greek Campaign. WAI 1 DA 438/21/4, NA.

Combat effectiveness factors identified in this battle analysis were the occupation of suitable terrain, along with its effects on observation and fields of fire. The Pinios Gorge was an ideal location for defence, given that it was a constricted route, bordered on one side by a fast flowing river, and on the other by steep hills. Had the Germans only attempted to force the gorge itself, or the commander been less demanding than Balck, the defence might have held out for longer. The gorge could be bypassed, however, and so would not have been able to remain in location permanently. This is what caused the Greeks to retire from Tempe (the Pinios Gorge) to Thermopylae in the face of the Persians in 480 B.C.⁷³ Further, the steep sided gorge prevented 21 Battalion troops firing into it from above, unless they were sited in the gorge itself. Many were sited, in Yeoman's case, so far back that they could observe the action but by being out of range could not employ their weapons. Long range visibility to Gonnos and the north bank enhanced the psychological impact on 21 Battalion, as they were conscious of German movement in large numbers to their flanks and rear.

Tactics, Doctrine and Training

21 Battalion was required to deny German movement towards Larisa through the Pinios Gorge. Unlike Platamon where Macky had very specific orders, this time, he had significant freedom over where he sited his companies. The weight of 21 Battalion's defence was given to the western exit of the south bank, rather than being sited forward at the eastern entry where, it might have been more easily bypassed. The defence was based on successive platoon positions sited in depth along the road leading through the gorge as can be seen in Map 4.1. Fighting positions were difficult to construct, principally due to the lack of digging tools and close proximity of Germans.⁷⁴ One platoon commander, who suggested that there was a better location from which it might be possible to

⁷³ 'The forgotten Anzacs', *Sunday Star Times*, 24 April 2011, p. C8. Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 463.

⁷⁴ Narrator's note: Para 28, Wards, Campaign Narrative- Campaign in Greece- Part IV, facing p. 473.

withdraw if required, was told by his company commander, 'There will be no withdrawal, COL Macky wants this to be another Gallipoli.'⁷⁵

A demolition crater, created well forward on the road at the eastern end of the gorge, was designed to block German tanks. The crater was guarded by 10 Platoon, whose tasks were to provide early warning of the approach of the enemy and then to prevent them from repairing the crater, or at least to slow repair work down and thereby add to the delay being imposed. Ideally, the platoon would have forced a company attack to be mounted against it, before the demolition was able to be cleared. As already stated however, tank fire from across the river forced this platoon away from the demolition prior to the arrival of the Germans. 10 Platoon was withdrawn without replacement, so there was no means to disrupt repairs to the crater. Instead of being a battle based around infantry defence of obstacles, those that were available (the river and demolition crater) were, effectively, given up.

Junior officers were sited in the gorge with their platoons, separated from their company commanders.⁷⁶ They had to make up their own minds about whether to fight, withdraw or surrender. Runners were totally inadequate for passing information or orders in this situation. Perhaps Macky thought that the Germans could not get tanks across the river, or that they might lead their advance with motorcycle infantry and reconnaissance troops as they had at Platamon. Anti-tank gun L1 had previously been sited forward with 10 Platoon at the demolition, but 'it was thought to be too far in front of the infantry and, with Brig Allen's permission, was brought back...' to the position towards the rear of 21 Battalion.⁷⁷ This was a huge blunder. The effect of 21 Battalion's dispositions was to disperse companies into platoon groups, without anti-tank support, that could be more easily defeated as the forward infantry platoons were at the mercy of the German tanks.

⁷⁵ O'Neill to I. McL. Wards, letter, 19th February 1953. Correspondence File, 21 Battalion [in Greece]. WAI 3/7, NA.

⁷⁶ O'Neill to I. McL. Wards, letter, 19th February 1953. Correspondence File, 21 Battalion [in Greece]. WAI 3/7, NA.

⁷⁷ Wards, Campaign Narrative- Campaign in Greece- Part IV, pp. 466- 467. R.C.B. Finlayson to I. McL. Wards, letter, 2nd March 1953. Correspondence File, 21 Battalion [in Greece]. WAI 3/7, NA.

Even though Balck had reduced the total forces committed to minimise their vulnerability to artillery fire within the confines of the gorge,⁷⁸ he still divided his forces into two separate combined arms teams- each with infantry and tanks. Even though the tanks could not get past the demolished railway tunnel on the north bank, they had had a significant impact by being able to direct sufficient accurate gun fire onto 10 Platoon, causing the crater demolition to be abandoned. The German infantry on that route did not have to clear any New Zealand troops from the north bank- as there were none- so they were 'freely using machine-guns to rake the spurs held by 21 Bn.'⁷⁹ Although they would have advanced on the northern route as a means of reaching Tempe, their real benefit was to fire onto the exposed New Zealanders across the river.

If the north bank was dominated by German infantry, the south bank was the domain of their panzers. They led the advance through the gorge, moving very slowly, which indicates that they anticipated the defence to have anti-tank guns (or even tanks), or would have mined the road. Infantry followed the tanks on foot. It was still a combined arms force, even with small numbers. There were no combined arms attacks required- the tanks merely bombarded the New Zealand positions and pushed through them.

21 Battalion achieved defence in depth at the Pinios Gorge, but sacrificed firepower forward to achieve this. Platoon sized positions, lacking support from the remainder of their company or the presence of effective anti-tank guns, were able to be defeated in detail by a much smaller force.⁸⁰ Basic errors, such as the failure to observe and defend key obstacles and to provide mutual support to forward elements, contributed to the defeat of the Battalion. 21 Battalion did not stop the dismounted motor cycle infantry advancing along the north bank. As a result, the Germans were able to render the New Zealand platoon positions ineffective by firing from the north bank, and thereby cause the anti-tank guns which were essential to preventing the German panzers exiting the gorge, to be lost. Neither side employed innovative tactics, although Balck's better use of

⁷⁸ Balck, 'Translation of taped conversation 13 April 1979', p. 11.

⁷⁹ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 474.

⁸⁰ Defeat in detail is sometimes incorrectly interpreted as complete destruction of a unit. The term actually refers to one side bringing superior force to bear on smaller portions of the other, in succession, thereby exposing themselves to less risk and possibly defeating a larger overall force than their own as a result.

combined arms ensured that either tanks, or infantry, could be employed in the terrain and situation that suited them and the tactical situation best.

21 Battalion was ineffective at the Pinios Gorge due to a range of tactical errors. These included failure to deny obstacles, faulty dispositions and inability to employ combined arms. Together, the crater and Pinios River provided potential to achieve significant delay. Because both areas were forward; their use was neglected (the river) or abandoned (the crater), with the result that the Germans were able to close on 21 Battalion with panzers, thereby achieving a capability overmatch. 21 Battalion's dispositions caused a significant amount of its potential firepower to be sited where it could not be employed, and this ensured that the platoons in the gorge were then defeated in detail. At no stage in the battle were 21 Battalion's infantry, artillery and anti-tank guns able to act as a combined arms team. The terrain denied effective artillery support within the gorge, at all stages of the battle. The siting of the anti-tank guns at the rear meant that they could not protect the forward infantry posts, and once the infantry had been defeated, bypassed or dispersed, left the surviving guns unprotected. A contributing factor was the lack of time and tools necessary to develop a deliberate defence. Sangars could not provide the level of protection to stand up to high volumes of small arms fire from the north bank, or tank fire from the front.

Command and Leadership

Retrograde operations require strong leadership to maintain combat capability and morale. In writing about command failures in Crete, W. E. Murphy recorded General Kippenberger's view that commanders in the Maleme area had 'answered all questions pessimistically, that they saw all dangers, real, imagined or possible' and that 'none made any effort to dictate or control events.'⁸¹ It is contended that similar criticisms could be levelled against Macky at the Pinios Gorge, given the events described in this chapter so far.

⁸¹ W.E. Murphy, "Crete- New Zealand Command Failures", *Comment*, 9(1), 1966, p. 30.

Kippenberger stated ‘... Macky was a prickly customer and I don’t think he rose to the occasion, but in the whole war no N.Z. battalion commander was placed in a more difficult position.’⁸² Macky himself admitted that he was not easy to work with: ‘The Australians were very difficult people to work with and I do not suppose that I am easy...’⁸³

By Macky’s own admission, it is clear that he recognised the dangers posed to his battalion’s rear by *6 Mountain Division*, even though the rest of 16 Brigade was sited behind for just this eventuality.⁸⁴ As Ardent du Picq noted, ‘Frederick [the Great] liked to say that three men behind the enemy were worth more than fifty in front of him, for moral effect.’⁸⁵ This threat clouded Macky’s judgement, and accounts for his decision for 21 Battalion to disperse.⁸⁶ It was this which ultimately caused the unit to become ineffective, for once it moved off the position, in mixed groups and without communications, it could not be reunited. Macky’s failure in command is even more pronounced when contrasted against Chilton’s performance during the same battle. Chilton stayed on with 2/2 Battalion and fought it out, even after his companies had withdrawn!

To exercise command, a commander must have the means and will to maintain situational awareness and transmit instructions. At the Pinios Gorge, Macky’s ability to command his companies and to keep 16 Brigade headquarters informed was tenuous, at best. Macky was forced to rely on a single field telephone link to 2/2 Battalion for passage of information- he had no direct line to Brigadier Allen. The battalion was totally reliant on runners to pass information and instructions as it had left its telephone cable at

⁸² Gavin Long to Brigadier F.O. Chilton, letter, 8 December 1954. AMW 93, Australian War Memorial Files, correspondence relating to the official history of Australia in the War of 1939- 1945. 50/2/23/322 Brig F.O. Chilton, DSO. Gavin Long quoted this passage from General Kippenberger.

⁸³ Macky to I. McL. Ward, letter, 9th February 1954. 21 Battalion Correspondence File 21 Bn Campaign in Greece, 21 Battalion [in Greece]. WAI 3/7, NA.

⁸⁴ This was reinforced by the call from Chilton requesting 21 Battalion’s carriers to counter a move which ‘threatened to cut us off and attack our rear.’ Macky, N.L., Report on operations of 21 Battalion in Greece (Prepared after return and circulated privately), p.12. WAI 1 DA 54/10/19, NA.

⁸⁵ Ardent du Picq, p. 114.

⁸⁶ That morning Lt- Col Macky had told his company commanders “that if completely cut off and overwhelmed, those left would make out in small parties to Volos.” Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 476.

Platamon in the haste to withdraw.⁸⁷ Macky's situational awareness was, therefore, limited to that which he could see for himself, and to what companies could pass to him by runner. There is no evidence that he established an observation post or tactical headquarters separate from the main Battalion headquarters, at a site where he could get a better view and feel for the battle. Like Platamon, he remained reactive. His Pinios Gorge headquarters had been in a 'prominent building', at Tempe initially, but before the battle, it was shifted to 'a deep ditch about 100 yards east of [the] road south of Tempe.'⁸⁸ Such a position was hardly a Tactical Headquarters from where he could maintain situational awareness and command his battalion in the defensive battle ahead. He ought to have been located on higher ground, where he could observe and influence the action. In reality, the companies and platoons were left to their own devices. Yeoman summed it up well: 'Communications from Bn to coys nil.'⁸⁹ As a result, sociological factors and fog of war were brought into prominence.

For Balck, this battle presented another river crossing challenge, such as he had overcome at the Meuse. Rather than accept the delay caused by the Pinios River, he took a chance by committing a tank to wading the Pinios, and it worked. In all, he lost two tanks during the crossing, but that did not deter him. He made a crucial decision- to commit tanks in an attempt to wade the Pinios. His operational experience provided him with the insight necessary to act decisively, and to risk a trial crossing.

It is useful to compare the different approaches of the two commanders to the welfare of their men. Of the battalion's performance Macky recorded:

They were done and had not had a hot meal for two days, but I felt confident that with a night's rest and a hot meal they would be fit again.⁹⁰

⁸⁷ Wards, (Narrator) Campaign Narrative- Campaign in Greece- Part IV, p. 466.

⁸⁸ Wards, Campaign Narrative- Campaign in Greece- Part IV, p. 466.

⁸⁹ A.A. Yeoman, Activities of 21 NZ Bn during Greek Campaign, Apr 1941, p. 2. WAI 1 DA 54/10/2, NA.

⁹⁰ Report on Operations 21 Battalion in Greece by Lt-Col N.L. Macky (Prepared after return to New Zealand and circulated privately), p. 10. WAI 1 DA 54/10/19, NA.

Macky's linking of food and rest to morale is correct, and no doubt both did some good. However, Balck's approach was to drive his men way beyond exhaustion, as has already been highlighted.⁹¹ Ultimately, it was Balck's hard-driving approach at Platamon, and the Pinios Gorge, that achieved results.

The Pinios Gorge highlights that the ability (or means) to command, situational awareness and location of the CO are significant factors affecting combat effectiveness of a unit. A CO's drive and willingness to take risks are also important factors affecting combat command. Macky appears to have been completely oblivious to the situation unfolding to his front; Balck's crossing of the Pinios, clearance of the crater obstacle, and even the appearance of tanks within his battalion's position. Given the paucity of telephone and wireless, good situational awareness could only have been maintained by Macky locating himself forward, and by greater use of runners to pass back information. Macky had a much greater awareness of, and focus on, the threat developing from the direction of Gonnos. By contrast, Balck's performance demonstrates the benefits of risk-taking and drive on combat effectiveness. A weaker commander than Balck may have waited longer at the river, perhaps for a bridge to be built, or committed infantry to the gorge action instead. Had he been less driven, the increased delay caused by waiting, would have increased the time available for the Allies to get beyond the Larisa bottleneck. Balck understood the higher intent of seizing the Larisa chokepoint and hence the necessity for haste.

Sociological Factors

The impression that German troops might cut the battalion off had a negative impact on the unit, even before the battle began. The men were tired, and short of weapons and ammunition after Platamon:

⁹¹ German soldiers demanded food from 21 Battalion PWs captured at Platamon. The Germans had not eaten for 24 hours. Wards, Campaign Narrative- Campaign in Greece- Part IV, Narrators note to para 47, p. 313.

During the day we could see that the Germans were infiltrating along and down opposite ridge on other side of river... we were dog tired and had inadequate arms and ammunition.⁹²

Macky suggested later that events at the Pinios Gorge were affected by Platamon and morale was low. This was no doubt contributed to by the men's fatigue. It may also have been due to an element of fear, given that the Germans were known to be operating in close proximity, and were observed moving from a direction where they could potentially cut the battalion off. By Macky's own admission:

These added to the exhausted nature of the troops and the absence of command made it a confused show. No heart could be put into tired troops when they could see the enemy cutting off their communications.⁹³

Macky's role as CO was to put heart into his "tired troops." However, he was more concerned about the potential for his battalion to be cut off at the Pinios Gorge, and dealing with that, than attending to the morale of his troops. Instead of inspiring his men ahead of the battle, he made arrangements with company commanders that the battalion would head for the hills. Moreover, his failure to then organise the battalion to withdraw as a formed body, ultimately led to the fragmentation of the unit, and it therefore being rendered ineffective for further combat. The unit was, as a result, not able to contribute during the remainder of the Greek campaign, nor play a significant part at Crete.⁹⁴ The view of Australians involved in the overall battle was that 21 Battalion 'had tended to panic and had not held on long enough.'⁹⁵ Brigadier Sydney Rowell, Brigadier General Staff to General Thomas Blamey, commanding Anzac forces in Greece, decided that CO

⁹² E.G. Smith to J.F. Cody, letter, undated. Correspondence concerning 21 Battalion's part in the Greek campaign. WAI 1 DA 54/10/20. NA.

⁹³ Macky to L. McL Wards, letter, dated 9th February 1954. 21 Battalion [in Greece]. WA II 3/7, NA. Comments made in the concluding paragraph of Macky's notes on the draft.

⁹⁴ Laurie Barber and John Tonkin-Covell, *Freyberg: Churchill's Salamander*, Auckland: Century Hutchinson New Zealand Ltd., 1989, p. 12. The author's note that 21 Battalion was at half strength, whereas the battalion assigned to defend the Maleme airfield on Crete was full strength. 21 Battalion's lack of numbers would have been a factor in it being limited to a supporting role.

⁹⁵ D.M. Horner, *High Command: Australia and Allied Strategy 1939- 1945*, Canberra: George Allen & Unwin Australia Pty. Ltd., 1982, p. 98.

21 Battalion was in a 'blue funk'⁹⁶ - had lost his nerve - hence the decision to send Clowes to investigate. Kevin Baker suggested that 21 Battalion platoons departed in a disorganised stream past 2/2 Australian battalion:

Platoon after platoon started to withdraw and the battalion commenced to fall back in a disorderly fashion. Cullen, Chilton and others endeavoured to stop and collect its members.⁹⁷

Overall, the Pinios Gorge was marked by a failure in Macky's leadership at a time when it was needed most. He did, indeed, lose his nerve. Balck and Chilton provide a sharp contrast, although to be fair, both had recent combat experience immediately prior to the Greek campaign.

Factors contributing to 21 Battalion's ineffectiveness at the Pinios Gorge were fatigue and fear. These two factors, in conjunction with the enemy fire from the north, the perceived threat posed by *6 Mountain Division* and the appearance of tanks, contributed to a diminished will to fight by 21 Battalion from what they had recently displayed at Platamon.

Fog of War

The fog of war played a part at Platamon. 21 Battalion did not know its role in relation to the overall Anzac Division plan. Balck did not know *6 Mountain Division's* movements and plans either, only that the goal was Larisa. Neither Balck nor Macky were aware of each others dispositions and plans. Nevertheless, Balck's combined arms groupings meant that his forces were best placed to deal with whatever situation arose on each of the two axes his forces advanced on. In the end, the separate operations of *6 Mountain Division* and *Battlegroup 2* complimented each other, albeit serendipitously, for they both had Tempe as their initial and Larisa as their subsequent objectives, and both did the utmost with the resources available to get their forces there.

⁹⁶ Horner, p. 87.

⁹⁷ Baker, pp. 67-68.

Macky's own fog of war was compounded by the lack of communication. His companies were themselves split up, with platoons left to their own devices.⁹⁸ This meant that Macky was unable to command his battalion during the battle, so the unit was not fighting as a cohesive organisation to a central plan.

Luck played its part in the battle. The first piece of "luck" was finding the island that assisted in the crossing. The second was the successful wading of tanks across the Pinios River, which led to his forces clearing the gorge for little cost. Although both actions involved luck, it is contended that Balck made his own through his willingness to take risks, and thus discovering possibilities, that the cautious commanders might have overlooked. Balck was, of course, assisted at the Pinios, in that the river crossing was not contested, unlike the Meuse.

Factors identified at Pinios Gorge include luck (based on risk-taking by Balck), and the negative impact on combat effectiveness caused by the inability to pass information or coordinate between separate elements of 21 Battalion.

CONCLUSION

21 Battalion was not combat effective at the Pinios Gorge. It had occupied a significant natural obstacle, been reinforced by anti-tank guns and artillery since Platamon, and was established within the brigade-strength Allen Force. Yet, it still failed to achieve its mission. The terrain ought to have enhanced 21 Battalion's defence, however the potential strength of the gorge was wasted by faulty tactics: abandonment of critical obstacles, failure to employ combined arms correctly, and dispositions based on weakly held and isolated infantry positions with two whole companies deployed where they could not influence the battle. This chapter illustrates many of the combat effectiveness factors, which, by their absence, led to the 21 Battalion being ineffective and *Battlegroup*

⁹⁸ See final sentence of paragraph with heading 'General' on p. 2. O'Neill to I. McL. Ward, letter, 19th February 1953, p. 4. 21 Battalion [in Greece]. WAI 3/7, NA.

2 ultimately reaching Larisa. It also illustrates those factors that led to Balck's troops being combat effective. Combat effectiveness factors identified by the analysis of the Pinios Gorge are shown in Table 4.4.

Category	Combat Effectiveness factors identified
Operational Setting	<ul style="list-style-type: none"> • Decision on where to fight • Allocation of sufficient resources • Level of headquarters support and oversight • Failure in passage of information • Inexperience of headquarters staff
Force Strength	<ul style="list-style-type: none"> • Bayonet strength • Posture (led to defeat in detail) • Ability to generate sufficient organic firepower • Capability overmatch
Battlefield Effects	<ul style="list-style-type: none"> • Occupation of suitable terrain • Terrain effects on observation and fields of fire
Tactics, Doctrine and Training	<ul style="list-style-type: none"> • Insufficient time and resources to prepare • Faulty dispositions • Failure to deny obstacles • Inability to employ combined arms
Command and Leadership	<ul style="list-style-type: none"> • Drive of the commander (Balck) • Risk taking (by Balck) • Exercise of forward command • Ability to exercise command • Situational awareness
Sociological	<ul style="list-style-type: none"> • Fatigue • Fear • Will to fight
Fog of War	<ul style="list-style-type: none"> • Risk taking (luck) • Communications failure (fog of war) • Inability to coordinate between elements (friction)

Table 4.4: Combat effectiveness factors identified at Pinios Gorge

The Germans only had to apply a small proportion of the total combat power available to *Battlegroup 2* at the Pinios Gorge, but it was decisive, and led to them being combat effective. Although the numbers they employed were small, their *relative* strength was

significant. German panzers proved impervious to infantrymen who did not effectively possess anti-tank weapons, or did not make best use of terrain that could physically block them. The tanks proved to be a capability overmatch for 21 Battalion. Any limitations the Germans may have had in generating supporting fire from the front were completely negated by high volumes of small arms fire that they were able to generate from across the river, without significant interference. They literally shot the New Zealanders out of their inadequate positions, so they were forced to withdraw uphill and away from the gorge, to escape the effects of enemy fire.

The terrain and poor New Zealand dispositions (including failure to cover the crater obstacle and deploy anti-tank guns forward) meant relative strengths were tilted greatly in the favour of the Germans. The application of German doctrine and the independent action of General Schoerner's *6 Mountain Division* had a psychological effect on the men of 21 Battalion, as well as making them physically less able to prepare their defences within the gorge. The novice New Zealanders were reluctant to patrol aggressively and take the battle to the Germans.

As 21 Battalion had acquitted itself well at Platamon against a considerably stronger force, it is necessary to determine why they performed so poorly at Pinios Gorge. The classic defence at Platamon, astride the enemy approach, where 21 Battalion had had reasonable time to prepare adequate fighting trenches had been within the capability of this novice unit. The Pinios Gorge was a more challenging tactical problem, even though the gorge gave the illusion of security. At the Pinios Gorge, Macky made a fundamental error by penny-packeting his infantry in isolated platoon positions that were easily defeated. He also, fatally, withdrew the platoon guarding the demolition when the going got tough. He was passive, overly concerned about the threat posed by *6 Mountain Division* to his flank and rear, and he failed to make any effort to maintain contact with his companies. Macky's approach to command and defence was weak and simplistic- he failed to appreciate how the Germans could make use of the north bank of the river and the effect this would have on his defences. His inexperience showed. In addition, he had been commanded by a range of headquarters, none of whom kept him in the picture. As a

result, his plan to head for the hills rather than to re-group behind 2/2 Battalion caused the 21 Battalion to be fragmented and so it played no further part in Greece, its men mostly becoming Prisoners of War or escaping in mixed groups on foot (and by boat eventually) to reappear in Crete or Egypt.

Continuing themes between Platamon and Pinios Gorge are the dominance of tanks over unprotected infantry and the vulnerability of the latter to small arms fire when in the open or inadequate sangar type defences; that is, when terrain does not afford adequate cover or concealment. In both battles, the psychological impact of an enveloping force has been a factor which impacted on the commander and forced safety valve reactions to withdraw. Macky might have heeded Balck's advice, that 'In war you never loosen your grip as it is possibly going equally badly for the enemy as it is for you.'⁹⁹

⁹⁹ Balck, *Ordnung im Chaos*, p. 316.

CHAPTER 5

BIR GHIRBA: 22 NOVEMBER 1941

'Terrain, which can be resolved into a combination of the geographical surroundings and the nature of the ground, could, strictly speaking, be of no influence at all on an engagement fought over a flat, uncultivated plain.'
- von Clausewitz, *On War*¹

'Yeoman... I sent Ferguson in to eliminate what appears to be a machine-gun outpost. He seems to have got into trouble... destroy the outpost, and get Ferguson back...'
- CO 21 Battalion's instructions to Captain Yeoman²

After Platamon, 21 Battalion was ineffective and played no further part in the Greek campaign. Although many men from 21 Battalion were captured by the Germans, quite a few managed to escape and regroup in time for the defence of Crete. After Crete, the Division returned to Egypt where its units were brought up to strength with reinforcements from New Zealand. 21 Battalion was commanded by Lieutenant Colonel John Allen at Bir Ghirba. He had been given command of the battalion on Crete, as Macky was still in the process of escaping from Greece. Although Macky arrived on Crete ahead of the battle, he was not re-appointed by General Freyberg to the command of 21 Battalion.³ Following Crete, the New Zealand Division returned to North Africa.

This chapter analyses 21 Battalion's actions at Bir Ghirba, in North Africa, where it attempted to capture a defended post occupied by the headquarters of the Italian 55 *Savona Division*, responsible for a sector of the Axis frontier posts. The ground surrounding Bir Ghirba was flat and open, like a sand table. Contrary to von Clausewitz's assertion that a 'flat, uncultivated plain' might not have any influence on tactics, in this case, the ground exposed 21 Battalion to intensive small arms fire which rendered it

¹ von Clausewitz, *On War*, p. 165.

² Yeoman, *The Long Road to Freedom*, p. 78.

³ Macky made it to Crete on 3 May. When addressing 21 Battalion on 17 May, before the battle for Crete started, General Freyberg was scathing about 21 Battalion's defence at Pinios Gorge (the official history refers to Tempe), so he no doubt held Macky responsible and therefore did not re-appoint him to battalion command. Cody, *21 Battalion*, pp. 81 and 83.

ineffective. This attack demonstrates the effect of terrain and firepower on combat effectiveness. It also demonstrates a weakness in planning and executing offensive operations by 21 Battalion, and its higher headquarters. 21 Battalion was still “green”, it had yet to acquire a good standard of combat effectiveness.

OVERVIEW OF THE BATTLE

21 Battalion’s attack at Bir Ghirba was undertaken during the Eighth Army’s Operation *Crusader*, which had begun on 18 November 1941. The plan for *Crusader* was to bypass the German and Italian defensive line along the frontier between Egypt and Libya and to bring the panzers to battle in an area well clear of their defensive positions and minefields.⁴ The line of defensive positions can be seen as the row of goose-eggs in Map 5.1, running from Halfaya in the east, to S.Omar in the west. 21 Battalion’s objective, Bir Ghirba, is shown slightly rearwards of the line. The line was to be bypassed with a corps-sized left hook through the desert. It was intended to cross the frontier into Libya well south of the Axis defences, advancing deep behind their lines, almost to Tobruk. Map 5.1 clearly shows the New Zealanders’ route around and behind the defences.

For its part, 21 Battalion was initially instructed to clear Hafid Ridge. It had been given no intelligence on which to base its operation. Patrols were therefore despatched towards the ridge from first light on 22 November, in an effort to gain some information prior to launching the operation. One of the patrols reported that the ridge was not occupied but that ‘there was a concentration of transport some distance to the south.’⁵ Allen ordered a fighting patrol under command of Captain Carl Ferguson to investigate the report, as the transport indicated the presence of a force which posed a threat to the flank of any operation mounted against Hafid Ridge.⁶

⁴ Bisheshwar Prasad (G. ed.), *Official History of The Indian Armed Forces in the Second World War 1939-45, Campaigns in the Western Theatre: The North African Campaign 1940-43*, Calcutta: Combined Inter-Services Historical Section (India & Pakistan), 1956, pp. 210- 212 and pp. 216- 217.

⁵ Cody, *21 Battalion*, p. 115.

⁶ Entry for 22 Nov. N.B Gray, Narrative 5 INF BDE Gp Crusader Campaign Nov- Dec 1941, KMARL, no page number.

Before the fighting patrol departed, however, Allen returned from 5 Brigade headquarters with new orders; 21 Battalion was to attack Bir Ghirba, a defended location a short distance to the south of Hafid Ridge. The battalion operation was designed to be a diversion supporting 4 Indian Division operations against the Omar forts approximately three to five kilometres to the southwest of Bir Ghirba.⁷ The CO appears to have overlooked this aspect, given how events unfolded. Ferguson's fighting patrol was to proceed, but as a spearhead for the attack on Bir Ghirba itself.

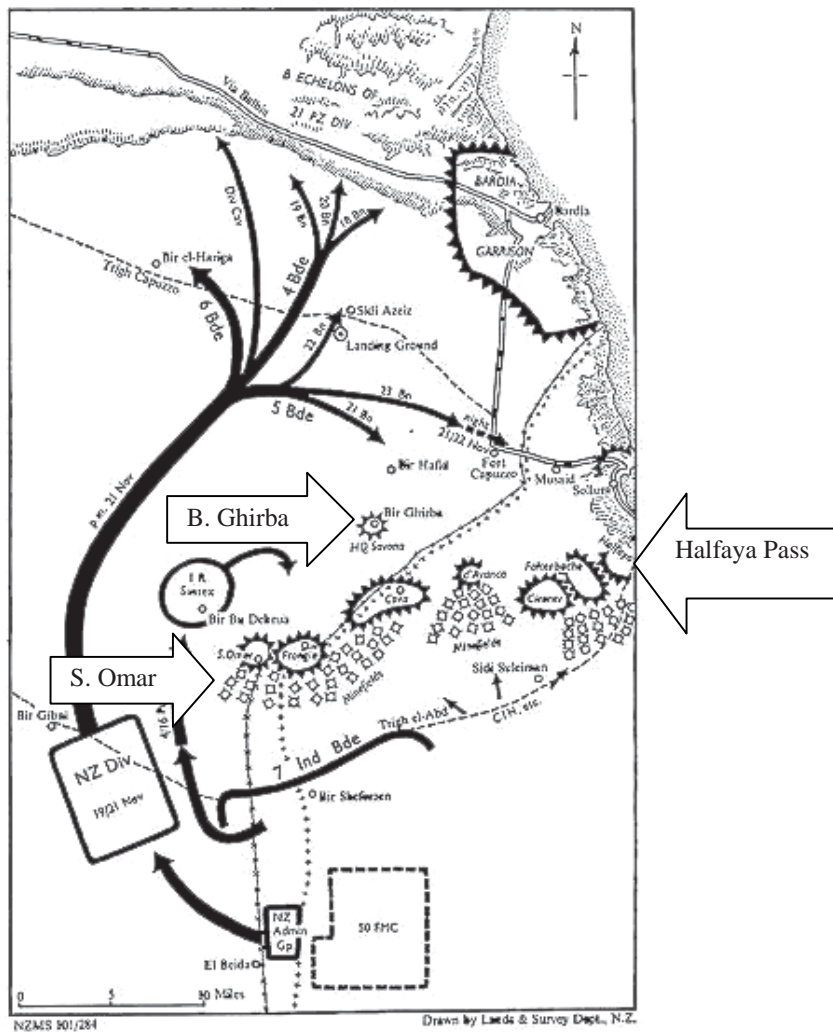
THE COMBATANTS

Italian

Bir Ghirba contained the headquarters of the fortified Axis frontier defences stretching from Bardia through Sollum, the Halfaya Pass and a further 40 kilometres into the desert to the south. Since late June 1941, defence of the southern- most positions of the line had been the responsibility of the Italian non- motorised *55 Savona Infantry Division*, commanded by Major General Fedele De Giorgis.⁸ The division's troops, stiffened by Germans in some cases, were responsible for the Libyan Omar, Sidi Omar and Frangia defensive positions in the south and south west sector of the frontier defences. Bir Ghirba, in rear of the more strongly defended forward strongpoints, was occupied by the headquarters of *55 Savona Division*, and some protection troops.

⁷ Entries for 22 Nov. N.B. Gray, Narrative 5 INF BDE Gp Crusader Campaign Nov- Dec 1941, KMARL, no page number. See also Note 1 to Section 40 of W.E. Murphy, NZ Divisional Campaign Narrative 2nd Libyan Campaign Nov- Dec 1941, Vol 4 Chap 19, 22 November 1941, KMARL, p. 448.

⁸ Rainer Kriebel, Colonel (Gudmundsson B.I., ed.), *Inside the Afrika Korps: The Crusader Battles, 1941-1942*, London: Greenhill Books, 1999, p. 35.



THE NEW ZEALAND DIVISION ADVANCES, AFTERNOON AND EVENING OF
21 NOVEMBER

Map 5.1: New Zealand Division advance 21 November 1941⁹

It is difficult to establish the strength of the forces at Bir Ghirba exactly, as reports vary. The New Zealand campaign history suggested that the headquarters had 600 men to defend it, which is roughly equivalent to the strength of a battalion.¹⁰ The defenders at Bir Ghirba consisted of:¹¹

⁹ W.E. Murphy, *The Relief of Tobruk*, Wellington: War History Branch, Department of Internal Affairs, 1961, p. 116.

¹⁰ Murphy, *The Relief of Tobruk*, p. 124.

¹¹ Jack Greene and Alessandro Massignani, *Rommel's North African Campaign September 1940-November 1942*, Cambridge, MA: Da capo Press Books, 1994, p. 131.

Headquarters 55 Savona Division

One company of Arditi¹²

One L tank company

One engineer company

one section of 100/17mm guns

Two captured Matilda tanks

Italian troops are characterised as having inferior weapons, shortages of transport and radios, and the lack of strong leadership.¹³ One might consider them weak, after all, Australian infantry had easily defeated Italian defenders at Bardia in January 1941.¹⁴ The main Italian armoured fighting vehicles at Bir Ghirba were the CV33 tankette, and the M11/39 and M13 medium tanks. The CV33 and M11/39 had ‘proved themselves virtually useless’ against the Allies during Operation *Battleaxe* in June 1941, whereas the M13 tank though marginally better was mechanically unsound.¹⁵ It is possible that the New Zealanders considered the Italians weak, and therefore did not take them seriously in this operation.

21 Battalion

21 Battalion was assigned a number of additional assets for its task, although no tanks. Its composition for the attack at Bir Ghirba was as follows:

21 Battalion	(Lieutenant Colonel J.M. Allen)
A Company	(Major Trousdale)
B Company	(Captain Yeoman)
C Company, less 15 Platoon	(Captain Tongue)
Captain Ferguson’s fighting patrol:	

¹² Arditi were handpicked men from existing Italian units. Greene and Massignani, p. 68.

¹³ Phillip Jowett, *The Italian Army 1940- 45 (2): Africa 1940- 43*, Oxford: Osprey Publishing Limited, 2001, p. 8. Grey, p. 152. Grey did acknowledge, however, that some Italian forces, notably artillery and machine gunners fought well.

¹⁴ Craig Stockings, ‘Beyond the Anzac Myth’ pp. 33- 39.

¹⁵ Jowett, p. 12.

15 Platoon C Company (Second Lieutenant MacPherson)
Section, Bren carriers
Forward Observation Officer
Section of 3 inch Mortars
Section of Medium Machineguns, 27 (Machinegun) Battalion
Mortar Platoon
Carrier Platoon

In support:

47 Battery, 5 Field Regiment
D Troop, 28 Battery, 5 Field Regiment (from afternoon 22 November)
Platoon, Medium Machineguns
Troop, 42 Light Anti- Aircraft Battery
Detachment, 7 Field Company (Engineers)

SUMMARY OF KEY EVENTS

Allen was ordered to attack Bir Ghirba, and ‘definitely to contain it.’¹⁶ If the position could not be captured, then the defenders were to be prevented from leaving it, either to escape, or to interfere with the Indian Division operations to the south. Although the New Zealand Division knew a great deal about the enemy manning the frontier posts, 21 Battalion knew very little about the Bir Ghirba position, with the exception, possibly, that it was the headquarters of the *Savona Division*.¹⁷ Geoffrey Cox, the division’s Intelligence Officer recalled that prior to Operation *Crusader*:

¹⁶ War Diary 21 Battalion 1 November - 31 December 1941, entry for Nov 22, 1941. WAI 1 DA 54/1/22, NA.

¹⁷ Entry for 22 Nov 1941, 21 Battalion Chronology. WAI 1 DA 54/11/1 (17179 Pt 1), NA.

We were provided with remarkably full information about the enemy. Much of it came from documents, prisoners or material captured during Battleaxe... Savona Division, held the line of fortified positions...¹⁸

Cox overstated the detail known, or certainly the level of detail passed down to subordinate commands. This was inexcusable, and it led to limited planning and poor execution at unit level, thereby prejudicing 21 Battalion's chance to be combat effective, before it even started. 21 Battalion's war diary and Freyberg's diary both implied that the *identity* of the defenders at Bir Ghirba was known before the battle commenced.¹⁹

Yeoman, who was a company commander during the battle, stated that the *strength* of the position was only known afterwards, 'It was only later that we were to discover that one New Zealand platoon and one New Zealand company had been audaciously fronting up to the headquarters of the Italian *Savona division*...' ²⁰ The question of the identity of the defenders is moot- the reality is that it was a defended strongpoint. 21 Battalion knew nothing of the defensive layout, or strength of the defence, prior to being committed to the attack. Reconnaissance at battalion and operational level was a weakness. Battle in the desert, with movement over great distances, did not suit the infantry foot patrol type of reconnaissance the New Zealand battalions were organised for.

There is no surviving record of the instructions given to the company commanders by Lieutenant Colonel Allen. The bottom left corner of Map 5.2 shows 21 Battalion's attack axes and timings. The campaign narrative offers a summary of the battalion plan, shown below, modified slightly, for clarity:²¹

C Coy [less 15 Pl who were assigned to Ferguson's patrol] with a section of carriers and another of MMGs, was to secure Hafid Ridge.

¹⁸ Geoffrey Cox, *A Tale of Two Battles: A Personal Memoir of Crete and the Western Desert*, London: William Kimber & Co. Ltd., 1987, pp. 132- 133.

¹⁹ Entry for 16 Nov 1941. WAI 8/44, GOC's Diary 3 Sep 41- 2 Sep 42, NA.

²⁰ Yeoman, *The Long Road to Freedom*, p. 80.

²¹ W.E. Murphy, NZ Divisional Campaign Narrative 2nd Libyan Campaign Nov- Dec 1941, Vol 4 Chap 19, 22 November 1941, KMARL, p. 443.

A patrol, led by Captain Carl Ferguson was to capture an outpost of the Ghirba position which had been reported by a previous 21 Battalion patrol and act as a vanguard to the main attack.

D Coy was left in Gabr el Meduar guarding the vehicle park.

The remainder of the battalion (A and B Companies) and supporting arms were to mount the attack on Bir Ghirba from a point somewhere to the north-west.

21 Battalion was therefore going into action against a position of unknown strength with just two rifle companies. C Company occupied Hafid Ridge. It transpired the ridge was not occupied by the enemy after all. The only casualties sustained by the company were two soldiers wounded by enemy artillery and mortar fire originating from Bir Ghirba. This should have been a combat indicator that Bir Ghirba contained more than just a headquarters; but this seems to have been overlooked, and therefore indicates a lack of awareness or combat experience.

Having occupied Hafid Ridge, Ferguson observed the “outpost” (his objective) with his binoculars. He saw it was ‘well wired and mined and not as small as advised’,²² signifying the presence of a much stronger force, quite probably beyond the capacity of his patrol alone to conquer. It was, in fact, Bir Ghirba, not just an outpost. This was not registered by him or CO 21 Battalion initially. At 0930 hours on 22 November, Ferguson commenced his attack from Hafid Ridge onto the “transport”. As a precautionary measure, Ferguson sent a Bren carrier section in advance of the infantry, in order to draw the enemy’s fire, so that he could identify the extent of the defences. The enemy response to the advance of the carriers was to engage them with mortars, which revealed nothing about the defensive layout, but caused Ferguson’s infantry trailing behind the carriers to dismount from their trucks, slowing the momentum of the attack considerably. 15 Platoon’s movement is marked on Map 5.2 as “15 Pl, 9.30 a.m.”

²² C.A. Ferguson to J.F. Cody, letter, 1 April 1951, p. 1. Correspondence collected by J.F. Cody concerning the part of 21 Battalion in 2 Libyan Campaign. WAI 1 DA 54/10/23, NA. Murphy, Campaign Narrative - 2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, p. 444.

It is worth relating the action of Second Lieutenant MacPherson's platoon. Having dismounted, his platoon continued on foot, still under mortar fire. They advanced with sections spread out in extended line, in a two section up formation, until the defenders' machineguns opened fire. The platoon then went to ground, an instinctive reaction to effective fire when moving in the open, without cover or concealment. From the rear, Ferguson shouted at MacPherson to keep moving forward. MacPherson did this by moving one section at a time, in short bounds. Every move drew heavy small arms fire. Eventually MacPherson could not get his platoon further forward for by then he had sustained a considerable number of casualties, including many of his NCOs. 'By the time [the platoon] reached within 150 yards of the wire, 10- 15 men had been hit, and the platoon was finally pinned down with only 18 or 20 unwounded men left.'²³ MacPherson sent a runner back to Ferguson, who was about 100 yards behind the platoon, with a message that he could not move any further forward without additional support. The platoon had not even reached the barbed wire before the attack stalled.²⁴

The attack had gone in without covering fire. Later, MacPherson was scathing about the attitude of Major Trousdale, who as senior Company Commander was acting as CO while Allen was at Brigade HQ, and who ought to have ensured the patrol was provided with adequate fire support. Ferguson did not arrange fire support either, an indication of inexperience. MacPherson wrote that the 3 inch mortar he had been assigned was missing critical parts, so could not fire. This was only discovered as the mortar attempted to come into action. When finally assembled, the mortar was 'badly handled and ineffectively used.'²⁵ Even the platoon's integral machinegun supporting fire was problematic. At one point, all three of the platoon's Bren guns had jammed, caused by sand. Overall, these problems indicate that 21 Battalion had not acquired sufficient desert combat experience to appreciate the need to check all equipment and weapons as part of preparation for

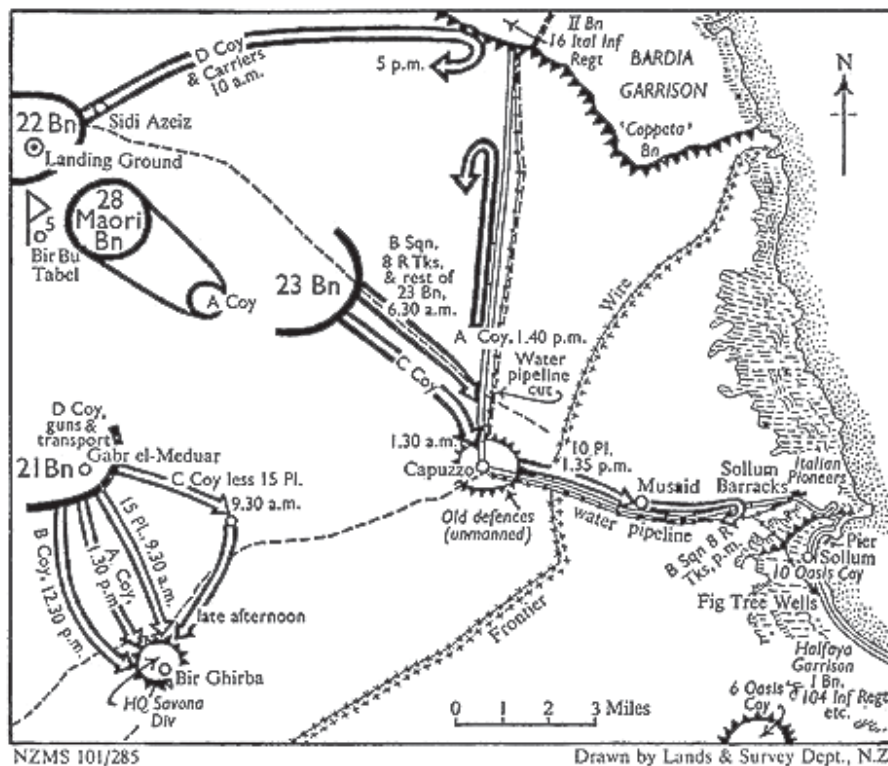
²³ Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, p. 444.

²⁴ Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, Note 1 to p. 444.

²⁵ 2/Lt E.G. MacPherson to J.F. Cody, letter, undated, pp. 1 and 3. 'Account of Crusader Campaign', Correspondence collected by J.F. Cody concerning the part of 21 Battalion in 2 Libyan Campaign. WAIL 1 DA 54/10/23, NA.

battle, or to conduct effective training, including live firing, in the use of its support weapons.

MacPherson stated that once his platoon was pinned down, Ferguson began acting irrationally. Ferguson issued impossible instructions, such as an order to capture a machinegun 900 yards away -which was covered 'by at least 6 others'- and to despatch a section to silence a particular gun *within* the enemy position.²⁶



OPERATIONS OF 5 BRIGADE, 22 NOVEMBER

Map 5.2: Attack onto Bir Ghirba 22 November 1941²⁷

When notified of the situation by Ferguson via the artillery Forward Observer's wireless, Allen went forward in a Bren carrier to investigate.²⁸ He still did not fully appreciate the

²⁶ 2/Lt E.G. MacPherson to J.F. Cody, letter, undated, p. 4. 'Account of Crusader Campaign', Correspondence collected by J.F. Cody concerning the part of 21 Battalion in 2 Libyan Campaign. WAIL 1 DA 54/10/23, NA.

²⁷ Murphy, *The Relief of Tobruk*, p. 118.

situation, for his next instruction was to instruct Captain Allan Yeoman, OC B Company, to 'take your company in, destroy the outpost, and get Ferguson back out of trouble.'²⁹ Clearly, he thought this task, or mission, was within the capacity of B Company. The company approached the objective in trucks at approximately 1200 hours, its movement covered by a heavy squall. The company dismounted 600 metres short of the barbed wire, then continued forward on foot, still under cover of the rain. When the rain cleared, the attackers could identify the enemy location clearly, and the enemy could see and engage the company. Yeoman was able to get his company forward a further 150- 200 metres, under fire, but then, like MacPherson, the company became pinned down by the volume of enemy fire, sustaining heavy casualties. Yeoman ended up to the right (west) of Ferguson's patrol, even though he did not know where Ferguson was at the time. It was now approximately 1230 hours.

47 Battery had commenced firing from about 1200 hours, and continued throughout the afternoon and into the evening.³⁰ Artillery fire had limited effect overall. It did cause the defenders to pull down the observation tower they had been using to direct their own artillery and mortars, an ammunition dump within the position to catch fire, and it destroyed at least one tank.³¹ The New Zealand artillery's official history does not explain the delay in commencing fire. It is possible that the guns were not deployed before MacPherson's assault commenced because they were originally ordered to move behind A and B Companies in readiness for the 'main attack' by the remainder of the battalion once the 'outpost' area had been secured.³² It took some time, therefore, for the artillery to come into action and commence firing. The main reason that the fire had any

²⁸ Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, note (1) to p. 445.

²⁹ Yeoman, *The Long Road to Freedom*, p. 78.

³⁰ Gray, N.B., Narrative 5 INF BDE Gp Crusader Campaign Nov- Dec 1941, KMARL. No page number. Entry for 22 Nov 1941. 21 Battalion Chronology. WAI 1 DA 54/11/1 (17179 Pt 1), NA. Murphy, 2nd *New Zealand Divisional Artillery*, p. 193.

³¹ Cody, *21 Battalion*, p. 119. Yeoman, *The Long Road to Freedom*, p. 80.

³² W.E. Murphy, NZ Divisional Campaign Narrative 2nd Libyan Campaign Nov- Dec 1941, Vol 4 Chap 19, 22 November 1941, KMARL, p. 444.

effect at all was because the infantry maintained communications to the gun-line, and actually directed the fire at times.³³

At 1330 hours, Allen ordered A Company to join the attack. The battalion was now fully committed. A Company's approach took them to the right of Ferguson and MacPherson, into the gap between Ferguson and B Company, as can be seen in Map 5.2. The rain had stopped by then. The company remained mounted until they were almost level with B Company, before debussing from their truck approximately 300 metres forward of the wire, roughly 500 metres short of the enemy.³⁴ As an indication of how disjointed the operation had become, the company's deployment was not supported by artillery covering fire, as the guns were firing on targets in depth rather than suppressing the enemy immediately forward of A Company. Moreover, because the company had remained mounted for too long, it sustained many casualties, for by then the enemy was firing at the attackers with its anti-tank guns as well as small arms and mortars. Once A Company dismounted it was unable to advance further. The destruction of all ten of the company's vehicles, and the pinning down of A Company, illustrates the weight and accuracy of the defenders' fire.

At 1700 hours, C Company (less the platoon already engaged) was withdrawn from Hafid Ridge and committed to the attack. The company moved by vehicle, but as the experience of A Company had been noted, C Company took a circuitous route and the troops dismounted in a depression, out of enemy observation and direct fire. C Company suffered less casualties as a result. Enemy visibility was reduced by that time anyway, as it was becoming dark. Despite the use of a circuitous route and the limited visibility, C Company's attack was still no more successful than the others. The company had joined the attack in rear of its own 15 Platoon, and there were some anxious moments as it fired over head of them.³⁵

³³ Comments by J.A. Fullerton on NZA History: Crusader Campaign November 1941 to February 1942, paragraph 18. WAI 11/4, NA.

³⁴ Cody, *21 Battalion*, p. 117.

³⁵ Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, p. 447.

The situation at last light was that the battalion had become decisively engaged. All three rifle companies were committed to the attack and were all pinned down outside the wire, roughly in an arc as is evident in Map 5.2.³⁶ Fading light made the enemy's tracer more visible, and from this it was estimated that the defenders had at least thirty machineguns covering the front forward of A Company.³⁷ It was definitely a well defended position, even if only a headquarters location.

The New Zealand artillery was firing, but could not provide sufficient suppression or destruction, as the objective was too large for one battery to cover effectively, even with the additional troop of guns allocated. A barrage fired by the artillery at 1900 hours as a means to create momentum for the attack in the oncoming dark, did not have the desired result, as enemy defensive small arms fire remained too strong.³⁸ The medium machineguns had taken some time to get forward and once they were in a position to support the attack, their fire was obstructed because C Company was forward of them. The lack of elevation made overhead fire risky, if not impossible.³⁹ Companies started running low on ammunition as little could be brought forward in daylight due to enemy observation and fire. The attack was an uncoordinated shambles. There was no coordination between artillery, medium machineguns and the troops on the ground. The CO ought to have been coordinating it all.

After last light, Allen held a conference with his Company Commanders to determine what to do. He suggested a dawn attack, but then agreed to a recommendation from Captain Yeoman that the attack should be mounted again, but two hours before first light next morning.⁴⁰ At approximately 0030 hours on 23 November, however, an order was finally received from brigade headquarters calling off the attack. The battalion withdrew under cover of darkness. The unit was back in Bagr el-Meduar by 0300 hours on 23 November, where their transport, and D Company, had been waiting all day.

³⁶ Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, p. 447.

³⁷ Cody, *21 Battalion*, p. 119.

³⁸ Murphy, *2nd New Zealand Divisional Artillery*, pp. 192- 193.

³⁹ Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, p. 448.

⁴⁰ Yeoman, *The Long Road to Freedom*, pp. 81- 82.

OUTCOME

Mission Accomplishment

Although 21 Battalion secured Hafid Ridge, it did not capture Bir Ghirba. It failed to complete the Bir Ghirba mission, and what little damage was inflicted on the enemy had mainly been achieved by the artillery.⁴¹ While the enemy did not breakout and go to the aid of the southern forts, it is argued they could have, especially as 21 Battalion attacked from the northwest and had not positioned blocking forces between Bir Ghirba and the Omar forts to prevent such a movement. The unit official history stated at the conclusion of its account of the battle that the battalion:

had been given an impossible job. In fact the battalion was trying to capture the headquarters of the Italian 55 Savona Division, defended by tanks, artillery, and machineguns firing from concrete pillboxes.⁴²

21 Battalion could not have captured Bir Ghirba without considerable additional resources. MacPherson's assessment (after the event) was that the objective was a battalion level task at the very least, even if supported by tanks.⁴³ He was correct.

Casualties Sustained

21 Battalion sustained a total of 81 casualties at Bir Ghirba. Yeoman's B Company had 9 men killed and 27 wounded, '... one third of the total who set off...' on the attack.⁴⁴ These were heavy casualties for no result. 21 Battalion's adjutant recalled that General Freyberg was 'not enthusiastic' when he heard about the number of casualties sustained and the

⁴¹ Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, p. 450.

⁴² Cody, *21 Battalion*, p. 118.

⁴³ Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, Note 1 p. 444.

⁴⁴ Yeoman, *The Long Road to Freedom*, p. 83.

amount of ammunition expended on a diversionary operation.⁴⁵ The only confirmed enemy “casualty” was a single tank, of unknown nationality or type, which was reported as destroyed. Casualties sustained are shown in Table 5.1 below. There is no information about casualties among the defenders, apart from the single tank.

	Personnel				Tanks
	KIA and DoW	WIA	PW	Total Casualties	
21 Battalion⁴⁶	16	65		81	
Enemy	unknown	unknown		unknown	1

Table 5.1: Casualties sustained at Bir Ghirba

ANALYSIS OF COMBAT EFFECTIVENESS

Operational Setting

The Allied plan for Operation *Crusader* was to destroy the Axis tanks before the infantry of 13th Corps took on the border posts, Bardia and Sollum. The choice of tank killing area deep within Axis territory resulted in the Eighth Army being spread from Sollum in the east across to Tobruk in the west. The British had developed the habit of breaking their forces up into smaller and less powerful units, nicknamed “Jock’s Columns.”⁴⁷ These columns were also referred to in derogatory term as “cowpats.”⁴⁸ Within the New Zealand Division, brigades and their battalions were deployed widely, undertaking different tasks simultaneously, like the very cowpats they derided. This dissipated the

⁴⁵ G.Dutton, Report on action of 21 NZ Battalion at Bir Ghirba, Sidi Rezegh and Point 175, 18- 29 Nov 1941. WAI 1 DA 54/10/6, NA. Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, p. 449.

⁴⁶ Cody, *21 Battalion*, p. 119. W.E. Murphy, NZ Divisional Campaign Narrative 2nd Libyan Campaign Nov- Dec 1941, Vol 4 Chap 19, 22 November 1941, KMARL, pp. 448- 449. Both sources give the 21 Battalion casualty state from Bir Ghirba as 13 KIA and 65 WIA, or a total of 78 casualties. The additional three which bring the total to 81 are the DOW recorded in the 21 Battalion Casualty List, p.10. WAI 2/44 Box 58, NA.

⁴⁷ Brigadier C.N. Barclay, *Against Great Odds: The Story of the first offensive in Libya in 1940- 41- the first British victory in the Second World War*, London: Sifton Praed & Co. Ltd., 1955, p. 17. Jock’s Columns were named after their inventor, Lieutenant Colonel J.C. Campbell, 4th Royal Horse Artillery. Campbell rose to the rank of Major General, was awarded a Victoria Cross November 1941, but killed in a motor vehicle accident in February 1942 whilst commanding 7th Armoured Division.

⁴⁸ Harper, *Kippenberger: An Inspired New Zealand Commander*, pp. 102 and 106- 107.

strength of the division, particularly its artillery, which had to be spread its batteries to cover all dispersed operations, rather than be concentrated onto one. The Germans believed failure to keep their forces concentrated was the Allies' 'fundamental tactical mistake' in Operation *Crusader*. The 'British showed they had much to learn about the handling of large land forces.'⁴⁹

At best, Operation *Crusader* could be judged a partial success. The effect of the concept of operations, combined with Rommel's own plans (involving Tobruk) and the general friction inherent in desert warfare, where visibility was poor and navigation difficult, led to a very fluid and confusing battle. The Allied operational concept for Operation *Crusader* was flawed.⁵⁰ From the outset, Freyberg was not convinced that the deep operation by 30th Corps would proceed as easily as had been suggested, and as a result, he was itching to have the New Zealand Division join the fight in the west rather than against the objectives he had been allocated.⁵¹ Moreover, the requirement to employ Allied tanks against enemy panzers meant less armour was available to support the infantry operations.

Once the New Zealanders commenced their advance around the defences, brigades were under pressure to move quickly. 5 Brigade was authorised to 'undertake all tasks tentatively allotted by the Divisional plan' and Hargest wanted to complete as many tasks as he could. The campaign history recorded that:

Hargest was in a tremendous hurry to get as much done as possible before dark. When Lieutenant Colonel Allen of 21 Battalion, who was sent ahead to reconnoitre Hafid and Bir Ghirba on the right flank, halted to brief his company commanders and hastily- attached supporting troops Hargest drove up at high speed and ordered him to keep his group moving. Allen therefore had to pass

⁴⁹ Major General I.S.O. Playfair, History of the Second World War, *The Mediterranean and Middle East, Volume III*, London: Her Majesty's Stationery Office, 1960, p. 100.

⁵⁰ Harper, *Kippenberger: An Inspired New Zealand Commander*, pp. 106- 107.

⁵¹ Murphy, *The Relief of Tobruk*, p. 114. Entries for 19 and 20 Nov 1941, GOC's Diary 3 Sep 41- 2 Sep 42. WAI 8/44, NA.

orders to his subordinates one at a time as they rode in turn in his car. He halted for the night just west of Hafid...⁵²

The above account suggests that Allen was about to undertake a reconnaissance of Hafid and Bir Ghirba. There is no record of it, and events suggest that it was never undertaken by him.

Unlike the New Zealand operation, attacks by battalions of the Indian Division onto the Omar forts had been meticulously planned, weeks in advance, presumably largely on the basis of aerial photographs. The New Zealand official history describes them in remarkable detail given that they had no relevance to New Zealand operations, other than to provide a sharp contrast to the poor planning, at all levels, by the New Zealanders.⁵³ The Indian Division had been in action in the desert previously during the December 1940- January 1941 operations, to capture Bardia and Tobruk. In these operations, as in Operation *Crusader* later, operations were conducted to the west, beyond the frontier 'with Sidi Omar to the South still holding out.'⁵⁴ Therefore, the situation would have been all too familiar to the Indians, and their staffs with their experience, ensured that their battalions were adequately prepared and supported.

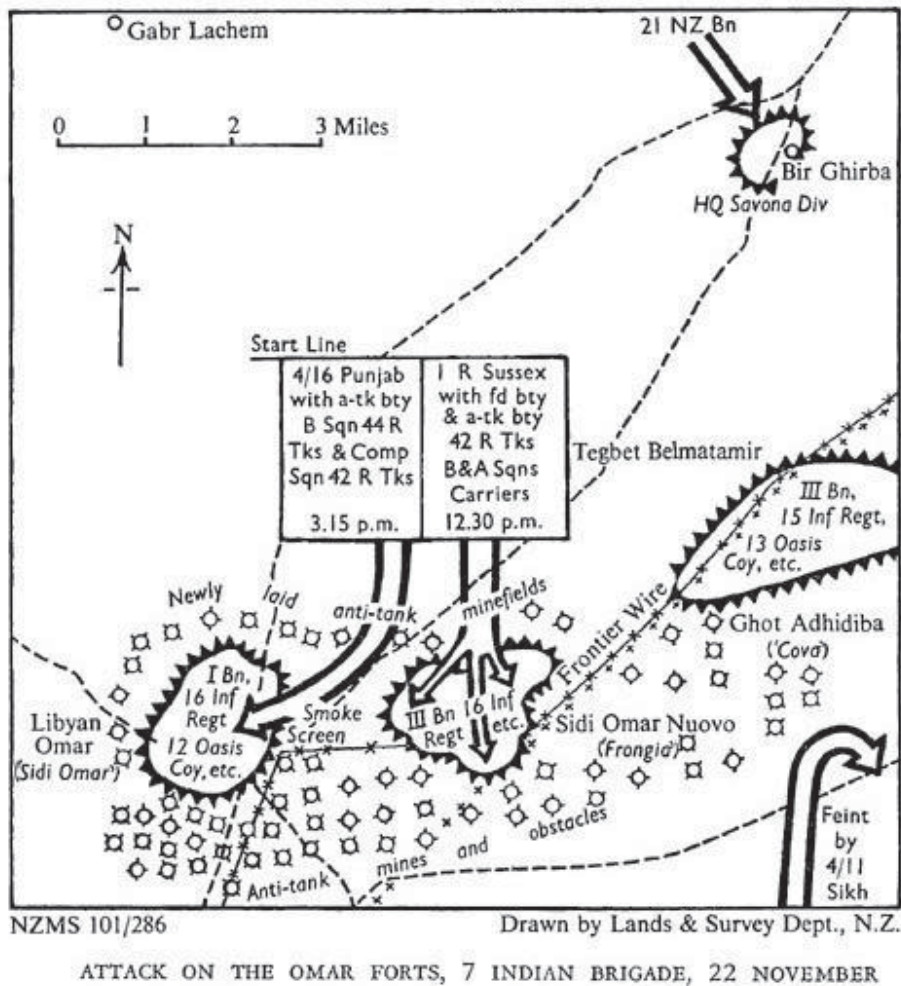
Map 5.3 indicates the strength and direction of each attack and situates the Indian operations in relation to 21 Battalion and Bir Ghirba. The Indian plans incorporated combined arms and air force support. Indian attacks were conducted by full infantry battalions. Each battalion was supported by medium and field artillery, and by squadrons of tanks. The experienced Indians knew the outposts were no walkover simply because they were isolated. Their operations were, therefore, well planned and properly supported. In contrast, on the morning of 22 November, Headquarters 5 Brigade was

⁵² Murphy, *The Relief of Tobruk*, p. 117. Underline added.

⁵³ Murphy, *The Relief of Tobruk*, pp. 124- 127. Another account of the two Indians battalion attacks can be found in J.A.I Agar- Hamilton,(ed.) and L.C.F. Turner (asst. ed.), *The Sidi Rezegh Battles 1941*, Cape Town: Oxford University Press, 1957, pp. 202- 204. The most authoritative account of the Indian battles (which includes warning orders, sketches of the defensive layout, orders and lessons learned) is contained within a U.S. Army information bulletin, Military Intelligence Service, War Department, *The Battle of the Omars*, Information Bulletin No. 11, MIS 461, April 15, 1942.

⁵⁴ Barclay, p. 42.

focussed simultaneously on the capture of Fort Capuzzo and the advances on Bardia and Sollum being undertaken by its other battalions, rather than supporting the operation at Bir Ghirba.⁵⁵



Map 5.3: Indian attacks onto the Omar forts 22 November 1941⁵⁶

21 Battalion was not allocated any anti-tank guns and had only eight 25 pounder field guns, previously mentioned, in support.⁵⁷ Each New Zealand brigade had only been allocated a single squadron of tanks from 8 Royal Tank Regiment, none of these were

⁵⁵ Entry for 21 Nov 41. GOC's Diary 3 Sep 41- 2 Sep 42. WAI 8/44, NA.

⁵⁶ Murphy, *The Relief of Tobruk*, p. 125.

⁵⁷ Murphy, *2nd New Zealand Divisional Artillery*, p. 192.

assigned to 21 Battalion.⁵⁸ The battalion's Transport Officer recalled that at a conference of officers, Lieutenant Colonel Allen asked them if they wanted tank support, with 'all replying in the negative.'⁵⁹ It is unlikely that 21 Battalion was offered tanks. More likely, having been allocated none, Allen sought an indication of whether he ought to request any from brigade headquarters. It also confirms a lack of intelligence about the *strength* of the Bir Ghirba position. In the event, the tank squadron allocated to 5 Brigade was assigned to 23 Battalion for the attack on Fort Capuzzo in a 5 Brigade order signed at 2235 hours on 21 November.⁶⁰ Allen's order to attack Hafid was signed at 2315 hours that same night, after the tanks were allocated.

The New Zealand Division's area of operations was huge. While 21 Battalion was attacking Bir Ghirba on 22 November, 4 Brigade was moving towards Bardia, 5 Brigade was operating around Sollum and 6 Brigade was moving west along the Trigh Capuzzo.⁶¹ Map 5.1 illustrates this clearly. The Division was thus widely dispersed and unable to provide support or re-allocate resources. Further, 21 Battalion was oblivious to the Indian Division operations it was supporting, and which were being conducted only just a few kilometres to its south.⁶² It would not have been aware of the need to coordinate operations in order to screen the Indians and distract the *Savona* headquarters. It is also indicative of a lack of coordination at higher levels.

This section illustrates poor planning, coordination and oversight by 5 Brigade and the New Zealand Division headquarters staffs. The willingness of the New Zealand Division to spread its formations into un-supporting battalion sized operations demonstrates a lack of experience, on their part, in planning and conducting large scale offensive operations. They failed to appreciate the impact of penny-packeting resources, and how this would cause some units, including 21 Battalion, to be allocated insufficient tanks and artillery to

⁵⁸ Murphy, *The Relief of Tobruk*, p. 112.

⁵⁹ Lt W.K. King to J.F. Cody, letter '21 Bn in action at Bir Ghirba and Sidi Rezegh (as seen by T.O.), undated, Correspondence collected by J.F. Cody concerning the part of 21 Battalion in 2 Libyan Campaign. WAI 1 DA 54/10/23, NA.

⁶⁰ Murphy, *The Relief of Tobruk*, p. 119.

⁶¹ Yeoman, *The Long Road to Freedom*, p.78.

⁶² Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, Note 1 to Section 40, p.448.

complete the missions they had assigned them. The higher headquarters were, themselves, still to reach a level of effectiveness as a command and control organisation at their level.

The analysis of suggests that the acquisition of intelligence (or in this case, the failure to acquire it and pass it down) was a significant weakness at battalion and brigade level, and as a result, a key factor in the failure of this attack. Further, and related to a lack of knowledge over the true strength of Bir Ghirba, was the insufficient allocation of resources for 21 Battalion to complete its mission. There was insufficient artillery assigned to 21 Battalion to suppress the objective or mask movement, essential requirements for defeating a well prepared defence with long fields of observation and fire. The allocation of resources to the Indian battalion attacks is a stark contrast to the New Zealand situation. 21 Battalion was assigned a mission beyond its ability to complete, given the paucity of resources allocated. At best, it should have been given a blocking mission to prevent enemy forces leaving Bir Ghirba to reinforce the forward posts, or a harassing mission to disrupt the headquarters, synchronised with attacks by New Zealand and Indian units on their objectives. These tasks would have been within its capacity and would not have required the additional resources necessary for a successful attack. Higher headquarters oversight of 21 Battalion was wanting. Hargest and Freyberg were both pre-occupied with getting to the main battle which they saw being much further west towards Tobruk, rather than in the rear areas of the Axis defence line where the New Zealanders had been assigned. In all, the brigade and divisional headquarters had much to learn about planning and monitoring a battle at divisional level, and operating within a corps context.

Force Strength

The strength of 21 Battalion at Bir Ghirba can be determined from the battalion's 11 November strength state, of 710.⁶³ While the battalion casualty list records a number of

⁶³ Entry for November 11, 21 Battalion War Diary 1- 31 November 1941. WAI DA 54/1/22, NA. 25 Officers and 685 Other Ranks.

casualties after the date 11 November (mainly from 19 November onwards), most entries are double dated, indicating more likely that those personnel became casualties some time between 19 November and the second date. The actual date the individual became a casualty is therefore not known precisely.⁶⁴ Neither the battalion's War Diary, nor its official history, record any significant activity, either combat, bombing or shelling before 22 November. It is likely, therefore, that the battalion did not sustain any combat related casualties between 11 November and the Bir Ghirba attack commencing. The battalion's nominal strength can therefore be assumed as 710 All Ranks. The battalion was, however, seriously weakened relative to the defenders at Bir Ghirba by three other factors; reduction in personnel for other directed tasks, failure to coordinate the infantry attack with supporting weapons and arms, and as already discussed, failure to increase 21 Battalion's combat power by allocation of tanks, anti-tank guns or air support.

The battalion's strength was immediately reduced by policy and directed tasks. Of 21 Battalion's total numbers, 50 officers and men were designated to remain behind as LOBs.⁶⁵ This was in accordance with the 2NZEF policy introduced just prior to Operation *Crusader*.⁶⁶ Further, D Company (probably ten of its number already detailed as LOBs) was detached from the attack, with one of its platoons tasked to guard a PW cage, while the remainder of the company was tasked to secure the battalion's echelon area in the rear. D Company took no part in the battle. Together, these reductions in infantry numbers reduced 'bayonets' available for the attack. Starting with about thirty soldiers in MacPherson's platoon, the infantry number committed to the attack can never have amounted to more than 300 men by the time the final company was committed, even without subtracting any of the casualties sustained throughout the day. The attackers were at least half the strength of the defenders, man for man. Given the weight of fire the defenders were able to produce, it is unlikely that the attack could have succeeded with infantry alone, even if the LOBs and D Company had been present. The three companies committed were pinned down between 500 and 1,000 metres from the defenders, in the

⁶⁴ Western Desert B, utilising dates 22 and 23 Nov 41. Casualty Lists 21 Battalion, pp. 9- 16. WAI 2/44 Box 58, NA.

