

INDEPENDENT SAROP REVIEW

Essence SAR Operation

Location: 20 nm North of Cape Brett, Northland
34 50.31S 174 25.20E

Date: 14 October 2019

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The seaman's hymn - Melita

*Eternal Father, strong to save
Whose arm has bound the restless wave
Who bidst the mighty ocean deep
Its own appointed limits keep
O hear us when we cry to thee
For those in peril on the sea*

William Whiting 1825 -78

Executive Summary

At 12.29 pm on Monday 14 October 2019, the Sailing Vessel *Essence* broadcast a mayday alert after being knocked down several times in 6-metre breaking seas and 50 knot winds, resulting in the vessel sinking, with four members on board, approximately 20 nautical miles off Cape Brett.

Operation ESSENCE was a Category II Search and Rescue Operation managed by the Rescue Coordination Centre NZ (RCCNZ) . With four persons believed to be in the ocean, RCCNZ chose to provide a combined military, civilian and *vessel of opportunity* response.

At 1.10 pm the Air Force Operation flight command was briefed, and at 1.48 pm an Air Force (AF) Orion was airborne. At 2.41 pm the AF Orion confirmed sighting of the four crew members in the ocean, and a life raft was dropped to them.

At 12.49 pm the Auckland Rescue Helicopter trust were notified of the situation and selected to crew two helicopters to send to the casualty location. At 1.53 pm the two aircraft left Auckland, transiting via Whangarei to refuel. The primary helicopter was on scene and had recovered the yacht crew members by 3.40 pm.

This operation was a very well managed and executed Search and Rescue Operation, with calm and professional radio communication between the stricken vessel and Maritime Operations Centre, well-coordinated deployment of assets by RCCNZ, and excellent response capabilities of the deployed AF Orion, Auckland Rescue Helicopter Trust personnel, and the Kerikeri Coastguard crew.

Although the operation was a well-managed and resourced rescue operation, one of the crew members on the SV ***Essence*** lost their life.

From reviewing the Search and Rescue component of this incident, a number of findings have been identified relating to:

- Helicopter competencies for Search and Rescue deployment
- Helicopter crew compilation for offshore rescues
- Coastguard competencies for offshore deployments (beyond 12 nautical miles)
- Management of Beacon emergency contacts
- Media awareness

1. Recommendations

Recommendation 1:

Search and Rescue helicopter operators to meet and discuss various SAR related tasks and competencies including national industry standards and operating procedures for SAR, including:

- SAR helicopter crew competencies
- SAR helicopter crew compilations based on deployment environment
- SAR helicopter crew equipment

Recommendation 2:

SAR Coordinating Authorities to meet with Coastguard, and discuss offshore deployment capability including:

- A nationally applied risk assessment template that identifies risk factors and provides mitigation of those risks with consideration of vessel size and design, crew qualification and capability, on board vessel equipment, and operationally independent risk assessment review.
- Abilities to extract bodies from the water in rough seas conditions
- Abilities to render first aid / provide medical support once recovered

Recommendation 3:

SAR Coordinating Authorities to discuss SAR victim management with the wider SAR sector, including:

- Emergency Beacon contact notifications and associated support
- Next of Kin notifications

Recommendation 4:

SAR Coordinating Authorities' media personnel to meet with SAR sector personnel and discuss media awareness and response including:

- Media reporting based on open source radio channels
- Urgency of managed media releases balanced against informing families of victims before being reported in the media

2. Introduction

At 12.29 pm, on Monday 14 October 2019, Maritime Operations Centre (MOC) received a Mayday call from the Sailing Vessel (SV) *Essence*. The vessel, a Bavaria 47 Ocean Sloop, was located approximately 20 nautical miles (nm) off Cape Brett, with four persons on board.

The crew advised they were in tough conditions with 50 knot winds and large seas which had resulted in them being knocked down a number of times and they were now taking on large amounts of water. They anticipated having to abandon the vessel. The life raft for the vessel had blown away with the high wind, and they had lost their emergency location beacon in the knock down. They were looking to activate a second handheld personal location beacon.

The Rescue Coordination Centre for NZ (RCCNZ) was advised and a Category II Search and Rescue Operation was commenced.

A decision was made by RCCNZ to provide a combined military, civilian and vessel of opportunity response. This decision was based around the possibility the civilian rescue helicopter may not be able to extract the crew from the water given the weather conditions, and it may become an extended search if the crew in the water were not immediately located.

Military support in the form of an Air Force P3 Orion fixed wing aircraft, two Sea Sprite helicopters and HMNZS Otago were all activated. Northern region Coastguard were activated, and their 10.2m rescue vessel *BAY RESCUE II* was deployed from Kerikeri. Auckland Rescue Helicopters deployed two Helicopters, each containing medical personnel. The Commercial Vessel *CMA CMG CORAL* agreed to assist and was tasked into the search area. The Auckland Police launch *DEODAR III* was activated and placed on standby should sea search be required.

At 2.48 pm the AF Orion identified four persons huddling in the water together, wearing yellow life jackets. A life raft with lanyard was deployed from the aircraft, which the yacht crew were able to retrieve. Two persons were able to enter the life raft, and two remained with the life raft in the water.

At 3.18 pm the Auckland Rescue helicopter arrived on scene and by 3 40 pm, all four persons were recovered from the ocean and were on board the helicopter. Of the four recovered, three survived the event.

3. Terms of Reference

1. The New Zealand Search and Rescue (NZSAR) Secretariat initiates and conducts reviews of selected SAR operations on behalf of the NZSAR Council. These reviews may be conducted into any SAROP that presents good opportunity for identifying systemic learning. The review outputs may be used to improve SAR system processes, standard operating procedures, documentation and teaching materials. They may also indicate future SAR exercise need.
2. To gain an understanding of the sequence, times of events and key search decisions relating to the Search and Rescue Operation (SAROP) following the mayday call from the yacht *Essence* with four people on board, 20 nm NNE of Cape Brett on 14 October 2019.
3. Ascertain the search and rescue arrangements, capabilities, documentation and procedures utilised for this SAROP, its management and the resourcing of SAR assets. Identify areas of excellence, sufficiency, lack, relevance, appropriateness and those that may need improvement.
4. Matters relating to the Coronial processes and Maritime investigation are out of scope.
5. Review and consider the following specific aspects of the SAROP with a view to confirming, improving and/or refining SAR documentation, systems, processes, skills, equipment and technology:
 - a. The IMT tools and arrangements including search tools, planning, investigation, intelligence, information flow and information analysis used and applied during this SAROP.
 - b. Family and Iwi liaison and support arrangements and activities.
 - c. Media relations, such as media comment, media release and management.
6. Identify any skill, equipment, technology, document, process or procedure that may contribute to systemic learning and continuous improvement.
7. Make recommendations as appropriate to the New Zealand Search and Rescue Council relevant to improving and validating New Zealand's SAR system, its people, equipment, documentation, skills, processes and procedures.

4. Background

This review was undertaken, looking purely at the lessons that could be learnt from the search and rescue component of this incident.

To achieve this, the reviewer travelled to Kerikeri, Whangarei, Auckland, and Tauranga and spoke directly to the people involved with the rescue operation, identifying their role, what went well, what did not, and what lessons could be taken away.

This document is not intended to make any findings in relation to the Maritime Investigation or Coronial inquiry.

4.1 Background to the Operation

At 11.35 am on Monday 14 October 2019, the SV *Essence* contacted the Maritime Operations Centre (MOC) to advise of their re-entry back into NZ waters. They indicated they were heading to Opuia in the Bay of Islands due to the bad weather. They were trying to steer their 47-foot sloop on a 204^o heading. They had 4 persons on board, no animals. Arrangements were made for regular hourly radio schedules (sked) with the next sked due 1.00 pm local time. They indicated they were experiencing tough weather conditions, and the conditions had worsened. Swell: Unknown. Wind: Gusting 50kts from 107^o - 112^o.

At 12.29 pm, MOC received a MAYDAY call from the SV *Essence*. The vessel was located approximately 20 nautical miles (nm) off Cape Brett. They indicated they were in 50 knot winds and large seas which had resulted in them being knocked down a number of times and were now taking on large amounts of water. They anticipated abandoning the vessel. The life raft for the vessel had blown away with the high wind, and they had lost their emergency location beacon in the knock down but were looking to activate a second handheld personal location beacon.

The Rescue Coordination Centre for NZ (RCCNZ) was immediately advised and a Category II Search and Rescue Operation was commenced.

