

Exercise Evaluation Report

Operation Weta



Location: *Tararua Forest Park, Wairarapa*

Date: *10 – 12 November 2023*

Report version: *One*

Evaluator(s): *David Houston on behalf of NZSAR*

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Executive Summary

The Wellington Police District land SAREX was conducted over a 3 day period starting from Friday 10 November and ending Sunday the 13 November 2023.

The exercise was attended by the Wairarapa and Wellington Police SAR squads; Wairarapa and Wellington Land SAR; Amateur Radio Emergency Communications (AREC) and Amalgamated Helicopters.

Wairarapa Police SAR squad was exercise control.

During the multi day event junior members from Wairarapa and Wellington Police squads were designated Incident Controllers for the initial and extended search phases of the SAREX.

The agencies were tested in a full scale exercise and deployed assets into the Tararua Forest Park.

The aim of the exercise was to practice and test operational capability for a land search and rescue event involving overdue hikers in the Tararua Forest Park. The exercise was realistic and was based on real SAROPs that have happened in the Tararua Forest Park over recent years.

By evaluating the SAREX against the objectives, some insights have been made that should support improvements in deploying hastily to the field and working together to achieve a common purpose.

The aim of the exercise was achieved and SAREX was a success for all agencies.

1. Recommendations

1.1 Consider developing developing SAR Track so the intended route for a missing party can be visually seen on the electronic map and also intended team taskings. This would aid in presentations and briefings

1.2 Remove all Land SAR forms and ensure NZSAR forms are used to ensure consistency across the country.

1.3 Consider getting posters highlighting Incident Management Roles and have the posters displayed in the operations Room of the SAR Base. The National Emergency Management Agency has CIM's role cards available for groups to utilise.

1.4 Consider a prompt card for IMT that if search teams are camping out over night they are given an update on the search and the weather forecast for the following day.

2. Introduction

Search and Rescue (SAR) incidents on land in Wellington Police District requires cooperation and a partnership approach across several organisations beyond NZ Police. The Wellington and Wairarapa Search and Rescue Police Squads is normally the coordinator for these types of SAR incidents. They utilise local resources including Land Search and Rescue New Zealand (LandSAR); Amateur Radio Emergency Communications (AREC) and Amalgamated Helicopters in a land SAR capacity.

Operation Weta was a Land based SAREX that took place in Wairarapa on Friday 10 November and ended on Sunday the 12 November 2023. Operation Weta was a full scale exercise, designed as a practical exercise with search assets deployed to Tararua Forest Park to search for a lost party.

A needs analysis was completed in the planning for Operation Weta, with the following outlined in the planning document:

Specifically there is a need to:

- To practice and test operational capability for a land search and rescue event involving over due hikers in the Tararua Forest Park
- Train new IMT and Field staff for succession for the future
- A scenario based event would provide training for planning; deployment; use of assets; Extraction; documentation; record keeping and communication.
- The ground for the SAREX would provide education to those who have not visited the Mount Holdsworth area of Tararua Forest Park.

The objectives of the Operation Weta for the SAREX were:

- Introduce and assess new volunteers to IMT roles
 - Introduce and assess new Police SAR squad members to the Incident Controller role
 - Test and assess the competencies associated to the IMT and correspondence associated to the SAR event
 - Introduce and assess new volunteers in field roles
 - test competencies relating to risks & hazards, fitness, field camping practices, helicopter safety, first aid, search techniques,, navigation, radio communications, clue awareness, search methods and reporting.
 - Capture the information relating to filed competencies and arrange entry into database
 - Work with Wellington and Wairarapa in a shared IMT
 - SAR partners will collaborate effectively – appropriate agencies are selected for and participate in the SAREX
 - The IMT effectively manages the exercise and operates within the CIMS model and principals
 - Risk awareness and management is demonstrated by all exercise participants
 - SAR operational personnel refresh and practice SAR skills
 - SAR personnel carry out a search to locate missing party
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3. Background

.3.1 Background to the Exercise

There have been 10 SAR events in the Wairarapa during the last year. 3 of the events included 3 deaths and 2 bodies that have not been recovered. SAR events in the Wairarapa have a history of resulting in multi day searches.

The Mount Holdsworth area in the Tararua Forest Park is an area of high usage by recreation users involved in tramping and hunting.

The SAR response often requires deployment to isolated locations that are not tracked.

The need for the SAREX:

- The Wairarapa SAR has an ageing group of members and training the IMT and field staff will allow for succession.
- A scenario based event would provide training for planning, deployment, use of assets, extraction, documentation, record keeping and communications.
- The ground would provide an education to those who have not visited the this particular part of the Tararua Forest Park.

.3.2 Dates, location, organising agency(s), key people

Date: 10 – 12 November 2023

Location:

- search area: Mount Holdsworth area of the Tararua Forest Park, Wairarapa
- Incident Control Point & Staging Area: SAR Base, Manaia Road, Masterton

Organising agencies and key people:

- New Zealand Police, Sergeant Matheson
- New Zealand Police, Sergeant Westrupp
- Wairarapa Land SAR, Chairman, Murray Johnson
- Wairarapa Land SAR, Training officer, Nigel Boniface
- NZSAR – evaluator – David Houston

.3.3 Participating organisations

New Zealand Police

Wairarapa Land SAR

Amalgamated Helicopters

AREC

.3.4 Exercise aim

To practice and test operational capability for a land search and rescue event involving overdue hikers in the Tararua Forest Park.

.3.5 Exercise objectives

- SAR partners collaborate effectively – Appropriate agencies are selected for and participate in the SAR exercise
- All SAR agencies operate within the CIMS model and principles
- The IMT effectively manages the exercise
- Risk awareness and management is demonstrated by all exercise participants
- SAR operational personnel refresh and practice search and rescue skills
- SAR personnel recover the missing party
- Implement SAR processes for managing field based personnel

.3.6 Exercise Scenario

At about 9am on the Wednesday the 8th of November 2023 a group of four hikers were dropped off at Mount Holdsworth carpark. The group were on an overnight hike that was mostly off track.

Their intention was to use the Gentle Annie and Totara Flats track to access the main ridgeline that runs south towards high point Waiohine.