⁶⁵ Cody, *21 Battalion*, p. 111.

⁶⁶ Harper, *Kippenberger: An Inspired New Zealand Commander*, p. 105.

open, and they were unable to generate sufficient suppressive firepower to close with the enemy.⁶⁷ To overcome the defenders fire, and to increase their relative strength, 21 Battalion needed to make more effective use of its integral and assigned support weapons and supporting arms. Why this did not happen will be discussed under the tactics section below.

Little is known about the construction of Bir Ghirba as the position was never breached. Some descriptions and diagrams of the forward strongpoints exist, however.⁶⁸ They provide an indication of the type of defences that were most likely contained within the Bir Ghirba position. The forward strongpoints (Libyan Omar, Sidi- Omar and Omar Nuovo) were of battalion strength. These strongpoints were sited for all round defence to repel an attack from any direction, including the rear. Flat terrain, without obscuration made this easily achievable. The positions were protected by wire entanglements and minefields. Clear flat desert provided all-round observation, and fields of fire. Strongpoints contained anti-tank guns including some of the formidable 88mm anti-aircraft guns, employed in the anti-tank role. Defenders fought from section and platoon posts, dug below ground, and from prepared concrete bunkers.⁶⁹ The Indian attacks were tough fights, even for battalions reinforced by tanks, demonstrating the additional strength afforded the defenders by the prepared strongpoints they were occupying.

As the Bir Ghirba position was a headquarters location behind the main line of defence, it would not have been as strong as a battalion strongpoint. It contained those forces needed to defend the headquarters, and possibly some reserve forces for the main positions forward. Other than the L tanks however, there does not appear to have been much of a counter attack force present. Accounts of the fighting for Bir Ghirba include references to minefields, barbed wire, bunkers; all signs of a well prepared defensive location. They

⁶⁷ Section 38, Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, p. 446.

⁶⁸ U.S. Army information bulletin, *The Battle of the Omars*, Figures 6, 9 and 10 on pp. 8, 22 and 24.

⁶⁹ Kriebel, pp. 34- 35. Agar- Hamilton and Turner, pp. 202- 203.

record artillery, mortar and anti-tank fire from within the position and attest to the position containing many machineguns.⁷⁰ MacPherson recorded:

There must have been 30 MGs of the enemy in action and the whole of the ground in front of their positions seemed to be swept [by fire]. They had a perfectly laid out defensive fire with fixed lines and arcs covering everything.⁷¹

The New Zealand artillery official history recorded the presence of ‘several tanks’ within the post.⁷² Yeoman observed tanks ‘dug in’ in a hull down position.⁷³ One of these was a captured Matilda tank.⁷⁴ An aerial photograph montage (see Map 5.4 below) produced prior to the attack, identified two possible machinegun sites, three anti-tank guns, a number of light machinegun positions and four vehicle pits. These are signs of a strongly held position, even without tanks. Indeed, the montage includes the words ‘defended locality’ in the title.⁷⁵ It seems unlikely that 21 Battalion, New Zealand Division headquarters or 5 Brigade headquarters were aware of the aerial photograph, or the true nature of the defences at Bir Ghirba. They considered it a minor position and required it be attacked, or contained, as a diversion for the Indian Division attacks on the Omar positions.⁷⁶

The defence of Bir Ghirba was not seriously threatened by the attack, such was the relative weakness of the New Zealanders’ combat power. A combat effectiveness factor highlighted in this battle is bayonet strength. 21 Battalion’s potential combat effectiveness was eroded by the three company per battalion policy of the Eighth Army,

⁷⁰ Murphy, *2nd New Zealand Divisional Artillery*, pp. 192- 193. Cody, *21 Battalion*, pp. 116- 118. Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, pp. 445- 449.

⁷¹ 2/Lt E.G. MacPherson to J.F. Cody, letter, undated, p. 6. ‘Account of Crusader Campaign’, Correspondence collected by J.F. Cody concerning the part of 21 Battalion in 2 Libyan Campaign. WAI 1 DA 54/10/23, NA.

⁷² Murphy, *2nd New Zealand Divisional Artillery*, p. 193.

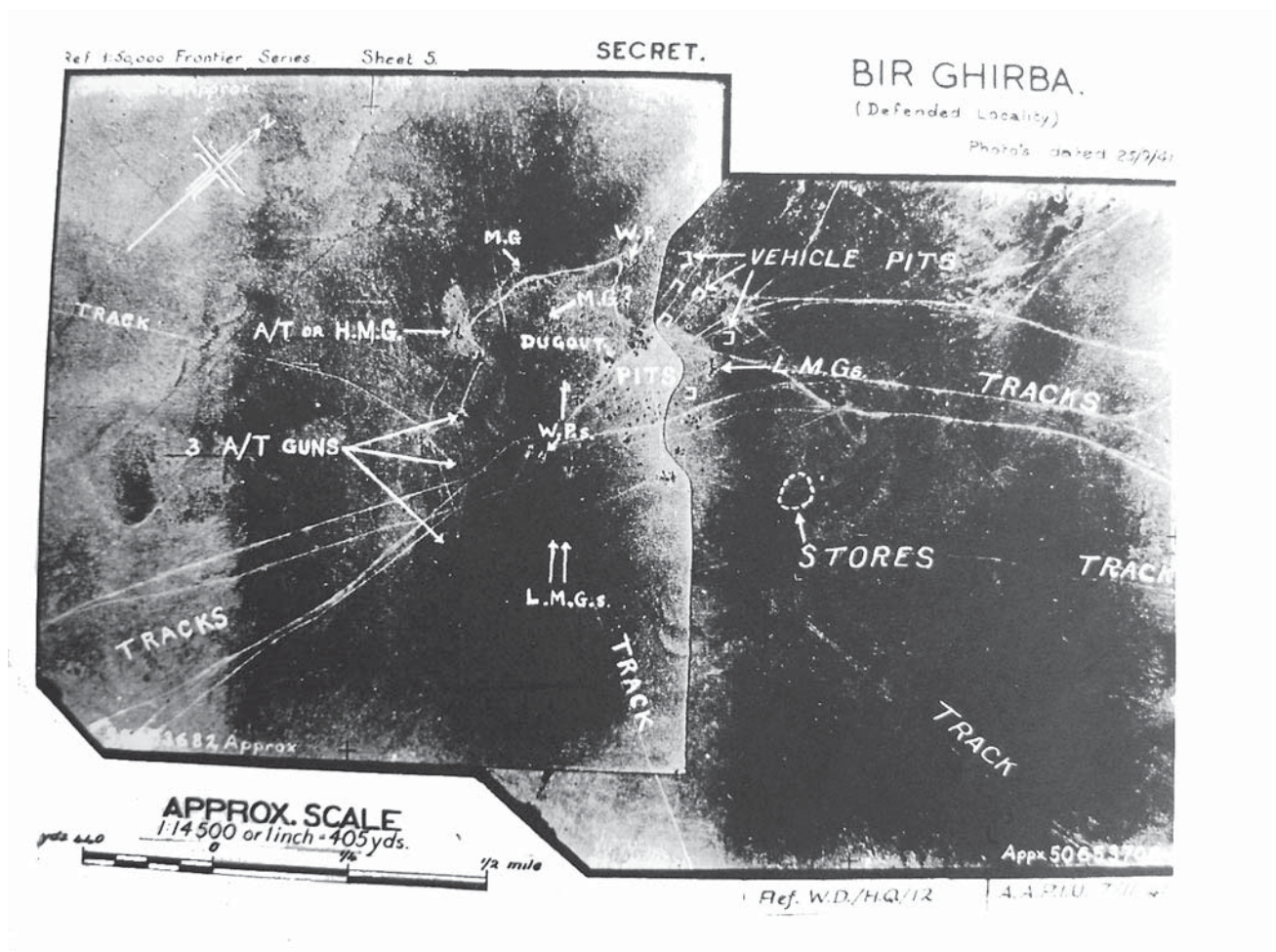
⁷³ Yeoman, *The Long Road to Freedom*, p. 80.

⁷⁴ Section 37, Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, p. 445.

⁷⁵ Bir Ghirba (Defended Locality) 1:50, 000 Frontier Series Sheet 5, photo inserted within Section 32 Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941. The photograph montage is dated 25 September 1941, two months prior to the attack.

⁷⁶ Section 34, Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, p. 443.

and further by the assignment of one of the three remaining companies to security tasks. They did not have enough troops for the attack. Additional firepower is another factor of Force Strength. Although 21 Battalion had insufficient artillery assigned, it failed, through poor coordination, to use what they did have as a force multiplier in support of the attack. Force posture- in this case 21 Battalion attacking in the open against a prepared defence- was a significant detractor of 21 Battalion's combat effectiveness, because the defence was not adequately suppressed, thereby exposing the unit to effective enemy fire.



Map 5.4: Aerial photograph of Bir Ghirba taken on 25 September 1941⁷⁷

⁷⁷ Bir Ghirba (Defended Locality) 1:50, 000 Frontier Series Sheet 5, photo inserted within Section 32, Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941.

Italian combat power was increased significantly because they were dug in, or protected by bunkers. Their posture afforded them the usual increase in combat power due to being in defence, and more so when properly dug in, as 21 Battalion demonstrated at Platamon, and in a negative sense, at Pinios Gorge. Dispersion within the defence also forced New Zealand artillery fire to be diffused, thus reducing its effectiveness. The need for sufficient organic firepower to suppress the defence is also established as a combat effectiveness factor in this operation.

Battlefield Effects

Flat open ground provided the defenders a significant advantage, particularly by day. There was almost no cover available for the attackers. As a result, they were exposed to the defenders' fire throughout the various assaults. The defenders were able to create their own cover by digging in and building bunkers, thus increasing the survivability of their troops and weapon systems. The 21 Battalion chronology offers this explanation of why the attack on Bir Ghirba failed:

Other reason [sic] failure- attack not begun until 1200 hrs which did not give arty time to make itself felt before inf attacked and attack itself was carried out on forward slope on which no cover. Ground too hard to dig in, very wet and slippery surface. Weather conditions against use [of] smoke- area to be covered too great.⁷⁸

An analysis of battlefield effects using OCOKA considerations is shown in Table 5.2 below:

Observation and Fields of Fire	Bir Ghirba was located on flat open desert that offered all round observation out to long range, save for periods when it was obscured by natural occurrences such as rain, sand storm or mirage. Observation was sufficient so that Hafid Ridge could be observed from Bir Ghirba, and for mortars and artillery to be directed onto it, from within the position.
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⁷⁸ Entry for 22 Nov 1941, 21 Battalion Chronology. WAI 1 DA 54/11/1 (17179 Pt 1), NA.

	Ferguson was able to identify the Bir Ghirba area from Hafid Ridge with the aid of binoculars, but he could not determine detail. The defenders were able to bring indirect (mortar and artillery), direct (anti- tank and tank) fire and small arms to bear on the New Zealanders at every stage of the assault, on all three company approaches. Smoke was not used at any stage to limit the observation and fire of the defenders. 21 Battalion's chronology suggests that the weather was against the use of smoke, and that the area to be obscured was too large.
Cover and concealment	Only the area where C Company dismounted offered any cover and concealment which they had to leave in order to move forward. ⁷⁹ Thereafter, as MacPherson's and Ferguson's accounts record, occasional cover from small arms fire was available from minor folds in the ground. MacPherson recalled that 'for some time we waited, pressed as close to the ground as we could get with no apparent cover whatever, not even a blade of grass in this miserable barren desert.' ⁸⁰ The best form of concealment was to lay flat on the ground, even then men were struck by bullets. ⁸¹ Smoke may have offered some concealment although it was not used, as highlighted already. It was not until nightfall that the attackers were able to move unobserved. By contrast, trenches and bunkers provided the defenders with excellent cover and concealment. ⁸²
Obstacles	The ground did not provide any obstacle to the attack. The defenders barbed wire and mines were not breached.
Key Terrain	There was no Key Terrain, the possession of which would have provided either the attacker or defender a marked advantage. Hafid Ridge (a significant piece of terrain from Operation <i>Battleaxe</i> in June 1941) was not useful enough for the defenders at Bir Ghirba to prepare as an outpost, nor was 21 Battalion able to use Hafid Ridge to its advantage in its attack. The defenders created some of the advantage afforded by certain Key Terrain when they used ladders, or towers, within the position, to extend their observation for artillery and mortar fire control.
Avenues of	The Bir Ghirba position had been prepared for all round defence, but if it was anything like

⁷⁹ Section 38, Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, p.446.

⁸⁰ 2/Lt E.G. MacPherson to J.F. Cody, letter, undated, p. 2. 'Account of Crusader Campaign', Correspondence collected by J.F. Cody concerning the part of 21 Battalion in 2 Libyan Campaign. WAI 1 DA 54/10/23, NA. C.A. Ferguson to J.F. Cody, letter, 1 April 1951, Correspondence collected by J.F. Cody concerning the part of 21 Battalion in 2 Libyan Campaign. WAI 1 DA 54/10/23, NA.

⁸¹ Cody, *21 Battalion*, p. 116.

⁸² Yeoman, *The Long Road to Freedom*, p. 79.

approach	the stronger battalion posts, it would have been optimised to defeat attacks in an arc from the north east and east around to the south as this covered the most likely direction of advance from the frontier. 21 Battalion attacked from the northwest, the rear of the position. This should have been the least defended approach. The attacking companies were all committed to the assault from the same general direction; this meant that possible weaker avenues of approach or blind spots were not tested, nor did the defenders have to divide their defensive fire to cover simultaneous approaches.
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Table 5.2: OCOKA Terrain analysis for Bir Ghirba

Occupation of suitable terrain and effect of lines of observation and fire are the battlefield effects combat effectiveness factors illustrated by this attack. The attack was undertaken in daylight, over ground that was fully observed by the defenders. All avenues of approach could be denied from within the position. Without the benefit of smoke munitions to screen the attackers, or the inclusion of tanks in the attackers organisation for battle, the terrain advantage was heavily weighted towards the defenders and rendered 21 Battalion ineffective.

Tactics, Doctrine and Training

The tactics employed by the defence were largely predicated by the static defensive position they had been allocated by the Germans. Defensive plans and instructions are not available, so the scheme of defence has had to be deduced from the layout of the position and the order and method by which they engaged the attackers. The defenders did not maintain significant patrols outside the position, nor did they occupy the higher ground of Hafid Ridge nearby. The defence was based upon a layered system of outer obstacles (barbed wire with mines further forward again), interlocking and supporting trenches and bunkers within the position, and by the coordinated use of indirect and direct fire. Although the defenders possessed a number of tanks, they only used them for long range fire. It is fortunate that the defenders did not attack with them, as 21 Battalion would have been highly vulnerable, for it did not possess any dedicated anti-tank weapons.⁸³ The

⁸³ Murphy, 2nd *New Zealand Divisional Artillery*, p. 193.

defenders had high numbers of automatic weapons. MacPherson assessed the enemy at one time had as many as 30 machineguns firing.⁸⁴

Long range fire by the defence was undertaken by mortars and guns initially. This was designed to limit early identification of anti-tank gun and tank locations. Even the approaching infantry companies mounted in trucks were engaged by mortars rather than anti-tank weapons, with the exception of A Company's approach. It is contended that the Italians were forced to engage A Company with anti-tank guns because the company was moving forward quickly, and they had to prevent the company from getting too close. By then, the defenders must have determined that the attackers did not possess tanks, and it was therefore no great risk to unmask the anti-tank guns.

The decision on when to dismount from the trucks was an important one. To remain mounted too long risked casualties, while dismounting early increased the distance to close with the enemy with resultant exposure to defensive fire. Lessons identified at a Brigade exercise 18- 20 October 1941 were 'the necessity for correct timing and the danger of debussing too soon.'⁸⁵ Glyn Harper wrote that Freyberg observed the mock attack on "Bir Stella" on 20 October and considered that it would have failed because the infantry dismounted too far back from the objective.⁸⁶ Yeoman watched A Company's mounted approach from his position on the ground. He believed Trousdale had taken a risk to cover more ground mounted in order to reduce the amount of exposure to fire after they closed with the enemy.⁸⁷ This tactic did not work against a determined enemy with good fields of fire. Doctrinally, it was correct to remain mounted for as long as possible. To make this work tactically, however, the defence's protective fire had to be suppressed adequately. That this was not done was a failure in tactics by 21 Battalion, compounded by insufficient support assets (by way of tanks and artillery) to achieve it.

⁸⁴ Section 40, Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, p. 447.

⁸⁵ Entry for 20 Oct 1941, 21 Battalion Chronology. WAI 1 DA 54/11/1 (17179 Pt 1), NA.

⁸⁶ Harper, *Kippenberger: An Inspired New Zealand Commander*, p. 104.

⁸⁷ Yeoman, *The Long Road to Freedom*, p. 80.

As the attackers worked their way closer in towards the wire, they were engaged freely by automatic weapons, many from in depth. MacPherson recalled that 'All at once the enemy machineguns opened up on us, that unforgettable rat- tat- tat that we were to hear incessantly almost from now on.'⁸⁸ This indicated a level of control and coordination within the defence. The enemy fire had the desired effect, causing casualties and forcing the platoon to the ground in an area where there was little cover. The attackers never got close enough to penetrate the wire and close with the defenders, such was the weight of fire directed at them. The Narrative records that A Company was being engaged by the enemy at 500 metres range; the barbed wire was still 300 metres distant and the defenders a further 200 metres beyond that again.⁸⁹ 500 metres is generally accepted as being beyond rifle range, but is within the machinegun zone. The New Zealand infantry were trapped, by fire, in the Italian defenders' killing areas.

21 Battalion's attack was ad-hoc. Intelligence about the objective was non-existent and no effective reconnaissance was conducted. Allen's decision to use C Company to capture Hafid Ridge, and thereafter to send a strong patrol against what turned out to be Bir Ghirba, affected the conduct of the main attack also. Instead of planning a coordinated battalion operation from the outset, the attack built up from platoon to battalion level as each element was added piecemeal. By the time the battalion was committed to the attack, it was too late to obtain the additional artillery and tanks needed. The unit became decisively engaged and had to make do with the resources it had been allocated. Only nightfall allowed Allen to disengage without sustaining further additional casualties. Until then, his men were forced to wait it out, under fire.

The tactics employed by Allen can be summarised as a quick attack, on a single axis, in daylight, but with insufficient supporting fire. This may have worked against a weaker enemy, in hasty defence, or one whose morale was low, but it was inadequate for the prepared defence Allen was up against. When he identified the position was actually Bir

⁸⁸ 2/Lt E.G. MacPherson to J.F. Cody, letter, undated, p. 2. 'Account of Crusader Campaign', Correspondence collected by J.F. Cody concerning the part of 21 Battalion in 2 Libyan Campaign. WAI 1 DA 54/10/23, NA.

⁸⁹ Section 38, Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, p. 446.

Ghirba, he could have contained the enemy within the post, which his orders had allowed for, rather than mount an attack against it. Quite possibly, given the enemy's limited response early on, he did not fully appreciate the extent of the position and the threat it posed, and was therefore drawn in. Maybe this was the enemy tactic. At the very least, the strength of the position should have warranted a deliberate attack, based on a thorough reconnaissance, and it should have been supported by a coordinated and heavy enough fire plan.

Freyberg may have been able to advise General Sir Claude Auchinleck (Commander in Chief, Middle East Forces) shortly before Operation *Crusader* that 'the Division, in my opinion, is now trained and fit for war', but the manner in which 21 Battalion was committed to action by its superior headquarters, and the way it executed the attack, contradicts this statement.⁹⁰ 21 Battalion's combat power was weakened by the failure to coordinate the battalion's integral support weapons and the combined arms it had been allocated. On all occasions, including Ferguson's patrol, the companies were committed to a dismounted daylight assault across exposed terrain in excess of 800 meters, without adequate artillery, mortar or machinegun fire in support.⁹¹ Failure to properly plan and conduct the operation, even with the limited assets assigned to the battalion, indicates a lack of experience by the CO and his senior officers.

This attack clearly illustrates tactics employed (or misemployed) as a factor in combat effectiveness. 21 Battalion had the doctrine for this type of operation, and had undertaken at least two exercises where techniques such as dismounting were practiced. It highlights, also, that there is a significant difference between training and actual operations as far as real learning is concerned. 21 Battalion did not attempt any form of deception or envelopment, failed to adequately employ direct or indirect supporting fire and did not employ combined arms tactics. The night attack, as a tactic to defeat long fields of observation and fire, was only truly recognised by 21 Battalion as a result of Bir Ghirba-

⁹⁰ Headquarters, New Zealand Division [Freyberg] to Auchinleck, Letter, 13th September, 1941. General-1941. WAI 8/21, NA.

⁹¹ Cody, *21 Battalion*, p. 117. A.A. Yeoman and C.P. Hutchinson, Report on 21 NZ Battalion actions at Bir Ghirba and Sidi Rezegh, 18- 28 Nov, 1941, multiple entries for 21 Nov. WAI 1 DA 54/10/4, NA.

it was an expensive lesson, with 81 casualties for no appreciable gain. Surprise is an important tactic, particularly in offensive operations. It was not achieved by 21 Battalion, nor compensated for by obscuring movement behind a smoke screen. If anything, 21 Battalion was surprised by the Italian defence and became decisively engaged, unable to withdraw until it got dark.

Command and Leadership

Lieutenant Colonel J.M. Allen was the Member of Parliament for Hauraki and a farmer by occupation. He had served in the Territorials since 1913, primarily with 1st Battalion, the Hauraki Regiment. He sailed for the Middle East with the First Echelon as Second in Command of 18 (Auckland) Battalion, in the rank of major, the rank he had held in the Territorials since September 1934.⁹² Allen did not serve in Greece with 18 Battalion, because on 6 December 1940 he had been posted to the Reinforcement Depot. On 15 January 1941 he was promoted to lieutenant colonel and appointed to command the 31st (Auckland) Reinforcement Battalion at the New Zealand depot in Egypt. It was from that appointment, where his role had been to oversee the training of newly arrived reinforcements from New Zealand destined for service with the Auckland battalions, that he was called forward to Crete to assume command of 21 Battalion on 17 May 1941.

Colonel Allen's combat experience prior to Bir Ghirba was gained commanding 21 Battalion in action on Crete, where the unit's limited operations were largely defensive in nature. Operation *Crusader* was the New Zealand Division's first major operation since Crete, and Bir Ghirba was 21 Battalion's first attack, except for two undertaken in training.⁹³ On 12 August, 21 Battalion was the 'enemy', in defence, attacked by 22, 23 and 28 Battalions in a mock night attack. On 20 October, 21 Battalion conducted a practice attack in conjunction with 23 Battalion. The October exercise was a brigade activity where attacks were conducted onto mock fortress positions, 'Sidi Clif' and 'Bir Stella'. The tactics employed included a 48 kilometre vehicle approach by night for

⁹² Personal File, 2562 John Manchester Allen. NZDF PA.

⁹³ 21 Battalion War Diaries 1 June- 31 December 1941. WAI 1 DA 54/1/18- 22, NA.

attacks at first light.⁹⁴ The CO therefore had little personal experience in planning and executing battalion deliberate attacks to draw upon, and none from an attack against real opposition. No rehearsals were done prior to the attack on Bir Ghirba.

Allen's judgement, battlefield leadership and power of influence are doubtful. He was unable to convince Hargest, when the operation was being planned and resources allocated, that the battalion should have tanks (even a troop of three or four) or anti-tank weapons. He was unable to convince 5 Brigade to release an infantry company, tanks or even anti-tank weapons once the attack was underway and his companies had become pinned down. He is only recorded performing any significant role in the battle on one occasion, when he came forward in a Bren carrier, under intense fire, determined the strength of the enemy and then committed B Company to the attack. He took no active measures to develop a cogent plan for the operation, and the decision to persist with it was 'a serious misjudgement.'⁹⁵ It was only the onset of dark that provided relief. Allen's courage was a positive aspect; however, it did not make him a successful tactician or leader.

The decision to attack again next morning was based on a suggestion of Yeoman's. Yeoman recommended a night attack because he felt that the defenders' firepower was still too strong and he:

knew that in the First World War, it was our New Zealanders who had pioneered the concept of attacking in the darkness, two hours before dawn.⁹⁶

Allen agreed with this suggestion, presumably with the concurrence of the company commanders. Again, the decision to attack again rather than screen the enemy was a misjudgement by the CO and a sign of his inability to take a firm stand, given 21 Battalion's combat power was already reduced and it had been determined that the defence was strong. The artillery official history states that the cancellation of the second

⁹⁴ Angus Ross, *23 Battalion*, Wellington: War History Branch, Department of Internal Affairs, 1959, p. 99.

⁹⁵ Murphy, *2nd New Zealand Divisional Artillery*, p. 192.

⁹⁶ Yeoman, *The Long Road to Freedom*, p. 81.

attack 'undoubtedly saved the infantry from further heavy loss- perhaps a complete disaster.'⁹⁷

An important responsibility of junior leaders is to inspect the men and their equipment prior to battle or a patrol. This is to ensure that all essential kit is carried, and serviceable. Men are known to leave items behind they do not think they will need. Prior to departing on the patrol that morning, MacPherson checked the equipment required to be taken by his platoon, and attempted to reduce the load his men were expected to carry during the attack. 'This was likely to be the first engagement of any of our Bn, with the enemy and there were important details I wanted settled and a ruling on.'⁹⁸ His actions and comments demonstrate that he had a healthy concern for his men, although events showed this did not prevent him placing them and himself at risk when under fire. He was performing exactly as a platoon commander ought to.

When the platoon came under mortar fire and dismounted, MacPherson saw his men had gathered in groups rather than dispersing into a suitable frontage from which to advance on foot:

I was afraid a shell or bomb landing amongst them would cause a lot of casualties and I had to be rather fierce on them. It had the desired effect and they soon got into position. All this time we were under slight fire but no small arms fire at all, although we were well within range. We began to advance.⁹⁹

MacPherson manoeuvred his platoon forward under fire as best he could, section by section. Initial casualties among his platoon did not cause him to falter, although he eventually reached a point where he determined that the platoon could go no further. Men reacted to his command to undertake the tasks he directed, and sections conformed to his

⁹⁷ Murphy, 2nd *New Zealand Divisional Artillery*, p. 193.

⁹⁸ 2/Lt E.G. MacPherson to J.F. Cody, letter, undated, p. 1. 'Account of Crusader Campaign', Correspondence collected by J.F. Cody concerning the part of 21 Battalion in 2 Libyan Campaign. WAI 1 DA 54/10/23, NA.

⁹⁹ 2/Lt E.G. MacPherson to J.F. Cody, letter, undated, p. 2. 'Account of Crusader Campaign', Correspondence collected by J.F. Cody concerning the part of 21 Battalion in 2 Libyan Campaign. WAI 1 DA 54/10/23, NA.

orders to move into better positions when he gave them. He shared the risks with his men by exposing himself and moving with them:

I decided to get forward a section at a time... I stood up and bullets splashed about me. I called “ No.9 sec, prepare to advance, advance:. They got to their feet like one man and dashed forward, they were greeted by a hail of bullets. “Down” I shouted and down they went; they had made about 20 yards. Gray and I had gone with them and down we went too.

This attack demonstrates the pivotal role of the commander in an attack. It highlights competence and experience of commanders as factors of combat effectiveness. To win resources for a unit, a CO must have influence. In this, Allen failed twice- first to argue for tanks, and then when the operation was underway, to have additional artillery assigned. Allen would not have met the standards, aside from physical courage, of a CO suggested by Roger McElwain, where ‘practical military knowledge, confidence, aggression, physical courage, command well forward [and] the ability to organise and carry out tasks’ were signs of effective leadership at battalion level in a New Zealand context.¹⁰⁰ An indication of Allen’s personal courage under fire is provided by the account of the soldier who drove the carrier forward to Bir Ghirba.¹⁰¹ Also, on Crete, when Allen ‘heard that the right front was apparently breaking, he personally led a reserve squad’ forward to restore the situation.¹⁰² Courage, does not, however, replace competence. He did not demonstrate the drive exhibited by someone like Balck. This battle also highlights the responsibility of junior commanders to prepare and lead their men well. This includes the tedious, like the checking of equipment, as well as the essential, particularly, controlling movement under fire, leading from the front and putting on a brave face.

¹⁰⁰ Roger McElwain, “Commanding Officers of Infantry Battalions of 2nd New Zealand Division’, p. 191.

¹⁰¹ Statement by Private H.S. Fox within Murphy, Campaign Narrative -2nd Libyan Campaign Vol 4 Chap 19, 22 November 1941, note 1 to p. 445.

¹⁰² Cody, *21 Battalion*, p. 98.

Sociological Factors

MacPherson recalled that his platoon 'were all keen and quietly excited' about the prospect of action. This was the first time in combat for most. 'Fear before an attack is universal' so some of the excitement would have been due to the men masking their own doubts.¹⁰³ MacPherson had a good relationship with Sergeant Kelly, his platoon sergeant. When MacPherson was away getting orders, Kelly would organise the platoon. They were a team. MacPherson and Kelly led the platoon forward, moving 10 metres in front of their platoon as mortar and artillery fire landed nearby. MacPherson was comforted by his sergeant's comments:

A shell would come whistling towards us and he would say "All right sir, don't worry, she'll land behind us, it is usually the ones you don't hear that are the dangerous fellows" or suddenly he would say "Down, sir, down" and one would land close. "This stuff is not so dangerous" he would say "its mainly noise to scare us..."¹⁰⁴

No doubt Kelly was equally frightened; however, the quiet words to his platoon commander had the desired effect. They allowed MacPherson to go on, and to set the example for his men; leading from the front and sharing the same risks as them. Many leaders report fear but realise that they have to overcome it, their mask of command, in order to be the example for their men to follow.¹⁰⁵ Continuing in the face of danger is good leadership by example, and it may also be a mechanism for the leader to overcome their own misgivings.¹⁰⁶ At one stage, a complete section of MacPherson's was hidden by a cloud of sand and smoke from a shell that landed amongst them. The section picked

¹⁰³ Norman Craig, *The Broken Plume, A Platoon Commander's Story, 1940- 45*, London: Imperial War Museum, 1982, p. 75.

¹⁰⁴ 2/Lt E.G. MacPherson to J.F. Cody, letter, undated, p. 2. 'Account of Crusader Campaign', Correspondence collected by J.F. Cody concerning the part of 21 Battalion in 2 Libyan Campaign, WAIL 1 DA 54/10/23, NA.

¹⁰⁵ John Keegan, *Mask of Command*, London: Penguin Books, 1987, p. 11. Keegan used the mask of command in connection with generalship, but it is equally applicable in this context. The "mask" hides what MacPherson does not want his troops to see; his fear. He presents a brave face.

¹⁰⁶ Major General F.M. Richardson, *Fighting Spirit A Study of Psychological Factors in War*, London: Leo Cooper Ltd., 1978, p. 112.

itself up, unharmed, and continued moving forward. This apparent lack of fear shown by the group, and their willingness to continue under indirect fire, is admirable. Even casualties had to be left, and they were, so the advance could continue:

I knew by this time that we had suffered several casualties, in fact I had seen several men fall, but greatly as I wished to go back and attend to them it was my duty as an officer to lead and I had to push on.¹⁰⁷

Once the companies were pinned down, it became a waiting game until nightfall. The men were unable to register any effect on the enemy with their own small arms fire. Even though the New Zealand artillery support was late and not effective, MacPherson recalled that it had a positive effect on the men.¹⁰⁸ Yeoman felt the same.¹⁰⁹

Despite the positive mood of the men ahead of the attack, they all, eventually, went to ground. The attack stalled. The intense enemy fire destroyed their will to fight. Will to fight is demonstrated in this attack as a key sociological factor of combat effectiveness. It also demonstrates how will to fight can be a temporary thing. Another factor of combat effectiveness is the interaction between officers and their subordinates. Ferguson was a distraction for McPherson. Conversely, the care taken by McPherson to check his men's equipment and to prepare them for battle was repaid by their willingness to follow his orders under fire.

Fog of War

The battle of Bir Ghirba contained a few examples of the fog of war worth examining; the misunderstanding of orders, the effect of the desert on navigation and observation, and equipment failures. The “fog” started as early as the lack of appreciation at division

¹⁰⁷ 2/Lt E.G. MacPherson to J.F. Cody, letter, undated, p. 3. ‘Account of Crusader Campaign’, Correspondence collected by J.F. Cody concerning the part of 21 Battalion in 2 Libyan Campaign. WAI 1 DA 54/10/23, NA.

¹⁰⁸ 2/Lt E.G. MacPherson to J.F. Cody, letter, undated, p. 3. ‘Account of Crusader Campaign’, Correspondence collected by J.F. Cody concerning the part of 21 Battalion in 2 Libyan Campaign. WAI 1 DA54/10/23, NA.

¹⁰⁹ Yeoman, *The Long Road to Freedom*, p. 80.

and brigade level of the true state of the defence at Bir Ghirba. It appears that brigade and division headquarters had not seen the aerial photograph (Map 5.4) taken in September. Had the true extent of the position been appreciated at division or brigade level, it is likely that additional forces would have been assigned, or alternatively, a mission more suited to the battalion would have been given, where they would not have become decisively engaged.

Absence of identifiable features made accurate navigation in the desert and the establishment of correct locations, challenging.¹¹⁰ On the night of 21 November, 21 Battalion was nearer to Bir Ghirba than they thought. Had they appreciated this then the transport that was observed initially by the patrol may have been correctly associated with Bir Ghirba. Accurate observation of any point further than one kilometre distant in the desert is difficult due to atmospheric effects.¹¹¹ Ferguson wrote:

21 Bn had orders to attack Bir Ghirba. Some argument as to where we were.¹¹²

When Ferguson's patrol departed, they literally disappeared and were not located again, even though they remained in position and firing, until the rest of their own company attacked from behind them late in the afternoon. The flat terrain and atmospheric effects made it difficult for the attackers to locate enemy that they could shoot at, which weakened the effectiveness of the attackers' fire significantly.

The battle at Bir Ghirba highlighted a number of equipment failures which detracted from 21 Battalion's combat power. The missing mortar part indicates that the weapon had not been thoroughly checked prior to the attack. Sand can cause weapons to jam, but in conjunction with the same squall that provided Yeoman cover, it caused all of

¹¹⁰ Yeoman, *The Long Road to Freedom*, p.78. Cox, *A Tale of Two Battles*, p. 156. Draft chapter of 21 Battalion, p. 6, attached to M.W. Tongue to Cody, letter, dated May 14, '51. Crusader Campaign Correspondence Files- 21 Battalion. WA II Series 3, NA.

¹¹¹ Major General A. Toppe, *Desert Warfare: German Experiences in World War II*, Fort Leavenworth, Kansas: U.S. Combat Studies Institute, 1991, p. 83.

¹¹² C.A. Ferguson, Report on 21 Battalion actions at Bir Ghirba and Sidi Rezegh, 18 – 28 Nov 1941. WA II 1 DA 54/10/5, NA.

MacPherson's Bren guns to jam at one point, severely reducing the small arms fire his platoon could generate.

This attack showed that friction and the fog of war were factors contributing to 21 battalion's ineffectiveness. These factors included misunderstanding of orders (by Allen) and hence the conduct of an attack when he could have reasonably undertaken a blocking operation. It also illustrated situational awareness, in this case lack of it, caused by navigation and the difficulty of ascertaining ones whereabouts with certainty in the desert), and the impact of equipment failures as factors also.

CONCLUSION

21 Battalion's performance at Bir Ghirba highlighted weaknesses in the preparation and execution of a battalion attack against a well established defence, and of the planning and oversight by higher headquarters. It is most unlikely that 21 Battalion could have captured Bir Ghirba given the forces assigned. They could, however, have blocked the position, or even conducted a demonstration against it, without becoming decisively engaged, and without the loss of 81 casualties. Combat effectiveness factors identified by the analysis of Bir Ghirba are shown in Table 5.3.

Category	Combat Effectiveness factors identified
Operational Setting	<ul style="list-style-type: none">• Acquisition of Intelligence• Allocation of sufficient resources• Assignment of mission (clarity and capacity to achieve)• Higher headquarters planning and synchronisation• Higher headquarters oversight of the operation
Force Strength	<ul style="list-style-type: none">• Bayonet strength• Additional firepower• Posture
Battlefield Effects	<ul style="list-style-type: none">• Occupation of suitable terrain• Effect of long lines of information and fire• Effect of light (daylight, in this case)

Tactics, Doctrine and Training	<ul style="list-style-type: none"> • Tactics (mis)employed: envelopment, suppression of enemy fire, combined arms • Use of surprise
Command and Leadership	<ul style="list-style-type: none"> • Competence and experience of CO • Influence of CO • Drive of the commander • Responsibility of junior commanders
Sociological	<ul style="list-style-type: none"> • Will to fight • Interaction between officers and subordinates
Fog of War	<ul style="list-style-type: none"> • Misunderstanding of orders (friction) • Navigation/ situational awareness (fog of war) • Equipment failures (luck)

Table 5.3: Combat Effectiveness factors identified at Bir Ghirba

Key factors contributing to 21 Battalion's ineffectiveness were insufficient forces allocated for the task (based on poor acquisition of intelligence and poor headquarters planning), diminished strength relative to the defenders due to posture, the failure of the New Zealand tactics, the additional strength of the Italians afforded by the flat open terrain and the poor judgement and leadership of Lieutenant Colonel Allen. 21 Battalion was seriously under-resourced for the attack, and poorly supported by division and brigade headquarters throughout the planning and execution phases, as both were busy with a range of other operations being conducted simultaneously over a dispersed area of operations. The Italians were able to generate a significant amount of direct and indirect firepower; their fire proved deadly, and pinned 21 Battalion down until nightfall.

New Zealand tactics at this time can be categorised as simplistic, prone to intelligence failures and lacking in combined arms cooperation, everything it appears that the Indian troops were not. Higher headquarters were focused on the bigger picture rather than on supporting and coordinating their subordinate units. This was likely a result of the "cowpat" syndrome, where operations were widely dispersed, and therefore less able to be supported. Overall, 21 Battalion (and its higher headquarters) had still not mastered the planning and execution of deliberate offensive operations- it was still not combat effective.

CHAPTER 6

RUWEISAT RIDGE: 14/15 JULY 1942

‘Everything in war is simple, but the simplest thing is difficult.’
- von Clausewitz, *On War*¹

‘From the New Zealand division’s point of view, Ruweisat ridge was one of the costly lessons of the desert war.’
- R. Walker, Campaign narrative²

The attack at Ruweisat Ridge took place on the night of 14/ 15 July 1942. Previous operations resulting from Rommel’s advance towards Egypt had left the Germans and Italians holding the western end of the Ruweisat Ridge, which J.F. Cody described as a ‘ten- mile- long dagger at the heart of the Alamein Line.’³ The Allies’ “Alamein Line” was more of a line on the map, than one of prepared defences. Much of the work intended to develop a strong defensive barrier had not been completed, for a variety of reasons, including the conduct of Operation *Crusader*.⁴ Capture of the western end of the ridge would allow British armour to exploit around it to the northwest or north towards El Alamein.⁵

This chapter describes the battle of Ruweisat Ridge, a night attack conducted by two brigades of the New Zealand Division and an Indian Brigade. Being a large scale operation, Ruweisat Ridge presents a good test of combat effectiveness. By being conducted at night, the operation magnified the friction that von Clausewitz identified which would make even the most simple things difficult. 5 Brigade, under Brigadier Hargest, had ‘eschewed night attacks in favour of dawn or daylight attacks’, so the

¹ von Clausewitz, *On War*, p. 138.

² R. Walker, Campaign Narrative, Volume VII, Chapter IV: The Attack on El Ruweisat Ridge (14- 15 July 1942) Part III and Appendices, War History Branch, Department of Internal Affairs, New Zealand, KMARL, p. 87.

³ Cody, *21 Battalion*, p. 163.

⁴ Playfair, *British Fortunes Reach their Lowest Ebb*, p. 333.

⁵ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, p. 48 and from the Extract from the Dairy (sic) kept by T/Maj- gen L.M. Inglis, commanding 2 NZ Div, in Appendix 6 to R. Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, War History Branch, Department of Internal Affairs, New Zealand, KMARL.

formation was not well prepared for a night assault onto Ruweisat Ridge.⁶ 5 Brigade was now under the command of Brigadier Howard Kippenberger. Brigadier Hargest had been captured on 27 November.⁷ Lieutenant Colonel S.F. (Sam) Allen was in command of 21 Battalion at Ruweisat, as Lieutenant Colonel J.M. Allen had been killed in action at Sidi Rezegh on 27 November 1941, five days after the attack at Bir Ghirba.

Although 21 Battalion completed its part of the 5 Brigade attack onto Ruweisat Ridge, the unit was not combat effective. This was because parties of men from the battalion who reached the objective were no longer a cohesive group. At some point during the attack, 21 Battalion had ceased to be a combat effective unit. Ruweisat Ridge was a significant battle, for although it cost New Zealand a great number of casualties, it established a basic pattern for Allied night attacks in the desert, and from which the New Zealand Division derived its impetus to improve reconnaissance, staff work and coordination.

THE COMBATANTS

Enemy Forces

The main weight of the German combat power (*21 Panzer Division*) was focused further to the north of Ruweisat Ridge, just west of El Alamein. The *90th Light Division* was operating well to the south of the Ridge. The gap between these two German formations was held by the Italian *Brescia* and *Pavia Divisions*, supported by elements of the much depleted German *15 Panzer Division*. There were no formations defending in depth, and no reserves.⁸ Most of *15 Panzer's* infantry was detached to *90th Light*, leaving it mostly with its panzers and support arms.⁹ *15 Panzer Division's* Tank State on 14 Jul 42 was nominally 91 panzers, however only 18 were classified as 'runners' (operable). The 18

⁶ J.L. Scoullar, *The Battle for Egypt: The Summer of 1942*, War History Branch, Dept. of Internal Affairs, Wellington, 1955, p. 302.

⁷ Murphy, *The Relief of Tobruk*, p. 340.

⁸ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, p. 50.

⁹ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, p. 12.

runners consisted of three Mk II, eleven Mk III, two Mk IISp and two Mk IV panzers.¹⁰ Thirteen of these tanks, from *15 Panzer Division's* weakened *8 Panzer Regiment* were located in the regiment's 'old night harbour immediately south of Ruweisat' ridge on the evening of the attack.¹¹ The New Zealanders did not know this.

The defender's organisation within the New Zealand objective was weaker than the "division" titles suggest. The campaign narrative summarises the enemy position on the night of 14 July as 'two divisions of Italians (*Brescia* and *Pavia*), apparently well below strength and of low morale.' They were 'stiffened by some German anti-tank guns and elements of the depleted 8 Panzer Regiment of 15 Panzer Division.'¹² 21 Battalion's opponents consisted of elements from:

Pavia Division

Brescia Division

15 Panzer Division (less most of its infantry)

13- 18 Tanks, *8 Panzer Regiment*
three guns, *135 AA Regiment*¹³

A New Zealand Division Intelligence Summary produced immediately *after* the battle identified nationalities and units of many of the prisoners captured by the New Zealanders. Italian prisoners included members of *I, II* and *III Battalions* of *20 Infantry Regiment* and members of *9 Bersaglieri Regiment*. German prisoners included members of *9 Flak Battalion*, *200 LG Infantry Regiment* and *8 Panzer Regiment*.¹⁴

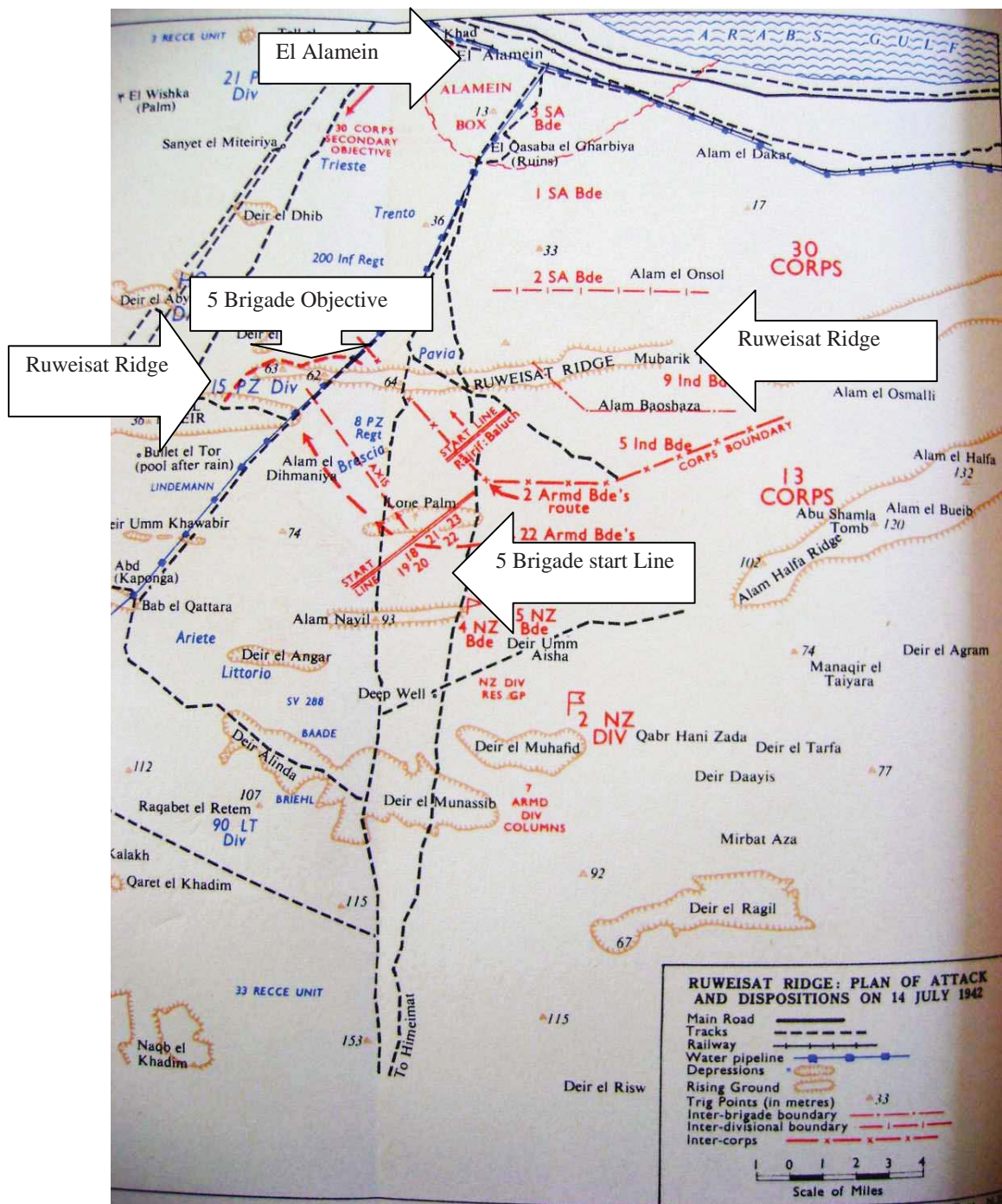
¹⁰ Tank State 14 Jul 42. Numbers taken from the 15 Pz Regt lines of the table. The command vehicle has not been counted as a tank which is consistent with the table beneath the tank State which states 'excluding command vehicles.' Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, Note 5B, p. 13.

¹¹ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, p. 13.

¹² Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, Note 11A (Strengths of NZ Div), p. 49 and note 10.

¹³ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, Note 10 to p. 50.

¹⁴ NZ Div Intelligence Summary No. 18 dated 15 Jul 42. War Diary HQ 2 NZ Div General Staff Vol 6, 1st July 1942 to 31st July 1942. WAIL 1 DA 21.1/1/31, NA.



Map 6.1: Ruweisat Ridge- Overview of dispositions on 14 July 1942¹⁵

¹⁵ Scoullar, *Battle for Egypt*, facing p. 201. Although the map shows enemy locations, these were not known prior to the attack. Arrows and text within them added.

It is not known who had overall command of the Axis defences on Ruweisat Ridge. The mission of the defenders is unknown as well. It can be reasonably assumed that their task was to prevent penetration by the Allies between *21 Panzer* and *90th Light Divisions*, or at least to limit any penetration of the line, until such time as mobile forces could be despatched from north or south, to intervene.

Information about the enemy position was scant, and the assumptions made about their main defences, flawed. It should be noted that the enemy locations shown on Map 6.1 were *not* known until *after* the operation. The campaign narrative stated ‘From the German records it is clear that the British appreciation of the enemy’s positions on the ground had been somewhat out of date.’¹⁶ New Zealand infantry night patrols had identified Italian infantry preparing defences forward (south) of the ridge.¹⁷ On the basis of this, the New Zealanders assumed that the main enemy defences were located on the ridge, with only an outpost line sited forward of it. This inaccuracy may have been corrected had good quality aerial photographs been available. Unfortunately, photographs delivered on the evening of 14 July were badly over-exposed, which effectively masked all detail within the New Zealand objective.¹⁸ New Zealand night reconnaissance patrols could not get close enough to obtain more detailed information about enemy dispositions due to the RAF dropping flares which would have exposed patrol movement to enemy work parties and sentries.¹⁹ As it transpired, 21 Battalion struck one of three enemy strongpoints that had almost been completed, and which was occupied in some strength.²⁰

¹⁶ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, p. 109.

¹⁷ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, p. 34.

¹⁸ Scoullar, *The Battle for Egypt*, pp. 223- 224.

¹⁹ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, p. 34. See also entry for 14 Jul 42 in the War Diary of HQ 5 Inf Bde 1- 31 July 1942. WA II 1 DA 52/1/31, NA. Entry for 14 Jul 42 and Night Patrol- Ruweisat Ridge Night 13- 14 Jul 42, Report by WO1 JD Farmer, Attached to Jul 1942 section, 21 Battalion Chronology. WAII 1 DA 54/11/1 (17179 Pt 1), NA. Flares were dropped by the RAF in order to illuminate Axis vehicle concentrations which would then be bombed. The lack of synchronisation between ground and air forces was because General Auchinleck’s Eighth Army advanced headquarters was 40 miles distant from Air Vice Marshal Coningham’s air headquarters. Playfair, *British Fortunes Reach their Lowest Ebb*, pp. 336- 337.

²⁰ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, pp. 109- 110.

21 Battalion

The Allied plan was for elements of the New Zealand and Indian Divisions to ‘break through the enemy’s centre and to destroy his forces east of the track El Alamein- Abu Dweis and north of the Ruweisat Ridge.’ The attack would focus on the Italian *Pavia* and *Brescia* Divisions which were holding the centre of Rommel’s line. 13th Corps was tasked to secure the western end of the ridge. The Corps chose the New Zealand Division for the attack. 5 Indian Brigade was ordered by 30th Corps to secure the right end of the ridge. The attacks were to be conducted as silent operations.²¹ Tanks would not accompany the attackers, but would be available the following morning for exploitation. It is not intended to examine the issue of armoured support, or rather the lack of it, because the true impact of the failure of the tanks to exploit or come to the aid of the attackers the following morning was not felt until after 21 Battalion’s part in the attack had concluded.²²

This was the first time that the New Zealand Division had attacked in such a deliberate fashion, and this showed in the poor planning and coordination.²³ The New Zealand Division’s plan was to conduct its attack on a two brigade frontage. The attack was to be from the south, with an axis of assault of 320 degrees. Brigades were ordered to attack with two battalions forward, and one battalion in reserve. The assault troops were expected to encounter forward enemy outposts at approximately 0100 hours on 15 July, and to be secure on the ridge by 0430 hours. The brigades’ support arms, artillery and anti-tank weapons would not accompany the battalions in the attack. Instead, they would be led forward at first light in order to be in position to defeat the anticipated counter-attack, which often included tanks.

²¹ Playfair, *British Fortunes Reach their Lowest Ebb*, p. 347.

²² For debate on the impact and analysis of why the tanks failed to support the New Zealanders in particular, see Playfair, *British Fortunes Reach their Lowest Ebb*, p. 352, Kippenberger, *Infantry Brigadier*, pp. 156 and 167- 170, R. Walker, Campaign Narrative, Volume VII, Chapter IV: The Attack on El Ruweisat Ridge (14- 15 July 1942) Parts I and II, War History Branch, Department of Internal Affairs, New Zealand, pp. 47- 49 and especially Note (9), and Harper, *Kippenberger: An Inspired New Zealand Commander*, pp. 155- 156 and 159- 162.

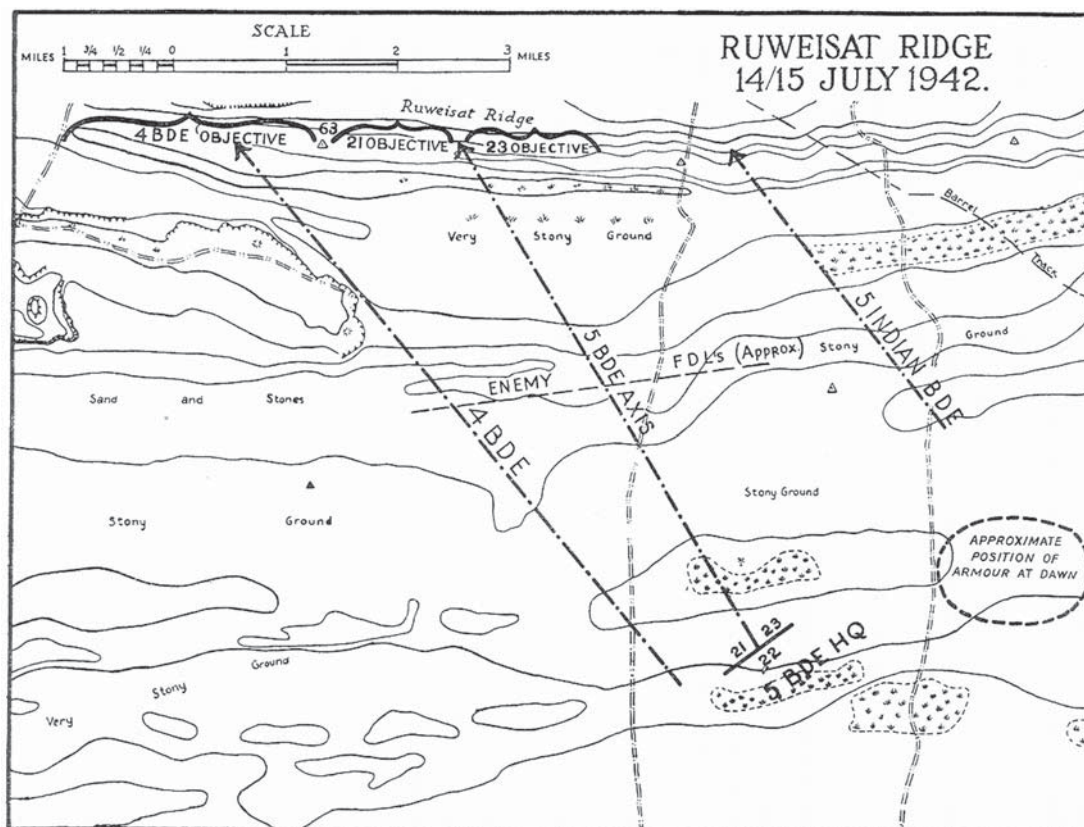
²³ Scoullar, *The Battle for Egypt*, p. 225.

At approximately 1130 hours on 14 July, Brigadier Kippenberger presented verbal orders to his COs for the attack that night. These orders were confirmed afterwards, in writing.²⁴ 5 Brigade's task was 'to attack and capture Ruweisat Ridge from 880278 to excl pt. 73, 876279.' From the Start Line, 5 Brigade's battalions were to advance almost ten kilometres to the objective across a front of four kilometres. This was a considerable distance to advance on foot, by night. Advancing two battalions abreast, each unit would be required to cover a frontage of two kilometres, approximately one kilometre per company if the battalions each advanced with two companies forward. 5 Brigade planned to advance with 21 Battalion on the left and 23 Battalion right, as depicted in Map 6.2. 22 Battalion was to be in reserve, following 1,500 metres behind the forward battalions, ready to deal with difficulties as they arose.

The brigade's twelve 6 pounder anti-tank guns and the three battalions' total of twenty four 2 pounder anti-tank guns were to move immediately behind 22 Battalion, but would in all likelihood be unable to join their battalions until first light. Each of the battalions' mortars and carriers, and the brigade's machine gun company, were also to be grouped immediately behind brigade headquarters, so that they could be moved forward at the first opportunity, probably at dawn.²⁵ The attacking battalions were therefore stripped of all support weapons during the assault, and reliant upon their own small arms to overcome any enemy encountered. They would require their support weapons to join them by first light, if they were to mount an effective defence against any counterattack involving tanks.

²⁴ Appendix B, Verbal Orders by Brigadier H.K. Kippenberger DSO, at HQ 5 NZ Inf Bde, 1130 hrs, 14 Jul 42. Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Part III and Appendices. The document is the written confirmation of verbal orders.

²⁵ Kippenberger, *Infantry Brigadier*, pp. 160- 163. Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, p. 34.



Map 6.2: Ruweisat Ridge 14/15 July 1942 showing axes of assault and objectives²⁶

Allen gave battalion orders to his officers on 14 July. The extract below, from 21 Battalion Operation Order No. 1, highlights the salient points of the 21 Battalion plan and confirms the New Zealand assumption that the Axis main defences were on the ridge, with only an outpost line forward. There was no mention of Axis tanks in the area.²⁷

1. Enemy: The enemy holds the line of the low ridge EL RUWEISAT... as his main position, with an outpost line in front of 5 INF BDE from 880 grid to incl trig 63 (4000 yds). A minefield has been located running north and south along the track on grid 881...

3. 5 NZ INF BDE will attack on a front of 2000 yards... 21 NZ BN on the left and 23 NZ BN on the right. 22 NZ BN is in reserve.

²⁶ Kippenberger, *Infantry Brigadier*, p. 162.

²⁷ Appendix 3, 21 NZ Battalion Operation Order No. 1 dated 14 Jul 42. Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Part III and Appendices. The order is also contained within Cody, *21 Battalion*, pp. 170- 172. Not all paragraphs are included in this extract, or in full.

INTENTION

4. 21 NZ BN will move by coys into position on start line; A Coy (right) at 2200 hrs; B Coy (left) 2145 hrs; C Coy (res) 2130 hrs; BN HQ (res) 2200 hrs...

METHOD

6. *Time past Start Line:* 2300 hrs.

7. *Bearings:* 320 deg[rees].

8. *Distance to Objective.* Approx 6 ¼ miles [10 kilometres]...

10. *Formation:* Line of Sec[tion]s at 60 yds interval from the right...

12. *Action on Meeting Opposition.* Secs will deploy to the left with an interval of five yds between each man. Touch will be kept with the right. The attack will be made with the bayonet. The outpost posn will be rushed with the bayonet and the Bn will pass on to the objective. 22 NZ BN will mop up.

D Company was Left Out of Battle and, therefore, did not take part in the action. 21

Battalion's organisation for battle at Ruweisat Ridge was:

21 Battalion (Lieutenant Colonel S.F. Allen)

A Company (Captain Butcher)

B Company (Captain Marshall)

C Company (Captain Wallace)

The men each carried a 'bandolier of 50 rds, normal weapons, 2" mor, EY rifle,²⁸ Type 68 grenades and two 36 grenades per man.'²⁹ Anti-tank rifles were left with the company trucks, which were held well to the rear with the battalion's Bren Carriers. 21 Battalion orders stated that shovels were not to be carried during the assault. However, Brigadier Kippenberger discovered this prior to the attack, and countermanded the battalion instruction, so tools were carried by each man after all.³⁰

²⁸ The EY rifle referred to Sir Ernest Youlle who perfected a slight adaptation to the standard Lee- Enfield .303 rifle.

²⁹ Appendix 3, 21 NZ Battalion Operation Order No. 1 dated 14 Jul 42, para 18. Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Part III and Appendices.

³⁰ Kippenberger, *Infantry Brigadier*, p. 164.

Shortly before the attack, Allen held a quick conference, where he stressed that platoons were to push on to the objective, only attacking opposition directly in their way.³¹ This meant that pockets of opposition would be left behind by the battalion as the attack progressed. It was expected that 22 Battalion, in rear, would clear out bypassed enemy strongpoints. Ironically, it was one of these bypassed strongpoints which claimed Allen's life, as he returned from the objective towards the Start Line, in the dark, to locate and bring forward his reserve company.³²

SUMMARY OF KEY EVENTS

At shortly past the appointed H hour, the lead companies crossed the Start Line and commenced their advance towards the battalion objective. There was still no sign of enemy one hour after H Hour, until an Allied aircraft with lights on flew low, triggering a reaction. The defenders fired on the aircraft, disclosing their location to the attackers. The assault was then discovered by the enemy once the aircraft had departed, causing the defenders to fire flares themselves, which illuminated the area to their front. Allen was well forward, abreast of the lead platoons when the illumination was fired. On his cry of 'Give it to them 21 Battalion!' the sections dashed into extended line and ran towards the enemy, firing from the hip.³³ The lead companies quickly overran enemy posts in their way, capturing a battalion headquarters and some artillerymen. Prisoners were easily taken and sent back towards 22 Battalion, without escort. The attack had begun well. The companies pressed on.

Contact with flank battalions and between the companies was quickly lost after the initial fire-fights. RSM 21 Battalion recalled that contact with enemy tanks was a key event that led to confusion.³⁴ It was pitch black, no moon at all, so it was extremely difficult to maintain any visual contact, and many groups therefore became separated and mixed in

³¹ Cody, *21 Battalion*, p. 172. Report by 21 Bn- Ruweisat Attack (Night 14- 15 Jul and Day 15 July), report attached to Jul 1942 section, 21 Battalion Chronology. WAI 1 DA 54/11/1 (17179 Pt 1), NA.

³² R.J. Phillip to R.Walker, letter, 20 May 51, 21 Bn Ops File Jun- Jul 42. WAI 1 DA 54/10/27, NA. Phillip was accompanying Allen at the time.

³³ Cody, *21 Battalion*, pp. 172- 173.

³⁴ WO1 J. Farmer to Cody, letter, undated. 21 Bn Ops File Jun- Jul 42. WAI 1 DA 54/10/27, NA.

with each other.³⁵ As companies and platoons became involved in fire-fights and dealing with prisoners, groups and individuals became separated and inter-twined. It was too dark. The next three paragraphs summarise the activities of the companies after the initial charge, and highlight the confusion that existed.

A Company was still moving forward at 0130 hours when Allen and members of battalion headquarters caught up with them. Captain Butcher's "company" at that time consisted of most of his own 9 Platoon, a small number of men from B Company 21 Battalion, all of 17 Platoon 23 Battalion, and members of D Company 23 Battalion. The group totalled about 50. Although the consensus of the officers in the group was that they were on or near the objective, Allen decided that they should continue to advance for another hour. When they reached a barbed wire fence at the edge of a minefield, near a gun emplacement, Allen decided that they were now on the objective. At 0300 hours, he left with a Senior NCO, to locate the battalion's reserve company so that he could bring it forward. Allen instructed Captain Butcher to remain, but if after one hour no one had arrived, to make up his own mind. In the event, Allen was killed (although Butcher did not know this) and as no troops had arrived after an hour had elapsed, Butcher led his group back on a reverse bearing where he came across Major McElroy, 7 Platoon and some other soldiers. The number increased to 69. The enlarged group, now under McElroy's command, eventually moved east and reached the Indian Brigade area, but not before capturing 500 prisoners and killing at least 14 Germans who had refused to surrender.

B Company continued to advance, in isolation. Its platoons eventually became separated also. Some of its men joined C Company 21 Battalion, while others moved on towards the objective, alone. Captain Marshall led the remnants of B Company forward. They overran an Italian headquarters, took some prisoners (including an Italian colonel) and then pushed on. They were joined by Lieutenant Colonel Lynch (CO 18 Battalion) with some members of his battalion headquarters. This group continued until 0200 hours when

³⁵ Entry for night 14/15 July, War Diary HQ 2 NZ Div General Staff, Vol 6, 1st July to 31st July 1942. WAI 1 DA 21.1/1/31, NA.

it encountered German armoured vehicles in a laager area. These were attacked and three tanks destroyed.³⁶ The attack on the tanks caused B Company to disintegrate further. Marshall continued with 10 men of his own company and a few other stragglers. He veered to the right in an attempt to locate A Company, but eventually met Captain Norris and A Company 23 Battalion. Norris and his men were digging in, so Marshall assumed that they were on the objective, fired his success flares, and ordered his men to dig in.

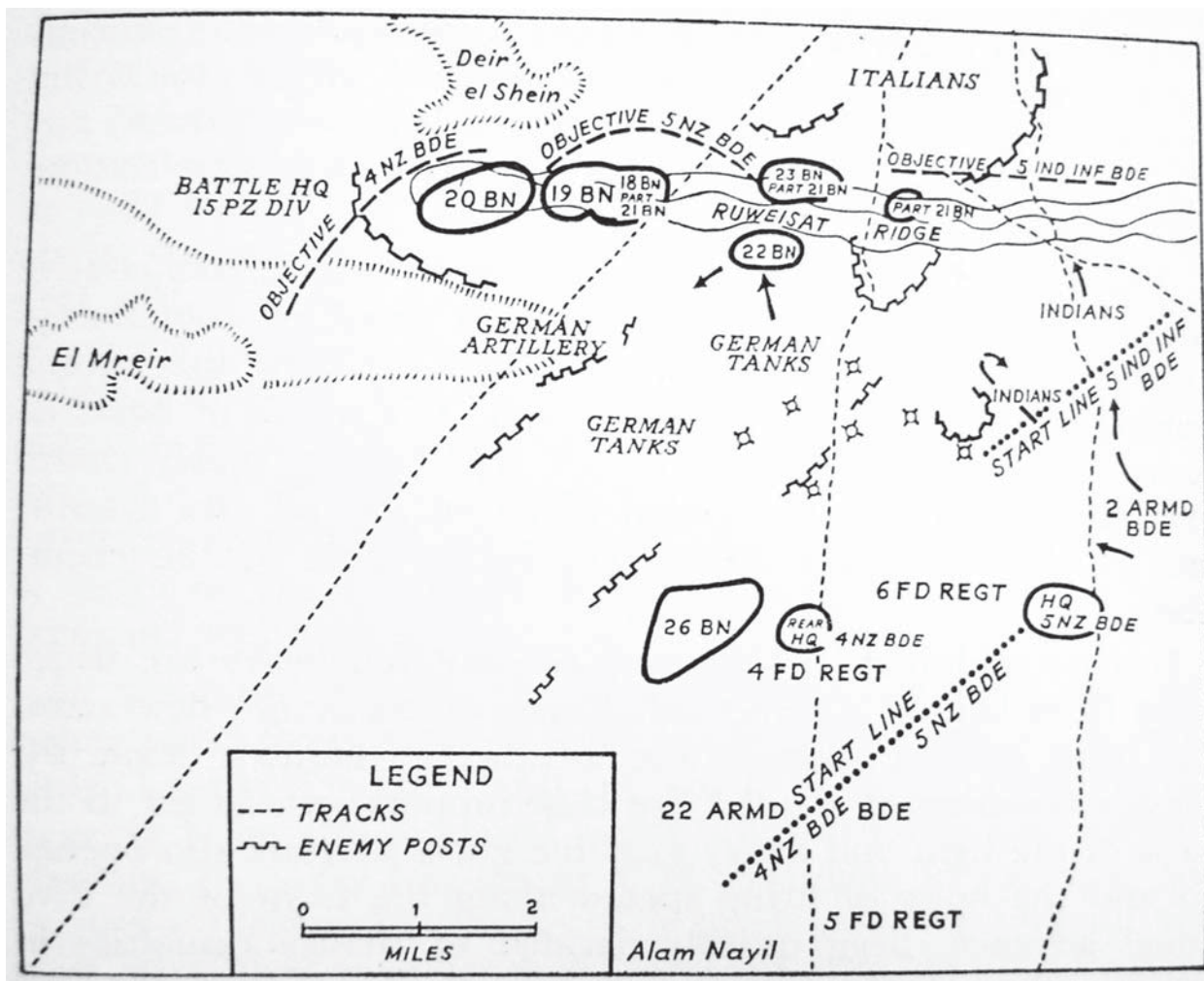
C Company, in its role as reserve, had been advancing close enough behind battalion headquarters to maintain sight of it. However, by the time the company got to B Company's burning tank, 15 Platoon was missing. Eventually, Captain Wallace was left with just a few of his headquarters, 13 Platoon and some members of other battalions which they had collected along the way. Wallace's group:

continued on the start bearing (320) and, after numerous encounters with MGs and tpt which wre (sic) cleaned out with grenades and loss [of] two men, finally reached objective 0400 hrs. During Adv picked up men from 18, 19, 20 and 23 Bns and, at objectives, joined forces with 19 Bn and dug in before dawn on either side of en minefields.³⁷

The situation at dawn on 15 July is shown in Map 6.3 below where it is clear that 21 Battalion was located in at least three separate and unsupporting entities at the conclusion of the attack.