4.2 Dates, location, organising agency(s), key people

At 12.33 pm, on receipt of the notification from MOC, the RCCNZ instantly appointed a Search Mission Controller (SMC) and two Search and Rescue Operators (SARO) to assist with the operation.

Immediate calls were made to NZ Defence Joint Forces Headquarters (JFHQ) and the Northland Emergency Services Trust (NEST) Rescue helicopter.

At 12.45 pm given the urgency of the situation, with four persons in the water and the atrocious weather conditions, it was the view of the RCCNZ watch to provide a combined Military, Civilian and Vessel of Opportunity response.

It was identified that there was a good chance a civilian rescue helicopter may not be able to extract the people from the water given the weather conditions and it may also become a search if the people in the water were not immediately found.

It was agreed to task:

- **Military:** Both helicopter and fixed wing top cover to drop a life raft and MADD pack to survivors
- **Civilian Rescue helicopter:** NEST as the nearest helicopter; Auckland Helicopter Rescue Trust as the next nearest.
- **Vessels of Opportunity:** CMA CGM CORAL the closest merchant vessel approximately 2 hours to the East
- **Coastguard:** Northern Region Coastguard Operations who arranged for deployment of Coastguard vessel – Bay Rescue II from Kerikeri
- **Auckland Police Maritime Unit:** Advice and Availability

4.3 Participating organisations

At 12.43 pm the Northland Rescue Helicopter (NEST) was contacted to ascertain their availability for aircraft to be tasked. At 12.47 pm they indicated an inability to respond due to lack of crewing staff and, due to the urgency of the situation, recommended Auckland Rescue Helicopter trust be utilised.

At 12.46 pm the Duty Air Component Command Staff Officer (DACCSO) at Defence Joint Forces Headquarters (JFHQ) was contacted to ascertain the availability of Defence air assets.

At 12.49 pm Auckland Rescue Helicopters (ARHT) was contacted and briefed of the situation. They accepted the task and indicated they would send two aircraft, Rescue 1 containing two pilots and two paramedics and a second, Rescue 3 containing a pilot, crew and doctor. Rescue 3 would provide top cover for the primary aircraft that would carry out any recovery of persons.

At 12.53 pm Auckland Police Maritime were contacted, and although they would not arrive on scene until after dark, they prepared for deployment.

At 12.57 pm Coastguard Northern Region were contacted and inquiries made as to the availability of a rescue vessel and crew.

At 12.58 pm JFHQ confirmed the availability of two Sea Sprite helicopters and an AF P3 Orion aircraft. The AF Orion aircraft would be on scene first and had the capability to drop a life raft to the survivors. All aircraft were tasked.

4.4 Operation Scenario

The operational plan saw the activation of multiple assets to the search area, with the expectation that the AF Orion would arrive on scene first, and if possible locate the survivors, drop a life raft to them, and remain on scene until further rescue support arrived.

The civilian ARHT helicopters would initially fly to Whangarei to refuel, then deploy to the casualty location to carry out the rescue. In the event that the Rescue helicopters were unable to deploy or recover the survivor's, then they would be supported by 2 x Defence Sea Sprite helicopters.

Should weather conditions deteriorate to the point aircraft could not be deployed, then vessels tasked to the area would become the prime responders to carry out the rescue.

Additional vessels remained both enroute and on standby, should the operation progress to a sea search for survivors.

The aircraft and the vessels also provided back up for each other, should they themselves get into difficulty.

4.5 Operation Timeline¹

At 1.13 pm Maritime Operations Centre (MOC) confirmed response from the Commercial Vessel CORAL, indicating she was approximately 53 nm east of the casualty location bound for Hong Kong. She agreed to assist in the Search and Rescue operation with an expected arrival time on scene around 5.00 pm.

At 1.30 pm the weather forecast for the area identified the current situation as an intense low, preceded by gale easterlies approaching the upper North Island, affecting the North Island until late Wednesday.

SAR Hindcast: Easterly 45 knots gusting 60 knots. Seas: High. Swell: Northeast swell 2 metres. Weather: poor visibility in rain.

SAR Forecast: Easterly 45 knots gusting 60 knots, easing 35 knots gusting 45 knots mid-afternoon and to north-east 25 knots gusting 35 knots by evening. Coming North-west 30 knots gusting 40 knots in the evening. Seas: High seas easing during the afternoon. Swell: North-easterly swell rising to 3 metres. Weather: Poor visibility in period of rain, easing late in the evening.

Sea Surface Temperature: 17⁰ C

At 1.48 pm the AF Orion confirmed it was airborne and enroute to the casualty location. The two Sea Sprite helicopters remained on the ground with an expected time of departure closer to 4.00 pm.

At 1.53 pm Auckland Rescue helicopters confirmed departure from Auckland, with both craft heading to Whangarei to refuel, and then to the casualty location. Expected time of arrival on scene around 3.00 pm.

At 2.15 pm Auckland Police Maritime Unit confirmed they were refuelled and ready for deployment, confirming they would not be on scene and therefore of any value until first light.

At 2.20 pm the AF Orion confirmed on scene, and at 2.35 pm JFHQ confirmed the AF Orion hearing the survivors in the water on Channel 16.

At 2.25 pm Kerikeri Coastguard *BAY RESCUE II* departed Doves Bay with 5 Coastguard crew on board and anticipated being on scene approximately 60 minutes from departure.

At 2.47 pm JFHQ confirmed the availability of HMNZS Otago, indicating it would not be on scene until between 7.00 – 7.30 pm. They also confirmed the two Sea Sprite helicopters would be ready to launch by 3.00 pm, with an arrival time on scene of 4 - 4.30 pm. The Sea Sprite helicopters had 3 Crew on board and could each carry 2 further passengers.

At 2.41 pm the AF Orion confirmed the sighting of four persons in the water huddled together wearing yellow life jackets. Position confirmed as 34 52.9S 174 25.5E. A life raft was deployed. The crew of SV *Essence* were able to retrieve the raft lanyard and work their way toward the raft. AF Orion would remain on scene and report directly to RCCNZ with any information.

¹ Refer Appendix 1 for full event timeline

At 2.48 pm MOC advised Coastguard *BAY RESCUE II* arrival time would be approximately 2 hours, as they were navigating 5 to 6 metre breaking swells and averaging 6 - 10 knots. Auckland Rescue Helicopter had also departed Whangarei with an expected arrival time of 35 minutes and an endurance time of 2 hours 4 minutes.

At 2.57 pm, Auckland Rescue 1 advised that the second aircraft would remain at Whangarei on standby, and they would work with the AF Orion as top cover. They anticipated being on scene in 18 minutes.

At 3.09 pm JFHQ advised that 1 person was in the life raft, with the remaining 3 persons attempting to get into the raft. The rescue helicopter was 10 minutes out from scene and in communication with the AF Orion. JFHQ were advised that once confirmation all survivors were in the life raft, they could stand down the two Sea Sprite helicopters.

At 3.12 pm the AF Orion advised RCCNZ that two persons were in the life raft, and two remained in the water. The AF Orion was currently off station to the North awaiting the arrival of the Rescue helicopter that was 12 minutes out. AF Orion confirmed they had located the yachts lost life raft, and no persons were inside. They could find no sign of the SV *Essence* either visually or on radar.

At 3.18 pm Auckland Rescue 1 confirmed on scene.

At 3.40 pm Auckland Rescue 1 confirmed all persons had been recovered from the water and were on board Rescue 1. The personal locator beacon had been deactivated, and a request was made for Ambulance to be waiting on their return to Whangarei. Status of patients: One status 3, two status 2 and one status 0 (deceased).



At 3.42 pm JFHQ confirm that the AF Sea Sprite helicopters had departed Whenuapai enroute to scene.

At 3.45 pm the AF Orion confirmed the recovery of all and indicated they would provide top cover for Rescue 1 until it was over land, before standing down.

At 3.46 pm Coastguard vessel *BAY RESCUE II* was stood down from the operation.

At 3.51 the CV CORAL was released from the operation.

At 3.52 JFHQ confirmed the HMNZS Otago stood down, the operational AF Sea Sprites turned around and stood down.

At 3.55 pm MOC cancelled MNZ 122/19 – Seelonce Feenee.



5. Evaluation Methodology

5.1 Agreed outcomes of the Review

To undertake an operationally focussed review into the SAR operation for the SV *Essence* (approximately 20 nm NNE off Cape Brett on 14 October 2019, 4 POB).

