INSPECTOR GENERAL
AUSTRALIAN DEFENCE FORCE

INQUIRY REPORT

CONCERNING THE DEATH OF
SGT G.J. FRANCIS

Report redacted for public release
Introduction


Background

2. In accordance with Special Operations Command (SOCOMD) Preparedness Directive 2014-15 of 03 February 2014, 2 Cdo Regt is required to maintain a minimum sustainable MACWO capability with a surge capacity to meet operational requirements. In response to the Preparedness Directive, 2 Cdo Regt scheduled the conduct of MACWO training to take place during 2014.

3. The MACWO training was to be undertaken in four phases in addition to a preliminary pre-deployment phase. The two principal MACWO field training components were Phase One and Phase Three whereas Phase Two and Phase Four centred on a series of theory and practical lessons, equipment familiarisation, administration and refit.

4. The MACWO Phase One training was to be undertaken in the Mount Cook National Park in New Zealand over the period 12 July 2014 to 26 July 2014 inclusive. It was to provide initial and continuation training of technical mountaineering skills as well as currency training for the MACWO Supervisors. Moreover, the Mount Cook National Park has been utilised as a MACWO training location since 2010 as it provides the terrain and conditions of a complex alpine environment not found in Australia.

5. The MACWO Phase Three training was to be undertaken over the period 04 August 2014 to 04 September 2014. It was to be conducted in the Kosciuszko National Park (KNP) and was to include advanced ski instruction.

6. The MACWO Phase One training comprised 10 personnel which included two MACWO Supervisors, four MACWO Operators and four students. SGT Francis and were the designated MACWO Supervisors, and were appointed as the The remaining Course members comprised
and I I as the MACWO Operators; and 

Soldier 6

and 

Soldier 7

as the MACWO students.

7. On 16 July 2014, the Course departed the Plateau Hut on Mount Cook at approximately 0930 hours and proceeded to undertake a series of training activities on the Grand Plateau. At approximately 1100 hours, the students commenced crevasse rescue training under the supervision of the MACWO Operators. During the lesson, SGT Francis and Soldier 7 moved off unroped and out of sight of the main group to a distance of approximately 75-80 metres. At the time, they were seeking to identify a suitable site for the next lesson which was to be ice climbing.

8. At approximately 1130 hours, Soldier 7 called for assistance as SGT Francis had fallen down a crevasse. In response, the MACWO members proceeded to the incident site to commence the rescue. In addition, the New Zealand emergency services were contacted resulting in the mobilisation of a Search and Rescue (SAR) team followed by the WESTPAC air ambulance.

9. SGT Francis was extricated from the crevasse by the MACWO Course members at approximately 1215 hours followed by their immediate application of cardiopulmonary resuscitation (CPR) and other first aid measures. At approximately 1355 hours, the WESTPAC air ambulance arrived at the incident site with SGT Francis being pronounced deceased by the attending paramedic at 1400 hours.

10. Following the incident, the Commanding Officer (CO) of 2 Cdo Regt suspended all MACWO training. This action included the Phase Three training which was scheduled to later take place in the KNP.

INQUIRY AUTHORITY AND METHODOLOGY

Inquiry authority

11. The Inquiry was conducted under the authority of, and in accordance with, Part 7 of the Defence (Inquiry) Regulations 1985. and 

Officer 1

were appointed as Assistants IGADF under regulation 82 of those regulations on 09 October 2007 and 02 July 2014 respectively, and were directed to undertake this inquiry on 21 July 2014.

Evidence

12. The Inquiry conducted witness interviews and collected supporting and reference documents. The supporting and reference documents included Defence Instructions, doctrine, directives, reports, unit routine orders, plans and assessments. In addition, PMKeyS records, biographical information, training attainment documentation, maps, aerial photographs, an activity log and an incident site sketch were also sourced.
13. **Australian Defence Force Investigative Service.** In accordance with DI (G) PERS 20-6 - Military Investigations and Inquiries, incidents involving loss of life will be investigated within Defence by the Australian Defence Force Investigative Service (ADFIS). Accordingly, ADFIS conducted a series of interviews in New Zealand with the MACWO Course members and civilian witnesses following the incident. As part of the ADFIS interview process, transcribed records of interview (TROI) were produced. Where appropriate, the ADFIS TROI were utilised as evidence for the purposes of the Inquiry.

**Witnesses**

14. The Inquiry conducted 19 recorded witness interviews and received supporting documentation and emails from four witnesses and other personnel.

**Rights and obligations**

16. All witnesses were advised of IGADF witness rights and obligations prior to interview. Additionally, witnesses were given an extract of the Directions to the Assistants IGADF relevant to the evidence they were being requested to provide.

**Privacy notice**

17. Each witness interviewed sighted a privacy notice (Privacy Notice to Inquiry Witnesses) and acknowledged their understanding that information they provided, including personal information, would be recorded and could be used in an IGADF Inquiry report and subsequently released to a broader audience.

**Statements of impartiality**

18. Statements of impartiality and independence were completed by Officer T and Officer Z and were provided to the witnesses. No concerns of bias, from or against the Assistants IGADF, were expressed and no witness objected to the Assistants IGADF conducting the Inquiry.

**Conduct of inquiry**

19. The Inquiry was conducted in private.

**Standard of proof**

20. The standard of proof adopted for determination of findings for this Inquiry was on the 'balance of probabilities.' In making findings and recommendations, the Inquiry applied the test in the Briginshaw case.
Procedural fairness

21. Due to an absence of any potentially affected persons arising from the evidence collected by the Inquiry, there was no requirement to afford procedural fairness to any of the witnesses.

Incident chronology

22. A chronology of events relating to the incident is at Annex B.

IGADF DIRECTIONS

23. The Inquiry examined the facts and circumstances surrounding the death of SGT Francis, in particular, covering the following 13 Sub-Directions:

a. The planning of the exercise.
b. The qualifications and experience of the instructors and directing staff.
c. The risk assessment.
d. The equipment.
e. The conduct of the exercise.
f. Whether relevant instructions and procedures were followed.
g. The adequacy of the relevant training instructions and procedures.
h. The extent of the knowledge of the local conditions.
i. Whether local guides or instructors should have been engaged.
j. The rescue/recovery actions.
k. Whether members have received post incident support.
l. Whether Defence could have reasonably done anything to prevent the death.
m. Factors relevant to any recommendation to the Minister concerning the appointment of a Commission of Inquiry.

24. The IGADF has undertaken this Inquiry into the death of SGT Francis to determine whether the death of SGT Francis had arisen out of, or in the course of his service. The CDF will then assess whether a recommendation should be made to the Minister for Defence that a Commission of Inquiry (COI) is warranted.
25. Each Sub-Direction is addressed in the succeeding paragraphs.

**SUB-DIRECTION A - THE PLANNING OF THE EXERCISE**

26. In accordance with SOCOMD Preparedness Directive 2014-15, 2 Cdo Regt is required to maintain a minimum sustainable MACWO capability with an inherent surge capacity to meet operational requirements. As a consequence, 2 Cdo Regt initiated planning to conduct Phase 1 of the MACWO Course over the period 12 July 2014 to 26 July 2014 inclusive.

27. The overall planning for the MACWO training was the responsibility of the Officer Commanding Operational Support Company (OC OSC) who had previously qualified as a MACWO Operator, advised that the intent of the training was to bring a tactical and operational focus for a Special Forces (SF) response in a mountain and cold weather environment. In particular, the training was to ensure that SF members possess the requisite MACWO technical skills.

28. At the time of interview on 05 August 2014, stated that the planning for the MACWO Course had commenced six months earlier in approximately early February 2014. An initial planning conference was held during early April with further conferences taking place at 30 day intervals during early May and early June.

29. Under the direction of planning at the working level was conducted by the MACWO Cell with oversight provided by The MACWO Cell comprised SGT Francis and and was supplemented by other unit personnel on an as required basis, including by and were all MACWO trained and qualified.

30. In relation to specific planning activities, advised that SGT Francis would have examined the MACWO Course learning outcomes from the Training Management Plan and would have then sought a suitable training venue so as to obtain the best out of the Course and its members. In doing so, observed that the Australian snow season can be short with variable conditions which in-turn can prevent the achievement of the MACWO qualification. As a consequence, advised that SGT Francis had selected Mount Cook as the training site.

31. Although was the understudy to SGT Francis within the MACWO Cell, the latter had taken primary carriage of the planning process at the working level. Nevertheless, was able to share with the Inquiry some of his observations.

32. advised that Mount Cook had been selected as the MACWO Phase 1 training venue due to glacial movement and crevasse work considerations. Moreover, he stated that SGT Francis had been in contact with the Department of Conservation (DOC) in New Zealand in order to
obtain advice on the prevailing conditions on Mount Cook and to seek information of any reported incidents. When asked whether any incidents had been reported by DOC, [Redacted] advised that there had been none.

33. In addition, [Redacted] stated that SGT Francis had been monitoring New Zealand meteorology sites for trend analysis purposes. A particular focus had been the avalanche risk which was considered to be the main threat on Mount Cook. [Redacted] also advised that should SGT Francis have received information that the local conditions were unstable, then he would have selected another training site.

34. [Redacted] supplemented the MACWO planning on an as required basis. As such, he was able to expand on the nature of the meteorological information sought by SGT Francis. In doing so, he stated that the information would have included wind direction, wind speed, the snow condition, the sun etc. [Redacted] also advised that SGT Francis would have been seeking to determine the condition of the snow base and what was underneath it.

35. An insight into the planning activities was also provided by [Redacted] who stated that SGT Francis had been in contact with the New Zealand Alpine Association which is linked to the New Zealand Mountain Rescue Association. [Redacted] also confirmed that SGT Francis had not received any adverse weather advice from the New Zealand authorities.

36. The Inquiry sought advice from [Redacted] as to whether there had been any liaison with the New Zealand Defence Force (NZDF) as part of the planning process. In response, [Redacted] advised that that was no contact with the NZDF as the training did not come under the umbrella of international engagement.

37. As a concurrent planning activity, an Operation Order (OPORD) was prepared by 2 Cdo Regt. The document addressed a series of administrative and logistics requirements including the concept of operations, key appointments, dress, equipment, meals, accommodation, transport, welfare, financial management and communication requirements. A Risk Management Plan and a Health Support Plan were attached to the OPORD as annexes. Overall, the OPORD was consistent with what would normally be expected for the conduct of a training activity.

38. Nonetheless, the Inquiry noted from the OPORD that a MACWO Post Activity Report (PAR) was to be raised upon return to Australia. Although the Inquiry did not anticipate that the 2014 PAR would be available in the short term, it took the opportunity to review the 2011, 2012 and 2013 PARs in order to obtain a greater insight into the planning process.

39. The 2011 MACWO Course had been conducted on the Tasman Glacier within the Mount Cook National Park over the period 01 May 2011 to 14 May 2011. The Tasman Glacier was also the training venue for the 2012 and 2013 MACWO Courses. In the resultant unsigned PAR dated 08 June 2011, [Redacted] had written that 'the timing of the package during May provides the perfect exposure to the elements without the severe weather making it impossible to achieve the designated outcomes.' The accompanying recommendation was that 'the May period should be sustained for future Courses.'
As the 2012 MACWO Course had been undertaken over the period 01 July 2012 to 13 July 2012, the earlier recommendation relating to the month of May had not been adopted. Nevertheless, the Inquiry did note that SGT Francis, the MACWO Contingent Commander, had written in the unsigned 2012 PAR that ‘the timing of the package during July could have been problematic due to the onset of winter.’ The PAR went on to recommend that ‘utilising the May to June period is recommended for future Courses.’

As the 2013 MACWO Course was conducted over the period 08 July 2013 to 21 July 2013, it signalled that the earlier recommendations had still not been adopted. Furthermore, as the unsigned 2013 PAR had made no reference to the timing for the MACWO Course, it appeared that the matter had ceased to be an issue. Unfortunately, the Inquiry was unable to pursue the matter as it could not locate the signed and endorsed originals of the PARs. The signed original PARs should have furnished pen script comments from the CO/OC formally addressing the recommendations and closing off the matter.

Nonetheless, the Inquiry did seek to obtain witness comment. Although [Name]’s memory on the matter appeared to be genuinely lacking, he did advise that May is warmer than July and therefore the crevasses can be more easily seen. Conversely, [Name] stated that with the heavier snow pack in winter, mobility is easier with no requirement to climb in and out of crevasses.

While not involved in the planning process, [Name], who is an experienced mountaineer and MACWO Operator was able to expand upon [Name] comments. [Name] advised that July was a good time of year to conduct the MACWO Course as the weather is more stable, that there was a high availability of training locations to mitigate against the avalanche threat and that the presence of more snow on the top of crevasses can make travel safer over ice bridges.

Although the Inquiry accepts the respective witness comments, it serves to raise the question as to why the matter of MACWO Course timing and the associated considerations had not been formalised during the planning process.

As outlined at paragraph 39, the MACWO training for 2011, 2012 and 2013 had been undertaken on the Tasman Glacier as opposed to the Grand Plateau in 2014. As the reasoning for the selection of a new MACWO training venue was not obvious from the OPORD, and in the absence of a PAR for 2014, the Inquiry sought further witness comment.

[Name] stated that while the MACWO training would take place around the Mount Cook region, selection of the training site would be dependent upon weather considerations. As such, he advised that several different sites would be lined up and that the final selection would take place within a couple of weeks of departure. As the weather did not directly impact on the conduct of the MACWO training, the following evidence provided by [Name] and [Name] may have more likely been the catalyst behind the selection of the Grand Plateau over the Tasman Glacier.
47. [redacted] advised that there is a requirement to soldier in all environments, in all terrains and at all times of the year. As such, he stated that if the MACWO training was limited to the Tasman Glacier then 'that's all we'd know.' [redacted] advised that the 2014 MACWO Course was the fourth time he had been to the Grand Plateau and that he had recommended the locality to SGT Francis as being a 'great area' for novices and members on continuation training. In addition, [redacted] advised that the Grand Plateau was no more dangerous than the Tasman Glacier. As an aside, [redacted] had worked as SGT Francis's understudy in the MACWO Cell during 2013 with the view to potentially replacing him once his contract had expired in 2014, but this did not eventuate as SGT Francis stayed on at 2 Cdo Regt. It was during this time that he recommended the Grand Plateau to SGT Francis as a suitable training venue for the 2014 MACWO Course.

48. While the Inquiry noted the respective witness statements, it left open the question as to why the training location was not formally addressed in the MACWO planning process.

49. As an ancillary planning activity, an Overseas Visit Authority (OVA) was raised and subsequently approved by CDF through CA. The OVA satisfied the Regulation 9 Delegate approval relating to more than five members travelling overseas. Accordingly, the OVA met a financial management regulatory requirement but did not represent an endorsement of the planning process by CDF.

Analysis/assessment of evidence

50. In response to a SOCOMD capability requirement, 2 Cdo Regt initiated planning for Phase 1 of a MACWO Course to be undertaken over the period 12 July 2014 to 26 July 2014 inclusive. The planning was initiated with sufficient time to undertake the task in a deliberate and considered manner and was accompanied by regular review leading to further ongoing development.

51. From a day-to-day management perspective, the planning was undertaken by the MACWO Cell which comprised of MACWO qualified staff. Additional MACWO qualified staff were also drawn upon to provide assistance as required. Furthermore, oversight was facilitated through the chain of command culminating at the executive level.

52. Based on the circumstances surrounding the incident of 16 July 2014, a primary consideration had been to determine the scope of SGT Francis's MACWO planning activities. The evidence collected by the Inquiry has indicated that SGT Francis had proactively sought and monitored information on Mount Cook climatic and environmental conditions which had the potential to adversely impact upon the MACWO Course. No information was received by SGT Francis which would have required him to revisit the selection of the training venue. As a consequence, SGT Francis presented as being a competent, proactive and thorough planner who took appropriate and considered action throughout the MACWO Course planning process.

53. From a broader administrative perspective, the planning activity had been formalised through 2 Cdo Regt OPORD. Based on a review of its contents, it was sufficiently detailed and comprehensive
to meet administrative, logistical, welfare and command and control requirements. As an adjunct, an OVA was approved by CDF to meet financial regulatory requirements.

54. The only identified anomaly in what was otherwise a thorough and deliberate planning process was the inability by the Inquiry to access the signed and endorsed PARs. The documentation may have served to provide an insight into why the month of May ceased to be an active consideration from a MACWO Course timing perspective. The lack of access to the signed and endorsed PARs also highlighted an absence of formal planning consideration in relation to the training location. Although these issues did not detract from the overall MACWO planning process, these matters should have been addressed in the risk assessment. (See discussion in Sub-Direction C - The risk assessment.)


FINDING: The MACWO Course comprised four phases. Phase One was to be conducted on the Grand Plateau in the Mount Cook National Park over the period 12 July 2014 to 26 July 2014. Its purpose was to provide initial and continuation training of technical mountaineering skills as well as currency training for the MACWO Supervisors in a complex alpine environment.

FINDING: Before 2014, 2 Cdo Regt had conducted MACWO training on the Tasman Glacier in the Mount Cook National Park. In 2014, 2 Cdo Regt changed the MACWO venue to the Grand Plateau in order to provide a more challenging training environment.

FINDING: Under the direction of planning at the working level was conducted by the MACWO Cell, comprising SGT Francis and supplemented by other staff, including Soldier 1 as required. Immediate oversight of the Cell was provided by The listed staff were MACWO trained.

FINDING: SGT Francis was proactive and thorough when seeking and monitoring information on the Mount Cook climatic and environmental conditions. No information was received by SGT Francis which would have required him to revisit the selection of the Grand Plateau training venue.

FINDING: The unavailability of signed and endorsed MACWO PARs highlighted an absence of documented outcomes in relation to Course timing and location. The absence of the signed and endorsed documentation did not detract from the overall planning process.

FINDING: The MACWO planning was thorough and deliberate and formalised through a 2 Cdo Regt OPORD which was authorised by It addressed a series of administrative, logistical, welfare and command and control requirements and was sufficiently detailed and comprehensive to meet administrative, logistical, welfare and command and control requirements.
SUB-DIRECTION B - THE QUALIFICATIONS AND EXPERIENCE OF THE INSTRUCTORS AND DIRECTING STAFF

55. SGT Francis joined the Australian Regular Army (ARA) on 18 August 2009 having completed approximately 22 years service with the Royal Marines (RM) Commandos. During his RM service, SGT Francis participated in more than twenty Arctic winter deployments and attained his RM Mountain Leader qualification in 1997. A Mountain Leader is a trade specialisation within the RM and is responsible for delivering training for, or leading, operations in high altitude or extremely low temperature environments.

56. Following qualification as a Mountain Leader, SGT Francis gained extensive experience through attending more than 15 alpine mountaineering exercises with each being four weeks in duration. Furthermore, between March 2002 and April 2004, SGT Francis was employed as the Chief Instructor of the Mountain Leader Branch, which included the conduct of the eight month Mountain Leader Courses. The training included a range of military climbing, mountaineering and mobility courses. In the final four years of his RM service, SGT Francis was posted to the United Kingdom (UK) SF Special Boat Squadron as their Service Mountain Leader.

57. SGT Francis also obtained extreme high altitude experience from two expeditions to the North Ridge and the West Ridge of Mount Everest in 2003 and 2006. In response to his actions to rescue an injured climber during a 2003 expedition to Mount Everest, SGT Francis was awarded a Royal Humane Society commendation and medal.