This ridgeline separates the Waiohine Catchment from Carrington Stream, Mangatarere Stream and Kaipaitangata Stream.

They were intending to camp overnight on the 8th of November somewhere on this ridgeline.

The group intended to negotiate this ridge line to the road end at Mount Dick.

They were to be picked up at the top carpark near the viewing platform at 4pm on Thursday the 9th of November 2023.

The group had a secondary plan to drop off the ridge into the Waiohine River if they found the conditions too difficult. It's not known how they would negotiate their way down to the Waiohine. It was their intention to ring the informant if this change of plan was to take place while they were up high and had cell phone coverage. The pickup time would remain the same – except the collection point would be at the Waiohine Gorge Rd end.

The informant received no phone call from the group – they did not meet the 4pm pick up at Mount Dick.

The informant also checked Waiohine Gorge Rd end without success.

Friday 10 November the informant has repeatedly checked the road ends without success.

The informant reported the group overdue to Police at 3pm today. The lost party is not responding to phone calls.

4. Evaluation Methodology

.4.1 The agreed outcomes of the evaluation activity

The evaluator was asked to observe the SAREX activity and produce evidence-based report comparing objectives to what was observed.

.4.2 Evaluation scope

Included:

Objective One Partners collaborate effectively – Appropriate agencies are selected for and participate in the SAR exercise

- All agencies required for the exercise participate
- All agencies participating collaborate effectively
- Liaison arrangements for inter-agency engagement are maintained

Objective Two: SAR agencies operate within the CIMS model and principles

- Agencies work under common structures, roles, and responsibilities
- Agencies use common terminology. agencies response is coordinated
- agencies coordinate resource organisation

Objective Three: IMT effectively manages the exercise and operates within the CIMS principles

- Structure is in accordance with CIMS
- Roles and responsibilities are in accordance with CIMS
- Personnel use CIMS terminology
- operation ensures integrated information management and communications.
- Information is communicated within and across agencies.
- Situation awareness is maintained.
- ICP established
- Appropriate Structure established
- All appropriate Documentation is completed
- IAP is established for the initial operational period
- IAP is updated for subsequent operational period
- IAP review meetings conducted by the IC
- I/C leads regular IMT briefings
- IMT function managers undertake regular team briefings

Objective Four: Risk awareness and management is demonstrated by all exercise participants

- All participants understand their personal responsibilities in regards to risks

Objective Five: SAR operational personnel refresh and practice search and rescue skills.

1. SAR personnel carry out search to locate missing party

- SAR field teams apply appropriate search techniques
- Field teams support resources (eg AREC, helicopter) perform to the standard of their speciality
- Missing party is located
- teams undertake taskings in line with the IAP
- teams provide regular updates
- teams provide accurate and timely information to the IMT
- team GPS tracking is consistent with tasking
-

2. SAR Personnel recover the missing party

- Missing party is fully assessed on discovery
- The safety of missing party is maintained during recovery
- The safety of the search team is maintained during recovery

3. Implement SAR processes for managing field based personnel

- Radio communications are maintained
- IMT records location and status of all field resources
- Field teams are fully briefed.
- Field teams are debriefed
- Field teams welfare is managed throughout the exercise and demobilisation
- Briefing information appropriately addresses identified risks

.4.3 Aspects of the exercise observed, what was not observed

Evaluator Observed:

- IMT progress during in all phases which included the Initial Phase and Extended Search Phase, which involved two different teams.
- Briefings from the I/C to the search teams and IMT
- Briefings from team leaders in staging areas
- Radio communications from the SAR Base

Not Observed

- Teams in the field

.4.4 The process followed in preparing and submitting the report

The evaluator and exercise controller agreed on the evaluation role and what objectives would be tested prior to the SAR exercise.

On the final day of the exercise a hot debrief was held at the completion of the exercise and any issues were addressed amongst the participants.

A report was prepared and submitted in draft form to the Exercise Controller before a final copy would be submitted.

5. Findings

5.1 Objective One: Partners collaborate effectively – Appropriate agencies are selected for and participate in the SAR exercise

KPI - All agencies required for the exercise participate

A good mix of agencies were involved in the SAREX and were suitable for the search for overdue hikers.

Wairarapa and Wellington Police SAR squads
Wairarapa Land SAR teams
Wellington Land SAR teams
AREC
Land Sar dog handler
Amalgamated Helicopters

NZDF were considered but organisers didn't want the SAREX organised around NZDF assets, which can be rigid in their processes.

KPI- All agencies participating collaborate effectively

Having Wellington and Wairarapa staff working together was great. Individual informal interviews and briefing highlighted positive feedback from various groups:

- Good to see how members in different areas operate
- Wairarapa more paper based where Wellington is computer based
- good to work with different people that I haven't met
- We process information differently
- Wellington uses a bigger Incident Action Plan whiteboard
- Wairarapa has a great SAR base and SAR track system
- Wairarapa had the local knowledge which was invaluable

AREC were not involved in the planning as VHF communications in the area was going to be very good due to past improvements. ???

KPI - Liaison arrangements for inter-agency engagement are maintained

Inter- Agency engagement was exceptional and various members across NZP and Land SAR considered it a very worthwhile SAREX and the experience from it would improve their skills within SAR. It felt comfortable with a friendly atmosphere amongst the participants, which made for a good learning environment.

Feedback about the learnings from the SAREX:

- Great learning environment
 - my first SAREX and I learnt from listening to other teams on how they operate
 - Good to do a SAREX that was longer than 2 hours
 - lots of my competencies will be signed off (Refer Appendix A - Land SAR competency)
 - Good training in navigation & GPS work
 - good practice for tracking including sound line
 - using topographical Maps online was new idea
-

- River crossing training tracking foot prints was good to practice

5.2 Objective Two: SAR agencies operate within the CIMS model and principles

KPI Agencies work under common structures, roles, and responsibilities

The proper CIMS structure was adopted and everyone understood their roles and responsibilities during the 3 day event.