The aim is to identify any systemic learnings, improve SAR system processes, standard operating procedures, documentation, teaching materials and indicate future SAR exercise needs.

5.2 Review scope

This review is to ascertain the search and rescue arrangements, capabilities, documentation and procedures utilised for this SAROP, its management and the resourcing of SAR assets. Identify areas of excellence, sufficiency, lack, relevance, appropriateness and those that may need improvement.

Matters relating to the Coronial processes and Maritime processes are out of scope.

5.3 Information collection

This review was undertaken initially accessing the event logs from RCCNZ, Defence, Police, and Maritime Operation Centre and overlaying those logs.

Interviews have been undertaken with a number of key primary participants including:

Police, Coastguard, NZ Defence, RCCNZ, Maritime Operations, Northern Emergency Services Trust helicopters, Auckland Helicopter Rescue Trust, and the family and victims of those involved in this incident.

After collating the information, and in consultation with independent subject matter experts, findings have been identified, and recommendations made.

5.4 The process followed in preparing and submitting the report

All interviews with participants in the SAROP were voluntary.

Based on the information obtained from the SAROP participants, final interviews were then carried out with the members involved from the Maritime Operations Centre, and the Rescue Coordination Centre New Zealand.

The insights that can be taken from the Search and Rescue component of this operation were then compiled, along with any associated recommendations for the NZ Search and Rescue Council's consideration.

6. Findings

6.1 Expediency of Deployment

Air Force P-3 Orion

At 12.29 pm the first mayday was announced by *SV Essence*. At 12.33 pm RCCNZ became aware of the situation and at 12.46 pm Defence Joint Force were made aware. At 1.10 pm an initial call was made from Defence Jt Force to Operations Flight Command, followed by a formal tasking of aerial assets at 1.25 pm.

At 1.48 pm, the AF Orion was airborne and at 2.18 pm was on scene at the casualty location. At 2.41 pm the AF Orion confirmed sighting the four persons huddling together in the water and were in the process of deploying a life raft to them.

A total of 1 hour 16 minutes had elapsed from the time the AF Orion was formally tasked in Whenuapai until the time they deployed a life raft to the four persons in the ocean off Cape Brett. It should also be noted, that on their first pass in 5 metre seas and 50 – 60 knot winds they were able to deploy the life raft and lanyard in such a position that the four in the water could recover the lanyard and pull themselves to the raft.

Auckland Rescue Helicopter Trust

The Auckland Rescue Helicopter Trust (ARHT) was contacted at 12.49 pm and advised of the situation. Due to the weather conditions, a secondary crew was contacted and assembled, and at 1.04 pm confirmed two aircraft available. Their plan of action was to fly to Whangarei and refuel, (to provide maximum operating time over water), and then fly to the scene location.

At 2.48 pm Westpac Rescue 1 confirmed they had refuelled at Whangarei, had a 2-hour 40-minute fuel time, and were heading to the casualty location. The second helicopter would initially remain at Whangarei as the AF Orion was providing overhead cover.

At 3.18 pm Westpac Rescue 1 was talked into the casualty location by the AF Orion, and at 3.40 pm, confirmed they had recovered all persons from the ocean and were returning to Whangarei.

A total of 2 hrs 36 minutes elapsed from the time the Auckland Westpac Rescue Helicopter was able to accept the mission from Ardmore, Auckland until they had retrieved all four persons from the ocean.

Kerikeri Coastguard BAY RESCUE II

At 1.00 pm the Northern Region Coastguard Operations room was contacted. They were advised of the situation and considered their options on how they could best assist.

At 1.16 pm the Bay of Islands Coastguard situated at Kerikeri was contacted, and they immediately commenced mustering a crew.

At 1.55 pm Bay of Islands confirmed a responding crew and at 2.09 pm confirmed they were departing with 5 persons on board. A total of 53 minutes elapsed from the time Bay of Islands Coastguard were first notified until they were operationally underway. The vessel encountered 50 knot winds and 5 – 6-metre breaking swells as it headed to the casualty location.

At 3.46 pm, when the four persons were recovered by helicopter and BAY RESCUE II was stood down, they were approximately 9 nm from the casualty location.

Navy Sea Sprite Helicopters

The Navy Sea Sprite helicopters are on an 8-hour Mandated Notice to Move and stationed at Whenuapai. At 12.29 pm the first mayday was announced by *SV Essence*. At 12.33 pm RCCNZ became aware of the situation and at 12.46 pm Defence Joint Force were made aware.

At 1.10 pm an initial call was made from Defence Joint Force followed by a formal tasking at 1.26 pm for 2 x Sea Sprite helicopters to assist the AF Orion and 2 Civilian helicopters in the rescue of four persons 20 nm north of Cape Brett.

At 3.42 pm the 2 x Sea Sprite helicopters departed Whenuapai for the casualty location, before being stood down as a result of the successful recovery of persons from the water.

A total of 2 hrs 16 minutes elapsed for Navy to muster crew for two aircraft, ready the craft and have them airborne and enroute to the scene location.

Conclusion

All the assets deployed are to be commended as they activated with urgency, whilst also focussed on the risks involved, operating in breaking seas and 50 – 60 knot winds whilst approximately 20 nm off-shore.

6.2 Unavailability of NEST Rescue Helicopter

At 12.43 pm, the Whangarei based Northland Emergency Services Trust (NEST) rescue helicopter was the first civilian rescue helicopter to be contacted by RCCNZ. The aircraft pilot was briefed on the situation and weather conditions. The pilot confirmed he would discuss the request with the Flight Operations manager and confirm their availability.

At 12.47 pm the NEST pilot contacted RCCNZ and advised they were unable to respond to the task due to crewing issues, and the task should be reassigned to Auckland Rescue Helicopter Trust (ARHT).

Subsequent inquiries with NEST, revealed that on receiving the briefing, the pilot contacted the Trust Flight Operations Manager, and briefed him on the situation. The operational pilot identified that their over water winching competency had lapsed, and therefore could not operationally respond. Attempts were made to contact a second certified pilot to no avail. As there were four people in the water, it was decided the job should be reassigned to the ARHT to respond with urgency.

Pilots are required to be winch certified over land, over water and at night. NEST required that every captain must have minimum winch time in each of these winch disciplines every 90 days. If this is not achieved through mission time, then it must be achieved through dedicated training sessions.

Civil Aviation Authority (CAA) requires a Pilot-in-Command be re-certified for winching every 24 months.

6.3 Rescue Helicopter Crew compilation and Equipment

The ARHT Rescue helicopter normally has a crew compilation for any deployment of a Pilot, crewman / co-pilot, Helicopter Emergency Medical Services (HEMS) doctor and an Intensive Care Paramedic (ICP). The ICP is also qualified as an Emergency Rescue Swimmer.

The ICP, to qualify as a rescue swimmer has to achieve a number of set standards and competencies² before they are deployed. These include swimming capability, fitness, winching capability, deploying hooked and unhooked, and completing hover deployment training. In Australia, before anyone is deployed in a winching role, they must have completed 1000 winches. In NZ there is currently no agreed national standard.

On this SAR mission, the Flight Operations Manager hand-picked the helicopter crew and briefed them on the nature of the assignment, taking into account it was a water winching deployment involving four people in 6 metre seas with 50 knot winds.

The decision was made, that for this mission two aircraft would be deployed, with the primary aircraft comprising a dedicated Chief Pilot, dedicated Co-pilot, a senior Crewman, and two Intensive Care Paramedics / rescue swimmers.

Once on scene, it was decided to winch the primary ICP into the water. From the aircraft, two people could be identified inside the life raft, and two further persons were identified in the water, about 3 arms lengths from the life raft. The two in the water were given initial priority.

The ICP was deployed, and once alongside the two in the water, found they were heavily entangled in rope, nylon and other debris. The ICP cut a lot of the entanglement away, which included the requirement of cutting the two people away from the life raft lanyard. The two in the water were then recovered one at a time, before the ICP returned to recover the two from the life rafts.