58. Upon joining the ARA, SGT Francis was posted to the 3rd Battalion, the Royal Australian Regiment (RAR). On 17 January 2011, SGT Francis was posted to 2 Cdo Regt and initiated action on 23 February 2011 to have his RM qualifications recognised through the submission of Forms AC 344-1 - Record of Attainment. As MACWO is the highest level of qualification having been built upon military roping and military climbing qualifications in the first instance, SGT Francis sought and was granted full recognition by the Commandant of the Special Forces Training Centre of the following courses:

a. SF Military Roping Course.

b. SF Military Roping Supervisor Course.

c. SF Military Climbing (with Supervisor Module) Course.

d. SF Military Climbing Supervisor Course.

e. Special Air Service Regiment (SASR) MACWO Operations Course.

f. SASR MACWO Supervisor Course.
59. As per SOCOMD Training Directive - Roping, Airborne Roping, Climbing (RARC), Mountain and Cold Weather Operations; the proficiencies are current for a period of three years from the date of qualification. At the time of his death on 16 July 2014, SGT Francis’s PMKeyS Record annotated current proficiencies for the above listed courses. Moreover, SGT Francis was promulgated as being proficient against the listed courses as per 2 Cdo Regt Routine Order 23/13 of 26 September 2013. The promulgated with effect date for the roping and climbing courses was 04 March 2013, and for the MACWO Courses it was 01 August 2013.

60. The SOCOMD Training Directive also prescribes that personnel undertaking MACWO training should be Medical Employment Class (MEC) J1. The Directive also advises that personnel who are MECJ2 may undertake training with the recommendation of a Medical Officer. As per his PMKeyS MEC record, SGT Francis satisfied the MEC 2 requirement with the subclassification of J21; ie: restricted deployment - defined limitations. Joint Health Command (JHC) advised that the medical limitation pertained to a mild hearing loss with no significant resulting disability. JHC also expressed the view that it is unlikely that the condition contributed to the incident under inquiry.

61. In respect to professional outlook, described SGT Francis as being a calm, measured and mature individual who did not undertake any undue risks. In relation to the MACWO Course members, described SGT Francis as being ‘super careful’ whereas observed him to be conservative and safety conscious. stated that SGT Francis had been one of the most experienced Mountain Leaders within the RM Mountain Leader Cadre who are in-turn considered to be world leaders in the mountain and glacial alpine environments. A similar line of questioning was put to the other witnesses with no contradictory responses being provided.

62. joined the ARA on 09 May 2005 with subsequent postings including 4 RAR, Special Forces Training Centre (SFTC) and 2 Cdo Regt. Prior to enlistment into the ARA, had served in the RM for a period of 17 years. During his RM service, had undertaken four Arctic deployments and was a qualified ski instructor. Moreover, stated that he did not have the ‘massive’ mountaineering experience of SGT Francis. Instead, his expertise was that of being a Cold Weather Warfare Instructor and a Cold Weather Warfare Operator.

63. Following enlistment into the ARA, applied for, and was granted, full recognition of prior learning for the following courses:
a. SF Military Roping Supervisor Course

b. SF Military Climbing Supervisor Course

c. SASR MACWO Supervisor Course

64. In addition, 2 Cdo Regt provided verbal advice to the Inquiry that as had met the supervisor standard for the listed courses, there was no requirement for him to be assessed at the SF Military Roping, SF Military Climbing and SF MACWO Course levels.

65. At the time of SGT Francis’s death on 16 July 2014, was reported to possess current competencies for SF Military Roping, SF Military Roping Supervisor, SF Military Climbing, SF Military Climber Supervisor, MACWO Operator and MACWO Supervisor Courses as per 2 Cdo Regt Routine Orders. However, when a comparative check was undertaken against PMKeyS record, the Inquiry noted that his SF Military Climbing and SF Military Climbing Supervisor proficiencies had expired. 2 Cdo Regt, later advised that due to clerical issues the PMKeyS record had not been updated and that was current as per the SOCOMD Training Directive RARC and MACWO.

66. In relation to MEC, was classified MEC 1 with the sub-classification of J11, ie: fully employable and deployable.

67. Professionally, described as a non-risk taker who presented as a mature and calming influence and that he possessed outstanding technical application skills. One of the MACWO Course members described as being knowledgeable and another, assessed him to be extremely experienced. All other witnesses interviewed held similar opinions of .

68. As the MACWO Supervisors, SGT Francis and were supported by and who were designated 2 Cdo Regt MACWO Operators. These members were also referred to as assistant MACWO supervisors or assistant instructors as the unit was seeking to build the experience base of these members with a view to them becoming MACWO Supervisors during 2015.
69. As per the respective PMKeyS records, each member possessed current competencies for the SF Military Roping Supervisor Course, the SF Military Climbing Supervisor Course and the MACWO Operator Course. That said, and although it had no bearing on the events of 16 July 2014, the Inquiry did receive advice from [Soldier 1] that [Soldier 2] was yet to complete the skidoo component of the MACWO Operator Course.

70. From an experience perspective, [Soldier 3] had previous exposure to mountaineering in New Zealand having climbed Mount Cook in 2003. [Soldier 4] was a qualified Norway Cold Weather Warfare Operator based on his former RM service. [Soldier 5] had undertaken mountaineering in Pakistan with the local military, had attended the British SASR Mountain Cadre Course in Norway, Germany and Austria; and had climbed in New Zealand in a private capacity. [Soldier 6] had previously run civilian MACWO training which covered the technical aspects of mountaineering.

Analysis/assessment of evidence

71. SGT Francis was qualified and current in all requisite MACWO Supervisor and related training proficiencies. Based his level of expertise and experience as a mountaineer, SGT Francis was highly qualified to undertake the role of OIC and senior instructor of the MACWO Course.

72. Although not as experienced as a mountaineer as SGT Francis, and despite a PMKeyS reporting anomaly, [Soldier 7] possessed the necessary qualifications and experience to effectively meet the MACWO Supervisor role and responsibilities as [Soldier 8].

73. Similarly, the four MACWO Operators who were [Soldier 9], [Soldier 10] and [Soldier 11] were qualified and experienced to undertake assigned MACWO tasks and responsibilities.

FINDING: SGT Francis was a highly experienced and qualified mountaineer based on 22 years service with the Royal Marines.

FINDING: SGT Francis was qualified and current in the requisite MACWO Supervisor and related training proficiencies.

FINDING: From a professional standing perspective, SGT Francis was considered to be a calm, measured and mature individual who did not take undue risks.

FINDING: Mountaineering experience was not as extensive as that of SGT Francis. Instead, [Soldier 12] expertise was that of being a Cold Weather Warfare Instructor, a Cold Weather Warfare Operator and a qualified ski instructor based on his 17 years service with the Royal Marines.

FINDING: [Soldier 13] was qualified and current in the requisite MACWO Supervisor and related training proficiencies despite a PMKeyS reporting anomaly.
FINDING: From a professional standing perspective, I was considered to be a non-risk taker who presented as a mature and calming influence accompanied by outstanding technical application skills.

FINDING: SGT Francis and were supported by and as MACWO Operators. Each member possessed current MACWO Operator proficiencies and were experienced.

FINDING: The MACWO Supervisors and Operators were qualified and experienced to undertake their assigned roles and responsibilities.

SUB-DIRECTION C – THE RISK ASSESSMENT

74. The Army risk management policy is prescribed in Annex A to DI (A) OPS 68-1 - Military Risk Assessment. The policy states that Military Risk Management (MRM) is the process through which Army has developed a proactive, risk-aware and adaptive culture. MRM aims to empower personnel to understand risk so they can focus on achieving objectives, exploit opportunities and identify and manage key threats and hazards.

75. Risks are to be identified and assessed with appropriate control measures implemented in order to reduce risks as low as reasonably practicable within allocated risk tolerance thresholds. For non-operational activities, the risk tolerance thresholds provide general risk tolerance levels by rank and appointment applicable to routine training and administration. A risk appreciation is typically documented in a Risk Appreciation Summary or agreed format by the commander.

76. The Risk Assessment for the MACWO training at Mount Cook was prepared by SGT Francis as the MACWO SME and is attached as Annex B to the 2 Cdo Regt MACWO OPORD. The risk assessment was based on a tabular template format which identified the threats, the associated risk impact, standard controls, the inherent risk level, the additional controls considered and the residual risk level.

77. The annotated threats included command, control and communication (C3); SF roping, SF climbing/mountaineering and MACWO. In relation to MACWO, a sub-set of eight threats were identified which included command and control, communications, mountaineering techniques, cold weather injuries, hazardous weather conditions, ski/movement techniques, snow assessment/avalanche conditions and snow survival shelters.

78. For the MACWO command and control threat sub-set, the principal safety controls included the following requirements:
a. The OIC is to carry out duties in accordance with SOCOMD RARC and MACWO Directive 2013. These included the planning, conduct, control and safety of all training; in addition to relevant current qualifications, record keeping and briefing requirements.

b. All safety appointments are to be in accordance with 2 Cdo Regt Routine Orders 2014.

c. Safety Supervisors are to carry out duties and responsibilities in accordance with the SOCOMD RARC and MACWO Directive 2013. These included dress and equipment serviceability and management in addition to the application of drills and approved techniques as per policy, doctrine, standard operating procedures and safety requirements.

d. All safety appointments and participants are to be current and competent in accordance with the SOCOMD RARC and MACWO Directive 2013.

e. A Casualty and Evacuation (CASEVAC) and Medical Plan is to be prepared in accordance with SOCOMD RARC and MACWO Directive 2013.

f. A CASEVAC and Health Support Plan is to be in accordance with Annex C to the 2 Cdo Regt OPORD.

79. From a safety perspective, SGT Francis and [blank] had been appointed as MACWO Safety Supervisors as per 2 Cdo Regt Routine Order 11/2014 of 19 March 2014. Each member also met SF Military Supervisor Roping Course, SF Military Supervisor Climbing Course and MACWO Supervisor Course and proficiency requirements.

80. As the MACWO Operators, [blank], [blank], [blank] and [blank] also met the SF Military Supervisor Roping, the SF Military Supervisor Climbing and the MACWO Operator Course and proficiency requirements. In relation to the MACWO students, [blank], [blank] and [blank] met, and in some instances exceeded, the minimal roping, climbing and MACWO Course and proficiency requirements.

81. In accordance with his PMKeyS record, [blank] did not possess a current proficiency for the SF Military Roping Course at the time of the incident on 16 July 2014. While [blank] advised that it had been unable to locate any formal documentation, he was of the view that [blank] was current. Although the absence of the recorded proficiency was not consistent with the Risk Management Plan requirement for participants to be current and competent.
in accordance with the SOCOMD RARC and MACWO Directive 2013, it was viewed to be a minor anomaly only.

82. The CASEVAC requirement was addressed in the Health Support Plan by reference to the utilisation of civilian helicopter and air ambulance assets on occurrence. The Medical Plan aspect was satisfied through [blank] being qualified and proficient in Combat First Aid (CFA) as per their respective PMKeyS records. In relation to the Health Support Plan, the requirement was met at Annex C to the 2 Cdo OPORD and addressed individual measures, climate awareness, safety briefing, treatment and emergency service contacts.

83. In relation to the MACWO threat sub-set ‘failure to carry out mountaineering techniques correctly,’ the standard controls included the annotation that glacial/alpine travel is to be conducted in accordance with Land Warfare Procedures (LWP) - Special Operations Forces (SOF) - 9-3-11 - Mountain and Extreme Cold Weather Tactics - Developing Doctrine, paragraphs 7.72 to 7.73. The paragraphs provide guidance on roped travel techniques for glacial movement. The issue of being roped or unrope on glaciers later proved to be a key consideration pertaining to the death of SGT Francis. This issue is examined in Sub-Directions E, F and G dealing with the conduct of the MACWO Course and compliance with relevant instructions and procedures.

84. From a MACWO threat sub-set perspective, the Risk Assessment did not identify the time of year or the training location as being threats to be managed. As a consequence, the Risk Assessment did not provide any corresponding controls or inherent risk level considerations. As flagged at Sub-Direction A - The planning of the exercise; these matters should have been addressed in the Risk Assessment.

85. As the MACWO Subject Matter Expert (SME), SGT Francis signed the Risk Assessment as having appropriate and effective control measures, that the inherent or residual risks were acceptable and that the overall risk level was also acceptable. In accordance with DI (A) OPS 68-1 - Military Risk Management, Annex C, the overall risk tolerance threshold was determined to be ‘Medium’. The Medium risk tolerance level denotes that ‘exposure to these risks may continue provided it has been appropriately assessed, has been mitigated as low as reasonably practicable, and is subject to periodic review to adjust risk controls if the risk level increases.’ SGT Francis also signed the Risk Assessment as the Chief Safety Officer consistent with the 2 Cdo OPORD and in doing so further advised that the control measures were appropriate and effective.

86. Once SGT Francis had prepared the Risk Assessment, it was forwarded to [blank] 2 Cdo Regt. [blank] signed the Risk Assessment as the Safety Manager advising that the control measures were appropriate and effective. In the absence of [blank] 2 Cdo Regt. [blank] completed the staffing action by signing the Risk Assessment advising that the control measures were appropriate and effective. However, as the approval level for the Medium Risk Tolerance is to be at MAJ rank, the Risk Assessment was counter-signed by [blank] Officer 1.
87. In order to inquire into the MACWO Risk Assessment process beyond what was available in the supporting documentation, Soldiers 10, 11, and 12 were interviewed.

88. Soldier 10 stated that he manages the advanced and niche capabilities for 2 Cdo Regt. He also advised that while he is MACWO trained, SGT Francis was the MACWO SME. Nevertheless, Soldier 11 stated that it was his responsibility to provide oversight and mentorship to SGT Francis as he managed the capability, in addition to reviewing the documents that he produced and to staff them through the unit chain of command.

89. Soldier 10 stated that while SGT Francis had drafted the Risk Assessment, he had been consulted during the development process as had the Soldiers 11 and 12 and to a lesser extent the Soldiers 13 and 14. In doing so, Soldier 10 stressed that there had been a series of checks, filters and balances that the Risk Assessment went through as part of the unit approval process. These actions were particularly aimed at ensuring that the document content was in-line with the risk management procedures and that the residual risk had been measured and weighed appropriately.

90. Soldier 16 advised that in his capacity as the Soldiers 10 and 11 it is his role to ensure that 2 Cdo Regt risk management plans comply with the international standard in addition to the MRM model. The purpose of his actions is to ensure that the inherent risk is as low as reasonably practical. Soldier 15 also advised that he was well placed to undertake the task with qualifications in workplace health and safety, in addition to MRM qualifications.

91. Soldier 17 stated that he closely reviewed the MACWO Risk Assessment. In doing so, he examined its lay out, its composition and checked to ensure that that the search and rescue plans matched up with the services available in New Zealand. As it was the first time he had reviewed a MACWO risk assessment, Soldier 17 had also undertaken a full check of the documentation. In addition, he advised that the MACWO training was a standard activity and appeared to be comfortable with the overall risk tolerance threshold as being Medium.

92. Soldier 11 also stated that the risk assessment template utilised by 2 Cdo Regt had been developed by the unit and was therefore different to what was used by the broader Army. He also noted that it had been adopted as a SOCOMD-wide document as it was a more streamlined and easy to read than the bulky document used by other units. It was later determined that while 2 Cdo Regt had developed its own risk management template, the headings were to adhere to extant Army policy.

93. Soldier 14 stated that in his capacity that he was responsible for overseeing all training within 2 Cdo Regt. As such, he advised that he had reviewed the MACWO Risk
Management Plan in order to ensure that it was in accordance with extant doctrine and that appropriate controls were present. went on to state that he was particularly focused on determining that due diligence and rigour had been placed into the analysis. Overall, he was satisfied with the risk assessment and was of the view that the Medium risk tolerance was warranted.

advised that as OC OSC, he would review and amend unit draft risk assessments as required. Against the background of MACWO training that he had received earlier in his career, had identified some small points that he wanted amended in the Risk Assessment. However, as he was taking two days leave, he had authorised to sign it in his absence.

went on to stress that the responsibility did not rest with or and that he owned the MACWO Risk Assessment. When providing this advice, commented that having returned from leave, he revisited the Risk Assessment in order to ensure that his amendments had been incorporated. When pressed on whether any additional measures could have been incorporated into the risk assessment which may have prevented the death of SGT Francis, responded by stating ‘no.

Separate to the IGADF Inquiry, SOCOMD has undertaken a desktop review of the doctrine and procedures applicable to the MACWO training. Although the SOCOMD review had determined that the 2 Cdo Regt MACWO Risk Assessment was comprehensive, it noted ‘that there are no risks highlighted specific to the location and its geographical make up or climate at the prescribed time of the year and how these might be treated/minimised.’ The SOCOMD comments are similar to those made by the Inquiry at paragraph 84 relating to the planning of the exercise.

The desktop review subsequently recommended that an independent SOCOMD review of activity risk assessments be undertaken pending a determination by the SOCOMD Safety Manager as to whether there is a need to provide updated guidance to units on the development of MRM assessments.

Analysis/assessment of evidence

The nature and content of the MACWO Risk Assessment was a key consideration for the purposes of the Inquiry. If the Risk Assessment had been found not to comply with Army policy and guidelines, or had been substantially flawed, or had reflected significant shortcomings in content or executive oversight, then it may have been a contributing factor to the events of 16 July 2014. However, no substantial policy, procedural or compliance issues were identified to suggest that the Risk Assessment had not been undertaken in a competent and thorough manner and that it had not served its intended purpose.
99. SGT Francis was appropriately tasked with preparing the Risk Assessment as the MACWO SME. In doing so, it was apparent that he had expended considerable time and effort towards ensuring that the Risk Assessment was robust and that it possessed the necessary utility and flexibility to meet MACWO Course requirements. In particular, SGT Francis demonstrated a comprehensive and thorough understanding of the applicable policy guidelines and administrative requirements with a strong and recurring emphasis on safety compliance and member welfare.

100. SGT Francis was not alone in relation to the development and implementation of the Risk Assessment with his work being monitored by and and . were particularly well placed to perform this task as both members were MACWO trained and could therefore directly relate to the matters at hand and could provide guidance and advice to SGT Francis as necessary. The evidence of these members indicates that they had conducted a comprehensive and careful review of the risk assessment culminating in a Medium risk tolerance threshold. The risk tolerance threshold enabled the MACWO Course to proceed albeit subject to periodic review to adjust risk controls if the risk level increased. In addition, and did not consider that any amendments to the Risk assessment were required in hindsight.

101. The only omission identified with the Risk Assessment related to the time of year and the training location not being identified as threats to be managed. The omission was minor in nature and is unlikely to have affected the Medium risk tolerance threshold had it been included in the Risk Assessment in the first instance. However, in the interests of further strengthening the Risk Assessment, time of year and location should be included for future MACWO Courses. Accordingly, and arising from the SOCOMD desktop review of the doctrine and procedures applicable to the MACWO training, the Inquiry agrees that it would be in its interests of SOCOMD to provide updated MRM guidance to 2 Cdo Regt and other affected stakeholders leading to an enhanced MACWO risk management and overarching planning framework.

**FINDING:** The MACWO Risk Assessment was prepared by SGT Francis in accordance with Army policy and guidelines. It identified threats, associated risk impact, standard controls, the inherent risk level, additional controls considered and residual risk level.