³⁶ Cody, *21 Battalion*, p. 174.

³⁷ Report by 21 Bn- Ruweisat Attack (Night 14- 15 Jul and Day 15 July), report attached to Jul 1942 section, 21 Battalion Chronology. WAIL 1 DA 54/11/1 (17179 Pt 1), NA.



Map 6.3: Ruweisat Ridge at dawn on 15 July 1942³⁸

OUTCOME

Mission Accomplishment

21 Battalion's official history described the situation for the unit at dawn on 15 July as:

The position, therefore, as far as 21 Battalion was concerned, was that of the three assaulting companies, each about 90 strong, a mixed group commanded by Captain Marshall was in a position on the right of the objective, a smaller one

³⁸ Cody, *21 Battalion*, p. 173.

under Lieutenant Abbott was on the left near 18 Battalion, and A Company, with strays, had fought its way diagonally across a portion of 23 Battalion and was with the Indians to the east. The CO was mortally wounded, headquarters was dispersed, the rear battalion was captured, and the troops on the objective were cut off and without supporting weapons.³⁹

Although formed groups of 21 Battalion were located on the objective on the morning of 15 July, the unit was no longer combat effective- it was dispersed and not a single unified organisation. The campaign history records that ‘The picture from 21 Battalion from about 2 o’clock is of about ten separate platoon, company and headquarters groups comprising their own men and parties and individual stragglers from other units, all searching for the objective and each other... from shortly after that hour, 21 Battalion as a unit was lost to 5 Brigade.’⁴⁰

Casualties and Losses Sustained

Casualties sustained at Ruweisat Ridge are shown in Table 6.1 below.

	Personnel				Tanks
	KIA and DoW	WIA	PW	Total Casualties	
21 Battalion ⁴¹	12	13	10	35	
15 Panzer Div/ 8 Panzer Regiment	unknown	unknown	unknown	Unknown	4
Pavia and Brescia Divisions	unknown	unknown	500+	unknown	

Table 6.1: Casualties sustained at Ruweisat Ridge

21 Battalion’s overall casualties from Ruweisat Ridge were slight compared to Bir Ghirba. If the ten men who were taken prisoner at Ruweisat are not counted, only 12 men

³⁹ Cody, *21 Battalion*, pp. 180- 181.

⁴⁰ Scoullar, *The Battle for Egypt*, p. 236.

⁴¹ Casualty Lists 21st Battalion, pp. 16- 21. WAI 2/ 44 Box 58, NA. Casualties attributed to 15 Jul were used.

were killed and 13 wounded. Bir Ghirba had cost the battalion 16 killed and 65 wounded. Notably, five times as many men had been wounded at Bir Ghirba, than at Ruweisat Ridge. The relative numbers are shown in Table 6.2 below. Yeoman's rationale for recommending the attack at Bir Ghirba be conducted at night, because it would result in fewer casualties, was proven correct at Ruweisat Ridge. Also significant in terms of the reduced casualty count, was that 21 Battalion was detected by the defenders at a much reduced range than they had been at Bir Ghirba. At Ruweisat Ridge, where the battalion closed with and killed many enemy, engaged and destroyed tanks and captured great numbers of prisoners, they incurred less than half the total casualties sustained at Bir Ghirba. The higher number of soldiers wounded at Bir Ghirba, despite the lack of close combat there, is attributable to the additional time in contact and the greater numbers of weapons the defenders were able to bring to bear in daylight, compared with the night fighting at Ruweisat Ridge, where firing was at much closer range and over a shorter timeframe.

	Personnel			
	KIA and DoW	WIA	PW	Total Casualties
Bir Ghirba	16	65		81
Ruweisat Ridge	12	13	10	35

Table 6.2: Comparison of Casualties sustained by 21 Battalion and Bir Ghirba and Ruweisat Ridge

ANALYSIS OF COMBAT EFFECTIVENESS AT RUWEISAT RIDGE

Operational Setting

In the period immediately prior to the attack on Ruweisat Ridge, Rommel had been attacking at a variety of points along the Alamein Line, seeking to penetrate. Commander Eighth Army, General Auchinleck, ordered Operation *Bacon*, the attack on Ruweisat Ridge, with the intention being 'To break through the enemy's centre and destroy his forces east of the track El Alamein- Abu Dweiss and north of Ruweisat Ridge.'⁴²

⁴² Scoullar, *The Battle for Egypt*, p. 221.

Planning for the attack on Ruweisat Ridge had been underway since 11 July.⁴³ The attack was delayed on a day-by-day basis until it was finally confirmed on 14 July that the attack would take place, that night. Kippenberger had already criticised the original plan. In his view, it lacked written orders to confirm and support the plan, was based on too little information about the enemy, was to occur without artillery support, had a Start Line that was too far from the objective, and there was poor coordination with the tanks.⁴⁴ No tanks were assigned in direct support of the New Zealand attack itself. At the time, British tank commanders were 'averse to moving their tanks in darkness, especially over disputed territory.'⁴⁵ Kippenberger summed up the Eighth Army's plan in a typically blunt comment within the campaign narrative:

No coordinating conference. No single commander on the field. A classic case of bad planning and bad orders. (H.K.K.)⁴⁶

Apart from the production of written orders, none of the other criticisms identified by Kippenberger had been rectified by the time the Ruweisat attack took place. Burrows and Kippenberger requested the advance from the Start Line be made in two stages, but this was refused by the corps commander, Lieutenant General W.H.E. 'Strafer' Gott.⁴⁷ Higher headquarters written orders have come under criticism, as they varied between the corps in important details, symptomatic of the lack of preparation, coordination and experience in Army level operations at this stage of the war. Key headquarters staff were not experienced enough in the high level of planning and coordination required. Scoullar wrote that 'it seems impossible to avoid the conclusion that the project was hastily conceived, loosely coordinated, and abounded in poor examples of staff work on matters which might be supposed to be within the knowledge and experience of those

⁴³ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, p. 32.

⁴⁴ Kippenberger, *Infantry Brigadier*, pp. 156- 157.

⁴⁵ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, Note 11A (Strengths of NZ Div), p. 49.

⁴⁶ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, Note 9 to p. 48.

⁴⁷ Glyn Harper, 'From darkness to light: Kippenberger and a tale of two battles' in John Crawford (ed), *Kia Kaha, New Zealand in the Second World War*, Melbourne: Oxford University Press, Paperback Edition, 2002, p. 125.

responsible.’⁴⁸ Glyn Harper noted the lack of coordination at corps level, and between the three divisions participating in the attack, and wrote that ‘if ever a military operation stands out as a model of poor planning and control with the inevitable disaster that follows, then it is the attack made by New Zealand Division on Ruweisat Ridge...’⁴⁹ 5 Brigade’s War Diary recorded on 14 July at 0600 hours that:

21 NZ BN had been impeded in their patrol by RAF bombing. All BNs had heard sounds of digging in at distances between 2000- 3500 yds from FDLs and also heard soldiers speaking ITALIAN, but NO identification or estimates of strengths had been obtained.⁵⁰

The division’s War Diary for 14 July recorded that:

In the absence of air photos we had no exact information as to enemy strengths or dispositions. His defences located by our patrolling North of our front at ALAM EL DIHANIYA appeared to be an outpost line, with his main strength on the ridge itself.⁵¹

Between the two diary entries, it can be seen that little enemy information had been obtained, by patrol or through aerial photographs. Therefore, the positions identified were interpreted as being an outpost line for the main defences, which were expected to be on the crest of the ridge itself, not forward of it. Neither the Indians nor the New Zealanders knew the British 18th Infantry Brigade had attempted to occupy Ruweisat Ridge earlier in the campaign, but had not been able to dig in.⁵² Being unable to dig in on the ridge is assumed to be the reason why the Italians positioned their defensive line forward, in softer ground, where defensive positions could be dug. Had aerial photographs been available, or had patrols been able to get onto the ridge itself, it is possible that the defence’s dispositions may have been identified correctly, rather than assumed.

⁴⁸ Scoullar, *The Battle for Egypt*, p. 221.

⁴⁹ Harper, *Kippenberger: An Inspired New Zealand Commander*, pp. 155- 156 and 163.

⁵⁰ War Diary HQ 5 INF Bde 1- 31 July 1942. WAI 1 DA 52/1/31, NA.

⁵¹ War Diary HQ 2 NZ Div General Staff Vol 6, 1st July 1942 to 31st July 1942. WAI 1 DA 21.1/1/31, NA.

⁵² Harper, *Kippenberger: An Inspired New Zealand Commander*, p. 156.

The 5 Indian Division order for the same attack at least identified the presence of the *Pavia* and *Brescia* Divisions, but more importantly noted also ‘NW of BRESCIA is 15 PANZER DIV.’⁵³ Tanks were in the vicinity. New Zealand patrols had identified possible tank tracks.⁵⁴ Nothing appears to have been concluded from this finding. As a result, sticky bombs used for dealing with tanks, and ideal for use if they were stationary in a laager when encountered, were left behind by some companies. The rationale for leaving the sticky bombs behind was based on reduced numbers of men in the infantry sections and because the New Zealanders had not included in orders the possibility of panzers being present. The commander of C Company recalled afterwards:

We had decided to leave behind sticky bombs and such like as the anti-tank guns were supposed to move up with 22 Bn and also sections were very small in numbers at this stage.⁵⁵

The analysis of this attack has highlighted higher headquarters planning, coordination and oversight, the acquisition of intelligence and the accuracy of threat assessment as significant combat effectiveness factors. Night attacks increased the requirement for detailed planning and coordination considerably. It was not a matter of planning a daylight attack to be conducted at night. Coordination and control issues were magnified in a night operation. The particular night chosen to conduct this attack was too dark. Failure to obtain accurate enemy information led to a plan based on flawed assumptions. It is fortunate that the panzers were not in a state of high alert, or able to engage under cover of illumination, or their effect could have been devastating.

Force Strength

The strength of 21 Battalion at Ruweisat had been reduced by a rifle company, as a result of the Eighth Army policy already explained. The battalion had nevertheless been

⁵³ 5 IND DIV OP INSTR No 39 dated 14 Jul 42. War Diary HQ 2 NZ Div General Staff Vol 6, 1st July 1942 to 31st July 1942. WAI 1 DA 21.1/1/31, NA.

⁵⁴ Kippenberger, *Infantry Brigadier*, p. 160.

⁵⁵ Wallace to Cody, letter, 13.7.51. 21 Bn Ops File Jun- Jul 42. WAI 1 DA 54/10/27, NA.

reinforced immediately prior to the attack; the exact numbers of reinforcements are not recorded. The battalion's War Diary merely stated that 'Reinforcements of Officers and ORs arrived in the afternoon.'⁵⁶ Although these were the first reinforcements received by the battalion for months, it is doubtful that the additional numbers added much value, as 21 Battalion's official history noted in one of the few passages that contain any direct criticism where it recorded:

most of the [reinforcement] draft had been winkled out of messes, canteens and orderly rooms, and other base jobs, or were newly discharged from hospital after sickness or wounds. In many cases they were just not tough enough to take their places beside the tired and honest soldiers who comprised 21 Battalion, and for that matter the other battalions. Some collapsed with the heat, and a few, a very few, lingered their way back to Maadi.⁵⁷

The battalion's strength on 17 July was 412.⁵⁸ It is possible to calculate the battalion's total strength on the eve of the attack by adding its 35 casualties from Ruweisat to the 17 July strength state. This gives an overall strength on the eve of the attack as 447. As was the case for the analysis of Bir Ghirba, the overall number has had to be adjusted downwards to give an accurate bayonet strength. The Campaign Narrative states that 21 Battalion attacked with three rifle companies, of 75 men each, making a total of 225.⁵⁹ Seventy five is assumed to be an average. It is extremely unlikely that all three rifle companies had the same number of men. Battalion headquarters, signallers and other attachments would have resulted in an additional 10- 20. This suggests that the bayonet strength of 21 Battalion at Ruweisat Ridge would have been approximately 245.

⁵⁶ Entry for 14 Jul 42. 21 Battalion War Diary July 1942. WAI 1 DA 54/1/31, NA.

⁵⁷ Cody, *21 Battalion* pp. 169- 170.

⁵⁸ 21 Battalion War Diary July 1942. WAI 1 DA 54/1/31, NA. The sum of 20 officers and 392 Other Ranks.

⁵⁹ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, Note 11A (Strengths of NZ Div), p. 57.

21 Battalion's War Diary recorded 'The attack was carried out with the bayonet and positions over-run, many PW being taken and many casualties inflicted.'⁶⁰ We know 21 Battalion killed a considerable number of enemy and captured in excess of 500, or twice their own number (using 21 Battalion's bayonet strength). It is assessed that this ratio was achieved because of the poor morale and fighting quality of the Italians at night, and because of the general reduction in casualties when an attack is conducted in darkness. The surprise achieved by the New Zealanders added to the battalion's relative strength as well. This finding suggests that the rule of thumb for attackers to be in superior numbers to the defenders in order to achieve success does not apply so much at night, as the defence has a difficult time observing and engaging defenders with small arms fire. Strongpoints, so effective by day, may be overwhelmed at night. Another factor in the attackers favour, was that the defence was not as well prepared as Bir Ghirba had been. Trench systems and bunkers, with machineguns firing on fixed lines, were all absent from the defence at Ruweisat. An indication of relative strengths, based on numbers alone, in the 21 Battalion sector of Ruweisat Ridge is shown in Table 6.3.

	Bayonet Strength (Infantry)	Medium Mortars	Artillery	Tanks
21 Battalion (3 companies only)	245	nil		nil
Defenders:	1500+	unknown	3 (A-Tk)	13-15

Table 6.3: Relative strengths at Ruweisat Ridge

Members of 21 Battalion were able to destroy a number of German tanks, for the panzers were at a distinct disadvantage in the dark. Moreover, the panzers were in a night laager rather than in a defensive posture with security posted, and were therefore able to be surprised and overwhelmed by the New Zealand infantrymen.

This battle has demonstrated for the first time in this study, the benefit of attacking by night, although it has also highlighted the increased coordination and control measures required to make night operations effective. Posture (in this case due to night attack) was

⁶⁰ 21 Battalion War Diary July 1942. WAIL 1 DA 54/1/31, NA.

established as a combat effectiveness factor, for the dark meant that greater numbers of 21 Battalion men reached the objective, albeit in a disorganised fashion, than had been possible during daylight at Bir Ghirba. The supposed 3:1 attacker-defender ratio for a successful attack was disproved in this particular attack.

Battlefield Effects

Despite dominating the surrounding area, Ruweisat Ridge was not easily recognised, especially at night.⁶¹ In addition to the desert effects outlined in the fog of war section of the Bir Ghirba chapter, the difficulties encountered at Ruweisat Ridge were compounded by the gentle gradient and lack of prominent features of the “ridge.” It was not as easy to identify as the ‘the map contour lines suggested.’⁶² Maps and 6.1, 6.2 and 6.3 convey the impression that the ridge was a distinctive feature. Figure 6.1 shows, however, that the ridge is barely perceptible on the skyline behind the hulk in the middle distance. It was not prominent in reality, even in daylight, let alone on a pitch black night. The ridge was only 35- 45 feet higher than the surrounding area. It rose at the barely perceptible gradient of between one in 40 and one in 60. Some maps show a number of man- made features; a pipeline and some tracks originating south of the ridge, crossing over at various points before joining and terminating in El Alamein to the north. None of these man-made features was significant enough to have been used as a reference point during the battle.⁶³

⁶¹ Bates, p. 148.

⁶² Scoullar, *The Battle for Egypt*, p. 232.

⁶³ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Part III and Appendices, Note 54 to p. 49.

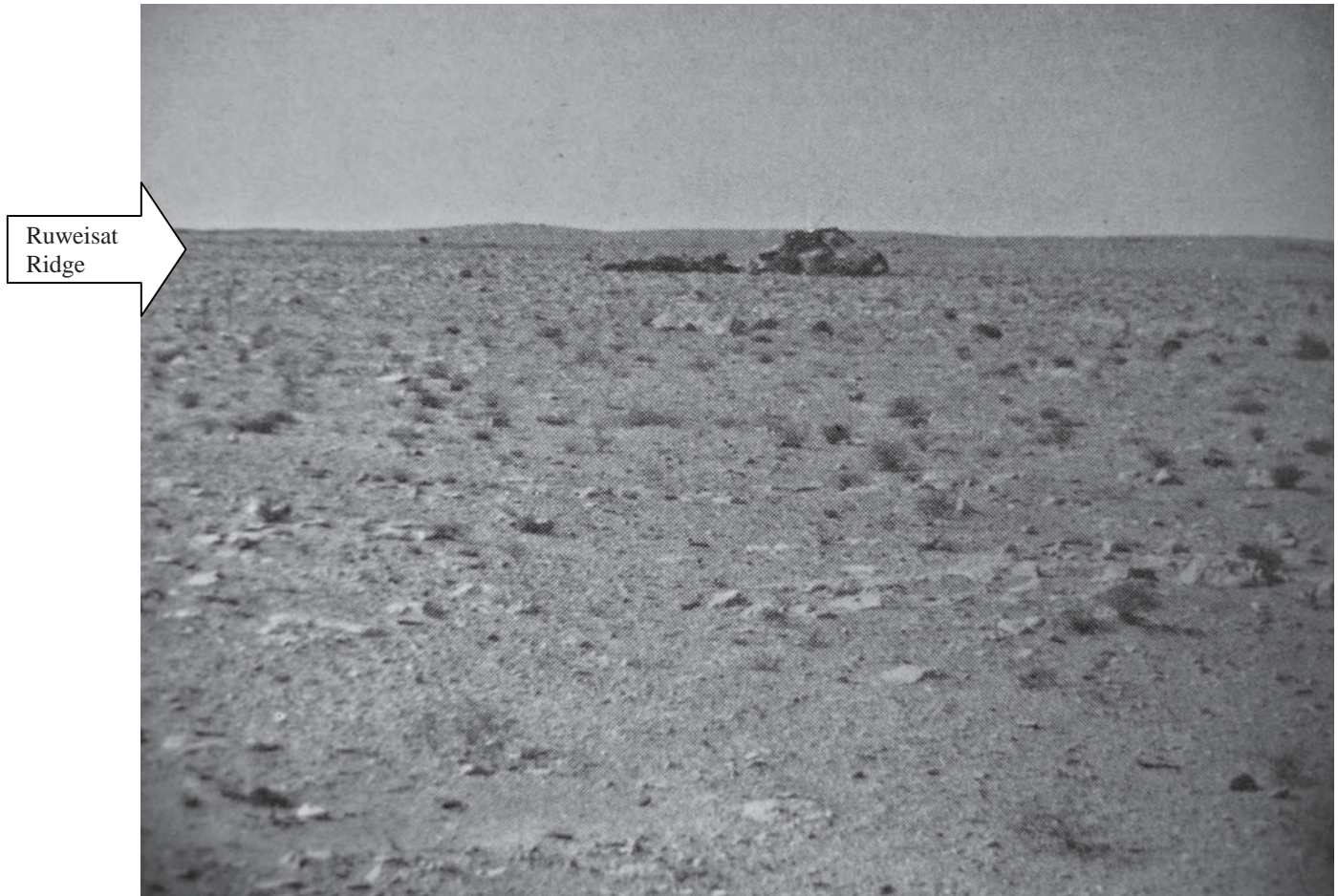


Figure 6.1: Ruweisat Ridge, photographed in September 1944⁶⁴

Kippenberger, Scoullar, Bates and Harper all highlight problems with the attack at Ruweisat Ridge which they attribute, quite rightly, to poor planning and coordination.⁶⁵ None of them mention, however, the positive effect of attacking by night and how this reduced the effects of defensive small arms fire, especially when compared to 21 Battalion's action at Bir Ghirba. Unlike Bir Ghirba, the Ruweisat Ridge battlefield offered little advantage to the defender, or to the attacker for that matter, except that at night, attackers enjoyed the initiative because they could not be seen until they were almost on top of the defenders. The defenders were isolated, invisible to other posts, and

⁶⁴ Scoullar, *The Battle for Egypt*, facing p. 102.

⁶⁵ Kippenberger, *Infantry Brigadier*, pp. 159- 165. Scoullar, *Battle for Egypt*, pp. 221- 231 and pp. 303- 307. Bates, pp. 168- 169. Harper, *Kippenberger: An Inspired New Zealand Commander*, p. 155. Glyn Harper, 'From darkness to light: Kippenberger and a tale of two battles' in John Crawford (ed), *Kia Kaha, New Zealand in the Second World War*, Melbourne: Oxford University Press, Paperback Edition, 2002, p. 131.

therefore without mutual support. In this way, the ability to generate firepower, a truer measure of relative strengths than pure numbers, and which was weighted so heavily towards the defender at Bir Ghirba, was nullified. An analysis of battlefield effects using OCOKA considerations is shown in Table 6.4 below.

Observation and Fields of Fire	Although the ridge and the area forward of it where the Italian infantry was located offered good fields of observation and fire to the defenders, these were effectively neutralised by attacking at night. By selecting a Start Line and assembly area far away (10 kilometres) from the Ridge, the attackers were well beyond effective observation and small arms engagement, even by day.
Cover and concealment	The ridge offered little by way of cover or concealment. There was so little cover available that patrols found it difficult to operate by night, as they would be exposed if the enemy fired flares. The digging was so hard that the Italians pushed their defence forward into ground where they could dig in, thereby creating man-made cover. The best concealment was achieved by the night, it being ‘... extremely dark, with no moon.’ ⁶⁶ This is one reason why so many posts were bypassed in the night attack, only to become active once more in 5 Brigade’s rear (between the Ridge and the Start Line) after first light 15 July. During the night attack, the defender’s fire, or more accurately the tracer from their fire, indicated their location. For the attackers, the darkness provided concealment, but not cover.
Obstacles	There were no natural obstacles. The Italians had constructed some wire obstacles and laid a few mines. Many of the mines had been lifted by the Italians from the Allied defensive boxes; ‘They contained a high percentage of duds and infantry could walk over them with reasonable safety.’ ⁶⁷
Key Terrain	The Key Terrain was the ridgeline itself, although its significance was marginal except by day. The Italians were only able to defend the approaches to the ridge there was no other Key Terrain whose possession would aid the defence and impede the attack.
Avenues of approach	5 Brigade (and for that matter the New Zealand Division) had been advised of the avenue of approach to take. 5 Brigade had little flexibility as it had to conform with 4 Brigade on its left and 5 Indian Brigade to its right. The axis of assault was pre-determined. As the left forward unit in 5 Brigade’s assault, 21 Battalion had no opportunity to select its own

⁶⁶ War Diary HQ 2 NZ Div General Staff Vol 6, 1st July 1942 to 31st July 1942. WAI 1 DA 21.1/1/31, NA.

⁶⁷ Kippenberger, *Infantry Brigadier*, p. 159.

	<p>avenue of approach. Given the general orientation of Axis Forces shown in post- battle maps,⁶⁸ from <i>Trento</i> Division in the north, through <i>Pavia</i>, <i>Brescia</i> and to the south to the <i>Littorio</i> Division, it is assessed that the New Zealand attack was from the defender's front as the line was generally oriented towards the south-east. To have assaulted from the south would have (potentially) exposed the New Zealanders to fire from their left flank.</p> <p>Assaulting towards the defences in echelon at different times would have created more confusion to the attackers.</p>
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Table 6.4: OCOKA Terrain analysis for Ruweisat Ridge

Table 6.4 shows that the terrain offered no marked advantage to either the defender or the attacker by night, although the pitch black night led to confusion and much mixing of troops between assaulting companies and battalions. This necessitated that the attack be carried by local initiative. Some light, even a small amount of moonlight, would have been desirable in order to reduce the confusion, yet not allow defenders maximum visibility.

Combat effectiveness factors identified at Ruweisat Ridge include lines of fire and observation, use of obstacles and the amount of light. These are all related. The choice of a night attack negated the advantage of long lines of fire and observation, and served to isolate the defenders, who could then be attacked at close range or bypassed. The dark made tanks impotent and vulnerable to infantry armed with grenades and small arms.

Tactics

The defence was a linear one, with insignificant infantry in depth, no appreciable field defences or fortifications to add strength to the position, and no designated counter-attack force. An examination of a 15 July situation map which marks the general areas of the Axis divisions confirms the linear disposition. "Depth" consisted of two lines of entrenchments with about two miles separating the lines in the New Zealand attack sector. *15 Panzer Division* is shown at the western edge of the ridge covering the gap

⁶⁸ Map Ruweisat Ridge; the morning of 15 July 1942. Scoullar, *The Battle for Egypt*, p. 238.

between the forward divisions and the El Mreir and Deir el Shein depressions.⁶⁹ This is why companies reported initial attacks and then long gaps (in time and distance) before the second line. The group Allen was with, for example, advanced for an additional hour without striking another defensive position. The Axis defence would be classified as “hasty”. The defenders had not been in position long enough to establish a well organised defence.

Axis defensive weapons fire was ineffective. Mutual support from other posts within the defence was ineffective because of the dark. Axis artillery fire was negligible as the attackers were almost on top of the defenders when they were discovered, so it was too late to engage them. 21 Battalion’s official history does not record incoming mortar or artillery fire during the attack, although enemy artillery was present as ‘several Italian field guns in the line of advance were rushed at the point of the bayonet’ and gunners were amongst the PWs taken.⁷⁰ Anti-tank guns had been identified and reported in pre-battle intelligence, but none are reported to have been fired during the attack.⁷¹

Machineguns, firing on fixed lines, so effective at Bir Ghirba, were not reported at Ruweisat. The German panzers, in their laager, proved to be vulnerable to infantry at close quarters, by night, and without close protection from their own infantry. Some panzers were able to be destroyed, others escaped but did not attempt to engage the infantry or to counter-attack, such was their perceived vulnerability in a confusing night action when surprised. Essentially, the conduct of a night attack against a hasty defence negated any firepower advantage the defenders might have had.

Ruweisat Ridge was the first attack that the New Zealand Division had undertaken on such a large scale. The attack was “silent” in that it did not have supporting fire, except for artillery harassing fire, and then only forward of the New Zealand Division’s frontage and until 0030 hours on 15 July.⁷² The purpose of the attack being silent was to allow the

⁶⁹ Map Ruweisat Ridge, Situation at Dawn, 15 July 1942. Cody, *21 Battalion*, p. 173.

⁷⁰ Cody, *21 Battalion*, p. 173 and Draft Section 22 of 21 Battalion 14- 15 July, p.62. 21 Bn Ops File Jun-Jul 42. WAI 1 DA 54/10/27, NA.

⁷¹ NZ Division Intelligence Summaries No. 15 dated 12 Jul 42 and No. 17 dated 14 Jul 42. War Diary HQ 2 NZ Div General Staff Vol 6 1st July to 31st July 1942. WAI 1 DA 21.1/1/31, NA.

⁷² War Diary HQ 2 NZ Div General Staff Vol 6 1st July to 31st July 1942. WAI 1 DA 21.1/1/31, NA.

attackers to get as close to the defence as possible, without the attack being signalled through heavier than normal artillery fire. If the enemy deduced from heavy fire concentrations that an attack was underway, or imminent, then they may have started firing their own artillery on the likely attack approaches, and the defence would ready itself. Surprise would be lost, and the attackers would sustain early casualties to indirect covering fire. Clearly, the tactic of a silent attack worked. Silent attacks carry certain risks, among them being that if the attack is compromised early, it may then be too late to provide timely and effective artillery cover to the attackers. Another disadvantage of the silent attack is that the defences are often intact, physically and mentally, as they have not been subjected to a heavy barrage. This has to be weighed up against the advantage of surprise.

As stated earlier, a number of writers have criticised the poor planning for this attack, which was undertaken by three different divisions. A comparison of the New Zealand Division Operation Orders for the Ruweisat attack (Operation Order Number 12), and the attack onto El Mreir (Operation Order Number 13) written just one week later, illustrates how much detail was missing from the first order and therefore just how much was learned from the Ruweisat Ridge operation, especially in terms of coordination.⁷³

It is not intended to examine the higher level issues of the attack. 21 Battalion's tactics within the assault and its level of experience were similar to the other battalions within 5 Brigade, with two notable exceptions. These were the battalion's attack frontage, and the disorganised state in which the unit reached its objective. It is only these aspects which will be examined, and they are related, as will become evident.

Kippenberger delivered verbal orders for the attack to 5 Brigade's COs. These were followed up in writing, standard procedure following verbal orders, designed to confirm any changes that may have resulted from comments and questions by commanders. There

⁷³ NZ DIV Operation Order No. 13 issued 21 July 1942. War Diary HQ 2 NZ Div General Staff Vol 6 1st July to 31st July 1942. WAI 1 DA 21.1/1/31, NA.

were no questions after these orders.⁷⁴ Allen, however, misinterpreted the frontage 21 Battalion was expected to cover during the attack. In paragraph 3 of 21 Battalion's Operation Order No. 1 (the extract quoted earlier), 21 Battalion's order stated that 5 Brigade would be advancing on a frontage of 2,000 yards, that is, 1,000 yards for *each* of the two forward Battalions; 21 Battalion would therefore be responsible for covering half the total brigade frontage, 1000 yards. 5 Brigade's order, delivered at 1130 hours on 14 July stated in paragraph 4:

4. Assault will be carried out 23 BN on right, 21 NZ Bn on left, 22 BN in RES. Fwd Bns will be deployed on a 1000 yd front.⁷⁵

Kippenberger has defended the way the frontage was expressed in his orders. Despite this, 5 Brigade's order is open to misinterpretation, and it certainly was not interpreted correctly by Allen. In the campaign narrative, note 6B says, in part 'Major General Kippenberger states that he is sure 21 Bn misinterpreted his verbal orders...' and in paragraph 4 of the narrative where the possibility of an error was raised, Kippenberger has added a note 'As ordered. Clear enough though ill expressed. (H.K.K.)'⁷⁶ To achieve the 1,000 yards Allen believed the battalion was responsible for, he instructed that the unit's forward rifle sections be dispersed at 60 yard intervals.⁷⁷ This had an adverse effect on control, and as was related in the description of the battle, individuals, platoons and companies quickly became separated. On a very dark night, additional spacing made the maintenance of cohesive groups almost impossible. 23 Battalion also had some of its members separated, but it still managed to arrive on the objective in cohesive company groups, as they were not spread as wide as 21 Battalion, for their CO had not misinterpreted the order.

⁷⁴ Kippenberger, *Infantry Brigadier*, p. 163.

⁷⁵ Verbal Orders by Brigadier H.K. Kippenberger D.S.O., at HQ 5 NZ INF BDE, 1130 hrs, 14 Jul 42, para 4. Appendix 1 to Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Part III and Appendices. Emphasis added. See also Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II, Note 6B to p. 34.

⁷⁶ Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Part III and Appendices, note 6B to p. 34 and pagination to p. 39 paragraph 4.

⁷⁷ 21 NZ Battalion Operation Order No. 1 dated 14 Jul 42, Appendix 1 to Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Part III and Appendices.

In deciding to reduce the frontage he had been ordered to attack on, Kippenberger, 'accepted with certainty' that pockets of enemy on the flanks of the assault would be missed out, even with the reserve battalion being assigned a mopping up role.⁷⁸

Numerous pockets of bypassed enemy became active at first light, which prevented the anti-tank guns and machine guns joining their parent battalions on the ridge. Although the bypassed tanks and infantry did not prevent 21 Battalion reaching the objective, the dark had allowed the unit and the remainder of 5 Brigade to attack an enemy which would have been beyond their capacity to do so in daylight.⁷⁹ The price they paid was that the bypassed enemy did not surrender- they remained in place and fought on after first light.⁸⁰

Despite 21 Battalion not being combat effective, this attack highlights a number of pertinent factors. A significant factor relates to the capacity to generate high volumes of small arms fire. In this case, the Italian's ability was degraded significantly by the dark. The New Zealanders, by contrast, were able to overwhelm infantry and tanks at short range. The night attack proved to be a good tactical choice, but it came with increased requirements for adequate control measures. Finally, as it relates to this attack, was 21 Battalion's misunderstanding of attack orders, which resulted in lost control due to extended frontages employed in error, rather than the tighter frontages demanded by the almost complete darkness. This suggests that correct interpretation of the detail within orders, and not just the mission statement, is a factor in a unit being effective or not.

This was the first significant night attack on a large scale. Infantry advanced on foot with reserve troops following behind. Further back, were the battalion and brigade support weapons and vehicles, with 'all the paraphernalia needed by the foot soldier to defend himself against a morning counter-attack.'⁸¹ Even though the assault on Ruweisat Ridge

⁷⁸ Kippenberger, *Infantry Brigadier*, p. 161.

⁷⁹ Extract from Major- General C.E. Weir (then CRA, 2 NZ Div), in Appendix 6 to Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Parts I and II.

⁸⁰ Bates, p. 168.

⁸¹ Bates, p. 152.

did not go well, a pattern for Allied attacks in the desert had begun to emerge which would be perfected at the Battle of El Alamein in October 1942.

Command and Leadership

A key requirement of command at every level is to be able develop and execute a plan. Allen's role was to correctly interpret Kippenberger's orders, and then combine standard procedures with his own experience to plan and execute a battalion attack. Planning 21 Battalion's operation was straightforward; the other New Zealand battalions attacked in a similar fashion, other than frontage. It is also known that Allen ordered digging tools not to be carried in the assault. 21 Battalion did not take sticky bombs, which allowed a number of tanks to escape.⁸² These examples demonstrate Allen's low level of infantry experience. Kippenberger, on the other hand, recognised instantly that members of 21 Battalion were not carrying digging tools (despite the written Brigade Operation Order that they must) and reversed Allen's order. This showed Kippenberger's experience and attention to detail.

Allen lost control of the unit almost as soon as it crossed the Start Line. Without any form of communication, and with widely separated sub-units, he was unable to monitor or modify progress. Early on in the advance he sent his adjutant to locate one of the companies. Later, Allen and his Intelligence Officer became separated when Allen who thought a company was heading off bearing, went off on his own to re-orient it.⁸³ Allen was therefore without his principal advisers during the attack, and was reduced to "commanding" a small group of stragglers, totally out of touch with his companies and brigade headquarters.

Kippenberger took a soft line about Allen when summarising 21 Battalion's performance at Ruweisat, whilst at the same time making it clear that in Allen's death, he had lost a

⁸² Kippenberger, *Infantry Brigadier*, p. 176.

⁸³ R.B. Abbott to Cody, letter, 1951. 21 Bn Ops File Jun- Jul 42. WAI 1 DA 54/10/27, NA.

commanding officer, and a friend.⁸⁴ Allen was a Regular officer, a Royal Military College Duntroon graduate from the Class of 1916, with 23 years service in the New Zealand Permanent Staff before embarking with the First Echelon in January 1940. What Kippenberger failed to mention in *Infantry Brigadier* was that Allen was actually a signals corps officer, and therefore had little, if any, practical infantry experience before his appointment as CO 21 Battalion.⁸⁵ In Greece, Allen was with Divisional Signals (where he was awarded an OBE). On return from Greece, Allen commanded the “C” Infantry Training Depot in Egypt until being appointed CO 21 Battalion on 7 December 1941. Kippenberger would subsequently admit Allen ‘knew extremely little about infantry work’ and that he ‘had never commanded infantry in action, and during the short opportunities that I had for training his bn in Syria I found him surprisingly ignorant of infantry work.’⁸⁶

Ultimately, Kippenberger took an enormous risk in appointing Allen to command an infantry battalion on operations, and both Allen and 21 Battalion paid the price- the former with his life. Allen may have been a ‘delightful companion and inimitable raconteur’⁸⁷ but he was not a capable or experienced *infantry* officer and should therefore never have been given command of 21 Battalion. To his credit, Allen was leading from the front when contact was made, and amidst all the confusion of battle, he was determined to bring forward his reserve company.

As the battalion lost its cohesion, company and platoon commanders came into their own by gathering up groups of stragglers and leading them towards the objective. The actions of Butcher, Marshall, Wallace and McElroy, all described earlier, attest to this. Together, they represent an emerging trend, of individuals using their initiative, unsupervised, to complete a unit’s mission.

⁸⁴ Kippenberger, *Infantry Brigadier*, p. 176.

⁸⁵ Personal File, 4005 Stanley Fairgrieve Allen. NZDF PA.

⁸⁶ Harper, *Kippenberger: An Inspired New Zealand Commander*, pp. 157- 158.

⁸⁷ Kippenberger, *Infantry Brigadier*, p. 176.

Combat effectiveness factors highlighted at Ruweisat Ridge were the competence and experience required of the CO, the use of forward command, situational leadership and the ability to exercise command. Allen was not an infantry officer. While brave, and exhibiting plenty of drive, he misinterpreted orders, became too embroiled in the battle- in effect commanding too far forward- and by becoming separated from his adjutant and intelligence officer, he was unable to exercise control. Ruweisat Ridge is the first operation where “situational leadership” is identified, where subordinates took over from injured or separated superiors, or to rectify problems, on their own initiative.

Sociological Factors

The troops waited in slit trenches for three days for confirmation the attack was on. While they waited, they were occasionally under enemy fire. This does not appear to have diminished the men’s morale. Wallace recalled ‘... we had a decent rum issue before starting and everyone was in fine fettle.’⁸⁸ It seems Lieutenant Ron Shaw’s platoon received a double issue.⁸⁹ The Battalion’s mortar officer reported:

... all went well until the first real opposition was met. The troops were in excellent shape and rushed in. Everything moved fast and prisoners, shouting and firing confused the picture.⁹⁰

Some men thrive on action. Two stand out in this battle. Given that McElroy was the commander of Headquarters Company and not a rifle company commander, it is noteworthy that he became involved in the attack at all. He ought to have been back with the battalion’s transport, well behind the Start Line. Nevertheless, he certainly had an impact, and was awarded an immediate DSO for his part.⁹¹ Wallace had this to say about McElroy:

⁸⁸ Wallace to Cody, letter, 13.7.51. 21 Bn Ops File Jun- Jul 42. WAI 1 DA 54/10/27, NA.

⁸⁹ T.G. Wells to Cody, letter, 27th July 1951. 21 Bn Ops File Jun- Jul 42. WAI 1 DA 54/10/27, NA.

⁹⁰ G.S. Rogers to Cody, letter, Aug 1951. 21 Bn Ops File Jun- Jul 42. WAI 1 DA 54/10/27, NA.

⁹¹ Citation for Immediate D.S.O. McElroy, Major Henry McElroy: 21 Bn. Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Part III and Appendices.

So far as McElroy is concerned he always was up with the Battalion for some reason... he probably liked being shot at. Both times he was wounded later in the desert he was 2 i/c Bn and on both occasions up with the forward troops somewhere.⁹²

Another man of action was Sergeant S.V. Lord, who destroyed two tanks by killing the commanders, climbing on board and dealing with the crew by grenade and Tommy gun. He was awarded an immediate Distinguished Conduct Medal for this action.⁹³

The most significant sociological factor identified at Ruweisat Ridge was the will to fight exhibited by certain men and exemplified by McElroy and Lord. Lord dealt with tanks and McElroy came forward and contributed appreciably to the wider 5 Brigade operation. These men were self-starters, or fighters, whose presence had a positive effect on those around them and who took positive steps on their own initiative. Rest, ahead of the battle, was also identified as having a positive effect.

Fog of War

The Fog of war abounded at Ruweisat Ridge. Aerial photographs which could have given the New Zealand Division a better understanding of the defensive posture were over-exposed and thus unreadable. This may not have been such an issue, had the infantry patrols been able to get close enough to allow a proper understanding of the dispositions of the enemy to be confirmed. They may have determined that there were no enemy located between the forward strongpoints and the ridge.⁹⁴ Differing map series and inconsistent numbering of topographic points also added to the general confusion.⁹⁵

⁹² Wallace to Cody, letter, 3/8/51. 21 Bn Ops File Jun- Jul 42. WAI 1 DA 54/10/27, NA.

⁹³ Citation for Immediate D.C.M. Lord, Sgt Stuart Victor: 21 Bn. Walker, Campaign Narrative- The Attack on El Ruweisat Ridge, Part III and Appendices.

⁹⁴ Scoullar, *The Battle for Egypt*, p. 233. WO1 Farmer, who led a night patrol on night 13/14 July 1942 recorded that the activities of his reconnaissance patrol to Ruweisat Ridge were 'hampered by RAF flares over en lines.' Night Patrol- Ruweisat Ridge Night 13- 14 Jul 42, Report by WO1 JD Farmer, Attached to Jul 1942 section, 21 Battalion Chronology. WAI 1 DA 54/11/1 (17179 Pt 1), NA.

⁹⁵ Scoullar, *The Battle for Egypt*, pp. 224- 225. Playfair, *British Fortunes Reach their Lowest Ebb*, p. 346 nl.

Allen's misinterpretation of Kippenberger's order about frontage is an example of where one miscommunication or misunderstanding can have significant second and third order effects. In this instance, it resulted in a greater loss of control and thus the fragmentation of the battalion. The pitch black moonless night literally added to the "fog" by curtailing observation severely, which in turn affected command and control. Combined with lack of wireless communications within the battalion, command and control problems were magnified.

Even elements following on behind the brigade were not immune from the fog. There was confusion among the anti-tank platoons that were meant to be guided along behind the assault troops, as one member of the 21 Battalion Anti-tank Platoon recalled:

The organisation was 'Up a gum tree'. The bloke in front did not lead us in any known direction and all we did was follow on. After driving around for some time the portee I was on lost contact with those in front. I had no idea where we were.⁹⁶

Ruweisat Ridge highlighted the greater requirements for control, achieved by clear orders, tight coordination, and a simple plan. Situational awareness, supported by navigation and good control measures, were all absent in this attack. The required level of control required for a complex night attack would be achieved at Miteiriya Ridge, which is covered in the next chapter.

CONCLUSION

21 Battalion's attack on Ruweisat Ridge ought to have been relatively straight-forward, however the cumulative effects of a range of factors identified demonstrates the dynamics of battle. The attack was laid on. All 21 Battalion had to do was advance within sector. It did. However, when it arrived at the objective, it was not in the same cohesive group as the other battalions. The other units had their share of members become separated, but the

⁹⁶ B.T. Robertson to J.F. Cody, letter, 27-6-1951. 21 Bn Ops File Jun- Jul 42. WAI 1 DA 54/10/27, NA.

defining difference between 21 Battalion and the other five attacking battalions was the state of cohesion on the objective at first light. The other units were located in organised groups, 21 Battalion was not. The men of 21 Battalion fought well, there is no denying 21 Battalion achieved their share of the destruction wrought on the enemy that night. By misinterpreting a simple single sentence in an order, and without sufficient experience to detect the error, Allen deployed the battalion for a night attack in a manner which guaranteed it could not fight in a cohesive manner, nor could it be brought together once the objective had been secured. Combat effectiveness factors identified by the analysis of Ruweisat Ridge are listed in Table 6.5.

Category	Combat Effectiveness factors identified
Operational Setting	<ul style="list-style-type: none"> • Level of experience of key staff • Acquisition of Intelligence • Allocation of sufficient resources • Higher headquarters planning and synchronisation
Force Strength	<ul style="list-style-type: none"> • Posture
Battlefield Effects	<ul style="list-style-type: none"> • Effect of long lines of observation and fire • Effect of light (night and extremely dark, in this case)
Tactics, Doctrine and Training	<ul style="list-style-type: none"> • Ability to produce high volumes of fire • Correct understanding and interpreting of orders • Adequate control measures
Command and Leadership	<ul style="list-style-type: none"> • Competence and experience of CO • Forward command • Ability to exercise command • Situational leadership
Sociological	<ul style="list-style-type: none"> • Rest • Will to fight • Presence of “fighters” (Mc Elroy et al)
Fog of War	<ul style="list-style-type: none"> • Misunderstanding of orders (friction) • Navigation/ situational awareness (fog of war)

Table 6.5: Combat Effectiveness factors identified at Ruweisat Ridge

The battlefield effects and force strength of the enemy (by day) were reduced because the attack was conducted at night. The key factors detracting from 21 Battalion’s combat

effectiveness were tactics (incorporating Allen's misinterpretation and the complete unpreparedness for controlling night movement) and the fog of war. In 21 Battalion's favour was the situational leadership and initiative exemplified by "fighters" such as McElroy and Lord who could grasp a situation, take action and lead others forward by their example. The battlefield effect of minimal light negated the force strength of defenders, who might otherwise have engaged earlier and over greater range, causing increased casualties to the attacker. The absolute dark allowed the attackers to achieve surprise and then to overwhelm defended posts at close range.

Some themes are evident. There must be adequate time for preparation at all levels, including the need for effective ground reconnaissance. This includes the requirement to correctly identify the enemy, to assign reasonable resources and to undertake coordination. This is particularly important when the enemy is in prepared positions. Rehearsals, preferably in terrain and light conditions close to what would be encountered, would have allowed potential problems to be identified. Bir Ghirba demonstrated the need to overcome enemy defensive firepower in a daylight attack. Ruweisat Ridge, however, showed the value of surprise with a silent attack by night, so the enemy could be taken at close quarters whilst the time that attackers spent in defensive killing zones was much reduced. The third theme is the need to maintain control within an attack, especially at night. Simple plans, limited objectives and better navigation and direction keeping techniques assist with this. The final theme to emerge is the leadership and initiative shown by junior commanders in battle, particularly once control had been lost.

At this stage of the war, sixteen months after first being committed to action in Greece, the New Zealand Division was still a novice organisation. They had, however, started to embrace night operations. In the next two battles analysed (Miteiriya Ridge and Halfaya Pass) the improved combat effectiveness of the New Zealand Division and 21 Battalion will be evident.

CHAPTER 7

MITEIRIYA RIDGE: 23/24 OCTOBER 1942

‘Without an accurate conception of danger we cannot understand war.’
- von Clausewitz, *On War*¹

‘...we were in a raging inferno which words fail to describe’.
- Clem Hollies, 21 Battalion²

Miteiriya Ridge was the New Zealand Division’s objective in Operation *Lightfoot*, the first phase of the battle of El Alamein.³ The attack took place on the night 23/ 24 October 1942. Under General Bernard Montgomery’s direction, Eighth Army preparations for the attack were thorough and included ‘instructions for the detailed and intensive training in the particular tasks which each unit was to undertake in the offensive.’⁴ 21 Battalion benefited from experienced division and brigade headquarters staffs. As an indicator of the growing confidence and experience of the New Zealand Division, battle drills and other practical procedures developed by them were adopted by other divisions.⁵ The entire formation was becoming more professional, and 21 Battalion with it.

This chapter describes 21 Battalion’s actions at Miteiriya Ridge, where the unit captured an area occupied by elements of *II/62 Battalion* of the Italian *Trento Division*. There was stiff fighting. This time, unlike their previous performance at Ruweisat Ridge, 21 Battalion arrived on its objective as an organised unit. It was capable of exploiting beyond the objective in a disciplined manner and it was ready, with the support of tanks and support arms, to defeat a German counterattack. This chapter will only examine the action as far as the morning of 24 October, for even though the battalion then remained in place for a further 48 hours, the morning of 24 October represents the end of the assault phase for 21 Battalion. This chapter confirms the tactic of a night attack as a positive

¹ von Clausewitz, *On War*, p. 133.

² Clem Hollies, ‘Infantryman with the 2nd New Zealand Division in World War II, 1939- 1945’, unpublished, Accession Number 1996.222, KMARL, pp. 35- 36.

³ 5 Brigade OPOD No. 8 of 20 Oct 42. 21 Battalion War Diary October 1942. WAI 1 DA 54/1/34, NA.

⁴ Walker, *Alam Halfa and Alamein*, p. 220.

⁵ Barton Maughan, *Australia in the War of 1939- 1945 Series 1 (Army): III. Tobruk and Alamein*, Canberra: Australian War Memorial, 1966, pp. 652- 653.

determinant of effectiveness in Second World War infantry combat and demonstrates the favourable effects achieved through thorough preparation and rehearsal. It confirms the growing trend of situational leadership among members of 21 Battalion.

BACKGROUND TO THE BATTLE

The Eighth Army plan for Operation *Lightfoot* was based on a frontal assault.⁶ The four infantry divisions of 30th Corps were to attack abreast, simultaneously as Map 7.1 shows.⁷ The infantry divisions were to penetrate the extensive defences sited behind deep minefields laid by Axis troops over a period of three months. These densely laid minefields were so heavily mined that the Germans referred to them as “*teufelsgarten*”, “Devil’s Gardens.”⁸ Once the infantry had crossed the minefields to close with the defenders, engineers following behind the assault troops were to clear lanes through the minefields so that tanks of 10th Corps could pass through. Rather than advance beyond the 30th Corps infantry, Montgomery planned for the Allied armour to adopt defensive positions at the forward (western) edge of the penetration, where they would then be supported by 30th Corps infantry, artillery and anti-tank weapons, and from where it was intended they would defeat counter-attacks as the means of destroying the enemy forces overall.⁹ Moonlight was deemed an essential requirement.¹⁰ This was to ensure that there was sufficient light for minefields to be cleared, so that tanks could then pass through unscathed.¹¹ In short, the attack was ‘a well-prepared, well-rehearsed, set-piece attack on a four divisional front, preceded by the biggest artillery barrage up until that time.’¹²

⁶ Walker, *Alam Halfa and Alamein*, p. 214.

⁷ Middle East Training Memorandum No. 7, *Lessons from Operations Oct and Nov 1942*, undated, p. 3 and John Bierman and Colin Smith, *The Battle of Alamein: Turning Point, World War II*, New York: Penguin Group, 2002, p. 255.

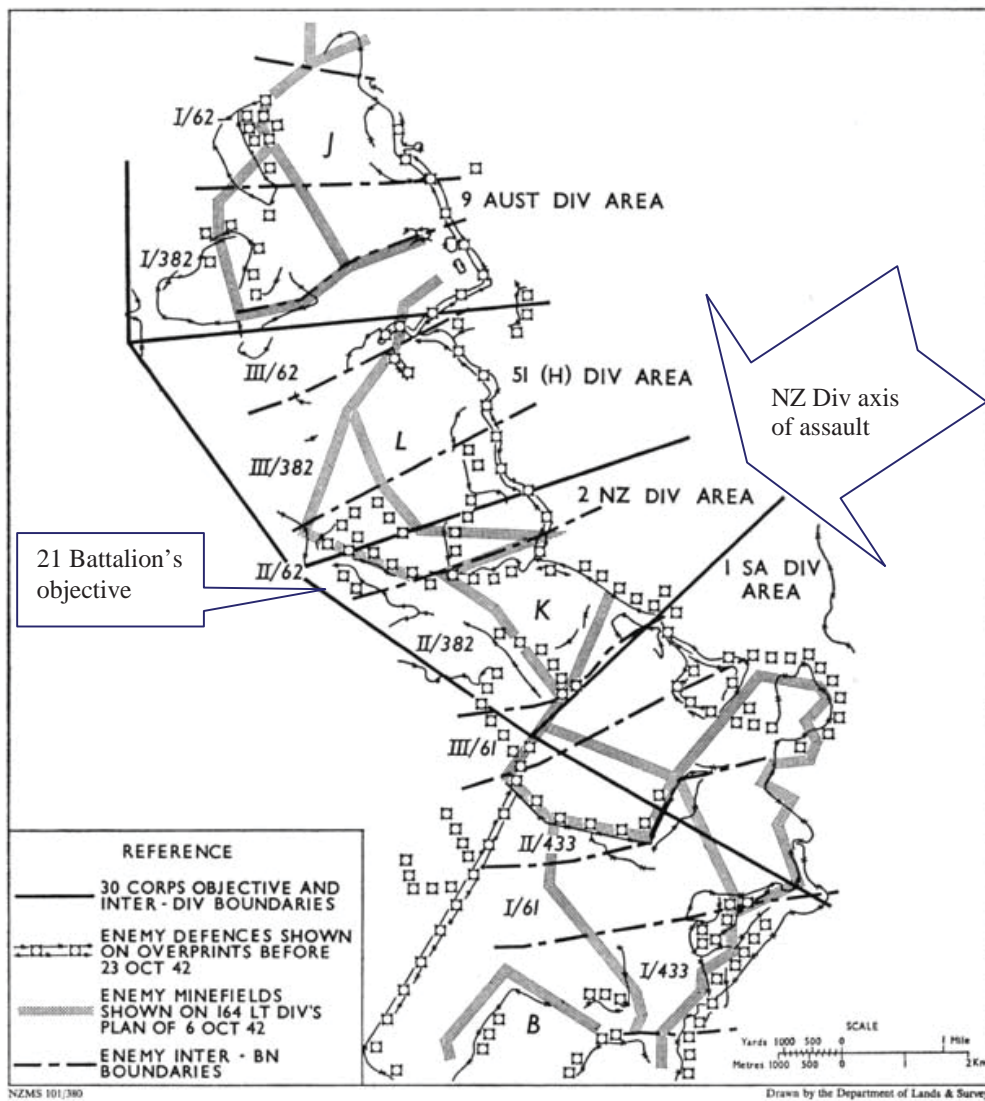
⁸ William Schneck, ‘Breaching the Devil’s Garden: The 6th New Zealand Brigade in Operation Lightfoot The Second Battle of El Alamein’, unpublished, Fort Belvoir, Virginia: Night Vision Directorate, 2004, p. 7.

⁹ Walker, *Alam Halfa and Alamein*, p. 214.

¹⁰ Michael Howard, *Grand Strategy Volume IV August 1942-September 1943*, London: Her Majesty’s Stationery Office, 1972, p.66. Field-Marshal The Viscount Montgomery of Alamein, *El Alamein to the River Sangro*, London: Barrie & Jenkins Ltd, 1973, p. 19.

¹¹ Greene and Massignani, p. 219 and Brigadier J.R.I. Platt, *The Royal Wiltshire Yeomanry 1907- 1967*, London: Garnstone Press Ltd., 1972, p. 123.

¹² Noel “Wig” Gardiner, *Freyberg’s Circus: Reminiscences of a Kiwi Soldier in the North African Campaign of World War II*, Auckland: Ray Richards Publisher, 1981, pp. 79- 80.



ENEMY DEFENCES IN 30 CORPS' SECTOR

Map 7.1: Enemy defences in 30 Corps' sector¹³

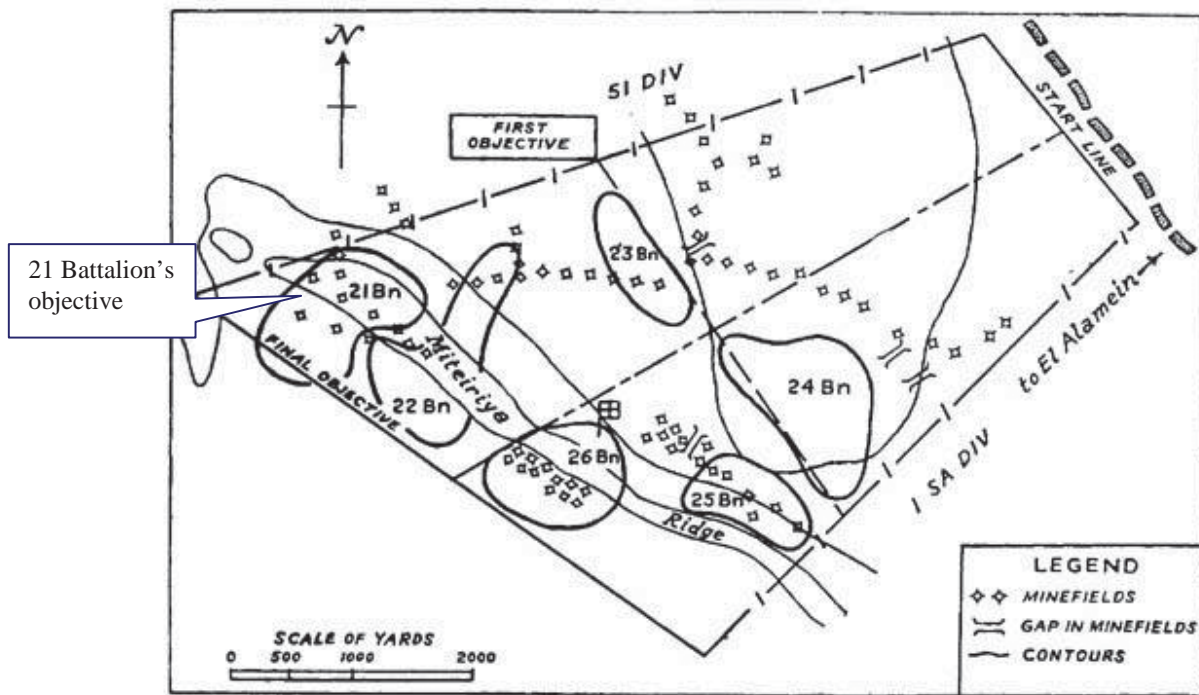
THE COMBATANTS

21 Battalion

The New Zealand Division's task was to attack and occupy a 5,000 yard section of Miteiriya Ridge. The New Zealand Division divided its attack zone in half, with 5

¹³ Walker, *Alam Halfa and Alamein*, p. 199. Text box and arrow added.

Brigade to attack on the right (northern) and 6 Brigade on the left (southern) sector. Map 7.2 shows the battalion objectives of 5 and 6 Brigade. Both New Zealand brigades planned to conduct their attacks in two phases. In the first phase, a single battalion from each brigade was to advance from their Start Line for approximately 3500 yards, stop, and dig in. In the second phase, each brigade was to advance its remaining two battalions a further 3,000 yards beyond the first battalions, to their objectives on the ridge. In both phases, all New Zealand battalions were to attack on a three company frontage. The assault was based on a simple linear attack which belied the level of planning, coordination and rehearsal required to make it work.



BATTALION POSITIONS, DAWN 24 OCTOBER

Map 7.2: Battalion positions, dawn 24 October 1942¹⁴

The New Zealand attack was to be supported by its own three field regiments, six additional British field troops and a battery of heavier calibre medium guns. In all, the division was to be supported by seventy four 25 pounders and eight 4.5 inch medium

¹⁴ Cody, *21 Battalion*, p. 201. Text box added.

guns.¹⁵ Even though the total number of guns supporting the entire Eighth Army was the greatest concentration of artillery for any attack conducted thus far in North Africa, it was not a large number of guns compared to a First World War barrage.¹⁶

The 5 Brigade mission was to ‘attack and capture MITEIRIYA RIDGE.’ 5 Brigade assigned the first phase task to 23 Battalion. In Phase Two, 22 Battalion was to be on the left and 21 Battalion on the right.¹⁷

21 Battalion’s mission was to ‘attack and capture [a part of] MITEIRIYA Ridge...’¹⁸ The Battalion plan was to attack with A Company right forward, B Company in the centre, and C Company left forward. D Company would be in depth and to the right, advancing behind A Company. Battalion headquarters would advance to the left of D Company, in rear of B Company. Each forward company was to advance with two platoons forward, their men in extended line, at five pace intervals between men. Once the battalion had reached its objective and commenced digging in, D Company was to exploit forward and destroy any guns encountered. The battalion’s plan was a classic “three up” attack to provide the widest frontage, or at least to cover their objective with more assault troops per metre than would be the case with only two companies forward. The depth company would provide a reserve and conduct exploitation beyond the objective to wreak further damage on the enemy. 21 Battalion’s organisation for the attack was:

21 Battalion	(Lieutenant Colonel Harding)
A Company	(Captain Butland)
B Company	(Captain Marshall)
C Company	(Major Smith)
D Company	(Captain Laird)
Mortar Platoon	

¹⁵ Walker, *Alam Halfa and Alamein*, p. 264.

¹⁶ The barrage was ‘rather small’ compared to the First World War. Maj. Gen. J.B.A. Bailey, *Field Artillery and Firepower*, Annapolis: Naval Institute Press, 2004, p. 303. Cody, 28 (*Maori*) Battalion, p. 230.

¹⁷ 5 Brigade OPOD No. 8 of 20 Oct 42. 21 Battalion War Diary October 1942. WAI 1 DA 54/1/34, NA.

¹⁸ 21 Battalion Operation Order No. 1, dated 21 Oct 42. 21 Battalion War Diary. WAI 1 DA 54/1/34, NA.

Anti-tank Platoon

One Troop, Royal Wiltshire Yeomanry (from first light 24 October)

Enemy Forces

The El Alamein Line was a deliberate defence based upon infantry strongpoints set behind barbed wire obstacles and extensive minefields.¹⁹ To minimise Allied superiority in artillery and airpower, Field Marshal Rommel had 'devised a novel system based on defence in depth' utilising extensive minefields boxes, which would be covered by anti-tank and artillery fire. A line of combat outposts were positioned forward of the minefields. The main defence line was 1,000- 2,000 metres behind the outposts.²⁰

Rommel's diary noted that 'Italian troops were interspersed with their German comrades,' and this was confirmed in the New Zealand sector by an Italian prisoner from the *Trento* Division which was reported in an Intelligence Summary (INTSUM) issued by Headquarters New Zealand Division on 2 October.²¹ Map 7.3 shows the Italian *II/62* and *III/61 Battalions* of the *Trento Division* separated by German *III/382* and *II/382 Battalions* of the *German 164 Light Afrika Division*. The Italian defence was stiffened by German "corset staves."²² These were German infantry battalions interspersed with Italian units as a way of shoring up the defence, for the Italians were an acknowledged weak link.²³ In an infantry battle, there was a risk that Italian units would crumble, thereby exposing the flanks of any German units that remained in place.

¹⁹ Martin Kitchen, *Rommel's Desert War: Waging World War II in North Africa, 1943*, Cambridge: Cambridge University press, 2009, p. 310.

²⁰ Schneck, 'Breaching the Devil's Garden', p. 4. Samuel J. Mitcham, Jr., *Rommel's Desert War: The Life and Death of the Afrika Korps*, New York: Stein and Day, 1982, p. 135.

²¹ B.H. Liddell Hart (ed.), *The Rommel Papers*, London: Collins, 1953, p.300 and 2 NZ Div Intelligence Summary No. 63 dated 2 Oct 42, para 2b. HQ 2 NZ Div General Staff, Vol 9, 1st October to 31st October 1942. WAI 1 DA 21.1/1/34, NA.

²² Schneck, 'Breaching the Devil's Garden', p. 7. Mitcham, *Rommel's Desert War*, p. 135.

²³ Bierman and Smith, p. 257- 258. Walker, *Alam Halfa and Alamein*, p. 250.

Enemy dispositions are shown in Map 7.3. The map shows *II/ 62 Battalion of Trento Division* in the area of 21 Battalion's objective.²⁴ The broken lines on the schematic indicate the extent of the *II/ 62* (Italian) and *II/ 382* (German) battalions. The New Zealand campaign history records that 'On the boundary of the Highland and New Zealand sectors *II Battalion of 62 Regiment* was early overrun...'²⁵ It is deduced that 21 Battalion attacked Italian troops of *II/62* of the *Trento Division*, but that there were some German corset-stave elements from *II/382 Battalion* on 21 Battalion's left flank, which were also encountered, as the axis inter-unit boundary shown in Map 7.1 suggests and Map 7.2 supports as well. 21 Battalion's objective was commanded by '...Captain Manassei's *II Battalion, 62nd Infantry Regiment*...' ²⁶ The Italian defenders were well armed, particularly with machineguns and anti-tank weapons. Although probably based on the full strength of the unit and therefore the personnel numbers overstated, the strength of each Battalion of *62 Infantry Regiment, Trento Division* was assessed prior to the attack as:²⁷

Personnel- 602

Anti- tank guns (5 cm)- 12

Anti- tank rifles- 12

Mortars (3 inch)- 3

Heavy machineguns- 12

Light machineguns- 36

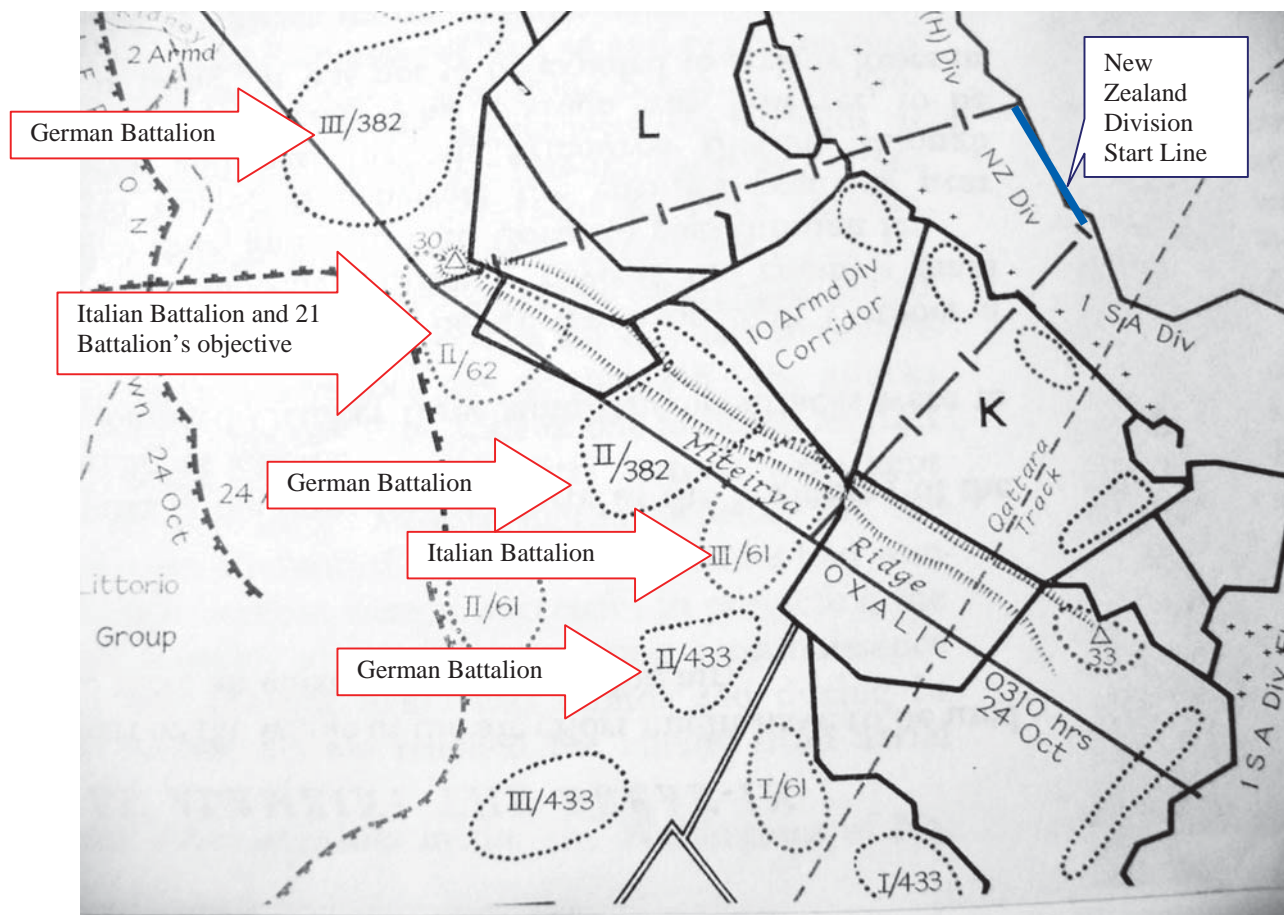
²⁴ Major General I.S.O Playfair, History of the Second World War, *The Mediterranean and Middle East, Volume IV, The Destruction of the Axis Forces in Africa*, London: Her Majesty's Stationery Office, 1966, opp. p. 35, Map 4.