A number of insights were identified by ARHT as a result of this operation:

- The construct of the crew for deploying into such environments. ARHT took two rescue swimmers due to the multiple patients being recovered. This enabled them to manage fatigue, and also provide back-up should the primary swimmer encounter issues.
- The immediate availability of a 'J' knife at the door of the helicopter. When the first person was winched to the helicopter, they still had rope dangling from them. This had to be cut clear before they could be brought into the craft for fear of getting caught in the tail rotors.
- During the recovery of the SV crew members, the ICP lost his cutter in the water, and had to deploy with a second cutter from the aircraft. ARHT are now issuing the rescue swimmers with a second cutter and determining where this is best deployed i.e. strapped to leg or arm.
- The presence of the AF Orion. They searched and located the four in the water, before ARHT had arrived, which meant the helicopter was able to be directed to the scene location and commence winching immediately. This enabled more time on scene. The AF Orion also became the radio relay when the helicopter was operational, which meant there was always good lines of communication with the Maritime Operations Centre.
- ARHT crew currently wear a harness and life jacket as two separate items. ARHT are working with providers to develop a one-piece harness and life jacket, with the webbing of the harness stitched to the lifejacket.
- During deployment, the aircraft lost comms with the ICP whilst he was in the water and therefore responded based on hand signals. The helmets and headsets used were supplied with the aircraft but are not designed to be submerged in water. ARHT are currently looking at alternatives that maintain radio communication whilst in the water.

² NZ Aeromedical Rescue Standard Version 3 2018

6.4 Coastguard capability / Risk Assessment

At 2.09 pm, the Bay of Island Coastguard vessel *BAY RESCUE II* departed Dove Bay, Kerikeri, to the rescue location. The crew that was activated, included two experienced skippers, two experienced helmsmen and an experienced crew hand.

Prior to departing the marina, a formal risk assessment³ was undertaken, and all on board agreed it was safe to deploy. The vessel was on a 1-minute tracplus monitoring and a 15-minute radio sked with Coastguard Northern Region Operations room.

BAY RESCUE II is a 10.2 metre NIAD rigged hull with pontoons and twin jet propulsion units. It is purpose built for Coastguard and surveyed to carry 11 passengers.



Twin sister vessel *KAWAU RESCUE*

The Coastguard vessel encountered breaking seas of 5 – 6 metres with winds of 50 knots. On leaving the Bay of Islands, the vessel identified the seriousness of the weather conditions to Maritime Operations Centre and identified their ETA on scene around 2 hours.

At 3.06 pm the vessel identified they were 19 nm from the identified GPS casualty location and were averaging around 10 knots.

At 3.46 pm the vessel was stood down from the operation, and at that time identified they were approximately 9 nm from the scene location.

Post operation, a number of insights were identified by the Coastguard crew:

- The crew that volunteered, were all very experienced. In future similar incidents serious consideration needs to be given to who should be deployed, and what training, qualifications, experience and skills they have for that type of deployment.
- Coastguard sets a very high standard as it relates to boat maintenance and staff training. It is important to maintain those standards so Coastguard can respond to calls for assistance in conditions like this. If planning to deploy into really rough offshore conditions, training is very important. All wet crew should take the opportunity to go out in bad conditions as part of training, to assess whether they are up to the tasks required, want to do it, and or can do it.
- Coastguard crew need to be in good physical and mental condition if deploying on similar missions. The team environment is critical.

³ Refer Appendix 2

- If deploying into such conditions, additional safety equipment needs to be considered, such as helmet headsets to prevent head injuries and enhance the capability to hear radio messaging, harnessing and appropriate seating in the vessels
- During the deployment, items were thrown from their housing including the boats anchor. The floatation rings had to be brought into the cabin, and other equipment was shaken loose from its mounting. Consideration needs to be given to secure storage, especially in heavy sea conditions.
- In future similar conditions, all the crew should have been wearing Personal Locator Beacon's and strobes.
- It was very difficult to write down the Latitude and Longitude when trying to hang on in heavy seas. Consideration of white board on desktops.
- Had Coastguard arrived on scene, uncertainty remained around:
 - how would Coastguard have got the four people out of the water and onto the boat in those sea conditions
 - how would they then manage the four rescued people, some injured on the boat in 5-6 metre very angry sea.
- The risk assessment undertaken proved valuable in making an informed decision to deploy.
- The skipper is ultimately in charge of the vessel and must continuously evaluate the risk they are deploying into and be mindful when to decide to stand down because conditions are too extreme.

6.5 EPIRB – Beacon Distress Contact

At 2.41 pm RCCNZ identified the SV *Essence* Beacon Distress Contact in the event of an EPIRB activation. Based on the mayday notification, not an EPIRB activation, the emergency contact was notified by telephone of the situation, and was asked to confirm if possible, the identities of the persons currently on board the vessel.

The contact identified two of the occupants (the vessel owners), but also had avenues of inquiry to identify the other crew members present. The contact openly acknowledged being shocked as a result of the notification and indicated an intention to head home and make the inquiries. An offer of victim support was extended in conversation but not accepted by the contact.

On review, two insights were identified:

- NZ Customs Integrated Targeting and Operations Centre (ITOC) had already been tasked with providing the SV *Essence* contact details from the submitted arrival form of the returning vessel.
 - Is there an opportunity for this information to be made available on-line to the two SAR lead agencies
- What current procedures are established to provide wrap around support for the Beacon Distress Contact in situations where they become part of the victim chain.

At 2.49 pm ITOC confirmed the details of the vessel occupants.

At 3.19 pm the emergency contact telephoned RCCNZ to advise of the crew details, only to be told they had already accessed the information from Customs. The contact was provided with an update of the SAROP situation and advised more information should be available in the next 15 minutes. Once that information was available, they would be updated.

At 4.45 pm, the emergency contact telephoned RCCNZ seeking an update. The contact was advised that the outcome wasn't positive, and that Police would be visiting shortly. The emergency contact was disappointed that no effort had been made to contact or keep her updated, and her current information source was from on-line media reporting who had identified one person deceased.

6.6 Next of Kin notifications

During this operation, a direct family member was the emergency contact and had been in contact with RCCNZ by telephone. As it transpired, they were also a suitable next of kin point of contact for the crew member that did not survive.

During the hand over phase from an RCCNZ led Search and Rescue Operation to Police led Coronial inquiry, the emergency contact in this case was left relying on media updates rather than lead agency sitreps.

The opportunity existed for RCCNZ to simply advise the emergency contact that all four had been recovered, and one of the four had not survived, and police were now leading the inquiry on behalf of the Coroner to formally identify the deceased, and they would be in contact within a short timeframe..

This scenario highlights the justification for early victim support to be made available to emergency contacts in similar situations.

6.7 Media Awareness

During the course of the afternoon of 14 October 2019, whilst the SAROP was underway, media were making contact with both RCCNZ and Whangarei police for comment.

Maritime NZ media group advise they were contacted at 4.25 pm and made a limited response to the Northern Advocate newspaper in relation to the rescue, and NZ Police media advised they only made one joint Police / Maritime media release at 5.10 pm.

The first on-line reporting of the incident observed by RCCNZ, was an article on Stuff reported at 4.46 pm and quoting a Northland rescue helicopter source and Coastguard. Inquiries to locate these sources were unsuccessful. The Emergency Beacon Contact had been monitoring the on-line reporting prior to this time.

Marine Channel 16 is an open source emergency rescue channel that can be heard by anyone listening on Channel 16. This rescue was undertaken utilising Channel 16, and updates were provided on Channel 16, including the status of the four persons recovered from the ocean.

Emergency services need to plan for early on-line reporting by the media and attempt to manage this with formalised media releases and engagement with media services, especially when notification of next of kin is still required.

6.8 Air On-Scene Coordinator

No on-scene co-ordinator was appointed by RCCNZ during this SAROP. When raised, RCCNZ identified that consideration would have been given to the appointment of an on-scene coordinator if:

- the SAR operation was so large that the Incident Management Team is not able to communicate with or monitor all the SAR resources that had been deployed

- the Incident Control Point and SAR resources could not communicate effectively, and this caused delays to sharing information, including monitoring tasked resources
- activities associated with the SAR operation were spread across such a large geographical area that local management of resources would be more effective
- the SAR resources used were so specialised that the people managing them also needed specialist knowledge.

During this operation, two aircraft were deployed to the scene. At the same time three vessels were enroute to the scene, and three aircraft were pending departure to the scene from different locations.

The SAROP was resolved prior to the need where on-scene coordination was required.

6.9 Communications

RCCNZ was the Search and Rescue planning and coordination centre. It has no radio communication with the tasked assets, this was managed by the Maritime Operations Centre operating from a neighbouring building.

Direct lines of communications are available to the MOC, and satellite phone contact is available with the aircraft should that be required. Direct telephone updates were received in the RCCNZ from the aircraft during the operation.

Similarly, RCCNZ had telephone contact with Police and Defence, and were updated as required.