**FINDING:** The Risk Assessment identified four principal threats including C3, SF roping, SF climbing/mountaineering and MACWO. A further sub-set of eight threats with corresponding management and mitigation actions was annotated against MACWO.

**FINDING:** The Risk Assessment identified the overall risk tolerance threshold as being Medium.

**FINDING:** The Risk Assessment omitted to include the time of year and the training location as being threats to be managed. The omission was minor in nature and would not have affected the Medium risk tolerance threshold from being applied.

**FINDING:** SGT Francis was thorough and considered when preparing the Risk Assessment despite the two identified omissions.

**FINDING:** SGT Francis was subject to oversight by and when preparing the Risk Assessment. Each member endorsed the contents of the Risk Assessment and did not identify any amendments in hindsight.
RECOMMENDATION: SOCOMD provide updated risk management guidance (time of year and location) to 2 Cdo Regt and other stakeholders leading to an enhanced MACWO risk management and overarching planning framework.

SUB-DIRECTION D - THE EQUIPMENT

102. [Soldier 1] advised that he is responsible for maintaining, fitting and issuing the MACWO equipment held by 2 Cdo Regt. Although the equipment holdings are not large, [Soldier 3] stated that there were sufficient items to run a MACWO Course for up to 20 members. When asked whether there were any issues with the equipment, [Soldier 4] responded by stating that 'it was all fine.' A list of the MACWO equipment is at Enclosure 56.

103. [Soldier 1] also advised that there were no issues with the MACWO equipment. While he stated that the unit could always do with more equipment, it had enough to do the job and that he could not think of any additional items. In relation to the other witnesses, [Soldier 2] advised that they had plenty of equipment and that it was in good condition whereas [Soldier 5] advised that most of the equipment was new and that it had performed satisfactorily. The matter was raised with the other Course members with similar viewpoints being expressed.

104. Notwithstanding his satisfaction with the MACWO equipment, [Soldier 1] mentioned that SGT Francis had wanted to purchase full-length skis (about 170 centimetres in length) as opposed to short skis (about 100 centimetres long). However, budget restraints had prevented him from doing so and the choice was made by SGT Francis to purchase the short skis. When asked to provide further comment, [Soldier 2] stated that short skis provide the ability to cover ground and to ascend vertical obstacles. In particular, short skis can be positioned on the back without affecting the climber's centre of gravity. In relation to full-length skis, [Soldier 1] advised that they were better for skiing. However, he then went on to advise that full-length skis can be a hindrance when carried on the back over vertical terrain or through woodlands. As it was unclear whether [Soldier 6] reference to full-length skis was of any consequence from a broader Inquiry perspective, additional comment was sought from [Soldier 4].

105. [Soldier 1] confirmed that 2 Cdo Regt had been unable to purchase full-length skis due to funding considerations. However, as travel to Mount Cook in-part required transport by helicopter, he advised that short skis were easier to accommodate while on-board the aircraft. Accordingly, full-length skis would not have been taken to New Zealand even if they had been available. Overall, [Soldier 4] did not appear to be unduly concerned by the non-purchase of full-length skis resulting in [Soldier 1] associated comments not concerning the Inquiry.
Analysis/assessment of evidence

106. The MACWO equipment held by 2 Cdo Regt was sufficient to meet ongoing training requirements. Furthermore, most of the equipment was new, it was well maintained and performed without any shortcomings. Although full-length skis were not purchased due to budget restraints, that equipment would have had limited utility due to vertical terrain, rotary air travel and other ancillary considerations.

FINDING: Soldier I was responsible for maintaining, fitting and issuing MACWO equipment for 2 Cdo Regt.

FINDING: Although Soldier I advised that there was sufficient equipment to run MACWO Courses, budget restrictions had prevented SGT Francis from purchasing full-length skis and a choice was made.

FINDING: Soldier I confirmed that full-length skis were not purchased due to budget restraints. Soldier I also advised that full-length skis would not have been taken to New Zealand if they had been available due to terrain, transportation and ancillary considerations.

FINDING: No dissatisfaction was expressed by MACWO Course members in relation to the available equipment.

FINDING: There is no evidence that the current MACWO equipment contributed to the death of SGT Francis.

FINDING: There is no evidence that a lack of MACWO equipment such as full-length skis contributed to the death of SGT Francis.

SUB-DIRECTION E - THE CONDUCT OF THE EXERCISE (MACWO COURSE)

Background

107. As previously indicated, the 2 Cdo Regt MACWO Course was to be conducted in four phases, including a Preliminary Phase (pre-deployment), during the period 09 July - 05 September 2014. The two field training modules were Phases One and Three, to be conducted in the Southern Alps in New Zealand and in the Snowy Mountains/Kosciuszko National Park in NSW, respectively. Phases Two and Four were to comprise lectures, demonstrations, administration and refit.

108. The MACWO Phase One training module was conducted in the Mount Cook National Park in New Zealand commencing on 12 July 2014 and was due to be completed on 26 July 2014. The purpose of the Phase One module was to provide initial and continuation training of technical mountaineering skills for the students and MACWO Operators, as well as currency training for the MACWO Supervisors. The Mount Cook National Park had been utilised as a MACWO training location since 2010 as it provides a complex alpine environment not found in Australia.
109. Phase One training comprised 10 personnel, which included two MACWO Supervisors (SGT 'Frankie' Francis, OIC, four MACWO Operators, and four students). While the two supervisors instructed on the Course, the four MACWO Operators acted as assistant instructors conducting some of the lessons for the four students undergoing initial training.

Evidence

110. Information concerning the conduct of the MACWO Course was primarily obtained from the Course participants in particular, and who was SGT Francis. Generally, there was no disagreement concerning the description of the day to day sequence of events; however, some witnesses due to their appointment, their experience and their involvement and location at the time of a particular activity, had a greater knowledge than others of events, and in some cases a different perspective on what occurred.

111. Throughout the following discussion of the evidence, reference is made by footnote to particular witnesses. In most cases more than one Course member is able to provide evidence on a particular event, so evidence of one witness may be referenced as being indicative of the general agreed evidence, or because he provides a more detailed and concise explanation of what occurred.

Preliminary Phase 09-11 July 2014

112. The Preliminary (pre-deployment) Phase of the MACWO Course was conducted at 2 Cdo Regt between Wednesday 09 July 2014 and Friday 11 July 2014. During this period the Course members familiarised themselves with their equipment and attended a series of theory and practical lessons.

113. The in-depth lessons were developed and delivered by SGT Francis and included cold weather injuries, avalanche, avalanche terrain, weather patterns, how the weather can affect snow stability, snow pit analysis and roping techniques used for glacial movement etc.

Phase One: Deployment to New Zealand, Mount Cook and Plateau Hut

114. The MACWO Course departed Sydney for Queenstown on Saturday 12 July 2014 and remained in location until Monday 14 July 2014. During that time additional warm clothing, food and other essential and personal items were procured in order to sustain the group once they had moved forward to Mount Cook. At no time was alcohol purchased nor was it consumed in the lead up to the incident on 16 July 2014.

115. On Monday 14 July 2014, the group departed Queenstown at approximately 0900 hours and travelled by road to Mount Cook Village. Having arrived at the village at approximately 1400 hours, SGT Francis attended the DOC - Visitor Centre. In doing so, he finalised a number of administrative requirements, including lodging a Notice of Intentions form indicating the names of
the group members and the dates that the group was planning to be on Mount Cook. However, as SGT Francis carried out these actions alone, the inquiry was unable to specifically determine what DOC advice had been provided in relation to conditions on the mountain. Nevertheless, SGT Francis did not appear to be concerned at the time, and provided a short brief to other Course members on the expected good weather conditions on the mountain and that the Plateau Hut had been vacant for two months.

116. A member of the New Zealand Mount Cook Alpine Search and Rescue (SAR) team at that time, and an employee of DOC, provided evidence to the Inquiry on the type of information the DOC Visitor Centre made available to visitors. This information includes past, current and future weather conditions and forecasts, the current avalanche risk, the stability of the snow pack, and whether other groups were in the huts that day. The Visitor Centre also holds a ‘Conditions Book’ behind the counter that is available for anyone to access and read. The book contains information on the mountain conditions for particular areas, provided by any mountain guide, amateur climber or any skier who has been in that area in the previous few days. Although the persons at the front desk of the Visitor Centre may not have lot of mountaineering experience they have access to experienced persons like Civilian 1, who they would ring if a visitor had a question about a particular location that the staff could not answer. Civilian 1 was not aware of any incident involving a crevasse fall in the area around that time.

117. During the afternoon of 14 July 2014, the group and their equipment and stores were transported by helicopter in a series of airlifts from Mt Cook heliport to Plateau Hut, which is about 18 kilometres away on the edge of the Grand Plateau, at an elevation of approximately 2 200 metres. The weather at the time was good, that is sunny with little wind, and remained unchanged up to and including the incident on 16 July 2014. The airlift was completed by approximately 1700 hours with the remainder of the day being spent settling into the hut and preparing equipment. In addition, an initial safety briefing was conducted along with monitoring the DOC weather updates.

Grand Plateau Location

118. To assist in understanding the Course events and activities that took place over the next two days on the Grand Plateau (a glacier), a series of numbered relief maps of the Mount Cook and Grand Plateau area (showing Plateau Hut) are at Enclosure 58; and series of marked photographs showing the incident site on that day are at Enclosure 59. The maps and photographs are referred to throughout the evidence.
Day prior to the incident

119. On Tuesday 15 July 2014, the day’s activities commenced at around 0900-0930 hours with a safety briefing being delivered by SGT Francis. It was followed by an outline of the planned training activities which included avalanche transceiver testing, snow pit analysis and skiing. The initial training was to take place in the vicinity of the hut as it was considered to be a safe area due to its location on a rocky ridge and away from the glacier.

120. Nevertheless, and before moving from the immediate vicinity of the hut on unknown or unproven ground, all members were roped together on skis with two or three people to a rope with a separation of approximately 10 metres. Although rope training had been undertaken during the pre-deployment phase, SGT Francis and other checked to ensure that each person had been tethered correctly as part of the ongoing safety precautions.

121. The group moved from the hut on skis in a northwest direction toward the top of the Grand Plateau following the 2200 metre contour shown on Relief Map 2 in a region where there had been a rock fall from Mount Dixon a few years earlier. The group travelled up to 800 metres from the hut across the width of the Grand Plateau. In this area there was little likelihood of crevasses. Although considered a safe area, members were still required to stay within defined tracks once they had been established.

122. No incidents were reported throughout the day with all tasks having been completed by 1600 hours. Against this backdrop, SGT Francis’s demeanour was described as being happy due to being in his (mountain) environment. The outlook of the rest of the MACWO Course members was also described as being happy.

123. The snow pit analysis had revealed the condition of the snow to be very good. The snow was assessed to be fine in texture, approximately 35 centimetres deep and with no apparent weak or inconsistent layers. The MACWO assistant instructors had observed the analysis as had the two supervisors, with noting that the various tests conducted indicated that the snow was ‘fairly’ (meaning ‘very’) stable. It is likely that SGT Francis also shared this view.

124. During that Tuesday afternoon, advised that he and SGT Francis had become increasingly mindful of the avalanche activity that had been occurring around them. In particular, they had identified ‘two fairly big events up the top’ (referring to avalanches), in addition to other events going off on the Linda Glacier. As a consequence, SGT Francis and formed
the view that for the ice climb, which was scheduled to be conducted the following day, they would not go up top as the rock surface would be too loose. Instead, they decided that on the Wednesday they would look for a crevasse to undertake this activity.

125. A series of presentations were undertaken in the hut during the evening which included the use of crampons, ice axes and self arrest techniques. As an extension of these presentations, SGT Francis outlined activities for the next day which included crevasse rescue training comprising a self rescue and an assisted rescue; in addition to an ice climb using ropes and crampons. Following a kit and equipment check, and after receiving an updated DOC weather report, the group retired to bed at approximately 2200 hours.

Day of Incident: Wednesday 16 July 2014

126. Photograph A, at Enclosure 59 depicts the Grand Plateau area (running from right to left) with the incident site marked in the left bottom corner. Plateau Hut is not shown on the photograph, but is located off to the right as indicated. The photograph was taken from the SAR helicopter around 1300 hours as it approached the incident site, and shows the MACWO Course members at the incident site and the ski tracks (the route) taken by the Course members and supervisors that day. This photograph was shown to witnesses at interview, and used to assist in describing the events on the day.

127. The area to the top of the photograph is the snow covered Grand Plateau which has no visible crevasses and few hidden crevasses likely to be of concern. When moving toward the bottom of the photograph following the ski tracks and to the incident site, crevasses start to appear at the start of Hochstetter Glacier which flows in an easterly direction into the Tasman Glacier. Here the terrain takes on a crater like appearance with many steep and deep crevasses.

128. The terrain near the Hochstetter Glacier was described by a qualified and experienced New Zealand mountaineer and guide, and a member of the SAR team that flew up to the incident site as follows:

_It's a very heavily crevassed area. There's big crevasses there, because if you think of the Grand Plateau as a lake of ice and the Hochstetter as a rapid that flows out of that lake, and they were on the boundary between the ice that's quite slow moving and the stuff that's fast moving. So it's getting - there's a lot of tension and it gets pulled apart. And if you look down on that zone from - for example if you were up on Mount Cook, you will see a big ring of concentric crevasses, not entirely symmetrical, of course, that radiates out from where it all flows down. So it's a pretty active part of the glacier._
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129. At about 0900 hours on Wednesday 16 July 2014, SGT Francis delivered a safety briefing at the hut area which emphasised the requirement for members to stay on the proven tracks. The weather was clear and sunny and the wind had dropped and conditions were improving. The crevasse rescue was to be undertaken during the morning with the ice climb to occur during the afternoon. Each activity required different conditions with the crevasse rescue training to be undertaken near the Hochstetter Glacier which is adjacent to and running East South East from the Grand Plateau.

130. A site for the ice climb had not been determined. Initially, the intent had been to conduct the ice climb and ice axe arrest practice on steep ground north of the Plateau Hut in the vicinity of Glacier Dome. However, following SGT Francis's and Soldier I discussion the previous afternoon, a decision was made by them that morning for safety reasons not to use the high ground or peaks to conduct the activity, but to look for a crevasse for ice climbing on the Grand Plateau down near the Hochstetter Glacier.

131. The MACWO Course set off, ‘unroped’, from the Plateau Hut at approximately 0930 hours, initially following the direction they took the previous day. Upon reaching the Grand Plateau the group headed in a south west direction down the centre spine of the plateau. Although this was new ground on the glacier, the absence of being roped was not raised with SGT Francis as it appears that the most of the MACWO Course instructors were not concerned as that ground had been checked the day before, and that it was not considered to be a high risk area. However, Soldier 2 indicated in his evidence that he wondered why the decision was made not to rope up but went along with it. It was travel over a slow moving glacier and the likelihood of crevasses was low at this point. The group was instructed by SGT Francis to stop before the first known crevasse area.

132. The group proceeded down the Grand Plateau and stopped where indicated by the tracks on Photograph A, where a lesson in anchor training was to be conducted by Soldier 8 as a precursor to the crevasse rescue training. However, while making their way down to that location the group had observed a small avalanche taking place off Mount Silberhorn (as can clearly be seen in the top of Photograph A). In response to the event, SGT Francis directed Soldier 7 to take the students to inspect the avalanche debris as part of their training in snow recognition. The members remained unroped during the avalanche inspection as they remained in the area at the top of the plateau that was considered to be safe, based on the terrain and skiing the day before, and because SGT Francis indicated that they did not need to be roped up.

133. As safety was a key consideration in relation to the conduct of the exercise, the Inquiry asked Soldier 1 during interview to revisit the ground and ice conditions at the time. Soldier 1 advised that there was no evidence of crevasses in the immediate surrounding of the avalanche. In addition, the snow was solid underneath with members only going down between five
and ten centimetres on their skis. When not on skis, advised that they would go down another 10 or 15 centimetres with a snow probing depth of approximately 30 centimetres.

134. Notwithstanding these conditions, and as an added safety precaution advised that he had ropes and anchors available while only allowing two students to move forward to the avalanche site at any given time following tracks established by him. Along the way the students practiced probing the snow and were taught how to read the terrain and the snow. Having viewed the avalanche debris and the snow composition, the students returned to the point on the Grand Plateau where the ice anchor lesson was to be conducted.

135. While the avalanche inspection was taking place, SGT Francis, and roped themselves together and proceeded further down the Grand Plateau (with SGT Francis in the lead) toward the start of the Hochstetter Glacier (as shown in Photograph A), so as to identify a suitable locality to conduct the crevasse rescue training. There was no discussion about roping, as it was an ‘automatic’ decision to do so in recognition of the unproven ground upon which they would travel, which was no longer over the landslide rock debris covered area of the Grand Plateau, but toward the Hochstetter Glacier where there were signs of crevasses (which was the object of their search). A second member of the Mount Cook Alpine SAR team described that area as follows:

> It was heavily crevassed. The area they were in is near the top of the Hochstetter Icefall. So what happens is that the Grand Plateau area is a large sort of glacial cirque which drains into the Tasman Glacier through the Hochstetter Icefall. So they were at the very edge of the Grand Plateau where the glacier begins to drain into the Tasman. So they were in the very early part or the very early area of the glacier where it starts to sink, if you like, or break away and tumble into the Tasman Valley. So it is generally regarded as a very serious area.

136. A site was located by SGT Francis and his team comprising two adjacent holes being approximately three metres and six metres in depth, respectively. The holes were assessed as being suitable for the crevasse rescue training as the students could walk out should they be unable to complete the exercise. (The holes or crevasses and the ski tracks to, and around them, can be seen in the centre of Photograph A at Enclosure 59.)

137. The site was considered to be safe following a figure of eight movement around the two holes. This action was accompanied by a series of snow probing tests which were undertaken so as to identify any weak areas in the snow. The snow was described as between 20 and 25 centimetres deep and on skis you sank in around five centimetres.

138. advised the Inquiry that he had noted the presence of a 30 centimetre crevasse during the examination of the site. described it as a narrow crevasse about a
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person’s foot wide in the eastern side of the first crevasse (marked 1 on Photographs A and B), which was selected for the crevasse self rescue. He did not know how deep it was and probed it open a little so it could be seen by the students. [Soldier 4] was not concerned by the hole, as long as you knew it was there, noting it was too narrow to fall into, the skis easily bridges the gap, and the snow around it was firm. SGT Francis was in the lead at the time and had passed the small opening first and had said nothing.

139. [Soldier 1] later stated that this information had not been brought to his attention. However, while it is unclear as to whether SGT Francis had actually sighted the hole or not, [Soldier 1] believes that he did, and when he mentioned it to SGT Francis, he appeared not to be that interested in it. Accordingly, while its significance to SGT Francis’ decision to conduct the subsequent reconnaissance ‘unroped’ is not known, the inference to be drawn from [Evidence] is that it had little effect on that decision.

140. Having secured the site from a safety perspective, [Soldier 1] and [Soldier 4] remained in-place to prepare for the crevasse rescue training. At this time, SGT Francis returned to the MACWO Course members to direct them to the crevasse rescue training site. When doing so, SGT Francis advised the Course that the ground was ‘extremely firm’ and that all of the ice bridges were consistent and holding. However, as matter of safety the Course members were told to follow the established or proven tracks down to where the training was to occur, that is, the tracks that SGT Francis has used to traverse to and from that area.