It was clear who was in the incident management team and who was in the field by vests and uniform worn by respective agencies. Looked very professional. (Refer Appendix B - Vests)

KPI - Agencies use common terminology

It was clear most of the participants understood the appropriate CIMS terminology

KPI - response is coordinated

The initial phase was carefully thought out by the IMT and the correct processes followed. The IMT processed the initial information and determined the type of response, which was going to be a measured response and members used the search urgency to assist with the response. The IMT then worked out the IAP and search area. Resources were tasked accordingly. (Refer Appendix C – Search Urgency)

During the second phase, being the extended search phase, the IMT took the same methodical approach. It was good to see the Incident Controller refer to the Extended Search Planning Aide Memoir produced by NZSAR.

KPI Agencies coordinate resource organisation

The IMT coordinated and tasked all resources appropriately for the type of situation. This was visible on a white board displaying team members, timings and tasking. (Refer Appendix D – Team Members taskings)

Taskings had been worked out and drawn on a map. Consideration should be given if this same tasking information could be put into SAR Track and viewed on an electronic map making it easier to view in briefings and presentations.

5.3 Objective Three: IMT Effectively manages the exercise and operates within the CIMS principles

KPI - Structure is in accordance with CIMS

There were two separate IMTs during the three day exercise and both had the appropriate size structure to deal with the incident.

The teams were made up a mixture from Wairarapa and Wellington members and this put pressure on the IMT who weren't use to working with strangers. It was good to see the

Incident Controller on both teams have an initial meeting to explore each others experience before assigning positions.

KPI - Roles and responsibilities are in accordance with CIMS

It was acknowledged at the start of the exercise that the IMT participants were new to the IMT roles and therefore mentors had been designated to teams.

It was good to see the exercise controllers intervene when Incident Controllers started to get involved in smaller issues and assisting other roles, which was starting to slow the response. There was the odd interference of members doing other roles but was not detriment to the operation.

There was a small posters identifying position roles as a method to prompt IMT of their roles but it was not visible to the IMT as they had been working in another room. It would be recommended that these Prompt Posters be bigger and put in areas visible to the IMT. (Refer Appendix E – A4 size CIMS Roles)

KPI - Personnel use CIMS terminology

The majority of participants were aware of how CIMS worked and who they were reporting to. The IMT was aware and involved in briefings, planning, intelligence, Media, IAP and handovers.

KPI - Operation ensures integrated information management and communications.

The SAR Track Team and Communications Team were instrumental to the gathering of information. Every document produced by the IMT and Radio messages were entered into SAR track by both groups.

At the end of the exercise a desk folder containing all documents was able to be presented and viewed for any enquiry such as the Coroner. The cover of the folder had a check list to ensure all documents had been collected. (Refer Appendix F – Check list)

A computer log of all radio messages was able to be viewed on Computer Screens. (Refer Appendix G - Radio messages)

During the SAR planning stage a Lost person Behaviour search area rings and search teams tasking had been drawn onto topographical Map. Some of this information included SAR teams actual track and search area rings was also captured in SAR Track and displayed onto the Large Television Screens, which could be viewed by teams. (Refer Appendix H – SAR Search area & Electronic Version)

To improve on the system it would be recommended that the intended track of the missing missing party, which would include the last known point and end destination. It would be ideal to also see the intended team tasking also and all this information would aid in briefings and presentations.

KPI - Information is communicated within and across agencies.

Communication from the IMT, Field teams, Communications Team and SAR Track teams Radio flowed smoothly and this made for a well organised SAREX.

KPI - Situation awareness is maintained.

Both IMTs had a comfortable atmosphere where individual members were constantly providing feedback to the team. There was regular briefings to talk about issues. Two scenario weighting worksheet forms had been filled out by the IMT to ensure they were keeping an open mind.

KPI - ICP established

The Wairarapa SAR base was designated the ICP and this was a brilliant location. Plenty of room, purpose built Sar base, enough space for parking, restricted entry, enough room for a staging area and helicopter landings of SAR teams, and break out areas. (Refer Appendix I - ICP)

KPI- All appropriate Documentation is completed

The desk file presented captured all relevant documents in a nice tidy and neat order.

Some participants were still using Land SAR Team Tasking form and Land SAR Safety forms. The proper NZSAR form should be used which has been approved by all agencies. (Refer Appendix J – Safety form and Tasking form)

IAP is established for the initial operational period

An IAP was done to a satisfactory level. Members did struggle with identifying objectives and strategies to achieve them. This was due to being new in the role.

The standard IAP on the whiteboard could be improved by enlarging it slightly to make it easier to capture all information. The mission had been missing and was later added.

KPI - IAP is updated for subsequent operational period

The first team updated the IAP for the subsequent period and while updating discovered there was no mission and this was rectified. The second team would often modify the IAP. They never had an opportunity to complete it for the third phase. (Refer Appendix K - IAP)

KPI - IAP review meetings conducted by the IC

Both I/C's conducted review meetings. Both groups looked at various likely scenarios and ranked them accordingly. Both were done on the NZSAR scenario weighting worksheet.

KPI - I/C leads regular IMT briefings

The first group Both groups had regular meetings This was a common theme amongst both IMT's . Meeting times were put on a white board so members were aware. Meetings were comfortable and all members participated in the briefing. (Refer Appendix L – Briefing notes)

KPI - IMT function managers undertake regular team briefings

The various functions were only single teams so never tested.

5.4 Objective Four: Risk Awareness and Management is demonstrated by all exercise participants:

KPI - All participants understand their personal responsibilities in regards to risks

Evaluator interviewed field members and ascertained each team had a

- first aid kit
- PLB
- Radio

It was clear field members were aware of the risks when they were debriefed especially in regards to fatigue.

5.5 Objective Five: SAR operational personnel refresh and practice SAR skills

5.5.1 SAR personnel carry out search to locate missing party

KPI - SAR field teams apply appropriate search techniques

Search teams were given taskings from the IMT and given a variety of techniques to use during the search such as: using grid references; following tracks; side cutting; search ridge lines; going to high spots; hasty search; sign cutting at junctions; sound line; following rivers and crossings

The evaluator was not present during search techniques but has seen radio logs and team tasking sheets, which matched the taskings on the search area.

KPI - Field teams support resources (eg AREC, helicopter) perform to the standard of their speciality

Speciality teams worked very well.

AREC / Communications – radio transmissions were very good with a local repeater on Mount Holdsworth. All messages were read or written down on a SAR message form. Each entry from the form was inputted into SAR Track generating an instant electronic log. The log was present on a television screen in each of the rooms around the SAR base, which was very useful tool for any presentation or briefing.