The flow and currency of information worked well and provided the three RCCNZ personnel the quiet environment in which to plan, deploy, monitor and assess. Should the operation have further escalated, the opportunity exists for Police and defence liaison officers to work from within the RCCNZ environment.

7. Conclusions

Successful Operation

This operation was a very well managed and executed Search and Rescue Operation, with calm and professional radio communication between the stricken vessel and Maritime Operations Centre, well-coordinated deployment of assets by RCCNZ, and excellent response capabilities of the deployed Air Force P3 Orion, Auckland Rescue Helicopter Trust personnel and Coastguard crew of the vessel Bay Rescue II.

As a direct result of the efforts of all involved, the four crew members of the *SV Essence* had a life raft dropped to them from the Air Force Orion 2 hrs 12 minutes after the first Mayday was voiced, and were recovered by helicopter from the ocean 3 hrs 13 minutes from initial call, in very challenging weather conditions and sea state.

Coastguard Deployment

Coastguard is surveyed to primarily respond to in-shore (within 12 nautical miles) requests for assistance from recreational water users. In emergency situations, to travel outside the surveyed 12 nm limit, requires a notification process through Maritime NZ.

Coastguard is made up largely of volunteer members who train for such situations. On this occasion, Coastguard provided a response to a Marine Search and Rescue request involving four persons in the water, at least 20 nautical miles offshore in 5-6 metre breaking seas and 50 knot winds. It was accepted from the outset that the response vessel would take at least 2 hours before it would reach the casualty location.

The deployed Coastguard crew of the vessel *Bay Rescue II* completed a thorough risk assessment prior to deployment and ensured ongoing safety with close vessel tracking and radio skeds of their progress in the ocean conditions.

The commitment and tenacity of the crew cannot be understated, however consideration needs to be given to ensuring the crew are trained, and the vessels equipped, if they are to be deployed in those conditions. Consideration also needs to be given to how fatigued persons would have been recovered from the ocean in such conditions, and the subsequent medical support available to them once on board the vessel.

The Coastguard crew were unaware of the involvement or deployment of HMNZS Otago until their return to Doves bay. The skippers of Coastguard vessels need to be kept fully updated of the dynamic situation, so they can make informed decisions when required.

An opportunity exists for lead SAR agencies and NZ Coastguard to discuss nationally consistent risk assessment models, mitigation and processes for deployment beyond surveyed limits.

Search and Rescue Helicopter response

This review has identified differences within the rescue helicopter industry as it relates to operating procedures, specifically around winching certification for Search and Rescue operations.

NEST declared themselves unavailable to respond to this SAROP due to the lack of certified crewing staff. Pilots are required to be *winch certified* over land, over water and at night. NEST requires that every captain must have minimum winch time in each of these winch disciplines

every 90 days. If this is not achieved through mission time, then it must be achieved through dedicated training sessions.

ARHT identified that, in Australia, before anyone is deployed in a winching role, they must have completed 1000 winches. In NZ there is no standard. In relation to winching competencies, CAA set the certification period at 24 months, but allow the industry to set its own standard. ARHT has a competency renewal of 12 months but try to maintain a 90-day currency. The Australian standard is 90 days.

Within NZ, the Industry standard varies from one company to the next, with terminology such as 'shall' vs 'should'. The expectations are outlined in the NZ Aeromedical Rescue Standard Version 3 2018.

Although the winching over water certification had lapsed under the NEST operating manual, the provisions of Section 13A Civil Aviation Act 1990, provide an exception to the rules for Pilots-in-Command and Operators in emergency situations:

Section 13A⁴ Duties of pilot-in-command and operator during emergencies:

- (3) *Subject to subsections (4) to (6), where an emergency (not being an emergency that arises in flight) necessitates the urgent transportation of persons or medical or other supplies for the protection of life or property, the pilot in command of the aircraft or the operator of the aircraft may breach the provisions of this Act or of regulations or rules made under this Act.*
- 4) *For the purposes of subsection (3), a breach of any prescribed requirement is permitted only if –*
- (a) the emergency involves a danger to life or property; and*
 - (b) the extent of the breach of the prescribed requirement goes only as far as is necessary to deal with the emergency; and*
 - (c) there is no other reasonable means of alleviating, avoiding or assisting with the emergency; and*
 - (d) the degree of danger involved in deviating from the prescribed requirement is clearly less than the degree of risk in failing to attend to the emergency*
- (6) *Where, in any emergency described in this section, a pilot-in-command or an operator breaches this Act or regulations or rules made under this Act in accordance with the provisions of this section, the pilot-in-command or the operator, as the case may be, shall-*
- (a) immediately notify the relevant air traffic control service of the action; and*
 - (b) as soon as practicable, notify the Director of the action and the circumstances that necessitated it, and, if requested by the Director, provide to the Director a written report of the action.*

An opportunity exists for the NZSAR Secretariat to provide a forum for Search and Rescue certified helicopter operators to collectively meet and discuss accepted national industry standards for various SAR related tasks and competencies.

⁴ Refer Appendix 3 for full Statute.

Emergency beacon contact – expectations and support

During the course of this operation, the Emergency Beacon contact, registered against the SV *Essence* was contacted by RCCNZ, to obtain crew information. Although the telephone contact was well managed, the recipient of the call was clearly shocked by the 'out of the blue' notification.

The relationship between RCCNZ and the emergency contact deteriorated when there was a lack of follow-up with the contact to provide situation updates, as was offered, and ultimately the emergency contact finding out what was occurring through on-line media reporting.

An opportunity exists for Maritime NZ and NZ Police to discuss victim management with the wider SAR sector and identify opportunities where emergency notifications including Emergency Beacon contact and next of kin notifications can be better managed, with an enhanced wrap around capability, when required.



