



Australian Government

Australian Maritime Safety Authority

SILHOUETTE II CASE STUDY



February – May 2008

While the public often sees the end result of a search and rescue incident, there is much that goes on behind the scenes to ensure a safe and happy ending. Many different entities are involved and the coordination of an event means a seamless communication must be established between all parties. This case study provides an overview of a particular incident and highlights the complexities of bringing everything together.

This type of rescue exemplifies the challenges that arise when a large ship assists in a rescue from a smaller vessel or liferaft.

Background

At 4.17pm on Wednesday 13 February 2008 the Australian Maritime Safety Authority's (AMSA) Rescue Coordination Centre – Australia (RCC) received a telephone call from the brother-in-law of the skipper of the 43ft New Zealand registered catamaran, Silhouette II which was enroute from Brisbane to Wellington with four people on board.

Information received in the telephone conversation indicated that the vessel's skipper had made a satellite telephone call to his brother-in-law indicating that the Silhouette II was sinking and the crew were abandoning to their liferaft. At this time, the skipper gave his position as approximately 140 nautical miles East of Byron Bay, New South Wales.

The RCC – Australia story

In response to advice received by the RCC, a distress broadcast was issued to all shipping in the area. Notification was also provided to the Australian Defence Force Headquarters, Coastwatch, the New South Wales Water Police and the Rescue Coordination Centre – New Zealand.

At 4.30pm on Wednesday 13 February 2008, Rescue 441, the Cairns based AMSA dedicated search and rescue Dornier aircraft, was tasked by the RCC. This aircraft is equipped with a FLIR (Forward Looking Infrared) camera, a comprehensive communications suite, Automatic Identification System and is drop equipped for daytime operations. Rescue 441 refuelled at the Gold Coast before heading to the distress location.

At 4.45pm Rescue 471, the Essendon based AMSA dedicated search and rescue Dornier aircraft was tasked and proceeded directly to the distress location. Rescue 471 was the first asset on scene at 8.15pm.

As a result of the distress broadcast to shipping, the MV CSCL Melbourne responded to the RCC and advised that the ship was approximately 6 hours from the distress position and was diverting to assist.

At 4.51pm the Silhouette II activated their 406MHz Emergency Position Radio Indicating Beacon (EPIRB) and at 4.54pm the initial satellite detection of the EPIRB is received by the RCC.

As the Silhouette II is a New Zealand registered vessel, RCC staff in New Zealand liaised with next of kin of the crew during this period.

RCC staff in Australia also tasked the Sydney Water Police at 5.50pm to the area of the distressed vessel to assist if necessary. Due to the distance offshore, the Police dispatched both the PV Nemesis and PV Fearless. At this time, the estimated time of arrival on scene was 15 hours.

The Department of Defence was contacted at 6.00pm and a RAAF P3C Orion was tasked to assist in case night drop capability was required.

Rescue 471 arrived on scene at 8.30pm and was able to establish radio communications with both the Silhouette II and the Alltrans. At this time, the crew of the Silhouette II were still on board the hull of the catamaran.

By 9.02pm, the crew of the Silhouette II had abandoned the catamaran and were positioned within the liferaft. Crew from Rescue 471 reported back to the RCC in Canberra that waves were breaking over the hull of the catamaran which was partially submerged. At this time Alltrans reported its position as 11 nautical miles from the distressed vessel, and the CSCL Melbourne as approximately 35 nautical miles away.

At 11.37pm, Rescue 441, the Cairns-based Dornier arrived on scene to relieve Rescue 471. At this time, Alltrans reported it was 0.25 nautical miles from the Silhouette II, and in direct radio contact with the four crew in the liferaft.

At 0054 hours on the 14th February 2008, the RAAF P3C Orion arrived on-scene and shortly after, Rescue 441 advised RCC-Australia that the crew of the Silhouette II have been successfully transferred to the Alltrans from the liferaft with no injuries.

RCC-Australia stood down all search and rescue assets at 0057 hours. The Alltrans advised they would retrieve the liferaft onboard in daylight hours and then deactivate the EPIRB, before continuing their journey to Gladstone where the rescued crew would disembark.

Finally, RCC-Australia issued a navigation warning to shipping in the area to be aware of the partially submerged Silhouette II.

To view Forward Looking Infrared (FLIR) footage filmed from the Dornier, please visit the Search and Rescue webpage of the AMSA website (www.amsa.gov.au/search-and-rescue/rcc/).



The MV Alltrans story (as retold by the Master)

Alltrans had sailed from Bluff New Zealand on 9th February and was on ballast passage towards Gladstone.

During the 13th February we received weather warnings due to a Monsoon Low moving past our area. We prepared for heavy weather, but did not experience particularly bad conditions. On the afternoon of 13th it was overcast with scattered showers with 20-25 knot South South Easterly winds and a 2 – 3 meter sea.

At 4.20pm on the 13th, the Chief Mate received a telephone call from RCC-Australia on the bridge satellite phone. The RCC advised that a yacht was in distress close to our position and asked if Alltrans could provide assistance. At about the same time AUSSAR 2008/1276 telex was received by Sat C.

The Master was called to the bridge and after confirming the proximity of the distress coordinates a turn to starboard commenced at 4.40pm. Alltrans was turned around and set on course towards the distress position at 4.42pm and was about 60 miles from the distress position. Our course towards the distress position was 154° and our speed was 11 knots.

The distress position was about 130 nautical miles (240km) east of Byron Bay.

The Master phoned the RCC and advised them that we were proceeding towards the distress position.