141. Between 1030 and 1100 hours, the MACWO Course members arrived to undertake the crevasse rescue training. A safety briefing was delivered by [Soldier 2] which directed the MACWO Course members not to go any closer than three metres to the edge of the holes unless connected to a rope and under the supervision of a MACWO Supervisor, or Operator (assistant Instructor). In addition, no movement was to take place off the defined track and there was to be no movement without skis. Following the safety brief, [Soldier 4] was lowered into one of the holes by [Soldier 2] with the students moving into position whereby they could watch the self rescue demonstration. Helmets were to be worn for this activity.

142. Once the demonstration had been completed, [Soldier 2] directed the four students to pair up with one of the four assistant instructors and to dig themselves a snow anchor before commencing the self rescue activity. It was at this time that [Soldier 2] had noticed SGT Francis and [Soldier 1] moving off. While the reason for them to do so was not apparent to [Soldier 2] at the time, he noticed that they were unroped which prompted him to think ‘you guys should be roped.’ However, he did not make his thoughts known to SGT Francis and [Soldier 1] as they disappeared over a hill and out of sight.
143. As a consequence of their discussion on the previous day concerning the dangers of avalanches around the higher peaks, SGT Francis and Soldier 1 decided to look nearby on the lower slopes for a crevasse to undertake the ice climbing activity while the other students and assistant instructors continued with the self rescue lesson. They first moved off in an easterly direction as seen by a track in Photographs A and B near the two crevasses used for the self rescue activity. Soldier 1 confirmed that he had not been roped to SGT Francis nor had it been a matter of discussion between the two. The absence of communication between the two did not signal any unwillingness by Soldier 1 to question SGT Francis as he had readily questioned him in the past. However, Soldier 1 advised that it was more a case of having that much confidence in SGT Francis, like a ‘CO’ and not needing to think about questioning him. When asked whether he was scared or fearful at the time, Soldier 1 responded by saying ‘no’, which appeared to be a genuine statement on his behalf.

144. SGT Francis had taken the lead when moving off. They left their packs, which included their ropes and ice axes, behind in the vicinity of the other Course members. Soldier 1 described their actions as being very tentative accompanied by looking around and probing with their ski poles while at the same time maintaining a separation of approximately 10-15 feet. When asked whether he thought it was a proven (safe) area, Soldier 1 responded by saying ‘no’; and why he didn’t rope up, he advised that ‘you don’t always rope up’ and that by being on skis was a sufficient mitigating factor. Furthermore, SGT Francis was in the lead and ‘he was the guy making the assessment.’ He later advised that by not carrying packs they were ‘nice and light.’

145. SGT Francis and Soldier 1 continued in an easterly direction along the first track (as shown on Photographs A and B) for about 30-40 metres looking at various features along the way. Soldier 1 described coming to an edge of a crevasse which was ‘hard ice’ and SGT Francis reaching what he assessed as an ice bridge over that crevasse. After some poking, the suspected ice bridge did not give way, but SGT Francis decided to turn back. Soldier 1 who was following had diverted off in a northeast direction for a few metres to look for an ice face along that crevasse and found none that were suitable for the ice climb. They returned on the same track toward the crevasse where the Course members were conducting their self rescue activity, and just before they reached that crevasse they turned in a southerly direction (see Photographs A and B at Enclosure 59, where the tracks intersect below the crevasse marked 1, and turned left).

146. In the vicinity of that location (intersection of tracks), Soldier 1 briefly stopped and then followed SGT Francis on what was described as ‘fairly solid’ ground with snow coverage of approximately 30 centimetres resulting in his ski stocks penetrating half way in some places. Again, Soldier 1 reiterated that the skis were keeping them on top (sink about five centimetres). When asked to provide a further description of the ground in order to obtain a greater insight as to why they were moving forward over unproven ground unrope, Soldier 1 stated that they were on a convex slope which suggested that they were on an ice ridge without the presence of any depressions (depressions were indicative of possible hidden crevasses). (Photographs A and B at Enclosure 59 show the convex nature of the slope.)
147. An assessment of the snow and ground conditions in that area was supported by the evidence of an experienced MACWO Operator. He later added that, ‘on that day he would have probably have done exactly the same as [SGT Francis] did’, that is, traversed the immediate area unroped having done an initial reconnaissance roped and assessed the stability and the strength of the snow packing around the crevasse field as good with no indicators of any hidden crevasses. However, he also stated that this was the first time that he had traversed a crevasse field on skis, having normally been on crampons and roped.

148. Followed SGT Francis up a slight climb along this convex ridge about five to six metres behind him reaching a small summit (as shown on the photographs A and B at Enclosure 59), before levelling off and descending on a very gentle slope. On this new route, and as they got further away from the Course members, there still had not been any discussion between them about roping.

149. Advised that he continued to watch SGT Francis who would stop, probe (in about 30 centimetres of snow) and talk about what he was feeling to the effect; ‘pretty solid’, ‘pretty good’ and ‘can’t see any depressions’ or openings. Indicated that they were heading in that direction towards some potentially suitable ice faces at the extreme left edge of Photographs A and B (up to a further 50 metres away), and stated that they were ‘chasing ground’. In doing so they were making assessments every five metres to the effect; ‘not really suitable’, or ‘that might be good down there.’

150. As they continued down the slight slope, assessed that the area on the convex ridge they were travelling on was good and solid in about 30 centimetres of snow and sinking on skis only about 5-10 centimetres and in his mind not necessary to raise the issue of roping with SGT Francis. The ‘chasing ground’ observation by was triggered by a realisation during interview that in their endeavour to find a suitable ice climbing location away from the mountains tops which they considered unsafe, they had moved approximately 75-80 metres from the main group and were out of sight. This then appeared to cause some disquiet to him, and he agreed that in hindsight they should have considered roping up, but given the difficulties in arresting another person’s fall while roped as a two, he commented: ‘...as a two, I think we should have probably gone back and said, “Okay, we’ll go down there in groups and make further assessments,” you know. I think that would be a mitigation now that I’d [look] at [it].’ (Roping is discussed in Sub-Direction F - Whether relevant instructions and procedures were followed.)
151. By this stage (which was about 130 hours), SGT Francis had travelled about 30 metres down the ridge from the small summit. SGT Francis was about five metres behind and while he was watching SGT Francis probe, he had seen him fall through the ice. When asked for a more detailed description of the incident, SGT Francis stated that SGT Francis had just finished probing - he wasn’t going deep and he was probing hard, so he was getting only 15/20 centimetres, and he put the stock back in his hand, went “Whoo” and was gone. He had ‘disappeared in a second flat’ and had fallen feet first and straight down.

152. Soldier believed that there was no way SGT Francis could have arrested his fall and that the action was akin to going through a trap door. The cavity was the width of a manhole; ‘...his arms created that width, literally but didn’t slow him down.’ Moreover, the only noise that heard from SGT Francis was the ‘Whoo’ which is the noise one would normally make having lost his footing. (See Photographs C and D at Enclosure 59 showing hole.)

153. At interview indicated that he been over the scenario a thousand times as to whether being roped to SGT Francis would have allowed him to arrest his fall. He explained the arrest procedure on skis and the difficulties involved for a single skier to arrest another person in that situation, even for good skier like himself. Although crevasse rescue training is normally carried out on crampons with an ice axe and not practised on skis, was genuinely convinced that he could not have done so on skis with only poles, and that he would have gone into the crevasse and died.

154. Soldier supports view on the ineffectiveness of arresting a fall when roped as a pair. He explained in some detail the arrest and rescue procedure used on skis and the difficulties with only poles concluded by saying that he had ‘no doubt in [his] mind that [he would] have gone in’ [to the crevasse]. In a subsequent interview indicated that the snow depth in the location of the fall was not as deep as the other areas, and maybe only about five centimetres before becoming compressed, making it very difficult to self-arrest, let alone someone else falling. Although he had little experience with doing self-arrests on skis, and has never undertaken a crevasse rescue on skis, he believed the sudden free fall of SGT Francis would have left little time to react at all and with the lose heel of the short skis it would be very difficult to get them into the ground. Based on an experience on the 2013 MACWO Course where a student on crampons failed to arrest the fall of another person during crevasse rescue training, he was convinced that would not have been able to arrest the fall of SGT Francis if they had been roped.

155. After witnessing the fall of SGT Francis, moved halfway towards the cavity and started to call for him. While he received no response from SGT Francis, he was not deterred as it is hard to hear in a crevasse. was hoping at the time that SGT Francis was ‘10 feet down, a little bit bruised and battered or lying in a small compression, waiting for me to
conducted a rescue. (He subsequently ascertained that the hole was about a metre wide in the middle of a three metre bridge across a deep crevasse.)

156. Soldier was later to observe that SGT Francis had ‘possibly fractured the freeze-thaw-freeze-thaw layer in the weakest part of the bridge’ by hard probing, but that the remainder of the ice bridge was so hard it had to be cut and dug out when extricating the body. Soldier also advised that they had been caught out by the angle of the crevasse. Normally, skiers would attempt travel at ninety degrees to a suspected hidden crevasse. However, in this instance they had unknowingly been travelling almost parallel to the crevasse with the implication that there was the potential for a greater concentration of weight on the weaker part of the ice bridge. The evidence from Soldier also indicated that the angle of the approach was not at right angles, but around 70 degrees as marked by him on photograph E at Enclosure 59.

157. Soldier then immediately proceeded to alert the MACWO Course members of the incident and to get their help. In order to do so, he needed to turn around and travel about half way up the slope (around 10-15 metres) so as to be in sight of the group who were back at the crevasse undertaking the self rescue activity. Soldier shouted to them to bring rope and his pack with had the first aid kit, and he may also have shouted to them to ‘rope up’ and ‘stay on the tracks’. The subsequent events are addressed under Sub-Direction J – The Rescue and Recovery Actions.

158. When looking at the incident in hindsight, Soldier stated that he was in his comfort zone behind SGT Francis, whom he trusted implicitly with his decision-making process, and that he possibly should have questioned him regardless of the level of trust between them. That said, Soldier stated that ‘the risks had been assessed at the time, we thought it was a good piece of ice’, but ‘we were caught out by the angle of the crevasse. We were caught out by the snow conditions underneath that crust layer’ of the ice. Soldier added that had SGT Francis thought that ‘there was a serious risk of falling ...., then he would not have gone there. He’s got a wife and kids and he is not an idiot.’

159. When asked about his earlier reference to chasing ground, Soldier did not offer any additional comment other than stating that ‘all commanders do [chase ground] and that’s no excuse’. The response was interpreted to mean that SGT Francis and Soldier may have become fixated on the task to find a suitable ice climb site and that they may have inadvertently travelled further over the ice than they realised.
In summing up his views, Soldier I emphasised that SGT Francis's focus was to make everybody safe. However, he observed that the cause of SGT Francis's death was most likely the same as that of 'every experienced, qualified mountaineer that gets killed; [he] gets probably killed by his own experience.' Soldier I agreed that what he meant by this statement was that SGT Francis's experience allowed him to make a judgment that there was a very low risk of falling into a crevasse and, therefore, it was not necessary to take any roping measures. He then commented: 'Which was wrong. ... The horrible thing to admit is that he got it wrong on the day because he’s dead. If he had got it right on the day, he would be alive. I got it wrong. I didn’t get it right on the day either, but luckily I was 10 feet behind him.'

Analysis and assessment of evidence

An examination of the conduct of the MACWO Course revealed no undue training, logistical, organisational or supervision anomalies or omissions.

The activity was supported by pre-deployment training prior to departure from Australia which imparted to the MACWO Course members baseline knowledge and skills. Upon arrival in New Zealand, the focus shifted to logistics and organisational requirements followed by a rapid appreciation of the prevailing weather and ground conditions on the Grand Plateau and surrounds through direct observation, weather reports and snow analysis.

Given the operating environment, safety appears to have been of paramount importance in the conduct of the MACWO Course. Regular safety briefs were provided and unproven or unsafe ground was normally treated with suspicion as evidenced by the MACWO Course members being roped until determined otherwise. Furthermore, the snow analysis suggested that the snow on the Grand Plateau was approximately 30-35 centimetres deep with no apparent weak or inconsistent layers, and that any ice bridges would be strong. Subsequently, SGT Francis had provided a brief that the ground around the crevasses or holes where the crevasse rescue activity was to be conducted was extremely firm and that all of the ice bridges were consistent and holding. The evidence of all MACWO Course members was that the applied safety precautions were appropriate and no student, including the assistant instructors, believed he was unreasonably subjected to any threat of injury.

While the two MACWO Supervisors; SGT Francis in his capacity as OIC and Chief Safety Officer, and Soldier I applied exacting safety precautions when the group were traversing unproven ground, it is apparent that the same roping precautions may not have been applied when they were transferring unproven ground in search of a suitable crevasse to conduct an ice climbing lesson. The Inquiry will never know precisely what judgement SGT Francis was applying when he decided to ski away from the group towards the top of the Hochstetter Glacier in search of a crevasse. However, Soldier I, an experienced MACWO Supervisor, and mountaineer, with a Royal Marine training background like SGT Francis, gave credible evidence as to why he was content to traverse the area unroped, albeit following SGT Francis whom he trusted implicitly, and this provides some insight into SGT Francis’s possible decision making process.

Fundamentally, Soldier I believed the area was safe to traverse in the manner they did, that is, unroped, moving slowly and probing the snow as they went. The factors supporting his belief included the good snow conditions upon a hard crust, the convex slope which they were traversing suggesting an ice ridge without any depressions and possible crevasses, and the safety afforded by
skis in spreading the weight with little sinking into the snow. His expertise is preferred to other experts with a contrary view as they had not viewed the terrain and the conditions. The Inquiry also accepts that [Soldier 1] has a genuine belief that roping with two persons on skis would have been ineffective in arresting a free fall into a deep crevasse; and had he been roped to SGT Francis, he would have fallen into the crevasse and died. This view is supported by [Soldier 2] who is convinced that if the pair had been roped, [Soldier 1] would have ‘gone in’. (The requirement to ‘rope up’, is further discussed in Sub-Direction F – Whether relevant instructions and procedures have been followed.)

166. It became apparent to the Inquiry that a combination of circumstances and these seemingly safe conditions may have led to SGT Francis and [Soldier 3] conducting their reconnaissance to find a suitable crevasse for the next lesson, in the manner they did, that is, as a group of two and unroped. At the time the four Course assistant instructors were paired with each of the four students to conduct a crevasse rescue lesson. This meant that any reconnaissance for the afternoon lesson would either have to be carried out by the two supervisors, or wait until the conclusion of the lesson in order to traverse the unproven area roped with three, as had been done earlier that morning when first entering the crevasse area. However, whether or not this was a consideration in SGT Francis’s judgement, in light of [Soldier 4] and [Soldier 5] expert evidence and judgement of those snow, ice and ground conditions, the inference that may be drawn is that SGT Francis’s decision to traverse the area in the manner he did was more likely than not a reasonable assessment made by him based solely on those prevailing conditions.

167. In light of the available evidence, it would not be appropriate for the Inquiry to speculate in hindsight that SGT Francis should not have conducted the reconnaissance separate to the main body, that he should have been roped, and that he may have been ‘chasing ground’ and losing sight of the situation he was facing. Ultimately the decision to traverse the unproven area on skis and unroped lay with the OIC, the Chief Safety Officer, the most experienced mountaineer and the individual undertaking the traversing - which was SGT Francis. It is apparent that he and [Soldier 6] were caught out by the unexpected hidden crevasse and the thin ice bridge. Furthermore, the angle of approach to the line of the crevasse (parallel, rather than at right angles), meant the short skis did not travel across the line of the crevasse which may have made them less effective in preventing the fall through the ice bridge.

168. While a less experienced mountaineer may have roped automatically as a precaution, [Soldier 7] comment that every experienced mountaineer gets killed by his own experience is very apt. SGT Francis’s experience placed him in a position to be able to make an informed judgment that there was a very low risk of falling into a crevasse and, therefore, it was not necessary to take any roping measures. And in the words of [Soldier 8] this decision ‘... was wrong. ... The horrible thing to admit is that he got it wrong on the day because he’s dead. If he had got it right on the day, he would be alive. ...’ (The subsequent events following SGT Francis’s fall into the crevasse are addressed under Sub-Direction J – The Rescue and Recovery Actions.)

169. Safety Measures: roping, use of short skis and helmets. The Inquiry received evidence (often differing) on three matters relating to the conduct of MACWO Course and potentially contributing to SGT Francis’s death; namely, the wearing of helmets, the use of short skis, and most significantly, on the impact of the SGT Francis and [Soldier 9] not being ‘roped’ as a pair whilst undertaking their reconnaissance of the top of the Hochstetter glacier. Whether relevant
instructions, procedures and best practice were followed in relation to these matters, and the adequacy of those instructions and procedures, are examined in Sub-Direcitions F and G.

FINDING: The MACWO Course (Phase One) was conducted in the Grand Plateau and Hochstetter glacier regions of Mount Cook National Park in New Zealand with the group arriving at Plateau Hut late on the afternoon of 14 July 2014.

FINDING: The MACWO Course comprised 10 personnel, which included two MACWO Supervisors (Instructors), four MACWO Operators (Assistant Instructors); and four students.

FINDING: The conduct of the MACWO Course revealed no undue training, logistical, organisational or supervision anomalies or omissions.

FINDING: Safety was of paramount importance during the conduct of the MACWO Course. SGT Francis, the Office in-Charge and Chief Safety Officer, ensured that regular safety briefings took place, appropriate safety measures were in place and that the necessary safety precautions were taken for each activity.

FINDING: On 15-16 Jul 2014 the weather was sunny and there was little wind. Snow conditions were considered good with a firm layer of between 30-35 centimetres with no apparent weak or inconsistent layers on a hard base.

FINDING: When travelling over unproven ground (on short skis) for the first time on 15 July 2014, SGT Francis ensured that the Course members were roped together until the area was deemed safe.

FINDING: On 16 July 2014, the second day of activities, SGT Francis conducted his first reconnaissance on skis over unproven ground toward the Hochstetter Glacier in search of a suitable crevasse training site, roped with two other MACWO Operators.

FINDING: While the crevasse rescue lesson was being conducted at about 1100 hours on 16 July 2014, SGT Francis accompanied by I decided to look nearby on the lower slopes of Hochstetter glacier for a suitable steep crevasse to undertake an ice climbing activity. Without discussion they proceeded on skis unroped in a slow and considered manner with SGT Francis in the lead probing the snow every few metres, and then discussing with I the strength of the snow and ice underneath.

FINDING: The failure to rope was not questioned by I because he had the utmost confidence in SGT Francis, and in any event the decision was his to make as the person in the lead, who would be subject to the greatest risk. There was nothing about the condition of the snow, ice and the ground in the area that caused I any undue concerns, and which needed to be brought to the attention of SGT Francis.

FINDING: Between 80-130 metres from the main group while traversing a gentle convex slope, considered to be an ice ridge with no evidence of likely crevasses, SGT Francis, who was about five metres ahead of I was probing the 30 centimetre snow cover in a hard manner penetrating an estimated 15-20 centimetres; and then without warning fell feet first straight through the ice into a crevasse without any resistance to the fall, akin to going through a metre wide trap door.
FINDING: It is evident that both SGT Francis and [Redacted] were caught out by the unexpected hidden crevasse and the thin ice bridge on that convex sloping ridge, and that their angle of approach to the line of the crevasse (parallel rather than at right angles) could have negated any benefit from the wearing of skis in preventing the fall through the ice.