8. Appendix

1. Operation ESSENCE timeline of Events

2. Coastguard Risk Assessment and Tracplus mapping

3. Civil Aviation Act 1990 Section 13A

Appendix 1

Operation ESSENCE timeline of Events

14/10/2019

MOC	1229 Yacht Essence calls Maritime Radio Mayday distress call	1244 Essence advise they have lost their life raft overboard in heavy wind.	1305 MOC broadcast vessel in distress	1313 MOC receive call from Merchant vessel <i>CORAL</i> . Unable to understand radio communication.	1315 MOC update RCCNZ. Requested to task MV <i>Coral</i> and ascertain eta.	1315 MOC receives call from MV <i>Coral</i> . Appro 53 nm east of casualty position. Requested to proceed to casualty location if able.	1322 Email forwarded to MV <i>Coral</i> from MOC	1322 NR Coastguard contact MOC advising Bay Rescue II Kerikeri being activated. Advise RCCNZ	1341 MV <i>Safmarine Mulanje</i> approx. 105 nm from casualty position. Best eta 5.5 hrs.	1348 MV <i>Safmarine Mulanje</i> thanked and stood down	1349 RCCNZ update MOC	1355 P3 Orion advise MOC airborne from Whenuapai ETA to casualty location 10 minutes.
RCCNZ	1233 RCCNZ advised and activate Cat II SAROP response	1243 NEST Rescue helicopter contacted – unable to respond	1246 Defence contacted for support aircraft and vessels	1249 Contact ARHT - Agree to deploy to Helicopters as response	1250 COSPAS-SARSAT alert received from PLB activation	1253 Police maritime Unit advised – Police launch Deodar III readied	1257 Northern Region Coastguard advised.	1258 DACCSO confirm P3 Orion and 2 x Sea Sprite helicopters. Request aircraft are tasked.	1303 Police Northern Communications centre advised of SAROP	1315 MOC update RCCNZ. Requested to task MV <i>Coral</i> and ascertain eta.	1318 Whangarei SAR contact RCCNZ and briefed on SAROP	1324 NR Coastguard contact MOC advising Coastguard vessel <i>Bay Rescue II</i> from Kerikeri being activated. MOC advise RCCNZ
Defence	1246 Defence contacted for support aircraft and vessels	1258 DACCSO confirm P3 Orion and 2 x Sea Sprite helicopters. RCCNZ request aircraft are tasked.	1313 DACCSO confirms aircraft are being prepared for SAR mission.	1348 Advise RCCNZ P3 Orion airborne. Operating Ch 16.	1355 P3 Orion advise MOC airborne from Whenuapai ETA to casualty location 10 minutes.	1358 DACCSO inquiries with RCCNZ re commercial vessel availability. Would ascertain what naval vessels may be available.	1410 P3 calls SV <i>Essence</i> advising 5 minutes to position. ARHT advise MOC landing Whangarei 4 minutes.	1418 P3 Orion advise SV <i>Essence</i> they are in area looking for them. Nothing further heard.	1420 P3 Orion confirm on scene	1421 P3 Orion calls SV <i>Essence</i> advise should be on top of their position.	1425 P3 Orion request SV <i>Essence</i> to repeat message. Rested to count down from 10.	1429 Defence advise <i>HMNZS Otago</i> location and travelled at 19 knots toward casualty location. Has not been formally tasked awaiting outcome from P3 Orion.
ARHT	1249 Contact ARHT.	1304 ARHT agree to deploy to Helicopters as response. Will refuel at Whangarei before ocean deployment	1353 ARHT confirm airborne heading from Whangarei to refuel.	1356 Advise RCCNZ eta to casualty location after refuelling approx. 1500. Operating Ch 16.	1410 P3 calls SV <i>Essence</i> advising 5 minutes to position. ARHT advise MOC landing Whangarei 4 minutes.	1440 ARHT advise MOC airborne with 5 persons on board. ETA to casualty location 35 minutes. Fuel endurance 2 hrs 40 minutes.	1452 ARHT advise MOC eta 21 minutes. Ops normal.	1457 RCCNZ contact telephone. Advised RCCNZ Rescue 3 will remain at Whangarei and top cover for aircraft will be provided by P3 Orion. ETA to scene 18 minutes.	1500 ARHT talks to P3 Orion. Change to working channel.	1540 ARHT advise MOC they have recovered 4 Persons on board – 1 status 0, 2 x status 2, 1 x status 3. ARHT bound for Kensington Park Whangarei. Request 2 x Ambulances on standby for arrival. ETA 30 minutes.	1543 RCCNZ telephone ARHT. Update of persons on board. 1 x Status 0. 2 x Status 2 1 x Status 3 ARHT proceeding to Kensington Ambo station. Requested 2 x Ambulance on standby for arrival. P3 Orion will remain with the helicopter until over land, then return to base.	1632 ARHT advise they are at Kensington Ambulance base. Confirm identity of deceased.
Coastguard	1257 Northern Region Coastguard advised.	1312 NCAP fixed wing pilot paged	1316 Bay of Islands Coastguard activated	1322 Bay Rescue II crew paged	1322 NR Coastguard contact MOC advising Bay Rescue II Kerikeri being activated	1334 Whangaro Coastguard advise ability to provide response. Stood down by NR Coastguard as <i>Bay Rescue II</i> in response.	1338 NR Coastguard advise RCCNZ <i>Bay Rescue II</i> crewing up – ETD 30 Minutes and expected to be on scene an hour from departure	1355 Bay Rescue II advise departing shortly. Advised aerial assets attending and operating Ch 16. Tracplus polling.	1409 <i>Bay Rescue II</i> departing with 5 persons on board.	1422 <i>Bay Rescue II</i> calls CG base on CH 16 with sitrep. Tough weather / sea conditions. ETA to scene 2 hours.	1445 <i>Bay Rescue II</i> advise NR Coastguard in heavy weather 2 – 2.5 hours from casualty location given 5-6 metre seas. Making average 6 – 10 knots.	1457 <i>Bay Rescue II</i> requests sitrep
Police	1253 Police maritime Unit advised – Police launch Deodar III readied	1303 Police Northern Communications centre advised of SAROP	1313 Whangarei SAR Coordinator advised – will take Police lead	1318 Whangarei SAR contact RCCNZ and briefed on SAROP	1406 Contact RCCNZ for sitrep	1415 <i>Deodar III</i> refuelled and ready to depart. Would not be on scene until after dark so would look to prepare to travel up for first light search.	1502 <i>Deodar III</i> stocked and ready to depart. Advised of update and eta of <i>HMNZS Otago</i> . Agreed that <i>Deodar III</i> would remain on standby until further updated.	1537 Sitrep provided by RCCNZ.	1548 Whangarei police SAR provided update and advised one fatal. Coronial / NOK handed to Police to complete.	1614 Deodar III stood down.	1640 Police North Communication Centre provided update on situation. Confirm NOK notifications will be managed by Police.	

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M O C	1405 MOC respond blindly to unknown radio call on Whangarei Ch16. Provide update on SV <i>Essence</i> and aircraft heading to location.	1410 P3 calls SV <i>Essence</i> advising 5 minutes to position. ARHT advise MOC landing Whangarei 4 minutes.	1415 RCCNZ request names of persons on vessel. Advised Customs would have received Arrival notice.	1417 SV <i>Essence</i> broadcast on Ch 16. Asked to repeat – no response.	1418 P3 Orion advise SV <i>Essence</i> they are in area looking for them. Nothing further heard.	1421 P3 Orion calls SV <i>Essence</i> advise should be on top of their position.	1422 <i>Bay Rescue II</i> calls CG base on CH 16 with sitrep. Tough weather / sea conditions. ETA to scene 2 hours.	1423 P3 Orion calls SV <i>Essence</i> advising in bound.	1425 P3 Orion request SV <i>Essence</i> to repeat message. Rested to count down from 10.	1440 ARHT advise airborne with 5 persons on board. ETA to casualty location 35 minutes. Fuel endurance 2 hrs 40 minutes.	1441 P3 Orion advise they have visual on 4 persons in water huddled together. About to deploy life raft. Would brief RCCNZ.	1448 MOC advise RCCNZ <i>Bay Rescue II</i> eta 2 hrs – reporting 5-6 metre swells, averaging 6-10 knots. ARHT departed Whangarei with an eta 35 minutes and endurance 2 hrs 40 minutes.	1452 ARHT advise eta 21 minutes. Ops normal.
RCCNZ	1324 Air desk advised of SAROP	1326 Maritime Media briefed on incident	1338 Bay Rescue II crewing up – ETD 30 Minutes and expected to be on scene an hour from departure	1341 MV Coral have altered course. ETA 4 hrs – 60 nm from site in heavy seas	1344 <i>Advised of MV Safmarine Mulanje.</i> Request MOC to thank vessel but due to distance no assistance required.	1348 Advise P3 Orion airborne.	1353 ARHT confirm airborne heading from Whangarei to refuel.	1356 Advise RCCNZ eta to casualty location after refuelling approx. 1500. Operating Ch 16.	1358 DACCISO inquiries with RCCNZ re commercial vessel availability. Would ascertain what naval vessels may be available.	1406 Whangarei Police SAR coordinator contact RCCNZ for sitrep	1415 Contact MOC and request names of persons on vessel. Advised Customs would have received Arrival notice.	1420 P3 Orion confirm on scene	1429 Contact Customs ITOC. Request details of crew on returning vessel <i>Essence</i> .
Defence	1441 P3 Orion advise they have visual on 4 persons in water huddled together. About to deploy life raft. Would brief RCCNZ.	1447 Jt forces advise HMNZS Otago would not be on scene until 1900 – 1930 hrs. 2 x Sea Sprite helicopters will launch 1500 hrs ETA on casualty location 1600 – 1630.	1448 P3 Orion advise 4 persons sighted huddled in water wearing yellow life jackets. Life raft deployed and they have lanyard to the life raft and are making their way towards it, P3 Orion will remain on scene and report directly to RCCNZ with any additional info.	1500 ARHT talks to P3 Orion. Change to working channel.	1509 Jt forces provide sitrep to RCCNZ – 1 inside life raft and 3 attempting to get in. ARHT 10 minutes out and in comms with P3. Once positive confirmation received, Sea Sprites will be stood down.	1512 P3 Orion contact RCCNZ to advise 2 persons in raft. Not sure of other 2 as holding off station to north. ARHT 12 minutes out. Have located life raft lost from yacht. Confirmed no persons on it. Can see no sign of SV <i>Essence</i> either visually or on radar.	1521 P3 Orion contacts <i>Bay Rescue II</i> and advised overhead. Advised ARHT on scene.	1542 2 x Sea Sprite helicopters depart Whenuapai for casualty location.	1545 P3 Orion updates RCCNZ. Update of persons on board. 1 x Status 0. 2 x Status 2 1 x Status 3 ARHT proceeding to Kensington Ambo station. Requested 2 x Ambulance on standby for arrival. P3 Orion will remain with the helicopter until over land, then return to base.	1545 P3 Orion off scene.	1552 Defence updated on situation. They confirm <i>HMNZS Otago</i> stood down and Sea Sprites returning to base.		
Coastguard	1501 NR Coastguard contacted by RCXCNZ and updated on situation with P3 Orion information.	1506 <i>Bay Rescue II</i> Provided Sitrep by NR Coastguard. <i>Bay Rescue II</i> advise they are 19 nm from casualty location making 9 knots.	1520 NR Coastguard call <i>Bay Rescue II</i> – welfare check	1521 P3 Orion contacts <i>Bay Rescue II</i> and advised overhead. Advised ARHT on scene.	1546 <i>Bay Rescue II</i> request NR Coastguard if they can be released. <i>Bay Rescue II</i> stood down from operation.	1656 <i>Bay Recue II</i> confirmed back at Doves Bay.							