SAR Track Team – did an impressive job keeping the flow of information and computer updated. A very impressive and tidy paper file of the entire job was then presented to the Evaluator at the conclusion of the SAREX.

SAR Dog – Evaluator was not in the field but it could see the log and hear some of the transmissions when the dog was near the lost party.

Amalgamated Helicopters – Due to the weather the helicopter was not able to fly on the final day. A good half hour of training was given to all participants around risks associated

with helicopters. A very worth while exercise for new participants and experienced members needing a refresher on helicopter use.

KPI - Missing party is located

Mission accomplished as the search teams located located 2 x separate groups of injured lost hikers.

KPI - Teams undertake taskings in line with the IAP

The proper search area was determined using the lost behaviour calculations by the IMT. Objectives were determined and strategies to achieve were determined by the IMT. Taskings were then generated and then passed onto search teams.

All taskings were appropriate for the search area.

KPI- Teams provide regular updates

Teams provided regular updates.

KPI - Teams provide accurate and timely information to the IMT

Teams provided timely information such as clues when located in the field such as

- dog indicating direction down hill
- single foot prints
- pack liner strips
- hearing voices

KPI - team GPS tracking is consistent with tasking

GPS tracking was perfect and it was great to watch it live on television screens in various rooms of the SAR base. The tracking matched the tasking set for each team. (Refer Appendix H – SAR Tracks)

5.5.2 SAR Personnel recover the missing party

KPI - Missing party is fully assessed on discovery

The first missing party was located which had a pregnant woman with abdominal pains. She was appropriately assessed and the information passed onto the IMT to work out a solution. The IMT requested a medical opinion and also advised West Pac Helicopter. The IMT worked out an extraction procedure.

The second missing group located the team assessed the patient and the information passed onto the IMT. The patient had a shoulder injury and it was determined he could walk out on his own. Helicopter was considered.

KPI - The safety of missing party is maintained during recovery

Both parties had their safety maintained during the extraction phase and monitored by the IMT.

KPI - The safety of the search team is maintained during recovery

The search team safety was always maintained throughout the operation. A safety plan and extraction procedure had been done. The safety plan had been done on a Land SAR form and should be done on the standardised NZSAR form.

5.5.3. Implement SAR processes for managing field based personnel

KPI - Radio communications are maintained

A communication Team was set up and communications with the team was great. A communication plan had been developed by the IMT and this was done on the NZSAR Communications Plan form. (Refer Appendix M – Communication Plan)

KPI - IMT records location and status of all field resources

The Field teams were being monitored by SAR Track and also a visible white board with sections for each team highlighting the members and what their tasking were and when in the field. (Refer Appendix – Team Taskings)

T cards were also being used to track all members including visitors and IMT who had arrived at the SAR base.

KPI - Field teams are fully briefed.

Before teams went out into the field they were briefed by the IMT along the lines of GSMEAC format. Team leaders were later briefed with a more detailed tasking. (Refer Appendix L – Briefing notes)

At the debrief field team members that had been staying over night would have liked an update of the search at the end of the day such as if any clues had been found and also the weather forecast for the following day.

KPI - Field teams are debriefed

Each field team was debriefed by a member from the IMT. The SAR team Debrief form was used.

KPI - Field teams welfare is managed throughout the exercise and demobilisation

The IMT was assessing the welfare of the teams and were aware of fatigue and if a team was behind schedule on SAR Track they would ask for a welfare check.

KPI - Briefing information appropriately addresses identified risks

The SAR Team tasking form highlights hazards and risks, which was limited water resources for most teams.

The IMT also utilised the Land SAR safety Plan which also provided a more detail hazards and risk controls. These were highlighted to the teams during briefings. (Refer Appendix J)

6. Conclusions

The Wellington and Wairarapa SAREX was a success with a friendly and comfortable learning environment for participants. All teams were motivated and did a great job by achieving the mission of finding hikers in the Tararua Forest Park.

The overall aim of the exercise was achieved, which was to practice and test operational capability for a land search and rescue event involving overdue hikers in the Tararua Forest Park.

Achieved: SAR partners collaborate effectively – Appropriate agencies are selected for and participate in the SAR exercise

The number of teams involved in the exercise was suitable for the event and enough to keep the IMT challenged. Wellington and Wairarapa staff enjoyed working together and a lot of positive feedback mainly around observing how other teams process information. Inter-Agency engagement was positive and various members across NZP and Land SAR considered it a very worthwhile SAREX and the experience gained from attending would improve their skills within SAR environment.

Achieved: All SAR agencies operate within the CIMS model and principles

Both Incident Management Teams operated within the CIMS model and Incident Controllers led their teams in a positive and relaxed manner. The Incident Control Point had a great advantage of being near the search area and the structure was big enough to handle the situation. Improvements could be made on Incident Action Plan namely around the Objectives and Strategies to achieve it. This can be done with a training refresher during a training day. The Incident Controllers did well on organising regular briefings and advising staff using the GSMEAC format

Achieved: The IMT effectively manages the exercise

Both Incident Management Teams worked well towards achieving the mission. They processed the information and determined the search urgency. A search area was determined and developed a plan on how to search the area by mobilising teams into the field. Proper search management principles were followed with the correct documentation and following Lost Person Behaviour. The IMT made use of technology with SAR Map where all documents and search planning tools were inputted into the computer and could be displayed on television screens to aid in briefings.

Achieved: Risk awareness and management is demonstrated by all exercise participants

Risk awareness was demonstrated by all individuals during the SAREX with risks identified and managed in Safety plans, IAPs, SAR taskings, briefings and through to individual teams carrying the right equipment such as clothing, PLBs, first aid kits and radios.

Achieved: SAR operational personnel refresh and practice search and rescue skills

SAR teams in the field were able to refresh and learn new skills during the exercise which included building on local knowledge in the Tararua Forest park; navigation; using grid references; following tracks; side cutting; searching ridge lines; going to high spots; hasty search techniques; sign cutting at junctions; sound line techniques; following rivers and

through to crossings. Participants from Police and Land SAR were able to get new competencies signed off during the three days.