FINDING: Ultimately the decision to traverse the unproven area on skis unroped lay with the OIC, the Chief Safety Officer, the most experienced mountaineer and the individual undertaking the traversing; which in all cases was SGT Francis.

FINDING: [Redacted] holds a genuine belief that roping with two persons on skis would have been ineffective in arresting a free fall into a deep crevasse; and had he been roped to SGT Francis, he would have fallen into the crevasse and died.

FINDING: The judgment applied by SGT Francis in his decision to traverse the unproven area in the manner he did is not known; but given the expert evidence from [Redacted] and [Redacted] of the prevailing weather, snow and ground conditions, the inference that may be drawn is that SGT Francis’s decision was more likely than not a reasonable assessment of a very experienced mountaineer, that there was a very low risk of falling into a crevasse and, therefore, it was not necessary to take any additional measures such as roping. Tragically, his assessment proved to be incorrect.

SUB-DIRECTION F: WHETHER RELEVANT INSTRUCTIONS AND PROCEDURES WERE FOLLOWED

170. The relevant doctrine, instructions and procedures applicable to the 2 Cdo Regt SF MACWO Training Course fall into a number of categories including the:

a. requirement, authorisation and approval of the training course;

b. planning of the training activity, in particular the compilation of the risk assessment;

c. provision of suitable equipment, in particular safety equipment;

d. techniques and procedures associated with SF operations in mountainous and cold weather environments, including safety measures, roping, climbing and movement over snow and ice; and

e. matters associated with the aftermath of the incident, such as recovery action and post incident support to members.

171. The procedures applicable to the matters outlined in sub-paragraphs a., b., c. and e. above are dealt with under other sub-directions in this Inquiry.

172. The primary guidance on the techniques and procedures associated with SF operations in mountainous and cold weather environments is contained in an Australian Army publication: Land Warfare Procedures - Special Operations Forces, LWP-SOF 9-3-11, Mountain and Extreme Cold
173. As a general principle, the evidence received by this Inquiry was that the techniques and procedures used during the training and conduct of the MACWO Course were adequate and cognisant of the procedures and guidance contained in LWP-SOF 9-3-11 and other standard Defence operating procedures. This includes the provision of necessary mountaineering equipment, the safety precautions taken, the conduct of safety briefings; the analysis of weather, snow, ice and terrain conditions; and the training in techniques in snow travel, including skiing, roping and avalanche training.

174. However, the critical matter before the Inquiry relating to snow and ice travel techniques and procedures, which potentially may have contributed to SGT Francis’s death, was the impact of SGT Francis and [Soldier] not being roped together (‘roped up’), while undertaking their reconnaissance on skis at the top end of the Hochstetter Glacier.

Snow travel and roping requirement, procedure and practice

175. The two specific sections in LWP-SOF 9-3-11, dealing with snow travel and roping are paragraph 1.18, under the general heading ‘Terrain considerations’ covering the issue of being ‘Roped and Unroped’; and paragraph 7.72 in the Snow and Ice Travel section under the general heading ‘Glacial Travel’ covering ‘Roping Up for Glacial Travel’.

176. Paragraph 1.18 states:

**Roped and Unroped.** The decision to move either roped or unroped is dependent upon the likelihood of the potential for falls on steep terrain and encountering crevasses or avalanches and is complicated by the likelihood of contact with hostile forces. Advice should be taken from the most experienced member of the FE [Force Element] in this environment.

177. Paragraph 7.72 states:

**Roping up for Glacial Travel.** Roped travel techniques are an essential safety measure for all glacial movement, regardless of how familiar individuals are with the glacier or whether they believe they can see crevasses. Roping up is especially important in areas above the fir line, where the glacier gains more snow than it loses to melting, making it likely that snow covers some crevasses.

Essential safety measure: the requirement to rope

178. These two paragraphs may appear confusing when read together. However, it is clear that while roping for all glacial movement is an essential safety measure, it is not a mandatory requirement. The decision to move either roped or unroped, should be based on an assessment of the snow conditions and the likelihood of encountering crevasses, and relies on the advice of the most experienced member of the group. The paragraphs make no distinction between travelling on skis, snow shoes, or in boots wearing crampons.
179. This interpretation of the two paragraphs accords with the evidence from discussed above and that of other Course members, including the MACWO Operators, and . In their opinion the requirement to rope or not rope was ultimately a "judgment call" for SGT Francis (the most experienced member) based on factors such as the location, the snow and terrain conditions in the immediate area, whether or not is was proven ground, the likelihood of encountering hidden crevasses and the mitigating effect of skis when undertaking glacial travel. Furthermore, who trusted SGT Francis implicitly, was comfortable with traversing the area unrope, and believed that the assessment not to rope was reasonably open to SGT Francis given the snow and terrain conditions on the route taken.

180. However, the Inquiry noted the differing opinion of the senior MACWO operator on the course. has previously visited the Grand Plateau area on a number of occasions, and he recommended its use for MACWO training to SGT Francis over the Tasman Glacier because it was a more challenging area. He is of the opinion that SGT Francis and should have roped up when traversing unproven ground, in a known crevasse area, like the top of the Hochstetter Glacier. Having seen them head off unrope, he now regrets that he did not say something to them about roping up. indicated that it was his standard practice to rope up when traversing new ground on the Grand Plateau, even if on skis. Despite the good snow and terrain conditions already encountered at the first crevasse exercise area, would still have roped up because on his previous visits to the Grand Plateau he had learnt to expect the presence of hidden crevasses, and had fallen down a couple up to his waist when roped. After explaining crevasse rescue and arresting techniques while on skis, was confident that if SGT Francis and had been roped up SGT Francis's fall would have been arrested and he would still be alive.

181. The Inquiry interviewed three subject matter expert (SME) witnesses in mountaineering outside of 2 Cdo Regt. Two witnesses, and were members of the Mount Cook Alpine SAR. The final witness was a MACWO Supervisor and the SASR MACWO SME, holding a similar a position that SGT Francis occupied at 2 Cdo Regt.

182. All three witnesses stated they personally would not have traversed a known crevasse area near the Hochstetter Glacier 'unrope' on skis, regardless of the conditions at that time. However, on the issue of the requirement to rope, they all acknowledged that roping was not a mandatory requirement or practice for glacial travel, particularly when on skis. Ultimately, it was a matter of judgment for the person involved, in this case SGT Francis.

183. was a member of the original writing team for LWP-SOF 9-3-11, prior to its initial publication in 2008. He was asked what paragraph 7.72 was intended to convey when
referring to ‘Roped travel techniques are an essential safety measure for all glacial movement...’ [my emphasis], in light of paragraph 1.18, which provides a discretion to rope or not, based on advice from the most experienced member. He indicated that the guidance in the LWP was not intended to be prescriptive meaning that roping was not mandatory, but was ‘essential’ for any glacial crossing when the circumstances warranted it. This included when traversing a known crevasse area such as the Hockstetter Glacier and as paragraph 7.72 says, regardless of how familiar you are with the glacier or whether you believe you can see crevasses. In his opinion this meant that, ‘if you’re going to go to New Zealand and climb in an out of climbing season when you can’t see the crevasses, it’s even more important to stay roped up the whole time.’

Assessment/analysis of evidence

184. The evidence from all witnesses concerning the requirement to rope up when undertaking glacial travel was consistent. Standard operating practice amongst military and civilian mountaineers, which is imparted in military doctrine and guidance in LWP-SOF 9-3-11, is that the requirement to rope up is discretionary rather than mandatory, but essential when the circumstances warrant it. In the military environment the decision to move either roped or unroped is made by the person undertaking the activity after making an assessment of the snow conditions and the likelihood of encountering crevasses, and is informed by the advice from the most experienced member of the group. In this case SGT Francis was performing both roles.

185. Accordingly, while most witnesses would have traversed the area roped, the requirement to rope was a matter for the judgement of SGT Francis. In making the decision to traverse unroped, it has been inferred from the evidence that SGT Francis took into account the snow and terrain conditions, the mitigating effect of skis when undertaking glacial travel, and the likelihood of encountering hidden crevasses; and assessed that the risk of falling into a crevasse was very low. While that assessment and decision to move unroped was ultimately incorrect, SGT Francis was not in breach of Defence doctrine and guidance as contained in the LWP; nor is it apparent that he failed to follow standard operating procedures or practice for mountaineers in the civilian environment.

186. The critical issue in this case was the basis of that assessment by SGT Francis, that is, whether the conditions and the terrain in which he was operating warranted roping as an essential safety measure. The three independent SME witnesses all state that they would have automatically roped up in the known crevasse area at the top of the top of the Hochstetter Glacier, implying that the judgement and decision of SGT Francis not to do so was incorrect. This matter is further discussed in Sub-Direction F, dealing with the adequacy of the relevant training instructions and procedures, in particular in providing guidance on what circumstances warrant, or make it ‘essential’ to rope up.

FINDING: Relevant guidance on the techniques and procedures associated with Special Forces operations in mountainous and cold weather environments is contained in Land Warfare Procedures - Special Operations Forces, LWP-SOF 9-3-11, Mountain and Extreme Cold Weather Tactics, Developing Doctrine.

FINDING: Generally, the techniques and procedures used during the training and conduct of the MACWO Course were adequate and in accordance with the procedures and guidance contained in LWP-SOF 9-3-11. This included the provision of mountaineering equipment, the safety
precautions taken, the conduct of safety briefings; the analysis of weather, snow, ice and terrain conditions; and the training in techniques in snow travel, including skiing, roping and avalanche training.

FINDING: The two sections in LWP-SOF 9-3-11 dealing with the requirement to be roped with another person during glacial movement are paragraphs 1.18 and 7.72. When read together the paragraphs indicate that the requirement to rope up is discretionary rather than mandatory, but essential when the circumstances warrant it. The decision to move either roped or unroped is made by the person undertaking the activity, after seeking advice from the most experienced member of the group.

FINDING: The decision to move unroped when traversing the glacier was a matter for the judgment of SGT Francis, the person undertaking the activity and the most experienced and senior member of the MACWO Course, taking into account the snow and terrain conditions and the likelihood of encountering hidden crevasses.

FINDING: An inference is drawn from the available evidence that in making the decision to traverse unroped, SGT Francis took into account the snow and terrain conditions, the mitigating effect of moving on skis, the likelihood of encountering hidden crevasses, and assessed that the risk of falling into a crevasse was very low. While the assessment to move unroped may have been incorrect, SGT Francis was not in breach of Defence doctrine, guidance and procedures as contained in LWP-SOF 9-3-11; nor is it evident that he failed to follow standard operating procedures or practice for mountaineers in the civilian environment.

SUB-DIRECTION G: ADEQUACY OF RELEVANT TRAINING INSTRUCTIONS AND PROCEDURES

187. SGT Francis has complied with the general doctrine and procedural guidance requirements in LWP-SOF 9-3-11 concerning glacial travel. However, the decision to traverse the Hockstetter Glacier 'unroped' was ultimately incorrect and led to his death. Accordingly, the Inquiry sought to ascertain the adequacy of the LWP as the primary policy and training instruction for operating in mountain and cold weather environments, in order to ascertain whether any changes in that guidance could be recommended to assist in reducing the likelihood of future incidents.

188. The Inquiry was provided with a copy of a desktop routine inquiry (RI) review of doctrine and procedures applicable to MACWO training, which was undertaken by SOCOMD immediately following the incident. The RI noted that LWP-SOF 9-3-11 dealt with roping and climbing techniques and procedures needed to conduct MACWO in some depth. But the RI found one conflict in the publication surrounding the requirement to be 'roped or unroped'. That conflict related to paragraphs 1.18 and 7.72 (already identified in Sub-Direction F above). In the RI officer's opinion, the reference in paragraph 7.72 to roped travel as an 'essential safety measure for all glacial movement', regardless of familiarity with the glacier, was at odds with the general discretion in paragraph 1.18 to be roped, which is dependant on 'the potential for encountering crevasses' and informed by 'advice taken from the most experienced member of the group'. It was recommended
that the LWP ‘be reviewed to ensure specific requirements for the conduct of MACWO are covered, easily understood and consistent.’

189. In Sub-Direction F, this Inquiry has noted the potential confusion between the two paragraphs. Furthermore, the evidence provided to this Inquiry by [Redacted] has suggested that guidance on when to ‘rope up’ as an ‘essential safety measure’ when undertaking glacial travel on skis could be expanded, and other safety measures such as the wearing of helmets addressed. To assist in determining if any further guidance may be required, evidence was sought from three subject matter experts (SMEs) on their practice and procedures in the same scenario encountered by SGT Francis, including on the effectiveness of roping up in pairs when on skis.

190. [Redacted] is employed by DOC at the Mount Cook Village and has two roles, the first being the management of tracks and structures in the Mount Cook National Park area, and the second as a permanent member of the Mount Cook SAR team (for the last eight years). He attended the incident sight on 16 July 2014. [Redacted] is a qualified and experienced mountaineer and a member of the New Zealand Mountain Guides Association. He has completed about six years as a guide for glacier walks and has 15 years personal experience of mountaineering, comprising climbing and skiing in the Southern Alps. Due to his work [Redacted] is very familiar with the Mount Cook National Park area, which includes the Grand Plateau and the accident site.

191. [Redacted] is a volunteer member of the Mount Cook SAR team and attended the incident sight on 16 July 2014. He has about 25 years experience as a mountain guide and holds the highest mountain guide qualification from the International Federation of Mountain Guides Association. He is an assessor on the New Zealand Mountain Guides Associations’ winter ski guide courses. [Redacted] has undertaken about 15 ascents of Mount Cook and numerous treks on the Grand Plateau, and is familiar with the Hockstetter Glacier area where the incident occurred. In summary [Redacted] is an expert climber, roper and skier, first working as a ski instructor in 1977 in the Northern hemisphere.

192. [Redacted] and [Redacted] gave very similar evidence concerning the practices and procedures they employ when undertaking glacial travel in the Grand Plateau area. Their evidence is summarised as follows:

a. The Grand Plateau, particularly as you approach the Hockstetter Glacier, is heavily crevassed and constantly changing. In the early winter time the snow covers a lot of the crevasses, sometimes only with a thin snow bridge forming. The area is not used for ski touring or climbing activities in winter time, but both persons have carried out SAR crevasse rescue training there on a regular basis.

b. The normal mode of moving on the Grand Plateau is on foot with boots and crampons or snowshoes depending on the season and condition of the snow, and always roped. When in boots and crampons or in snow shoes, an ice axe would normally be carried, as well as one ski pole when in snow shoes.
c. Skis would only be used on the higher regions of the glacier where knowledge and experience indicates little likelihood of hidden crevasses and a relatively safe area. When on skis they rarely rope together as this can cause difficulties in manoeuvring or travelling quickly, particularly when roped in a group of more than two. Skis have the advantage over boots and snow shoes of spreading the load across the ground and can also bridge small crevasses more easily. They have never used short skis of the one metre length used by the MACWO Course, but use skis about 170-180 centimetres in length.

d. Probing the snow with ski poles is an effective way to test the ground in front of you for crevasses, but is not fail safe. Generally, if there is a need to probe on a regular basis in a crevasse area, that is an indicator that you should be roped.

e. Both have fallen into a crevasse up to their waist while roped, and arrested other persons who have fallen into crevasses while roped, with one falling straight through a thin ice bridge. On all occasions they were not on skis.

f. After explaining in detail how you would arrest another person falling though a crevasse on skis, they were very confident that given the snow conditions at the time of the incident they would have been able to arrest the free fall roped as a pair. Arresting a fall requires correct rope control and being on alert in a known crevasse area. They also use knots in the rope to increase the friction and resistance, should a person fall into a crevasse.

g. They have never practiced arresting the fall of another person with skis and poles, as opposed to practising with crampons and an ice axe. They would rarely be in a situation where they need to rope up on skis, and to practice an arrest and crevasse rescue with skis would be dangerous.

h. Under the Standard Operating Procedures (SOPs) the default position for moving in a known crevasse area, such as where the incident occurred, is to be on foot and roped. Even if on skis there would be a requirement to be roped until the area has positively been deemed safe using a thorough exploratory procedure.

i. On the issue of wearing helmets the standard practice is to wear them while undertaking SAR training, and personal climbing. The helmet sits high on the head and is designed to protect the wearer from being hit by objects from above when climbing. Helmets are not generally worn when skiing where there is little chance of being hit from above. On a commercial ski field helmets may be worm to protect you from other dangers not present on the high alpine areas.

193. In summary, who are experienced mountaineers with knowledge of the Mount Cook National Park region, would not have traversed Grand Plateau in the known crevasse area at the top of the Hockstetter Glacier on skis, but rather in crampons or snow shoes; and always roped and carrying an ice axe. In the rare circumstances that they were in a crevasse area on skis they would be roped, usually as a pair. They were confident that in such a situation they could successfully arrest the fall of the other person where a snow bridge had given way and one person had free fallen into a crevasse.

194. The third expert witness, is a qualified MACWO Supervisor and the SASR MACWO SME. He has had seven years continuous experience in the SF MACWO environment, and conducted five SF MACWO Operator courses two continuation courses (more recently held in
Colorado, USA), and four technical mountaineering courses in the Mount Cook National park on the Tasman and Fox Glaciers. He has also been the safety officer for a 27 man expedition in the Himalayas. He is a Climbing and Roping Supervisor and holds the equivalent civilian Certificate IV qualifications and emergency response instructor certificates. He has done extensive climbing in his own time.

195. Based on his experience as a MACWO Supervisor and a qualified mountaineer, has provided a detailed account of the practices and procedures he employs when undertaking glacial travel. His evidence is summarised as follows:

a. has not conducted training on the Grand Plateau, because on his previous visits to Mount Cook area he was advised by local alpine guides that the area had additional dangers over the Tasman Glacier, the latter being of sufficient difficulty to achieve the SASR learning outcomes. The Grand Plateau is littered with crevasses and there is no need from a military mountaineering perspective to go to extreme danger areas with unskilled troops.

b. Timing is very important for MACWO training in New Zealand. SASR conduct their training from late September through to January because there is less snow and less hidden crevasses. SASR practice their skiing and cold weather skills in Mount Kosciusko or Colorado where hidden crevasses are not a danger. The only reason to go to Mount Cook onto a glacier is train in the technical mountains skills of snow and ice climbing and crevasse rescue, and this can be more safely done in the spring/summer period.

c. When operating in glacier terrain the safety procedures for SASR MACWO courses include roping up as soon as you leave the hut and move more than 10 meters away. Helmets are always worn. Following an assessment of the terrain and the glacier antimony there may be certain areas (safe or proven), where you can ski down and not be roped. If you enter a potential crevasse area it is mandatory in SASR to rope up to travel that section as you do not know whether a snow bridge may give way. Roping with skis is not preferred due to the issue of entanglement.

d. Short (approach) skis have been trialled by SASR but proven to be ineffective. They have gone back to long skis and snow shoes. Short skis are not as stable on the foot, and with equipment and a heavy pack they do not provide any more support and mobility than snow shoes, unless on hard packed snow. In the military environment short skis are only used to approach the area and then you put on snow shoes. As they do not replace snow shoes, long skis are preferred.

e. The helmets used sit high on the head like a bicycle helmet, and are designed for climbing to protect the wearer from objects falling from above. However, helmets are still worn as standard practice at SASR to provide protection from falls; particularly in a known crevasse field such as the Grand Plateau/Hochstetter Glacier area.
f. Advised they usually rope in pairs as this provides more flexibility, and because in the military everything is done in pairs when operating in the field. If roped on skis it would also be in pairs, which assists manoeuvrability.

g. When roped in pairs on skis he was most confident that one person could arrest the fall of the other who free falls through a snow bridge into crevasse, unless perhaps on pure ice. Roping technique is important. There is also a substantial amount of friction which is caused by the rope cutting through the crevasse edge which assists the arrest. He explained in detail the arrest procedure when on skis with poles, and indicated that short skis would not be any different to long skis and perhaps would make it easier to conduct an arrest. Agreed that in the conditions that SGT Francis was operating his free fall into the crevasse could have been arrested.

h. While training is conducted in self-arrest techniques on skis, snowshoes and crampons, training in crevasse rescue is done in crampons and not skis. The reason for this is that you do not usually wear skis when in a known crevasse area; you take them off and go back to snow shoes. The only time he would leave skis on is if they were crossing a ‘bergschrund’, a crevasse going sideways at the top of a glacier which is half a metre or so wide.

i. In the area which SGT Francis and the MACWO course were operating (known crevasse area), would not have been on skis, but would have been on crampons with an ice axe. If he had been on skis at the top of the Grand Plateaus because it was considered safe, and even if then he skied down to the fist two holes or crevasses (where the self rescue activity was being carried out) roped as SGT Francis did, he would have taken his skis off and put crampons on to undertake the second reconnaissance the next exercise (in search of a suitable crevasse for ice climbing).

j. does not believe that vigorous probing would have broken the snow bridge where SGT Francis fell, but his body weight would have done it. The trap door type free fall is what often happens on snow bridges.