²⁵ Walker, *Alam Halfa and Alamein*, p. 290.

²⁶ Schneck, 'Breaching the Devil's Garden', p. 113.

²⁷ GOC's Papers LIGHTFOOT and SUPERCHARGE. WAI 8 8/4*25A, NA. The figures in the reference are for two battalions, they were halved for a single battalion. The New Zealand Operation Order supported these figures, although expressed them in company strengths as 133 personnel, 3 anti-tank guns, 3 anti-tank rifles, 3 heavy machineguns and 6 light machineguns per company. Appendix "A" to NZ Division Operation Order No. 17, paragraph 2 (b), HQ 2 NZ Div General Staff, Vol 9, 1st October to 31st October 1942. WAI 1 DA21.1/1/34, NA.

The enemy was deployed in two lines of defence within the New Zealand sector.²⁸ The defence was based on a “reverse slope.” This meant the bulk of the defenders were



Map 7.3: Axis dispositions within the New Zealand Division attack zone²⁹

protected from direct fire and observation from the front, but as a corollary, they were therefore not able to contribute to the main defensive battle in the forward killing areas. They were effectively left out of battle in the initial stages. Antitank and infantry killing grounds were sited forward. The main destruction in these killing grounds was to be achieved by anti-tank guns and indirect fire as the weapon allocations above suggest, not by small arms. Mines would add to the destruction of tanks. The angular siting of the

²⁸ *The New Zealand Division in Egypt and Syria: Operations “Lightfoot” and “Supercharge” Part I- Narrative and Lessons*, Headquarters New Zealand Division in the Field, 20th November 1942 Headquarters, p. 2.

²⁹ Playfair, *The Destruction of the Axis Forces in Africa*, Map 4.

minefield rows would cause tanks to turn side on to the anti-tank guns, thus exposing their weaker armour. Forward of the main killing areas were the outpost troops whose tasks were to prevent the enemy closing up on the main line without warning, to provide information about the attack and, though this was not possible given the information gleaned from aerial photographs, to conceal the disposition and strength of the main line.³⁰

Map 7.4 below does not identify the defenders or show any of their unit boundaries, but if it is compared to Map 7.3, the Italian *II/62 Battalion* locations can be identified within the top half of 5 Brigade's attack sector. Map 7.4 depicts a well prepared defence, in depth, with a forward defence zone along the line of 23 Battalion's objective and a main defence zone on the reverse slope of Miteiriya Ridge, with machineguns, mortars and anti-tank guns. Defences in the rear are shown in two main clusters as indicated by the arrows and the words "pits" (not the circles with the four legs, which indicate anti-tank mines). This map confirms that there were two main defensive areas defending along the rear of the New Zealand sector. A and B Companies would have struck the *II/62 Battalion* position, whereas C Company's axis was along an Axis inter-battalion boundary (between Italian *II/62* and German *II/382*) which the map shows was less strongly defended, and which supports the contention in 21 Battalion's official history that C Company had 'a relatively easy passage on the left.'³¹

The defenders had laid extensive minefields and the main line of resistance consisted of a continuous line of battalion strongpoints.³² 'All Axis positions had been dug-in, wired and covered by machineguns, mortars, anti-tank guns and artillery.'³³ Positions were well camouflaged.³⁴ No significant barbed wire obstacles were noted in 21 Battalion's official history, although the map indicates a major belt along the approximate line of 23 Battalion's objective, and a lesser one just forward of the rearmost defence line. It is

³⁰ Condell and Zabecki, p. 125.

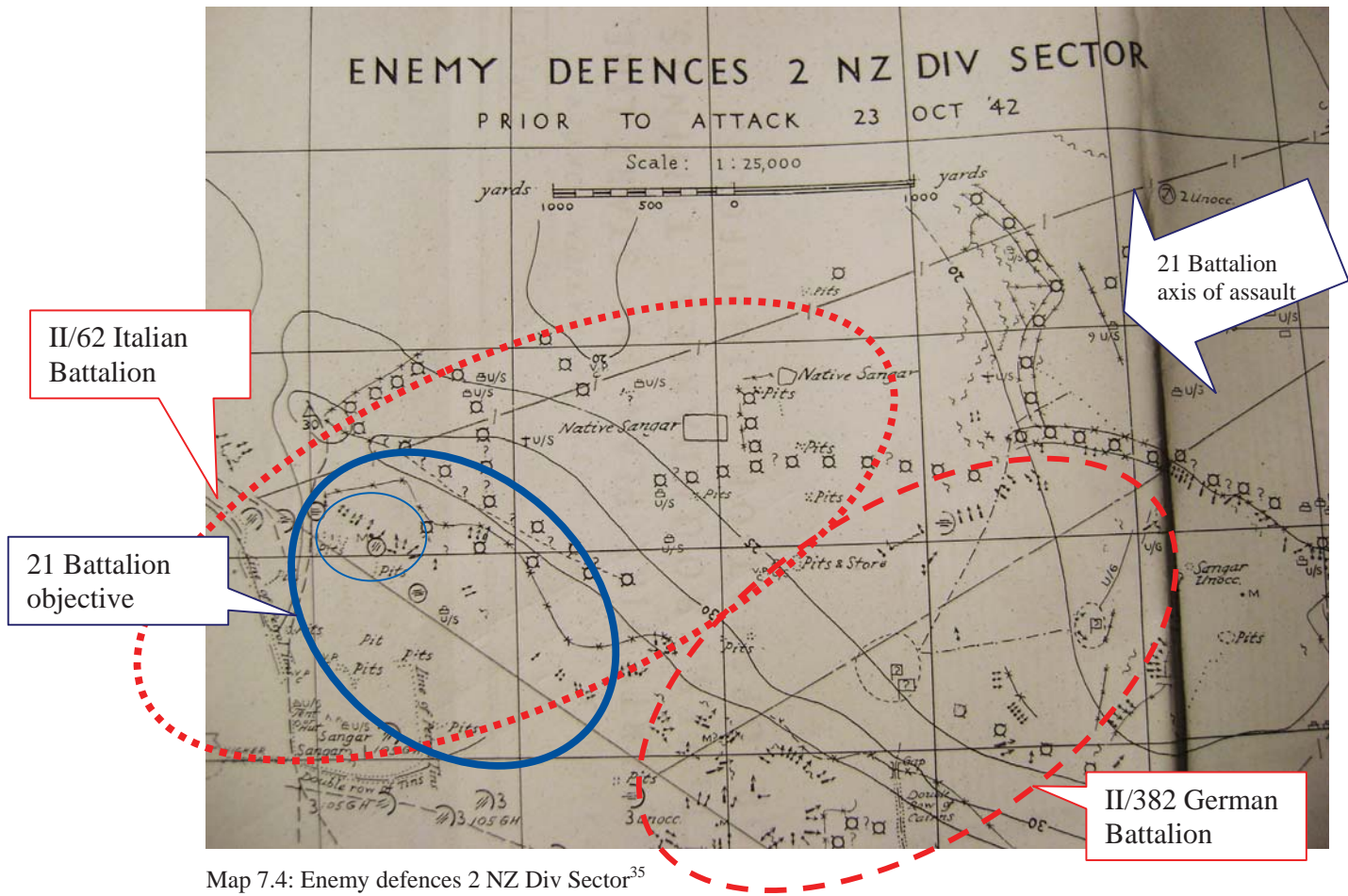
³¹ Cody, *21 Battalion*, p. 202.

³² Greene and Massignani, p. 217. Liddell Hart, *The Rommel Papers*, p. 300. Nigel Hamilton, *The Full Monty: Montgomery of Alamein 1887- 1942*, London: Penguin Books, 2002, p. 670.

³³ Robin Neillands, *Eighth Army: The Triumphant Desert Army that held the axis at bay from North Africa to the Alps, 1939-45*, New York: The Overlook Press, 2005, p. 156.

³⁴ William Schneck, 'Breaching the Devil's Garden', p. 9.

deduced, as they were not mentioned, that the wire obstacles were not a significant barrier to the attackers.



Map 7.4: Enemy defences 2 NZ Div Sector³⁵

Summary of Key Events

21 Battalion crossed its Start Line on time at 0055 hours on 24 October. Companies advanced in 'bright moonlight.'³⁶ The battalion came under enemy mortar and artillery fire from the start, and started taking casualties immediately, which in a lesser trained or motivated unit, might have resulted in the attack becoming disorganised and losing

³⁵ Map No. 3 "Enemy Defences 2 NZ Div Sector Prior to attack 23 Oct 42, *The New Zealand Division in Egypt and Syria: Operations "Lightfoot" and "Supercharge" Part II- Maps and Diagrams*, Headquarters New Zealand Division in the Field, 20th November 1942. Ovals and text boxes added.

³⁶ Cody, *21 Battalion*, p. 200.

momentum.³⁷ As the attack progressed, enemy fire intensified. Although casualties were caused by indirect fire and the battalion's War Diary stated 'most' were, Kippenberger noted that 'many "mortar" casualties were in fact caused by anti-personnel mines.' In the marginalia of the campaign narrative, Kippenberger wrote 'Yes and most of [the] shell casualties [were] from S mines.'³⁸

Despite mounting casualties, 21 Battalion maintained the laid down rate of advance of 100 yards every three minutes, following closely behind the creeping barrage. The battalion also kept to its designated attack formation.³⁹ Navigation was undertaken by companies and the Intelligence (or "I") Section. Overall control was assisted by wireless communication between companies and battalion headquarters.⁴⁰ Wireless was now employed for inter-company communication, which made this possible. Contact was maintained with the Highland battalion on 21 Battalion's right flank.⁴¹ When it was found contact was lost with 22 Battalion on the left flank, OC C Company directed his depth platoon into the gap and contact was re-established. This level of control, and the calm exhibited during the advance before enemy pits were encountered and attacked, was a significant improvement from that which was exhibited at Ruweisat Ridge. This is attributed to established and rehearsed drills, the control measures put in place, use of wireless, the reasonable level of light, and good morale.

The artillery barrage had not been effective, as sufficient defenders remained in a fit state to fight. As the battalion's official history noted, it was only when 'the ridge proper was reached the fighting really commenced.'⁴² Given the width of the New Zealand objective,

³⁷ R.L. Kay, Campaign Narrative- 2 NZ Division: Volume VII, The Battle of Alamein (23 October- 4 November), Chapter 8, Part I: Operation 'Lightfoot', KMARL, p. 18.

³⁸ Kay, Campaign Narrative- The Battle of Alamein, Chapter 8, Part I: Operation 'Lightfoot', Note 2 to p. 18. The German 'S' or "Shu" mine was also known as the "Bouncing Betty" for when it was tripped, a charge fired the mine into the air to waist height and then a second and larger charge detonated the mine firing 360 ball bearings. Bierman and Smith, p. 255.

³⁹ Kay, Campaign Narrative- The Battle of Alamein, Chapter 8, Part I: Operation 'Lightfoot', p. 18.

⁴⁰ Cody, *21 Battalion*, pp. 201- 202.

⁴¹ Brian Abbott reported that this was a fairly easy task as the Highlanders on the flank were playing the bagpipes. R.B. Abbott, interview, Paparimu, 11 April 2011.

⁴² Cody, *21 Battalion*, p. 202.

each gun had to cover a frontage of 46 yards.⁴³ Defenders survived the artillery bombardment, protected by their underground posts, and were therefore able to offer resistance. A more prolonged bombardment- several hours- would more likely have achieved greater destruction, but more importantly, would have incapacitated the defenders. Fire and movement was employed by 21 Battalion to subdue enemy posts offering resistance. By a combination of envelopment and bayonet charges:

Several successful actions were fought against machine-gun posts. While two sections of 10 Pl B Coy engaged one post, Sergeant H.J. Bramwell worked round to a flank with a third section, and captured one heavy and two light machine guns.⁴⁴

The enemy main enemy position on and in rear of the ridge was:

silenced as post after post was rushed and the German occupants bayoneted or shot. There were not many prisoners.⁴⁵

The reference to ‘German occupants’ supports the evidence that some of the enemy encountered by 21 Battalion were Germans. Clem Hollies, out on the left flank with C Company recorded in his account ‘We pressed on, passing odd groups of dazed Italians and Germans, totally cowed by the ferocity of our guns, but we left them to the Maoris who were “cleaning- up” behind us.’⁴⁶ As they were attacking along the boundary between the German and Italian battalions, C Company must have struck the edge of *II/382 Battalion* or a German observation post, security detachment or local “corset stave” position. This possibility is evident in the small “elbow” at the forward edge of the German *II/382 Battalion* visible in Map 7.3.

⁴³ Cody, *21 Battalion*, p. 201.

⁴⁴ Kay, Campaign Narrative- The Battle of Alamein, Chapter 8, Part I: Operation ‘Lightfoot’, p. 18

⁴⁵ Cody, *21 Battalion*, p. 202.

⁴⁶ Hollies, ‘Infantryman’, p. 36. Emphasis added.

The Battalion reorganised on the ridge, a formed body, ready for further action. Companies dug in and the success signal was fired at 0300 hours (the battalion's War Diary states 0245 hours).⁴⁷ Wireless communication was established between companies and cable was laid to provide a field telephone network as well. The remaining 23 men of D Company, under the leadership of Lieutenant Peter Robertson, exploited forward as per the original plan, searching for enemy guns which they intended to destroy with demolition charges prepared for them for just this purpose by the New Zealand engineers. They destroyed four Italian artillery pieces, three anti-tank guns and a number of machineguns. In addition, they killed and wounded many enemy and captured 100 prisoners.⁴⁸ The remnants of *II/ 62 Battalion* were 'reported to be fleeing to the west.'⁴⁹

21 Battalion remained on its objective, supported by a Royal Wiltshire Yeomanry squadron which had arrived at first light, despite some of their tanks being destroyed by mines.⁵⁰ 21 Battalion remained in position until Sunday 26 October, often under heavy shellfire, a further indicator that Allied counter-battery fire directed against the German artillery had been ineffective, for German guns had survived. The Germans mounted a major counter-attack on 26 October which was driven off, aided by a concentrated artillery barrage and Yeomanry tanks.⁵¹

⁴⁷ The difference in reported timings is noted at Kay, Campaign Narrative- The Battle of Alamein, Chapter 8, Part I: Operation 'Lightfoot', note (4) to p. 19.

⁴⁸ Kay, Campaign Narrative- The Battle of Alamein, Chapter 8, Part I: Operation 'Lightfoot', p. 19. Lieutenant Robertson was awarded a Military Cross for his conduct during the battle- taking command of the company after the company commander was wounded, leading the company forward 'through intense mortar and machinegun fire' and for leading the exploitation patrol afterwards. Kay, Campaign Narrative- The Battle of Alamein, Chapter 8, Part I: Operation 'Lightfoot', Notes to p. 19.

⁴⁹ Schneck, 'Breaching the Devil's Garden', p. 182.

⁵⁰ Robin Kay, 27 (*Machine Gun*) Battalion, Wellington: War History Branch, Department of Internal Affairs, 1958, p. 280.

⁵¹ War Diary 21 Battalion, entry for 26 October, 1942. WAI 1 DA 54/1/34, NA.

OUTCOME

Mission Accomplishment

21 Battalion was combat effective at Miteiriya Ridge, even though it had sustained a considerable number of casualties in achieving its mission. 21 Battalion completed all it had been required to: it had secured its objective, exploited beyond it in a controlled manner and, in conjunction with the Yeomanry tanks and artillery, repelled a counterattack. When it was relieved, the battalion marched seven miles back to the rear; the men 'were dead beat and just lay down and went to sleep in the open.'⁵²

Casualties and Losses Sustained

The attack cost 21 Battalion 122 casualties.⁵³ This represents a staggering 49 percent of those in the assault.⁵⁴ As ever, the bulk of the casualties were suffered by the rifle companies, A Company in particular.⁵⁵ The casualty breakdown between officers and Other Ranks was 4 officers and 33 ORs killed, 5 officers and 78 ORs wounded, one OR missing and one OR taken prisoner.⁵⁶ The number of casualties was so high that some companies and platoons had to be amalgamated, and the Anti- Aircraft Platoon assigned an infantry role when the battalion re-organised on its objective, ready to defend its part of the ridge against counterattack.⁵⁷ The officer casualty rate among the rifle companies was particularly high given that nine of the 16 who took part in the attack were wounded or killed.

The only Italian casualties which can be determined with any degree of certainty are the prisoners taken by 21 Battalion. General Freyberg's diary noted that across the division

⁵² Hollies, 'Infantryman', p. 38.

⁵³ War Diary 21 Battalion, entry for 23 October, 1942. WAI 1 DA 54/1/34, NA and Cody, *21 Battalion*, p. 206.

⁵⁴ 21 Battalion's bayonet strength at the start of the attack was just 249 men. Kay, Campaign Narrative- The Battle of Alamein, Chapter 8, Part I: Operation 'Lightfoot', p. 128 (para 32).

⁵⁵ Walker, *Alam Halfa and Alamein*, p. 287. Cody, *21 Battalion*, p. 206.

⁵⁶ Kay, Campaign Narrative- The Battle of Alamein, Chapter 8, Part I: Operation 'Lightfoot', p. 39.

⁵⁷ Cody, *21 Battalion*, p. 207.

there were 260 prisoners who were ‘Italians of Trento best lot we have ever seen- just as good as Germans.’⁵⁸ Given the D Company patrol under Lieutenant Robertson accounted for 100 of the 130 tally by 21 Battalion, it is plain that many more Italians (and Germans) were killed, rather than captured, in the fighting on and forward of the objective. The men were fired up.

	Personnel				Total Casualties
	KIA	WIA	PW	MIA	
21 Battalion	37	83	1	1	122
<i>II Battalion/ 62 Regiment</i>	unknown	unknown	130+ ⁵⁹		130+

Table 7.1: Casualties sustained at Miteiriya Ridge

The high New Zealand casualty rate shows the battle of Miteiriya Ridge was no walkover, despite the artillery barrage. Not only was the fighting stiff, but mines laid by the defence and indirect fire not fully destroyed or suppressed by the Allies, contributed to the high number of casualties. The attack took 21 Battalion just two hours to complete between crossing the Start Line at 0055 hours and firing the success signal at 0300 hours.

ANALYSIS OF COMBAT EFFECTIVENESS

Operational Setting

Rommel could not afford to conduct a further attack. Chronic shortages of fuel and limited artillery ammunition meant that he had little choice but to defend, or withdraw.⁶⁰ The perceptive and experienced General Sir Francis Tuker summarised Rommel’s tactical option as ‘to keep the Eighth Army battering away at the strong, fixed defences of the Alamein defences and there to employ the marked German heavy anti-tank

⁵⁸ Notes of Conference at 1600 hrs (25th October)[1942]. GOC’s Diary 3 Sep 42- 2 Sep 43. WAI 8 44/45 Box 5, NA.

⁵⁹ Cody, *21 Battalion*, p. 203.

⁶⁰ *Rommel’s Desert War*, p. 135.

superiority in keeping the far more powerful British Armour from opening up the battle and running free on the desert to the west.’⁶¹ Rommel’s defensive preparations allowed time for Montgomery to build up his forces.⁶²

Rommel’s choice of defensive location was sound. With its dominating ridge, his defensive line was anchored to the north by the sea and to the south by the ‘impenetrable salt marshes of the Qattara Depression.’⁶³ It could not be enveloped by land.⁶⁴ Any attack would have to be frontal. The question was where and when Montgomery would strike.⁶⁵ Rommel assumed that Montgomery would attack with his armour leading and so the scheme of his defence was based on defeating Allied tanks first, rather than infantry.⁶⁶ This proved to be a mistake on Rommel’s part.

In optimising the defence for defeating tanks, Rommel sited extensive minefields, up to 6,000 yards in depth in some places, forward of his defence positions.⁶⁷ Axis engineers did not have the heavy plant required to construct anti-tank ditches, which could have been dug closer in, as a final and total block.⁶⁸ Rommel thought minefields of such depth would force the Allies into a deliberate and lengthy breaching operation. Minefield boxes became tank killing areas based on strongpoints. The role of the anti-tank weapons and mortars within those strongpoints was to defeat tanks and disrupt the mine breaching parties. Rommel’s own panzers, the few available, were to be held in reserve in small groups where they could be deployed to any area where an allied breach seemed likely.⁶⁹ It would be a battle of attrition rather than the manoeuvre Rommel was used to fighting.

⁶¹ Lieutenant General Sir Francis Tuke, *Approach to Battle: A Commentary Eighth Army, November 1941 to May 1943*, London: Cassell & Company Ltd., 1963, p. 217. Tuke was a British officer who commanded 4 (Indian) Division in the Middle East.

⁶² Matthew Wright, *Desert Duel: New Zealand’s North African War 1940- 43*, Auckland: Reed Books, 2002, p. 110.

⁶³ Platt, p. 124.

⁶⁴ Howard, p. 67.

⁶⁵ Paul Carrell (transl. Mervyn Savill), *The Foxes of the Desert*, London: MacDonald & Co. (Publishers) Ltd., 1960, p. 271.

⁶⁶ Schneck, ‘Breaching the Devil’s Garden’, p. 13.

⁶⁷ Platt, p. 124.

⁶⁸ Schneck, ‘Breaching the Devil’s Garden’, p. 7.

⁶⁹ Schneck, ‘Breaching the Devil’s Garden’, p. 9.

Despite their depth and density, the minefields only contained 8% of anti-personnel mines within them and therefore were not well suited as an infantry barrier. They were more appropriate for channelling and destruction of Allied tanks, as infantry could tread on an anti-tank mine and it would not detonate.⁷⁰ The task of Rommel's infantry was subordinated to protecting the minefields and counterattacking to recover any ground lost.⁷¹ As a result, the positions were at their weakest when attacked by infantry, at night, particularly if the assault troops were willing to risk crossing the minefields on foot. Rommel ought to have deployed stronger infantry outposts forward of, and within his minefields, in order to force sufficient delay so that any night attack was still held up within the killing areas at first light, where they would then have been more vulnerable to indirect and direct fire from the defence.

The arrival of General Montgomery on 12 August 1942 injected the Eighth Army with renewed purpose.⁷² Kippenberger recalled after Montgomery's arrival 'Now we were told we were going to fight, there was no question of retirement... the morale of the whole Army went up incredibly.'⁷³ Correlli Barnett, possibly Montgomery's severest critic,⁷⁴ characterised Montgomery as a man of 'precision, punctuality, caution and close control; [whose] plans were shaped and explained with the exactness of a watchmaker.'⁷⁵ When pressed by Churchill to attack, Montgomery resisted.⁷⁶ Having halted Rommel at Alam Halfa in September, Montgomery decided that he would not rush headlong into an immediate counterattack.⁷⁷ He needed time for his army to train, for a deception plan to be put in place, and for sufficient quantities of ammunition and fuel to be stockpiled.⁷⁸ He had shown stronger character than his predecessors, by resisting pressure from Prime

⁷⁰ Schneck, 'Breaching the Devil's Garden', p. 7.

⁷¹ Ronald Lewin, *The Life and Death of The Afrika Korps: A Biography*, London: B.T. Batsford Ltd., 1977, p. 171.

⁷² Neillands, pp. 146- 147. Lewin, p. 162.

⁷³ Kippenberger, *Infantry Brigadier*, p. 196.

⁷⁴ Allan D. Converse, 'Churchill's Armies at War: Morale and Combat Efficiency in the 50th (Northumbrian) and 9th Australian Divisions, 1939-45', PhD Thesis in Philosophy, Brandeis University, 2007, p. 2.

⁷⁵ Correlli Barnett, *The Desert Generals*, Edison, New Jersey: Castle Books, 2004, first published 1960, p. 252.

⁷⁶ Hamilton, pp. 644- 645 and 666- 667.

⁷⁷ Schneck, 'Breaching the Devil's Garden', p. 53.

⁷⁸ Maughan, p. 640. Neillands, p. 154.

Minister Churchill to attack.⁷⁹ Montgomery's insistence on thorough training and its consequent positive impact on morale and coordination was to pay dividends at infantry battalion level, even if Operation *Lightfoot* did not achieve all of its intended aims. With a plan resembling a First World War attack, Montgomery was not offering any new tactics, but what he did provide was 'firm leadership... and a plan that everyone could understand.'⁸⁰

Montgomery enjoyed numerical superiority over the Axis forces.⁸¹ He recognised the extensive minefields would preclude close tank support and therefore dictated that the attack be made by an overwhelming infantry force.⁸² To achieve this effect, he employed four infantry divisions side by side, attacking simultaneously, which had never been attempted previously in the Middle East theatre. This gave him concentration of force amongst the infantry. Despite this, the overall Eighth Army combat power at the decisive point was weakened by the separation from armour due to the minefields, and by Montgomery spreading his artillery fire across the entire front to support his deception plan as well as the attack. That said, Montgomery did not expect an instantaneous victory, he 'warned his officers to expect a 'dogfight' lasting about ten days, and he was right.'⁸³

Half of Montgomery's artillery superiority was directed on other targets rather than in direct support of the four division infantry attack.⁸⁴ The strength of the artillery support was eroded further within the New Zealand Division. Freyberg recognised that the battle would be similar in style to those in the final stages of the First World War. On that basis, he allocated the greater proportion of his division's organic artillery to provide a creeping

⁷⁹ Barnett, p. 260.

⁸⁰ James Holland, *Together We Stand: North Africa 1942-1943: Turning the tide in the west*, London: HarperCollinsEntertainment, 2005, pp. 340- 341.

⁸¹ Howard, p. 68.

⁸² Maughan, p. 642.

⁸³ Howard, p. 67. A sceptic might say that the selection of the date of for launching *Supercharge* and Montgomery's "prediction" of no more than ten days dogfight were based on the known date of the American landings to the west (Operation *Torch*) which would likely cause Rommel to withdraw. See Howard, p. 66 and Barnett, p. 272.

⁸⁴ General Taker (General Officer Commanding 4th Indian Division) estimated that only 408 guns of the 1000 were actually fired in support of the main attack. Taker, p. 241.

barrage, as used in the First World War, for the infantry to hug as it advanced forward.⁸⁵ To achieve an effect on known enemy locations, to provide cover and be a guide to the advancing troops, 4 Field Regiment was tasked to fire a series of concentrations on enemy positions, while 5 and 6 Field Regiments were directed to provide the creeping barrage in front of 5 and 6 Brigades to neutralise the enemy.⁸⁶ The guns supporting 21 Battalion would be firing on a frontage at the objective of 46 yards per gun.⁸⁷ The number of guns available was not huge (on a First World War scale), but was the biggest concentration to date, demonstrating what could be achieved when divisions and corps were focused on a single objective rather than how they had been widely dispersed during Operation *Crusader*.

The artillery plan for *Lightfoot* was described in the gunners' official history as 'a masterpiece of making do with resources not really sufficient for the task.' While the idea of providing concentrations and a creeping barrage were the correct artillery tactics, the number of guns applied was too few to be fully effective.⁸⁸ General Sir Francis Taker was blunt, 'the [creeping] barrage is a wasteful and rigid form of artillery support that holds up successful troops and deserts the unsuccessful.'⁸⁹ Robin Neilland's offered this account which suggests that the Allied artillery was overwhelming:

The relative quiet was suddenly torn apart as a thundering, crushing barrage of shells from over 1,000 guns rained down on the enemy positions. This was the first major artillery barrage of the war, the first since the massive artillery bombardments of the Western Front during the First World War, and shattering.⁹⁰

Despite Neilland's stirring description of a "crushing barrage" and "shattering" effect, the evidence suggests that, in fact, the Allied counter-battery fire and aircraft attacks on Axis gun lines beyond the range of the 25 pounders were not effective. As a result, Axis

⁸⁵ Harper, 'From darkness to light', p. 134.

⁸⁶ W.E. Murphy, 2nd *New Zealand Divisional Artillery*, 1966, pp. 177- 378.

⁸⁷ Cody, *21 Battalion*, p. 201.

⁸⁸ W.E. Murphy, 2nd *New Zealand Divisional Artillery*, 1966, p. 377.

⁸⁹ Taker, p. 220.

⁹⁰ Neillands, p. 157.

artillery was able to play a key role in the defence by causing significant casualties, even if they could not prevent infantry positions being overrun by the New Zealanders. There were complaints that the artillery did not kill enough enemy.⁹¹ German records stated that many men survived the barrages, as did much of the artillery.⁹² Mitchum wrote 'The German gunners had wisely held their fire against Montgomery's thousand-gun barrage, and thus had not been destroyed by it.'⁹³ This accounts for the stiff fighting the New Zealanders had to undertake on and beyond the ridge and for the casualties sustained by 21 Battalion from Axis indirect fire during the assault itself. Abbott laid the 21 Battalion Start Line under fire, 'for enough [enemy] guns and mortars were unsilenced (sic)' to make the job especially hazardous.⁹⁴ It was communications within the Axis line which were most disrupted, and which prevented them knowing just where the Allies were attacking.⁹⁵ Tucker summarised the key failings of the battle:

Herein lies the basic cause for those long twelve days of fighting now known as the Second Battle of Alamein, namely, insufficient guns at the decisive point- the main attack. Eighth Army had split its decisive offensive power almost equally between the north, the winning blow, and the south.⁹⁶

Attack boundaries, objectives and timings were pre-determined, as the operation was large, involving two corps. This left little opportunity for manoeuvre, but the benefit was that it maximised opportunities for standardisation and the introduction of common drills.⁹⁷ Despite the high level direction, and as a sign of its growing maturity as a fighting formation, the New Zealand Division plan of attack was developed collegially at a number of conferences which provided a forum for lessons learned to be shared and applied. Kippenberger stated 'We sat around a relief model and discussed point by point

⁹¹ Bailey, p. 307.

⁹² Walker, *Alam Halfa and Alamein*, p. 287. Cody, *21 Battalion*, p. 206.

⁹³ Mitcham, p. 139.

⁹⁴ Cody, *21 Battalion*, p. 200.

⁹⁵ Ronald Walker, *Alam Halfa and Alamein*, p. 287. Cody, *21 Battalion*, p. 206.

⁹⁶ Tucker, p. 242.

⁹⁷ Maughan, pp. 650- 654. Maughan provides an excellent account of the types of drills developed and rehearsals conducted.

every phase and detail of our task.’⁹⁸ This was to be no repeat of Ruweisat Ridge. The collegial approach illustrates the emergence of a professional and focused New Zealand Division headquarters staff.

This battle identifies the crucial role of a headquarters in directing and allocating time for training and proper rehearsals, thereby reducing the fog of war, and having a positive impact on combat effectiveness. Under Montgomery’s direction, higher headquarters planning was thorough, and synchronised. Detailed information was acquired about the enemy, and information was passed down to the lowest levels. This, coupled with rehearsals, had a positive effect on morale and resulted in a well controlled infantry attack, despite mounting casualties. The New Zealand Division headquarters staff were gaining in competence too, and they led the way in developing techniques to overcome the particular coordination issues caused by night operations. Miteiriya Ridge represented a significant improvement in combat effectiveness from Ruweisat Ridge.

Force Strength

The New Zealand Division had not received reinforcements for some time. 21 Battalion’s bayonet strength was just 249, with an average strength of 62 for each of the four rifle companies.⁹⁹ This made it half strength in reality. It is appropriate to include the depth company (D Company) numbers, as they sustained casualties and participated directly in the attack by exploiting beyond the objective, killing a number of the enemy, capturing many prisoners and destroying a number of guns.¹⁰⁰ The battalion’s support weapons, supporting tanks, anti-tank guns and machineguns did not participate directly in the attack, so their numbers are not included in the bayonet strength in Table 7.1.

⁹⁸ Kippenberger, *Infantry Brigadier*, p. 224.

⁹⁹ R.L. Kay, Campaign Narrative- 2 NZ Division: Volume VII, The Battle of Alamein, Chapter 7: Preparation for the Offensive (7 September- 23 October 1942), p.128 (para 32). After the war, Lieutenant Robertson recalled that the D Company strength was 3 officers and 90 Other Ranks, however this figure has been discounted on the basis of the figures provided in the narrative. P. Robertson to Mr Kay, letter, 28 June [1951]. Bramwell H.J., de Stitger H.J., Robertson P. [Blakey, E.H., McManus, T.] Letters concerning operations of 21 Battalion, Miteiriya Ridge area, 23/24 October, 1942. WAI 1 DA 54/10/25, NA.

¹⁰⁰ Cody, *21 Battalion*, p. 203.

The strengths of the Axis units that 21 Battalion attacked on Miteiriya Ridge are difficult to determine with certainty.¹⁰¹ 21 Battalion attacked elements of *II/ 62 Battalion* primarily. It is impossible to confirm the fighting strength of *II/ 62 Battalion*, the numbers it had on 21 Battalion's objectives and the casualties it sustained, apart from prisoners taken, of which there were more than 130. That equates to an entire Italian company being taken prisoner. Some Germans were intermingled among Italian troops within 21 Battalion's sector, which adds to the complexity.

The estimated strength of the defence assumes *II/62 Battalion* had a starting strength of 602, and was deployed with one company forward in the outpost area of the 23 Battalion objective and one company in the 51st (Highland) Division area adjacent to 21 Battalion. Typically, a company was deployed on outpost duty, forward of each battalion, and arrayed across the entire battalion frontage.¹⁰² Weaker than the more concentrated companies behind, the outpost company acted as a tripwire and was supposed to prevent the attackers interfering with mines and wire obstacles unimpeded. Maps 7.3 and 7.4 show that the mass of *II/62 Battalion* was deployed on and behind the ridge within 21 Battalion's objective, and both suggest a portion (possibly as much as a company) were inside the Highland battalion's objective. Map 7.3 shows a "goose-egg" shaped position forward of *II/62 Battalion* and Map 7.4 marks a series of pits forward of the main defensive position in what would be 23 Battalion's objective. It is assessed that these indicate a company from *II/62 Battalion* was screening forward of the unit's main position. If the forward and flank company numbers (133 each) are subtracted from 602, it is possible that 21 Battalion faced as many as 336 Italians on Miteiriya Ridge, and at least half of *II/62 Battalion's* support weapons.¹⁰³ The New Zealand artillery barrage certainly affected some enemy, but how many were killed or wounded, and how this affected their bayonet strength during the attack itself, cannot be determined.

¹⁰¹ Walker, *Alam Halfa and Alamein*, p. 249.

¹⁰² Schneck, 'Breaching the Devil's Garden', pp. 4 and 15. Apparently these outposts were known as "cannon bait" as they were under orders not to withdraw. Carrell, p. 275.

¹⁰³ This figure is based on the New Zealand Division figures varied by likely dispositions. William Schenk gives the strength of *II/62* as 530, which he says would only be at 75% due to deploying the fourth company forward on outpost duty. That would give a strength of 397, slightly higher than the estimate used in this study, as the outpost company and one other assessed to be in the Highland battalion objective therefore do not count. Schneck, 'Breaching the Devil's Garden', p. 116.

	Bayonet Strength (Infantry)	Anti- tank guns	Anti- tank rifles	Heavy mortars	Heavy	Light
					machineguns	
21 Battalion	249					36
II/ 62 Battalion, less two companies	336	6	6	3	6	18

Table 7.2: Relative strengths at Miteiriya Ridge

The attack was conducted with a 1:1.3 ratio in favour of the defence. The defenders were potentially even stronger, for they were dug in, and had machineguns firing on fixed lines, although the effectiveness of their observation and fire was reduced at night. A night attack was also shown to increase the odds of defeating a well prepared defender. The number of light machineguns would have added considerably to 21 Battalion's combat power when dealing with Italian strongpoints.

This battle highlights the positive impact on combat effectiveness at battalion level when all four of the unit's rifle companies participate in the attack, even if under strength. They would still have carried the same number of Brens and Tommy guns into battle, as they were the key firepower generators of a section. The fourth company allowed the attack to be phased and for a greater frontage to be achieved. The Italian defensive posture was negated by the Allies' use of a night attack.

Battlefield Effects

Like Ruweisat Ridge, Miteiriya Ridge was barely distinguishable from the east, rising only 30 feet above the surrounding desert.¹⁰⁴ This could have created similar issues for navigation and control to Ruweisat Ridge, had it not been for moonlight and adequate navigation drills. 21 Battalion had to advance 4,000 yards from its Start Line to its

¹⁰⁴ Walker, *Alam Halfa and Alamein*, 967, p. 233.

objective¹⁰⁵ This was a considerable distance by night, although significantly less than the 10,000 yards at Ruweisat Ridge. The division's objective was 4,800 yards wide.¹⁰⁶ The brigades therefore had a 2,400 yard sector. Halving the 5 Brigade sector at the objective gives a 21 Battalion objective of 1,200 yards wide, approximately 400 yards per company with three companies forward. An analysis of battlefield effects using OCOKA considerations is shown in Table 7.3 below.

Observation and Fields of Fire	<p>In daylight, the defenders in the outposts would have had excellent observation and fields of fire, on a par with Bir Ghirba. The defence did not use this advantage for 'As a result of their decision to defend primarily from the reverse slope of Miteiriya Ridge, most of the Axis units in the main line of defense would not be able to engage the [mine] breach force...' or the infantry 'on the other side of the ridge.'¹⁰⁷ The reverse slope sacrificed the potential long range observation and fire for cover and concealment from the front.</p> <p>Attacking at night denied any long range advantage to the defender. There was, however, sufficient moonlight for the attacking infantrymen to see each other and to locate and warn others of mines and booby traps.¹⁰⁸ Visibility was limited occasionally due to the 'dust and murk' thrown up by the indirect fire and wafting smoke.¹⁰⁹</p>
Cover and concealment	<p>There was little cover and concealment on the ridge or forward of it. The map suggests that the enemy's main defence, within the division's attack sector, was behind the ridge, which would have offered some concealment from the front. The attackers achieved concealment by attacking in the dark. Defenders created cover by constructing strongpoints.</p>
Obstacles	<p>There were no natural obstacles to movement of the attackers. The defenders' wire had no apparent effect of delaying or breaking up the attack. 445,000 mines were laid by the Germans, some captured from the British.¹¹⁰ Some mines had been booby trapped.¹¹¹ The extensive minefields, caused casualties to the attacking infantry but did not hold them up</p>

¹⁰⁵ Map No. 3 "Enemy Defences 2 NZ Div Sector Prior to attack 23 Oct 42, *The New Zealand Division in Egypt and Syria: Operations "Lightfoot" and "Supercharge" Part II- Maps and Diagrams*, Headquarters New Zealand Division in the Field, 20th November 1942.

¹⁰⁶ Kippenberger, *Infantry Brigadier*, p. 226.

¹⁰⁷ Schneck, 'Breaching the Devil's Garden', p. 116.

¹⁰⁸ Hollies, 'Infantryman', pp. 35- 36.

¹⁰⁹ Cody, *21 Battalion*, pp. 201 and 203.

¹¹⁰ Appendix A to Operation Order No. 17, para. 3 (b) (ii). HQ 2 NZ Div General Staff, Vol 9, 1st October to 31st October 1942. WAI 1 DA 21.1/1/34, NA.

¹¹¹ Gardiner, *Freyberg's Circus*, p. 83.

	appreciably.
Key Terrain	The Key Terrain was the Miteiriya Ridge. There were no other features that afforded a particular advantage to attacker or defender.
Avenues of approach	The main approach was from the east. Axis defences were predicated on this. Operation <i>Lightfoot</i> was undertaken as a frontal attack. The possibility of envelopment was discarded by Montgomery because he wanted to trap and destroy the enemy in situ. ¹¹² Divisions, brigades and battalions were unable to alter their avenues of approach as the attack axes of assault and objectives were set down by higher headquarters in advance. At company level there was some opportunity for manoeuvre, although the need to maintain contact with flank companies (and units) tended to reduce this until contact was made with the enemy. The ability to move to a flank was most often taken at platoon and section level when assaulting strongpoints, where the dark provided concealment for enveloping manoeuvre.

Table 7.3: OCOKA terrain analysis for Miteiriya Ridge

The most significant combat effectiveness factor in the battlefield effect category was light. Although the attack was conducted at night, there was sufficient moonlight to assist with control, while still reducing enemy visibility. By day, the terrain was very favourable for the defence for they enjoyed unimpeded fields of observation and fire, whilst there was very little cover available for the attackers. This would have made the effects of direct fire devastating, especially if the attackers were held up in the extensive minefields by day. By night, the terrain favoured the attacker, despite the long and open approach. The lack of natural obstacles, which could have otherwise broken up the assault formation and confused the attackers, aided in control.

Tactics, Doctrine and Training

Each Italian company occupied five *centri di fuoco* (fire direction centres) or strongpoints of 16- 18 men. This was different to the three platoon locations that a New Zealand

¹¹² Walker, *Alam Halfa and Alamein*, pp. 209 and 213. General Montgomery's 'Lightfoot: General Plan of Eighth Army' dated 14 September 1942, Hamilton, pp. 660- 661.

infantry company would typically adopt, as 21 Battalion dispositions at Platamon and Pinios Gorge demonstrated. Each Italian strongpoint consisted of three fighting pits sited in an arrowhead formation (middle pit forward of the other two), connected by crawl trenches.¹¹³ Four of the five strongpoints contained an anti-tank gun, a medium machinegun and 1-2 light machineguns. The fifth strongpoint had an anti-tank rifle in place of the anti-tank gun. Therefore, each *centri di fuoco* contained four medium and up to ten light machineguns. This was more than the nine Bren guns a New Zealand rifle company contained. Doctrinally, three of the five strongpoints were located forward and spaced 150 metres apart, with the rear two approximately 200 metres behind.¹¹⁴ This provided frontage, depth and mutual support. An example of one of the company *centri di fuoco* can be made out in the forward battle area of Map 7.4 as five clusters marked “pits” between contour lines 20 and 25.

Italian dispositions were optimised for protecting heavy weapons, so each company was broken into smaller protective elements rather than into three mutually supporting infantry platoons. The Germans, and the Italians like them, had become ‘weapon holders’ and tank followers in daylight, which was assessed as being a result of successful German ‘blitz tactics.’¹¹⁵ In an infantry fight however, especially by night, they were therefore that much weaker, due to being smaller and separated, subordinated to a support weapon protection role.

Strongpoints, and the pits within them, were dispersed to minimise the effects of Allied artillery fire, but still to be close enough to support each other with small arms fire by day, thus achieving mutual support. By night, they were isolated and thus became death traps for the occupants when attacked, as they were unable to be supported by

¹¹³ A crawl trench is a shallow trench connecting deeper fighting trenches and bunkers. They are not intended to be fought from, their purpose is to allow defenders to move below ground between deeper defensive works unobserved and protected from observation, and the effects of indirect and direct fire.

¹¹⁴ 2 NZ Div Intelligence Summary No. 63 dated 2 Oct 42, para 3 (b) (i). HQ 2 NZ Div General Staff, Vol 9, 1st October to 31st October 1942. WAI 1 DA 21.1/1/34, NA. In a memorandum issued after the attack, the assessment of Italian strongpoints was proven to be accurate, see Appendix C Detail of Italian Coy Positions in Area 872296, Middle East Training Memorandum No. 7, *Lessons from Operations Oct and Nov 1942*, undated.

¹¹⁵ Middle East Training Memorandum No. 7, *Lessons from Operations Oct and Nov 1942*, undated, pp. 48- 49.

strongpoints to their flank and rear, who could no longer see them. Visibility (despite the moonlight) was reduced 'to a few yards' due to smoke and dust from the bombardment.¹¹⁶ This provided the attackers local numerical superiority when attacking strongpoints. It also reduced the range over which the defenders could bring small arms fire onto the attackers. Machineguns on fixed lines were still in use, 'Pink and red streaks ran through the fog where tracers from enemy machine guns firing on fixed lines left their colours glowing behind them.'¹¹⁷ Despite this, the strongpoints were isolated.

Even though it was tightly scripted, Montgomery's plan to take on Rommel's defence was 'relatively simple.'¹¹⁸ The attack resembled a First World War style broad frontage infantry assault supported by a creeping barrage.¹¹⁹ A creeping barrage is where artillery is fired, stops, and adjusts towards and through the objective, in '100-yard lifts every three minutes.'¹²⁰ The attackers would "hug" the creeping barrage, staying close to it, so as to arrive at enemy positions as soon as possible after the gunfire lifted, while the defenders were still suffering the incapacitating effects of bombardment.¹²¹

23 Battalion's situation illustrates how weak the creeping barrage at Miteiriya Ridge really was. 23 Battalion got ahead of the barrage. When they stopped moving, the barrage fired in amongst them, without causing any casualties.¹²² Moreover, apart from a few isolated cases, many of the enemy in the main defensive area on the ridge were prepared to fight. The apparent ineffectiveness of the creeping barrage may have been because there were either too few guns, or, the infantry had not followed close enough and the defenders had had time to recover their senses as a result. The evidence suggests both factors, for those parts of:

¹¹⁶ Cody, *21 Battalion*, p. 201.

¹¹⁷ Cody, *21 Battalion*, p. 201.

¹¹⁸ Gardiner, *Freyberg's Circus*, p. 79.

¹¹⁹ Bailey, p. 303. J.F. Cody, *28 (Maori) Battalion*, 1956, p.226. MacGregor Knox, *Hitler's Italian Armies: Royal Armed forces, Fascist Regime, and the War of 1940- 43*, Cambridge: Cambridge University Press, 2000, p. 155.

¹²⁰ Walker, *Alam Halfa and Alamein*, p. 287. Cody, *21 Battalion*, p. 268.

¹²¹ Bailey, p. 307.

¹²² Wright, *Desert Duel*, p. 113.

the line, meeting opposition, fell behind the barrage, and the four battalions approached the objective thinly spread and with large gaps in the line. Here also the barrage was noticeably thinner and visibility seemed to improve so that the enemy was more aware of his danger.¹²³

The problem with any creeping barrage was synchronisation between the artillery and the infantry. The artillery worked off a pre-arranged timetable. All guns lifted and shifted target in accordance pre-determined timings, calculated at 100 yards every three minutes. They could not pause to reflect the true pace on the ground of individual battalions or companies. Defenders, therefore, had the opportunity to gather their senses and prepare to fight if the attacking infantry fell behind the advancing protective barrage.

Training was directed from top down.¹²⁴ Every formation of the Eighth Army had been ordered to train for the attack.¹²⁵ Montgomery realised his was 'an untrained army' and he therefore 'had rewritten his plan of attack until it was about as simple as he could make it.'¹²⁶ The standard of training prior to El Alamein was one of three major Eighth Army weaknesses identified by Montgomery.¹²⁷ 'A forceful training directive from the commander indicating his intention, aim of training and standard to be achieved' was therefore issued.¹²⁸ The highest commander set the tone, and directed that training was to occur.

As an extension of training, realistic rehearsals did much to ensure the success of infantry attacks at battalion level. Rehearsals were designed to resemble actual attack conditions as closely possible, and this contributed significantly to enhanced control during the actual attack. Troops lay up during the day, the rehearsal was undertaken across replica minefields, in the moonlight and with live fire supporting barrages, just as it would be for

¹²³ Walker, *Alam Halfa and Alamein*, p. 269.

¹²⁴ Lewin, p. 162.

¹²⁵ Hamilton, p. 687.

¹²⁶ Bierman and Smith, p. 261.

¹²⁷ The three aspects were leadership, equipment (which he summarised as Sherman tanks, artillery and artillery ammunition) and training. Field- Marshal The Viscount Montgomery of Alamein, *El Alamein to the River Sangro*, London: Barrie & Jenkins Ltd, 1973, p. 17.

¹²⁸ Middle East Training Memorandum No. 7, *Lessons from Operations Oct and Nov 1942*, undated, p.11.

the real thing.¹²⁹ According to Kippenberger, the rehearsals (he called them exercises) ‘were absolutely invaluable in giving some experience to go on.’¹³⁰ A dress rehearsal for the attack, was conducted in full moonlight on the night of 26 September. Real artillery barrages were fired. Ground used was very similar to the New Zealand Division objective. Tracer was fired on inter-brigade and division boundaries.¹³¹ This level of realism, amounting to a full dress rehearsal, had never been undertaken for previous operations. This was effective training; so much more so than the comparatively perfunctory preparatory activities conducted prior to Ruweisat Ridge.

Rehearsals allowed ‘weaknesses in training, organisation and procedure [to] become apparent while there [was] still time for their correction, and Brigadiers and Commanding Officers [were] still able to develop a sound battle drill when they know by experience the practical difficulties of an operation.’¹³² Training was ‘extremely interesting and thorough.’¹³³ Training allowed for the development and practice of common drills and this was the ‘extra factor’ that Montgomery’s insistence brought to the battle.¹³⁴ Drills for occupying an attack Start Line, navigation and for clearing minefields were derived and disseminated to all divisions. Some of the drills, as already noted, had been developed by the New Zealanders.

Infantry tactics for the Allies were straight forward which was allowed for by the unobstructed terrain. Battalions formed up in an extended line on marked Start Lines that oriented them to their axis of advance. Companies then advanced on compass bearings towards their objective, maintaining a broad frontage. It was all very geometric. Maintenance of a broad frontage reduced the chances of missing enemy strongpoints, which if not mopped up, would interfere with minefield clearance operations and delay

¹²⁹ R.L. Kay, Campaign Narrative- 2 NZ Division: Volume VII, The Battle of Alamein, Chapter 7: Preparation for the Offensive (7 September- 23 October 1942), KMARL, p.52 (para 1) and Glyn Harper, ‘From darkness to light: Kippenberger and a Tale of Two Battles’ in, John Crawford (ed.), *Kia Kaha: New Zealand in the Second World War*, Melbourne: Oxford University Press, paperback edition, 2002, p. 133.

¹³⁰ Kippenberger, *Infantry Brigadier*, p. 222.

¹³¹ Schneck, ‘Breaching the Devil’s Garden’, p.105.

¹³² *The New Zealand Division in Egypt and Libya- Operations “Lightfoot” and “Supercharge”, Part I- Narrative and Lessons*, Headquarters New Zealand Division in the Field, 20th November 1942, p. 23.

¹³³ Kippenberger, *Infantry Brigadier*, p. 221.

¹³⁴ Lewin, p. 162.

the move forward of tanks and support weapons. Encounters with the enemy were inevitably at short range. The enemy was attacked immediately with small arms fire, bayonet and grenade.

When a strongpoint was encountered, it was attacked vigorously. Sergeant Bramwell's situation was typical where 'his platoon ran into a whole nest of machineguns, but he left two sections to engage them while he led a third to the flank and rushed the post.'¹³⁵ This example highlights the tactic of fire and manoeuvre applied within 21 Battalion, with one group (the largest) providing suppressing fire, while a small assault group (led by Bramwell) moved to the flank to avoid enemy fire, close with the enemy and kill them at close quarters. To achieve this manoeuvre, the platoon must have been far enough from the strongpoint that it could not be rushed. The use of more men in fire support and less in the assault itself is almost counter-intuitive, but it worked for it ensured that overwhelming fire was generated, to suppress the enemy and to win the fire fight, and it kept the assault group at a manageable size in reduced light conditions.

The men were fired up and the bayonet put to use. Clem Hollies, of C Company, recalled:

we cleared out one strongpoint where the occupants fired at us until we were very near then came out with their hands up. However, with blood lust up, the men could not be stopped and the poor unfortunates were bayoneted.¹³⁶

This battle demonstrates the positive impact a simple plan and thorough rehearsals have on combat effectiveness. Even though this was planned and directed from above, it filtered down to battalion level. Combat effectiveness factors identified in this battle are the need for a simple plan, adequate control measures, use of standard drills, and the conduct of realistic rehearsals.

¹³⁵ Cody, *21 Battalion*, p. 202.

¹³⁶ Hollies, 'Infantryman', p. 36.

Command and Leadership

This is the first attack in which the CO is not mentioned in the official history during the conduct of the assault itself. This lack of personal involvement is attributed to the simple plan and reasonable light, and especially because in this attack wireless had been issued down to company level. Harding was, as a result, able to maintain contact with his companies by radio and this resulted in him not having to wander the battlefield to get information.¹³⁷ This was a significant improvement in the level of situational awareness and control achievable in a night attack. The attack was tightly scripted and went mostly to plan (at unit level), so wireless was not required that much, certainly not as much in Italy in 1943, where the CO would also have to coordinate and direct his own mortars as well as synchronize with tanks and supporting artillery. In addition to wireless contact, the extra visibility provided by the moonlight, the fixed assault formation and bearings, and the creeping barrage all contributed to a previously unachievable level of control in a night attack.

Although it is not recorded in any sources, it is assumed that Harding learned of one particular officer casualty by wireless and that it was he who then ordered (also by wireless) Lieutenant West-Watson forward from D Company to take command of A Company. This was an important decision, as A Company was known to be taking on a difficult task. Indeed, Brigadier Kippenberger had advised Harding before the attack that 21 Battalion's right forward company:

would find a nasty looking knot of posts when it arrived. I told [CO 21 Battalion] Ralf Harding to put his best company at it and he chose Butland's.¹³⁸

By ordering West- Watson forward from the reserve company to replace Butland, Harding sought to prevent one of the A Company platoon commanders having to assume command of the company so that the primary platoon grouping should remain intact. As

¹³⁷ Cody, *21 Battalion*, p. 202.

¹³⁸ Kippenberger, *Infantry Brigadier*, p. 226. The "nasty looking knot of posts" is visible in Map 7.4. It is represented by the line of small arrows (representing machineguns) within the light blue circle.

it was, Lieutenant Catran of A Company had already been killed, command of his platoon having been assumed immediately by his platoon sergeant. Lieutenant West- Watson became a casualty himself shortly after taking command of A Company. Officer Commanding B Company (Captain Marshall) was killed also. The only company commander to reach the objective was Major Smith (C Company). While the casualties from mines and artillery were random, clearly the company and platoon level of command, where constant movement was required in order to maintain contact with platoons and sections, involved increased risk and hence the high number of officer casualties.

Junior officers and non-commissioned officers assumed command when superiors became casualties. Momentum was therefore maintained in the attack. As noted in the battalion's official history, 'The subalterns and NCOs... were more than equal to the occasion.'¹³⁹ Corporal McManus, Sergeant Blakey and Lieutenant Robertson each guided remnants of D Company onto the objective, and once they had gathered the 23 survivors together, Robertson led the "company" out into no-mans land, in accordance with the exploitation plan, to locate and destroy enemy guns.¹⁴⁰ This shows the high standard and confidence of many 21 Battalion officers and NCOs who were willing to take charge after their superiors had become casualties.

Robertson was in good company with McManus and Blakey. Corporal McManus had assumed command of 17 Platoon early on in the attack when, as McManus recalled, his officer and sergeant went missing. By the time he got the platoon to the objective it was reduced to just five men.¹⁴¹ Blakey was in a similar situation once his platoon commander was killed. Blakey was the platoon sergeant and he continued on to the objective with his platoon, just as he was expected to.¹⁴² As was demonstrated at

¹³⁹ Cody, *21 Battalion*, p. 202.

¹⁴⁰ Cody, *21 Battalion*, p. 202.

¹⁴¹ T. McManus to Mr Kay, letter, 5th July 51. Bramwell H.J., de Stitger H.J., Robertson P. [Blakey, E.H., McManus, T.] Letters concerning operations of 21 Battalion, Miteiriya Ridge area, 23/24 October, 1942. WAI 1 DA 54/10/25, NA.

¹⁴² E.H. Blakey to Mr Kay, letter, 21st July, 1951. Bramwell H.J., de Stitger H.J., Robertson P. [Blakey, E.H., McManus, T.] Letters concerning operations of 21 Battalion, Miteiriya Ridge area, 23/24 October, 1942. WAI 1 DA 54/10/25, NA.

Ruweisat Ridge, subordinates were willing to assume command when superiors were killed or incapacitated, although in this instance, because platoons and companies remained intact, the new commander was more likely to be from the same sub-group where familiarity and trust already existed. Junior ranks assuming leadership roles in place of fallen commanders is a recurrent theme identified since Ruweisat Ridge.

This battle highlights the positive impact of wireless as an aid to command and control and for maintaining situational awareness, and thus contributing to combat effectiveness. Until Miteiriya Ridge, wireless had only been available at battalion headquarters level. Prior to Miteiriya Ridge, a CO had to move about the battlefield to exercise command and gain situational awareness, at increased personal risk. The problems were compounded by night. The issue of wireless down to company level meant a CO could get situation reports and pass instructions from a central location. Combat effectiveness factors identified from this battle include the ability to exercise command (noting, for instance, the limitations on Macky at the Pinios Gorge and the benefit wireless would have been), situational awareness by commanders and, as a continuing trend, situational leadership.

Sociological Factors

When Montgomery arrived, the Eighth Army regained a sense of purpose and its morale improved considerably. In addition to the rigorous training he insisted upon, the men were rested. The battalion War Diary for October 1942 lists compulsory swims, easy days, church services and a Kiwi Concert Party performance in the midst of preparation for combat.¹⁴³ A balanced regimen had been struck. Clem Hollies recalled that in the period immediately prior to the attack 'Life was comfortable, plenty of swimming, a balmy climate, fig trees in abundance and daily leave to Alexandria.'¹⁴⁴ In the end, more training than resting was undertaken, but the effect achieved was that the men went into

¹⁴³ Entries for 1-2, 4, 11, 18, 19 October. 21 Battalion War Diary October 1942. WAI 1 DA 54/1/34, NA.

¹⁴⁴ Hollies, 'Infantryman', p. 34.

battle rested, rather than having been on continuous operations, or continuous training, in the period immediately prior to the attack.

The men went into the attack knowing their part and also understanding, for the first time, previously unachieved levels of support were being provided, particularly from artillery and aircraft. This had a positive impact on morale, as the quotes below attest. Having experienced a series of reverses in previous attacks, it was essential that the men understood that this time, resources (tanks, artillery and aircraft) were being applied on an unprecedented scale. This information was passed down to all men in the form of orders. COs were made aware of the plan first. Soldiers were advised also, but to help maintain security, not until just prior to the attack.¹⁴⁵ ‘Every effort was made to ensure that everyone knew his unit’s and his own part in the plan.’¹⁴⁶ Gardiner recalled:

we were thoroughly briefed, right down to platoon level. This was something new and it helped to raise morale.¹⁴⁷

Clem Hollies recalled that in the period of waiting immediately prior to the attack ‘There was a tension in the air, but the men were in good spirits, with plenty of idle chatter and the smoking of innumerable cigarettes.’¹⁴⁸ All the training and briefings had the desired effect. Morale was high, despite the nerves before combat. Men moved forward in the assault despite mounting casualties. It was just like a rehearsal. Clem Hollies recalled:

we were in a raging inferno which words fail to describe—for as the men advanced, cheerful advice was given and passed from mouth to mouth, “mind that wire,” “booby traps to the left,” “slow down on the right,” with parched mouths, adrenalin flowing, almost singing the words...¹⁴⁹

¹⁴⁵ Hamilton, p. 687.

¹⁴⁶ Kippenberger, *Infantry Brigadier*, p. 226.

¹⁴⁷ Gardiner, *Freyberg’s Circus*, p. 79.

¹⁴⁸ Hollies, ‘Infantryman’, p. 35.

¹⁴⁹ Hollies, ‘Infantryman’, pp. 35- 36.

Later, Clem Hollies put the men's behaviour in the attack down to 'Good training. We did a lot of training, all thorough, a terrific amount of good infantry training.'¹⁵⁰ This reinforces the link between realistic training (preferably involving all-arms live firing rehearsals in conditions closely resembling the operation to be undertaken), morale and success in battle.

The analysis of this battle has highlighted that will to fight, morale, small group cohesion and adequate pre-battle rest were positive contributors to the combat effectiveness of 21 Battalion. All of these were enhanced by the effect of Montgomery's arrival and his insistence on thorough training. Adequate rest, realistic rehearsals and passage of information about the attack all contributed to the will to fight of the men. Clem Hollies's comments suggest a good level of small group cohesion; the men had been together for a considerable time, gone through Ruweisat Ridge and there were no green reinforcements for them to mind. They were a team.

Fog of War

The friction inherent in battle was reduced significantly at Miteiriya Ridge through detailed planning and thorough rehearsals. Friction was Clausewitz's 'way of squaring history with theory... why theory did not always work out in reality.'¹⁵¹ Clausewitz believed that the fog of war could be offset through positive doctrine, combat experience, or failing that, 'by genuinely tough training.'¹⁵² David Lonsdale noted that the fog of war and its debilitating effects could be reduced by high morale, rigorous training, combat experience and sensitivity to potential problems.¹⁵³ Martin van Creveld made the same point, especially in relation to experience, although he cautioned against the assumption that it could eliminate friction entirely.¹⁵⁴ Miteiriya Ridge demonstrated that training,

¹⁵⁰ Clem Hollies, Interview, Auckland, 18 July 2006.

¹⁵¹ Hew Strachan, *Clausewitz's On War: A Biography*, Crows Nest, NSW: Allen & Unwin, 2007, p. 153

¹⁵² Strachan, *Clausewitz's On War*, p. 153.

¹⁵³ David Jordan, James D. Kiras, David J. Lonsdale, Ian Speller, Christopher Tuck and C. Dale Walton, *Understanding Modern War*, Cambridge: Cambridge University Press, 2008, p. 36.

¹⁵⁴ Martin van Creveld, *The Transformation of War*, New York: The Free Press, 1991, p.108.

rehearsals and detailed planning could reduce the fog of war. It was then up to the men on the spot to fight through it.

The experience of General Freyberg and Brigadier Kippenberger, who now had time to train and prepare their troops was also a key factor in reducing the fog at Miteiriya Ridge. Wireless meant information could be passed. The creeping barrage, compass bearings and pacers, were all practical aids to maintaining control. Even the choice of 23 October so there would be moonlight- therefore some degree of visibility for the attackers- reduced the confusion and fog, deliberately, from that caused by the extreme darkness at Ruweisat ridge.

The degrading effects of the fog of war on combat effectiveness were minimised by the development of drills, the simple plan, rehearsals and control measures. The moonlit night enhanced combat effectiveness by assisting in the maintenance of control.

CONCLUSION

21 Battalion achieved its mission at Miteiriya Ridge. It was combat effective. In addition to securing its sector of the Eighth Army objective, and despite suffering a significant number of casualties, it was still able to exploit into rear areas after the assault in accordance with its orders, and was in a fit state to repel a German counterattack. This was a significant improvement over the battalion's performance at Ruweisat Ridge.

Although the Ruweisat Ridge attack resembled Miteiriya Ridge- an infantry night attack- the assault undertaken for Operation *Lightfoot* was at a whole new level of professionalism. This level of skill was able to be achieved largely due to the command driven priority afforded to training, and the emphasis placed on realistic rehearsals in conditions that approximated the real attack. The examination of this battle also demonstrates the positive impact of realistic training on morale and in achieving a high level of combat effectiveness. Combat effectiveness factors identified by the analysis of Miteiriya Ridge are listed in Table 7.4.

Category	Combat Effectiveness factors identified
Operational Setting	<ul style="list-style-type: none"> • Acquisition of Intelligence • Higher headquarters planning and synchronisation • Direction and allocation of time for training and rehearsals. • Passage of information
Force Strength	<ul style="list-style-type: none"> • Bayonet strength • Posture (degradation of Italian strength through night attack)
Battlefield Effects	<ul style="list-style-type: none"> • Effect of light (adequate moonlight to assist with control)
Tactics, Doctrine and Training	<ul style="list-style-type: none"> • Adequate control measures • Simple plan • Training and the derivation of simple drills • Realistic rehearsals
Command and Leadership	<ul style="list-style-type: none"> • Ability to exercise command • Situational awareness of commanders • Situational leadership
Sociological	<ul style="list-style-type: none"> • Will to fight • Rest • Small group cohesion
Fog of War	<ul style="list-style-type: none"> • Training and drills as a means to minimise

Table 7.4: Combat Effectiveness factors identified at Miteiriya Ridge

Key factors at play in this battle were the positive effects of training and rehearsals, a simple plan and the high levels of will to fight and group cohesion. The terrain did not afford a particular advantage, and the defender's strength was negated by the choice of a night attack. This battle proved that a night attack could be executed in an organised and disciplined fashion (admittedly over ground which did not have any features that could break up formations) and, thus, set a pattern for future operations undertaken by the New Zealand Division and 21 Battalion. Despite casualties which might have caused the 21 Battalion attack to falter, officers and NCOs took over and continued with the plan which they understood clearly because of the orders given and rehearsals undertaken.

Night attacks had become a tactic of choice to overcome the enemy's direct fire advantages and to isolate enemy posts, making them easier to subdue. Having sufficient

moonlight meant that platoons and companies were more likely to remain intact and in touch, so that when casualties occurred among commanders, a subordinate who knew the men would be more likely to emerge than was the ad-hoc situational leadership seen at Ruweisat Ridge.

The demonstration at Miteiriya Ridge of how an attack could be properly conducted became a significant experience within the New Zealand Division and contributed to its improvement in combat effectiveness. The knowledge and experience acquired at Miteiriya Ridge was put to good use, albeit under wildly different conditions, as 21 Battalion demonstrated with stunning effect at Halfaya Pass.

CHAPTER 8

HALFAYA PASS: 11 NOVEMBER 1942

*‘Surprise therefore becomes the means to gain superiority...
it confuses the enemy and lowers his morale.’*
- von Clausewitz, *On War*¹

‘get stuck into them [the enemy] and get cracking.’
- Major McElroy, 21 Battalion²

Halfaya Pass, or Hellfire Pass as it was called by the men,³ was a chokepoint near the coast between Egypt and Libya.⁴ The pass was one of the ‘most famous and contested passages in Egypt.’⁵ It was the scene of bitter fighting in 1941 during earlier operations although the New Zealand Division had not fought there previously.⁶ In the aftermath of Operations *Lightfoot* and *Supercharge*, as the Allies pursued Axis forces retiring from El Alamein in 1942, the New Zealand Division was the lead formation on the coastal axis of advance. Shortly before first light on 11 November, 21 Battalion was called forward and ordered to capture Halfaya Pass.

At Miteiriya Ridge, 21 Battalion had been part of an Eighth Army coordinated operation. It had had time to train, rehearse and give formal orders. During that attack, the battalion had been supported by artillery and engineers. None of these conditions nor supporting arms were present at Halfaya Pass and yet 21 Battalion, comprising just the CO and two under-strength rifle companies, surprised the enemy, killed sixty of them and took more

¹ von Clausewitz, *On War*, p. 233.

² R.L. Kay, Campaign Narrative- Volume VIII, The Advance to Alamein and Tripoli, Chapter 1: Clearing the enemy from Egypt and Cyrenaica, KMARL, p. 46.

³ R.A. Jennings to J.F. Cody, letter, 26.6.50. Ellery, F. and Jennings R.A., and G. Kirkcaldie Correspondence concerning part of 21 NZ Battalion at Halfaya Pass, November 1942. WAI 1 DA 54/10/21, NA. See also Greene and Massignani, pp. 17 and 72.

⁴ Walker, *Alam Halfa and Alamein*, p. 463.

⁵ Barrie Pitt, *The Crucible of War: Western Desert 1941*, New York: Paragon House, First America Edition, 1989, p. 51.

⁶ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 42 and Cody, *21 Battalion*, p. 211.

than six hundred prisoners, for the cost of only one man killed and one wounded.⁷ Neither side employed support weapons, tanks or artillery during the action. It was an infantry battle, fought with small arms and grenades only.

LEADUP TO THE BATTLE

After Operation *Lightfoot* failed to achieve General Montgomery's aim, the Eighth Army launched Operation *Supercharge* on 2 November 1942. From 4 November, the Axis forces were in retreat,⁸ with 10th Corps (consisting of British 1, 7 and 10 Armoured Divisions, and the New Zealand Division) in pursuit.

As the Allies pursued Rommel's forces across the north of Egypt, the effect of the wet weather,⁹ and minefields, necessitated the use of the limited roads rather than the off-road movement normally possible.¹⁰ To keep the Allied forces at bay, Rommel made use of rearguard forces.¹¹ He had to secure key defiles and passes so that his forces were not cut off, and from where it might also be possible to delay the Allies. Halfaya Pass was a key defile and was therefore protected by a rearguard force. The Allies had similar issues to Rommel; the use of roads caused chronic congestion, with vehicle columns stretching for miles.¹²

As 4 Light Armoured Brigade, attached to the New Zealand Division, approached the foot of the pass just on last light 10 November, three of its Stuart light tanks were destroyed by mines.¹³ The advance halted while two small dismounted infantry patrols from 1 King's Royal Rifle Corps (KRRC) were despatched by 4 Light Armoured Brigade to confirm the state of the defences at the pass, and the condition of the road leading up to

⁷ Major-General W.G. Stevens, *Bardia to Enfidaville*, War History Branch, Dept. of Internal Affairs, Wellington, 1962, p. 2.