Achieved: SAR personnel recover the missing party

Search Teams were able to locate 4 missing hikers who had separated into two groups. One in each party had a medical issue, one a pregnant woman with abdominal pains and the second a minor shoulder injury. Both groups were assessed and the information passed to the IMT. Medical advice and Westpac Helicopter was considered for both injuries and then an extraction plan was developed.

Achieved: Implement SAR processes for managing field based personnel

The IMT were able to monitor the field teams in the field by SAR Track tracking, which was being monitored on television screens in the ICP. A white board in broken into sections for each field team highlighted team members and taskings. T cards were used for personnel including visitors entering the SAR Base so everyone was accounted for.

Field Team members staying over night in the bush did comment that they would have liked an update on the search at the end of day such as any clues found and the weather forecast for the following day.

7. Appendix

Appendix A – Land SAR Competencies

Your Name:	Team Leader	To		Not
		Pass	Re-test	
Competency to test				
91.01: Demonstrate an ability to identify potential risks and hazards.				
91.02: Demonstrate an ability to assess potential risks and hazards.				
91.03: Demonstrate an ability to mitigate potential risks and hazards				
91.04: Communicate safety action plan to team and/or management as appropriate				
92.01: Demonstrates knowledge of search area containment.				
126.01: Explain factors which determine searcher spacing between members of a search team				
126.02: Demonstrate search methods as a member of a search and rescue team.				
126.03: Describe the role and activities of a member of a containment team.				
127.01: Can identify and/or describe human sign using basic track and clue observation skills.				
127.02: Can identify clues/sign and demonstrate how to record and report on clues/clue sites.				
127.03: Demonstrates how to determine direction of travel based on human sign.				
128.01: SATNAV/GPS is set for operational use.				
128.02: Fourteen (14) figure grid references are converted to six (6) figure grid references.				
128.03: Log and name waypoints and navigate to a specific waypoint				
128.04: Log, name and report all significant references.				
129.01: Daily maintenance and recharging procedures are completed to operational requirements.				
129.02: Radio is set up and used to obtain best coverage and reception.				
129.03: Channel or frequency is selected				
129.04: Messages are sent and received using radio protocol				
129.05: Messages are communicated and/or relayed under difficult conditions				
130.01: Describes the hazards associated with working around rotary wing aircraft.				

130.02: Demonstrate safe procedures for loading and unloading personnel.				
130.03: Describe the likely hazards around a landing site.				
130.04: Explain or demonstrate how to brace for impact and escape from an aircraft in an emergency.				
130.05: Explain the use of emergency equipment for helicopters				
1.01: Explain or demonstrate minimum survival requirements.				
1.02: Describe three methods of emergency communication.				
2.01: Demonstrate care and maintenance of maps for operational use.				
2.02: Orientate a map.				
2.03: Use the map to describe a route.				
2.04: Demonstrate navigation using natural and cultural features to a selected position.				
2.05: Estimate route distance and time using a map				
3.01: Demonstrate the use of bearings to a defined feature.				
3.02: Demonstrate navigation to a selected position, on and off track, using a compass.				
4.01: Describe when to cross and when not to cross a waterway				
4.02: Demonstrate knowledge of river characteristics, dynamics and hazards				
4.03: Identify an appropriate place to cross a river and justify for solo and mutual support methods				
4.04: Demonstrate river crossing techniques.				
4.05: Demonstrate safe river crossing technique with a stretcher.				
5.01: Demonstrate appropriate fitness level for role.				
7.01: Demonstrate tying of general purpose knots/bends/hitches for SAR.				
8.01: Establish a campsite.				
8.02: Demonstrate decommissioning the site and returning it to its natural state.				
8.03: Demonstrate preparing food/drink that is free from contamination.				
8.04: Demonstrate appropriate hygiene for the outdoors				

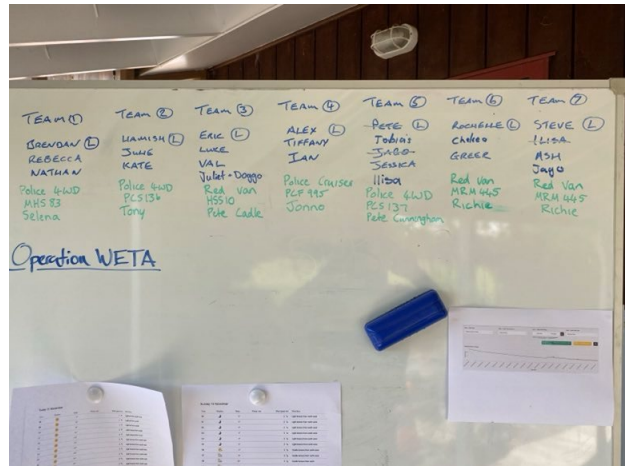
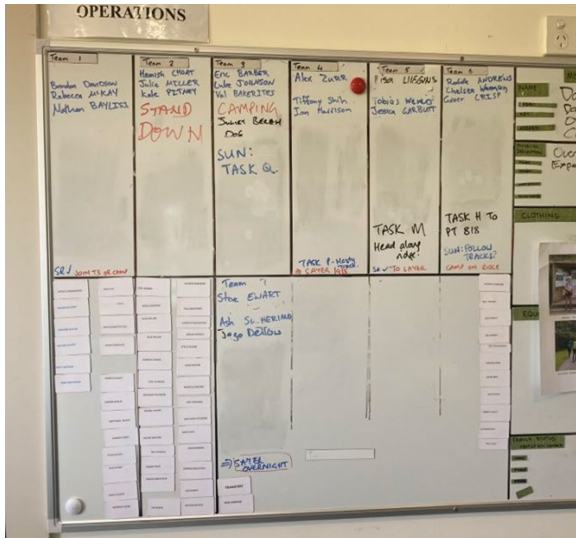
Appendix B – Incident Management Team Vests