196. In summary generally shares the views and and would not have been on that part of the Grand Plateau and Hochstetter Glacier at that time of year. If he was there, he would not be on skis, but rather on snowshoes or crampons, and roped with an ice axe in hand. believes that short skis are generally ineffective compared to long skis, but when on any skis in a heavily crevassed area he would be roped in a pair. He was very confident that he could arrest a fall into a crevasse by the other person.

197. As previously noted was a member of the original writing team for LWP-SOF 9-3-11, prior to its initial publication in 2008. He was asked to comment on whether there should be any clarifications, amendments or additions to the still developing doctrine. accepted that the potential confusion between paragraphs 1.18 and 7.72 (outlined in Sub-Direction F above) could be clarified. But he emphasised that any guidance in respect of roping must not be too
prescriptive. I agreed with the option put to him that some of the considerations for glacial travel relating to skis discussed in his evidence and included in his instruction to MACWO students (such as seasonal factors), could be useful for inclusion in the LWP section on Glacial Travel.

198. In the end believed that LWP-SOF 9-3-11 required little change, because SGT Francis's decision to move unroped was made as a result of a failure to appreciate that the likelihood of a potential fall (using the phrase from paragraph 1.18) in a known and clearly visible crevasse area was 'extreme.' Nor, in his view, was the warning in paragraph 7.72 adhered to, where it states that roping is considered an essential safety measure regardless of familiarity with the glacier or whether you believe that you can see the crevasses. This means that 'if you’re going to go to New Zealand and climb in an out of climbing season [winter] when you can’t see the crevasses, it’s even more important to stay roped up the whole time.'

Assessment of doctrine and recommendations

199. The evidence provided by the three SME witnesses concerning the using of skis in a crevassed area, the requirement to rope and the effectiveness of roping in pairs, which in the main is supported by , differs markedly from that shared by and . The Inquiry assesses that current doctrine, procedures and training may not adequately assist in reconciling these differing views.

200. The guidance in paragraph 7.72 of LWP-SOF 9-3-1 [Annex X], concerning the apparent non-discretionary requirement to rope as an essential safety measure for all glacial movement, could be expanded and clarified to avoid a potential confusion with the general roping discretion provided for in paragraph 1.18, which is informed by the potential for falls and encountering crevasses. Furthermore, Paragraph 7.72, and the following paragraph on Rope Management, do not specifically refer to roping when skiing (other than in a photograph). The focus in those paragraphs is on roping while undertaking glacial travel in a crevassed area on foot (crampons), or when climbing. The subsequent paragraphs on crevasse rescue procedures describe techniques on crampons, including when roped in a pair, but not when skiing. Skiing self-arrest techniques are briefly explained in an earlier section (paragraph 7.71) separate from Glacial Travel, but crevasse rescue techniques on skis are not covered.

201. It follows from the evidence of the SME witnesses that as skis are not normally used to undertake glacial travel through a potential crevasse area, the focus in the LWP is understandably on the training techniques and procedures on roping and crevasse rescue on crampons. In that situation, it is accepted practice by all witnesses, including and that roping is an essential safety measure, and roping in pairs is effective for crevasse rescue.

202. Accordingly, the essential safety measures and requirements may not be readily apparent or explained in doctrine where skis are used to traverse heavily crevassed regions such as the Grand Plateau at the top of the Hockstetter Glacier. The Inquiry considers that the incorporation of guidance into paragraph 7.72 and subsequent paragraphs, specifically relating to skiing when undertaking glacial travel, that includes the considerations and practices outlined by the SMEs, would be of assistance to future MACWO training. Those considerations and practices include: (1)
the use of skis in crevassed areas; (2) the requirement to rope; and (3) crevasse rescue when roped in pairs.

203. Furthermore, it may be of assistance if the specific guidance contained in the Glacial Travel section of the LWP dealt with the advantages and disadvantages of traversing on snow shoes, long skis and short skis; and the impact of terrain and seasonal factors on the selection of travel means. The guidance could also address the wearing of helmets when skiing, which says is standard practice at SASR because helmets offer some protection from a fall. Although there is no evidence that a helmet would have prevented the death of SGT Francis, who fell approximately 40 metres into the crevasse, now believes it would be good practice to wear helmets when traversing glaciers on skis.

204. The Inquiry is cognisant of the dangers of recommending that roping and other safety measures be made mandatory or too prescriptive, particularly in the operational environment. But where there already are accepted practices, such as the wearing of helmets while skiing on glaciers, and roping when moving on crampons or skis in a potential crevasse area, then these practices could be made an essential or mandatory safety measures as the default position; with the relaxation of such measures only in defined circumstances at the discretion of the most experienced operator.

205. The Inquiry also considers that combined SF training, rather than individual unit training, may assist in not only making the best use of the small number of qualified and experienced MACWO Supervisors, but would also ensure consistency in the training and application of doctrine and the improved capture of lessons learnt in the ever changing MACWO environment.

FINDING: The evidence reveals the application of different considerations and contradictory practices by experienced military and civilian mountaineers for glacial travel concerning: (1) the selection and use of skis in crevassed areas; (2) the requirement to rope; and (3) roping in pairs.

FINDING: Paragraph 7.72 of LWP-SOF 9-3-1 concerning the apparent non-discretionary requirement to rope as an essential safety measure for all glacial movement could be interpreted as contradicting the general discretion in paragraph 1.18 to be roped, which is informed by the potential for falls and encountering crevasses.

FINDING: Current doctrine and procedures in LWP-SOF 9-3-1 concerning glacial travel is generally adequate, but focuses on the training techniques and procedures for roping and crevasse rescue when moving on crampons or snow shoes, and makes only limited reference to these matters for movement on skis.

RECOMMENDATION: To assist in reconciling potentially different applications of the requirements and techniques in undertaking glacial travel, consideration be given to clarifying and supplementing the current ‘developing doctrine’ and procedures by:

a. providing expanded and clarifying guidance in paragraph 7.72 of LWP-SOF 9-3-1 concerning the apparent non-discretionary requirement to rope as an essential safety measure for all glacial movement, so as to avoid a potential confusion with the general discretion in paragraph 1.18 to be roped, which is informed by the potential for falls and encountering crevasses;
b. incorporating guidance specifically relating to skiing when undertaking glacial travel into paragraph 7.72 and subsequent paragraphs of LWP-SOF 9-3-1 dealing with: (1) the selection and use of long and short skis in crevassed areas; (2) the requirement to rope; (3) crevasse rescue when roped as a pair; and (4) the wearing of helmets; and

c. making already accepted practices, such as the wearing of helmets while skiing on glaciers, and roping when moving on crampons or skis in a potential crevasse area, essential and mandatory safety measures as the default position; with relaxation of such measures only in defined circumstances at the discretion of the most experienced operator.

RECOMMENDATION: The option of combined SF MACWO training, rather than individual unit training, be examined to: (1) make the best use of the small number of qualified and experienced MACWO Supervisors; (2) ensure consistency in the training and application of doctrine; and (3) improve the capture of lessons learnt.

SUB-DIRECTION H - THE EXTENT OF THE KNOWLEDGE OF THE LOCAL CONDITIONS

206. Before the commencement of the 2014 MACWO Course, 2 CDO Regt had conducted all of its training on the Tasman Glacier in the Mount Cook National Park. The use of the Tasman Glacier appears to have been tied to the initial MACWO-related training that had been facilitated by Alpinism and Ski New Zealand in 2010 (refer to Sub-Direction 1 - Whether local guides or instructors should have been engaged).

207. The majority of the MACWO Supervisors and Operators had experience of the Tasman Glacier as a training venue. SGT Francis and Soldier 1 attended the 2011, 2012 and 2013 Courses. In addition, Soldier 4 had attended the 2011 Course, Soldier 3 had attended the 2011 and 2013 Courses and Soldier 2 had attended the 2012 and 2013 Courses.

208. However, as advised at Sub-Direction A, a change of training venue to the Grand Plateau for 2014 was brought about by a desire by 2 Cdo Regt to provide a more varied and challenging training environment. The Grand Plateau is located within the Mount Cook National Park to the west of and adjacent to the Tasman Glacier with Hockstetter glacier joining the Grand Plateau to the Tasman Glacier (See Map 1 at Enclosure 58). It appears that the new location was selected by SGT Francis based on the advice provided by Soldier 2 who had been to the Grand Plateau on three previous occasions.

209. Soldier 2 had worked as SGT Francis’s understudy in the MACWO Cell during 2013 with the view to potentially replacing him once his contract had expired in 2014, but this did not eventuate as SGT Francis stayed on at 2 Cdo Regt. It was during this time that he recommended the Grand Plateau to SGT Francis as a suitable training venue for the 2014 MACWO Course, which he was scheduled to attend as a MACWO Operator. Soldier 4 had informed SGT Francis that the area was suitable for novices and for the purposes of continuation training. Moreover, he was of the view that the Grand Plateau was no more dangerous than the Tasman Glacier. Other than...
no other MACWO Course member had visited the Grand Plateau before the commencement of the 2014 Course.

210. As outlined at Sub-Directions A and C, the selection of the Grand Plateau and accompanying risk assessment considerations were not formally captured in the supporting unit documents. Notwithstanding, SGT Francis had undertaken action to ascertain and proactively monitor and analyse information on the local climatic, environmental and terrain conditions with a view to determining any potential impact on the 2014 MACWO Course. In doing so, SGT Francis was seeking to build a knowledge base of the local conditions.

Analysis/Assessment of evidence

211. As previously discussed, the suitability of the Grand Plateau as the new training area for the 2014 MACWO Course was not formally included in the planning and risk assessment process. Having not visited the Grand Plateau, SGT Francis had no first hand knowledge of the location and its suitability for MACWO training. However, he selected the location for the Course on the recommendation of an experienced MACWO Operator, who had worked for him in 2013, and had considerable knowledge of the Grand Plateau area, having visited there on four occasions prior to the 2014 MACWO Course. It is likely that would have briefed SGT Francis during the initial planning on the conditions, and as he was attending the MACWO Course he was to able provide further advice in location as required.

212. Notwithstanding, the formal MACWO Course planning process did serve to provide some knowledge of the local conditions through SGT Francis ascertaining and proactively monitoring and analysing information on the local climatic, environmental and terrain conditions. Furthermore, as the Grand Plateau was in close proximity to the Tasman Glacier in the Mount Cook National Park, the weather, snow and ice conditions would have had some similarity to that of the Tasman Glacier at that same time of year (winter). The major difference between the two appears to have been in the terrain particularly at the top of the Hochstetter Glacier, which was heavily crevassed and more a rapidly moving part of the glacier system and the problems that can cause, particularly in winter time (as discussed in Sub-Direction 3).

213. Based on the available evidence it is reasonable to infer that SGT Francis had sufficient knowledge of the local conditions on the Grand Plateau, in particular, of the different terrain conditions between the two glaciers and the impact of wintertime, to properly conduct the MACWO Course. Ultimately, it was mistake in the assessment of those conditions (about the presence of hidden crevasses and the strength of snow bridges) which resulted in SGT Francis’s death (as discussed in Sub-Direction 3).

FINDING: 2 Cdo Regt did not doctrinally employ the formal planning or risk assessment process to select and assess the suitability of the Grand Plateau as the new training location for the 2014 MACWO Course.

FINDING: SGT Francis had no first hand knowledge of the location and its suitability for the 2014 MACWO Course. He selected the Grand Plateau on the recommendation of an experienced MACWO Operator, who had worked as his understudy 2013 and had considerable knowledge of the Grand Plateau area.

FINDING: As part of the ongoing planning process for the 2014 MACWO Course, SGT Francis did ascertain and proactively monitor and analyse information on the local climatic,
environmental and terrain conditions on the Grand Plateau. It is likely that would have briefed SGT Francis on the conditions and that he was to able provide further advice in location as required.

FINDING: The close proximately of the Grand Plateau to the Tasman Glacier is likely to have meant that the weather, snow and ice conditions would have had some similarity at that same time of year. The difference in conditions between the two locations was the terrain, particularly at the top of the Hochstetter Glacier, which was heavily crevassed and a more a rapidly moving part of the glacier system.

FINDING: The extent of the knowledge of the local conditions was only limited by SGT Francis and the other MACWO Course Supervisor not having previously been to the Grand Plateau.

FINDING: On the available evidence, it is reasonable to infer that SGT Francis had sufficient knowledge of the local conditions on the Grand Plateau, in particular, of the different terrain conditions between the two glaciers and the impact of wintertime, to properly conduct the 2014 MACWO Course.

SUB-DIRECTION 1 – WHETHER LOCAL GUIDES OR INSTRUCTORS SHOULD HAVE BEEN ENGAGED

214. In accordance with SOCAUST Directive 20/2010, 2 Cdo Regt was tasked to provide a MACWO capability. In response, and lacking an inherent MACWO skills and knowledge base, the unit utilised a civilian organisation known as Alpinism and Ski New Zealand to provide initial training on the Tasman Glacier on Mount Cook in 2010.

215. Against this backdrop, 2 Cdo Regt commenced to formulate a long-term MACWO development plan. It included a technical skills phase which was to be undertaken overseas. However, until 2 Cdo Regt had the ability to conduct its own MACWO training, it further utilised Alpinism and Ski New Zealand in 2011. Moreover, the training was once again conducted on the Tasman Glacier.

216. From a MACWO training perspective, the overarching focus of the unit had been to ensure that current best practices were taught to trainees in mountaineering and other alpine-related skills by accredited New Zealand mountain guides. As such, the use of the civilian staff served to meet MACWO training package quality control requirements. As an ancillary consideration, the training also enabled the conduct of recognition of current competency for one member.

217. For the purposes of the 2011 MACWO Course, SGT Francis was the appointed OIC and As such, 2 Cdo Regt maintained overall control of the MACWO Course as opposed to Alpinism and Ski who were not MACWO operators. Accordingly, SGT Francis and provided input into the military aspects of the Course. Furthermore, as
SGT Francis and [Soldier 1] had not been to the Tasman Glacier before, the Alpinism and Ski staff were also being used for safety and guide purposes based on local knowledge considerations.

218. Although the 2011 PAR recommended that 2 Cdo Regt continue working with Alpinism and Ski New Zealand, there has been no further involvement with any civilian organisation in relation to the unit’s MACWO training requirements. When asked as to why this was the case, [Soldier 1] stated that there had been no requirement to expend limited financial resources on local guides once the unit had two qualified and experienced MACWO Supervisors. In doing so, [Soldier 1] was referring to himself and SGT Francis following the recognition of their former RM service.

219. In addition, the MACWO training venue had changed from the Tasman Glacier, which had been used over the period 2010 to 2013 inclusive, to the Grand Plateau in 2014. The change in locality had in-part been brought about by a recommendation by [Soldier 2] that the plateau was suitable for novice and continuation training purposes having visited the area on three prior occasions in a private capacity. [Soldier 2] familiarity with the Grand Plateau, along with his advice that the locality was no more dangerous than the Tasman Glacier, would have likely dismissed in the minds of SGT Francis and [Soldier 1] any need to engage local guides and instructors.

220. Although the 2 Cdo Regt’s viewpoint on the use of guides was apparent, the Inquiry sought comment from a New Zealand SME. [Civillian 1] is a [Soldier 2] ranger within the Mount Cook National Park and has two primary roles.

221. As such, and having observed the events first hand, the Inquiry sought his views as to whether local guides or instructors should have been engaged by the MACWO Course.

222. Before 2014, all MACWO Courses had been conducted on the Tasman Glacier. Accordingly, no previous training had been undertaken on the Grand Plateau. Against this backdrop, [Civillian 1] was asked whether it would be a usual practice to employ guides having not been to the Grand Plateau before. [Civillian 1] responded by stating that it was not necessarily the case as everyone has right of access to the national park. As a consequence, he advised that amateur climbers and mountaineers will go into the area and climb the peaks and travel across the glaciers on their own accord.

223. Nevertheless, [Civillian 1] was asked as to whether he would take a guide if he was going to the Grand Plateau. He responded by stating ‘no.’ However, he did advise that he would seek information from experienced people which would serve to ensure that he was aware of the dangers
and would then take the necessary precautions. Furthermore, the SASR MACWO SME, advised that he has been involved with the unit’s MACWO training since 2005. As such, he stated that the SASR MACWO training regime includes the USA and New Zealand. The USA training is undertaken in Colorado due to its guaranteed snow, altitude and extreme cold weather conditions. Continuation training is then undertaken in New Zealand on either the Tasman Glacier or the Fox Glacier in the Mount Cook National Park. The training is conducted to enable the MACWO members to obtain technical skills pertaining to snow and ice climbing and crevasse rescue.

225. In relation to local guides, advised that they are used by the SASR in New Zealand only. The companies have included Alpine Guides at Mount Cook and Alpinism and Ski Wanaka. When asked whether the SASR had conducted MACWO training on the Grand Plateau, he stated that the unit has never gone there due to the crevasse danger and an associated unwillingness by the guides to jeopardise their careers. The latter comment was interpreted by the Inquiry to mean that the local guides did not wish to harm their reputations should a person be injured. When summing up his comments, stated that the SASR always takes into account the military learning outcomes vis a vis the risk and that he considered the Grand Plateau to represent a high risk.

Analysis/assessment of evidence

226. Civilian guides had been utilised by 2 Cdo Regt to assist with the conduct of MACWO training on the Tasman Glacier in the Mount Cook National Park in 2010 and 2011. The guides had been employed as 2 Cdo Regt lacked sufficient qualified staff to conduct the training. In doing so, the unit was also seeking to leverage off local civilian expertise for best practice and ongoing training development and quality control purposes. Local knowledge and overarching safety considerations were also key considerations.

227. While 2 Cdo Regt appeared to be receptive to the ongoing use of civilian instructors as evident in the 2011 PAR, the practice ceased. Although funds expenditure was proffered as a reason, the Inquiry formed the view that the presence of two qualified and experienced MACWO Supervisors, along with a qualified MACWO Operator with previous experience of the Grand Plateau, were likely to have been the persuasive factors.