⁸ Walker, *Alam Halfa and Alamein*, pp. 421 and 430.

⁹ Liddell Hart, p. 342. Kitchen, p. 383.

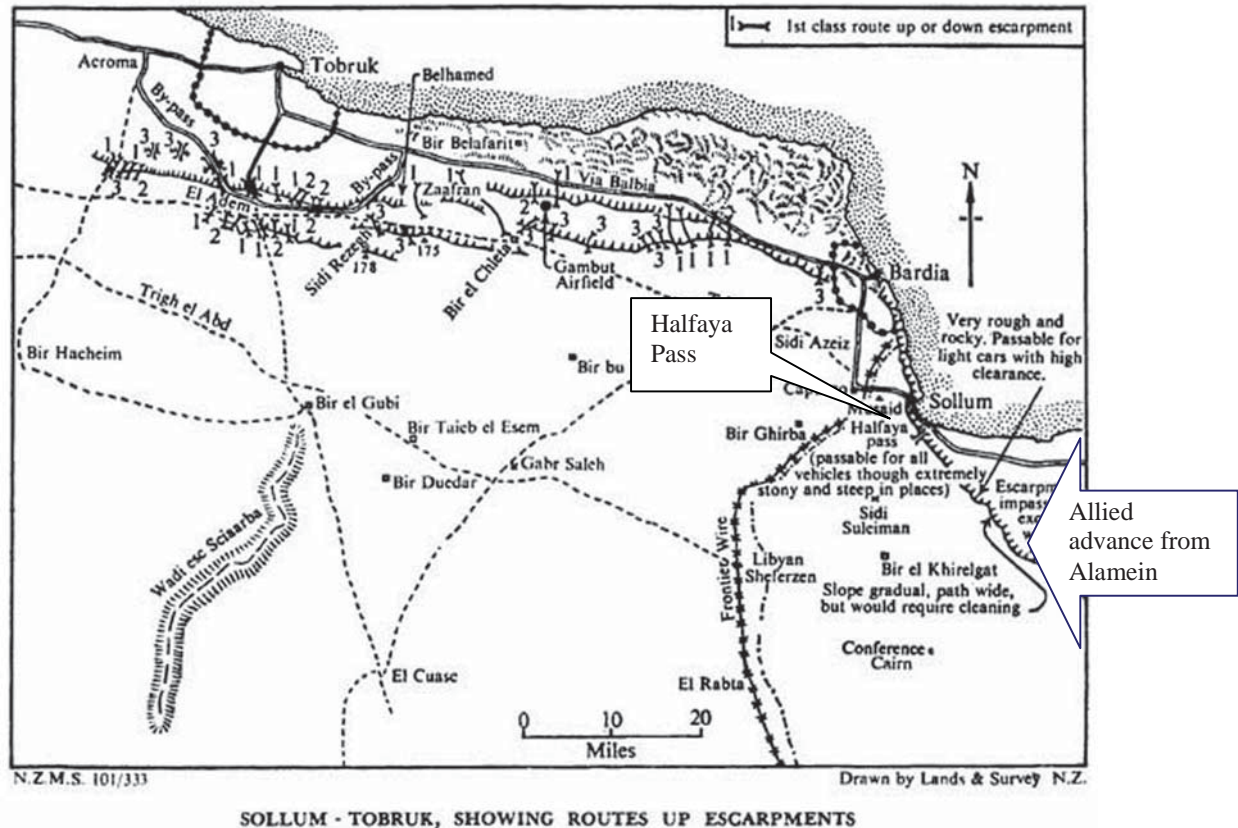
¹⁰ Barrie Pitt, *The Crucible of War: Year of Alamein 1942*, London: Jonathan Cape Ltd., 1982, p. 434.

¹¹ Liddell Hart, pp. 340- 341. Rearguards were employed at Fuka. See also Playfair, *The Destruction of the Axis Forces in Africa*, p. 92.

¹² Neillands, p. 175. Kay notes traffic was 'head to tail' on the road below the Pass. Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 42.

¹³ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 43.

the top. Both patrols were able to reach the top of the pass undetected, each patrol having used opposite sides of the zigzag road visible in the sketch at Figure 8.1, to ascend.



Map 8.1: Sollum- Tobruk, showing routes up escarpments¹⁴

On the basis of information sent back from the KRRC patrols, Commander 4 Light Armoured Brigade, Brigadier Marcus Roddick, concluded that the capture of the pass was beyond the capacity of his depleted truck-mounted infantry battalion, 1 KRRC.¹⁵ He advised Freyberg of this. It was approximately 0200 hours on 11 November before Kippenberger received notification that an attack by 21 Battalion was required.¹⁶ As dawn was approaching, there was a need for urgency. Kippenberger therefore sent an immediate message to notify CO 21 Battalion, Lieutenant Colonel Ralf Harding, then he

¹⁴ Cody, *New Zealand Engineers, Middle East*, Historical Publication Branch: Wellington, 1961, p. 211. Labels added.

¹⁵ Ronald Walker, *Alam Halfa and Alamein*, War History Branch, Dept. of Internal Affairs, Wellington, 1967, p. 467.

¹⁶ Kippenberger, *Infantry Brigadier*, p. 243.

travelled to the unit's night location himself to ensure that the message got through and that the need for haste was appreciated. The battalion's War Diary records the departure of A and C Companies for Halfaya Pass at 0345 hours. The pass was 6 miles (9.6KM) to the west of the battalion's departure point.¹⁷



Figure 8.1: Sketch showing zig-zag road leading up to Halfaya Pass¹⁸

THE COMBATANTS

Axis Forces Halfaya Pass

Halfaya Pass had only been occupied by Axis forces on 10 November, the day prior to the action. The defenders comprised mainly of Italians of the *Pistoia Division*, and included some Germans. The top of the pass was protected by mines, artillery and machine guns.¹⁹ The defenders had three batteries of 210 mm guns, with a range of 3,300

¹⁷ Entry for Nov 11, 21 Battalion War Diary November 1942, WAI 1 DA 54/1/35, NA.

¹⁸ Jack Crippen, Halfaya Pass, c.1943- 1944, Ref AAAC 898 NCWA 161, NA.

¹⁹ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, KMARL, p. 42.

metres,²⁰ which were perfectly positioned to fire on transport concentrations on the road below the escarpment, noting earlier comments on traffic congestion.²¹ During the period the two KRRC patrols were active, and indeed at the time when 21 Battalion commenced their attack, most of the defenders were asleep. Their forward protection was non-existent and on their immediate perimeter, lax, as they relied on 'several very noisy sentries' for their security.²² They were inexperienced, reminiscent of 21 Battalion at Platamon.

The Italians defending the pass were from *35 Infantry Regiment* of the *Pistoia Division*.²³ This action was the first for members of this formation. The *Pistoia Division* had not been in combat previously, and they were therefore 'still quite green.'²⁴ The New Zealand campaign history suggests that the defenders may have consisted of two battalions;²⁵ however, Rommel recorded in his diary that the pass was held by one Italian battalion and three German artillery batteries.²⁶ The *90th Light Division* had, according to its War Diary, placed an ad-hoc German battalion and some artillery at the pass.²⁷ Some German guns were engaged by 21 Battalion during the attack, however there is no evidence that German infantry were part of the defence. German artillery was observed at the pass by 21 Battalion, and German artillerymen were among the prisoners taken.²⁸ The German infantry of the *90th Light Division* had actually 'settled down for a good night's well-earned rest behind the protection of the defenders' without advising the Italians the Allies were close behind.²⁹ It is deduced that the infantry defence at Halfaya Pass was Italian only, and consisted of a single battalion, supported by German artillery.

²⁰ Ivan V. Hogg, *German Artillery of World War Two*, London: Greenhill Books, 1997, p. 101.

²¹ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 42.

²² Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 43.

²³ 2 NZ Division Intelligence Summary No. 80 (Based on information received up to 1600 hrs 13 Nov 42). War Diary HQ 2 NZ Division General Staff 1-30 November 1942. WAI 1 DA 21.1/1/35, NA.

²⁴ Mitcham, *Rommel's Desert War*, p. 178.

²⁵ Walker, *Alam Halfa and Alamein*, p. 464. Martin Kitchen stated that 'a couple of battalions of the Pistoia Division and a German heavy artillery battery were overrun at Halfaya.' Kitchen, p. 383.

²⁶ Liddell Hart, p. 349. Rommel's comment is supported by a footnote by General Fritz Bayerlein on the same page.

²⁷ Walker, *Alam Halfa and Alamein*, p. 465. Walker advises that this information came from the *90th Light Division's* War Diary.

²⁸ Pitt, p. 439 and Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 50.

²⁹ Walker, *Alam Halfa and Alamein*, p. 465.

21 Battalion

21 Battalion's mission was to 'take' (or capture) Halfaya Pass.³⁰ Harding decided that the attack would be silent. He had already worked out a plan the previous afternoon after he received an initial warning for the task from division headquarters. He had then been stood down while the KRRC patrols undertook their reconnaissance, for it was assumed that members of their parent unit would undertake any operation required.³¹ While waiting at division headquarters, Harding had:

made a rough plan and thought that as the foot of the pass would be mined and that silence and surprise were the main factors of a night show I should try and do the job with A and C Coys.³²

Kippenberger and Harding agreed that 'an assault on the lines laid down in pre-war training manuals would best suit the conditions.'³³ The infantry would advance, and once the enemy were encountered would develop the attack under cover of Bren gun fire. The infantry were to 'deploy on either side of the road as soon as they met opposition, and go straight in with the bayonet.'³⁴ 21 Battalion's organisation for the attack was:

21 Battalion	(Lieutenant Colonel Harding)
A Company	(Captain Roach)
C Company	(Major Smith)

Two 1 KRRC patrols, of 4-5 men each³⁵

³⁰ Entry for Nov 11, 21 Battalion War Diary November 1942. WAI 1 DA 54/1/35, NA.

³¹ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 44.

³² Notes to p. 44, quoting Lt-Col Harding to War History Branch, letter, 17 September 1949, Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 44.

³³ Walker, *Alam Halfa and Alamein*, p. 468.

³⁴ Kippenberger, *Infantry Brigadier*, p. 244. See also Cody, *21 Battalion*, p. 213.

³⁵ The KRRC patrols were never tasked with supporting 21 Battalion; however, both acted voluntarily as guides for the unit in this battle.

Summary of Key Events

21 Battalion ascended the pass on foot, led by Lieutenant Fyfe whose patrol had recently returned from the area. Major Smith and C Company followed next. This was deliberate, as Smith was the only officer in the battalion who had been over Halfaya Pass previously.³⁶ The CO and his two signallers were next in the order of march, with Captain Roach and A Company bringing up the rear.

The battalion reached a position just short of the top of the pass an hour later. It was still dark. Dawn was 30- 45 minutes away.³⁷ Harding held a quick conference with his company commanders and allocated assault axes to them.³⁸ He established his headquarters near the head of the pass beside abandoned anti-aircraft guns, large quantities of ammunition and other discarded small arms.³⁹

The two companies then formed an extended line. Initially, C Company was on the left (south) and A Company the right. The battalion commenced its advance, in line, however shortly after crossing the Start Line, A Company found its path blocked by a deep wadi.⁴⁰ As a result of this, Harding ordered A Company to cross behind C Company and take up a position on the left flank. Thereafter, the road became the inter-company axis, with A Company on the left and C Company right. The attack axis was initially southwest, became more westerly and then finally swung northwest along the Barrel Track.

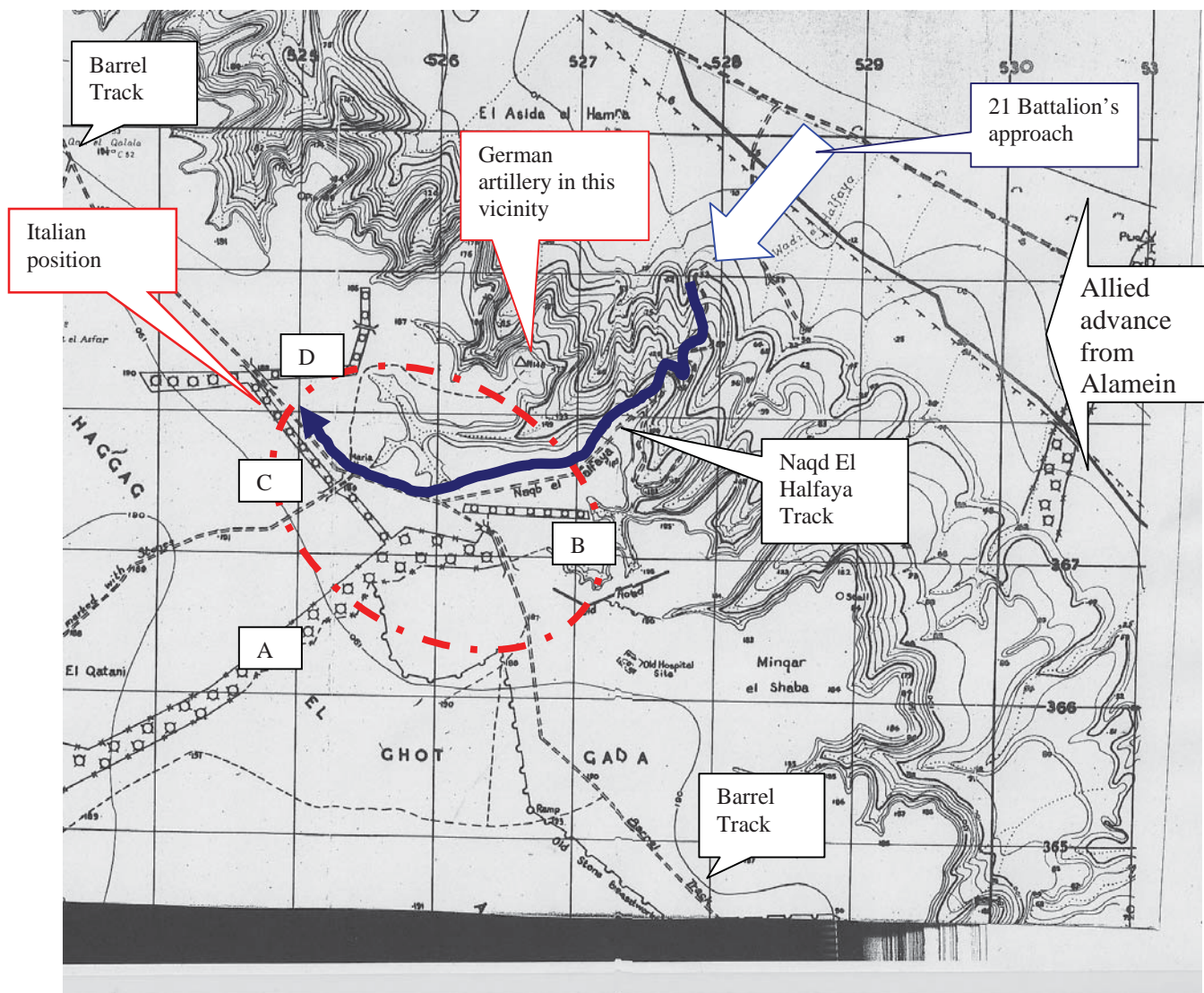
³⁶ Walker, *Alam Halfa and Alamein*, p. 468.

³⁷ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 47.

³⁸ Cody, *21 Battalion*, p. 214.

³⁹ Walker, *Alam Halfa and Alamein*, p. 469.

⁴⁰ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 47.



Map 8.2: Halfaya Pass⁴¹

Having been repositioned on the left, A Company advanced with two platoons in extended line. The third platoon (Lieutenant Chalmers) was deployed a further 400- 500

⁴¹ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, facing p. 46. The letters, arrows and text boxes have been added for this study. The Italian position was located generally within the red oval. The blue line indicates the centre line of 21 Battalion's approach (to the top of the pass) and their axis of assault. The text boxes A-D indicate minefields referred to in the key events and analysis sections of this chapter. The 90th Light Division troops went into a laager somewhere to the west of Pistoia, near the Egypt-Libya frontier wire. Walker, *Alam Halfa and Alamein*, p. 465. Map 5.2 (in the Bir Ghirba chapter) shows the 'Halfaya Garrison' (at bottom right), and to the west, the frontier wire. The scale suggests that the frontier was approximately 6 miles (or 9 kilometers) west of Halfaya. The 90th Light may well have been as much as 9 kilometers from the battle at Halfaya, too distant to intervene.

yards further out to the left again, to advance independently. As the two platoon group advanced:

trucks could be seen in the growing light 200 yards ahead and the company went slowly towards them, firing their rifles and light machine guns from the hip. There was some fire in return, but as the troops closed in white flags began waving from trenches and from behind trucks.⁴²

Captain Roach and his two platoons advanced using 'textbook fire and movement' towards some vehicles that they had observed. They captured five vehicles and forty Italians. A search of nearby trenches and sangars yielded more prisoners.⁴³

The single A Company platoon on the extreme left was engaged by enemy as it encountered a minefield. Corporal Ellery and the remainder of his section (reduced to two men) moved around to the left, emerging in another sector of the defence. As Ellery advanced on his own, covered by the fire of his two soldiers, the position surrendered. Ellery and his "section" led their 143 prisoners back to the rear. The remainder of his platoon had meanwhile emerged from the minefield and attacked the main point of resistance. The battalion's two casualties were incurred in this attack, which netted even more prisoners. Chalmers' platoon (which included Ellery's section) had captured approximately 250 enemy.⁴⁴

Back on the right on the right of A Company, as Roach and his two platoons searched sangars and trenches for further enemy, eight vehicles, some towing anti-tank guns appeared from the west. One platoon opened fire and started to advance towards the vehicles. The enemy surrendered.⁴⁵

⁴² Cody, *21 Battalion*, p. 214.

⁴³ Walker, *Alam Halfa and Alamein*, p. 469.

⁴⁴ Walker, *Alam Halfa and Alamein*, p. 469.

⁴⁵ Walker, *Alam Halfa and Alamein*, p. 470.

Like Roach and A Company, Major Smith had C Company advance as two platoons with a single platoon (Lieutenant McLean) advancing independently further out to the right flank. Smith retained direct control of the two platoon group. Off to the right, McLean's platoon captured 50 enemy and continued to advance 'against little resistance,' bagging more prisoners.⁴⁶ The two platoon group encountered enemy as well, and were soon sending back prisoners, not having had to mount a coordinated attack after all.

Major Smith returned to battalion headquarters to report his area clear of enemy. On the way back, he was fired on from behind A Company. Smith ordered Sergeant Jennings from the C Company platoon guarding prisoners to deal with this new threat. Jennings took three men, one of them a Bren gunner who fired from the hip, as the small group approached the enemy. In the midst of an anti-personnel minefield, and under fire, Jennings spotted some trucks. While his Bren gunner gave covering fire, Jennings got a truck started and then with the Bren gunner and men now aboard and firing, Jennings drove the vehicle at the enemy. The enemy surrendered under this assault. The group captured five trucks, 10 machine guns, two anti-tank guns and 50 prisoners.⁴⁷

Harding sent Kippenberger a message to advise him that the road was now open for tanks, but as the attempt to communicate with brigade headquarters by wireless was unsuccessful, it had to be conveyed to the Kippenberger by one of the messengers using an Italian bicycle that had been found abandoned at the pass. Brigadier Roddick arrived at 21 Battalion's headquarters at this time, and his scepticism over Harding's claim to have 600 captive Italians quickly turned to congratulations when he actually saw the prisoners.⁴⁸

⁴⁶ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 50.

⁴⁷ Walker, *Alam Halfa and Alamein*, p. 470.

⁴⁸ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 50.

OUTCOME

Mission Accomplishment

21 Battalion achieved its mission. At the cost of two casualties, the pass was secured and the pursuit of the *Afrika Korps* was able to continue.

Casualties and Losses Sustained

Both 21 Battalion casualties were suffered by C Company. Counts of prisoners captured by 21 Battalion vary between 523 and 612.⁴⁹ 21 Battalion's War Diary records that 612 prisoners were taken; so this is the figure that has been applied.⁵⁰ Casualty figures for both sides are shown in Table 8.1.

	Personnel				Total Casualties
	KIA	WIA	PW	MIA	
21 Battalion	1	1			2
Elements of 35 Infantry Regiment, Pistoia Division	70	Unknown (although there must have been some- their numbers would be included within the PW)	612		682

Table 8.1 Casualties sustained at Halfaya Pass

The number of casualties suffered by 21 Battalion was extremely low. This indicates Italian defensive fire, of any type, was ineffective. The ratio of prisoners taken indicates a serious problem with Italian leadership and will to fight. Kippenberger's assessment

⁴⁹ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, note 1 to p. 52. Harding stated 612, WO2 Hill estimated 'some 600' and Ellery says he counted 523.

⁵⁰ Entry for Nov 11, 21 Battalion War Diary November 1942. WAI 1 DA54/1/35, NA.

prior to the attack that the enemy ‘would not resist a brusque attack’ was proven correct.⁵¹

ANALYSIS OF COMBAT EFFECTIVENESS

Operational Setting

The pursuit of the Axis Forces after El Alamein was an opportunity for the Allies to ‘crush an Axis Army and close a theatre of operations.’⁵² That this did not occur before or soon after the action at Halfaya Pass has been blamed mostly on the weather, but other causes have been cited such as ‘confusion, lack of fuel, [and] German rearguard actions’.⁵³ This is the position taken by the British official history.⁵⁴ Matthew Wright provided an example of the congestion when noted that traffic conditions caused 4 Light Armoured Brigade to report to the New Zealand Division four hours late.⁵⁵

Rommel had to fight a series of rearguard actions so that his forces could withdraw without being overrun or cut off.⁵⁶ The retention of key junctions and passes was, therefore, essential. Halfaya Pass was one such key point.⁵⁷ It was one of only two passes leading to Sollum. It should have been defended by a veteran unit. Rommel ordered 90th *Light Division* to defend the passes ‘in company with a large detachment of *Pistoia Infantry Division*’ which had occupied the defences on top of the pass ‘some days earlier’.⁵⁸

The 90th *Light Division* located itself behind the Italians, closer to the Egyptian border, and took no part in the battle. They ignored Rommel’s orders. They were probably

⁵¹ Kippenberger, *Infantry Brigadier*, pp. 243- 244.

⁵² Colonel Charles D. McFetridge, US Army, ‘In Pursuit: Montgomery After Alamein’, in *Australian Defence Force Journal*, No. 99, March/ April 1993, p. 29.

⁵³ McFetridge, p. 31.

⁵⁴ Playfair, *The Destruction of the Axis Forces in Africa*, p. 96.

⁵⁵ Wright, *Desert Duel*, p. 125.

⁵⁶ Prasad, *The North African Campaign 1940-43*, p. 471.

⁵⁷ Liddell Hart, p. 136- 137.

⁵⁸ Walker, *Alam Halfa and Alamein*, p. 465.

exhausted, needed to rest, and thought that the Italians, who had not been in combat thus far, should play their part. There was no effective liaison between Italian and German units. Indeed, there was considerable enmity between the two nations at this time.⁵⁹ The New Zealand official history summarised the situation as *90th Light Division* resting at some distance behind the assumed protection of the *Pistoia Division*, but without advising the Italians that the Allies were so close behind, whilst the Italians ‘left control of the defences and the blowing and mining of the pass roads to the Germans.’⁶⁰ The New Zealanders were able to exploit this lack of coordination between the Axis forces.

A key factor contributing to 21 Battalion’s combat effectiveness at Halfaya Pass was that it was pitted against a novice Italian unit rather than a seasoned German unit. Rommel realised that the Italian infantry was inferior, hence the corset staves at Miteiriya Ridge, and ordered 90th Light to defend this key pass. The veterans ignored him.

Force Strength

This attack was conducted by a much reduced 21 Battalion; just the CO and the two available rifle companies. The total strength of the force was 110.⁶¹ This number would be the usual strength of a single fully manned rifle company. Kippenberger had hoped for more men, but had possibly overlooked the fact that 21 Battalion’s third company was detached, and did not realise the remaining two were so depleted. Kippenberger was aware the venture was risky, with no additional support being provided to the attackers, of the sort required should the defences prove to be stubborn. Roddick’s report that the enemy was probably only a half company of Italians, or a weak company at best, was encouraging. Harding assured Kippenberger that his force was adequate for the task.⁶² He was confident in their ability.

⁵⁹ Paolo Caccia-Dominioni, *Alamein 1933- 1962: An Italian Story*, London: Allen and Unwin Ltd, 1966, pp. 106- 107, 248 and 250 and James J. Sadkovich, ‘German Military Incompetence Through Italian Eyes’, *War in History*, 1 (1), 1994, pp. 40 (fn7) and 59.

⁶⁰ Walker, *Alam Halfa and Alamein*, p. 465.

⁶¹ Kippenberger, *Infantry Brigadier*, p. 244 and Cody, *21 Battalion*, p. 212.

⁶² Notes to p. 44 (quoting a 17 September 1949 letter from McElroy to the War History Branch). Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica.

The defenders, as already noted, were from *35 Infantry Regiment*, of the *Pistoia Division*. In all, 70 were killed and 612 prisoners taken; this suggests that the enemy was of battalion strength, approximately. Captured weapons and equipment included ‘30 vehicles, 20 anti-tank guns, various field guns, and many light, medium and heavy machine guns.’⁶³ The loss of this many heavy weapons would have been a significant blow to the already depleted Axis armoury. The Italian figures in Table 8.2 are based on the numbers of prisoners and weapons captured. The Italians occupied a ‘naturally strong defensive position [which] had been strengthened by a system of minefields.’⁶⁴ Many of the defenders were sited in deep dugouts.⁶⁵ This should have added to their strength and reduced their vulnerability.

	Bayonet Strength (Infantry)	Anti- tank guns	Field Guns	Machineguns		
				Heavy	Medium	Light
21 Battalion	110					9
Unidentified battalion, 35 Infantry Regiment	682	20	5 - 12 ⁶⁶	‘many’ ⁶⁷		

Table 8.2: Relative strengths at Halfaya Pass

The overall attacker to defender ratio of 1:6 shows that if the defence had been more vigorous, the attack would likely have failed. Attacker- defender ratios for separate engagements within the battle are listed in Table 8.3. Defender numbers (except for weapons and artillery) are derived from the sum of casualties caused and prisoners taken

⁶³ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 52.

⁶⁴ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 42.

⁶⁵ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, notes to p. 49.

⁶⁶ Rommel’s diary records that there were three German artillery batteries located at the pass. Liddell Hart, p. 349. Mitcham advises that infantry divisional gun batteries contained four guns each. Samuel W. Mitcham, Jr., *German Order of Battle, Volume One: 1st- 290th Infantry Divisions in WWII*, Mechanicsburg, PA: Stackpole Books, 2007, p. 5. George Forty’s organisation of a German infantry division shows that artillery batteries each had four guns. George Forty, *German Infantryman at War 1939- 1945*, Hersham, Surrey: Ian Allan Publishing, 2002, p. 13. The high figure in Table 8.2 assumes three full strength batteries as the maximum number. The 21 Battalion official history recorded that five enemy vehicle drawn guns were identified (and then attacked) at one point, suggesting the possibility that despite Rommel’s belief that there were three full batteries in place, there may only have been five guns. This is the basis for the minimum number of field guns. Cody, *21 Battalion*, pp. 216- 217.

⁶⁷ Kay does not provide a number, just “many”. Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 52.

during each separate engagement. 21 Battalion's rifle platoons were at much reduced strength, through a combination of losses sustained at El Alamein and lack of reinforcements from New Zealand.⁶⁸ As the total strength of the two companies in the attack at Halfaya Pass was 110, it is estimated that the six rifle platoons had an approximate strength of 15, not quite half the usual number. In a letter to the unit historian, Ellery reported that his platoon (commanded by Chalmers) had a total strength of 14 at Halfaya Pass, so that number has been used in his case.⁶⁹

Attacker	Attackers	Defenders	Attacker- Defender Ratio
A Company			
Roach's two platoons	30	40	1: 1.3
Ellery's "section"	3	143	1: 47.6
Chalmer's platoon	14	107 (250, less Ellery's 143)	1: 7.6
C Company			
McLean's platoon	15	50	1: 3.3
Sergeant Jennings' group	4	50	1: 12.5

Table 8.3: Attacker-defender ratios at Halfaya Pass

There were no engagements at Halfaya Pass where the New Zealanders enjoyed numerical superiority. Analysis of previous battles has shown the vulnerability of attackers in daylight to small arms fire from the defence. At Platamon, fire from two of 21 Battalion's rifle companies had a devastating effect on German dismounted infantry in the open, and it has been shown that 21 Battalion was decisively engaged by the strength of the defenders' small arms fire at Bir Ghirba. The defenders at Halfaya Pass had the potential, therefore, even without Italian mortar and German artillery fire, to decisively engage 21 Battalion and to inflict considerable casualties, but this did not occur. The Italians had the ability to inflict serious casualties, but they did not. It remains for

⁶⁸ The next of 21 Battalion reinforcement of 22 men arrived 20 December 1942. Entry for Dec 20, 21 Battalion War Diary December 1942. WAI 1 DA 54/1/36, NA.

⁶⁹ Frank Ellery to J.F. Cody, letter, 29.5.50. Ellery, F., and Jennings R.A., and G. Kirkcaldie. Correspondence concerning part of 21 NZ Battalion at Halfaya Pass, November 1942. WAI 1 DA 54/10/21, NA.

subsequent sections of the analysis to provide the reasons for this. A significant deduction derived from this battle is that an attacker does not need to have numerical superiority to win, provided the conditions are right. Even when used by a much smaller force, surprise and offensive action are effective, and more so against an enemy with low will to fight.

The key to 21 Battalion's combat effectiveness was the appearance of superior strength through the use of bold tactics, surprise and attacking at dawn on a wide frontage. This gave the Italians the impression that the New Zealanders were in greater strength than they actually were. Most significant, was the surprise achieved by not preceding the attack with a barrage, and the sudden appearance of the New Zealanders on the edge of the Italian positions. Surprise is shown to be a significant force multiplier.

Battlefield Effects

Halfaya Pass was at the top of a dominating escarpment which rose over 600 feet above the plain below. The road to the top of the pass from the east zigzagged up a ridge. On each side of the road, 'a deep wadi cuts into the escarpment.'⁷⁰ This is visible in Map 8.2 and Figure 8.1. At the top of the pass, the ground flattened out, although it was cut in places by steep wadis. Visibility at the top of the pass was good; accounts of the battle state groups of defenders were visible hundreds of yards away. There was no terrain or vegetation to provide cover and concealment to the attackers. It was ideal defensive terrain, with long lines of observation and fire. An analysis of the battlefield effects using OCOKA considerations is shown in Table 8.4 below.

Observation and Fields of Fire	In daylight, the defenders would have had excellent observation and fields of fire along the top of the pass and into the area at the top of the road (Naqd el Halfaya), where any vehicles attempting to climb the pass would have had to emerge. ⁷¹ Even at night, in moonlight, Warry's KRRC patrol was able to observe vehicles at 500 yards. ⁷² At
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⁷⁰ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 42.

⁷¹ Walker, *Alam Halfa and Alamein*, p. 463.

⁷² Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 43.

	<p>approximately 45 minutes before dawn, A Company was able to identify enemy vehicles at 200 yards.⁷³ To the right (north) of the pass, there was a ridge where German artillery was seen being hitched to vehicles; slight rises such as this to the flanks of the pass were excellent gun positions from which to direct aimed fire onto any vehicles or infantry emerging from the top of the pass, and from where any movement north-west up the Barrel Track could also be engaged.⁷⁴</p>
Cover and concealment	<p>There was no natural cover or concealment on the top of the pass. The ground was flat and devoid of any vegetation.</p>
Obstacles	<p>Maps show that the pass defences included anti-tank and anti-personnel minefields. (The four main minefields are shown with letters A- D on Map 8.2] Accounts state that the attackers found themselves in minefields, and report the withdrawal of enemy towards minefield gaps. There were no reports of casualties from mines (during 21 Battalion's attack) which indicates that the mine obstacles at the top of the pass were not effective.⁷⁵ No significant barbed wire barriers were reported. The wadis to the right of A Company (initially) and to the left of the original assault axis were the only significant natural obstacles to the attack itself.</p> <p>The effect of the mines at the bottom of the pass, which destroyed the lead 4 Light Armoured tanks, was to cause the capture of the pass to become an infantry operation.</p>
Key Terrain	<p>The top of the pass, where the road reached the escarpment was Key Terrain. A north- west to south-east line approximately 1,000 yards across at the point where the Halfaya Pass Road meets the Barrel Track is also considered to be Key Terrain, as this area was the last possible line from which attackers could be prevented from breaking out of the top of the pass. If this line could be denied by the defenders, the attacking force would be bottled up in an exposed area. This area is shown (on the map) to be bounded by minefield B to the south, and had an enemy position covering it (cleared by Chalmers), suggesting that this location was intended to be a killing area.</p>
Avenues of approach	<p>The only possible approaches to the pass in the time available to 21 Battalion were the open areas either side of the road leading up to the Pass, just as the two KRRC patrols had</p>

⁷³ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 48.

⁷⁴ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 50. See also Walker, *Alam Halfa and Alamein*, p. 465.

⁷⁵ Cody, *21 Battalion*, p. 217. Jennings's attack was through an anti- personnel minefield.

	<p>done. As the sketch at Figure 8.1 shows, the ridge that the road zigzagged up was broad, but open. This made denying the route up the ridge an essential feature of the defence, however, it was not denied to the KRRC patrols, or to 21 Battalion.</p> <p>The two wadis at the top of the pass effectively hemmed in any attacker and restricted the approach to be from a south westerly and westerly direction for the first two thousand metres. Once the point where the Halfaya Pass Road joins the Barrel Track was reached, the flat open terrain offered numerous approaches to any position, albeit none offered a covered approach, or one from which direct fire support could have been provided, had 21 Battalion employed any. On the right flank, Smith intended to approach the enemy head on with two platoons, with the third platoon emerging from the enemy's flank or rear having made use of the deep wadi to the north of the track, which demonstrates that at the edges of the escarpment, the drop off provided covered approaches for envelopment. Ellery was able to make use of similar terrain during his attack on the opposite flank.</p>
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Table 8.4: OCOKA terrain analysis for Halfaya Pass

The terrain clearly favoured the defender, as the analysis above proves, due to extended lines of observation and fire for the defenders, and limited covered approaches for the attackers. Even though it was still semi-dark when the attack commenced, visibility was good enough for the attackers to identify enemy positions at 200- 500 yards range. The deep wadis to the north and south of the final two thousand metres of the Halfaya Pass Road also restricted attackers to a flat and exposed killing ground in the initial stages of the attack. This was the area the attackers had to gain possession of before first light so they could break out, although they would have been unaware of this at the time.

Failure of the Italians to adequately deny the top of the pass (Key Terrain), at the point where the road first met the escarpment was a fundamental error. This error was compounded by their failure to adequately deny the zigzag road- this mistake will be examined later as an example of the fog of war. The bulk of the defence was set too far back from the lip of the pass.⁷⁶ Clearly, also, the minefields did not have their intended effect. The protective effect of sangars and trenches, and the excellent lines of observation and small arms fields of fire were squandered by ill- disciplined troops who

⁷⁶ Walker, *Alam Halfa and Alamein*, p. 471.

were caught off guard and who then showed no real fight. This battle shows that occupation of Key Terrain offers no advantage, if the true posture of the defender is reduced by lack of security measures, likely caused by their overall lack of combat experience and low will to fight. 21 Battalion learned the same lesson at the Pinios Gorge when the road crater was left unguarded.

Tactics, Doctrine and Training

The Italian scheme of defence was based on pre-prepared static infantry positions protected by minefields that had already been laid. This was a rearguard defensive action, the defenders needed to make do with what had already been prepared. Posts were sited in depth, to cover the exit from the pass as well as the approach from the south up the Barrel Track. The layout of the minefields, particularly the extensive line from Abar Abu Talag to Barrel Track (marked as A on the map), indicates that the defence was optimised against an attack from the south up the Barrel Track.⁷⁷ The British had used the Barrel Track axis to attack the Halfaya Pass during Operation *Battleaxe* in June 1941, when well sited 88mm anti-tank guns under command of *Hauptmann* (Captain) Bach caused heavy casualties to tanks supporting the infantry attack.⁷⁸

The Italians had only occupied their positions at Halfaya ‘some days earlier’.⁷⁹ It is assessed that the defenders occupied the existing field defences (trenches and sangars),⁸⁰ rather than siting and constructing their own. Therefore, the forces they had defending the pass were not concentrated solely on the direction from which the New Zealanders came, for some would have been deployed to defend against a possible infantry and tank approach from the south up the Barrel Track. It is unlikely that the existing defensive positions were improved by the Italians, for they left the layout of the defence and destruction of roads to the Germans.

⁷⁷ The positions of the minefields is shown in Map 8.2. Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, opp. p. 46.

⁷⁸ Neillands, p. 175.

⁷⁹ Walker, *Alam Halfa and Alamein*, p. 465.

⁸⁰ Walker, *Alam Halfa and Alamein*, p. 465. Walker uses the word “occupied,” rather than prepared.

German artillery was sited on a ridge to the north of the infantry defence (as marked on Map 8.2), which confirms a combined arms defence of the Pass was anticipated, although no Axis tanks were reported in the area during the attack. The field artillery was sited where it could have engaged vehicle and personnel emerging from the pass with direct fire, and, as there was clear line of sight, the guns could have covered 21 Battalion's entire axis of assault. The ability of the defenders to employ their artillery was negated because the New Zealanders closed rapidly with the enemy positions unobserved initially, and by the time the Italians were aware an attack was underway, the companies of 21 Battalion were among the infantry positions. The New Zealanders had "hugged" the defence. The German gunners would have had to fire on their own side in order to engage the attackers. As a result, the defensive artillery fire plan, if there was one, was defeated.

There are no accounts of the defence employing support weapons. This suggests that either the defenders did not possess mortars, or that they had insufficient time to bring them into action before the attackers were amongst the defenders. Anti-tank weapons only arrived during the battle. Either they were hastily sent forward once the attack started, or they were being deployed forward at first light in anticipation of an Allied tank attack that day. The surprise and speed of the New Zealand attack caught the defenders unaware, so that what indirect and heavy calibre direct fire they did possess, was not able to affect the battle. It was therefore an infantry against infantry battle.

The defence was weak. This assessment is supported by the lack of small arms fire generated by the Italians, which is reflected in the minimal casualties sustained by 21 Battalion, particularly given the overwhelming number of defenders. The ill-disciplined sentries have been mentioned earlier; no effective early warning was positioned forward of the position. Had there been some, the attack could have been detected earlier, the defenders alerted and possibly the defenders' German artillery able to come into action sooner.

Apart from the one engagement where the two 21 Battalion casualties were sustained, the remaining enemy small arms fire was desultory and long-range. Once 21 Battalion

closed, even by charging forward in a captured truck at one point, the Italians surrendered. This indicates poor leadership and lack of will to fight within the defence. Given the attacker- defender ratios, an important deduction is that leadership and sociological factors may be a stronger determinant of combat effectiveness than ground, relative strengths or tactics, in some instances. At Halfaya Pass there were no German corset staves among the infantry to stiffen the resolve of the defence. Had there been, the results may have been different.⁸¹ The New Zealand attack was, after all, conducted by only the numerical equivalent of a single rifle company and was entirely unsupported, even by its own organic support weapons.

Harding's plan was to conduct a silent attack in order to achieve the element of surprise. This would enable his small force to close with the defenders without being subjected to the enemy's defensive artillery, mortar and machinegun fire, which he would have anticipated them employing. To achieve this he had to approach as close to the enemy as possible, before the attack was discovered. This precluded the use of artillery support, which could have been interpreted by the defenders as preparation for an attack, thereby reducing the element of surprise. Further, the time to prepare artillery fire (bringing guns into action and adjusting their fire onto targets) would have consumed valuable time. On balance, it was better for the attack to be launched without the benefit of covering fire.

Typically, each New Zealand company would have attacked on a 250 yard frontage,⁸² or 500 yards with two companies forward, whereas the distance between the extreme left platoon (Lieutenant Chalmers) and the A company's two platoon group was '400 or 500 yards,'⁸³ twice the usual distance. This indicates that the battalion was moving on a broad front. Not knowing the enemy layout, the battalion was guided by the general axis designated by Harding (the road- as indicated by the blue arrow on Map 8.2) and then by sightings of the enemy, which tended to draw the flanks wider. While the wide frontage may have given the defenders the impression of an attack on a much larger scale than it

⁸¹ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 52.

⁸² Kippenberger quotes a planned 1,000 yard frontage for two battalions at the battle of Ruweisat Ridge which equates to 250 yards per company, with each battalion attacking with two companies forward. Kippenberger, *Infantry Brigadier*, p. 161.

⁸³ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 48.

actually was, it would have caused increased spacing between men, and thus reduced the effect of any enemy fire. It also ensured that the maximum numbers of attackers' weapons were in the firing line, thereby increasing their volume of fire. It will be recalled that 21 Battalion killed 70 Italians in the course of this battle- a sure sign that they made extensive use of small arms firepower in this battle.

The lack of fire support employed during the attack was made up for by the employment of fire and movement. As noted earlier, Walker recorded Roach's platoon 'advanced by textbook fire and movement' and off to the right, McLean's platoon provided covering fire while others raced for a gap where they attempted to cut off retreating German artillery who were trying to tow their guns clear.⁸⁴ Fire and movement was, and still is, a basic infantry tactic which ensures one static element of the attacking force is suppressing the enemy with fire (usually by firing from a prone position) while other attackers are moving forward a short way, before taking over the firing to allow those supporting them previously to move forward themselves. Closing with the enemy was done rapidly (Jennings) and whenever possible, enveloping moves were employed (Ellery). Closing with the enemy quickly was the key to avoiding enemy small arms fire and precipitating the surrender of the defence.

The tactic of a silent attack fitted well with meeting the timeline and achieving surprise, although it increased the risks for 21 Battalion considerably- lack of fire support, reserves and the like. The New Zealand artillery official history mentions the attack in passing; however, it does not indicate whether any of its guns were even readied to fire any tasks in support of the attack had they been called upon to support 21 Battalion.⁸⁵

It is concluded that the combination of surprise, achieved through the undetected approach to the pass by night and the withholding of pre-attack fire support contributed significantly to the success of this attack. Walker attributed success to 'the surprise effect of 21 Battalion's unexpected appearance [which] was exploited to the full by both

⁸⁴ Walker, *Alam Halfa and Alamein*, pp. 469- 470.

⁸⁵ Murphy, *2nd New Zealand Divisional Artillery*, pp. 420- 421.

officers and men' but noted, tellingly, that under good leadership the *Pistoia Division* 'could have inflicted severe casualties on any troops attempting to ascend the pass.'⁸⁶ Although the tactics used by the New Zealanders suited the situation, there were risks, especially if the Germans had intervened, but these fortunately did not eventuate.

The attack at Halfaya Pass is instructive; with respect to combat effectiveness, from both the Italian and New Zealand perspectives. Although the Italians occupied Key Terrain and were in defence, they squandered this advantage by lax security initially and then a failure to fight a defensive battle. It is deduced that *35 Infantry Regiment's* lack of combat experience coupled with the surprise achieved by 21 Battalion's approach, detracted from the usual advantage accrued by a force from adopting a defensive posture. From a New Zealand perspective, this battle shows that if the situation is right, risks, such as attacking in reduced strength and without fire support, even against superior numbers, are warranted. Although the attack was not supported by organic or external firepower, basic tactics of envelopment and fire and manoeuvre were employed to good effect.

Command and Leadership

The evidence presented thus far suggests that neither force strength nor battlefield effects were significant factors in the success of the attack and the failure of the defence at Halfaya Pass. It is assessed that the level of leadership displayed by commanders prior to and during the battle that a key factor, for both sides.

New Zealand commanders who contributed directly to the success of the operation at Halfaya Pass were Kippenberger, Harding and the two company commanders, Smith and Roach. As a counter-point, it is assessed that there was a failure in Axis leadership, which is supported by the eagerness of the men to surrender and the speed with which the defence was overcome. Although the individual Italian commanders are not known and nor are there any accounts available of their individual performance, their collective lack

⁸⁶ Walker, *Alam Halfa and Alamein*, p. 471.

of leadership can be deduced from the ease with which the defence faltered despite superior numbers of men.

A feature evident in this battle was what would today be termed “forward command.” Brigadier Kippenberger must take some credit for the success of the attack by being located forward and thus being in a position to give the attack its momentum, for any delay would have made it likely that the attack would be conducted by day, which would have increased the risk of casualties and failure. By being forward, albeit only as far as division headquarters initially, and then at the base of Halfaya Pass when 21 Battalion was about to set off, Kippenberger was in the right place to reduce the time required to communicate instructions. Without interfering in the attack itself, he gave Harding last minute advice and then left him to get on with the attack.

Even if it was Brigadier Kippenberger who provided the initial impetus for the attack, credit for initiating it while it was still dark, and for its conduct, rests with the CO. As stated earlier, Harding had developed an outline plan of attack the afternoon prior (without having even seen the ground or knowing much about the enemy) and decided that the assault needed to be silent. This was a key decision. His willingness to make this choice and to create a flexible outline plan demonstrated a level of expertise and confidence in himself, and in his unit. Leading the battalion forward to the base of the pass rather than waiting for orders at his night location, or more detailed information on the enemy, saved time. When asked by a subordinate what enemy might be expected at the pass, Harding said ‘Fight and find out.’⁸⁷ This statement reflects a confident and aggressive nature. At the top of the pass, Harding gave quick orders and got the attack underway.

It is assessed that Harding remained close behind the attack, for almost immediately after it had commenced, A Company found its line of advance blocked by a steep wadi and Harding was able to instantly direct the company to the left flank. He sited his

⁸⁷ Cody, *21 Battalion*, p. 213.

headquarters 'on a low mound.'⁸⁸ This would have afforded him an unobstructed view of the attack. He was subsequently reported 'prowling round keeping his finger on the pulse.'⁸⁹ It was, however, the company, platoon and section commanders who maintained the momentum of the attack. Harding only re-entered accounts of the battle after the adjustment of A Company when he advised brigade headquarters that the task has been successfully completed. Being daylight, and having good visibility and the ability to observe his companies in action to his front, Harding would have had little cause to intervene in the attack. He had played his part, and would only need to intervene if the defenders gained the initiative.

At the next level down, the two company commanders executed their part of the plan based on the flimsiest of guidance. Like their CO, the two company commanders were well forward, so much so that when five enemy tractor-drawn guns were identified, Major Smith was immediately able to order Second Lieutenant McLean 'to go after them.'⁹⁰ Similarly, when returning to Battalion headquarters to report his sector clear, Smith immediately ordered Jennings to deal with a bypassed enemy post located behind A Company. Both company commanders employed platoon strength flank guards, and both allowed their flank platoons free reign. They both maintained firm control of their two platoon groups. It seems, therefore, that McElwain's ingredients for successful command are equally applicable at company and platoon level.

The actions of Sergeant Jennings and Corporal Ellery provide solid evidence of leadership at platoon and section level within 21 Battalion. In both cases, the two non-commissioned officers personally led attacks. Their attacks were highly successful, despite the odds and their somewhat unorthodox methods. That said, the basic principle of fire and movement was adhered to, in conjunction with bold action. Jennings and Ellery both received MMs for their conduct at Halfaya Pass.⁹¹

⁸⁸ Cody, *21 Battalion*, p. 214.

⁸⁹ Cody, *21 Battalion*, p. 217.

⁹⁰ Cody, *21 Battalion*, pp. 216- 217.

⁹¹ Ronald Walker, *Alam Halfa and Alamein*, p. 471. MM citations for Jennings and Ellery can be found in Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, note 2 to p. 52.

All of the above examples taken together establish that leadership within 21 Battalion was functioning well at all levels, and demonstrate a level of confidence in its ability. The same can not be said of the defenders. Whilst none of the references consulted address the failure of Italian leadership at Halfaya Pass, the capitulation of the defence is a significant indicator of weakness. Of the Italian prisoners taken, twenty to thirty were officers, so there was no shortage of them.⁹² The 143 prisoners taken by Ellery included a number of officers.⁹³ Either the Italian officers did not themselves possess the will to fight, or they were unable to assert authority over their troops.

An additional and significant consideration is that this action was the first for members of the *Pistoia Division*. The *Pistoia Division* had not been in combat previously and they were therefore ‘still quite green.’⁹⁴ It was thus inexperienced and best classified as “garrison” rather than “combat” troops.⁹⁵ The similarities to 21 Battalion’s situation at Platamon are striking; acting independently from its parent division, defending a significant location and undergoing its initiation to combat having witnessed forward troops withdrawing through its position.

A key difference between the two battles was the element surprise, which was present at Halfaya Pass, but not at Platamon. The Germans had got very close at Platamon, although their approach had been detected at range, and the New Zealanders had started engaging immediately with artillery and mortar fire. The main attacks at Platamon were preceded by bombardments; infantry did not suddenly appear in the midst of the forward fighting trenches as they had at Halfaya Pass. It is deduced that the arrival of 21 Battalion at Halfaya Pass, undetected, caught the inexperienced Italians so much by surprise that their instinctive reaction was to surrender. The broad frontage adopted by 21 Battalion would have aided in the misconception that there was a much larger force involved in the attack. The leadership of the Italians, generally acknowledged as weak, was insufficient to

⁹² Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 52.

⁹³ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 49.

⁹⁴ Mitcham, *Rommel’s Desert War*, p. 178.

⁹⁵ Mitcham, *Rommel’s Desert War*, p. 109. The *Pistoia Division* had been sent to Libya as a garrison force.

prevent surrenders. This failure of leadership is linked to the wider sociological aspects within the defence.

The attack at Halfaya Pass highlights competence of commanders, combat experience, forward command and the willingness to take risks as key factors contributing to 21 Battalion's combat effectiveness. The Italians completely failed in all these areas, with their lack of experience being a root cause of their ineffectiveness.

Sociological Factors

Brigadier Kippenberger believed that the defenders of the pass were 'probably feeling very lonely and unhappy.'⁹⁶ None of the available records permit an accurate determination to be made on the overall sociological state of the defence. Instead, observations have to be gathered from other sources and a link made to the Italian performance at Halfaya Pass. Kay wrote that the morale of the defenders at Halfaya Pass was:

probably very low, despite the [*Pistoia*] division's motto of 'I am valiant unto death.'⁹⁷

Low morale was contributed to by the condescending attitude of the Germans, and a sense of inferiority suffered by the Italians.⁹⁸ The Italian Army's 'approach to morale, unit cohesion, and relations between officers, NCOs and enlisted men was inconsistent with any tactical system aimed at defeating the enemy.'⁹⁹ Officers were from a different class to their men, having 'personal servants, better uniforms and equipment... more and

⁹⁶ Kippenberger, *Infantry Brigadier*, p. 244.

⁹⁷ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 42.

⁹⁸ Sadkovich, pp. 39- 40 and 59. Caccia- Dominioni, pp. 106- 107. Bierman and Smith, p. 102. According to Martin Kitchen, Rommel was '... outspoken in his criticism of the Italians, accusing them of inexperienced leadership, an elderly officer corps, insufficient training and poor weapons.' Kitchen, p. 314.

⁹⁹ MacGregor Knox, "The Italian Armed Forces, 1940- 3" in Millett, A.R., Murray, W. (eds.), *Military Effectiveness Volume III: The Second World War*, Boston: Allen & Unwin, 1988, p. 163.

better food' than their soldiers.¹⁰⁰ It can be deduced that officer- soldier relations were poor. 'Food, except for officers' rations, was by universal testimony execrable and insufficient' and through the lack of sanitation, they all 'lived amid clouds of flies and suffered inordinately from dysentery and hepatitis.'¹⁰¹ Living in appalling conditions, the Italian soldiers must have detested their officers- hardly a recipe for cohesion.

Training was a weakness of the Italian Army.¹⁰² Added to this, the action at Halfaya Pass was the Italian defenders' baptism of fire. Both these conditions would have further weakened the performance of the Italians. Perhaps more than the state of morale and inter-rank relationships was the question of whether, at this stage of the war, these Italians wanted to be in the fight at all. In A Company's attack, as an example, the company fired as it advanced:

There was little fire in return and, as the attackers closed in, the enemy surrendered; they were all Italians and seemed to be quite pleased to be taken prisoner.¹⁰³

Had German infantry been part of the defence, the outcome may have been every different, or at least more costly for the New Zealanders.¹⁰⁴ Without the "corsets" the Italians were free to surrender, if that was what they wanted to do and the circumstances allowed. It is fortunate for the New Zealanders that elements of the *90th Light Division* were resting beyond the defence, where they could not influence the outcome.

It is deduced from the above that will to fight (or lack of it) is a stronger determinant of combat effectiveness than morale, fatigue or fear, although they are linked. As already shown, the Italians failed to exploit their numerical advantage or their dominant position at Halfaya Pass. Moreover, it is further deduced from this battle that sociological factors,

¹⁰⁰ MacGregor Knox, "The Italian Armed Forces, 1940- 3" in Millett and Murray, p. 164. Lucio Ceva, "The North African Campaign 1940- 43: A Reconsideration" in John Gooch, *Decisive Campaigns of the Second World War*, London: Frank Cass, 1990, p. 88.

¹⁰¹ Knox, p. 166.

¹⁰² Ceva, p. 99.

¹⁰³ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 48.

¹⁰⁴ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 52.

specifically lack of will to fight may overcome leadership, terrain or numerical advantage unless this reluctance is kept in check. The corollary is that troops in poor terrain, or who are in inferior strength to their opponent, may still choose to fight if their collective will is strong enough. As military psychiatrist Lt Col A.T.M. Wilson once observed, and it is applicable to the battle at Halfaya Pass, that 'victory depended not so much on the number killed as the number demoralized.'¹⁰⁵

When the New Zealanders conducted the attack they had been out of combat for at least 15 days.¹⁰⁶ They were therefore well rested. 21 Battalion was by then a veteran unit; every member of the battalion had previous battle experience for there had been no reinforcements following El Alamein. Orders issued by officers and non-commissioned officers were followed; platoons and sections were successfully dispersed, and they conducted the attack with minimal direct supervision. R.L. Kay summed it up:

With the minimum of orders, fuss, and organisation, the 110 officers and men had gone quickly and efficiently into action and, acting on their own initiative, had carried the task through to a successful conclusion.¹⁰⁷

Combat effectiveness factors that emerged from this battle were morale (lack of it with the Italians), will to fight and the impact of surprise on unit cohesion.

Fog of War

The defenders of Halfaya Pass were plagued by the fog of war, much of it self-induced. From the start, coordination between German rearguards and Italian defenders was non-existent. This can be traced to General Rommel who refused to take the *Pistoia Division* under command when it was deployed forward from Libya to the frontier with Egypt as

¹⁰⁵ Quoted in Ahrenfeldt, pp. 197- 198.

¹⁰⁶ Based on coming out of the line at Miteiriya Ridge on night 26 October. This was followed by a rest period until 4 November. The Battalion had been part of the divisional advance since 4 October- moving in trucks- and had captured Sidi Barrani without a fight on 10 November. 21 Battalion War Diary October 1942. WAI 1 DA 54/1/34, NA. and 21 Battalion War Diary November 1942. WAI 1 DA 54/1/35, NA.

¹⁰⁷ Kay, Campaign Narrative - Volume VIII: Clearing the enemy from Egypt to Cyrenaica, p. 52.

he 'no longer had the necessary equipment for either their communications, their transport or their supply.'¹⁰⁸ His orders for the 90th *Light Division* to defend the pass were ignored, for the formation merely rested well to the west of the *Pistoia* defence, and took no part in the action. The inexperienced and ill- disciplined *Pistoia* defenders did not place out any early warning patrols or sentries and were therefore ignorant of the approach of the New Zealanders, or the earlier presence of the KRRC patrols. The combat experienced German veterans probably despised the Italians, but nevertheless felt confident enough that they could rest behind them, not realising the defence would crumble so quickly. One author has raised the possibility that the veteran Italian *Young Fascist Division* was on its way to defend Halfaya Pass, but was late.¹⁰⁹

Despite three tanks from 4 Light Armoured Brigade being destroyed at the foot of the pass on the afternoon prior to the New Zealand attack, there was little further evidence of mines on the zigzag road, or of any large scale attempt to make it impassable. The *Pistoia Division* left the blocking of roads to the Germans. German engineers thoroughly destroyed the Sollum Pass, but not the Halfaya Pass, it was as if 'they thought that either German or Italian detachments were still on the coastal plain.'¹¹⁰ This oversight would have been less of a problem by day when German artillery could have covered the zigzag road and the approaches to it on the plain below. By night, it was a significant blunder, for dismounted infantry were able to ascend the road undetected and thus close on the defence. This oversight by the defence meant that 4 Light Armoured Brigade was able to ascend the pass very quickly next morning after it had been secured by 21 Battalion.

The movement of large formations on constricted routes can be chaotic. Having a balanced order of march is essential. The New Zealand situation at the foot of the pass in the hours preceding the attack was somewhat confused as units were strung out along the road. Kippenberger overcame this largely by sending messages to 21 Battalion then personally searching out Roddick at the foot of the pass before driving back to contact

¹⁰⁸ Liddell Hart, p. 347.

¹⁰⁹ Kitchen, p. 383.

¹¹⁰ Walker, *Alam Halfa and Alamein*, p. 465.

Harding to ensure he got the instructions.¹¹¹ In other words, he used multiple means, including himself, to ensure the message got through.

This battle demonstrated clearly that animosity between Allies can contribute to the fog of war. Luck also played a part for the New Zealanders, whereby the Germans had inadvertently failed to comprehensively mine the approaches to the Pass and the *Young Fascists* did not arrive in time to bolster the defence.

CONCLUSIONS

21 Battalion was combat effective at Halfaya Pass. The results were spectacular. Seventy enemy were killed and over 600 captured for the cost of one man dead and one wounded. Harding had every right to feel ‘very pleased about things’ after the battle.¹¹² This was their finest hour. Combat effectiveness factors identified by the analysis of Miteiriya Ridge are listed in Table 8.5.

Category	Combat Effectiveness factors identified
Operational Setting	<ul style="list-style-type: none"> • Suitability of the mission assigned (to the Italians)
Force Strength	<ul style="list-style-type: none"> • Bayonet strength • Posture (degradation of Italian strength through surprise)
Battlefield Effects	<ul style="list-style-type: none"> • Occupation (and retention) of suitable terrain- (Italian failure to retain the Key Terrain)
Tactics, Doctrine and Training	<ul style="list-style-type: none"> • Security • Surprise • Use of fire and manoeuvre
Command and Leadership	<ul style="list-style-type: none"> • Competence of commanders • Combat experience • Forward command • Risk
Sociological	<ul style="list-style-type: none"> • Morale • Will to fight

¹¹¹ Kippenberger, *Infantry Brigadier*, p. 243.

¹¹² Kippenberger, *Infantry Brigadier*, p. 244.

	<ul style="list-style-type: none"> • Baptism of fire
Fog of War	<ul style="list-style-type: none"> • Animosity between Allies

Table 8.5: Combat Effectiveness factors identified at Halfaya Pass

Key factors were the New Zealanders achievement of surprise, coupled with the Italians' inexperience and lack of will to fight. The defence had, on the face of it, significant advantages in numbers and in the natural strength of their position. Even though it is difficult to state with certainty whether the defence consisted of one or two battalions, there were at least 682 defenders, a six to one advantage over the New Zealanders. Had the pass been defended by a combat experienced unit, and even without the advantage of numbers, the capture of the pass would have been a much more difficult proposition, analogous to Bir Ghirba with infantry attempting to close on a defended position in the open, in daylight. It is deduced therefore, that leadership and sociological state are key modifiers of force strength and that strengths based on number counts, as a result, do not provide a true gauge of the relative strengths between two opponents.

It is clear the combat effectiveness factors are, in fact, all inter-related. They alter each others actual strengths and weaknesses in each area, and relative to the opposition.

Low morale, poor leadership, the lack of combat experience and Rommel's failure to take *Pistoia* under command were all key conditions which detracted from the Italian performance. When confronted in the half light with enemy infantry at the forward trenches, the immediate reaction of the defenders was to surrender, and this act rapidly degraded the defence. The corset staves were lacking this time; their absence suggests that co-locating superior troops with weaker ones (and by extension the presence of veterans within units generally) is a successful tactic and one wonders what the effect would have been if *90th Light Division* had taken its rest immediately behind, or even within the *Pistoia* position.

In contrast to the Italian defenders, 21 Battalion was a veteran unit, well led and sufficiently rested prior to being committed to combat. With no recent reinforcements,

these were the hardened veteran rump of the battalion. Their experience and confidence over-rode their lack of knowledge about the state of the defence, limited preparation time, or absence of any of the usual support from external as well as organic support weapons. Confident and strong leadership enabled the lack of light, knowledge of enemy dispositions and firepower to be exploited to the attackers' advantage. This illustrates the positive aspects of these conditions, where combat experience, leadership and the use of surprise can overcome the disadvantages of being in weaker strength or attacking over unfavourable terrain. Surprise was also a key factor. Surprise was complete; the effect was a disproportionate casualty rate between the two sides.

Exploiting the dark proved once again to be a sound tactic, to close up on the defence undetected and achieve the element of surprise. By not being so dark as to create confusion among the attackers, the transition into light allowed the attack to extend across a wider area and it is deduced that this also served to spread alarm among the defence, and hastened the general surrender.

The significant effect of positive leadership within 21 Battalion from CO down to section commanders has been highlighted as a key factor in 21 Battalion's combat effectiveness at Halfaya Pass. The junior leadership demonstrated by Ellery and Jennings made all the difference to ensuring that momentum was maintained in the attack. Had any of these junior leaders faltered, then the assault would likely have bogged down into an extended small arms slugging match, which may have allowed time for the German artillery to come into action, or even for the veteran *90th Light Division* to join in. This last point, though conjecture, is not an unreasonable possibility.

CHAPTER 9

THE SANGRO: 27/28 NOVEMBER 1943

‘As each type of terrain approaches its extreme it will, as we have observed elsewhere, tend to reduce a general’s influence on events to the same degree to which it tends to emphasize the personal resources of the ranks, down to the private soldier.’

- von Clausewitz, *On War*¹

‘Generally, it was a satisfactory and surprisingly easy affair’

- Major General Kippenberger²

21 Battalion’s first operation in Italy occurred at the Sangro. The operation consisted of an unopposed crossing of the Sangro River followed by a night attack. The New Zealand Division’s objectives at the Sangro were forward outposts of the Gustav Line within the zone defended by the inexperienced German *65 Division*. The forward outposts were not as heavily fortified as the Gustav Line itself. This was fortunate, for it allowed infantry battalions of the New Zealand Division, who by November 1943 contained significant numbers of untried reinforcements within them, to develop combat experience before being committed against a better prepared and stronger defence mounted by veteran units.

In the interval between the campaign ending in North Africa in May 1943 and being committed to combat in Italy, the New Zealand Division spent a period in Egypt recuperating. During this time, it reorganised and sent a 6,000 strong furlough draft back to New Zealand. The replacement soldiers for the furlough draft were untried reinforcements, and this had the potential to impact on 21 Battalion’s combat effectiveness. The New Zealand campaign history noted that ‘In a typical infantry battalion, few but the commands and technical posts were filled by original members; most of the older reinforcements had found their way to administrative duties...’³ The division absorbed sufficient reinforcements to bring itself back up to strength and

¹ von Clausewitz, *On War*, p. 418.

² W.D. Dawson, Campaign Narrative- 2 Division: Volume X The Italian Campaign (Sangro to Florence) Chapters 1 (Across to Italy) and 2 (The Sangro Operations), KMARL, note to p. 65.

³ N.C. Phillips, *Italy Volume I The Sangro to Cassino*, Wellington: War History Branch, 1957, pp. 31-32.

conducted extensive training and exercising.⁴ A significant number of the riflemen were untried. The question was whether the outflow of battle experienced officers and men would impact on the combat effectiveness of 21 Battalion.

This chapter analyses 21 Battalion's actions at the Sangro, where it captured a section of outposts occupied by *I Battalion of 146 Regiment of 65 Division*. The ground forward of the objective was very different from what 21 Battalion had experienced in North Africa. It was not as "extreme" as von Clausewitz meant in the opening quote; however, it was challenging to both attacker and defender alike. In both cases, it fragmented units. This operation demonstrates that 21 Battalion had transferred sufficient knowledge from its North African experience to Italy, so that despite large numbers of novice reinforcements, it still remained combat effective. It also shows that German novice troops exhibited the same failings as 21 Battalion at Platamon and with the Italian defenders at Halfaya Pass.

LEADUP TO THE BATTLE

The New Zealand Division arrived in Italy in two drafts on 9 and 22 October 1943.⁵ Once established, the formation began training in the specific skills it was envisaged would be needed for the type of fighting to be undertaken in Italy.⁶ The training imperative of General Montgomery still applied. He was still commanding the Eighth Army. While the New Zealanders trained and prepared, the remainder of the Eighth Army continued fighting to the north.

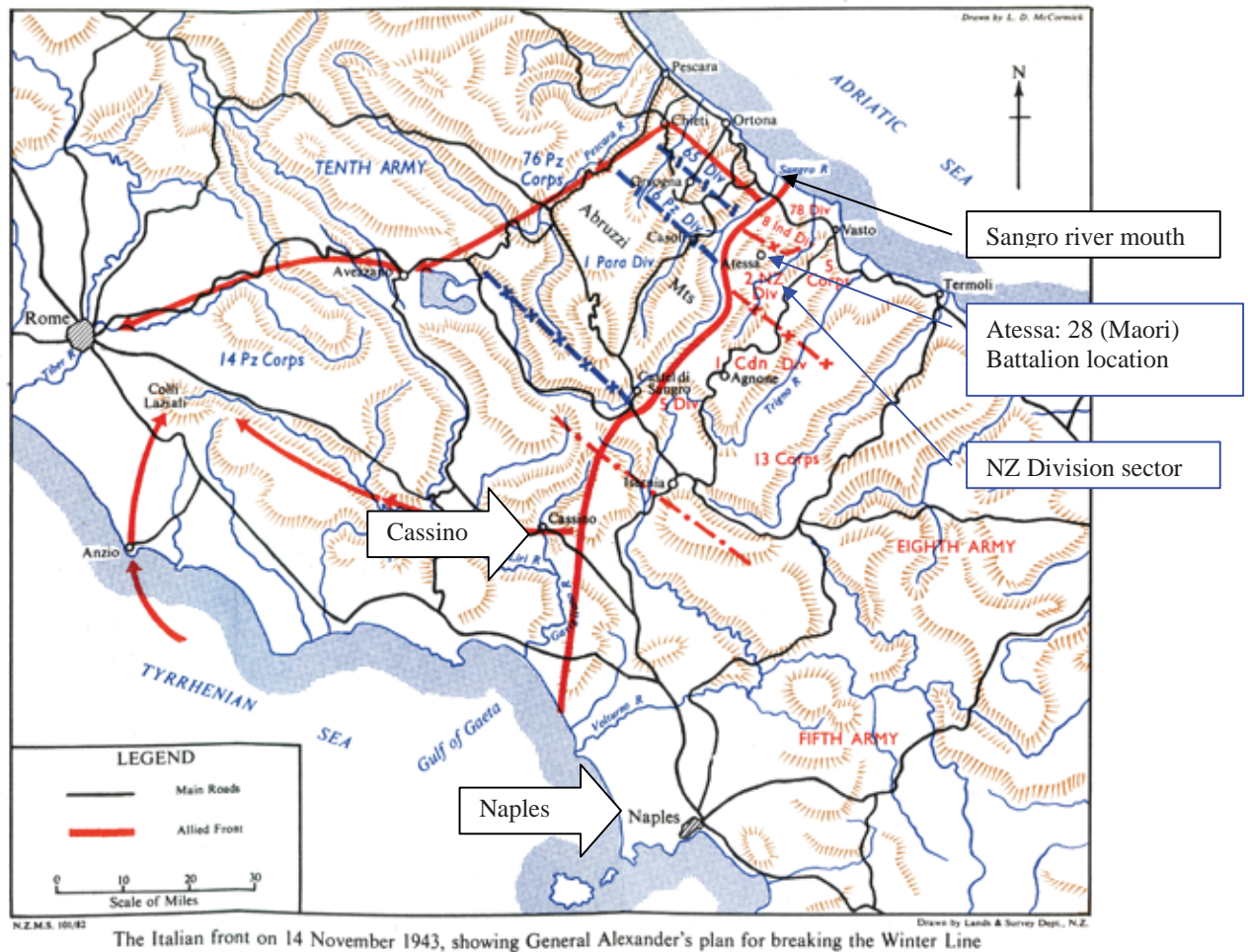
By mid November 1943, the overall situation was that the Eighth Army was east of the Apennines and closing on the Sangro River immediately forward of the Gustav Line. The American Fifth Army had captured Naples and was closed up on Cassino. The Germans had begun a vigorous defence based on river lines, natural chokepoints and prepared lines

⁴ Phillips, *The Sangro to Cassino*, p. 31 and *Roads to Rome: With the New Zealand Division from Maadi to Florence The Second New Zealand Division in Action*, Wellington: Army Board, 1946, p. 5.