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MOC	1540 ARHT advise MOC they have recovered 4 Persons on board – 1 status 0, 2 x status 2, 1 x status 3. ARHT bound for Kensington Park Whangarei. Request 2 x Ambulances on standby for arrival. ETA 30 minutes.	1546 MOC advise RCCNZ of air lift. NR Coastguard have stood down Bay Rescue II. Request authority to cancel further Mayday broadcast.	1551 RCCNZ request MOC contact MV Coral and tank them for their support and release them from the SAROP.	1555 Maritime Radio cancel MNZ 122 / 19, SEELONCE FEENEE									
RCCNZ	1429 Defence advise HMNZS Otago location and travelled at 19 knots toward casualty location. Has not been formally tasked awaiting outcome from P3 Orion.	1429 Media Release	1441 Contact SV <i>Essence</i> Emergency Beacon contact. Seek details of SV crew.	1447 Jt forces advise HMNZS Otago would not be on scene until 1900 – 1930 hrs. 2 x Sea Sprite helicopters will launch 1500 hrs ETA on casualty location 1600 – 1630.	1448 P3 Orion advise 4 persons sighted huddled in water wearing yellow life jackets. Life raft deployed and they have lanyard to the life raft and are making their way towards it, P3 Orion will remain on scene and report directly to RCCNZ with any additional info.	1448 MOC advise Bay <i>Rescue II</i> eta 2 hrs – reporting 5-6 metre swells, averaging 6-10 knots. ARHT departed Whangarei with an eta 35 minutes and endurance 2 hrs 40 minutes.	1449 Customs ITOC advise arrival details of crew of SV <i>Essence</i>	1455 MOC advise ARHT eta 21 minutes to scene.	1457 Contact ARHT by telephone. Advised Rescue 3 will remain at Whangarei and top cover for aircraft will be provided by P3 Orion. ETA to scene 18 minutes.	1501 Contact NR Coastguard and update on situation with P3 Orion information.	1509 Jt forces provide sitrep to RCCNZ – 1 inside life raft and 3 attempting to get in. ARHT 10 minutes out and in comms with P3. Once positive confirmation received, Sea Sprites will be stood down.	1512 P3 Orion contact RCCNZ to advise 2 persons in raft. Not sure of other 2 as holding off station to north. ARHT 12 minutes out. Have located life raft lost from yacht. Confirmed no persons on it. Can see no sign of SV <i>Essence</i> either visually or on radar.	1518 ARHT on scene

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RCCNZ	1519 Emergency Beacon contact telephone RCCNZ with crew information. Contact advised info gathered from Customs arrival card. Contact provided sitrep and advised will be given further update in next 15 minutes.	1537 Sitrep provided by RCCNZ to Whangarei Police SAR Coordinator.	1543 Contact ARHT. Update of persons on board. 1 x Status 0. 2 x Status 2 1 x Status 3 ARHT proceeding to Kensington Ambo station. Requested 2 x Ambulance on standby for arrival. P3 Orion will remain with the helicopter until over land, then return to base.	1546 NR Coastguard seek confirmation Bay <i>Rescue II</i> can be stood down.	1546 MOC advise RCCNZ of air lift. NR Coastguard have stood down Bay Rescue II. Request authority to cancel further Mayday broadcast.	1551 RCCNZ request MOC contact MV Coral and tank them for their support and release them from the SAROP.	1552 Defence updated on situation. They confirm HMNZS <i>Otago</i> stood down and Sea Sprites returning to base.	1556 Defence advise NZDF media is wanting to do a media release. Advised all have been extracted but as one was fatal, please hold off on media.	1614 Deodar III stood down.	1640 Police North Communication Centre provided update on situation. Confirm NOK notifications will be managed by Police.	1645 Emergency Beacon contact telephones RCCNZ looking for an update. Advised outcome not positive and that Police will be visiting shortly. Contact indicated are of death as a result of on-line media reporting.	1650 Maritime NZ Media release	1653 MNZ Media advise media are aware of incident – first article released on STUFF at 1646 hrs quoting Northland sources.
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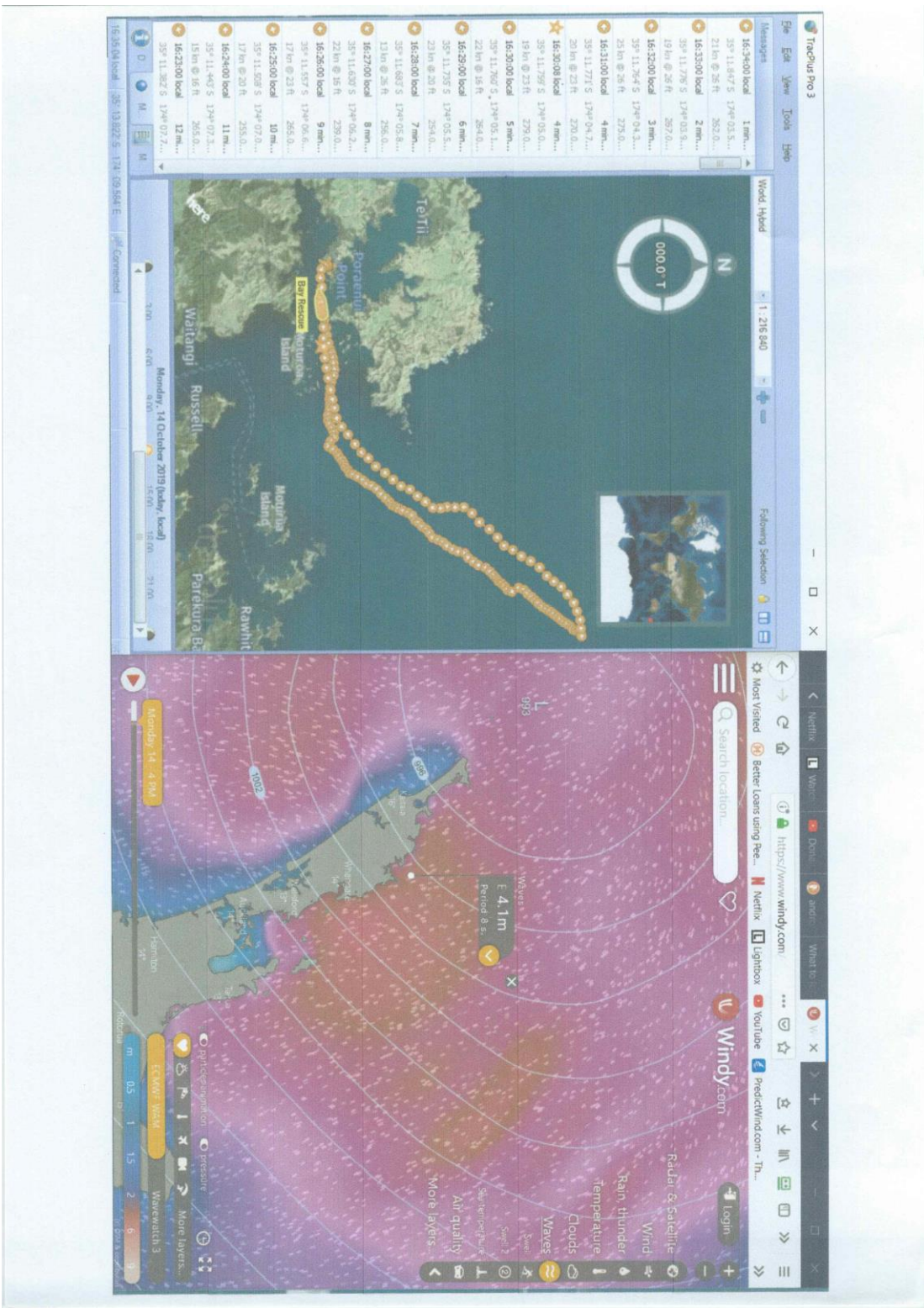
Appendix 2