228. The civilian SME did not advocate the use of guides or instructors for the purposes of MACWO training. Instead he served to contextualise the matter by highlighting that the Mount Cook National Park is open to the general public who in-turn have unrestricted access including travel across glaciers on their own accord. However, he sagely advised of the need to plan and to
develop a risk assessment with a particular focus on the weather, the snow pack conditions and stability.

229. As outlined at Sub-Direction A - The planning of the exercise, SGT Francis had proactively sought and monitored information on the Mount Cook climatic and environmental conditions which had the potential to adversely impact upon the MACWO Course. Furthermore, and as advised at Sub-Direction C - The Risk Assessment, SGT Francis had initiated the development of a Risk Management Plan in accordance with DI(A) OPS 68-1 - Military Risk Management. In doing so, he had been thorough with the identification of the perceived threats accompanied by appropriate Management controls. As a consequence, the Risk Management Plan identified a medium risk level and it was later endorsed by experienced staff within the 2 Cdo Regt chain of command.

230. In relation to the advice that the SASR utilises guides in New Zealand, it is ultimately a matter for the unit based on its own assessed safety requirements and considerations.

231. Having reviewed and assessed the available evidence, the Inquiry determined that there was no requirement for 2 Cdo Regt to engage local guides or instructors for the purposes of the 2014 MACWO Course.

FINDING: 2 Cdo Regt utilised accredited New Zealand mountain guides in 2010 and 2011 pending the development of an inherent MACWO skills and knowledge base within the unit.

FINDING: The employment of the accredited New Zealand mountain guides served to ensure that current best practices were taught to MACWO students, to meet training quality control requirements and to enable the conduct of recognition of current competency for SGT Francis.

FINDING: After 2011, 2 Cdo Regt ceased to utilise accredited New Zealand mountain guides as it had two qualified MACWO Supervisors in the form of SGT Francis and

FINDING: A New Zealand Department of Conservation mountaineering SME did not advocate the use of guides or instructors as the Mount Cook National Park is open to the general public with unrestricted access including unescorted travel across glaciers. Nevertheless, the SME advised that the weather, snow pack conditions and the associated stability should be assessed in the first instance as part of a risk management strategy.

FINDING: In the lead up to the 2014 MACWO Course, SGT Francis had proactively sought and monitored information on the Mount Cook climatic and environmental conditions which had the potential to adversely impact upon the Course. As a concurrent activity, SGT Francis developed a risk assessment which was in accordance with extant Army policy and guidelines and was reviewed and endorsed by experienced and qualified staff within 2 Cdo Regt.

FINDING: Due to the presence of experienced MACWO Course members who were operating within an overarching planning framework and an accompanying Medium risk threshold, there was no requirement for 2 Cdo Regt to engage local guides or instructors for the purposes of the 2014 MACWO Course.
SUB-DIRECTION J - THE RESCUE AND RECOVERY ACTIONS

232. After witnessing the fall of SGT Francis into the crevasse at approximately 1130 hours, I moved halfway towards a one metre-wide hole in an ice bridge. He did not move any closer for fear of also falling into the crevasse. After repeatedly calling out to SGT Francis without any response, quickly returned to the MACWO Course members to raise the alarm and to commence a rescue.

233. After being alerted by that SGT Francis had fallen into a crevasse, commenced to collect ropes and other rescue equipment. However, before moving forward they were directed by to travel on skis and to follow the proven track. then directed the MACWO students, which included to rope up as a party of four and to follow when ready. then proceeded to the incident site to assist with the rescue effort.

234. had initially thought that he would descend into the crevasse to rescue SGT Francis. However, he soon realised that he was the only remaining MACWO Supervisor and that the area was far more dangerous than first thought. As such, and in the interests of the safety of the remaining MACWO Course members, decided that he would supervise the rescue and that would journey into the crevasse. was specifically chosen for the task based on his SF Climbing Supervisor qualification and mountaineering experience.

235. Upon arrival at the incident site, and moved to set up ice anchors at a distance of approximately 30 metres from the crevasse hole. This initial action was undertaken not only to facilitate the rescue, but to also to meet their respective safety requirements. As a concurrent activity, supporting equipment in the form of crampons and ice axes were also organised so as to facilitate 's decent.

236. Once the first ice anchor had been established, crawled to the hole utilising a rope and belay. After had again shouted out to SGT Francis without any response, he looked 20 metres down into the crevasse could not see anything other than dark spaces which in-turn prompted him to assume a worst case scenario.

237. also noticed that approximately one metre remained on either side of the ice bridge making its overall length to be approximately three metres. He described the residual remaining ice bridge structure as being solid and having to be later cut away in order to extract SGT Francis. confirmed assessment by stating that the remaining two metre section of the ice bridge had a thickness of between 30 to 40 centimetres and that SGT Francis's fall would have been completely unexpected and instantaneous.
238. During this time, the four MACWO students had roped up as directed and were preparing to travel to the incident site. When doing so, Soldier had noticed the presence of SGT Francis’s backpack and had remembered seeing him testing the satellite telephone earlier in the day. As a consequence, he located the telephone in SGT Francis’s backpack and then transported both items to the incident site. Having done so, noted that there were no numbers stored on the telephone. Along with the assistance of Soldier they searched SGT Francis’s backpack without success and concluded that the emergency contact numbers may be with SGT Francis. Soldier later advised that the emergency contact numbers were back at the hut.

239. At that juncture, took carriage of the telephone and commenced to dial the New Zealand emergency number 111. He initially heard a voice on the line but it was undistinguishable and it soon dropped out. tried calling the number two more times but without success. He then proceeded to return to the hut along with so as to radio for Search and Rescue (SAR) assistance. All other MACWO members remained at the incident site so as to provide ongoing support to the rescue effort.

240. was able to radio the Department of Conservation (DOC) at 1205 hours. He then accessed the spare satellite telephone which had been left in the hut in order to maintain the battery. However, was unable to contact the incident site due to ongoing issues with the telephone signal dropping out. Nevertheless, he managed to send a text message advising that SAR support had been requested. Moreover, the estimated time of arrival of the SAR helicopter could not be determined at that time as the SAR team had to be gathered in the first instance.

241. In addition, sought advice from the incident site as to whether any additional medical equipment was required. In response, he was advised that a defibrillator, oxygen, a resuscitation kit and a stretcher were needed. This information was in-turn radioed to DOC. then collected the spare medical kit, extra roll mats and a sleeping bag from the hut and returned to the incident site. was left at the hut to maintain SAR communications which he did so throughout the rescue effort.

242. Once secured on a rope, was lowered into the crevasse with an extra line, a head torch and a medical kit. Although and were the designated MACWO CFA appointments, was also CFA qualified except for the administration of drugs.

243. Upon his entry into the crevasse, advised that he did not need to use his head torch in the first instance as there was light coming through the hole in the ice. The availability of light at that time later enabled to produce a sketch of the crevasse. The sketch pictured the crevasse as comprising two branches; one with an approximate depth of 20 metres whereas the other had an approximate depth of 40 metres. Furthermore, the latter branch had a very sharp three metre long ice blade in the centre.
first dropped into the 20 metre deep branch of the crevasse as it was directly beneath him. As such, he believed that it was reasonable to assume that SGT Francis would have landed in that area. The assumption proved to be incorrect following a search of the area and then moved towards and down the 40 metre branch of the crevasse. When passing through the one metre gap which separated the ice blade from the wall of the crevasse, he did not observe any sign of impact. As proceeded deeper into the crevasse, it became increasingly dark which necessitated the use of the head torch.

When turning on the torch, could see the light reflecting off the steel edge of SGT Francis's ski. He then commenced to yell out to SGT Francis without receiving any response. then proceeded to where SGT Francis was laying which was at the bottom of the crevasse. He found SGT Francis to be very tightly wedged in an area that was approximately 50 centimetres in width. Nevertheless, was able to get beside him as that part of the crevasse had a length of approximately 50 metres.

SGT Francis was found bent forward at the waist as if touching his toes. Furthermore, he was covered in blocks of snow which were between 20 centimetres and 30 centimetres in size. In the absence of any responsiveness, connected SGT Francis's belt harness to the extra line. He was then able to position SGT Francis on to his lap whereby he was able to cradle his head and check for a carotid pulse.

However, could not detect any pulse and noticed that SGT Francis had a significant injury to his head above the right eye and that it was obvious that he had sustained a traumatic impact. Moreover, there was no blood present despite the size and nature of the head injury. At this juncture, formed the view that SGT Francis was most likely deceased.

Despite the absence of a pulse, moved to facilitate SGT Francis's extraction from the crevasse as soon as possible. In doing so, he removed SGT Francis's skis and made a chest harness for him. then yelled to to commence raising SGT Francis on the extra line.

As there was a short delay before the lift could commence, considered placing an oropharyngeal airway into SGT Francis's mouth. However, he chose not to do so as he did not think it would stay in-place due to the head injury and the absence of a neck support in the medical kit. Further, he also considered applying CPR but did not do so based on practical and endurance considerations.

Once SGT Francis had commenced to be hauled out of the crevasse, which required six MACWO members to facilitate, realised that there was insufficient capacity to also lift him at the same time. As a consequence, he proceeded to independently climb out of the crevasse while at the same time remaining close to SGT Francis and guiding him.

After SGT Francis had been hauled close to the surface, proceeded to cut away the ice bridge to effect the extraction. It was a difficult task as the rope had cut its way through the ice at the edge of the hole. As a consequence, a couple of manoeuvres were required
including having to hang upside down into the crevasse on a rope and having one boot steadied by another member. After SGT Francis had been extracted, followed as soon as possible thereafter.

252. From a timeline perspective, was of the view that the rescue had taken no more than 10 minutes. However, advised that it had been a longer time period and after some considered thought settled on a timeline of approximately 30 minutes. In doing so, he advised that had entered the crevasse at approximately 1145 hours and that SGT Francis had been brought onto the surface at approximately 1215 hours. The advice equated to a rescue timeline of approximately 30 minutes. After further consideration, became increasingly confident with the advised timeline as he could recall SGT Francis being administered an injection at approximately 1236 hours. This action occurred approximately ten minutes after had exited the crevasse with the first aid kit which was approximately 10 minutes after SGT Francis.

253. As one of the designated MACWO CFAs, conducted an initial assessment of SGT Francis as a precursor to administering first aid. Throughout the process, he was assisted by who also had a CFA background. Advised that SGT Francis was not breathing and that he did not have a heart beat. He also noted massive head trauma on the right-side above the forehead and to the back of the head. The latter injury equated to an approximate length of 11 centimetres also noted that SGT Francis had ‘racon eyes’ which indicated a basal skull fracture. Moreover, he observed SGT Francis’s body to be ‘floppy.’

254. Having completed his initial assessment, proceeded in the first instance to clear an airway. However, as he found SGT Francis’s mouth to full of broken teeth and blood, he considered opening an airway through the nose using tubes. However, for fear of penetrating what would have likely been a swollen brain by inserting tubes into the nose, instead cleared the mouth in order to insert a tube and to commence CPR. Furthermore, the CPR was continued with the added assistance of until the WESTPAC air ambulance arrived.

255. Aside from the CPR, also administered adrenaline to SGT Francis at 1236 hours. Although he was doubtful as to whether it would serve any substantive purpose, he did so in an attempt to start the heart also advised that he had administered morphine to SGT Francis however, he could not remember the time other than it was before the arrival of the SAR helicopter.

256. In relation to the SAR effort, it was coordinated by who was the DOC Incident Management Team Manager at the Mount Cook Village. Advised that he had been contacted by at midday on 16 July 2014 advising that he had received a radio call that a climber had fallen down a crevasse unroped. He then set about calling out the SAR team members in addition to alpine guides as he was short of staff. The SAR team comprised who were members of the Mount Cook Alpine Rescue Team; and who were alpine guides.
257. I then took action to source the first available helicopter to transport the SAR team. This action was met through the Heli Line tourist operator. As a concurrent activity, extraction rope systems and anchors were collected in addition to medical equipment and a stretcher. The SAR helicopter subsequently departed Mount Cook Village at approximately 1252 hours and arrived at the incident site at approximately 1305 hours.

258. Upon arrival of the SAR helicopter, commenced to hand the management of SGT Francis over to the SAR team member who was carrying the defibrillator. However, once he realised that there were no paramedics among the SAR team, promptly read the defibrillator instructions and applied it to SGT Francis. When doing so, the defibrillator recorded 'no electrical signal, no shock to be administered.'

259. Although a number of attempts were made, the defibrillator would not shock SGT Francis. later advised that a defibrillator will only work if there is a heartbeat. SGT Francis was then placed in a sleeping bag and conveyed on a stretcher utilising a rope and ice anchor to a nearby safe location pending the arrival of the WESTPAC air ambulance. Against this backdrop, advised that there was not a lot for the SAR members to do. Moreover, he commented that the site safety was under control and that he was impressed with the demeanour of MACWO Course members as they were organised, were not panicking and that they had their act together.

260. Before departing Mount Cook Village with the SAR helicopter, requested that DOC contact the WESTPAC air ambulance as he expected the casualty would be suffering from hypothermia. The request was made at 1225 hours with the WESTPAC air ambulance departing Christchurch at approximately 1245 hours. It proceeded direct to the Grand Plateau and arrived at the incident site at approximately 1355 hours. As an aside, the mountain rescue service normally has access to a local operator with two long-line fitted helicopters. However, on day of the incident both helicopters were out of service.

261. was the WESTPAC air ambulance paramedic. Upon arrival at the incident site he had observed that CPR was being effectively applied to SGT Francis and that he was being ventilated using a bag mask. He also noted that SGT Francis appeared to have suffered massive head trauma with significant facial fractures and possibly a right-sided chest injury.

262. advised that he had applied a monitoring device to SGT Francis in order to detect a heart rhythm. However, there was no cardiac activity and therefore the heart was dead and had probably been so for some time. At that juncture, he directed that the CPR was to cease and declared the official time of death as 1400 hours. later stated that the
MACWOCourse members had done all that they could do under the circumstances. The comment was particularly apt as the CPR had been applied for approximately one hour and forty five minutes.

263. As an aside, the exact course of death had not been determined by the New Zealand authorities at the time of the completion of the Inquiry Report. As per the Death Certificate at Enclosure 72, the cause of death will be subject to New Zealand Coroner’s findings.

264. At approximately 1406 hours SGT Francis was transported by the WESTPAC air ambulance to the Mount Cook Village Emergency Services Base with Soldiers and Soldiers, travelling separately as the escorts. Later that day, SGT Francis was conveyed to Christchurch with Soldiers and Soldiers, and returned to Australia on Tuesday 22 July 2014.

265. In respect to the other MACWO Course members, Soldiers and Soldiers were airlifted to Mount Cook Village during PM hours on 16 July 2014. However, Soldiers and Soldiers remained at the Plateau Hut overnight to pack and clean the equipment and were airlifted to Mount Cook Village the next morning. The foregoing MACWO Course members, including Soldiers and Soldiers, returned to Australia on 18 July 2014.

Analysis/assessment of evidence

266. After SGT Francis had fallen into the crevasse, the MACWO Course members moved quickly and deliberately to commence the rescue. The activity was overseen by Soldier 1 who effectively exercised command and control throughout the recovery effort. Furthermore, it is likely that Soldier 1 did so while suffering from shock having witnessed the incident first hand.

267. Furthermore, and while it is understandable that Soldier 1 wanted to descend into the crevasse to rescue SGT Francis, he had the presence of mind to recognise his responsibilities towards the safety of the other MACWO Course members and as a consequence appropriately identified Soldier 1 for the task. Moreover, it would not have been easy for Soldier 1 to task as he would have clearly recognised the inherent dangers and risks.

268. Notwithstanding, Soldier 1 readily accepted the task and performed his assigned role with fortitude in what was an unknown and unpredictable operating environment which at any time could have caused him injury. Furthermore, and while he suspected that SGT Francis was deceased once he had been found, he remained undaunted and expended every effort to facilitate a rapid extraction from the crevasse.

269. Once on the surface, Soldiers and Soldiers were entrusted with the care of SGT Francis until the arrival of the WESTPAC air ambulance. This trust was not misplaced and both members worked tirelessly in their efforts to revive SGT Francis. Although it would have been a highly stressful and demanding task, Soldiers and Soldiers remained calm, focused and totally committed throughout the event.
270. Also made valuable and substantive contributions to the rescue effort. Their efforts were wide ranging and included the construction of ice anchors, managing and hauling ropes, collecting equipment, maintaining communications and administering CPR. When doing so, each member demonstrated a very high degree of fortitude, endurance and selflessness.

271. From a collective perspective, the commendable efforts of the MACWO Course members were not lost on the SAR and WESTPAC air ambulance personnel. They shared the view that the various actions had been undertaken professionally and that everything that could be done had been done.

272. Irrespective of the actions of the MACWO Course members, and based on the evidence provided to the Inquiry, it is probable that SGT Francis died soon after falling into the crevasse. As such, all subsequent events should be viewed as a recovery activity as opposed to a rescue. This observation is not intended to detract from the efforts of the MACWO Course members, but more a salient recognition that it is unlikely that any human intervention could have saved the life of SGT Francis.

**FINDING:** SGT Francis fell into a crevasse at approximately 1130 hours on 16 July 2014 leaving behind a one metre wide hole in an ice bridge.

**FINDING:** Following the fall of SGT Francis into the crevasse, quickly initiated rescue action which involved all MACWO Course members albeit performing different roles and responsibilities depending upon inherent skills and prevailing requirements and needs.

**FINDING:** L exercised effective command and control throughout the rescue effort although it was likely that he was suffering from shock having witnessed the fall of SGT Francis into the crevasse.

**FINDING:** was lowered into the crevasse to rescue SGT Francis at approximately 1145 hours. Located SGT Francis at the bottom of a 40 metre branch of the crevasse. Once SGT Francis had been located, determined that he had suffered head and facial injuries with no apparent sign of life.

**FINDING:** SGT Francis was extracted from the crevasse at approximately 1215 hours. The rescue had taken approximately 30 minutes to complete.

**FINDING:** Upon reaching the surface, SGT Francis's condition was assessed by who was designated to administer first aid. determined that SGT Francis was not breathing and that he did not have a heartbeat. also observed that SGT Francis had suffered massive head trauma including a skull fracture.

**FINDING:** with the assistance and other MACWO Course members, administered CPR to SGT Francis for approximately one hour and forty five minutes. Additional first aid measures included morphine and adrenaline injections and the application of a defibrillator. None of these actions served to revive SGT Francis.

**FINDING:** A civilian SAR team was mobilised through radio contact by at approximately 1205 hours. The SAR team departed Mount Cook Village by helicopter at approximately 1252 hours and arrived at the incident site at approximately 1305 hours.
FINDING: Upon arrival at the incident site, the SAR team were required to provide minimal assistance as SGT Francis had been extracted from the crevasse and the associated site safety requirements had been attended to by the MACWO Course members.

FINDING: The WESTPAC air ambulance helicopter was mobilised by the Department of Conservation. It departed its base at Christchurch at approximately 1245 hours and arrived at the incident site at approximately 1355 hours.

FINDING: The WESTPAC paramedic declared SGT Francis to be deceased at 1400 hours.

FINDING: The recovery of SGT Francis was carried out by the MACWO Course members in an efficient, effective and highly professional manner irrespective of the very difficult, uncertain and traumatic circumstances.