⁵ Phillips, *The Sangro to Cassino*, p. 37.

⁶ Phillips, *The Sangro to Cassino*, p. 38. 21 Battalion War Diary entries for November 1943 record routine training, night exercises and sports took place. Entries for 1- 14 Dec 43. War Diary 21 Battalion November 1943. WAI 1 DA 54/1/47, NA.

of defence along lines of resistance which Field-Marshal Albrecht Kesselring had identified as early as 10 September 1943.⁷ The Gustav Line was a significant fortified barrier running astride Italy between the Tyrrhenian Sea on the west coast and the Adriatic in the east and presented a major challenge to the Allies. The situation and general dispositions as at 14 November 1943 are shown in Map 9.1.



Map 9.1: The Italian front on 14 November 1943⁸

⁷ Field Marshal Albrecht Kesselring, *The Memoirs of Field-Marshal Kesselring*, London: William Kimber and Co. Limited, 1953, pp. 186- 187.

⁸ Phillips, *The Sangro to Cassino*, facing p. 39. Text boxes and arrows added. The Gustav Line runs generally along the line Rome- Avezzo- Pescara, in the vicinity of the German Tenth Army area dominated by 76 Pz Corps. The outpost line was located forward between the Gustav Line and the north bank of the Sangro River.

THE COMBATANTS

Axis Forces

The Axis main line of defence east of the Apennines, the eastern section of the Gustav Line (also called the Winter Line by the Allies),⁹ was based along a prominent ridge to the north of the Sangro River, running parallel to the river itself. Forward of the main positions, the Germans had sited a series of outposts on top of steep bluffs 300 metres beyond the northern banks of the river as a buffer between the Sangro River and the Gustav Line.¹⁰ A section of this “series of outposts” was the New Zealand objective for the operation being examined in this chapter.

There were no defensive positions sited on the northern bank of the river or the flat area between it and the bluffs. The Germans ought to have dominated this bank with patrols, but as will be shown, the defence was based on the inexperienced *65 Division* who were not up to it, and who put their faith in artillery, their defensive positions and the river itself, which for a time had acted as a barrier due to flooding. Prior to the New Zealand attack, the commander of *65 Division*, General Gustav von Ziehlberg had stated that his division’s position was ‘naturally very strong and it is rendered considerably stronger by our numerous and excellent field works.’¹¹ Von Ziehlberg downplayed the need for patrolling in favour of static defences. By failing to dominate the home bank of the river, *65 Division* had handed the initiative to the Allies and, as a result, made themselves reactive and reliant on detecting New Zealand movement. The New Zealand campaign narrative described the defence of the Sangro as being:

in the hands of a second-rate formation, 65 Inf Div, which contained a large number of Poles and young raw troops; it had only two regiments (145 and 146)

⁹ Rudolf Bohlmer, *Monte Cassino*, London: Cassell & Company Ltd., 1956, p. 69. As an example of inter-changing the names of the Gustav and Winter Lines, see Eric Linklater, *The Campaign in Italy*, London: Her Majesty’s Stationery Office, Second Impression 1959 (First published 1951), p. 105.

¹⁰ Kippenberger, *Infantry Brigadier*, p. 322. Dawson, Campaign Narrative- Chapter 2 (The Sangro Operations), p. 48.

¹¹ Supplement to the London Gazette of Tuesday 6th June 1950, p. 2905.

with which to hold 15 miles of front, it was entirely horse drawn and its equipment was poor.¹²

65 Division had been raised for service in July 1942, at a time when the New Zealand Division had already fought many battles. Its role had been to defend the city of Antwerp and the Scheldt River estuary. A year later it was reorganised and trained for service in Russia, but was sent instead to Italy in August 1943.¹³ The division arrived at the Sangro on 12 October.¹⁴ It had never seen action before; as a result, ‘... the inexperienced 65th was mauled by the British.’¹⁵ Field- Marshal Kesselring was dubious about the combat effectiveness of *65 Division*. He described them as ‘a green unit’ and he considered, in hindsight, whether he ought to have replaced them with the *1st Parachute Division* prior to the Allied attack.¹⁶ It was fortunate for 21 Battalion that he did not.

Based on the New Zealand official history and a New Zealand Division Intelligence Summary, it is likely 21 Battalion was opposed by troops of *I Battalion of 146 Regiment*.¹⁷ *I/164 Regiment*’s defences within the New Zealand objectives consisted of isolated machinegun posts, mainly sited to cover tracks between bluffs and along the valley sides, as they were too steep to ascend.¹⁸ Their defences included slit trenches and a few posts based on isolated stone houses. Like 21 Battalion at the Pinios Gorge, soldiers of *I/164 Regiment* failed to guard (or at least observe) their river obstacle. Therefore, it was not an effective block. Based on *65 Division*’s assessment, *I/164 Regiment* were a novice and ill-equipped unit of dubious quality, but thought good enough to be employed as a trip-wire in the outpost line during winter when weather

¹² Dawson, Campaign Narrative- Chapter 2 (The Sangro Operations), p. 48. Underlining removed.

¹³ 65. Infanterie- Division (65th Infantry Division), pp. 23- 24. Guides to German Records microfilmed at Alexandria, VA. No. 65. Records of German Field Commands: Divisions (Part V): Divisions 58- 96, The National Archives, National Archives and Records Service, Washington, 1970.

¹⁴ 2 NZ Div Intelligence Summary No. 191, 13 Nov 43. War Diary HQ 2 NZ Div “G” November 1943. WAI 1 DA 21.1/1/47, NA.

¹⁵ Mitcham, *German Order of Battle*, p. 115. When using the term “British”, Mitcham was referring to the Eighth Army generally, including the New Zealand Division.

¹⁶ Kesselring, p.188.

¹⁷ Phillips, *The Sangro to Cassino*, p. 67. 2 NZ Div Intelligence Summary No. 201 dated 28 Nov 43. HQ 2 NZ Div “G” November 1953. WAI 1 DA 21.1/1/47, NA. It is not possible to state this categorically for the unit identity of prisoners was not recorded in unit War Diaries or official histories.

¹⁸ Kippenberger, *Infantry Brigadier*, p. 323.

conditions were expected to minimise combat operations anyway. *I/164 Regiment's* dispositions were typical of an outpost line unit, covering an extended frontage with too few troops.

As *I/164 Regiment* of *65 Division* was a novice unit, ill-equipped, with lax security and weak leadership, it was, therefore, the ideal first opposition for 21 Battalion in Italy; recent reinforcements soldiers could be initiated into battle alongside the more experienced men, and the intricacies of navigation, movement and fighting in the new terrain could be worked through.

21 Battalion

21 Battalion arrived in Italy on 22 October, the day before the first anniversary of the Battle of El Alamein. On arrival, it readied itself for operations in different terrain and climate conditions to those experienced in the Middle East.¹⁹ The division moved forward on 18 November to re-join the remainder of the Eighth Army. 21 Battalion occupied defensive positions on the south of the Sangro River on the night of 24 November. As a sign it was combat ready, 21 Battalion immediately deployed reconnaissance patrols across the river.²⁰ Patrols were deployed to 'locate suitable crossing points,²¹ check the river's depth,²² test the enemy's defences,'²³ and to determine routes up the escarpment.²⁴ This activity contributed to the division's knowledge of the enemy and terrain north of the Sangro River, and importantly, it also provided experience for junior officers and NCOs. It also represented an increase in patrolling activity from that undertaken in the Middle East, where patrols were a relative rarity due to the

¹⁹ Entry for 22 Oct 1943. 21 Battalion Chronology. WAI 1 DA 54/11/1 (17179 Pt 1), NA.

²⁰ Entries for 1- 26 November 1943. 21 NZ Battalion War Diary. 1 November 1943 to 30 November 1943. WAI 1 DA 54/1/47, NA.

²¹ Patrol Report by 2/Lt O.G. McGregor of C Coy, 21 NZ Bn dated 27 Nov [43]. 21 NZ Battalion War Diary 1 November 1943 to 30 November 1943. WAI 1 DA 54/1/47, NA.

²² See 21 Battalion patrol reports and the information on crossing points and river depths at War Diary entries for 25, 26 and 27 Nov 43. War Diary HQ 2 NZ Div "G" November 1943. WAI 1 DA 21.1/1/47, NA.

²³ McLeod, p. 56. Norton, *26 Battalion*, p. 298.

²⁴ Cody, *21 Battalion*, p. 282.

distances involved, the difficulty of moving undetected in flat, open terrain, and because of the extreme heat.

Figure 9.1 provides a perspective of the 21 Battalion attack. The figure looks northwest across the river towards 21 Battalion's objectives of Points 200 and 227. The Gustav Line is not marked, but was located in depth along the line of the villages of Orsogna and Castelfrentano on the skyline. The Figure illustrates how much the bluffs overlooking the river dominated the forward area, and the lines of observation and fire available by day to the defence. A night attack would reduce much of this advantage.

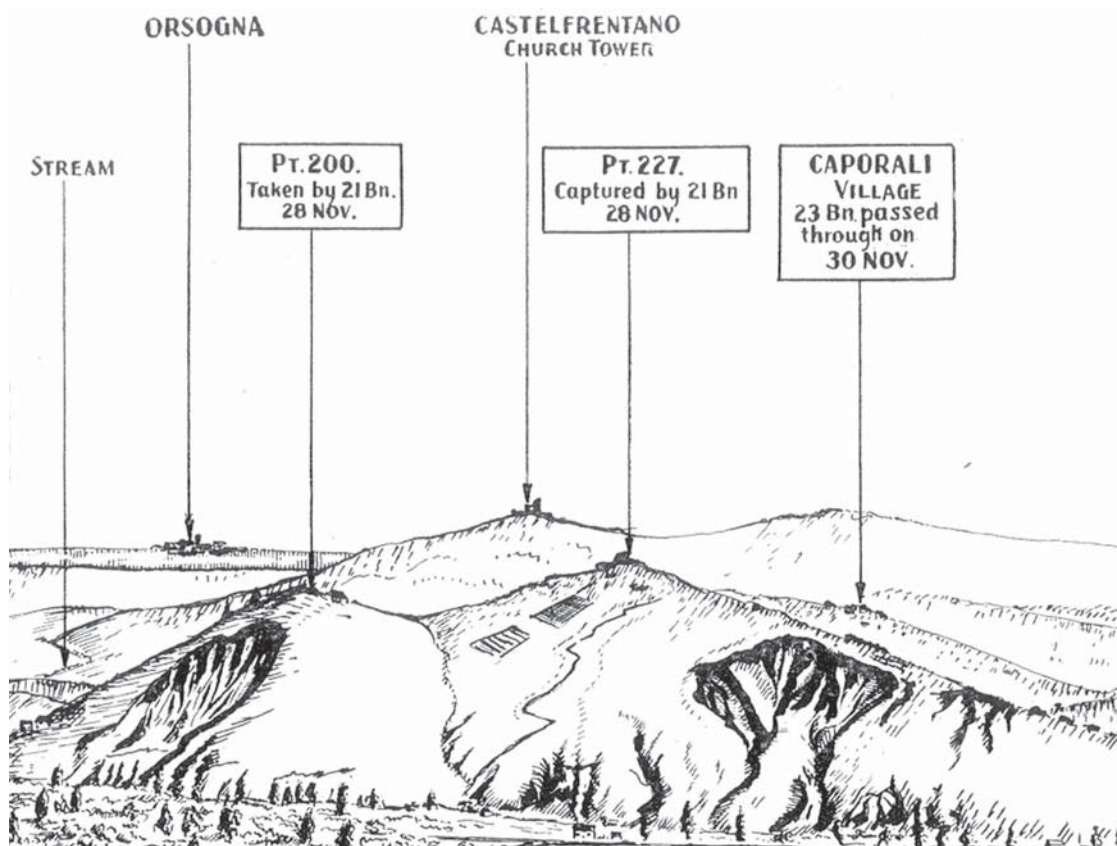


Figure 9.1: Panorama of the Sangro River front²⁵

The New Zealand Division's task was to establish a bridgehead over the Sangro River.²⁶ General Freyberg decided to employ both of his infantry brigades.²⁷ The division's plan

²⁵ *Roads to Rome*, pp. 10- 11.

was for the five assault battalions of its two infantry brigades to cross the Sangro River simultaneously by night to reach the foot of the bluffs. Under cover of artillery fire, the infantry were then to attack uphill to clear and secure the dominating ground. This would then allow engineers to construct bridges, which would in turn permit tanks and heavy weapons to cross the river and be used to support subsequent attacks against the stronger defences of the Gustav Line.

5 Brigade's intention was to establish a bridgehead beyond the Sangro River. Its method was to attack "two battalions up," with 21 Battalion on the left and 23 Battalion on the right. 28(Maori) Battalion was designated as reserve for this operation.²⁸ They were located at Atessa (see Map 9.1), where they were 'left rather far back.'²⁹ This will become evident as the unit was not available on the one occasion 21 Battalion requested assistance. The siting of 28(Maori) Battalion demonstrated poor judgement by brigade headquarters and showed that they did not yet appreciate the difficulty presented by the terrain which would have delayed the timely deployment of the reserve had it been activated as a result of a request by any of the assault battalions. The New Zealanders chose to conduct a night attack, although the terrain was more challenging than at Ruweisat or Miteiriya Ridge.

While the New Zealand Division headquarters and 5 Brigade did not break the operation into phases, 21 Battalion did. The use of phasing showed a level of sophistication, although the passage of companies through each other, in the dark, between phases two and three, created the possibility for confusion. The CO's report on the operation summarised the object of each phase as follows:

First Phase. Object: Attack and clear lateral rd from 343942 to 330933 and fwd to escarpment of all EN. [This was the river crossing]

²⁶ 2 NZ Division Operation Order No 35 dated 26 Nov 43. HQ 5 INF BDE War Diary. WAI 1 DA 52/1/47, Vol 2, NA.

²⁷ Norton, *26 Battalion*, p. 300.

²⁸ 5 INF BDE Operation Order No.23 dated 27 Nov 43. HQ 5 INF BDE War Diary. WAI 1 DA 54/1/47 Vol 2, NA.

²⁹ Phillips, *The Sangro to Cassino*, p. 65.

Second Phase. Object: B Coy to capture and consolidate right hand feature of first objective 339941; C Coy to capture and consolidate left hand feature on first objective 324938. [Artillery support commenced]

Third Phase. Object: D Coy to pass through B Coy, capture and consolidate feature 328954- A Coy to capture and consolidate point 117, 322944 to 321949.³⁰

21 Battalion's Start Line, and the objectives of points 200 and 117 can be clearly identified in Map 9.2 and Figure 9.1. 21 Battalion conducted the operation with all four of its rifle companies. 21 Battalion's organisation for the operation was:

21 Battalion	(Lieutenant Colonel McElroy)
A Company	(Major Tanner)
B Company	(Major Hawkesby)
C Company	(Captain Horrocks)
D Company	(Major Bailey)

3 Platoon, 1 Company, 27 NZ (MG) Battalion- arrived 28 November

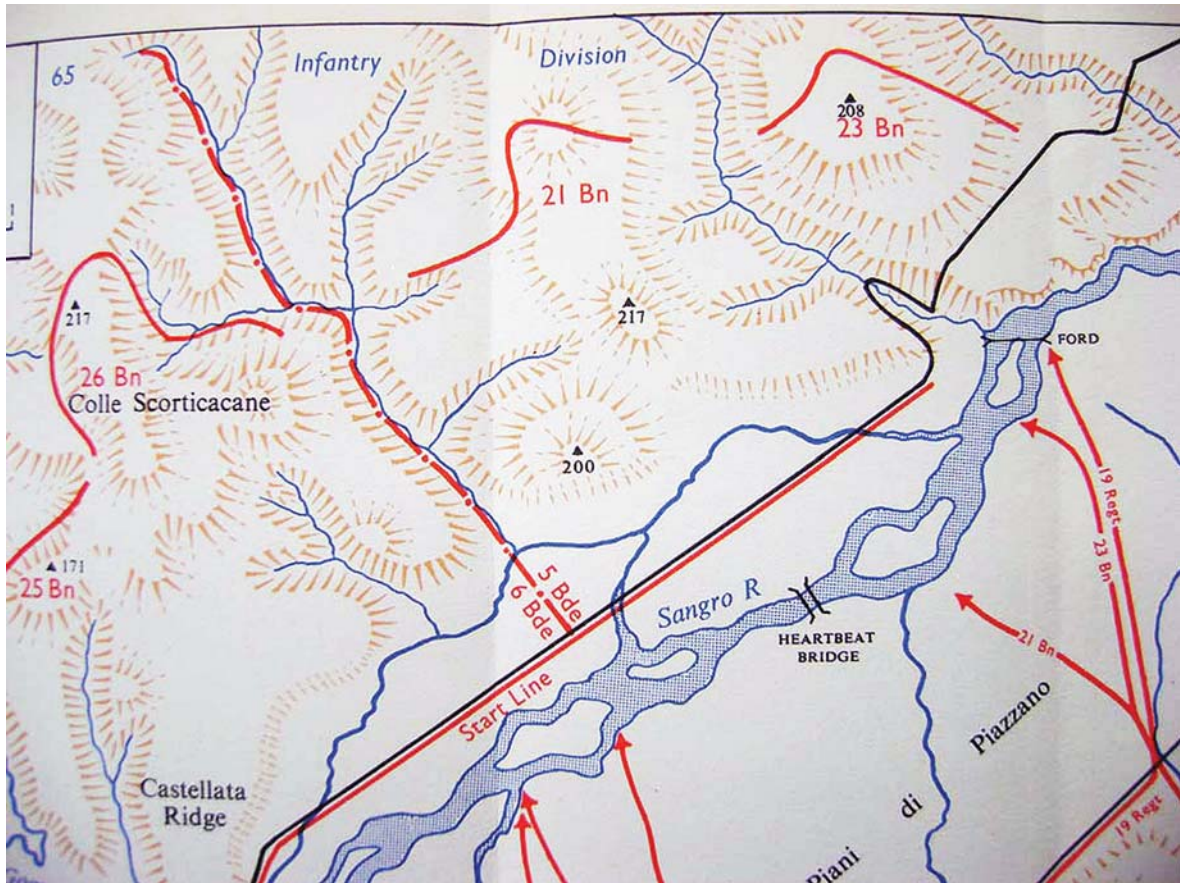
A Squadron, 19 Armoured Regiment (less one Squadron)- from first light 28 November

Summary of Key Events

A Company started across the river at 2330 hours. Its role was to secure the battalion's Start Line and prevent enemy interference.³¹ Once A Company had completed its crossing, the remainder of the battalion followed. Although the men of 21 Battalion could not have seen them in the dark, 6 Brigade and 23 Battalion were also crossing the river.

³⁰ Report by CO. Sangro Crossing. (Copy obtained from Unit War Diary Nov 43). Enclosed with November 1943 section of the Battalion Chronology. 21 Battalion Chronology. WAI 1 DA 54/11/1 (17179 Pt 1), NA.

³¹ Phillips, *The Sangro to Cassino*, p. 68.



Map 9.2: Crossing the Sangro³²

At 0245 hours, at the commencement of the artillery covering fire, B and C Companies crossed the Start Line and started climbing towards their objectives. For clarity, it is intended to summarise the key events sequentially by flank of the attack, rather than by phase. The four separate engagements which took place during the operation have been designated L1, L2, R1 and R2 (the letter indicates left or right flank of the attack), so that the same engagements referred to in more than one paragraph, and in different sections of the analysis, are more easily associated. Action undertaken by A and B Companies after first light to clear the remaining enemy outposts have been designated A1 and B1.

³² Phillips, *The Sangro to Cassino*, facing p. 59. The red arrow to the right of the word “Piazzano” shows the route taken by 21 Battalion to approach and cross the river. It’s Start Line for the attack is shown as the red line immediately below the 200 feature and above the Heartbeat Bridge (which was constructed later).

On the left, C Company's movement began well enough. 14 and 15 Platoons (Second Lieutenants Owen McGregor and Alex Maich) crossed the Start Line and went straight up the escarpment, while Captain Bob Horrocks, with 13 Platoon (Second Lieutenant Allen Dale) and a section from 15 Platoon moved up a gully with the intention of approaching the company objective from a flank. Horrocks and 15 Platoon were eventually blocked by barbed wire in a gully and then came under fire from mortars and small arms (L1).³³ Horrocks went forward to investigate the source of the small arms fire.

A short while later, Lieutenant Brian Grant, whose task was to lead A Company through C Company once the latter had secured its objective, came across C Company's headquarters where he was advised that Horrocks had gone forward to investigate the hold-up (L1). Grant halted his platoon, then went forward with one of his corporals to locate Horrocks. They found him, mortally wounded. Grant and his corporal were then themselves wounded.

Meanwhile, the remainder of A Company had closed up on C Company headquarters. While OC A Company took stock of the situation, Corporal Perry (7 Platoon, A Company) went ahead and dealt with the spandau position single-handedly (L1). A Company then pushed on through C Company and reached its objective on Point 117 without further incident.³⁴

Once the gun at L1 had been neutralised, Dale led the rest of C Company towards the company objective at Point 200. Dale hoped McGregor and Maich with their two platoons would be there already, but they were not. Instead, Dale found a house on the objective occupied by an unknown number of enemy (L2). The occupants were ordered to come out. When they did not, Dale fired a flare in through an open window. This caused 24 Germans to emerge, among them two officers with 'very compact radio sets'.³⁵ These two officers are assessed to be forward observers for German artillery. They had been ineffective, given the lack of artillery fire employed by the defence.

³³ Dawson, Campaign Narrative- Chapter 2 (The Sangro Operations), p. 64.

³⁴ Cody, *21 Battalion*, pp. 286- 287.

³⁵ Cody, *21 Battalion*, p. 287.

McGregor and Maich finally arrived with their platoons. On the way up they had passed unoccupied slit trenches of the defenders. It was discovered later that the enemy who should have been occupying these trenches were some of the ones captured earlier by Dale. They had preferred what they thought was the superior protection from the barrage afforded by the stone house with its internal excavations, to their slit trenches.³⁶ Instead, they had compromised the security of the position by abandoning their forward trench.

The movement by B Company on the right flank in Phase 2 was without significant incident. Rather than scale the bluffs, B Company moved from the Start Line in two groups on opposite sides of a re-entrant. Major George Hawkesby led 10 Platoon (less one section) and 11 Platoon up the right hand side, while 12 Platoon and a section from 10 Platoon advanced up the left-hand side. On reaching the company objective, the company dug in and waited for D Company to pass through.

In Phase 3, D Company passed through B Company and pushed on to their objective, a hill 'forward of and between A Company on Point 117 and C Company on Point 200.'³⁷ The climb to their objective was difficult, 'almost a precipice.'³⁸ OC D Company recalled 'The whole of D Coy ran into difficulty trying to climb a very steep escarpment & became somewhat disorganised.'³⁹ As a result, 18 Platoon (Second Lieutenant John Ross) became separated from the remainder of the company. The reduced company was engaged from a house to the left of their line of advance (R1). Major Harry Bailey sent 17 Platoon (Second Lieutenant James Hill) to deal with the enemy in the house, thus leaving himself just one platoon to continue on to the company's objective.

The single platoon left with Major Bailey was then engaged from a position 200 metres short of the company objective (R2). While one section laid down suppressing fire from the front, two other sections manoeuvred to the flank. Once he had dealt with that post, Corporal Roy Hinton then dealt with three other posts in the vicinity, accounting for 20

³⁶ Cody, *21 Battalion*, p. 287.

³⁷ Cody, *21 Battalion*, p. 287.

³⁸ Cody, *21 Battalion*, p. 287.

³⁹ Harry Bailey to Mr Cody, letter, 19/3/52. 21 NZ Battalion- Taranto to Orsogna: Correspondence collected by unit historian. WAI DA 1 54/15/10, NA.

enemy killed and captured. Hinton was awarded an MM to recognise his performance that night.⁴⁰

Back on the left of the company's line of advance, Hill had been unable to deal with the house that he and his platoon had been assigned to capture. However, Second Lieutenant Edward Swainson (B Company) had been sent forward to assist Major Bailey and when he came across Hill instead, he joined Hill's attack and together the two platoons rushed in and cleared the house (R1). They captured nine prisoners, one machinegun and one anti- tank gun. Swainson and one other were the only New Zealand casualties in this engagement; both wounded by hand grenades. Hill then joined D Company on the company objective.

All companies dug in on their assigned objectives. As D Company dug in, it still had firing going on around it, from flanks and rear, but it was not until first light that positions which had been bypassed, and which had continued firing, were able to be cleared.⁴¹ Daylight also allowed D Company's missing platoon to find its way to the company objective. B Company was fired on from their right flank at first light. 12 Platoon (Second Lieutenant Richard Campbell) was tasked to deal with this opposition, capturing several Germans while clearing out five machinegun posts (A1).⁴² 10 Platoon B Company captured a 2 inch mortar and a 3 inch mortar (B1).⁴³ In all, an additional 17 Germans were captured by A and B Companies after first light.⁴⁴

⁴⁰ Citation for 25157 Corporal Roy Haddrell Hinton dated 4 Dec 43. Medal Citations Vol 4 GRAY- HOW. WAI 1 DA 409 2/2, NA. Cody, *21 Battalion*, p. 461.

⁴¹ J.F. Cody, *21 Battalion*, p. 288.

⁴² Report by CO Sangro Crossing. 21 NZ Battalion War Diary. 1 November 1943 to 30 November 1943. WAI 1 DA 54/1/47, NA.

⁴³ Report by CO Sangro Crossing. 21 NZ Battalion War Diary. 1 November 1943 to 30 November 1943. WAI 1 DA 54/1/47, NA.

⁴⁴ Cody, *21 Battalion*, p. 289. Report by CO Sangro Crossing. 21 NZ Battalion War Diary. 1 November 1943 to 30 November 1943. WAI 1 DA 54/1/47, NA.

OUTCOME

Mission Accomplishment

21 Battalion achieved its mission. At the cost of 33 casualties, 21 Battalion reached all its objectives and cleared the intervening ground of enemy.

Casualties and Losses Sustained

The attack cost 21 Battalion six men killed and 27 wounded. The Battalion captured 74 enemy. Casualty figures for both sides are shown in Table 9.1.

	Personnel				Total Casualties
	KIA	WIA	PW	MIA	
21 Battalion	6	27			33
<i>1 Battalion, 146 Regiment</i>	unknown	unknown	74		74+

Table 9.1 Casualties sustained at the Sangro

Given there were at least six recorded engagements, and considerable firing of spandau machineguns by the defenders, the New Zealand casualties were low. This is attributed to limited German use of mines and the attack being by night. 23 Battalion's casualties at the Sangro were also relatively light; 3 KIA, 12 WIA and 1 PW- a total of 16.⁴⁵

⁴⁵ Ross, *23 Battalion*, p.290.

ANALYSIS OF COMBAT EFFECTIVENESS

Operational Setting

Although Rommel had argued to forgo southern Italy and base the Axis defence in the north only, Kesselring got his way.⁴⁶ Kesselring's operational concept was to defend from as far to the south of Italy as possible, utilising successive belts of river lines and high ground bisecting Italy from west to east.⁴⁷ This created extreme tactical and operational challenges for the Allied attackers, for the east- west running rivers and steep ground inevitably separated the tanks and infantry as they advanced northwards, thereby reducing the combined arms effect during attacks. The Germans did not have this challenge. German infantry, supported by artillery, could be integrated. Panzers were able to use east-west running lateral routes to transfer between threatened infantry sectors. The Allies also faced the additional operational and logistic challenges of river crossings and congested north-south routes.

The Americans were held up at Cassino, on the western flank of the Gustav Line. The eastern end of the line, just north of the Sangro River, offered the possibility of unhinging the German defence at Cassino by threatening Rome, if only the line could be penetrated.⁴⁸ The attack at the Sangro was therefore conducted because of the need to provide an alternative route to Rome, or at the very least cause the defenders at Cassino to withdraw, lest they be cut off.

This battle highlights operational decisions on where to fight as a factor of battalion level combat effectiveness. Kesselring understood the tactical challenges that defending successive river and ridgelines would cause the Allies. Although he did not see it in these terms, his concept improved the defenders' combat power through their defensive posture

⁴⁶ Rick Atkinson, *The Day of Battle The War in Sicily and Italy, 1943- 1944 Volume Two of the Liberation Trilogy*, New York: Henry Holt and Company, 2007, p. 254. Bohlmer, pp. 67- 68.

⁴⁷ Gordon Corrigan, *The Second World War: A Military History*, London: Atlantic Books, 2010, p. 409.

⁴⁸ G.A. Shepperd, *The Italian Campaign 1943- 45: A political and military re-assessment*, London: Arthur Baker Limited, 1968, p. 159 and Bishewar Prasad (g. ed.), *Official History of the Indian Armed Forces in the Second World War, The Campaign in Italy 1943- 45*, Calcutta: Combined Inter-services Historical Section (India & Pakistan), 1960, p.35. Cody, 28 (*Maori*) *Battalion*, p. 322.

and use of dominating terrain. It detracted from that of the attackers as the terrain tended to separate infantry from their support weapons and tanks. This meant, ideally, Kesselring's combined arms defenders would have an advantage over infantry-only attackers until such time as tanks and support weapons could be brought forward. As a result, infantry units like 21 Battalion had to be combat effective solely on the basis of their riflemen.

Force Strength

21 Battalion's strength on 27 November was 34 officers and 733 Other Ranks.⁴⁹ It was almost at full strength. The bayonet strength of four rifle companies and Battalion Headquarters was approximately 440. This is calculated on the basis of a full strength rifle company being 117 All Ranks; less 10 percent for LOBs giving 105 per company or 420 in total for four companies. The addition of 20 for Battalion Headquarters gives an approximate bayonet strength of 440 for 21 Battalion. The battalion's mortars and anti-tank weapons, and the tanks and platoon of machineguns from 27 (MG) Battalion assigned in orders did not participate in the fighting, and have therefore not been included within the unit's bayonet strength. The numbers of prisoners taken and weapons captured by 21 Battalion have formed the basis for the German figures in Table 9.2.

	Bayonet Strength (Infantry)	Anti-tank guns	Machineguns	Mortars
21 Battalion	440	nil	27	
<i>Company, I/146 Regiment</i>	74+	1	6+	2

Table 9.2: Relative strengths at the Sangro

The New Zealanders were significantly stronger than the defence. In many instances, German outposts were confronted by two platoons; six light machineguns against one. As related in the opening paragraphs of this chapter, a large furlough draft had departed for

⁴⁹ NZ Battalion War Diary 1 November 1943 to 30 November 1943. WAI 1 DA 54/1/47, NA.

New Zealand which meant that there were many new men within the New Zealand Division. While many of the infantry command positions were still filled by 2nd Echelon originals and early reinforcements, the remaining veterans of North Africa had mostly been transferred to administrative posts or to positions within Headquarters Company and battalion headquarters. Within battalions, the greatest proportion of new men were contained within infantry rifle companies. In the main, company commanders and commanding officers all had recent combat experience. John McLeod assessed that ‘more than half had fought only in the last two months of the North African campaign or were untried reinforcements.’⁵⁰ Therefore, many of 21 Battalion’s riflemen and junior officers were novices. 21 Battalion’s combat effectiveness in this battle is assessed as being partially attributable to the relative ease of the operation, as noted by Kippenberger in the second of this chapter’s opening quotes, for the low standard of the enemy, the presence of combat experienced leaders in key positions, and the benefit derived from the training period in Italy prior to being committed to operations.

Unlike *65 Division*, 21 Battalion had a number of combat experienced soldiers and leaders within its ranks. It can be deduced that *65 Division* was not an elite, veteran or even ‘first tier’ combat unit. Moreover, *65 Division*’s lack of wheeled transport severely limited its ability to rapidly re-position its forces, and relegated it to positional defence. Selection and preparation of defensive positions would therefore be important because they could not be altered once an attack had started. Corporal I.A.M. Sansom of B Company did not rate the opposition faced by 21 Battalion at the Sangro. He wrote ‘The outfit we were against were a scabby lot, mainly Poles and Checks [sic]... the easiest lot I have ever come across.’⁵¹ Quite possibly the Poles and Czechs were unwilling soldiers, even treated as an underclass by their German “comrades.”

It is possible to estimate the size of the force opposing 21 Battalion by adding the numbers and locations of enemy casualties from the four engagements which occurred

⁵⁰ McLeod, p. 53.

⁵¹ Sansom I.A.M, Sangro River Crossing (Eye-witness account by Cpl I.A.M. Sansom). WAI 1 DA 54/10/26, NA.

during the night as well as the clearance operations by A and B Companies the following morning. The estimate is shown in Table 9.3 below.

	Number of Enemy at location		Assessment
L1	2+	dug in spandau post	Platoon (L2) with machinegun post located forward (L1)
L2	24	house	
R1	9, 1 x MG, 1 x A-T gun	house	Platoon (R2) with a reinforced section post located forward (R1)
R2	20	four posts	
B1	17+, 1 x 2 inch mortar,	five spandau posts	Platoon location
A1	1 x 3 inch mortar, 5 x spandau MG.	two mortar positions	

Table 9.3: Estimate of 65 *Division* strength within the 21 Battalion sector

The numbers in Table 9.3 suggest a company defence within 21 Battalion's sector, with two platoons positioned forward and one sited in depth. The two forward platoons had each deployed a small element (at L1 and R1) to their front for early warning and to provide defence in depth, although the darkness reduced visibility and thus limited the range at which the movement of attackers could be observed and engaged by fire. The German dispositions were in accordance with defence doctrine, and were reasonable for a company strength force occupying a portion of a forward outpost line.

This battle highlights bayonet strength and combat experience (still resident within the battalion, mainly in with its leaders) as combat effectiveness factors. Given that the terrain this battle occurred on effectively stripped 21 Battalion of their support weapons and denied them tank support, the unit sought to maximise "boots on the ground" by employing all four rifle companies in this attack. The maximum number of enemy encountered by 21 Battalion elements at any one time was 24, but mostly it was significantly less. At 74 men total, the defence was based on an under strength company. They were complete novices and this detracted from their performance, whereas new members of 21 Battalion had the benefit of combat experienced personnel alongside them.

Battlefield Effects

Italy was a ‘battleground that proved to be particularly bloody due to the rugged terrain of Italy, whose mountain spine and numerous rivers negated effective use of armour for breakthroughs.’⁵² The effects of terrain were amplified by Kesselring’s defensive tactics based on river lines and defensive belts, and by the weather. The central spine of Italy, the Apennines, ‘invited each Allied Army to advance up the narrow plains to the east and west and made cooperation between the Allied Fifth and Eighth Armies problematic.’⁵³ The sector the Eighth Army was fighting through ‘was a land of tumbled hills, steep ridges, and deep river valleys.’⁵⁴

The New Zealand Division’s objectives were within the area held by the light covering forces and not the main defensive positions. An analysis of the battlefield effects at the Sangro River using OCOKA considerations is shown in Table 9.4 below.

Observation and Fields of Fire	The hills above the Sangro river-line offered ‘total observation over the river plain’ below. ⁵⁵ This provided the defenders with good fields of fire by day. The defenders’ lines of observation and fire were demonstrated, albeit in reverse, when the New Zealanders fired Vickers machineguns and 17 pounder anti-tank guns over open sights at ‘selected houses [and] potential enemy strongpoints’ on the afternoon prior to the operation. ⁵⁶ The defenders’ observation advantage was negated at night as 21 Battalion patrols, which had crossed the Sangro on the nights preceding the attack, proved. Lack of observable defensive fields of fire by night was partially overcome by the Germans through siting machineguns to fire on fixed lines, so that the firers would not have to rely on seeing the attackers. Firing on fixed lines could be effective; the 5 Brigade War Diary specifically recorded ‘C Coy still held up by wire and intense fixed line fire.’ ⁵⁷
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⁵² Mark A. Stoler, *Allies in War: Britain and America against the Axis Powers 1940- 1945*, London: Hodder Arnold, paperback edition, 2007 (first edition 2005), p. 128.

⁵³ Douglas Porch, *Hitler’s Mediterranean Gamble: The North African and the Mediterranean Campaigns in World War II*, London: Weidenfeld & Nicolson, 2004, p. 510.

⁵⁴ *Roads to Rome*, p. 9.

⁵⁵ Prasad, *The Campaign in Italy 1943- 45*, p.36 and Neillands, p. 254.

⁵⁶ Ross, *23 Battalion*, p. 286.

⁵⁷ Entry for 0500 hours Sun 28 Nov. War Diary HQ 5 INF Bde. WAI 1 DA 52/1/47, Vol 1, NA.

Cover and concealment	<p>It is difficult to make an assessment about the overall cover and concealment the terrain and vegetation offered to attackers, as there are few comments on these aspects in the literature or records. Corporal Sansom stated that the vegetation his rifle section moved through was grape-vines; ‘ever tried to keep a section in line and speed in that mess,’ he asked rhetorically.⁵⁸ Cody wrote that B Company ‘scrambled through grape vines.’⁵⁹ In describing the area generally and the features the attacking battalions had been allocated, Frazer Norton recorded objectives were:</p> <p style="padding-left: 40px;">Covered with low scrub and a few trees, these hills were clearly defined. Narrow gullies or low saddles connected each feature.⁶⁰</p> <p>The dark provided the attackers with concealment, but not cover. Concealment was enhanced because the night of the attack was ‘dark and starless.’⁶¹ In fact, it was ‘particularly dark. A misty rain was still falling and visibility was limited to a few yards.’⁶² Alex Maich remembered ‘Quite heavy rain fell and in itself would have drowned any slight noises we may have made.’⁶³</p> <p>Von Ziehlberg had insisted <i>65 Division’s</i> defensive positions be well constructed and concealed.⁶⁴ Several accounts attest to the concealed nature of some defensive posts. The spandau post (L1) ‘was difficult to locate, but was eventually found literally underfoot in a grass-covered pit.’⁶⁵ At night, it was firing which identified German positions to the attackers. Next day, it was discovered that some machinegun posts could only be entered through concealed trapdoors.⁶⁶</p>
Obstacles	<p>The Sangro river was a significant obstacle, although dismounted infantry were able to cross it once its level had dropped sufficiently. The river and north bank were not contested by the Germans, nor was effective observation maintained by night, as none of the attacking battalions of the New Zealand Division were discovered during their crossings.</p>

⁵⁸ Sansom I.A.M, Sangro River Crossing (Eye-witness account by Cpl I.A.M. Sansom). WAI 1 DA 54/10/26, NA.

⁵⁹ Cody, *21 Battalion*, p. 286.

⁶⁰ Norton, *26 Battalion*, p. 301.

⁶¹ Cody, *21 Battalion*, p. 284.

⁶² Norton, *26 Battalion*, p. 303.

⁶³ Alex Maich to Mr Cody, letter, 1.3.52., p.7. 21 NZ Battalion- Taranto to Orsogna: Correspondence collected by unit historian. WAI 1 DA 54/15/10, NA.

⁶⁴ Phillips, *The Sangro to Cassino*, p. 67.

⁶⁵ Cody, *21 Battalion*, p. 287. See also p. 288 for a general comment that ‘the enemy was cleverly concealed’ and p. 289 when two Germans emerged in daylight ‘from a hidden dugout.’

⁶⁶ Craig to Mr Cody, letter, 24th June, 1952., pp.1- 2. 21 NZ Battalion- Taranto to Orsogna: Correspondence collected by unit historian. WAI 1 DA 54/15/10, NA.

	<p>This was a significant oversight, but is consistent with inexperienced troops. 21 Battalion reconnaissance patrols discovered barbed wire, trip wires and mines (some booby-trapped),⁶⁷ so it is certain the Germans incorporated obstacles within the defence.⁶⁸</p> <p>The Germans covered barbed wire obstacles with fire, for as the commander of A Company recalled: ‘the Hun had heavily wired the track leading up the escarpment [sic] and this obstacle was covered by a dug-in spandau sighted in a cliff face only a few yards away.’⁶⁹ This was the gun at L1 which killed Horrocks. It represented the ideal combination where an obstacle impeded the progress of infantry through a narrow chokepoint, who were then fired on from a concealed position.</p> <p>Alex Maich recalled that after first light they saw many unexploded S (Schu) mines, ‘Many of us had walked all over this ground and no casualties... detonators had been placed upside down.’⁷⁰ Whether this was sabotage or accidental, the result was no mine-related casualties were sustained by 21 Battalion during the assault proper. Cody recorded Sgt Worthington inspected the mines and concluded that the detonators had been incorrectly fitted. Cody suggested that as ‘the prisoners were mostly conscripted Poles and Czechs’ this may have been ‘sabotage on a small but acceptable scale.’⁷¹ Possibly it was poor training, definitely it was poor leadership by NCOs, who should have been checking and supervising.</p>
Key Terrain	<p>The river was Key Terrain. Failure to defend the river or to deny it with fire ensured that the Allies would eventually be able to cross it although this accorded with the overall German doctrine for river-lines, of screening rearwards of the river itself and then positioning main defences behind, supported by reserves able to counter penetrations, once crossing points had been identified.</p> <p>Routes up the escarpment were few. Therefore, track junctions, often on hills, where a number of these routes could be denied from a single point, became Key Terrain to be</p>

⁶⁷ Norton, *26 Battalion*, p. 305.

⁶⁸ Dawson, Campaign Narrative- Chapter 2 (The Sangro Operations), pp. 49- 50. Entry for 0315 hours Sat 27 Nov. War Diary HQ 5 INF Bde. WAI 1 DA 52/1/47, Vol 1, NA. Patrol Report 2/Lt McGregor Sangro Crossing 27 Nov. NZ Battalion War Diary 1 November 1943 to 30 November 1943. WAI 1 DA 54/1/47, NA.

⁶⁹ OC A Coy to J.F. Cody, letter, 6th February 1952, p.1. War Diary HQ 5 INF Bde. WAI 1 DA 52/1/47, Vol 1, NA.

⁷⁰ Alex Maich to Mr Cody, letter, 1.3.52., p.11. 21 NZ Battalion- Taranto to Orsogna: Correspondence collected by unit historian. WAI 1 DA 54/15/10, NA.

⁷¹ Cody, *21 Battalion*, p. 287.

	defended. These were often the locations where the Germans chose to site their defences, such as the houses at R1 and L2, and those noted in patrol reports prior to the attack. ⁷²
Avenues of approach	<p>Avenues of approach leading to the main line of defence were created by the ridges and re-entrants leading up to the escarpment. These avenues were not broad like those 21 Battalion had experienced previously in North Africa, where extended line attack formations could be adopted. At the Sangro, attacking elements were confined to movement in single file along the top or side of a ridge, or in re-entrants between ridges. This caused 21 Battalion's companies to advance, single file, in separate un-supporting columns, and this led to lengthy delays when machineguns or defended houses were encountered covering the limited routes.</p> <p>The effect of movement in single file or on restricted frontages was that it reduced the attacker's capacity to quickly generate a sufficient weight of fire to the front. The obvious defence tactic posed by the constricted avenues of approach was to deny key ridges and in particular ridge junctions. The hold-up of C Company demonstrated the lengthy denial of a single route by just one machinegun(L1) and probably no more than 2- 3 men.</p>

Table 9.4: OCOKA Terrain analysis for the Sangro

The analysis shows that the ground overlooking the Sangro River favoured the defence. The terrain restricted the routes 21 Battalion could use to approach their objectives, and narrowed assault frontages. This limited the volume of small arms fire which could be generated to the front by the attacker. The defenders were also able to place a range of smaller posts forward, and in depth, along the most likely routes.

The combat effectiveness factors reinforced in this battle include light and the effects of terrain on line of sight. Because it was dark, 21 Battalion exploited this, and was able to close with the enemy positions. Furthermore, it had the added benefit of being shielded by dead ground during most of its approach. The formations, tactics and drills (such as pacing distances and maintaining contact with flank elements) the New Zealanders had developed in the desert battles would have been of little help at the Sangro, where the

⁷² Patrol Report 2/Lt McGregor Sangro Crossing 27 Nov. NZ Battalion War Diary 1 November 1943 to 30 November 1943. WAI 1 DA 54/1/47, NA. Grant to Mr Cody, letter, 22 June 52. 21 NZ Battalion- Taranto to Orsogna: Correspondence collected by unit historian. WAI 1 DA 54/15/10, NA.

battlefield was effectively compartmentalised by the ridgelines. Although terrain altered the formations used previously, basic fire and movement tactics during the close combat stage of the assault remained unchanged. Indeed, the level of combat effectiveness achieved had more to do with the tactics employed and the junior leadership displayed by both sides, as the following sections of the analysis will show, than the nature of the terrain.

Tactics, Doctrine and Training

Within the New Zealand attack zone at the Sangro, defences 'consisted mainly of machine-gun and weapon pits not very close together.'⁷³ They also included 'scattered weapons pits, many of them at the top of the cliffs.'⁷⁴ Like Miteiriya Ridge, these posts could generate significant firepower from their light machineguns, but would be easily isolated and vulnerable in the dark, once located. Moreover, the effectiveness of their long range aimed rapid fire was also negated by the dark, as the attackers were difficult to locate. Some posts encountered, and not just by 21 Battalion, were based around existing buildings.⁷⁵ These proved particularly vulnerable and usually yielded significant numbers of prisoners. As described in the battlefield effects section and OCOKA analysis, forward posts were sited to cover key tracks which the attackers were required to ascend. Stronger groups, close to platoon strength, were sited in depth to cover track junctions. Forward posts were based on a single machine gun, and as was highlighted with C Company, in particular (L1), a single machinegun could create considerable delay.⁷⁶

German doctrine was for the defence to be supported by artillery and mortar fire.⁷⁷ However, there are no reports of 21 Battalion being subjected to German defensive artillery bombardment during the attack, other than sporadic mortar fire.⁷⁸ Two mortars

⁷³ Dawson, Campaign Narrative- Chapter 2 (The Sangro Operations), p. 48.

⁷⁴ Phillips, *The Sangro to Cassino*, p. 66.

⁷⁵ Norton, *26 Battalion*, p. 299.

⁷⁶ Dawson, Campaign Narrative- Chapter 2 (The Sangro Operations), pp. 48 and 65, and notes to p. 64.

⁷⁷ Condell and Zabecki, p. 125.

⁷⁸ Dawson, Campaign Narrative- Chapter 2 (The Sangro Operations), p. 64.

were captured next morning by B Company.⁷⁹ These appear to have been the sole indirect weapons allocated to the defending company in this sector, which explains the minimal effect on 21 Battalion. This situation may be attributable to Allied artillery bombardments and air attacks on German battery locations in previous days which reduced the weight and effectiveness of the German artillery response.⁸⁰

Although the Germans were deployed doctrinally, with forward combat posts and obstacles, the conduct of the defence did not delay the New Zealanders sufficiently to cause the attack to have to be continued in daylight where it would be more vulnerable to direct and indirect fire; nor were the outposts able to extricate themselves. It is deduced that a lack of combat experience within *65 Division* contributed to the failure of the defence to conduct local counterattacks or to plan for the withdrawal of their forward posts, which were then left isolated where they were then killed or captured. This sounds very much like Platamon, but with the roles reversed; the common denominator being lack of combat experience, resulting in a passive and reactive defence.

Few German patrols were reported in the days prior to the attack. Indeed, Doherty recorded that the Germans ‘appeared most unusually quiescent’ allowing Allied patrols to dominate the no-mans land between the river and the escarpment.⁸¹ Later in the campaign, at least one official history would record *65 Division* ‘was well commanded and had a good record throughout the Italian campaign’ suggesting that its performance improved as it gained in combat experience.⁸²

The New Zealand operation was based on a silent crossing of the river and then, supported by artillery fire, an attack, to clear and capture the ground which dominated approaches to the river from the north. The torturous nature of the terrain necessitated movement in columns; extended line would not be possible. In Phase 2, each company moved in two separate columns so they could each advance to their objectives on

⁷⁹ Dawson, Campaign Narrative- Chapter 2 (The Sangro Operations), p. 65.

⁸⁰ Phillips, *The Sangro to Cassino*, p. 63. Dawson, Campaign Narrative- Chapter 2 (The Sangro Operations), p. 45.

⁸¹ Doherty, pp. 42- 43.

⁸² Norton, *26 Battalion*, p. 301.

different approaches which would create the opportunity to bypass opposition. Movement in columns rather than extended line limited clearance to the actual route taken, or to a flank if fired upon (such as R1). This meant that some enemy posts would be bypassed in the dark. As a result there was still some opposition (firing, rather than counterattacks) even after the battalion had occupied all its objectives, until they were able to be dealt with after first light. Movement in two columns also halved the combat power available to companies, and it will be recalled that two Germans manning a single spandau at L1 held up half of C Company (Horrocks), and the enemy house at R1 held up Hill's platoon until, in both cases, the New Zealanders received reinforcements.

The Sangro operation highlighted surprise as a positive factor in 21 Battalion being combat effective. It also showed that a wholesale lack of combat experience detracted from *I/146 Regiment's* effectiveness, as they were reluctant to maintain the security of their position by conducting patrols, and when the New Zealanders attacked, they did not conduct planned withdrawals, or counterattack to recover lost ground. The parallels with 21 Battalion at Platamon and Pinios Gorge are clear.

Command and Leadership

21 Battalion was commanded in this battle by Lieutenant Colonel Harry McElroy. He had assumed command of the unit on 24 June 1943.⁸³ The Sangro was McElroy's first operation as CO. As noted in Chapter 7, McElroy had featured prominently at Ruweisat Ridge where he led a small group across the battlefield and accounted for a large number of enemy. For this action at Ruweisat he received a DSO. Having been decorated twice, his personal courage is unquestionable.⁸⁴ However, at the Sangro he hardly featured, and when he did it was not in close proximity to the enemy. This was uncharacteristic of McElroy. It is deduced that his lack of active involvement was caused by the terrain, and the increased use of wireless, which was now allocated down to platoon level.

⁸³ Cody, *21 Battalion*, p. 463.

⁸⁴ Personnel File 20045 Henry Michael McElroy, NZPA. Army Form W. 3121, Citation for 20045 Major Henry Michael McElroy 16 Jul 42 and Citation for Lt-Col H.M. McElroy dated 8 Apr 44. Medal Citations Vol 6 LOW- MAS. WAI 1 DA 409 2/2, NA.

Long single files of soldiers meant that the CO would have been located further back than he might have been in a linear and (relatively) unobstructed battlefield. Further, the terrain at the Sangro segmented the battalion into separate un-supporting routes. This situation would have made it particularly difficult for a CO to move around the battlefield in the dark, whereas it had been possible for the CO to switch flanks and position at Ruweisat Ridge, Miteiriya Ridge and Halfaya Pass because of the open and unobstructed terrain. Locating himself in a (relatively) secure and central position was therefore a sensible option at the Sangro. The main requirement was for the CO to establish himself where he could readily access the wireless and a map. The role of a CO remained unchanged- to command the battalion- how he undertook the role was influenced by the introduction of wireless.

	North Africa			Italy
	Miteiriya Ridge	Halfaya Pass	Takrouna	Sangro River
	23 October 1942	11 November 1942	20 -22 April 1943	27/28 November 1943
CO	Lt Col Harding	Lt Col Harding	Lt Col Harding (WIA)	Lt Col McElroy
OC A Company	Capt Butland (KIA)	Capt Roach	Capt Bullock-Douglas	Maj Tanner
OC B Company	Capt Marshall (KIA)		Capt Roach	Maj Hawkesby
OC C Company	Maj Smith	Maj Smith	Maj Laird	Capt Horrocks (KIA)
OC D Company	Capt Laird		Capt Murray (KIA)	Maj Bailey

Table 9.5: 21 Battalion key appointments Miteiriya Ridge and the Sangro

Leadership at company, platoon and section level within 21 Battalion was still as strong as it had been at Miteiriya Ridge and Halfaya Pass, despite there being a new cohort of commanders at battalion and company level. Key command appointments at the final major battles in North Africa and at the Sangro are listed in Table 9.5. This table shows that the CO and company commanders at the Sangro were all undertaking their first

operation at that level. It also highlights that in almost every major attack, at least one company commander was killed, stressing the risks at that level of command, with a casualty rate in major operations of at least 25%.

It is possible to make an assessment about the leadership of the *65 Division* displayed at the Sangro at regimental and battalion level even though none of the literature addresses this aspect directly. The following conclusions are based on the four main engagements, whether or not enemy posts actively opposed 21 Battalion, and how readily they surrendered.

Small groups forward at L1 and R1 fought well. The spandau team at L1 held out until they were stalked and killed. The occupants of the house at R1 engaged D Company from the flank and resisted until the attacking force numbers had been swelled by Swainson's platoon. They could just as well have let D Company pass, or surrendered sooner, if they had no will to fight. In both cases (L1 and R1), the defenders did not attempt to withdraw, nor were they ever reinforced. This suggests either a fight to the death mentality, or more likely, an intention to fight until the position became untenable and then to withdraw, or surrender. The usual tactic would be to fall back to the platoon position to the rear. The group at R2, consisted of upwards of four posts, and although 20 of them were killed, they held out. These three engagements, at least, suggest that at small group level, even though they lacked combat experience and fought doggedly in some cases, they still inevitably remained static, with no planned manoeuvre or withdrawal.

The large group at L2 offered no resistance. They surrendered after a Very pistol flare had been fired in through an open window. At face value, this suggests that the occupants were not prepared to fight. There were at least two German officers present within the house at L2. Having been called upon to surrender, it is notable that the post did not do so immediately. The occupants emerged only after a flare had been fired in through a window. Putting a flare in through such a small gap would have given a clear indication to the occupants the New Zealanders were very close by. While the stone building may have offered a degree of protection against small arms fire, the interior of the building

caught fire as the flare ignited straw that the Germans had lined the floor with for sleeping on.⁸⁵ It is assessed that it was the smoke caused by the fire which drove the 24 German defenders out, rather than the New Zealand threat.

Lack of combat experience on the part of the Germans translated into the conduct of defence from static posts. It is deduced from the above that small group leadership within the defence was weak and inexperienced and the comment 'Enemy resistance had been at best sporadic: the young troops of *65 Division* showed but little stomach for the fight' is correct.⁸⁶ Resistance was sporadic; the enemy soldiers opposing 21 Battalion were prepared to fight, but only up to a point. The morning after the attack 'there were still some Germans in houses between the forward companies; these were taken prisoner without any resistance.'⁸⁷

This battle was a test of junior leadership – corporals and lieutenants- on both sides. The examples above demonstrate the different state of leadership at lower levels between 21 Battalion and the *65 Division* defenders. The New Zealanders, although mostly novices themselves, displayed adequate combat leadership and got stuck in during attacks. On the German side, the smaller engagements would almost certainly have been led by NCOs, with officers present at L2, R2 and possibly B1. Irrespective of rank, they were only capable of the most basic procedures.

Wireless provided hitherto unknown levels of situational awareness. Before Grant went forward of C Company's headquarters to locate Horrocks, he 'put a signal over the 38 Set... and received Major Joe Tanner's permission and an acknowledgement from 7 & 8 platoons.'⁸⁸ Not only did Grant get clearance, but the two platoons moving on the other company route now understood what was happening. The issue of wireless sets down to platoon level at the Sangro increased the flow of information during the battle significantly. This meant that the actions of platoons, companies and eventually support

⁸⁵ Cody, *21 Battalion*, p. 287.

⁸⁶ Phillips, *The Sangro to Cassino*, p. 70.

⁸⁷ Dawson, Campaign Narrative- Chapter 2 (The Sangro Operations), p. 65.

⁸⁸ Grant to Mr Cody, letter, 22 June 52. 21 NZ Battalion- Taranto to Orsogna: Correspondence collected by unit historian. WAI 1 DA 54/15/10, NA.

weapons and support arms could be coordinated, which suggests that the New Zealanders were finally getting to a stage where combined arms was possible. It also altered the role of a CO to include coordinator of supporting arms. Wireless assisted coordination in the broken and torturous terrain where it would have been well nigh impossible to employ the type of control measures used at Miteiriya Ridge.

Just how much detail was able to be passed by wireless is evident from entries within the 5 Brigade War Diary, which describes the attack as it unfolded for 21 Battalion:

- 0525 A Coy on top of first left objective- hill at 325943- having moved through C Coy, which had become disorganised and the OC killed. A Coy moving fwd to final objective.
- 0540 D Coy on second right objective- hill at 327953- in depleted str.
- 0632 Both second objectives taken, but held in pl str only due to men getting lost in darkness. Adv opposed by enemy, especially on left.
- 0707 Tp of tks in sp 21 NZ Bn across the river and started ascent of the hill.
- 0905 Bailey br being used by traffic.⁸⁹

Wireless enabled subordinate, peer and superior commanders to gain a previously unachievable level of situational awareness. Just reading the account above gives one a sense of the action as it was unfolding; a far different and improved picture than had been available previously when the brigade commander had to wait for the occasional runner or for infrequent wireless reports from unit commanders as had been the case at Ruweisat Ridge.⁹⁰

The action at the Sangro highlights the central role of a CO, literally, to command and control his unit. The location of the CO, his ability to command (now enhanced further with wireless issued down to platoon level) and his level of situational awareness were all vastly improved over previous battles. These all enhanced 21 Battalion's level of combat

⁸⁹ Entries for Sun 28 Nov. HQ 5 INF BDE War Diary Nov 43. WAI 1 DA 58/1/47, NA.

⁹⁰ Kippenberger, *Infantry Brigadier*, pp. 165- 166 (Ruweisat Ridge) and pp. 228- 230 (Miteiriya Ridge) illustrate the point.

effectiveness. A new combat effectiveness factor that has emerged is the ability (and need) to be able to link coordinate with support arms in order to maximise a unit's combat power.

Sociological Factors

A significant factor in *65 Division's* poor showing is deemed to stem from its previous employment and its national makeup, noting it contained Poles and Czechs. They may have had a weaker sense of loyalty to the cause than their German comrades. As *65 Division* were former garrison troops who had not been in action previously, it is likely that the deployment of groups in isolated locations, particularly at night was unnerving and contributed to a sense of isolation. This deduction is supported by a patrol report (not from 21 Battalion) where noisy sentries were encountered, similar to the KRRC patrols' experience with the Italians at Halfaya Pass:

...like their countrymen in AFRICA, the men of III Bn 145 Gren Regt derive comfort from hearing one another during the night watches.⁹¹

This report highlights a lack of discipline and combat experience among the defenders and suggests a lack of confidence they may have had in each other. Either they did not appreciate the proximity of the Allies and the patrolling which would be undertaken by them, or they did, but lacked the combat experience to comprehend the extent to which their own security had been compromised. Some of the enemy were worthy fighters; however, their effect was localised rather than general.⁹²

21 Battalion's men were in a good state prior to the attack. They were well rested and had been fed, all of which made it easier to endure combat. Members of 21 Battalion were provided with a hot meal at 1630 hours and then a cup of tea along with bread and cheese

⁹¹ 2 NZ Div Intelligence Summary No. 191, 13 Nov 43. War Diary HQ 2 NZ Div "G" November 1943. WAI 1 DA 21.1/1/47, NA.

⁹² Sansom I.A.M, Sangro River Crossing (Eye-witness account by Cpl I.A.M. Sansom). WAI 1 DA 54/10/26, NA. Craig to Mr Cody, letter, 24th June, 1952, pp.1- 2. 21 NZ Battalion- Taranto to Orsogna: Correspondence collected by unit historian. WAI 1 DA 54/15/10, NA.

at 2100 hours.⁹³ As noted previously, the unit received, prior to the Sangro, a significant number of reinforcements with no combat experience. This did not appear to be a major impediment and there is no doubt the experience of veterans that remained in the unit helped. Alex Maich wrote:

To many it was a new experience as there was quite a number of 9th and 10th reinforcements. The ex-desert campaigners were more or less unconcerned but the green horns seemed to apply themselves with conspicuous (sic) activity and seriousness.⁹⁴

Some nervousness (and “seriousness”) would be a natural reaction for the newcomers. A similar effect was recorded by 28 (Maori) Battalion on the night of the attack. Whereas the Maori veterans went to bed and slept through the artillery barrage, ‘the new hands left their blankets to watch the red rosettes preceding the assault up the muddy bluffs across the Sangro.’⁹⁵ It is unlikely that the old hands within any battalion were not nervous but they would be more likely to portray a calm demeanour in the company of newcomers. In veteran John Blythe’s estimation ‘What experience gave us was the ability to distinguish real danger from the apparent, but with this came diminished capability to absorb stress.’⁹⁶

It is assessed from the above that there were no significant sociological issues which detracted from the performance of the 65 *Division* defenders or 21 Battalion, other than a complete lack of combat experience in 65 *Division*. It is very difficult to establish if there were integration problems with foreign members of 65 *Division*. They were not evident in the performance of the defenders; isolated posts and lack of defensive fire to cover withdrawals of small groups had more to do with the failure of tactics. They fought well in the main, however, posts were left unsupported and so the defenders were either killed

⁹³ Cody, *21 Battalion*, p. 284.

⁹⁴ Alex Maich to Mr Cody, letter, 1.3.52., p.4. 21 NZ Battalion- Taranto to Orsogna: Correspondence collected by unit historian. WAI 1 DA 54/15/10, NA.

⁹⁵ Cody, 28 (*Maori*) Battalion, p. 323.

⁹⁶ John Blythe, *Soldiering On: A Soldier's War in North Africa and Italy*, Auckland: Century Hutchinson New Zealand Limited, 1989, p. 145.

or captured. On the New Zealand side, large numbers of reinforcements were not an impediment, even though a significant proportion of junior commanders had no previous combat experience. This is attributed to training and to having a percentage of veterans, even if low, still within the companies.

21 Battalion's combat effectiveness was enhanced by the unit being well rested prior to the attack. Although many members of 21 Battalion displayed pre-battle nerves, the presence of old hands exerted a steadying influence. The combat effectiveness of *I/146 Regiment* was degraded by a lack of confidence (due to lack of combat experience), and this was reflected in poor discipline and lax, possibly naive, security arrangements.

Fog of War

Von Moltke stated that 'No plan of operation extends with certainty beyond the first encounter with the enemy's main strength.'⁹⁷ This proposition should not be interpreted as operations should not be planned at all, or in detail. Rather, it means that commanders must expect that an operation will not unfold as anticipated, and they must therefore be prepared to make or allow changes to a plan as the evolving situation dictates, coping with whatever unexpected contingencies arise. In the previous chapter, we saw how Harding was on hand to modify his simple plan at Halfaya Pass, initially, but then as the 21 Battalion battlefield expanded laterally and in depth, lieutenants and corporals had to make up their own minds. This worked because the battalion was by then a very experienced unit having amassed eighteen months of combat experience. This same quality was evident at the Sangro. At any one time, two companies were moving, each divided into two groups. Unable to see the other columns, each "column commander" had to adapt to the situation at hand.

The nature of the terrain at the Sangro forced the onus for the control of movement and the conduct of battle to lower levels within 21 Battalion. Personnel had to take action on

⁹⁷ Quoted in Daniel J. Hughes (ed.), *Moltke On the Art of War: Selected Writings*, Novato California: Presidio Press, 1995, p. 45.

their own initiative. The introduction of wireless down to platoon level made possible the passage of information as a factor in combat effectiveness factor, and as a means of reducing the fog of war.

CONCLUSION

21 Battalion successfully completed its mission at the Sangro. It was combat effective in this attack over challenging terrain. Combat effectiveness factors identified by the analysis of the Sangro are listed in Table 9.6.

Category	Combat Effectiveness factors identified
Operational Setting	<ul style="list-style-type: none"> • Decision on where to fight (Kesselring)
Force Strength	<ul style="list-style-type: none"> • Bayonet strength • Combat experience
Battlefield Effects	<ul style="list-style-type: none"> • Effect of light • Terrain effects on line of sight and covered approaches
Tactics, Doctrine and Training	<ul style="list-style-type: none"> • Surprise • Passive and reactive defence • Security
Command and Leadership	<ul style="list-style-type: none"> • Ability to command (enhanced by wireless) • Situational awareness • Ability to coordinate support arms • Small group leadership
Sociological	<ul style="list-style-type: none"> • Rest • Presence of veterans (to steady novice members) • Will to fight • Small group cohesion
Fog of War	<ul style="list-style-type: none"> • Ability and willingness to undertake action on own initiative • Coordination between elements (Passage of information)

Table 9.6: Combat Effectiveness factors identified at the Sangro

Key factors influencing 21 Battalion's combat effectiveness were the surprise achieved, the standard of junior leadership by both sides, and the failure of the novice defenders to mount an aggressive defence. The defence occupied dominating ground and the *I/146*

Regiment outpost line was organised and deployed in accordance with German doctrine. The outpost dispositions and tactics adopted by the Germans at the Sangro, particularly given the extended frontages which needed to be covered, suited a defensive battle by day. Attacking infantry could then have been engaged at range with small arms and indirect fire with far greater effect. The defence could also have imposed significant delay if the troops of *I/ 146 Regiment* had been more active. The defence was unsuccessful though, due to a lack of aggressive patrolling and failure to conduct local counter-attacks or extricate forward outposts. By conducting a night attack, the attackers seized the initiative. The similarity to 21 Battalion's performance at Platamon is clear and appears, therefore, to be a characteristic of inexperienced units, as 21 Battalion showed in Greece and the *Pistoia* defenders at Halfaya Pass.

The standard of junior leadership exhibited on both sides varied markedly. 21 Battalion's junior leadership, inclusive of the new blood, proved to be superior and was a key determinant in the New Zealand victory. As soon as the battalion arrived at the Sangro, it commenced patrolling, as much to find out about the enemy, as to blood new junior leaders. No doubt the experienced members had a steadying effect on the newer soldiers during the assault itself. The Germans did not display the will to fight, in any more than a token manner, and those who did exhibited poor combat skills such as the lack of patrolling and incorrectly arming mines. They abandoned defensive positions for the shelter of buildings- a sign of weak leadership and limited combat experience.

21 Battalion's performance at Platamon and *I/46 Regiment's* conduct at the Sangro are two examples of "green-horn" units conducting a defence. These actions suggest that the will to fight is a greater determinant of combat effectiveness than previous experience.

Despite containing a significant number of men without combat experience and an almost totally new command structure, 21 Battalion achieved its mission at the Sangro.

Attacking the *I/ 146 Regiment* outposts at the Sangro provided a less demanding combat initiation than the battalion might otherwise have experienced had its first operation in

Italy been against the fortified defensive positions of the Gustav Line or against, for example, a battle-hardened unit of the *Parachute Division*. For 33 casualties, the equivalent of a platoon, the battalion got off lightly. It had performed well. Nevertheless, the opposition was poor grade and did not provide a difficult or prolonged test of combat effectiveness. This would come in the next battle, at Orsogna.

CHAPTER 10

ORSOGNA: 14 - 16 DECEMBER 1943

‘...maximum strength derives from a combination of all three arms...’
- von Clausewitz, *On War*¹

*‘The situation was strangely similar to the Peneios Gorge
in Greece and the infantry were almost as helpless.’*
- J.F. Cody, *21 Battalion*²

This chapter focuses on the 5 Brigade attack to the east of Orsogna, codenamed Operation *Florence*. Since the Sangro, two New Zealand attempts to drive the Germans from the stronghold town of Orsogna had failed. Operation *Florence* was the third attempt.³ The assault on Orsogna itself was to be preceded by an attack by 21 and 23 Battalions to seize a less well defended section of the Gustav Line astride the Orsogna-Ortona Road. This is the phase of Operation *Florence* examined in this chapter. In the event, Orsogna was not captured, so the overall objective of the operation was not achieved. Nevertheless, 5 Brigade’s operation to seize sections of the road, and thereby isolate Orsogna, was successful.⁴

21 Battalion’s task was similar to the Sangro, but without the need for a river crossing to be undertaken. It was required to conduct a night attack over difficult terrain, without tank support, or the support of its own integral heavy weapons. The attack was to be directed against the main line of resistance, rather than the outpost line, and the objective this time was defended by the veteran *26 Panzer Division*, not the low-grade infantry of *65 Division* encountered at the Sangro. 21 Battalion’s severest test in this operation came with the defence against counterattacks following the assault, where von Clausewitz’s observation that decisive strength comes from the combination of infantry, armour and artillery was demonstrated.