Appendix C – Search Urgency

SEARCH URGENCY - LAND		Form: 1958
Operation name:	Operation WETA	Date: 10/1/23
Prepared by:	MT	
Number of missing persons	Missing persons (MP)	Value
Age of missing persons	MP is alone (value is 1) MP is a group but they are separated (value is 1-2) MP is a group but they are together (value is 3)	3
Medical conditions	MP very young (value is 1) MP very old (value is 1) Other (value is 2-4) Known or suspected injury/fitness/condition (value is 1-2) MP is healthy (value is 3) Recent fatality (value is 4)	3
Fitness	MP is fit (value is 1) MP is fit (value is 2) MP is weak (value is 3)	2
Experience	MP not experienced; not familiar with area (value is 1) MP not experienced; but knows the area (value is 2) MP is experienced; but not familiar with area (value is 3) MP is experienced; and knows the area (value is 4)	3
Reliability	Reliable, punctual (being late is not of character) (value is 1) Usually reliable, on time (value is 2) Reliability, functionally questionable (value is 3) Completely unreliable (value is 4)	2
Clothing	MP's clothing is inadequate for conditions (value is 1) MP's clothing is adequate for conditions (value is 2) MP's are well clothed/prepared for conditions (value is 3)	3
Equipment	MP's gear is inadequate for their situation (value is 1) MP's gear is questionable (value is 2) MP's gear is adequate for their situation (value is 3) MP's is well equipped for any situation (value is 4)	3
Weather	Existing hazardous weather (value is 1) Predicted hazardous weather (within 8 hours) (value is 2) No hazardous weather (more than 8 hours) (value is 3) No hazardous weather predicted (value is 4)	3
Terrain hazards	Terrain has known hazards (value is 1) Difficult terrain (value is 2) Terrain has few hazards (value is 3) Easy terrain, no known hazards (value is 4)	2
Length of time missing	Missing over 12 hours (value is 1) Missing 4-12 hours (value is 2) Missing under 4 hours (value is 3) Missing more than 7 days (value is 4)	1
Search Urgency		Total
Requires emergency response	11-16	
A measured response	19-27	27
Evaluate and investigate	28-41	
Approved:	MT	Date/Time: 10/1/23

Appendix D – TeamTasking



Appendix E – Small poster of CIMS Roles

Operation: P056678702 - Operation WETA - GroupID: 5091 - Operator: Tony Spittal

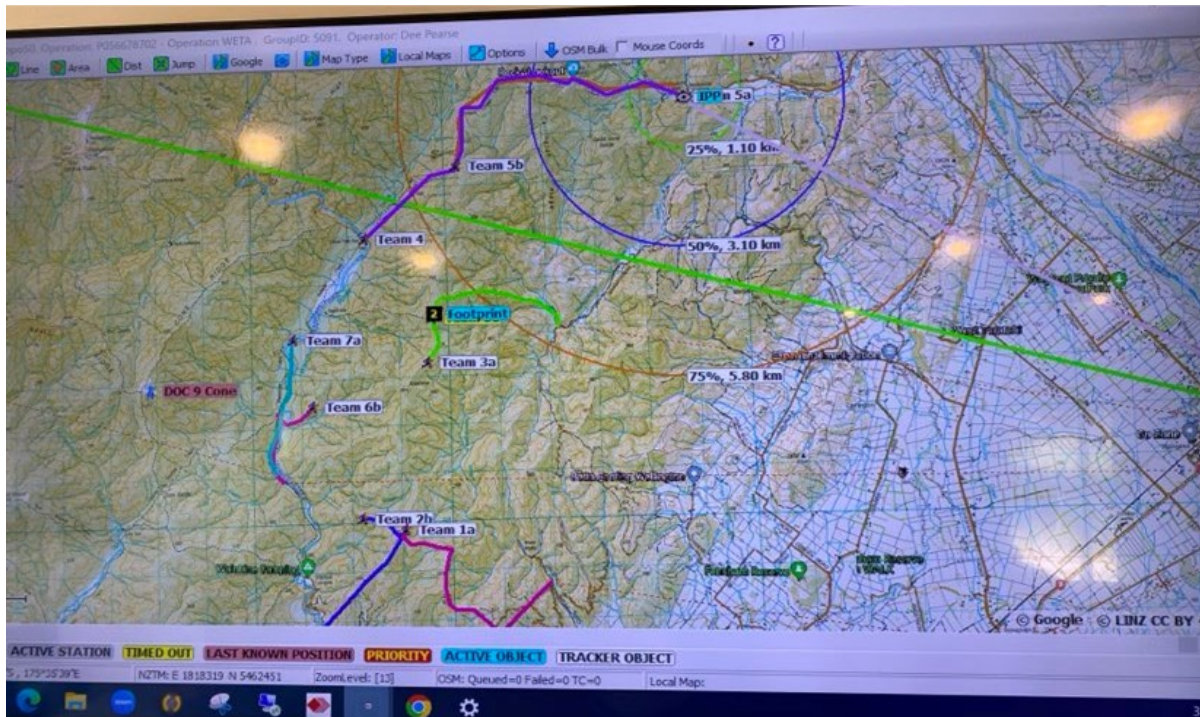
Log Out Search Team Status Clues Sirep Time Line Tasks New/Close Options Reports 100 ?