FINDING: Based on the evidence provided to the Inquiry, it is probable that SGT Francis died soon after falling into the crevasse and therefore it is unlikely that any subsequent human intervention could have saved the life of SGT Francis.

SUB-DIRECTION K - WHETHER MEMBERS HAVE RECEIVED POST INCIDENT SUPPORT

273. Following the return of the MACWO Course members to Australia, 2 Cdo Regt initiated a Critical Incident Management Health Response (CIMHR). The CIMHR entailed a psychologist offering the provision of clinical supervision and support to each of the affected MACWO Course members in the first instance. Should a member have advised that they did not wish to avail themselves to the CIHR support, then follow-up action by a psychologist would occur in three months for ongoing monitoring purposes.

274. In addition to the foregoing action, chaplaincy support was offered to each member along with active engagement by the chain of command. Mental health-related information was also disseminated throughout the unit.

275. Soldiers 1, 2, 3, 4, 5 acknowledged the level of post incident support that had been made available to them and expressed no dissatisfaction.

276. Although the post incident support was primarily aimed at the MACWO Course members, support was also provided to the families. In general terms, it included unit welfare, chaplaincy and
social worker support. From a broader SOCOMD perspective, were provided with first class flights to Australia from the UK following the death of SGT Francis. At the time, had been visiting family in the UK. Moreover, was provided with a return business class ticket to the UK which she could utilise at a time of her choosing.

Analysis/assessment of evidence

277. Following the death of SGT Francis, 2 Cdo Regt initiated a series of CIMHR actions. These included psychology and chaplain support coupled with active engagement by the chain of command and the dissemination of mental health information. In addition, support was appropriately extended to the families of the affected members based on individual circumstances and requirements.

FINDING: Following the incident resulting in the death of SGT Francis, 2 Cdo Regt initiated a Critical Incident Management Health Response to affected MACWO Course members. The response centred on the provision of initial and follow-up clinical support by a psychologist.

FINDING: Additional assistance was provided to the affected MACWO Course members in the form of chaplaincy support and active engagement by the chain of command. Mental health-related information was also disseminated throughout the unit.

FINDING: Post incident assistance was extended to the affected families. It included unit welfare, chaplaincy and social worker support in addition to travel assistance based on individual requirements.

FINDING: Overall, the level of post incident support provided to the MACWO Course members and their families was appropriate given the circumstances.

SUB-DIRECTION L - WHETHER DEFENCE COULD HAVE REASONABLY DONE ANYTHING TO PREVENT THE DEATH

278. Previous Sub-Directions have examined and assessed the requirement, authorisation, planning, risk assessment and the conduct of the MACWO Course, as well as the post incident rescue and recovery actions. The choice of location and time of year to conduct the MACWO Course were made by SGT Francis, the MACWO SME at 2 Cdo Regt, and he also prepared the risk assessment. No evidence has been found that the death of SGT Francis resulted from any organisational or systemic weakness in Defence practice and procedures.

279. SGT Francis, the OIC and most experienced mountaineer on the MACWO Course, made a ‘judgment call’ that based on the snow and terrain conditions at the time, there was a very low risk of encountering, and falling into, a hidden crevasse in the area he was traversing and, therefore, he decided that it was not necessary to take any roping or other measures. Tragically that decision proved to be incorrect.

280. The Inquiry assesses that it is most unlikely that the identified potential confusion on the requirement to rope during glacial travel set out in current doctrine (paragraphs 1.18 and 7.72 of
LWP-SOP 9-3-11) had any bearing on that decision. While minor changes have been recommended to Defence doctrine, which may assist in the prevention of future incidents of this nature, it is unknown whether such changes, if adopted, would have impacted on SGT Francis’s judgement and decision at the time.

FINDING: No evidence has been found that the death of SGT Francis resulted from any organisational or systemic weakness in Defence practice and procedures.

FINDING: There was nothing that Defence reasonably could have done to prevent the death of SGT Francis.

SUB-DIRECTION M - FACTORS RELEVANT TO ANY RECOMMENDATION TO THE MINISTER CONCERNING THE APPOINTMENT OF A COMMISSION OF INQUIRY

281. Regulation 109(1) (a) of the Defence (Inquiry) Regulations 1985 requires the Minister for Defence to appoint a Commission of Inquiry (COI) to “inquire into the death or suicide of a member of the Defence Force that appears to have arisen out of, or in the course of, the member’s service”, unless the Minister issues written direction that a COI is not required.

282. At the time of his death SGT Francis was a Defence Force member posted to 2 Cdo Regt performing duty as the OIC of an approved MACWO Course being held in the Mount Cook National Park in New Zealand. Accordingly, the Inquiry assesses that the death of SGT Francis was Service-related arising out of, or in the course of his duties.

FINDING: The factors relevant to any recommendation to the Minister concerning the appointment of a COI into the death of SGT Francis include:

a. the death of SGT Francis was Service-related arising out of, or in the course of his duties;

b. the Inquiry has been comprehensive in determining all of the relevant facts and circumstances surrounding SGT Francis’s death;

c. it is unlikely that a COI would elicit any further relevant evidence noting the time that has elapsed since his death;

d. the Inquiry has not identified any potentially affected persons (including SGT Francis), whose blameworthy conduct may have caused or contributed to the death; and

e. it is unlikely that conduct of a COI would be in the interests of either SGT Francis’s family, Defence or the public.

RECOMMENDATION: A recommendation be made to the Minister that a written direction be issued that a Commission of Inquiry is not required into the Service-related death of SGT Francis.

SUMMARY AND CONCLUSION
283. At approximately 1130 hours on 16 July 2014 SGT Gary ‘Frankie’ Francis died as a result of falling approximately 40 metres into a crevasse on the Grand Plateau near the top of the Hockstetter Glacier in the Mount Cook National Park in New Zealand. At the time SGT Francis was on duty as the OIC of the 2 Cdo Regt MACWO Course comprising 10 members being conducted in that location.

284. The 2014 MACWO Course was an approved training activity required to maintain a minimum sustainable MACWO capability and meet operational requirements for 2 Cdo Regt. The purpose of the course was to provide training in MACWO technical skills to four new students, continuation training for four qualified MACWO Operators as part of their progression to MACWO Supervisor competency, under the instruction and supervision of two MACWO Supervisors, SGT Francis (OIC) and SGT Frank. SGT Francis was a highly experienced and qualified mountaineer, by reputation one of the best in Australia and the Southern Hemisphere. SGT Frank also had extensive experience as a mountaineer. In short, the Inquiry found that there were no concerns with qualifications and experience of the two Supervisors who were clearly capable of satisfactorily conducting the MACWO Course on the Grand Plateau.

285. The planning and subsequent risk assessment for the Course was undertaken by SGT Francis, the SME at 2 Cdo Regt, with appropriate oversight, approval and endorsement by the 2 Cdo Regt executive, including (Training Officer). The conduct of the planning and the preparation of the risk assessment was comprehensive and considered, and the oversight thorough and careful.

286. However, two issues were not formally addressed in the planning and risk assessment documentation. The first was the change in training location from the Tasman Glacier used in 2011-2013 to the nearby Grand Plateau without explanation and a specific risk assessment of its suitability. However verbal evidence provided by a MACWO Operator and understudy for SGT Francis in 2013, revealed that he recommended the Grand Plateau as it provided a varied and safe training environment suitable for both novice and MACWO Operators. Despite evidence of its unsuitability provided by some SME witnesses, proper planning was undertaken to mitigate the risks using knowledge, and information from the Department of Conservation, for the area.

287. A second unexplained matter was the selection of July, or winter time for the training. The previous 2011 MACWO Course PAR had recommended the May period as the most suitable time. Without explanation the 2012, 2013 and 2014 Courses were held in July. The change in season was not specifically covered in the risk assessment, and there is evidence from SME witnesses that July is a more dangerous time of year for hidden crevasses, weaker snow bridges and avalanches. Again this matter appears to have been addressed by the assessment and monitoring of the climatic, environmental and terrain conditions at the location by SGT Francis, and the subsequent safety measures taken. The Inquiry concluded that neither the choice of location nor the time of year contributed directly to the death of SGT Francis.

288. The MACWO Course arrived on the Grand Plateau on the afternoon of 14 July 2014. After a day of training and familiarisation, including roping and skiing practice, the Course moved down the Grand Plateau to the top of the Hochstetter Glacier. At about 1100 hours on 16 July 2014, while members of the MACWO Course were undertaking a crevasse self-rescue lesson, SGT Francis accompanied by decided to look nearby for a suitable steep crevasse to undertake the next ice climbing activity. Without discussion they proceeded on skis unroped in a slow and
considered manner, with SGT Francis in the lead probing the snow every few metres, and then discussing with Soldier 1 the strength of the snow and ice underneath. The failure to rope was not questioned by Soldier 1 because he had the utmost confidence in SGT Francis, and the decision was his to make as the person in the lead, who would be subject to the greatest risk.

289. There was nothing about the condition of the snow, ice and the ground in the area that caused any undue concerns. Previously the group had roped up when entering the unproven crevasse area, and having assessed the area as safe, it is presumed that SGT Francis decided that it was not necessary to rope for the subsequent reconnaissance. Between 80-130 metres from the main group, while traversing a gentle convex slope considered to be an ice ridge with no evidence of likely crevasses, SGT Francis was probing the 30 centimetre snow cover about five metres ahead of Soldier 1 when, without warning, he fell feet first straight through the ice into a crevasse, akin to going through a metre-wide trap door. It was evident that both SGT Francis and Soldier 1 were caught out by the unexpected hidden crevasse and the thin ice bridge on that convex sloping ridge.

290. The two New Zealand SME witnesses indicated that they would not have traversed the Grand Plateau in the known crevasse area at the top of the Hockstetter Glacier on skis, but rather on crampons or snow shoes; and always roped and carrying an ice axe. In the rare circumstances that they were in a crevasse area on skis they would be roped, usually as a pair, and were confident that they could successfully arrest the fall of the other person. The contrary view put forward by CI was that roping in pairs would have been ineffective in arresting a free fall into a deep crevasse, and he holds a genuine belief had he been roped to SGT Francis, he would have fallen into the crevasse and died.

291. Standard operating practice amongst military and civilian mountaineers, which is imparted in military doctrine and guidance in LWP-SOF 9-3-11, is that the requirement to rope up is discretionary rather than mandatory, but essential when the circumstances warrant it. In the military environment the decision to move either roped or unroped is made by the person undertaking the activity after making an assessment of the snow conditions and the likelihood of encountering crevasses, and is informed by the advice from the most experienced member of the group. In this case SGT Francis was performing both roles. While other mountaineers may have traversed the area roped, the requirement to rope was a matter for the judgment of SGT Francis. While his assessment and decision to move unroped was ultimately incorrect, SGT Francis was not in breach of Defence doctrine and guidance as contained in the LWP; nor is it evident that he failed to follow standard operating procedures or practice for mountaineers.

292. The Inquiry concluded that Defence doctrine (LWP-SOF 9-3-11) concerning the requirement to rope is potentially confusing, particularly when traversing a glacier on skis, however, it is clear that while roping for all glacial movement is an essential safety measure, it is not a mandatory requirement. To assist in reconciling potentially different interpretations of required safety requirements, the Inquiry recommends that consideration be given to amending doctrine and procedures by making accepted practices, such as the wearing of helmets while skiing, and roping when moving on crampons or skis in a potential crevasse area, mandatory safety measures as the default position; with relaxation of such measures only in defined circumstances.

293. After SGT Francis had fallen into the crevasse, the MACWO Course members moved quickly to commence the rescue. The activity was overseen by Soldier 1 who effectively exercised command and control throughout the recovery effort. Soldier 1 readily accepted the task to descend into the crevasse to rescue SGT Francis and fearlessly performed this role in what was an
unknown and unpredictable operating environment. While he suspected that SGT Francis was deceased, after he had been found him wedged in a shaft about 40 metres below the surface, remained undaunted and expended every effort to facilitate a rapid extraction from the crevasse.

294. Once on the surface, and were entrusted with the care of SGT Francis until the arrival of the WESTPAC air ambulance. This trust was not misplaced and both members worked tirelessly for an hour and forty five minutes in their efforts to revive SGT Francis, even though he showed no signs of life when extracted from the crevasse. Although it would have been a highly stressful and demanding task, remained calm, focused and totally committed throughout the event. and also made valuable and substantive contributions to the rescue effort. Their efforts were wide ranging and included the construction of ice anchors, managing and hauling ropes, collecting equipment, maintaining communications and administering CPR. When doing so, each member demonstrated a very high degree of fortitude, endurance and selflessness.

295. Upon arrival at the scene, the WESTPAC paramedic declared SGT Francis to be deceased at 1400 hours. The commendable efforts of the MACWO Course members were not lost on the SAR and WESTPAC air ambulance personnel. They shared the view that the various actions had been undertaken professionally and that everything that could be done had been done. The Inquiry concluded that the recovery of SGT Francis was carried out by the MACWO Course members in an efficient, effective and highly professional manner notwithstanding the very difficult, uncertain and traumatic circumstances. Despite their best efforts, on the evidence available, it is probable that SGT Francis died soon after falling into the crevasse.

296. In summary, the conduct of the MACWO Course revealed no undue training, logistical, equipment, organisational or supervision anomalies or omissions. Following the incident the support provided to SGT Francis’s wife and family and to the MACWO Course members and their families was appropriate in the circumstances.

297. The Inquiry has concluded that there were no systemic or individual failures that caused, or contributed to, the death of SGT Francis. While amplifying changes have been recommended to doctrine, there is no evidence that inadequate Defence doctrine or procedures contributed to the incident. Put simply, SGT Francis, a very experienced and safety conscious mountaineer, made a reasonable ‘judgment call’ that, based on the snow and terrain conditions at the time, there was a very low risk of encountering and falling into a hidden crevasse in the area he was skiing across; and therefore, he decided that it was not necessary to take additional safety measures such as roping. Tragically that decision proved to be incorrect.

December 2014
Annexes:
A. 
B. Incident Chronology
### INCIDENT CHRONOLOGY

<table>
<thead>
<tr>
<th>TIMING</th>
<th>EVENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>03 February 2014</td>
<td>SOCOMD issues Preparedness Directive 2014-15 - 2 Cdo Regt is required to maintain a minimum sustainable MACWO capability with a surge capacity to meet operational requirements.</td>
</tr>
<tr>
<td>February 2014</td>
<td>2 Cdo Regt commences MACWO Course planning.</td>
</tr>
<tr>
<td>April 2014</td>
<td>2 Cdo Regt conducts MACWO Course planning conference.</td>
</tr>
<tr>
<td>May 2014</td>
<td>2 Cdo Regt conducts follow up MACWO Course planning conference.</td>
</tr>
<tr>
<td>June 2014</td>
<td>2 Cdo Regt conducts final MACWO Course planning conference.</td>
</tr>
<tr>
<td>09 - 11 July 2014</td>
<td>2 Cdo Regt conducts MACWO pre-deployment training.</td>
</tr>
<tr>
<td>12 July 2014</td>
<td>MACWO Course departs Sydney for Queenstown.</td>
</tr>
<tr>
<td>13 July 2014</td>
<td>MACWO Course remains in Queenstown to procure additional warm clothing, food and personal items etc.</td>
</tr>
<tr>
<td>14 July 2014 - 0900</td>
<td>MACWO Course departs Queenstown for Mount Cook Village.</td>
</tr>
<tr>
<td>14 July 2014 - 1400h</td>
<td>MACWO Course arrives at Mount Cook Village. SGT Francis attends DOC Visitor Centre.</td>
</tr>
<tr>
<td>14 July 2014 - PM</td>
<td>MACWO Course members, stores and equipment are transported by helicopter in a series of airlifts to the Plateau Hut near the Grand Plateau.</td>
</tr>
<tr>
<td>14 July 2014 - 1700h</td>
<td>Airlift completed.</td>
</tr>
<tr>
<td>14 July 2014</td>
<td>MACWO Course members rest overnight at Plateau Hut.</td>
</tr>
<tr>
<td>15 July 2014 - 0900-0930h</td>
<td>MACWO Course training activities for the day commence preceded by a safety briefing by SGT Francis. The training includes avalanche transceiver testing, snow pit analysis and skiing.</td>
</tr>
<tr>
<td>15 July 2014 - 1600h</td>
<td>MACWO Course training completed for the day.</td>
</tr>
<tr>
<td>15 July 2014- 2200h</td>
<td>MACWO Course members retire to bed.</td>
</tr>
<tr>
<td>16 July 2014 - 0900h</td>
<td>SGT Francis delivers a safety brief to the MACWO Course members.</td>
</tr>
</tbody>
</table>
16 July 2014 - 0930 hours | MACWO Course departs Plateau Hut for the day’s training on the Grand Plateau. Initial activity includes snow anchor training.

16 July 2014 - 1030-1100 hours | Soldier 2 delivers a safety brief. MACWO Course members commence crevasse rescue training. During this time, SGT Francis and Soldier 1 move off to identify a suitable site for an ice climbing lesson.

16 July 2014 - 1130 hours | SGT Francis falls into a crevasse. Soldier 1 raises the alarm.

16 Jul 2014 - 1145 hours | Soldier 4 enters the crevasse to commence the rescue of SGT Francis.

16 July 2014 - 1205 hours | Soldier 3 radios DOC for SAR assistance.

16 July 2014 - 1215 hours | SGT Francis is recovered from the crevasse. CPR and first aid treatment commences.

16 July 2014 - 1225 hours | Soldier 4 exits crevasse.

16 July 2014 - 1225 hours | DOC request WESTPAC air ambulance.

16 July 2014 - 1236 hours | SGT Francis is administered morphine.

16 July 2014 - 1245 hours | WESTPAC air ambulance departs Christchurch for incident site on Grand Plateau. Advised flying time was approximately one hour and twenty minutes.

16 July 2014 - 1252 hours | SAR helicopter departs Mount Cook Village for incident site on Grand Plateau.

16 July 2014 - 1305 hours | SAR helicopter arrives at incident site on Grand Plateau.

16 July 2014 - 1355 hours | WESTPAC air ambulance arrives at incident site on Grand Plateau.

16 July 2014 - 1400 hours | SGT Francis is pronounced deceased by WESTPAC air ambulance paramedic.

16 July 2014 - 1406 hours | SGT Francis transported by the WESTPAC air ambulance to the Mount Cook Village Emergency Services Base. Soldier 2 and Soldier 3 travel with SGT Francis as escorts.

16 July 2014 - PM hours | Soldier 1, Soldier 3, Soldier 4 and Soldier 6 are airlifted by helicopter to Mount Cook Village.

16 July 2014 - PM hours | SGT Francis is transported to Christchurch by New Zealand authorities.
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 July 2014</td>
<td>PM hours</td>
<td>Soldier 1 and Soldier 8 travel separately by road to Christchurch and assume escort duties.</td>
</tr>
<tr>
<td>17 July 2014</td>
<td>AM hours</td>
<td>Soldier 3, Soldier 4, and Soldier 5 are airlifted by helicopter from Plateau Hut to Mount Cook Village.</td>
</tr>
<tr>
<td>18 July 2014</td>
<td></td>
<td>Soldier 2, Soldier 5, Soldier 6, and Soldier 9 return to Australia.</td>
</tr>
<tr>
<td>22 July 2014</td>
<td></td>
<td>SGT Francis returns to Australia with Soldier 1 and Soldier 9.</td>
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</tbody>
</table>