¹ von Clausewitz, p. 339. Von Clausewitz was referring to infantry, cavalry and artillery; combined arms.

² Cody, *21 Battalion*, p. 296.

³ Phillips, *The Sangro to Cassino*, p. 121. Two previous attempts had failed.

⁴ 5 NZ INF Bde Operation Instruction No. 1 dated 15 Dec 43. War Diary HQ 5 NZ INF Bde December 1943, Vol 4, Annex G. WAI 1 709 DA 52/1/48, NA.

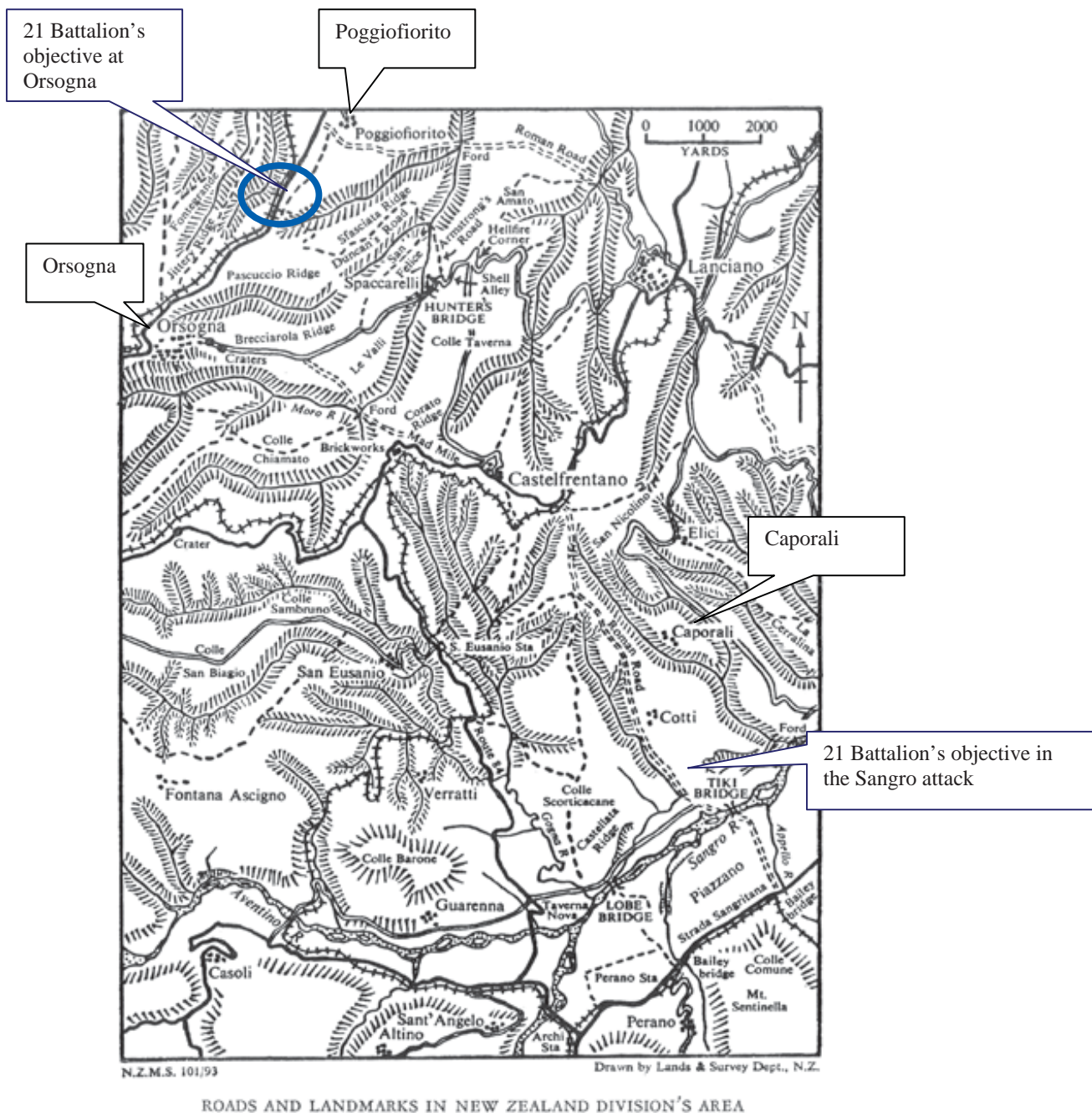
This chapter analyses 21 Battalion's actions at Orsogna, where it captured a section of the Gustav Line occupied by veteran troops of *II Battalion, 9 Panzer Grenadier Regiment*. Having secured their objective, 21 Battalion endured three counterattacks, each supported by, or consisting entirely of tanks. The first counterattack was reminiscent of 21 Battalion's action at the Pinios Gorge where panzers had easily penetrated the unit's defences. At Orsogna, while the soldiers were equally in extremis, they remained in place or quickly re-occupied their previous positions when the threat diminished. This outcome was quite unlike the Pinios Gorge, and reinforces the assertion that 21 Battalion was by now a confident, battle-worthy and combat effective unit. The second and third counterattacks were defeated by the combined arms action of 21 Battalion, C Squadron 18 Armoured Regiment and supporting artillery.

LEADUP TO THE BATTLE

The aim of Operation *Florence* was to breach the Gustav Line and drive the Germans from the stronghold town of Orsogna. It was thought by the New Zealand Division staff that an attack from a new direction, slightly to the rear of Orsogna, would compel the Germans to withdraw from the town, and therefore, from the Winter Line.⁵ After the Sangro crossing on 27/28 November, 21 Battalion had conducted an attack on Caporali where it sustained four KIA and seven WIA and although enemy opposition was stiff and 'brisk fire was encountered', the Germans surrendered once the New Zealanders had engaged at close quarters.⁶

⁵ Phillips, *The Sangro to Cassino*, p. 99. Doherty, p. 48.

⁶ Report 'Two Coy Night Night Attack- 21 Bn- ½ Dec, 43.' 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA. The CO's after action report also noted ten MG34, three Italian machineguns, an anti-tank rifle, and 15 submachine guns were among the weapons captured. The Germans were able to generate a high rate and volume of fire as they had a lot of automatic weapons.



Map 10.1: Roads and landmarks north of the Sangro River⁷

⁷ Phillips, *The Sangro to Cassino*, p. 84. Text boxes and oval added.

THE COMBATANTS

Axis Forces

While the Sangro outpost line had been made up primarily of infantry, the defence in the Orsogna area was a combined arms force. The ridgeline that 5 Brigade attacked was defended by elements of *II/ 9th Panzer Grenadier Regiment*, *II/ 146th Grenadier Regiment* and *6th and 8th Companies of 26th Panzer Regiment*. Units of *3rd/ 4th Parachute Regiment* (of the *1st Parachute Division*) were in the area from 7 December,⁸ the increase being summarised in the British official history as ‘more anti-tank guns than before, and a few tanks.’⁹ The Indian official history recorded that ‘the Germans were determined to hold Orsogna at all costs.’¹⁰ Two failed New Zealand attacks support this statement. Orsogna was considered by the Germans to be the linchpin for the entire Winter Line, and so it was strongly defended.¹¹ Being a built up area, it was ideal for defence.

The *26th Panzer Division*, commanded by Major- General Smilo Freiherr von Lüttwitz, was responsible for the Orsogna sector. This division was combat experienced. It was rated as one of the German’s best divisions.¹² It had been sent across the Apennines to stiffen the defence against the Eighth Army.¹³ General Freiherr von Lüttwitz had ‘four battalions in the line between Poggiofiorito and Orsogna,’ although ‘the full shock of 5 Brigade’s attack fell on the three companies of *II Battalion 9 Panzer Grenadier Regiment*.’¹⁴ By 14 December the Germans had just 20 tanks, including some flamethrower variants, spread between key locations. Mark IV panzers provided the

⁸ Brigadier C.J.C. Molony, *The Mediterranean and Middle East Volume V The Campaign in Sicily 1943 and The Campaign in Italy 3rd September 1943 to 31st March 1944*, London: Her Majesty’s Stationery Office, 1973, p. 498, fn 1 and 2. Battalion designations modified slightly from the source for standardisation within this chapter.

⁹ Molony, p. 499.

¹⁰ Prasad, p. 56.

¹¹ Oberstleutnant Douglas Graf. D Bergstorff, *The Operations of the 26th Panzer Division in Italy: The Fighting in Southern Italy (7 September 1943 – 23 January 1944)*, FMS D316, AHEC, p. 31.

¹² Cody, 28 (*Maori Battalion*), p. 326.

¹³ Montgomery, *El Alamein to the River Sangro*, p. 123.

¹⁴ Phillips, *The Sangro to Cassino*, p. 123.

backbone for local counterattacks, but they needed the road to move between threatened sectors.

The enemy in 21 Battalion's sector were combat experienced panzer grenadiers, organised in an isolated company defended area, reliant on artillery and their integral weapons, primarily machineguns, for local defence. Counterattack forces based on tanks, flame throwers and infantry would support them from Orsogna (west) or Arielli and Poggiofiorito (east) if required, although these operations could take time to mount.

21 Battalion

The New Zealand Division's mission was to establish a bridgehead astride the Orsogna-Ortona Road.¹⁵ The intention was to 'prevent the movement of *26 Panzer Div* across the front to the coastal sector.'¹⁶ The bridgehead, astride the road and therefore also designed to isolate Orsogna, was to be established by 5 Brigade. Its mission was to 'establish a bridgehead astride rd Ortona- Orsogna.'¹⁷ The brigade commander intended to achieve this by attacking with two of his three battalions only; 21 and 23. 28 (Maori) Battalion was to remain in reserve, as it had been at the Sangro, but ready to be committed to action if required. If the attack was successful, 28 (Maori) Battalion and 20 Armoured Regiment were to exploit towards Orsogna.¹⁸

21 Battalion's mission was to capture high ground along the Orsogna- Ortona road.¹⁹ The focus on seizing ground indicates that the objective of the operation was to secure terrain and isolate Orsogna, rather than to destroy the enemy as a result of the attack itself, or by drawing and defeating counterattacks. The 21 Battalion plan was to attack with three companies forward in the assault. C Company was to be held back in the area of the

¹⁵ Entry for Wednesday 15th December, 0100 hours. GOC's Diary 3 Sep 43- 17 Oct 44. WAI 8/46, NA.

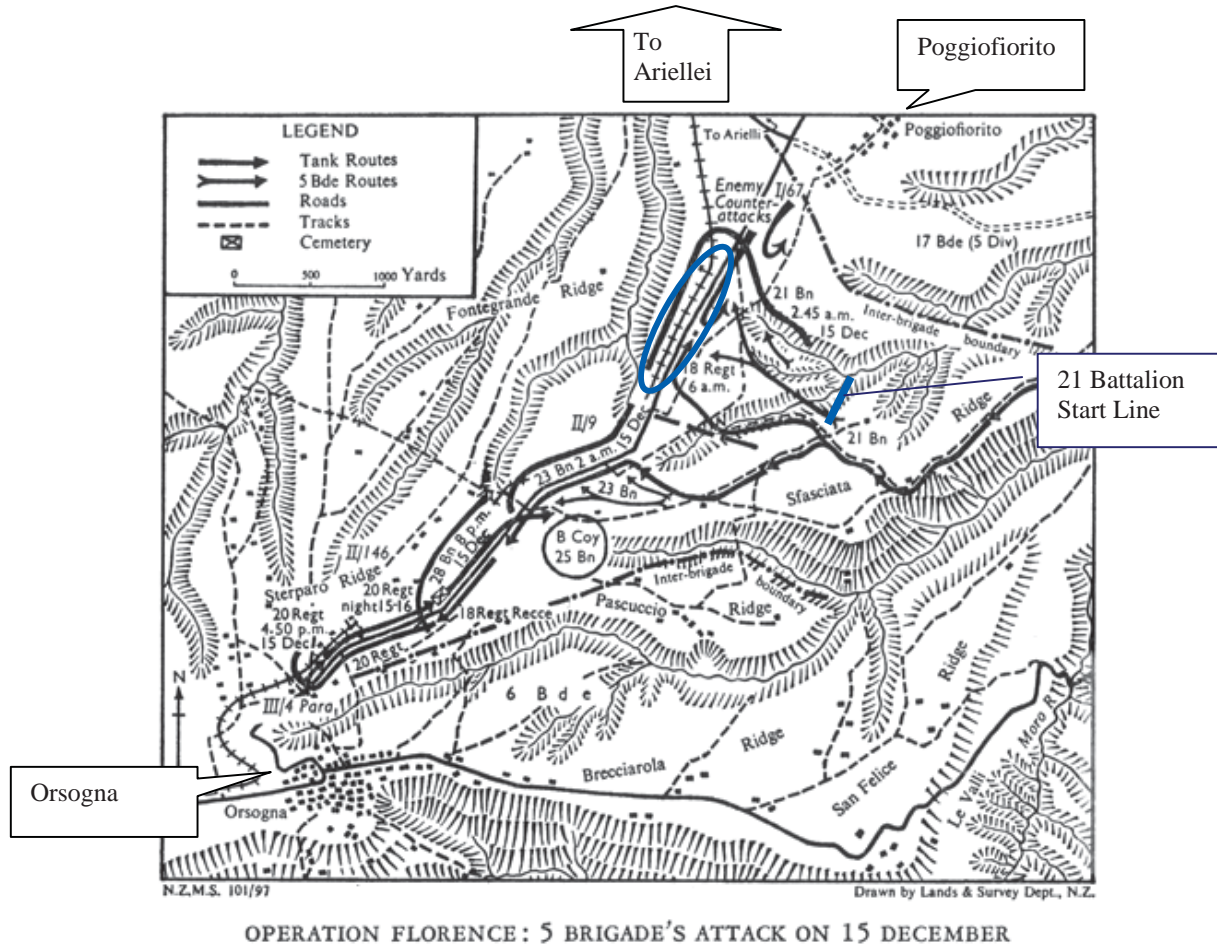
¹⁶ Special Report: Part played by 2 NZ Division in the Italian Campaign, Nov to Dec 43, p. 5. HQ 2 NZ Div "G". WAI 1 DA 21/10/7, NA.

¹⁷ 5 Inf Bde OPOD No 24 dated 14 Dec 43. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA.

¹⁸ Cody, *21 Battalion*, p. 293.

¹⁹ This has been deduced from after action reports. 21 NZ Bn Night Attack Morning 15 Dec 43. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA. This is reinforced by N.C. Phillips, *Italy Volume I: The Sangro to Cassino*, Wellington: War History Branch, 1957, p. 121.

attack Start Line in reserve, where it could be called forward as required. In essence, the objectives were three points, in a line, astride the Orsogna- Ortona Road. 21 Battalion's organisation for the operation was:



- 21 Battalion (Lieutenant Colonel McElroy)
 - A Company (Major Tanner)
 - B Company (Major Hawkesby)
 - C Company (Captain Abbott)
 - D Company (Major Bailey)
 - Mortar Platoon- from after the first German counterattack

²⁰ Cody, *21 Battalion*, p.123. Arrows and rectangle added. 21 Battalion's objective for the attack, and the eventual location of the three assault companies are indicated by the blue oval.

C Squadron, 18 Armoured Regiment²¹ - from first light 15 December

Summary of Key Events

The Attack

At 1900 hours on 14 December, after darkness had fallen so its movement would not be detected by the Germans, the battalion moved forward to the attack Start Line. It had occupied it by 2300 hours. The barrage opened at 0100 hours on 15 December, and the assault commenced at 0130 hours.

D Company, assaulting on the right flank, was held up astride a re-entrant for two hours by German mortar fire.²² At one stage, the company was split by the severity of the fire. They could not re-group until after the enemy fire had lifted, which, according to the official history, was only once two Allied 'artillery concentrations eventually quietened the opposition.'²³ Allied counter-battery fire was effective, although one soldier had been killed and four wounded before D Company could re-group.

As D company neared its objective, it came under fire once more, from heavy machineguns and mortars. Now that they were closer to the defensive position, lighter calibre mortars and direct-firing heavy machineguns (the latter firing on fixed lines) took over responsibility for defensive fire. Finally D Company soldiers were engaged by small arms as they closed on the defensive positions and their own protective artillery fire lifted. Lifting of the attackers' protective fire enabled the defenders to emerge from the cover they had taken to avoid its effects, and to commence firing with small arms themselves. This illustrates the effective pattern of defensive fire employed by veteran troops, with the attacker being engaged by different weapon systems as they get closer to

²¹ This assignment can be inferred from 18 Armoured Regiment's official history. W.D. Dawson, *18 Battalion and Armoured Regiment*, Wellington: War History Branch, 1961, p. 400.

²² Cody, *21 Battalion*, p. 294.

²³ Cody, *21 Battalion*, p. 294 and W.D. Dawson, *Campaign Narrative- 2 Division: Volume X The Italian Campaign (Sangro to Florence) Chapter 3- The Battles for Orsogna*, KMARL, p. 201.

the defence. This requires coordination by the defence, which was not evident within 65 *Division* at the Sangro. At Orsogna, the enemy was of better quality.

Small arms fire from the defenders pinned down 16 Platoon but as 18 Platoon was not decisively engaged by the defence, it was free to manoeuvre and was able to neutralise the position holding up 16 Platoon. Failure to pin down 18 Platoon indicates that German defensive small arms fire was not widespread, and that defended posts lacked mutual support from other locations to the flank. This flaw provided opportunities for attackers not under effective fire to manoeuvre. Effective fire- as it had been at Bir Ghirba- would have caused the attackers to go to ground, and cease forward movement. Despite this being the main line of resistance, the lack of field defences- barbed wire and mines- is evident. This suggests that the priority for strongpoints and obstacles was the defended towns. Having reached its objective, D Company dug in. It was approximately 0400 hours.

In the centre, A Company had an easy advance initially, until it encountered enemy at the head of a stream. It is assessed that this was a listening post covering a likely approach route up the re-entrant. At this point, 9 Platoon sustained casualties from enemy mortar and shellfire. This indicates that German artillery and mortar fire control was effective and also that the listening post had communications to the rear. This correlates to the German defensive technique (most likely adopted when there was more ground to cover than troops) for infantry to 'act as protection for ... Artillery observers... they were holding the observation posts...'²⁴ 8 Platoon was held up by German *spandau* machinegun fire and grenades, confirming that fighting in close quarters took place, certainly within grenade throwing distance - the Germans did not just scarper at long range, but neither did they conduct a coordinated fighting withdrawal. Corporal McCullough (8 Platoon) led his section in an attack on one of the posts, and when this was successful, the defence faltered and 30 prisoners were taken. The company then advanced along a ridge parallel to the Orsogna- Ortona road, clearing out several

²⁴ Bergstorff, AHEC, p. 20.

machinegun posts before reaching its objective at approximately 0300 hours, and making contact with B Company to its left.

B Company, on the Battalion's left flank, made good progress towards its objective. The company reported at least ten enemy dead caused by the New Zealand barrage supporting the attack, so the barrage had had a reasonable effect, but given the A Company fighting already recorded and the combat undertaken by B Company, the effect was not widespread. The two forward platoons struck enemy posts at approximately 0247 hours which they cleared. Meanwhile, B Company headquarters and 12 Platoon had to subdue enemy located in a house, which turned out to be a command post. The house yielded 11 prisoners, four of whom were officers. In all, B Company took 23 prisoners and sustained one man killed and four wounded. The company reported itself on its objective by 0336 hours on 15 December. It began to dig in immediately. After they had arrived on their objective, 21 Battalion was subjected to three counterattacks. These attacks are shown in Map 10.3.

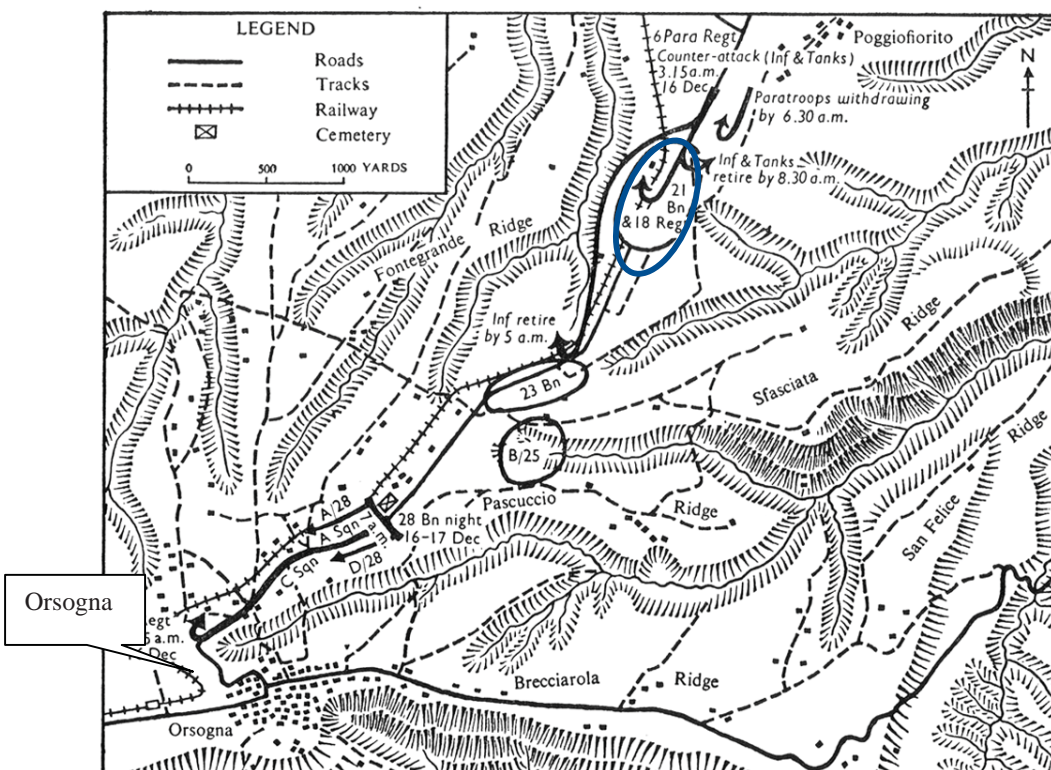
The First Counterattack

The Germans mounted their first sortie against 21 Battalion at approximately 0500 hours on 15 December, within 1- 2 hours of the companies starting to dig in on their objectives. 21 Battalion was still without its anti-tank guns or mortars, and the tanks of 18 Armoured Regiment had yet to arrive.²⁵ The battalion was at its most vulnerable, physically and psychologically, particularly from an attack by panzers. The New Zealand tanks which might have aided the defence had been delayed by anti- tank mines blocking their route, and the boggy ground conditions, which prevented the vehicles from bypassing the mines.²⁶ 21 Battalion still had:

²⁵Dawson, Campaign Narrative- The Battles for Orsogna, p. 206. Entry for Wednesday 15th December, 0405 hours. GOC's Diary 3 Sep 43- 17 Oct 44. WAI 8/46, NA.

²⁶ Special Report: Part played by 2 NZ Division in the Italian Campaign, Nov to Dec 43, p. 6. HQ 2 NZ Div "G". WAI 1 DA 21/10/7, NA.

its Piats with them. One at least came into action against the tanks, but did no damage.²⁷



Map 10.3: Operation Florence- Attacks and Counterattacks on 16 December 1943²⁸

The first counterattack was mounted by five Mark IV panzers, without any accompanying infantry. The tanks approached from the north-east 'along the road from Arielli'.²⁹ This movement confirmed that the Germans were using the lateral road as a route for counter attacks based on panzers, and substantiates the Allied intent to cut it as a precursor to securing Orsogna as a reasonable one. Allied artillery fire could not block the advance of the enemy tanks, and the PIAT, which had replaced the Boys anti-tank

²⁷ Observation attributed to I.A.M. Sansom. Dawson, Campaign Narrative- The Battles for Orsogna, note to p. 206. This is re-stated in the official history. Cody, *21 Battalion*, p. 296.

²⁸ Phillips, *The Sangro to Cassino*, p. 129. Text box and oval added. 21 Battalion's location is indicated by the blue oval.

²⁹ Cody, *21 Battalion*, p. 297.

rifle, proved to be ineffective against Mark IVs. The panzers were therefore able to penetrate 21 Battalion's position.

16 Platoon (D Company) withdrew, 'after suffering five casualties in a few minutes.'³⁰ A Company and a platoon of B Company were also forced to withdraw, presumably as they had come under direct fire from the panzers. The remainder of B Company (10 and 11 Platoons) stayed in position, but were cut off temporarily. The tanks halted behind (to the west of) 21 Battalion. They then 'withdrew at leisure, still firing' at approximately 0550 hours, ten minutes before the arrival of the first Sherman tanks of 18 Armoured Regiment.³¹ Map 10.4, produced by one of the platoon commanders after the battle, shows the counterattack objectives, location of the 21 Battalion's three forward companies and the positions of the New Zealand Sherman tanks during the second and third counterattacks.

Just as they had been at Platamon and Pinios Gorge, infantry without tanks or effective anti-tank weapons were extremely vulnerable to panzers, even small numbers of them. At Platamon, the terrain had prevented German tanks penetrating the 21 Battalion position, but not this time. At Orsogna, and as a sign of how more combat effective the battalion was now that it was a battle experienced unit, those companies that withdrew remained intact and then resumed their original positions immediately after the tanks had withdrawn.³²

The Second Counterattack

The second counterattack occurred in daylight. It was launched at approximately 0850 hours, and consisted of two tanks from the direction of Poggiofiorito. The tanks had infantry riding on them.³³ Although no numbers were stated, it is likely there would have

³⁰ 21 NZ Battalion Night Attack 14/15 Dec 43. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA.

³¹ Dawson, Campaign Narrative- The Battles for Orsogna, p. 207.

³² Entries for 0610 and 0617 hours, 15 Dec. Log 21 NZ Bn of 15 Dec. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA.

³³ Cody, *21 Battalion*, p. 297.

been no more than a dozen infantry able to ride on the panzers. Like they had previously, the German tanks proved to be impervious to defensive small arms and artillery fire, although the infantry riding on them were not. As 18 Armoured Regiment's tanks did not come into action immediately, this two tank counterattack caused D Company to retire.

With the tank threat neutralised after the 18 Armoured regiment tanks had finally engaged, D Company was able to re-occupy its position. The New Zealand response alerted the Germans to the presence of tanks within the position and this would have shaped the composition, strength and timing of the next counterattack.

The Third Counterattack

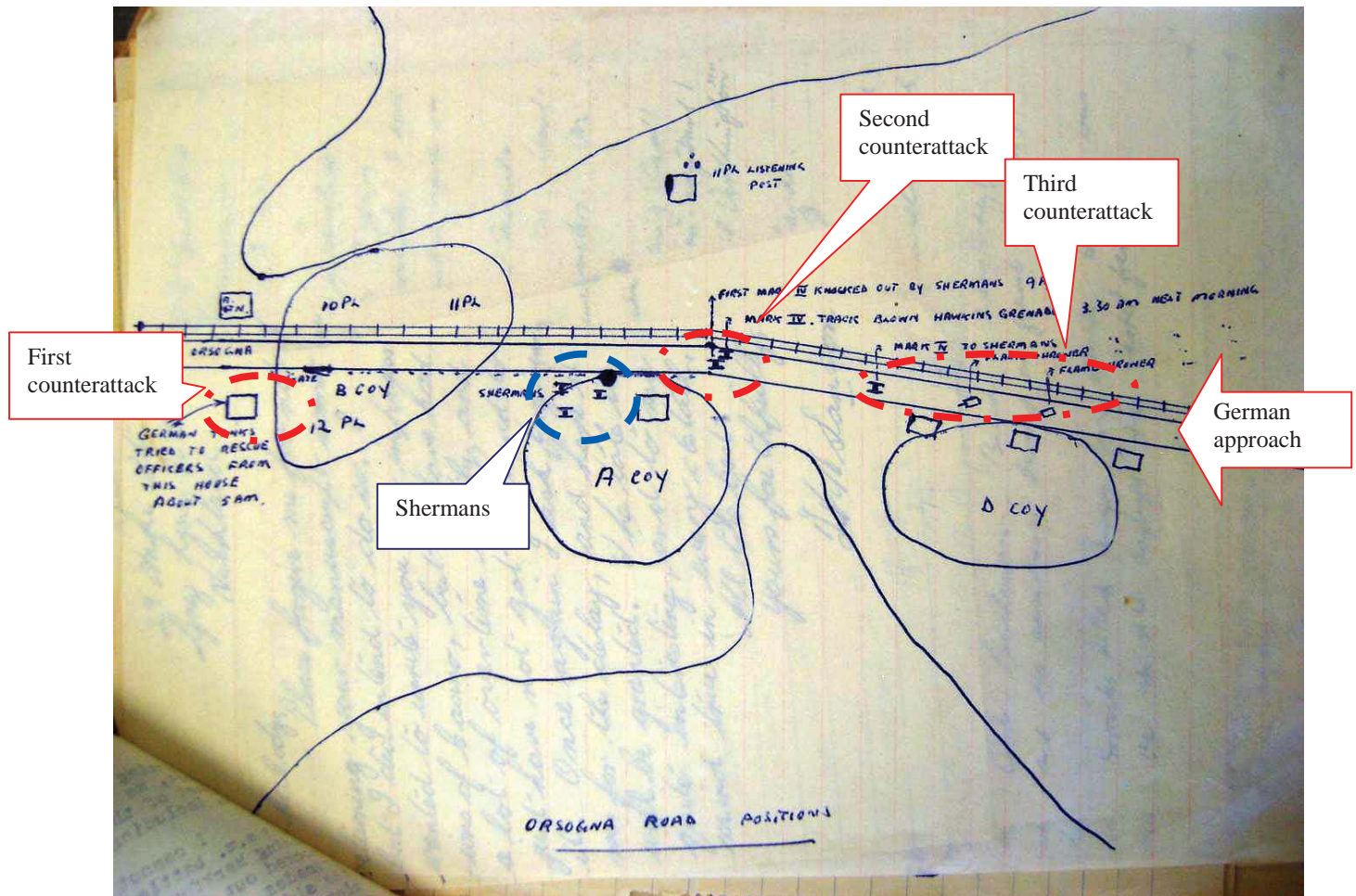
The third counterattack was mounted by panzers and by parachutists acting as infantry.³⁴ The attack was launched against the entire 5 Brigade position, in darkness, at approximately 0330 hours on 16 December. The first stage of the third counterattack directed against 21 Battalion was mounted by nine panzers (five of which were flamethrower variants), three assault guns and infantry from the *6th Parachute Regiment*, of the *1st Parachute Division*. The parachutists did not close on the defence initially, but held back, thus exposing the leading panzers, which were engaged and destroyed.

Screened behind the two leading Mark IV panzers, German flamethrower tanks had been freely and 'systematically burning up every building near the road.'³⁵ They no doubt assumed that this was where the New Zealanders would have positioned themselves, but to their credit, they had dug in elsewhere in order to defend their recently won objective, rather than simply occupy the buildings. Once the forward panzers were destroyed, the flamethrower tanks became vulnerable and were then picked off by the Sherman tanks of 18 Armoured Regiment, although at least one of the flamethrowers had 'its tracks blown off by a Hawkins Grenade laid by A Coy.'³⁶

³⁴ Entry for Thursday 16th December, 0800 hours. GOC's Diary 3 Sep 43- 17 Oct 44. WAI 8/46, NA.

³⁵ Cody, *21 Battalion*, p. 298.

³⁶ 21 NZ Battalion Night Attack 14/15 Dec 43. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA.



Map 10.4: Craig's sketch map of Orsogna road positions during counterattacks³⁷

It was only after the flamethrower tanks had been destroyed and 'their 200-foot jets of flame [had] died away' that the parachutists who had formed up out of sight and in cover on a reverse slope to the defence then attacked.³⁸ This attack was supported by the assault guns and two surviving Mark IVs firing from static positions. Because the parachutists were assaulting over open ground, they were vulnerable to mortar and artillery fire, as well as small arms, and this assault failed. Indeed, the attack was defeated before the

³⁷ Sketch map "Orsogna Road Positions" enclosed with A. Craig to J.F. Cody, letter, dated 24th June, 1952. 21 NZ Battalion- Taranto to Orsogna- Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA. Ovals and text boxes added. The red ovals indicate the German counterattack objectives. The blue oval indicates the location of the New Zealand Sherman tanks.

³⁸ Cody, *21 Battalion*, p. 298.

parachutists were able to seriously threaten the defence, although as will be recounted later in the analysis section looking at German command and leadership, one group of parachutists got very close to the New Zealand position.

The panzers and assault guns firing in support from static positions were unable to neutralise the hasty defence, and so heavy defensive fire was able to be unleashed on the parachutists attacking in the open. The Germans ‘who had suffered hvy casualties, withdrew approx 0600 hrs and was last seen disappearing in direction Peggiofierate (sic), carrying his dead and wounded.’³⁹ The attack against 21 Battalion, launched from the direction of Poggiofiorito had the forces assigned to mount a combined arms attack although the execution was poor.⁴⁰ Nevertheless, the third counterattack was still a costly episode for 21 Battalion, resulting in five dead and fifteen wounded.⁴¹

OUTCOME

Mission Accomplishment

21 Battalion achieved its mission. The attack cost 21 Battalion 46 casualties.⁴² It had secured all of its objectives, survived three counterattacks and was still combat effective at the end.

Casualties and Losses Sustained

Operation *Florence* cost 21 Battalion nine men killed and 37 wounded, 50% more casualties than had been sustained in the Sangro operation, suggesting that Orsogna was a

³⁹ 21 NZ Battalion Night Attack 14/15 Dec 43. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA.

⁴⁰ Phillips, *The Sangro to Cassino*, p. 130.

⁴¹ Cody, *21 Battalion*, p. 299.

⁴² 21 NZ Battalion Night Attack 14/15 Dec 43. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA. Numbers taken from the totals at the foot of p. 1 and p. 2 of the report.

tougher fight against a stronger enemy.⁴³ As in earlier examples in the present research, it is not possible to confirm how many German infantry were actually defending the area of 21 Battalion's objective, or exactly how many parachutists were committed in the third counterattack, although the latter was reported officially as 'two inf companies.'⁴⁴ An approximate number of defenders is able to deduced from the prisoners taken and when known, the number of enemy killed. 21 Battalion captured 80 enemy on the first night.⁴⁵ Casualty figures for both sides are shown in Table 10.1.

	Personnel				Tanks
	KIA	WIA	PW	Total Casualties	
21 Battalion	9	37		46	
<i>Germans:</i>					
<i>Defending infantry</i>	10+ ⁴⁶		80 ⁴⁷	90+	
<i>First counterattack</i>					Nil
<i>Second counterattack</i>					1
<i>Third counterattack</i>	50 ⁴⁸			50+	4

Table 10.1 Casualties sustained at Orsogna

The number of enemy dead and prisoners suggests that 21 Battalion's objective contained at least one company of infantry- who were mostly captured after early resistance rather than killed. This raises questions about leadership, morale and willingness to fight within the defending company. The large number of parachutists killed reaffirms the vulnerability of infantry attacking over open ground and indicates that morale and the will to fight was still strong within the elite *Parachute Division*. The majority of the casualties sustained by 21 Battalion (particularly the KIAs) were caused by indirect fire,

⁴³ This is supported by 23 Battalion's casualty numbers at Orsogna; at least 20 KIA and 80 WIA. This was more than they had sustained at the Sangro, just like 21 Battalion. Ross, *23 Battalion*, p. 308.

⁴⁴ 21 NZ Battalion Night Attack 14/15 Dec 43. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA.

⁴⁵ 21 NZ Battalion Night Attack 14/15 Dec 43. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA.

⁴⁶ These are only the ten or more German infantry noted by B Company as killed by Allied artillery fire.

⁴⁷ The Battalion's after action report notes that 'approx 80 PWs were taken by Bn during the night [14/15 Dec]'. 21 NZ Battalion Night Attack 14/15 Dec 43. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA.

⁴⁸ Cody, *21 Battalion*, p. 299.

or during the counter-attack, not by assaulting and clearing German positions. Once more, this endorses the tactic of attacking by night, even if it meant doing so without supporting tanks and with less coordinated artillery fire due to the darkness. The reluctance of local German infantry to fight confidently at night (panzer-led or supported counterattacks notwithstanding), at least in Italy and on this front, is apparent.

ANALYSIS OF COMBAT EFFECTIVENESS

Operational Setting

The aim of New Zealand Division's operation on 14/ 15 December was to provide an opportunity to clear Orsogna and to deny tanks of *26 Panzer Division* the use of Orsogna-Ortona road as a means of interfering with 1 Canadian Division's attack further east.⁴⁹ It also provided an opportunity to clear the Winter Line from the east.⁵⁰ Given the onset of winter, it also presented a chance to dislodge the Germans before operations ceased by both sides due to cold and snow. These factors and lessons learned from previous operations shaped this attempt to capture Orsogna. Among these "lessons" was the preference for night attacks over those mounted in daylight.⁵¹

The Germans were determined to keep the road clear, so that their tanks could re-deploy between threatened sectors, which meant that any successful blocking the road had to be counterattacked vigorously. The frontage to be defended necessitated the siting of static defended posts, with little depth. Counterattack forces were based on the few remaining tanks, and any infantry that could be mustered.

Even though the overall New Zealand Division intent of turning Orsogna was not achieved, this action shows that higher headquarters decisions on when and where to

⁴⁹ Cody, *21 Battalion*, p. 293 and Special Report: Part played by 2 NZ Division in the Italian Campaign, Nov to Dec 43, p. 5. HQ 2 NZ Div "G". WAI 1 DA 21/10/7, NA.

⁵⁰ Molony, p. 495.

⁵¹ Phillips, *The Sangro to Cassino*, p. 116. HQ 5 NZ Inf Bde I/3 Lessons from Ops [by 5 Inf Bde] dated 8 Jan 44, p.1. 2 NZEF- Headquarters NZ Division (G Branch)- Lessons from Operations 31 Dec 43- 8 Feb 44. WAI 1 102 DA 21.1/9/G2/7, NA.

fight impact on the combat effectiveness of subordinate units. By directing 5 Brigade into the gap, the “soft spot”, rather than against the Orsogna stronghold, both 21 and 22 Battalions were far more likely to be combat effective. Likewise, the decision to send tanks to 21 Battalion, at night, and despite the terrible conditions and high risks, demonstrated a level of experience within the higher level headquarters staff, showed they appreciated the enemy threat posed by tank-based counterattacks, and therefore allocated sufficient and appropriate resources. 21 Battalion enjoyed a good deal of higher headquarters oversight in this battle.

Force Strength

21 Battalion’s strength on 11 December 1943 was 29 officers and 641 Other Ranks, 670 men in total.⁵² This number was five officers and 132 Other Ranks less than the battalion had been when it attacked at the Sangro, the equivalent of a complete rifle company, or 20% less men overall. Man for man, 21 Battalion should have been less combat effective than at the Sangro. The average rifle company strength at the Sangro, with 10% LOBs deducted, was 105 men. If that figure is reduced by a further 20%, reflecting the across the board reduction in 21 Battalion stated above, then the average rifle company strength for the Orsogna operation was 84. Only three companies actively participated in the attack; the battalion’s bayonet strength deduced and used in Table 10.2 below is therefore calculated as 252. The numbers of prisoners taken and tanks destroyed and recorded in Table 10.1 have formed the basis for the German figures, although little about the actual numbers of their support weapons can be ascertained.

Based on the assessed bayonet strength of 21 Battalion and an estimate of German numbers in the defence (as in Table 10.2), it is calculated that the unit attacked with a ratio of 2.5:1. All things being equal, on an infantry- infantry basis, the New Zealanders ought to have prevailed, particularly as tanks did not enter the equation until after 21 Battalion had reached its objective. By attacking a soft spot, held by a low number of defenders (relative to the stronghold towns, such as Orsogna), 21 Battalion was given the

⁵² NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA.

best chance to be combat effective. The German ace was the proximity of its panzers and the small time window it would have to counterattack before 21 Battalion got properly organised, and tanks joined them on the objective.

	Bayonet Strength (Infantry)	Anti-tank guns	Machineguns	Mortars	Tanks	Assault Guns
21 Battalion	252	nil	27	3 (counterattack 2 onwards)	3 ⁵³ (counterattack 2 onwards)	nil
<i>German Defence</i>	90+	unknown	unknown	unknown	nil	nil
<i>Counterattack 1</i>	nil	nil	nil	nil	5	nil
<i>Counterattack 2</i>	12?	nil	nil	nil	2	nil
<i>Counterattack 3</i>	50+ ⁵⁴	nil	unknown	unknown	9	3

Table 10.2: Relative strengths at Orsogna

The panzer grenadier (motorised infantry) troops of *26 Panzer Division* had seen much previous fighting in Italy, particularly at the battle of Salerno in September 1943. They were ‘employed almost always at the point where the main effort was made during the action of the Italian theatre of war.’⁵⁵ They were, however, stretched thin at Orsogna and not fighting in cohesive battlegroups. At the time of the attack, *26 Panzer* had no reserve, as their panzers had been deployed elsewhere. Moreover, the panzer grenadiers defending in the area of the 5 Brigade objective were badly shaken by the bombardment supporting the attack.⁵⁶ In addition, the attackers had achieved surprise.⁵⁷ In short, German companies were deployed in linear and isolated posts between Orsogna and Arielli, and were without combined arms, depth or reserves. As isolated companies, they were the weakest link in the Winter Line within the Orsogna sector. They had been weakened further by the attackers’ supporting bombardment.

⁵³ Sketch map “Orsogna Road Positions” enclosed with A. Craig to J.F. Cody, letter, dated 24th June, 1952. 21 NZ Battalion- Taranto to Orsogna- Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA. Craig’s sketch map shows three Sherman tanks positioned near A Company 21 Battalion.

⁵⁴ The British official history states ‘two German battalions and a few tanks attacked the N.Z. right flank, and were driven off.’ Molony, p. 499.

⁵⁵ Bergstorff, AHEC, p. v.

⁵⁶ Phillips, *The Sangro to Cassino*, p. 123.

⁵⁷ Bergstorff, AHEC, p. 29.

This attack highlights bayonet strength as a determinant of combat effectiveness. Any tactic which increases the attacker-defender ratio improves the chance of being combat effective. 21 Battalion's combat effectiveness was enhanced by the arrival of tanks, and its ability to defeat the second and third counterattacks by use of combined arms. 21 Battalion's actions, and the coolness with which the men returned to their positions after the tank counterattacks, indicates a level of confidence derived from combat experience.

Battlefield Effects

21 Battalion's objective for the attack was a section of the road to the northwest of the Sfasciata Ridge, a 'kind of table- land approx half way between Orsogna and Ortona.'⁵⁸ Analysis of battlefield effects using OCOKA considerations for the 21 Battalion attack is shown in Table 10.3 below.

Observation and Fields of Fire	<p>An examination of grid squares 2504 and 2505 on the Lanciano map shows that the 21 Battalion approach was up steep ridges.⁵⁹ The enemy positions were located on a plateau or 'tableland.'⁶⁰ Just as at Halfaya Pass, the infantry defenders were therefore unable to observe or fire down the ridgelines due to the gradient, and this was a considerable weakness which was exploited by the attackers.</p> <p>The 'battle began in bitter cold and icy showers of rain.'⁶¹ It was a 'misty moonlight night.'⁶² General Freyberg noted in his diary that it was a 'full moon but overcast and visibility was not good.'⁶³ The campaign history recorded that 'the infantry moved forward in confusing gloom, for the full moon was obscured by cloud. Bitter cold and showers of rain made the night miserable as well as menacing.'⁶⁴</p> <p>21 Battalion's official history does not describe the ground around the objective. 18</p>
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⁵⁸ J.A. Maich to Mr Cody, letter, 12.4.52, p. 8. 21 NZ Battalion- Taranto to Orsogna Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA.

⁵⁹ Map- Europe Italy- 1:50,000- LANCIANO- 1943. WAI 5 Box 6, Item 147.I, NA.

⁶⁰ J.A. Maich to Mr Cody, letter, 12.4.52, p. 8. 21 NZ Battalion- Taranto to Orsogna Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA.

⁶¹ Molony, p. 499.

⁶² Craig to J.F. Cody, letter, 24th June, 1952, p. 2. 21 NZ Battalion- Taranto to Orsogna Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA.

⁶³ Entry for Wednesday 15th December, 0100 hours. GOC's Diary 3 Sep 43- 17 Oct 44. WAI 8/46, NA.

⁶⁴ Phillips, *The Sangro to Cassino*, p. 122.

	<p>Armoured Regiment's does, as the ground was ideal for anti-tank defence, and movement without accompanying infantry was risky, and therefore a slow, and methodical advance was conducted. The 18 Armoured Regiment official history recorded that:</p> <p style="text-align: center;">the tanks were in flat country, thinly covered with trees, where, all unknown, German anti-tank guns were waiting.⁶⁵</p> <p>It can be deduced from the above that the defenders' observation and fields of fire were poor at night on the approaches used by the infantry. This explains why 21 Battalion soldiers were able to close up on most strongpoints undetected and why engagements were at close range and of short duration.⁶⁶ The plateau itself was ideal for defence, due to the rolling nature of the terrain and the patches of willows and vines.</p>
Cover and concealment	<p>The vegetation, darkness and mist provided concealment to the attackers and defenders; however, once the defenders engaged with small arms fire (usually rapid firing <i>spandau</i> machineguns), their positions would have been able to be located due to their muzzle flash and tracer, thereby indicating firing points to the attackers.</p>
Obstacles	<p>The infantry assault was conducted in a north westerly direction across a ravine, initially.⁶⁷ No significant man made obstacles (such as mines and barbed wire), or natural obstacles were recorded in official or personal accounts of the infantry attack, which seems unusual for the main line of defence. This confirms that the German obstacle priority was directed at town-based strongholds and the tracks onto the ridge that Allied tanks might use. Only armoured vehicles were held up by the wet ground and mines as already recorded.⁶⁸ This caused them to join 21 Battalion later than expected and exposed the unit to the known risk of counterattack by tanks.</p>
Key Terrain	<p>Point 332 (A Company's objective) was located on dominating terrain where 'the road topped a rise.'⁶⁹ The road, or any portion of it which could be blocked and held, became Key Terrain for denying German tanks use of the route, provided the position could be</p>

⁶⁵ Dawson, *18 Battalion and Armoured Regiment*, p. 403.

⁶⁶ Cody, *21 Battalion*, p. 294. The attackers got close enough for the Germans to open fire 'with small arms and grenades', and in another incident A Company moved parallel with the road until held up with grenades and spandau fire...' The use of grenades suggests the range was very close.

⁶⁷ Cody, *21 Battalion*, p. 293.

⁶⁸ Special Report: Part played by 2 NZ Division in the Italian Campaign, Nov to Dec 43, p. 6. HQ 2 NZ Div "G". WAI 1 DA21/10/7, NA. Entry for 0320 hours, 15 Dec 43. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA.

⁶⁹ Cody, *21 Battalion*, p. 294.

	retained.
Avenues of approach	21 Battalion's designated axis of assault was northwest from Sfasciata ridge. Although 'the air-line distance was about a mile... the actual distance [was] considerably more.' ⁷⁰ This approach allowed both attacking battalions from 5 Brigade to launch their attack from the security of Sfasciata ridge which was already in New Zealand hands. Attacks from the left or right flanks were out of the question, as New Zealand patrols and two unsuccessful attacks had determined previously. ⁷¹

Table 10.3: OCOKA terrain analysis for Orsogna

The terrain in Italy suited the defence, but 'was almost impracticable for motorized organizations.'⁷² The terrain was better suited to a daylight defence, especially against attacks mounted from either the west or the east, than for an infantry night attack from the south east. The analysis shows that 21 Battalion had been directed to use a viable approach, which the Germans had only covered with one listening post. The unit's assault companies were therefore able to close on the defence, with minimal casualties, and in good order. As recorded in previous night battles, the *spandau* posts were able to be subdued at close range. By night they became isolated from other posts, that by day, would have been able to provide mutually supporting fire to each other, and might also have engaged at greater distances causing more casualties and taking longer to neutralise.

The Germans only counterattacked by day once. This counterattack, launched by tanks with infantry riding on top of them, was able to have New Zealand artillery called down on it- the line of sight was that good.⁷³ This was in contrast to the initial counterattack, at night, where the German panzers had got 'in too close to our men to be engaged by artillery.'⁷⁴ By day, observation and fields of fire were good enough for the defence to compel the Germans to conduct their subsequent counterattacks, once they had determined the New Zealanders now had tanks as part of the defence, by night. A 1946

⁷⁰ Cody, *21 Battalion*, p. 294.

⁷¹ Molony, p. 497.

⁷² Bergstorff, AHEC, p.19.

⁷³ Dawson, Campaign Narrative- The Battles for Orsogna, p. 207.

⁷⁴ Dawson, Campaign Narrative- The Battles for Orsogna, p. 207.

Army Board publication described the scene, reminiscent of Bir Ghirba, but with the tables reversed:

A murderous fire from every weapon available, tanks and artillery, machineguns and mortars, and within a few moments the scene was of some unreal, yet horribly vivid nightmare....⁷⁵

The analysis shows that the terrain was more suited to a defence against attacks mounted from the east, than the direction of 21 Battalion's attack. 21 Battalion, once reorganised on their objective, was able to take advantage of the long lines of observation and fire by day, and reasonable fields of fire by night, to deal with the counterattacks.⁷⁶ 21 Battalion's approach from the southeast was largely defilade, and as a result they were able to close on the Germans in good order and with a minimum of exposure.

This attack highlights, yet again, that the amount of light (and hence visibility) during an operation is an important factor in combat effectiveness. The dark shielded 21 Battalion's attack approach and re-organisation. The dark also made it more difficult for the Germans to mount coordinated counterattacks over unfamiliar terrain when they did not know the whereabouts and composition of the 21 Battalion defence.

Tactics, Doctrine and Training

The New Zealand operation was a deliberate, noisy night attack. It was deliberate from the perspective that it had been planned in some detail over the days preceding the attack, although, despite the planning and preparation, very little was known about actual enemy dispositions on the objective. Infantry and armour had to approach the objective using separate routes and therefore it did not become a true combined arms operation until the tanks joined 21 Battalion in time for the second counterattack. Previous attacks in Italy had demonstrated that wire obstacles were rare, and mines were laid mainly on formed

⁷⁵ *Roads to Rome*, p. 17.

⁷⁶ Phillips, *The Sangro to Cassino*, p. 130.

tracks.⁷⁷ No engineers were assigned to 21 Battalion, which suggests that German mines and barbed wire were not expected to be significant obstacles on the infantry approach. Instead, engineers were deployed to tracks which tanks were required to negotiate in order to join the infantry. The attack was “noisy” in that covering artillery was fired during the assault, unlike a “silent” attack.

The 21 Battalion plan of attack was simple. Three rifle companies attacked in a north-westerly direction, in a single phase, on separate axes towards the road, using night and terrain for concealment and to achieve surprise. Support weapons and tanks were separated from the attacking infantry due to the difficult terrain until they could be moved forward on separate routes. In North Africa, the enemy’s extensive minefields had been the obstacle that separated infantry from its support weapons and support arms; in Italy, the steep and broken terrain had the same effect. As a result of this separation, the New Zealanders were vulnerable to enemy panzers until such time as the 21 Battalion support weapons and 18 Armoured Regiment tanks joined them on the objective. The 21 attack resembled the Sangro two weeks prior, and thus the previous operation constituted a dress rehearsal for this one against the main line of resistance.

The strongest enemy defences were built up areas and key road junctions, consistent with German tactical doctrine which was to make use of towns (such as Orsogna) as strongpoints.⁷⁸ The line along the road itself, between each strongpoint, was less firmly defended, and therefore more vulnerable. The terrain of the region; rivers, ridges and limited north-south running roads, made such a defence based on key points possible.

The German tactic was for defended posts to hold up attackers so they could be counterattacked by panzers and infantry, supported by artillery. Defended posts were based on *spandau* machineguns, but, surprisingly for the main line of resistance, lacked man-made obstacles to impede the assaulting infantry, and therefore they could not be held off for long enough to be worn down by fire, or counterattacked. Early warning

⁷⁷ HQ 5 NZ Inf Bde I/3 Lessons from Ops [by 5 Inf Bde] dated 8 Jan 44, p.1. 2 NZEF- Headquarters NZ Division (G Branch)- Lessons from Operations 31 Dec 43- 8 Feb 44. WAI 1 102 DA 21.1/9/G2/7, NA.

⁷⁸ U.S. War Department, *Handbook on German Military Forces*, p. IV-26.

within the New Zealand attack sector was limited; only one company encountered a German listening post which suggests that the Germans did not have sufficient forces to cover all approaches and man their posts, or that they expected an attack to be launched in daylight. The defence was better suited to defeat an attack mounted in daylight, where it would have had better fields of fire and observation. It seems that no additional measures were taken to defeat a night attack, or to cover the southern approaches, other than to rely on counterattacks to recover lost ground.

The German tactic of counterattacking was predictable, even the timing of it, as the following quote from one 21 Battalion participant in the attack at Orsogna suggests: 'Continuing to their usual methods the Germans commenced their counterattack about four thirty in the morning.'⁷⁹ Infantry-only local counterattacks by night were non-existent at the Sangro, or Orsogna. The German tactic was for panzers to launch a counterattack, usually in the dark in to order to achieve surprise through masking the approach, but with sufficient time to conclude the attack before first light. Defending from first light would then offer better of fields of fire to aid in the defence of re-captured terrain. The second counterattack showed how risky an operation was if mounted in daylight, and supports the New Zealand decision to attack at night.

Counterattacks directed at 21 Battalion were quite different to the successfully coordinated combined arms infantry and panzer attacks conducted against the Indian Division 7/ 8 December.⁸⁰ This indicates that the counterattacks onto 5 Brigade battalions were conducted by units which had not had time to coordinate their actions. It also suggests that the counterattacks against the Indians were conducted by formed, rather than ad-hoc, units. It is notable that the largest counterattack on 21 Battalion was conducted last, leading one to conclude that it had taken considerable time to assemble the parachutists and the number of tanks required, after the first two counterattacks failed. Cohesion between the panzers, flame throwers and parachutists broke down and resulted in chaos, reinforcing the assessment that the third counterattack was mounted by an

⁷⁹ J. McCullough to Mr Cody, letter, March 24 [no year], p. 3. 21 NZ Battalion- Taranto to Orsogna Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA.

⁸⁰ Prasad, *The Campaign In Italy 1943- 45*, p. 63.

ad-hoc grouping, that had been given insufficient time to undertake planning and coordination ahead of their counterattack mission.⁸¹ To have improved their chances of success, in addition to the aforementioned time for planning and coordination, the Germans would have had to neutralise New Zealand tanks and infantry defending the position and their supporting artillery as well. As they did not, or could not, New Zealand elements were therefore able to defeat the counterattack.

Maich's letter illustrates the 21 Battalion tactical response to the counterattacks, when he wrote that 'The enemy [counterattack] was soon repelled by our arty [and] mortars' and the 'combined defence of A & D Coys.'⁸² This battle suggests, when one compares the impact on 21 Battalion and the counterattack forces in the first and third counterattacks, that a combined arms force is better able to defeat a panzer-led assault.

This attack was a comprehensive test for 21 Battalion. The battalion was combat effective. This attack highlights the combat effectiveness factors of a simple plan, use of combined arms, surprise, combat experience and striking the enemy at his weakest point. 21 Battalion's plan of attack was simple, and it worked, with three assault companies maximising the chance that at least one would be able to seize a section of the road. In the event, all three were able to do so. 21 Battalion's own defence of its recently won objective, supplemented eventually by Sherman tanks and artillery, was more than capable of absorbing the counterattacks mounted against them, although the infantry vulnerability to tanks was demonstrated once again. German dispositions did not favour night defence and their reliance on counterattacks to recover lost ground failed them. They were not able to mount effective counterattacks quickly enough. It is fortunate that the third counterattack, mounted by the strongest force, was poorly coordinated. During all counterattacks, 21 Battalion troops either stood fast, or if pushed off their position, they remained a cohesive group and were able to reoccupy their ground and continue the fight.

⁸¹ Phillips, *The Sangro to Cassino*, pp. 129- 130.

⁸² J.A. Maich to Mr Cody, letter, 12.4.52, p. 14. 21 NZ Battalion- Taranto to Orsogna Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA.

Command and Leadership

Lieutenant Colonel McElroy was still CO for this operation. Grid references, in the unit's after action report, place C Company (in reserve) and battalion headquarters back in the vicinity of the Start Line, approximately 300 yards apart.⁸³ They were located at least 1,500 metres behind the forward companies. It is assumed that McElroy was not forward with his companies, but was back at his headquarters, no doubt because he was able to maintain wireless contact with his companies and with brigade headquarters from there.

This made McElroy reliant on reports from his company commanders, rather than on personal assessment of the situation, during the assault and the counterattacks. By being in his headquarters, static rather than advancing with the assault, he gained much better situational awareness than if he had been trailing behind one of the assault companies as had been the practice in North Africa. In a night attack in Italy, where visibility, and thus understanding of the overall picture was much reduced and contact with other companies reliant on the vagaries of wireless reception, the location of the CO in a static headquarters was a good option. The battalion's war diary contains the battle logs for 15 and 16 December 1943. They provide, in short form, an almost minute by minute account of the battle. The following 20 minute extract from the log is taken from the assault itself, at the point D Company got held up:⁸⁴

0250 [from] D Coy- am being heavily mortared and machine gunned and cannot
get ahead
0250 one green flare 10°
0255 to D Coy- JACOB coming
0256 to A Coy- JACOB coming for D Coy
0304 [from] A Coy- send JACOB up 100

⁸³ 21 NZ Battalion Night Attack 14/15 Dec 43. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA.

⁸⁴ Log 21 NZ Bn of 15 Dec. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA.

0305 CO to BM: JACOB up 100
0306 [from] D Coy- Pinned down and losing men. Can't move.
0309 CO to MMGs- JACOB add 100 pronto
0310 CO to Mortars- JACOB add 100 pronto

The CO ordered JACOB to be fired. JACOB was a pre-arranged target for artillery and support weapons.⁸⁵ Adjustment by 100 yards was ordered by A Company, for D Company, and this was coordinated through the Brigade Major at brigade headquarters, who would have directed the corrections to the artillery headquarters controlling the gun-line. The last two messages record the CO bringing his own mortars and medium machineguns into action to support D Company, a sign that he assessed D Company's situation to be serious. He thus exerted far greater influence on the battle, based on a better understanding, than if he had been following behind one of the assault companies, in conditions of limited visibility, possibly under fire himself. The artillery did provide observation parties; they appeared to operate independently of the assault battalions as the record for 0655 hours of 'Arty OP. 4th Fd reported in and passed on fwd' suggests.⁸⁶

At 0320 hours on 15 December, 18 Armoured Regiment reported 'Going very soft, am recce'ing (sic) new route' confirming that the CO had communications with supporting arms, as well as his companies. The message advised McElroy that the tanks would likely be delayed. At 1345 hours, the CO told A Company 'Excellent work'; it was even possible to praise good performance over the wireless net. The remaining log records have updated reports from the companies and tanks, and contain a wide range of short bursts of information such as instructions for further artillery strikes, casualty reports, requests for stretchers, withstanding the counterattacks, and the movement of 21 Battalion's mortars into the forward company locations.

⁸⁵ Appendix B 2 NZ Div Arty Def Fire Task in sp 5 NZ INF Bde, to 5 NZ INF Bde Operation Order No 24 of 14 Dec 43. HQ 5 NZ Inf Bde War Diary December 1943. WAI 1 709 DA 52/1/48, NA.

⁸⁶ Entry for 0655 hours, 15 Dec. Log 21 NZ Bn of 15 Dec. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA.

At 0617 hours on 15 December, A Company reported ‘have occupied point 332. Do not stonk.’⁸⁷ This was formal notification that A Company was back on its objective having retired in the face of the panzers during the first counterattack, and more importantly, it did not want to be fired upon by its own artillery. Even though the message was directed to battalion headquarters, it would have been noted by all 21 Battalion companies, the battalion’s mortars and anti-tank platoons, and by 18 Armoured Regiment. Wireless, an unqualified success for ranges up to about 1 mile’ therefore allowed information to be transmitted laterally.⁸⁸ This increased overall coordination and situational awareness, which all helped make some sense of the sounds across the battlefield. As a result, company commanders and support arms commanders now had a far greater understanding of the overall situation than being limited to what they could see.

The logs show that the CO’s exercise of battle command, achieved through the wireless, was to direct which targets the artillery was to fire on (in effect, to prioritise and authorise), to assess the progress of assault companies and to control the commitment of his reserve company. There may have been extra wireless messages between the CO and companies that were not recorded in the battle logs. Nevertheless, the messages that were logged provide a good record of the conduct of the battle, and the types of information being relayed and instructions being given.

The only action McElroy is known to have undertaken personally was to brief Maich, to undertake a platoon sized patrol, in daylight, towards the town of Poggiofiorito to see if it was still occupied by the Germans.⁸⁹ The task was extremely risky and it was only right therefore that McElroy briefed the patrol commander in person.

⁸⁷ Log 21 NZ Bn of 15 Dec. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA. A “stonk” was an artillery concentration. The system is attributed to Maj Gen CE Weir when CRA 2 NZ DIV.’ Army slang, within List of Expressions and sayings prevalent throughout 2 NZEF. WAI 1 DA 420/1, NA.

⁸⁸ Lessons from recent operations of 2 NZ Div- Signals (attached to note dated 2 Feb 44), p.2. 2 NZEF- Headquarters NZ Division (G Branch)- Lessons from Operations 31 Dec 43- 8 Feb 44. WAI 1 DA 21.1/9/G2/7, NA. HQ 5 NZ Inf Bde I/3 Lessons from Ops [by 5 Inf Bde] dated 8 Jan 44, p.5. 2 NZEF- Headquarters NZ Division (G Branch)- Lessons from Operations 31 Dec 43- 8 Feb 44. WAI 1 DA 21.1/9/G2/7, NA.

⁸⁹ J.A. Maich to Mr Cody, letter, 12.4.52, p. 14. 21 NZ Battalion- Taranto to Orsogna Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA.

There is very little that can be gleaned from Allied or Axis sources about German command and leadership within 21 Battalion's objective at Orsogna. One of the houses captured by B Company, from which eleven Germans of whom four were officers emerged, was a headquarters.⁹⁰ Four officers suggests a battalion sized headquarters; it is likely that a company headquarters would have contained only one or two officers. The house was found to contain maps, radio equipment and a field telephone- the latter still connected to the German phone lines.⁹¹ How influential the headquarters was is not known. There were no other reports of officers or radios being captured, so it is possible that the radio links were for contact with a higher headquarters, maybe with the listening post (although that would more logically be connected by field telephone) and for calling in artillery. This headquarters probably called in the first counterattack, although it only arrived after the headquarters had surrendered. It is possible, that the first "counterattack" was actually a rescue mission for this headquarters.⁹²

German battlefield leadership was poor, as evident with the surrenders and absence of local counterattacks. The only recorded positive example of German leadership can be found from the third counterattack, where:

the man who was obviously leading the attack was killed just within our line. He was a Major and had served in Greece and Crete... seven to ten [enemy] bodies were counted within ten to twenty feet of the Major, indicating that had the

⁹⁰ Cody, *21 Battalion*, p. 295.

⁹¹ Cody, *21 Battalion*, p. 297.

⁹² Sketch map attached to A. Craig to J.F. Cody, letter, dated 24th June, 1952. 21 NZ Battalion- Taranto to Orsogna- Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA. The sketch map has the words 'German tanks tried to rescue officers from this house about 5AM' written on it. In the same file, Sansom's letter recorded that a German tank crewman jumped down from the tank and dashed inside the building. Once the crewman had returned a short time later, presumably having determined that the building was empty, the tank fired a couple of shots into the building and then all the tanks departed. I.A.M. Sansom to Mr Cody, letter, 22/1/ 52, p.6 of attachment to letter. 21 NZ Battalion- Taranto to Orsogna Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA.

German officer been successful in breaking our lines we would have been sorely pressed.’⁹³

While McCullough’s remark was about the potential for the Germans to penetrate the 21 Battalion position and cause mayhem, the incident highlights that within the German *Parachute Division*, at least, field-rank officers still led from the front. The major had in fact selected an untried approach, although he had chosen (or perhaps he had been ordered) to wait out the tank attack first, and thereby squandered the opportunity to launch his dismounted assault on the New Zealand flank in concert with the flamethrower attack, when he might have been more successful as the defence would have had to focus on two attacks simultaneously. So, he was brave, but perhaps not tactically astute.

New Zealand leadership was solid. The CO’s location and understanding of the battle had changed significantly with the introduction of the wireless. No longer a battlefield nomad exposed to similar risks as the rifle companies, and doing his best to command the battalion across an extended front, he was now a battlefield coordinator whose previous experience allowed him to assess the situation, through wireless reports, and then give direction. Passage of information was becoming more prevalent, as the wireless logs attest.

This battle shows that the CO’s situational awareness and ability to exercise command through the wireless were enablers for 21 Battalion’s combat effectiveness. With support arms on the net as well, a CO was required to coordinate support for his unit, in a manner that Macky and both Allens were never expected to, or ever could have, given their reliance on telephone cables and, at best, a single wireless to brigade headquarters.

⁹³ J. McCullough to Mr Cody, letter, March 24 [no year], pp. 3-4. 21 NZ Battalion- Taranto to Orsogna Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA. The official history recorded that the major and his group were killed by Private “Snowy” Munro’s Bren gun and that the major was found ‘lying among his men with a pistol in one hand and a grenade in the other.’ Armed like that, surrounded by his men, the major was clearly bent on fighting and leading, not just commanding. Cody, *21 Battalion*, p. 299. The matter is also recorded in A. Craig to J.F. Cody, letter, dated 24th June, 1952, p. 5. 21 NZ Battalion- Taranto to Orsogna- Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA.

Sociological Factors

Despite the defence at Orsogna being stronger than 21 Battalion had encountered at the Sangro, and the unit being weaker because of casualties sustained since that battle, it was better prepared from the combat experience perspective. 21 Battalion soldiers and officers, even those who had only arrived in the most recent reinforcement draft, had all been in action previously, even if only at the Sangro. The battalion had not received any reinforcements since then. The one company commander who had not led a company in combat previously, Abbott (C Company), was given the reserve role in the attack and his company was located in depth (back at the Start Line) when the battalion reorganised on their objective. The Sangro had, in fact, proven to be a rehearsal for the attack at Orsogna, and thus provided a suitable blooding for the most recent 21 Battalion reinforcements, or “red arses” as they were known.⁹⁴ Sansom put it succinctly when he recorded: ‘The Coy was the same as had crossed the Sangro, so they had all seen shots fired in anger, and I could trust the lot.’⁹⁵

Soldiers were aware of the need to take as much ammunition as they could carry during assaults- a sign of experience- and not just ammunition for their own weapon, but grenades, anti-tank mines and extra magazines for Bren guns as well. It has already been related that at least one Hawkins anti-tank mine was put to good use at Orsogna. One anecdote in the official history relates the story of a soldier who needed nails to help hitch up his trousers, as they had come apart under the strain of the extra ammunition he was carrying in his pockets.⁹⁶ Although burdensome, extra ammunition would make up for yet to be established supply lines immediately following the attack, and for the probable self-reliance by the riflemen (like parachutists), based on experience, of having to deal with counterattacks before tanks, anti- tank guns, medium machineguns and mortars were able to provide the promised support.

⁹⁴ List of Expressions and sayings prevalent throughout 2 NZEF. p. 2. WAI 1 DA 420/1, NA. The use of the nickname for recent reinforcements is also highlighted in Gordon Slatter, *One More River: The Final Campaign of the Second New Zealand Division in Italy*, Auckland: David Ling Publishing Limited, 1995, pp. 77- 78.