Date	Time	F/T	Reference	Type	Summary	Operator	Sender
11/11/2023	17:21:40	FROM	Team 3	Sirep Team	Shout that team 6 heard may have been hit. We will make some more calls to confir	David Bray	WSAR 4 Radio
11/11/2023	17:21:41	FROM	Team 6	Standard	GR 027 628 spur not far from Washine HP. We heard a single male voice shouting	David Bray	WSAR 4 Radio
11/11/2023	17:25:44	TO	Team 6	Sirep Team	MSG received. Continue on Task. Please report any further developments	David Bray	WSAR 4 Radio
11/11/2023	17:28:02	FROM	Team 6	Sirep Team	Confirmed Whistle and shout was from Team 3	David Bray	WSAR 4 Radio
11/11/2023	17:28:29	TO	Team 7	Sirep Team	Yes, please return to Sayer if no sign found on East of river likely overnight,	David Bray	WSAR 4 Radio
11/11/2023	17:29:51	FROM	Team 3	Sirep Team	Any future tasks? Dogs are tired	David Bray	WSAR 4 Radio
11/11/2023	17:32:30	FROM	Team 2	Sirep Team	Do we have any more talking?	David Bray	WSAR 4 Radio
11/11/2023	17:35:31	FROM	Team 4	Sirep Team	We are at GR 020 643. Potential clue found. Werthers Original wrapper found on t	David Bray	WSAR 4 Radio
11/11/2023	17:40:54	FROM	Team 6	Sirep Team	We have located footprints head down hill. Location GR 18129782, 5462840N. Direct	David Bray	WSAR 4 Radio
11/11/2023	17:41:41	FROM	Team 6	Clues	CLUE Update: Clue information Updated: Footprint scuffs	Dee Pearce	WSAR 2 OPS
11/11/2023	17:44:22	TO	Team 2	Sirep Team	What you like to be collected, uplifted from at the road end? No longer required	David Bray	WSAR 4 Radio
11/11/2023	17:47:03	TO	Team 3	Sirep Team	If possible, return North to Washine high point and query dog scent on scours to	David Bray	WSAR 4 Radio
11/11/2023	17:51:21	TO	Team 7	Sirep Team	No further tasks today. Overnight at Sayer.	David Bray	WSAR 4 Radio
11/11/2023	17:52:17	FROM	Team 3	Sirep Team	Will find a camp site for the night. Will be finding a site north and will connect	David Bray	WSAR 4 Radio
11/11/2023	17:55:28	FROM	Team 4	Clues	CLUE Update: Clue information Updated: Wrapper	Dee Pearce	WSAR 2 OPS
11/11/2023	17:57:06	FROM	Team 5	Sirep Team	Hourly Sirep: 500 m north of HP 758. Energy levels ok, just getting to the end	David Bray	WSAR 4 Radio
11/11/2023	18:00:08	TO	Team 1	Sirep Team	Join Team 3 for camp for night	David Bray	WSAR 4 Radio
11/11/2023	18:04:33	TO	Team 6	Sirep Team	Once task is complete, please camp for the night.	David Bray	WSAR 4 Radio
11/11/2023	18:05:08	FROM	Team 4	Sirep Team	We have completed Task P. We will return to Sayer Hut for the night. Estimated a	David Bray	WSAR 4 Radio
11/11/2023	18:06:23	TO	Team 5	Sirep Team	Once you task is complete. Make camp or head to Sayer Hut. Hut recommended. Plea	David Bray	WSAR 4 Radio
11/11/2023	18:11:07	FROM	Team 6	Clues	CLUE Update: Clue information Updated: Mandarin	Dee Pearce	WSAR 2 OPS
11/11/2023	18:11:23	FROM	Team 6	Sirep Team	Where are by the Washine HP mark and there is mandarin and apple core. A bit dr	David Bray	WSAR 4 Radio
11/11/2023	18:15:45	FROM	Team 5	Sirep Team	We are at SH 768. We have decided continue to Sayer Hut for the night.	David Bray	WSAR 4 Radio
11/11/2023	18:17:13	TO	Team 3	Sirep Team	Q: did you have fruit peel on top of Washine as you passed?	David Bray	WSAR 4 Radio
11/11/2023	18:20:37	FROM	Team 7	Standard	Have made it to Sayer Hut, will be making camp for the night	David Bray	WSAR 4 Radio
11/11/2023	18:21:35	FROM	Team 3	Standard	Now at 300 meters from the high spot and are going to have a look at it	David Bray	WSAR 4 Radio
11/11/2023	18:26:24	FROM	Team 3	Standard	Have come across more mandarin peel on the ridge track. (18130811, 5464477)	David Bray	WSAR 4 Radio
11/11/2023	18:28:26	FROM	Team 5	Clues	CLUE Update: Clue information Updated: Mandarin2	Dee Pearce	WSAR 2 OPS
11/11/2023	18:36:11	FROM	Team 1	Standard	Location 029617, have found a boot print, heading the same direction as they are	David Bray	WSAR 4 Radio
11/11/2023	18:36:46	FROM	Team 3	Standard	Cast dog around high point, no tracks to west or anywhere, heading down below to	David Bray	WSAR 4 Radio
11/11/2023	18:46:47	TO	Team 5	Standard	answer to Team 3, satisfies Task Q, camp down for the night	David Bray	WSAR 4 Radio
11/11/2023	18:50:02	FROM	Team 6	Standard	Have talked to Team 3 and confirmed the footprints found earlier were not there	David Bray	WSAR 4 Radio
11/11/2023	18:55:24	FROM	Team 4	Clues	CLUE Update: Clue information Updated: Fruit Burst	Dee Pearce	WSAR 2 OPS
11/11/2023	18:55:35	FROM	Team 4	Sirep Team	Location 01846, have found wild honey Nut leaf wrapper Found on track,	David Bray	WSAR 4 Radio
11/11/2023	19:10:20	FROM	Team 4	Sirep Team	Have arrived at Sayer Hut	David Bray	WSAR 4 Radio
11/11/2023	19:11:35	TO	Base Support	Standard	test	Ned Richardson	Remove_Clothes
11/11/2023	19:19:01	FROM	Team 2	Standard	Team 2 arrive back at base	Dee Pearce	WSAR 1 Check in
11/11/2023	19:35:06	FROM	Team 1	Sirep Team	Team 1 - have met Team 3 at HP 818 Washine. Setting up camp for the night.	David Bray	WSAR 4 Radio
11/11/2023	19:46:29	TO	To All Teams	Sirep Team	ALL TEAMS BRIFING	David Bray	WSAR 4 Radio
12/11/2023	07:28:23	TO	Team 1	Sirep Team	Task 1: From Washine SH 818 descend ridge west to gr 022 432 TAWD NWHighway to	David Bray	WSAR 4 Radio
12/11/2023	07:40:43	TO	Team 3	Sirep Team	From Washine SH 818 descend ridge to West to GR 028 628 take spur into Deep Crk	David Bray	WSAR 4 Radio
12/11/2023	07:42:38	TO	Team 6	Sirep Team	Task U: From Washine SH 818 descend west down ridge to GR 022 432 then to GR 01	David Bray	WSAR 4 Radio
12/11/2023	07:49:43	TO	Team 7	Sirep Team	Tasking up 400m, 400m to 800m, 800m to 1200m, 1200m to 1600m, 1600m to 2000m	David Bray	WSAR 4 Radio

Message for Team 4, 5 and 7: Prepare for Heli extraction. Time to be confirmed.

Click on LOG entry above to see full message.