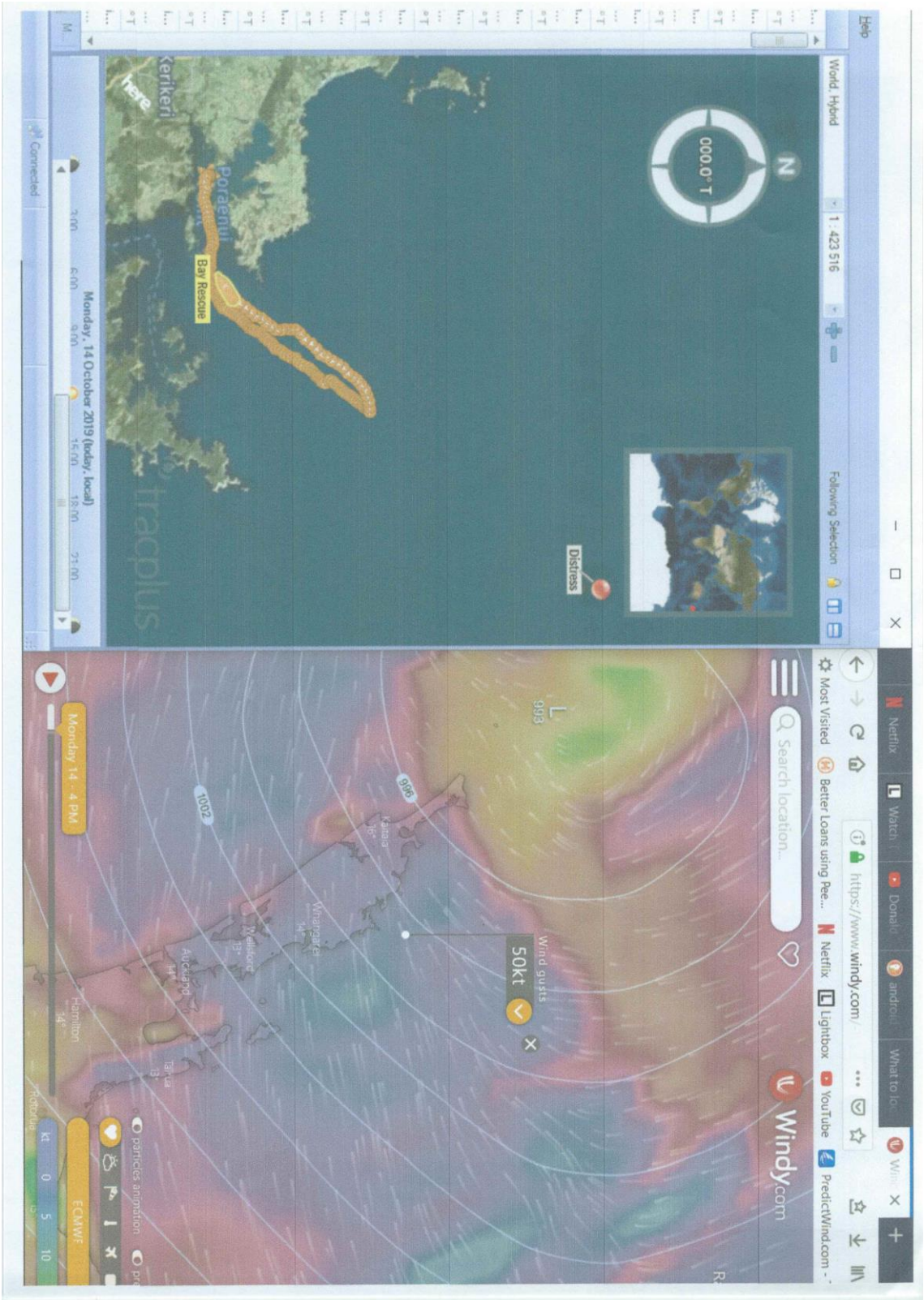
Coastguard Risk Assessment Matrix And Tracplus Mapping

Skipper		Date		Incident #			
Incident details							
Hazard	Low risk	pts	Moderate risk	pts	High risk	pts	Total
People (Suggested Values)							
KECH	All crew have correct kit	0	Sufficient crew have correct kit	10	Few crew have correct kit	no go	
Kit personal for work required	Mostly snr op crew	0	Mostly op crew >50hrs	10	Mostly op crew >10hrs	20	
Experience Skipper/ crew	Most crew last mth	0	Most crew last 6 mths	10	Most crew last 12mth	20	
Current Skipper/ crew	Rested short op	0	Rested long op	10	Unrested med. to long op	no go	
Health Skipper/ crew	IMSAFE						
The 2Cs							
Vessel							
Capability	Within vessels capability and crew	0	the conditions stretch the capability of vessel and crew	20	the conditions exceed the capability of vessel and crew	no go	
Communications	Good in all areas	0	Some blind spots expected	10	poor connection	20	
SC							
Task							
Survivability (Whole of mission)	Incident occurred <1hr	0	1hr<Incident occurred<5hr	10	Incident occurred >5hrs	20	
Complexity of search	Simple tasks using known technology	0	Complex tasks using known technology	10	Complex tasks using new technology	20	
WANT HAV							
Environment							
Weather over entire period	Good calm	0	Not good and changeable	10	Very bad and bad forecast	no go	
Areas for refuge	Good	0	Some	10	None	20	
Night Operations	Crew trained for night	0	Crew partially trained for night	10	Crew not trained in night ops	25	
Tide effect	No issue	0	Some concerns	15	Concerns operationally	no go	
Hazards- Objtects	No hazards in area	0	Some hazards in area	10	Many hazards in area	25	
Area familiarity	Crew familiar with area	0	Some crew familiar with area	10	Crew not familiar with area	25	
Visibility Night or Day	Good	0	Fair using equipment on board	15	Bad even using equipment on board	no go	
Risk	Low =0-70		Medium = 70-150		High > 150		
Decision				Signature and date			

DOCS FT

Distraction * Over Reliance Instruments and Own Ability * Complacency * Stress * Fatigue * Transition





Appendix 3

Civil Aviation Act 1990 Section 13A

Civil Aviation Act 1990

Section 13A

Duties of pilot-in-command and operator during emergencies

- (1) Subject to subsections (2) and (6), in an emergency that arises in flight, the pilot-in-command may breach the provisions of this Act or of regulations or rules made under this Act.
- (2) For the purposes of subsection (1), a breach of any prescribed requirement is permitted only if the pilot-in-command is satisfied that—
 - (a) the emergency involves a danger to life or property; and
 - (b) the extent of the breach of the prescribed requirement goes only as far as is necessary to deal with the emergency; and
 - (c) there is no other reasonable means of alleviating, avoiding, or assisting with the emergency; and
 - (d) the degree of danger involved in complying with the prescribed requirement is clearly greater than the degree of danger involved in deviating from it.
- (3) Subject to subsections (4) to (6), where an emergency (not being an emergency that arises in flight) necessitates the urgent transportation of persons or medical or other supplies for the protection of life or property, the pilot-in-command of the aircraft or the operator of the aircraft may breach the provisions of this Act or of regulations or rules made under this Act.
- (4) For the purposes of subsection (3), a breach of any prescribed requirement is permitted only if—
 - (a) the emergency involves a danger to life or property; and
 - (b) the extent of the breach of the prescribed requirement goes only as far as is necessary to deal with the emergency; and
 - (c) there is no other reasonable means of alleviating, avoiding, or assisting with the emergency; and
 - (d) the degree of danger involved in deviating from the prescribed requirement is clearly less than the degree of risk in failing to attend to the emergency.
- (5) Nothing in subsection (3) permits—
 - (a) the operation of an aircraft that is not registered in New Zealand or elsewhere;
or
 - (b) the breach of any prescribed requirement as to the airworthiness of an aircraft;
or
 - (c) the operation of an aircraft by a person who is not lawfully entitled to operate that aircraft.
- (6) Where, in any emergency described in this section, a pilot-in-command or an operator breaches this Act or regulations or rules made under this Act in accordance with the provisions of this section, the pilot-in-command or the operator, as the case may be, shall—
 - (a) immediately notify the relevant air traffic control service of the action; and
 - (b) as soon as practicable, notify the Director of the action and the circumstances that necessitated it, and, if requested by the Director, provide to the Director a written report in respect of the action.

Section 13A: inserted, on 13 August 1996, by section 7 of the Civil Aviation Amendment Act 1996 (1996 No 91).