⁹⁵ I.A.M. Sansom to Mr Cody, letter, 22/1/ 52, p.1 of attachment to letter. 21 NZ Battalion- Taranto to Orsogna Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA.

⁹⁶ Cody, *21 Battalion*, p. 294.

Combat experience also brought a measure of self-reliance. A commentator from 21 Battalion's opposition at Orsogna recorded a similar sentiment among *26 Panzer Division* (of which *9 Panzergrenadier Regiment* was a part) when he wrote:

... the main burden of fighting was placed on the individual grenadier, both as a fighter and a carrier. Every piece of ammunition, food and construction material had to be carried to the front, and every man wounded carried to the rear...⁹⁷

Although most of the New Zealanders had never faced a German counterattack by tanks before, they were able to endure it, for 'After the initial panic we realised how ineffective tanks were in open country, without infantry support.'⁹⁸ The flame attack was worse, it was 'the most demoralising thing we had struck in our experience.'⁹⁹

5 Brigade reported to division that the flame thrower was 'a terrifying spectacle at night and has a distinct anti- morale effect on dismounted tps against whom it is used.'¹⁰⁰ Craig also recorded that the flamethrower attack was the most demoralising sight he had seen.¹⁰¹ Yet, the New Zealanders did not flee. The unit proved to be more resilient than it had been at the Pinios Gorge in Greece; a product of combat experience carried forward by veteran members of the unit, which helped steady the remainder. 'D Coy just stuck it out until our own tanks came up & knocked out the flamethrowers with some beautiful shooting.'¹⁰² A clue to this level of resilience is provided by General Freyberg when commenting about the third German counterattack, where the contrast with the lack of support available to 21 Battalion in Greece at Platamon and Pinios Gorge is pronounced, when he recorded:

⁹⁷ Bergstorff, AHEC, p. 25.

⁹⁸ J. McCullough to Mr Cody, letter, March 24 [no year], p. 2. 21 NZ Battalion- Taranto to Orsogna Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA.

⁹⁹ Harry Bailey to Mr Cody, letter, 19/3/52, p. 4. 21 NZ Battalion- Taranto to Orsogna Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA.

¹⁰⁰ HQ 5 NZ Inf Bde to Main 2 NZ Div, Memo I 8/1, dated 3 Mar 44. 2 NZEF- Headquarters 2 Division- Enemy Weapons and Equipment. WAI 1 DA 21.1/9/94/13, NA.

¹⁰¹ A. Craig to J.F. Cody, letter, dated 24th June, 1952, p. 4. 21 NZ Battalion- Taranto to Orsogna- Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA.

¹⁰² Harry Bailey to Mr Cody, letter, 19/3/52, p. 5. 21 NZ Battalion- Taranto to Orsogna Correspondence collected by Unit Historian. WAI 1 DA 54/15/10, NA.

... the bn was quite confident. They have good MG support, [two] 6 pdrs up and the 18 Regt tanks in action.¹⁰³

These comments suggest that in addition to the men's faith in themselves and their leadership, the presence of support weapons and supporting arms (especially tanks on or near the position, and the ability to call in artillery support) provided an extra level of assurance. Further, a successful attack would have buoyed the men's spirits. The battalion's wireless logs contain comments that demonstrate the battalion had high morale as this example, from CO 21 Battalion to the Brigade Major, at 0715 hours on 16 December following the counterattack, attests:

A and D Coys attacked with flamethrowers. All Coys [attacked] with INF and TANKS. Haven't given an inch. Got in between A and D Coys. Completely held now. Have as many [New Zealand] tanks as we can do with. Bn very happy and waiting for another crack.¹⁰⁴

The German experience was the opposite, and this detracted from their combat effectiveness, lowering their will to fight. With few buildings for shelter, the men were required to endure the freezing cold and wet conditions in exposed trenches, other than the one headquarters group that was based in a house. The troops of *9 Panzergrenadier Regiment* had been in action almost continuously since being sent to the Sangro sector in advance of the remainder of *26 Panzer Division* on 25 November.¹⁰⁵ In the days preceding the attack, they had been subjected to a considerable number of Allied air attacks. Their morale was also likely further reduced by the surprise achieved by the New Zealand night attack, the artillery bombardment they sustained, and the atrocious weather. *26 Panzer* had already recorded a drop in morale as a result of previous combat

¹⁰³ Entry for Thursday 16th December, 0450 hours. GOC's Diary 3 Sep 43- 17 Oct 44. WAI 8/46, NA.

¹⁰⁴ Entry for 0715 hours, 16 Dec. Log 21 NZ Bn of 15 Dec. 21 NZ Battalion War Diary 1 December 1943 to 31 December 1943. WAI 1 DA 54/1/48, NA. Fifteen minutes prior, B Company had reported 'quite happy and waiting for a hot meal.'

¹⁰⁵ Bergstorff, AHEC, p.24 and 26.

where the men ‘until then, had been eager to go into action.’¹⁰⁶ It seems that their fighting at Orsogna was active, but only up to the point that the New Zealanders closed in on their individual trenches and strongpoints, then they surrendered. Their entire experience since being committed to action in Italy had been of stiff fighting, and even if they won locally, the end result was a withdrawal and commitment to yet another hot spot, or as one 26 *Panzer* veteran wrote ‘at the points were (sic) the main effort was made during the action...’¹⁰⁷ It is assessed that the normally combative 9 *Panzer*grenadier Regiment’s will to fight was lowered as a result of the combined effects of prolonged combat (including being subject to air attack), poor weather, and the surprise achieved by the New Zealanders.

German defensive tactics were based on strongpoints, which grouped men together closely, in a smaller number of bunkers or buildings. Therefore, when confronted by opposition, they tended to surrender en mass (sometimes after token resistance), such as the headquarters building and also as Corporal McCullough found when his section attacked one post and captured 30 Germans. The intention to surrender, like panic, could be infectious. While the larger strongpoints were no doubt stronger, for they contained a greater number of men and therefore weapons, they also ran a greater risk of larger scale surrender than smaller posts, just as Lieutenant O’Neill had surrendered his entire platoon at the Pinios Gorge. It was probably felt by German commanders planning the defence that larger posts would hold out for longer (in time for counterattack forces to arrive at least) and that greater numbers of men might have better morale and supervision than men positioned in twos and threes, but this did not eventuate. In fact, it would appear that it may have had the opposite effect to that intended.

In all, it can be said that at this point in time, 21 Battalion had accumulated a considerable amount of combat experience, enough even to blood the “red arses”, and was confident in its ability to conduct operations against the Germans, by day and night. From a sociological perspective, the men were capable of undertaking a physically tough

¹⁰⁶ Bergstorff, AHEC, AHEC, p.9.

¹⁰⁷ Bergstorff, AHEC, p.v.

night attack, and then withstanding three counterattacks, including one supported by flamethrower tanks. A significant finding from this battle is that the men of 21 Battalion were resilient enough to complete the attack and then to withstand and defeat counterattacks supported by combined arms. German will to fight was weakened by prolonged combat, poor weather and the effects of surprise. None of the counterattacks was properly pressed home, apart from the paratroopers. The New Zealander Division would soon face these formidable opponents at Monte Cassino.

Key combat effectiveness factors identified at Orsogna were the outcomes from combat experience by increasing self-reliance, resilience and group cohesion, as well as the positive effect on morale, and the will to fight from the presence of support arms, particularly tanks and artillery. It was also shown, from *9 Panzergrenadier Regiment's* experience, that continuous combat and the adverse effects of weather can degrade combat effectiveness, even of veteran troops.

Fog of War

Wireless helped keep the CO informed of 21 Battalion's progress at all stages in the attack and with the defence of the objective, as the excerpts referred to earlier demonstrate. Wireless reports mitigated the usual effects of uncertainty surrounding a unit commander accompanying an attack in conditions of limited visibility and poor communications. With wireless able to receive information and send instructions, a CO was now able to direct artillery and support weapons onto the more pressing targets, knowing which of his companies was under most pressure at the time and therefore which one was the priority. Now that he could receive regular and more wide-ranging situation reports, a CO was better able to prioritise and coordinate.

The third counterattack, mounted by elements of *6th Parachute Regiment* and panzers, was not successful and a subsequent German report indicates why this was so, 'The regiment, which is unfamiliar with the terrain and is not used to the strong and effective [Allied] artillery fire, [was] unable to carry forward the attack and to bring about a

success.’¹⁰⁸ What would have been a straight forward combined arms attack, with no significant terrain obstacles along the axis of assault, was made difficult by operating in unfamiliar terrain and with unrehearsed units, a result of the local forces having been destroyed and the strength of the New Zealand defence determining that a stronger force was required. This was Clausewitz’s classic friction, where even the simple becomes difficult.

The troops of *6 Parachute Regiment* had only come forward to the area at 2100 hours on the night of the counterattack, so there had been insufficient time and no light to undertake a ground reconnaissance or for thorough coordination. Commander *26 Panzer Division* led this counterattack.¹⁰⁹ This indicates how desperate the Germans were to open the lateral route to Orsogna from the east, but even this extreme measure did not result in success. A local counterattack, mounted by troops from the vicinity of the 21 Battalion objective may have been more successful, even if ad-hoc, for they would have had a better understanding of the terrain. Troops brought in from a different area of operations had no such situational awareness; and trying to operate in conjunction with elements from other formations would have only compounded the problem.

Combat occurs within a confusing environment; darkness, noise and other factors exacerbate this. This battle illustrates the positive benefit of wireless for passing information and building situational awareness, thereby reducing the fog of war. Unfamiliarity of terrain and other units was a cause of friction for the Germans, which could have been overcome by reconnaissance and rehearsals.

CONCLUSIONS

This battle, or series of battles really, was a significant test for 21 Battalion. When viewed against Platamon and Pinios Gorge, and even more so against Ruweisat Ridge, it shows how far these city soldiers had progressed in little more than two years. Even

¹⁰⁸ Bergstorff, AHEC, pp. 29- 30.

¹⁰⁹ Bergstorff, AHEC, p. 29.

though many of the troops were recent reinforcements, with little combat experience themselves, the collective experience gained at much cost from Platamon onwards was carried forward. The opening quote to this chapter, by Cody, drew the parallel between the situation at the Pinios Gorge and that faced during the Orsogna counterattacks. The *situation* the men faced both times was similar, but their *reaction* and the outcome was entirely different. Combat effectiveness factors identified by the analysis of the action at Orsogna are listed in Table 10.4.

Category	Combat Effectiveness factors identified
Operational Setting	<ul style="list-style-type: none"> • Decision on where to fight • Allocation of sufficient resources by higher headquarters • Level of experience of key staff • Accurate threat assessment • Level of higher headquarters oversight during the operation
Force Strength	<ul style="list-style-type: none"> • Bayonet strength • Use of additional assets assigned (as a combined arms) • Combat experience
Battlefield Effects	<ul style="list-style-type: none"> • Effect of light; night/ darkness. • Terrain effects on line of sight and covered approaches
Tactics, Doctrine and Training	<ul style="list-style-type: none"> • Simple plan • Combined arms • Surprise
Command and Leadership	<ul style="list-style-type: none"> • Ability to command (enhanced by wireless) • Situational awareness • Ability to coordinate support arms • Small group leadership
Sociological	<ul style="list-style-type: none"> • Combat experience, resulting in <ul style="list-style-type: none"> • resilience • self-reliance • Presence of support arms
Fog of War	<ul style="list-style-type: none"> • Unfamiliarity of units (with each other and/ or terrain) (friction) • Coordination between elements (Wireless for passage of information and maintenance of situational awareness- fog of war)

Table 10.4: Combat Effectiveness factors identified at Orsogna

This chapter has illustrated how the effective use of terrain, simple but sound tactics and solid unit cohesion meant that 21 Battalion was able to complete the attack and then endure three counterattacks. The Germans did not make best use of the terrain; they occupied it, but had not optimised their defences to defeat a night attack. This was a trend displayed by the Germans in the two Italy battles examined in this study- failure (at the tactical level anyway) to adopt flexible defensive tactics and make the necessary daily adjustments to take account of the differences in defending against attacks mounted by day or night. The Germans were not able to mount a coherent combined arms counterattack either, which meant that they could not drive 21 Battalion from the ground they had won. The veterans of 26 *Panzer* and 1st *Parachute* divisions were unable to break or repel the combat experienced and cohesive 21 Battalion.

The counterattacks were a particularly tough test, *for soldiers are typically exhausted and at their weakest physically and psychologically immediately after an attack.*¹¹⁰ Troops arrive on the recently secured objective, often in relative confusion (take 21 Battalion at Ruweisat Ridge as an example), without support weapons and support arms, with gaps in their command structure and low on ammunition. Counterattacks exploit all of this and it is a significant achievement that 21 Battalion stayed in place. Of course, it was aided by the New Zealand armour and artillery eventually- the combination of three arms- just as von Clausewitz identified.

¹¹⁰ Marshall, p. 194. Marshall noted that success in the attack could be disarming, causing the attackers to become lax and therefore vulnerable. Grossman notes that Napoleon believed that ‘the moment of greatest danger was the instant immediately after victory, and in saying so he demonstrated a remarkable understanding of how soldiers become physiologically and psychologically incapacitated by the parasympathetic backlash that occurs as soon as the momentum of the attack has halted and the soldier briefly believes himself to be safe. During this period of vulnerability a counterattack by fresh troops can have an effect completely out of proportion to the number of troops attacking.’ Grossman, pp. 69- 70.

CONCLUSION

'No general can accustom an army to war. Peacetime maneuvers are a feeble substitute for the real thing; but they can give an army an advantage over others whose training is confined to routine, mechanical drill.'

- von Clausewitz, *On War*¹

When asked why the New Zealand Division was such a good one, General Freyberg always attributed it to 'the quality of our men.'² In analysing the combat effectiveness of 21 Battalion through its performance in battle, this study has highlighted the fighting qualities of some of Freyberg's men, of his PBI at least. It has shown that although 21 Battalion was ineffective during its initial battles, over time it developed into a battleworthy unit, and became combat effective. This study has shown that "green" units, be they New Zealanders, Germans or Italians, are less likely to be combat effective, particularly during their initiation to combat if facing a more experienced opposition, as the battles analysed in this study in Greece and at Halfaya Pass and the Sangro have shown.

The aim of this study has been to analyse 21 Battalion's combat performance in the Second World War, using that experience along with the relevant literature on combat, to create a model that defines combat effectiveness and its associated factors for modern application. It has attempted to answer three key questions. They were:

- What is combat effectiveness and what factors contribute to achieving it?
- What factors determined whether 21 Battalion was combat effective or not in each of the battles analysed?
- Did 21 Battalion develop a particular style of fighting over time?

Combat effectiveness relates to success in battle, or in the modern context, completing an assigned mission or task, without unnecessary loss. The yardstick for being deemed "effective" in this study was mission accomplishment. Mission accomplishment was synonymous with victory, and ineffectiveness with defeat or

¹ von Clausewitz, *On War*, p. 141.

² Cody, *21 Battalion*, pp. v- vi.

failure. In the modern context however, mission accomplishment may not be measured by “victory,” for missions requiring a unit to clear or deter, rather than to destroy or capture, will not necessarily result in a victory in the traditional sense.

This study contends that to be combat effective, a unit must be able to complete its mission and remain in such a condition that it is able to undertake subsequent tasks flowing from the original assignment. For 21 Battalion, this caveat was usually the need to conduct exploitation tasks following an attack, or to defeat counterattacks. In defence, this included the requirement to counterattack to retain lost ground, to retire from one forward position to another in a pre-planned and tactically sound fashion, or to withdraw completely if the situation warranted it. It was not just a case of arriving on the objective, or withdrawing from a defensive position when about to be overwhelmed. A unit must remain a cohesive organisation with a functioning command structure in place, even after an objective is gained, to be deemed combat effective, even if operating over extended distances in a contemporary non-linear battlefield.

This benchmark is not too high, for as General Sir Rupert Smith was quoted in Chapter 1 of this study, one must engage in combat in such a manner ‘so as not to lose the force.’³ This implies a considered approach rather than one which results in consuming a unit just to accomplish the mission. At Ruweisat Ridge, 21 Battalion was deemed not combat effective, despite reaching its objective, for the unit was no longer a cohesive one. Of the battles examined in this thesis, the two which most clearly demonstrate 21 Battalion’s ability to conduct subsequent operations, were Miteiriya Ridge and Orsogna. In both cases, having secured their designated objectives, 21 Battalion showed that it was still in a condition where it was able to exploit beyond the objective (Miteiriya Ridge) and defeat counterattacks (Orsogna). It was combat effective.

The definition of combat effectiveness developed by this study is: the ability of a unit to achieve its assigned mission and still be in a position to complete subsequent tasks flowing from the original assignment.

³ Smith, p. 295.

The analysis of eight of 21 Battalions battles in the course of this study, irrespective of whether the unit was victorious or not, has generated 69 factors within the seven categories of the combat effectiveness model. Each of these factors contributed to the outcome of the battles examined, although they were not always identified in all battles, or even more than once. The factors identified, and listed below in Table 11.1, are a collation of those provided in similar tables towards the conclusion of each battle analysis chapter.

It is stressed that the factors listed below are those identified from the eight battles analysed, as exhibited by 21 Battalion, their opposition, or by the superior headquarters of either combatant; they are *not* a re-packaging of the 73 variables published by Dupuy et al which were introduced in Chapter 1 (and which are listed in Appendix C). Dupuy listed, for example, leadership, as one of his variables. He did not, however, elucidate on this, whereas this study has found through 21 Battalion's experience of combat, that leadership at unit level includes experience of the commander, drive, forward command, situational awareness and risk taking as just some aspects. The Operational Setting, particularly as it relates to threat assessment, mission assignment, higher level headquarters planning and oversight were overlooked by Dupuy. He did not include "situational leadership" of subordinates, nor the will to fight or impact of cohesion. It is argued that this is largely because he was analysing data from significantly larger organisations.

	Operational Setting
1	Accuracy of threat assessment
2	Decision on how and where to fight
3	Allocation of sufficient resources by higher headquarters
4	Suitability of mission assigned to subordinate unit
5	Level of higher headquarters support and oversight during an operation
6	Passage of information between higher headquarters and subordinate unit
7	Level of experience of key staff in headquarters
8	Acquisition of intelligence and passage of that information
9	Higher headquarters planning and synchronisation
10	Direction and allocation of time for training and rehearsals
	Force Strength
11	Bayonet strength
12	Posture- defence, attacking, in the open
13	Effective use of organic firepower
14	Capability overmatch
15	Additional firepower assigned (or in support); armour, artillery, anti-tank and machineguns (primarily)

16	Combat experience (of the unit)
	Tactics, Doctrine and Training
17	Sufficient time and resources to prepare
18	Passive or active nature (of defence)
19	Production of high volumes of fire
20	Use of envelopment
21	Reconnaissance undertaken
22	Use of combined arms
23	Adequate and suitable dispositions
24	Denial of obstacles
25	Suppression of enemy fire
26	Correct interpretation of orders
27	Adequate control measures employed
28	Simple plan
29	Training and derivation of standardised drills
30	Realistic rehearsals conducted
31	Surprise achieved
32	Use of fire and manoeuvre
33	Security maintained
	Command and Leadership
34	Combat experience of commander
35	Drive of the commander and key subordinate commanders ⁴
36	Exercise of forward command
37	Ability to exercise command (telephone, runner, wireless)
38	Situational awareness and location of commander
39	Willingness to accept risk
40	Competence and acceptability of commander and key leaders
41	Influence of commander (on subordinates and higher headquarters)
42	Responsibility of junior commanders
43	Situational Leadership: Willingness of subordinates to step in (lead) ⁵
44	Ability to coordinate support arms
45	Small group leadership
	Sociological
46	Morale
47	Small group cohesion
48	Will to fight
49	Level of combat stress or fear
50	Fatigue, hunger, food and water, rest
51	Interaction between officers and men
52	Presence of “fighters”
53	Baptism of fire
54	Presence of veterans
55	Combat experience: resilience and self-reliance
56	Presence of support arms
	Battlefield Effects
57	Occupation of suitable terrain
58	Terrain effects on mobility
59	Terrain effects on line of sight, fields of fire, formations and/ or control
60	Light and weather
	Fog of War
61	Willingness to undertake action on own initiative

⁴ In this context, “drive” is interpreted as the vigour and energy the commander displays to overcome fears, doubts, delays and friction in order to complete the mission.

⁵ The use of the term “Situational Leadership” is intended to indicate those situations where individuals assume leadership roles and use their initiative, rather than the traditional use from the 1970s and 1980s developed by Hershey and Blanchard.

62	Communications failure
63	Coordination between elements
64	Risk taking
65	Misinterpretation (of orders)
66	Navigation/ situational awareness
67	Equipment failure (or loss of)
68	Animosity (between Allies)
69	Unfamiliarity (of units/ individuals, with terrain, weapons etc)

Table 11.1: Combat effectiveness factors identified by this study

The factors identified in Table 11.1 each contributed to the outcome of one or more of the battles examined, albeit with varying effect, by either contributing to or detracting from 21 Battalion's combat effectiveness. Indeed, these same factors also applied, in varying combinations, to 21 Battalion's opposition in each battle. Even though the factors are listed 1-69, they have not been ranked in order of significance, even within categories. There was no super-factor identified in this study. Rather, there were combinations of factors that interacted to determine the result, as demonstrated in each battle analysis chapter.

The framework model developed in Chapter 1, on the basis of the literature reviewed, provided a structure for the battle analysis chapters and for the derivation of combat effectiveness factors. The revised model at Figure 11.1 is similar, however, it has become clear from the battle analyses that the "boundaries" of the combat effectiveness categories are permeable and interact- hence the broken lines- and that each combatants combat power is altered by their own fog of war. The factors identified in each category in Table 11.1 above are a part of the corresponding category in the combat effectiveness model at Figure 11.1 below.

Further, certain key activities or processes, if undertaken, enhance combat effectiveness. If they do not take place, then combat effectiveness is potentially degraded. These processes are identified as intelligence, planning and training. They are shown feeding into the categories of each side. Arguably, if they are undertaken, they each also reduce, to some degree, the fog of war.

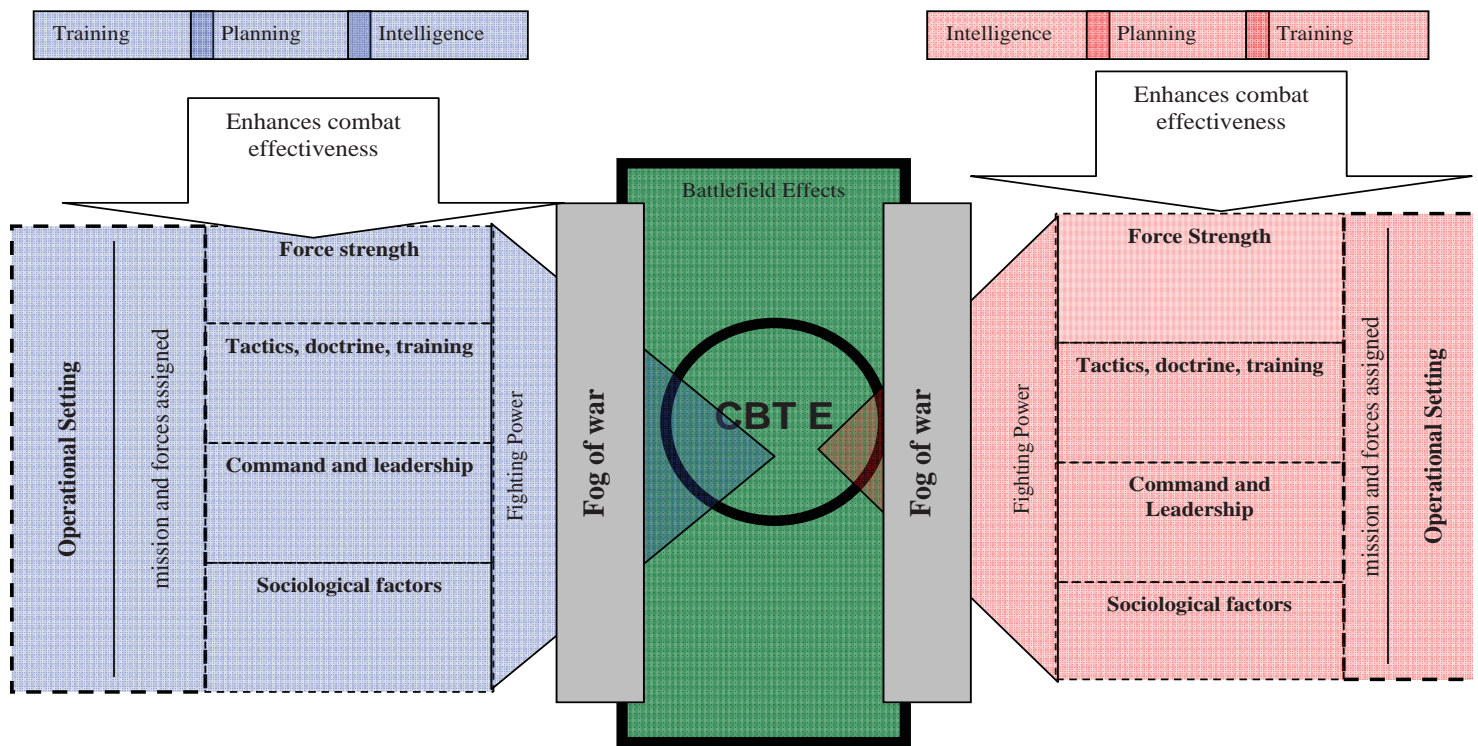


Figure 11.1: A Model of Combat Effectiveness

Those factors that determined whether 21 Battalion was combat effective or not in the battles analysed, were listed at the end of each chapter. The eight battles illustrated the impact that higher headquarters decisions and activities have on combat effectiveness at battalion level. 21 Battalion's earliest battles were characterised by the inexperience of the formation headquarters above them, from brigade level up to the ad-hoc Anzac corps headquarters. Headquarters' failures in 21 Battalions first four encounters, to acquire intelligence, produce and disseminate accurate threat assessments, allocate sufficient resources and to provide suitable oversight during an operation, did not create the optimal conditions for 21 Battalion to achieve its assigned mission. The headquarters staffs themselves were inexperienced. The New Zealand Division headquarters (and 21 Battalion) did not demonstrate a professional approach until Miteiriya Ridge, after they had gained considerable experience, most notably (within the battles examined within this study), from Ruweisat Ridge. The improvement in headquarters' performance, planning and oversight coincided, from this study's perspective, with the arrival of General Montgomery. With his penchant for detailed

planning, Montgomery set the tone for thorough training, derivation of standard drills, conduct of realistic rehearsals and the passage of information and intent down to the lowest levels.⁶ The cascading effect of this directive greatly improved 21 Battalion's combat effectiveness. Superior commanders and their staffs therefore have a crucial role in shaping the conditions that allow a subordinate unit to be combat effective. It stands to reason that headquarters staffs must be skilled in planning, assessing the threat and monitoring battles. They must focus on supporting units and providing oversight, not just preparing a written or verbal order.

In all eight battles analysed, combat effectiveness was never determined just by relative infantry bayonet strengths. The battles of Pinios Gorge and Orsogna both demonstrated the superior strength, a capability overmatch really, of panzers. In neither case were the New Zealanders deployed (Pinios Gorge) or equipped (Orsogna) to deal with armour. Deployment and posture were both shown in all battles to alter the strength of one combatant relative to the other. 21 Battalion's penny-packeting of infantry weakened its overall strength at the Pinios Gorge, whereas the supposed additional strength gained from a defensive posture was overcome from Ruweisat Ridge onwards because the New Zealanders chose to attack at night. Tactics employed and battlefield conditions (terrain and light) therefore altered the relative strengths of combatants. The battle of Halfaya Pass showed that under certain conditions an attacker could overcome defenders with an unfavourable ratio as high as 47:1. Clearly, the New Zealanders' bold and aggressive actions, coupled with surprise and low Italian will to fight afforded the attackers greater relative strength. Although force or relative strengths were based on numbers of men, weapons and tanks, it was actually the ability (or threat) to employ that firepower which was the true measure of strength. 21 Battalion's small arms fire effectively halted the *2 Motorcycle Battalion* attack at Platamon and 21 Battalion was blocked and decisively engaged by firepower at Bir Ghirba. Terrain, light, vegetation, weather were all shown, in different settings, to improve or reduce the ability to employ firepower, and thus altered the relative strength of combatants. The ability to generate firepower, or to reduce that of the enemy's, were shown to be important determinants of combat effectiveness.

⁶ Fennell, p. 233.

21 Battalion's tactical options were limited at Platamon; it was ordered to defend from a specific location, was reduced to a static defence through removal of all of its transport, and was not reinforced with tanks or anti-tank guns. It did have, however, the advantage of defending on suitable terrain. It, therefore, had to rely on basic defensive techniques, and these proved adequate until the unit was threatened with envelopment. Constricted or complex terrain would appear to offer the best chance for an unsupported infantry battalion to be combat effective. Platamon, Halfaya Pass and the Sangro were all defended by novice units from New Zealand, Italy and Germany respectively. As inexperienced units, they all failed to employ adequate security measures, properly deny obstacles, conduct planned tactical withdrawals or make local counterattacks. Failure to carry out these standard activities, in order to seize and retain the initiative, rather than remaining passive and reactive, made novice units particularly vulnerable to more combat experienced opposition. Surprise, bold action along with fire and manoeuvre at platoon and section level, proved to be sound tactics, most notably at Halfaya Pass.

Training, passage of information and realistic rehearsals were also shown in the analysis of 21 Battalion's performance at Miteiriya Ridge, to be key enablers of combat effectiveness. Not only did these activities develop coordination, they also improved trust and will to fight within the unit, as 21 Battalion's performance at Miteiriya Ridge attests. Furthermore, as everyone understood the plan, subordinates were better able to carry on in place of superiors who became casualties.

Colonel Trevor Dupuy argued leadership was 'probably' a key determinant of combat effectiveness, alongside training.⁷ Dupuy listed leadership as one of his 73 factors, but he did not specify what leadership, a broad term, actually consisted of. The analysis of eight of 21 Battalion's battles has shown that leadership is a critical function of commanders, their subordinates, and by those individuals irrespective of rank, who exercise what has been termed in this study, "situational leadership." The CO is without doubt pivotal to the effective performance of an infantry battalion in combat. This study finds that leadership at battalion level is about *who* the leader is (the personality type and their experience), *what* they do during the battle and *how* they

⁷ Dupuy, *Numbers, Predictions and War*, p. 39.

are able to exercise command. Relevant, usually recent, combat experience is important; Macky and both Allens did not have this, as their performance during independent actions in the first four of 21 Battalion's battles showed. No amount of First World War experience or inter-war Territorial service was able to prepare them adequately for the trial of "modern" combat. Being first to confront a new foe with superior fighting power was a particular trial for Macky. The first three 21 Battalion COs may have performed better had they been operating within a close brigade or division setting; however, independent command required a particular level of competence because there was no oversight available. By the time Harding and McElroy took command, they (and the unit) had accumulated considerable combat experience. They also had the added benefit of thorough planning and training for Miteiriya Ridge.

Balck and Harding between them exhibited the drive necessary for a commander to make his unit combat effective. Both had combat experience, both exercised forward command and both were willing to accept risk. Balck was an energetic commander, who drove his troops on, to the point of exhaustion in some cases. He had the advantage of having a superior commander who assigned him considerable forces and complete latitude on how to get to Larisa. At Platamon, Balck intervened personally to recover the situation after *2 Motorcycle Battalion's* abortive attack and to re-cast the operation. His action is in contrast to Allen. At Bir Ghirba, Allen let the battle unfold, to the point his unit was decisively engaged, and only able to withdraw once night had fallen. Harding, like Balck, was willing to accept risk and conducted the attack at Halfaya Pass without the support of artillery and heavy weapons. Based upon a simple plan that was able to be amended on the move, 21 Battalion's attack at Halfaya Pass overcame a significantly larger force and demonstrated that surprise and aggressive action are key determinants of combat effectiveness.

In order to achieve the level of control required, a commander had to have situational awareness. This required a commander to locate himself forward, despite the risks, although as has been shown, the greater allocation of radios down to lower levels as the war progressed meant a CO obtained better situational awareness by being close to the wireless, rather than moving with forward elements on the battlefield. Macky had good situational awareness at Platamon with his observation post located on the

ridge, however he was completely unaware of events (other than *6 Mountain Division's* movement across the Pinios River) because of his poor choice for the location of his headquarters and lack of internal communications at the Pinios Gorge. As a result, he was unable to exert any control over 21 Battalion at that battle. As the war progressed and radios became more widely distributed, the ability to sift through information, determine the most urgent needs and allocate tasks and fire, became a higher priority for a CO than following behind the forward companies, ready to commit the reserve or take charge on the objective.

The present research has identified three significant trends related to command. At the start of the war, COs were older, with pre-war service, some dating as far back as the First World War. The physical and mental strain of infantry combat proved to be so much that the average age of COs reduced as the war progressed from 40 down to 34. At age 49 when in command of 21 Battalion, Macky would have found the physical strain enormous, and this no doubt contributed to the psychological pressure he faced at the Pinios Gorge. That said, he managed to escape from Greece, which was no mean feat. The second trend was the reduction in level of control during combat. The shift to night attacks devolved responsibility down to section commander level, particularly after arrival in Italy, where the broken terrain forced the separation of platoons and companies, so that junior commanders had more responsibility. The corporal section commander, with his small group of men and rapid firing Bren gun was, as a result, an important leader. Units were increasingly reliant upon junior officers and corporals to achieve results; higher level commanders, could not be everywhere to supervise, direct and motivate. The third trend identified was the increase in situational leadership evident from Ruweisat Ridge onwards. Embodying the German doctrine for initiative to be shown at the lowest levels, junior members of 21 Battalion took action when the situation demanded.⁸ Fighters like McElroy, Lord and Ellery, ensured that the battalion's operations did not stall in the face of the enemy.

Much has been written about morale and group cohesion and their impact on determining the outcome of battle, or a unit's combat effectiveness. Clausewitz

⁸ Condell and Zabecki, p. 18

believed ‘tough realistic training which closely simulates the stresses of combat serves to mitigate the psychological impact.’⁹ Although 21 Battalion did not have the advantage of “tough realistic training” prior to its baptism of fire in Greece, it did exhibit strong small group cohesion at Platamon. It is argued that this was because of the extended period the men had had together since the battalion formed in 1940, and this allowed sufficient bonds to develop for the men to give a good account of themselves against the veterans of *Battlegroup 2*. 21 Battalion’s performance at Platamon showed small group cohesion is a key determinant of combat effectiveness. New Zealand’s practice of reinforcement drafts meant the entire battalion was never replaced, even after the huge losses suffered in Greece. Rather, replacements to 21 Battalion came into a unit where there were veterans able to pass on their knowledge and experience, and thus avoid the unit reverting to novice status. This was demonstrated at the Sangro, where the presence of veterans helped maintain the effectiveness of the unit during its first action in Italy. The Sangro battle was the best preparation 21 Battalion could have had for Orsogna.

Battlefield effects are a significant determinant of combat effectiveness. Terrain, vegetation, light and weather all affected lines of sight and fire, altered the effect of weapons and impacted on manoeuvre. Nowhere were the effects of terrain on movement and firepower more clearly demonstrated than at Platamon where broken ground blocked Balck’s panzers, and at Bir Ghirba, where flat open ground with no cover exposed 21 Battalion to long range effective fire from the defence. Terrain also served to break up combined arms, particularly in Italy, where rivers and ridges separated 21 Battalion from its support weapons and tanks. Occupation of suitable terrain aided combat effectiveness, but as was shown at the Pinios Gorge and Halfaya Pass, Key Terrain and any obstacles forward of it still had to be defended, or the defence would eventually be overcome. Light and darkness both altered observation and fire. Bir Ghirba demonstrated the full effect of defender’s firepower in full light, whereas Ruweisat Ridge and the night attacks that followed showed the effect of enemy fire could be reduced through attacking in the hours of darkness.

⁹ Observation made by Robert W. Madden, ‘Living on the Edge: Building Cohesion and the Will to Win’, in Christopher D. Kolenda (ed.), *Leadership: The Warrior’s Art*, Carlisle: The Army War College Foundation Press, 2001, p. 62.

Carl von Clausewitz identified friction and the fog of war as random factors which impacted on the conduct of battle and therefore on combat effectiveness.¹⁰ Luck, or chance, were shown in this study to be fog of war factors as well. In most cases, however, *bold commanders created their own luck*. For instance, Balck *chose* to risk panzers wading the Pinios River. Harding *elected* to conduct his attack at Halfaya Pass with just two companies and no external support. In both instances favourable results were achieved. Noticeably, Balck pressed on even though he lost two panzers in the attempt. Harding was supported further by Axis miscommunication during the withdrawal through Halfaya Pass, the unilateral decision by 90th Light to leave the defence to the Italians, and the lax security measures of the defence. The fog of war surrounding commanders, particularly in night operations or in dispersed locations, was overcome considerably with the widespread use of wireless after Miteiriya Ridge. Information was now able to be gathered and passed quickly. One is left wondering whether this wireless traffic led to information overload, and if it resulted in subordinate commanders waiting for instructions rather than in using their initiative. On balance, the increased flow of information and improvement in battlefield coordination provided by wireless was a positive development.

Miteiriya Ridge stands out as an operation where, at battalion level at least, much of the fog of war was stripped away. Training was comprehensive, rehearsals were thorough and realistic, information was passed down to the lowest ranks. These actions, among a host of others, reduced the fog of war considerably. It can never be eliminated completely, however. Just as von Moltke stated that no plan survives contact with the enemy, one could also argue that no combat operation can avoid friction or the fog of war entirely. They must be taken into account. The keys, it would seem from the battles analysed in this study, are to train well, have flexible plans, take calculated risk and to communicate key information as widely as possible within the bounds of operational security.

Although the 69 combat effectiveness factors identified in this study were identified in a systematic and consistent manner from each of the eight battles analysed, it is clear that they are inter-dependent. That is why *Infantry in Battle* concluded 'The Art

¹⁰ von Clausewitz, *On War*, pp. 138- 140.

of War has no traffic with rules, for the infinitely varied circumstances and conditions of combat never produce exactly the same situation twice.’¹¹ Infantry combat produces endless permutations due to variations in terrain, tactics, weather and weapons.¹² It is little wonder that it took 21 Battalion 18 months, from its baptism of fire in Greece in April 1941 where it was a novice unit, to become battleworthy. The evidence has shown that 21 Battalion deserved this accolade from General Freyberg.¹³ It has also totally refuted the sweeping statement of General Sir David Fraser that townsmen could not possibly make good soldiers.¹⁴

It is clear that 21 Battalion’s fighting style evolved over the course of the eight battles analysed in this study. Most notably, they progressed from being novice to veteran, with all the attendant improvements in combat effectiveness already discussed. Despite the increased use of combined arms from Miteiriya ridge onwards, 21 Battalion still had to rely on its rifle companies, for the minefields in North Africa and the terrain in Italy separated the unit from its support weapons and tanks during the actual assaults. Once an objective was secured, the defence became increasingly a combined arms operation, involving infantry, tanks and artillery.

Other developments in fighting style included the change to night operations, a preference to use four rather than three rifle companies in the attack (allowing for phasing and designation of a reserve) and increased reliance on corporals and junior officers as the dark and complex terrain reduced the span of control of COs and company commanders. Fire and movement became increasingly used; with light machineguns providing a firebase to support a close range charge by riflemen. Night operations, in all but the flattest terrain, required junior leaders to exercise initiative in order to maintain attack momentum. As the level of complexity and uncertainty rose, so the need to devolve responsibility to lower levels increased.

Wireless, as previously mentioned, allowed information to be passed, increasing the overall situational awareness of commanders and improving battlefield coordination. Information could be passed at all levels from platoon to brigade, allowing

¹¹ Chapter 1: Rules, *Infantry in Battle*, Washington D.C, p.1.

¹² Smith, pp. 13- 14.

¹³ Cody, *21 Battalion*, p. v.

¹⁴ Fraser, p. 98.

unprecedented situational awareness, and evolving an infantry battalion CO's role towards battlefield coordination, rather than local leadership.

Some general observations can be made about infantry combat from the eight battles analysed. Infantry combat was (and still is) a physical and exhausting undertaking, whether that was wading the Sangro River ahead of an attack or digging in after completing an assault. It was terrifying, noisy, dangerous and brutal. In all cases (apart from Greece where their support weapons were located with them), 21 Battalion had to be capable of assaulting with its riflemen only, and with artillery support usually, until such time as tanks and support weapons could be brought forward. Although combined arms were shown to be superior to infantry only assaults and defence, terrain frustrated New Zealand attempts to achieve this. Standard drills based on fire and manoeuvre, which usually resulted in riflemen charging the enemy at close quarters, covered by fire from their own section or platoon's Bren gun, were the most common means of destroying the enemy. This requirement reinforced the need to concentrate on section and platoon tactics in training, something that the unit overlooked in New Zealand with due to Macky's decision to undertake company and battalion level activities. Surprise and boldness were combat multipliers, even by day. Battles were confusing affairs, the degree to which commanders showed drive and subordinates used their initiative largely determined if the unit was combat effective or not.

Although the battles examined in this study occurred 70 years ago, the combat effectiveness model developed and factors identified are clearly applicable to the modern setting. Battlefield Effects, for example, may include human terrain factors nowadays, however, the category is still relevant, as people (non-combatants) and buildings will just as surely impede lines of movement, observation and fire as rivers, ridges and darkness did for 21 Battalion and their opponents. Those who would rely on superior numbers, better technology or information dominance to win,¹⁵ should not underestimate the positive (and negative) impact of command, leadership and sociological factors on a unit's combat effectiveness. The fact that it took 21 Battalion some time to develop into a combat effective unit has implications for the combat

¹⁵ McManus, pp. 2-6.

effectiveness of contemporary New Zealand battalions committed to a future conflict, for deployment lengths and for reinforcement and rotation policies.

As New Zealand maintains a regular and professional Army, time to gain final proficiency should be less and the chances of being combat effective more, than was the case with 21 Battalion and the infantry units of the New Zealand Division. It would seem, therefore, that there is a place for hard realistic training and also for education, especially in past operations and campaigns, to ensure that New Zealand troops are prepared for the certainties, and uncertainties, of modern infantry combat.

This study has identified 69 factors which, at various points, combined to determine whether 21 Battalion was combat effective or not. There was no super factor identified, although this study supports Dupuy's assertion, with a slight variation, that leadership, training and morale (exhibited as strong will to fight), are definitely significant determinants of combat effectiveness, irrespective of the relative strengths of the combatants.¹⁶ The conventional infantry battles fought by 21 Battalion between April 1941 and December 1943 have provided the lessons from operational experience that the White Paper stated were required to be applied in order to ensure the combat effectiveness of New Zealand land forces committed to future conflict. These lessons are more than the "feeble substitute" noted by von Clausewitz in the quote at the head of this Conclusion. Rather, the model derived from 21 Battalion's experience will promote the development of Infantry unit combat effectiveness and ensure that Government policy requirements are met. One constant will remain; all future infantry engagements will be battles to win.

¹⁶ Dupuy, *Numbers, Predictions and War*, p. 39.

THE MEN OF 21 BATTALION

Data from the Sample of Original Members

The 100 man sample of 21 Battalion's original members generated 39 different pre-enlistment occupations, which are listed in Table A1. The most common occupations were labourer (31) and driver (13). Only 11% of the sample had rural occupations: farmers (7), bushman (1), cheesemaker (1) and timber workers (2). The majority (89%) of 21 Battalion was urban. White collar workers amongst the 89% of the sample were represented by accountants (2), clerks (5), a journalist (1) and a secretary (1), representing 9 %. The two accountants, the bank clerk and the journalist were all officers. The rank and file were therefore largely urban blue collar workers, representing 80% of the sample. The sample only contained one member of the Permanent Force.¹ 21 Battalion was therefore a "city" battalion, a unit of "townsmen."

Occupation	Number	Occupation	Number
Accountant	2	Grocer	2
Armourer	1	Journalist	1
Baker	1	Labourer	31
Blacksmith	1	Linesman	1
Bridge Builder	1	Motorbody Builder	1
Builder	1	Motor Mechanic	2
Bushman	1	Nurseryman	1
Butcher	1	NZ Permanent Forces	1
Carrier	2	Painter	1
Cement Worker	1	Plasterer	1
Cheesemaker	1	Printer	1
Clerk etc	5	Railway Porter	1
Contractor	2	Secretary	1
Cook	1	Storeman	4
Driver, various	13	Student	1
Farmer, various	7	Timber Worker	2
Filer	1	Upholsterer	1
Fireman	1	Wine and Spirit Merchant	1
Fitter	1	Woodworker	1
Ganger	1		

Table A1: Pre-enlistment occupations

Enlistment towns for the sample are shown in Table A2. Although 21 Battalion drew the majority of its manpower from the wider Auckland province, four members were

¹ He was the unit RSM, WO1 Ray Barnes.

from outside it. RSM Barnes, a member of the Permanent Force, was from Trentham. The armourer was also from Trentham; he had served previously in the 1st Auckland Regiment which may have been the reason he was assigned to 21 Battalion.² Two soldiers came from Taranaki indicating some members of the battalion were drawn from out of region.³ It is not possible to determine whether this was because they stated a preference for an Auckland battalion, had some association with the Auckland province, or whether it was a deliberate manpower assignment by the authorities.

Enlistment Town	Number	Province
Auckland	30	Auckland
Cambridge	3	Waikato
Dargaville	7	North Auckland
Hamilton	12	Waikato
Hawera	1	Taranaki
Huntly	1	Waikato
Kaikohe	3	North Auckland
Morrinsville	7	Waikato
New Plymouth	1	Taranaki
Ngaruawahia	2	Waikato
Paeroa	4	Waikato
Rotorua	11	Hauraki
Te Awamutu	2	Waikato
Trentham	2	Wellington
Warkworth	1	North Auckland
Whakatane	1	Hauraki
Whangerei	12	North Auckland

Table A2: Enlistment towns

The figures combined on a provincial basis in Table A3 below, demonstrate 21 Battalion could have manned its companies on a provincial basis, except for B Company, had it chosen to.

Province	% of Sample	Rifle Company
Auckland	30	A Company
Hauraki	12	B Company
North Auckland	23	C Company
Waikato	31	D Company
Out of Region	4	

Table A3: Provincial proportions

² Staff Sergeant Stanley Cronin.

³ Private Martin Barr (New Plymouth) and Corporal Harold Bird (Hawera).

The bulk of the battalion was aged between 21 and 39 on enlistment in 1940 as Table A4 shows. Only two Privates were outside that range.⁴ Both survived the war, and by coincidence, they were both taken prisoner.

Age	20	21	22	23	24		20- 24
Number	1	11	6	9	7		34
Age	25	26	27	28	29		25-29
Number	11	4	5	7	10		37
Age	30	31	32	33	34		30- 34
Number	4	5	8	4	4		24
Age	35	36	37	38	39		35-39
Number	2	1	0	0	1		4
Age	40	41	42	43	44		40-44
Number	0	0	0	0	1		1

Table A4: Age on Enlistment

The majority of the sample were single men (Table A5). Only 20 were married. The married men tended to be over 24 years old (only two were younger). Another characteristic of the married men, and acknowledging the small sample size, was a much higher proportion of them received gallantry awards than their single comrades.

Marital Status	Number
Married	20
Single	78
Widower	1
Divorced	1

Table A5: Marital Status

Almost half the battalion had served in the military before enlistment in 1940 for service with NZEF (Table A6), although 13 of them had less than one years service in the Territorial Force. Of the 51 in the sample who did *not* have any previous service, only four deployed as NCOs and two as officers, which indicates the battalion's officers and NCOs were almost exclusively made up of those with some previous military experience. The two officers in the sample without previous service were journalist Second Lieutenant William Butland and bank clerk Second Lieutenant Murray Chinchin. Private Edward Phillips, who had served in the First World War with the Auckland Regiment, was the only member of the sample with previous active

⁴ Private Christopher Kelly (age 20) and Private Herbert Clement (age 44).

service, suggesting the overall number of veterans within 21 Battalion was small. As stated in Chapter 2, the small number of First World War veterans were mostly confined to the battalion's senior officers.

Previous Military Service	Number
None	51
Cadets only	1
1 year or less Territorial Force Service	13
More than 1 year Territorial Force Service	31
Territorial Force Service with a foreign army	2
First World War experience	1
NZ Permanent Force	1

Table A6: Previous military service

The final finding in relation to the men in the sample is that twenty of the men were wounded in action. Of that number, three were wounded twice, one was wounded three times and one (Lieutenant Colonel McElroy⁵) was wounded four times. The twenty four wounded men were awarded between them four gallantry medals and one MID; the remaining seventy six men in the sample received just six medals and one MID. There is a definite correlation between wounding and bravery; acts of courage in the face of the enemy put the soldier at far greater risk of wounding or death.

Before finishing with the sample group, it is intended to disclose the fate, generally, of the hundred men in the sample (Table A7).

Sample Outcome	Number
Accidentally Killed	1
Died on Active Service	1
Died of Wounds	3
Killed in Action	13
Missing in Action	1
Transferred Out	4
Medically discharged	4
Prisoner of War	39
Discharged on completion of service	34

Table A.7 Outcomes of 21 Battalion sample

Nineteen men in the sample were killed, listed as missing or died. One of the nineteen, Private Earnest Bevington, was accidentally killed while tampering with an

⁵ Cody, *21 Battalion*, p. 57, fn 34.

anti-tank mine in A Company's accommodation area in November 1941. Eight men left the unit, either through being transferred or medically discharged. Three of the four who were medically discharged were repatriated from the United Kingdom, before they got to Egypt, suggesting they were possibly marginal health cases who should never have been enlisted in the first place. Thirty nine men became prisoners, and ultimately survived, despite the deprivation they endured while in captivity.⁶ One PW was repatriated to New Zealand and one other to Switzerland. Only two PWs in the sample died in captivity. The number of prisoners in the sample is high, as the originals saw service in Greece and Crete, where 2 NZEF had large numbers of men captured. Thirty four men were discharged on completion of their service, having avoided death or capture. These survivors generally served from three to four years overseas, whereas the PWs, except for those who died or were repatriated, were overseas for more than five years.

Commanding Officers

The key appointment within the battalion was the CO. Roger McElwain observed that in comparison to higher levels of command:

battalion command is more personal in nature. Commanding officers not only exercise command and undertake missions and tasks but also develop a very personal affinity and understanding of their soldiers.⁷

The background and experience 21 Battalion's COs is shown in Table A8. Only periods of command for greater than three weeks have been listed. Most COs feature in battle analysis chapters where their influence is evident.

Between 1940 and 1945, 21 Battalion had seven commanding officers. Lieutenant Colonel John Thodey served as CO of the unit twice. The average command tenure was nine and a half months (if Thodey's two tours are aggregated to nine months).

⁶ 21 Battalion veteran Allan Yeoman provides an interesting account of the unit's formation and battles in Greece as well as his time as a prisoner of war. Allan Yeoman, *The Long Road to Freedom*, Auckland: Random Century New Zealand Ltd, 1991.

⁷ Roger McElwain, 'Commanding Officers of the Infantry Battalions of 2nd New Zealand Division', in Glyn Harper and Joel Hayward (Eds.), *Born to Lead? Portraits of New Zealand Commanders*, Auckland: Exisle Publishing Limited, 2003, p.178.

Lieutenant Colonels John (J.M.) and Sam (S.F.) Allen were both killed in action, highlighting the risks associated with command at battalion level. 21 Battalion COs were exclusively pre-war white collar professionals or farmers. This reflects the occupation trends of original 2nd and 3rd Echelon officers.⁸ All officers who commanded 21 Battalion were infantry, except for S.F. Allen; the effect this had on the battalion's combat effectiveness at Ruweisat Ridge is discussed in Chapter 6.

Name	Dates in Command 21 Battalion	Tenure (months)	Pre-war occupation	Age on assuming command	Appointment in April 41 (Greece campaign)
N.L. Macky ⁹	12 Jan 40- 17 May 41 ¹⁰	16	Solicitor	49	CO 21 Battalion
J.M. Allen ¹¹	17 May 41- 28 Nov 41	6 (KIA)	Farmer and Member of Parliament (Hauraki)	39	CO Infantry Training Unit
S.F. Allen ¹²	7 Dec 41- 15 Jul 42	7 (KIA)	Regular soldier	44	CO 2 NZEF Signals
R.W. Harding ¹³	18 Jul 42- 4 Jun 43	11	Farmer	45	unknown
H.M. McElroy ¹⁴	4 Jun 43- 21 Jun 44	12	Accountant	32	2IC C Company 21 Battalion
J.I. Thodey ¹⁵	9 Jul- 30 Oct 44	3	Insurance Clerk	34	19 Battalion Mortar Pl Comd
E.A.	30 Oct 44- 25	7	Bank Official	37	Pl Comd 23

⁸ Occupational Return of Officers- Including those overseas and those in camp- Second and Third Echelons. Nom Rolls- civ occupations of 2 NZEF. AD 1 349/1/4 Box 1417, NA. The largest occupation groups were clerks (81), farmers (73), accountants (41), solicitors and civil servants (29 each), school teachers (28), and bank officers (21).

⁹ Cody, *21 Battalion*, p. 2, fn 1.

¹⁰ Macky's official "command" ended with the official appointment of J.M. Allen on 17 May. However, he had for all intents and purposes lost command of the unit when it broke up on 18 April 1941 at the battle of Pinios Gorge. Thereafter, Macky escaped Greece in the company of a group of officers and soldiers, eventually reaching Crete. By then J.M. Allen had been appointed to command. Colonel Macky provides an interesting account of his escape from Greece to Crete in N.L. Macky, "21st Auckland battalion in Crete", 2004.464 Memoirs of 20053 Lieutenant- Colonel Neil Lloyd Macky, Commander, 21 Battalion, 2 NZEF, KMARL, pp. 33- 44.

¹¹ Cody, *21 Battalion*, p. 83, fn 10.

¹² Cody, *21 Battalion*, p. 142, fn 1.

¹³ Cody, *21 Battalion*, p. 2, fn 5.

¹⁴ Cody, *21 Battalion*, p. 57, fn 34.

¹⁵ 5414 John Ingle Thodey, PF, NZDF Archives.

McPhail ¹⁶	May 45				Battalion
J.I.	25 May 45- 2	6	Insurance	35	
Thodey ¹⁷	Dec 45		Clerk		

Table A8: Commanding Officers 21 Battalion

The average age of COs was 40, with the two First World War veterans (Macky and Harding) being the oldest. There was a decline in age of COs as the war progressed, which was consistent with other New Zealand infantry battalions and with the Australian experience. Garth Pratten assessed credible battalion command as ‘the domain of the fit and the young.’¹⁸ The average age of the first four 21 Battalion COs was 44. From McElroy onwards there was a ten year decline in average age, with the last four COs (counting Thodey twice, at different ages) averaging 34. McElroy’s military experience leading to eventual command of 21 Battalion at age 32 consisted of Territorial service from 1928, a period as a company commander with the Battalion in Greece, then as the battalion’s Second in Command in Libya and qualification on the Unit Commander’s Course in September 1942. He was very well prepared for war service as CO. Thodey’s appointment also marks the change from always appointing COs from among officers who had served previously in the battalion they were assigned to command.

As noted in the Introduction, command of an infantry battalion was eventually deemed to be too rigorous to be undertaken by older officers. When the Special Force was raised, the general age requirement was to be between the ages of 21 and 35,¹⁹ and up to 45 for Lieutenant Colonels. This would have eliminated Macky and Harding as COs, along with many others in the unit who had First World War experience. However, the Returned Services Association expressed its concern over the upper age limit of 45 for Lieutenant Colonels being too low.²⁰ Minister of Defence Jones agreed,

¹⁶ 8044 Edward Allan McPhail, PF, NZDF Archives and Angus Ross, *23 Battalion*, p. 49, fn 44.

¹⁷ 20045 Henry Michael McElroy, PF, NZDF Archives.

¹⁸ Garth Pratten, ‘The “Old Man”’: Australian battalion commanders in the Second World War’, PhD thesis, Deakin University, 30 September 2005, pp. 90 and 267.

¹⁹ Office of the Minister of Defence to Cabinet, letter, 6th September, 1939. AD1 300/1/1 Box 1264 Organisation- 2nd Division- 2nd N.Z.E.F., NA.

²⁰ General Secretary of the RSA to Minister of Defence, letter, 18th September, 1939. AD1 300/1/1 Box 1264 Organisation- 2nd Division- 2nd N.Z.E.F., NA.

and the age limit was revised upwards.²¹ It was only reduced once the reality of combat was re-learned.

Echelon and Reinforcement Draft Sailing Dates

Departure and arrival dates of the three Echelons and Reinforcement Drafts are listed in Table A9.

Echelon/ Reinforcement	Departed NZ	Arrived Middle East
1 st Echelon	6 Jan 40	12 Feb 40
2 nd Echelon	2 May 40	Arrived UK 16 Jun 40
	Departed UK 17 Jan 41	2-3 Mar 41
3 rd Echelon	28 Aug 40	29 Sep 40
4 th Reinforcement 1 st Section	8 Nov 40	17 Dec 40
4 th Reinforcement 2 nd Section	20 Dec 40	28 Jan 41
4 th Reinforcement 3 rd Section	1 Feb 41	15 Mar 41
5 th Reinforcement	7 Apr 41	13 May 41
6 th Reinforcement	27 Jun 41	29 Jul 41
7 th Reinforcement	15 Sep 41	19- 20 Oct 41
8 th Reinforcement	12 Dec 41	11 Jan 42
9 th Reinforcement	15 May 43	11 Jun 43
10 th Reinforcement	22 Jul 43	18 Aug 43
11 th Reinforcement 1 st Section	12 Jan 44	23 Feb 44
11 th Reinforcement 2 nd Section	31 Mar 44	3 May 44
12 th Reinforcement	29 Jun 44	1 Aug 44
13 th Reinforcement	30 Sep 44	5 Nov 44

Table A9: Reinforcement sailing dates from New Zealand²²

²¹ Minister of Defence (F. Jones) to General Secretary RSA, letter, 30th September, 1939. AD1 300/1/1 Box 1264 Organisation- 2nd Division- 2nd N.Z.E.F., NA.

²² Note to file, no title, handwritten “keep on top of file”. 2 NZEF- Reinforcements from New Zealand- 1943- Policy and General 1943- 1944. WAI 1 DA1/9/27/1, NA.

STAFF TABLE OF 21 BATTALION RANK AND FILE

The allocation of trades amongst soldiers (“rank and file”) is shown in Table B1 below. The battalion only required a small number of tradesmen, for which previous civilian experience would have been necessary. The bulk of the battalion’s rank and file consisted of “non- tradesmen.” A significant number of these, (Batmen through to the Medical Officer’s Orderly) were in roles that did not contribute directly to combat.

In all, there were only 317 riflemen (inclusive of Bren gunners) within the battalion, or just 53 percent of its total rank and file, that actually had a combat role and who undertook the bulk of the fighting.

	BN HQ	Headquarter Company								4 x Rifle Companies (each)					
		Coy HQ	Signals	Anti A/C	Mortar	Bren Carrier	Pioneer	Admin TPT	Total Coy	Coy HQ	1st Pl	2 nd Pl	3 rd Pl	Total (Coy)	Total BN
Tradesmen															
Clerk								1	1						1
Equipment Repairer								1	1						1
Bricklayer							1		1						1
Carpenters							6		6						6
Blacksmith							1		1						1
Mason							1		1						1
Motor Mechanics								2	2						2
Driver Mechanics						10			10	1				1	14
Technical Storemen								2	2						2
Total						10	9	6	25	1				1	29
Non- Tradesmen															
Batmen	6	1	1			1		2	5	2	1			3	23
Cooks								8	8						8
Clerks	2	1						1	2	1				1	8
Drivers I.C.								55	55						55

Butcher								1	1						1
Postman (g)								1	1						1
Sanitary Duties								4	4						4
Water Duties								2	2						2
Range Takers		1			1				2						2
Offrs Mess cooks/ servants								2	2						2
Storemen		1						1	2	1				1	6
Sergeants Mess								2	2						2
Signallers			26						26						26
Orderlies			5	1	3				9	3	1	1	1	6	33
Stretcher Bearers	20														20
Regimental Police	3														3
Intelligence Sec	6														6
Med. Offr Orderly	1														1
Mortar Detachment					10				10		2	2	2	6	34
Pioneers							10		10						10
L.M.G.(Bren) Numbers and Riflemen				14		15			29		24	24	24	72	317
Total Non-trade	38	4	32	15	14	16	10	79	170	7	28	27	27	27	564
TOTAL RANK AND FILE	38	4	32	15	14	26	19	85	195	8	28	27	27	27	593

Table B1: Infantry battalion Rank and File²³

Many of the longer serving riflemen from the rifle companies would be transferred to the less risky positions in the Intelligence Section, or as cooks or drivers, once they had served long enough.²⁴ Their place in the rifle companies was taken by reinforcements. Soldiers therefore knew that eventually there was some respite from the rigours and dangers of being an infantrymen in a rifle company. This created a flow through the battalion and ensured sections and platoons had a mix of experienced as well as less-experienced soldiers in them.

²³ Infantry (Rifle) Battalion, Distribution by Rank and File, Director Mobilisation to Headquarters Northern, Central and Southern Military Districts, memo, 1st November 1939. Establishments- War-Special Force. AD1 325/1/1 Box 1353 Part 1, NA.

²⁴ Bryan Mahon, interview, Auckland, 2 December, 2006. Bill Tucker, interview, Paraparumu, 19 November 2006.

DUPUY'S VARIABLE EFFECTS FACTORS²⁵

A		Weapons Effects		G		Mobility Effects
	1	Rate of fire			43	Characteristics of mobility
	2	Potential targets per strike			44	Environmental effect
	3	Relative incapacitating effect		H		Vulnerability Factors
	4	Effective range (or muzzle velocity)			45	Exposure consideration, general
	5	Accuracy			46	Environmental effects, general
	6	Reliability			47	Across beach
	7	Battlefield mobility			48	Across unfordable river
	8	Radius of action			49	Across major fordable or minor unfordable river
	9	Punishment (vulnerability) factor		I		Tactical air Effects
	10- 13	Armor performance factors (4)			50	Close air support damage and casualties
	14	Helicopter			51	Close air support morale effect ***
	15- 21	Special weapons effects factors (7+)			52	Interdiction logistical movement **
	22	Dispersion factor			53	Interdict delays on ground movement **
B		Terrain factors			54	Interdiction damage and casualties
	23	Mobility Effect			55	Interdiction disruption effect ***
	24	Defense posture effect		J		Other Combat Processes
	25	Infantry weapons effect			56	Mobility effects of surprise
	26	Artillery weapons effect			57	Surpriser's vulnerability effect
	27	Air effectiveness effect			58	Surprised's vulnerability effect
	28	Tank effect			59	Other surprise effects **
C		Weather Factors			60	Degradation effects of fatigue and casualties **
	29	Mobility effect			61	Casualty- inflicting capability factor
	30	Attack posture effect			62	Disruption **
	31	Artillery effect		K		Intangible Factors
	32	Air effectiveness effect			63	Combat effectiveness *
	33	Tank effect			64	Leadership **
D		Season Factors			65	Training/ experience **
	34	Attack posture effect			66	Morale ***
	35	Artillery effect			67	Logistics *
	36	Air effectiveness effect			68	Time ***
E		Air Superiority Factors			69	Space ***
	37	Mobility effect			70	Momentum ***
	38	Artillery effect			71	Intelligence ***
	39	Air effectiveness effect			72	Technology ***
	40	Vulnerability effect			73	Initiative **
F		Posture Factors				
	41	Force strength effect				
	42	Vulnerability effect				

Table C.1: Dupuy's Variable Effects Factors

Key to the asterisks:

*	Sometimes calculable
**	Probably calculable; not yet calculated
***	Intangible; probably individually calculable

²⁵ Dupuy, *Numbers, Predictions and War*, pp. 32- 33.

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Commanding Officers 21 Battalion:

Name	Christian Names	Army No	Name	Christian Names	Army No
Allen	John Manchester	2562	McPhail	Edward Allen	8044
Allen	Stanley	4005	Macky	Neil Lloyd	20053
	Fairgrieve				
Fairbrother	Monty Claude	7192	Trousdale	Archibald Campbell	20079
McElroy	Henry Michael	20045	Thodey	John Ingle	5414

Sample of Original Members of 21 Battalion: (100 Personal Files)

Surname	Christian Names	Army No	Surname	Christian Names	Army No
Adams	John Richard	21341	Hilton	William Leslie	21367
Alves	Ernest	3761	Homan	Thomas Gerald	22084
	Graham				
Anderson	Thomas Good	21553	Howe	Herbert Clement	21366
Armstrong	Jack Ernest	22242	Hutchinson	Harold William	22085
Baker	Ralph John	22594	Jensen	Harry Peter	22036
Barnes	Raymond	22762	Kelly	Christopher	21380
	Sperry			Robert	
Barr	Martin Todd	21332	Kilpatrick	Edgar Frederick	22087
Bavister	Jack	21490	Lamont	Fletcher	23584
				Alexander	
Bellamy	Herbert	22246	Lewis	Gwynne Hope	22089
	Hargraves				
Bevington	Ernest Clinton	22019	Lockett	Allan Hugh	20496
Bird	Harold	6970	Luckings	Sydney	21585
Blomfield	Cedric	21491	Martin	Charles Henry	22130
	Verdun				
Bogun	John	22250	Maxton	Ronald Ian	22131
Bosworth	Cecil John	21342	McCollum	Frederick Keith	22690
Bradley	John Franklin	222060	McCorkell	Sydney Crawford	22565
Brown	John Robert	20472	McElroy	Henry Michael	20045
Brown	Arthur John	21494	McKee	Archibald Skinner	21385
				Forrester	
Brownlee	Thomas Hone	21416	Mellsop	Campbell Ross	22525
Burr	John Hosking	22256	Moore	Alfred Leslie	21591
				Arthur	

Surname	Christian Names	Army No	Surname	Christian Names	Army No
Butcher	Ernest Tai Alexander	22112	Morrell	Ian Harry	20540
Butland	William Camille	8678	Mutu	Thomas	21455
Buxton	Norman	22489	Nichols	John Edward	22747
Capner	Clifford Armitage	21559	Nicolson	Malcolm	22047
Cartwright	Gordon Keith	21326	Nicolson	Oliver	22046
Chinchen	Murray Pattinson	3616	Oliver	Robert	22225
Clark	Hector Douglas	21284	Panckhurst	Gray Holder	20068
Clark	David	22023	Pearson	Lloyd Ralph	22191
Cook	William John	22206	Phillips	Edward Arthur	2051
Cottrell	Astley Bernard	20514	Pohe	Hepi	21460
Cragg	William Arthur	22663	Puckey	Robert Edgar	21528
Cronin	Stanley Allen	31402	Rawson	Murray Ellis	21529
Dance	Frank Raymond	21422	Roach	William Joseph Gregory	2625
DeCosta	Ralph Granville	20503	Ross	Ronald Blashford	21534
Dee	Kenneth Garret	20067	Ryan	Michael Patrick	21396
deStitger	Herbert John	21355	Schofield	Cecil James	22710
Dodson	Alfred William	20553	Smith	Leonard William	22715
Donovan	James Trevor	22770	Spooner	James	22719
Duncan	James Andrew McDonald	22077	Stevenson	Norman Leslie	22573
Epps	William Henry	21500	Sullivan	George Verdun	21472
Ferguson	Alan	2050	Taylor	Gordon Malcolm	21404
Fleming	Brian Patrick	21704	Thomas	Walter	21322
Frogley	Quentin Basil	21574	Tinsley	Lewis Ralph	22151
Gaukrodger	Cecil	22274	Trundle	George Edmund	2050
Gerrish	Edward James	22212	Wallace	Clifford Bruce	21481
Green	William Henry	21319	Ward	Alfred Hugh	21548
Hall	Alexander William	21700	Watson	Edward Arthur Victor	22512

Surname	Christian Names	Army No	Surname	Christian Names	Army No
Harker	Robert John	21701	Whitson	Eric Guy	22513
Haworth	Leslie Russell	22278	Williamson	Cornelius John	22238
Henshilwood	George Lindsay	21509	Wright	William Bryan	21695
Hill	William George	22173	Yeoman	Allan Arthur	20055

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