Appendix H – Electronic Map



Appendix I – Incident Control Point



Appendix J – LandSAR Tasking and Safety Form

SEARCH & RESCUE
LAND SAR
NEW ZEALAND

LANDSAR SAFETY PLAN

(version 4) Page 1
This form is for recording safety information and decisions at an event management level. Review and update plan for each operational period.

Event Name: Operation WETA Date: 10/11/23 Time: 20:50

Person in Control: IMT (ic Plan) Safety Advisor: _____

A Identify Hazards

Event Location: Tommas

List Hazards at Location

Natural Hazards: Washburn River
Steep terrain
Dense bush

Manmade Hazards: Travel to/ro
vehicles
hazards

Other Activities: Hunter
Other persons in park.
Helicopter

Event Description: 24 lost hikers Tommas

List Task Related Hazards

Task Hazards: Equipment, stability, medical, water/food
As above natural/manmade

Current Weather: Fine conditions 3° overnight 10/11

Forecast Weather: Fine - cold overnight - wind northerly 12/10

List Weather Related Hazards

Climate Hazards: No snow 3° overnight
injection exposed to wind.

B Risk Controls

Risks resulting from exposure to the above hazards will be controlled by the following actions:

Compulsory Safety Practices

- Complete specific safety assessments for all team taskings
- Team safety discussions before the commencement of tasks and whenever plans, conditions or other circumstances change during a task
- Safety equipment, appropriate for each task, is available and is used
- Accidents and incidents (including near misses), that are more than trivial, will be reported

SEARCH & RESCUE
LAND SAR
NEW ZEALAND

LANDSAR TEAM TASKING AND SAFETY ASSESSMENT

This form is for use whenever written task assignments are prepared at LandSAR events (eg. SAROPs and SARASs). Incident managers (IMTs) should complete page 1 and task Team Leaders should then complete page 2, with input from their teams.

Operation Name: Operation Weta Date: 10/11/23 Time: 18:00

Prepared By: IMT Task ID: A

Team Name: _____ Team Type: _____ Team Leader: _____

Team Members: _____

Map: _____

Tasking Assignment (use GSMEAC format):

Drop of at 4:30. R. carpark.
Search track from Washburn creek to totem flat but
identify clues and areas where people may have gone off track
report to IMT. don't sidestep or go off track, approx 4hrs.

Current and Expected Environmental Conditions:

fine weather - cold overnight.

Hazards and Risk Controls: List which LandSAR Safety Standards apply to this task and list any other hazards and controls, applicable to this task, that have been noted at a management level.

Communications: Refer to Comms Plan for additional information

VHF Repeater(s): _____ VHF Simplex: _____ ICP Pr: _____

HF Day Frequency: _____ HF Night Frequency: _____

Times: _____ Times: _____

Additional Information: #B. previous or other SAR task in area, decision points, team transport arrangements

Tasked by: _____ Approved: _____ Date/Time: _____

Appendix K – IAP

PERSONNEL		DATE/TIME	LOCATION	MISSION
Name: Alex Smith. 0211909519 Contractors Ultra loaded transport.		10/11/2010	4x Lost Hilcas.	Safely locate missing party.
LAST KNOWN POSN: Hillman 9:00 1/2 Camp.		OBJECTIVES 1. Contain the search area. 2. Search the Wadhwa Ridge line. 3. Search the Wadhwa River tracks. 4. Search the Mangere track. 5. Find intel on missing people.		1.1 Local with Campicans. 2.1 SAR teams from - Hildesheim - Wadhwa George Road. 3.1 SAR teams from - Hildesheim via Hildesheim - Wadhwa George Road. 4.1 SAR teams from Mount Dick Lookout. 5.1 IMT - CLO to talk to family/friends.
WEATHER Fine. Frost at night 15°-19° high, 1°-3° low.		TERAIN Wadhwa River. Steep terrain. Bluffs on river. Dense Bush. Hunters/other people. Helicopter.		EQUIPMENT EE196 Doc 09 SIM - ESX 07 AXC - MSX 27
PERSONNEL Steve/Matt JO		PERSONNEL Nigel 27. Measured.		NOTES No DUF on radio. plan with IC/MT. Medig rescue likely completed by Mediteam.

Appendix L - Briefing Notes in GSMEAC format

GSMFAC
 Questions @ end.

Ground: Eastern Taranaki specifically between Holdsworth and Mt Dick the Waikare ridge and west.

Situation: Brief of scenario use map as visual clue.
 x4 trampers wednesday - intended route,
 x2 exits for Thursday - haven't shown up.

Mission: To safely locate 4 missing trampers x2

Execution: - After briefing Operations will task each TL
 - Rough overview of tasks.
 - 2nd MT taking over at lunch
 intention to retask if necessary in afternoon

Admin: Introduce Nigel for admin SARBase
 Introduce Matt for transport logistics

Communications: Introduce David/Steve for radio chat.

Appendix M – Communication Plan

COMMUNICATIONS PLAN FORM

Operation name: Weta Time: 22.06
 Prepared by: D Gray Date: 10/11/23

1. Operational Period for this Plan (Date and Time)
 From: Niles Barn To: 11/11/23 1pm

2. Key Contact Details

	LAND LINE	CELL PHONE	EMAIL / FAX / OTHER
Incident Controller	06 3774471		operations@nzarsar.govt.nz
Safety Advisor	06 3774471		SAR+09+nz
Operations Manager	06 3774471		
COMMS		027 669774	
		027 266706	emcent@nzarsar.govt.nz

3. VHF Comms

	CHAN NAME	CHAN ID	BANK / CHAN #	COMMENTS
Command & Control	Holds	EE196	LN121	
Operations	DOC9	COFE	LN121	
Team Simplex	ESX07			
Air Ops Channel	M5X27			

4. HF Comms

CHAN NAME	HF SCHEDULE TIME	COMMENTS
N/A		

5. Notes / Other Comments
 NOTE: SAR BASE THIS IS
 A NO DUFF SAFE WILDS
 IF YOUR SIGNAL IS POOR CONTACT CHANK OR NASHAW

Approved: [Signature] Date/Time: 11-11-23 0700

Communications Plan Form 18 June 2023

Appendix N – Team taskings