The Master got in touch with ASP (the company operating Alltrans) to inform them of the ships involvement in a Search & Rescue operation. Valuable support and advice was received from ASP.

At 6.05pm the Master contacted the RCC and updated them with our position, course and speed and estimated time of arrive at the distress position. RCC advised us that Dornier Rescue aircraft Rescue 471, Rescue 441 and a P3 Orion would be providing air coverage. The container ship CSCL Melbourne was approaching from the south west. Alltrans was designated as On Scene Commander (OSC).

Over the next 2 hours various briefings were held on the bridge to discuss preparations for search & rescue and recovery of survivors.

At 8.22pm aircraft lights were sighted ahead.

At 8.31pm Rescue 471 was heard talking to the yacht crew on VHF.

At 8.36pm the Master called Rescue 471 on VHF and established that we were being tracked by them on Automatic Identification System (AIS). The distress position was amended to 28° 10.7' S 156° 04.8' E.

At 8.45pm, the new coordinates having being plotted and set into our radar displays, Alltrans adjusted course to 158°.

At 9.00pm all crew were called out and deck lighting was switched on. An hours notice was given to the engine room. The Chief Mate, took charge of any necessary preparations on the deck for the rescue. It was decided to set everything up for a starboard side recovery. As Alltrans always berths starboard side to, it was felt that equipment on this side would be more reliable.

At 9.04pm Communications on VHF 16 between Rescue 471 and the yacht crew could be heard okay. The yacht crew confirmed that they were fine.

At 9.05pm CSCL Melbourne was heard on VHF advising she was 36 miles away from the distress position.

At 9.33pm Alltrans commenced reducing speed.

At 9.38pm Rescue 471 advised the yacht Crew that Alltrans was in the area and that they should have us in sight. The yacht crew warned that they were in the liferaft and attached by a 30 meter line to the semi submerged 12.8 meter catamaran.

At 10.00pm circling aircraft was drawing out onto the starboard bow so Alltrans adjusted course to 160°.

At 10.03pm the Chief Mate confirmed that all was ready on the main deck. Ladders had been rigged at 3 positions along the starboard side of the ship. Nets and heaving lines were ready, and block and tackle was rigged from the bunker davit.

At 10.06pm Rescue 471 passed on an updated distress position as 28° 09.9' S 156° 03.1 ' E. From this it was evident that the yacht / liferaft was drifting in a North Westerly direction.

At 10.07pm a flashing light was spotted 3 points on the starboard bow.

At 10.10pm the Master took the controls of Alltrans.

At 10.12pm Standby was rung and course was adjusted to put the flashing light on the starboard bow. The Master contacted the yacht crew by VHF to confirm that the flashing light was coming from the liferaft itself.

Alltrans speed was progressively reduced and the vessel was turned around to starboard to establish a circling pattern around the liferaft to enable visual contact to be made. As the liferaft was still tethered to the semi-submerged yacht a careful probing approach was required to assess the situation. As Alltrans circled in towards the liferaft a note was made of the lee afforded and rolling encountered on each heading. The 2nd Mate was of great assistance in this job. The Chief Caterer, manned a searchlight on the starboard bridge wing and was able to keep the liferaft and yacht illuminated throughout the rescue.

A total of 5 circuits of the liferaft occurred during the rescue.

The Master advised the rescue aircraft and the yacht crew that he couldn't approach while the liferaft was still tethered to the yacht. It was agreed that the liferaft cast off from the yacht and this was done. The master advised the yacht crew to find and deploy a sea anchor and this was also done.

The Master contacted the liferaft and asked how far they were from the yacht. They said about 50 m. It was agreed to pull up the sea anchor to allow the liferaft to drift away from the yacht more rapidly.

At 11.17pm Alltrans made its first approach towards the liferaft heading on a course of about 300° with the wind on the port quarter. The yacht was sighted fine on the port bow with the liferaft to starboard. Taking evasive action to avoid contact with the yacht meant full ahead was required. The ship passed between yacht and liferaft too fast at about 5 knots. The pick up was aborted at 11.22pm and the ship turned to starboard.

At 11.48pm Alltrans made its second approach on a similar heading to the first. At 11.52pm the liferaft was fine on the starboard side. As the ship approached at 2-3 knots the liferaft moved down the ship's side about 50 meters away. As it approached the ship abreast to the bridge, it came close enough to pass a line to the liferaft. The engine was stopped but could not be used to slow the Alltrans further, due to the proximity of the liferaft to the ship's propeller. The Master confirmed that the engine was stopped as the liferaft moved close past the stern. The liferaft drifted clear and moved out onto the port quarter. Concerned that they would be pulled towards the propeller, the occupants of the liferaft had wisely severed the line to the ship. Once it was confirmed that the liferaft was no longer attached

to the ship, and had drifted clear astern the engine was put ahead and at 11.58pm another turn was commenced to starboard.

At about this time CSCL Melbourne called on VHF and asked if they could be of assistance. The Master advised that vessel that it was of great help to Alltrans having it standing by. Its deck lights provided a good reference point in judging heading and rate of turn. As Alltrans was almost constantly turning and it was dark and overcast it was difficult to remain orientated and maintain situational awareness.

At 00.09am on 14 February, 2008 Alltrans made its third approach to the liferaft on a heading of about 280°. It was put fine on the starboard bow and the ship approached at 2-3 knots. At 00.18am the life raft was abreast of the focsle and came down the ship's side about 50 meters away. It was too far away to pass a line to the raft. The ship was brought up to a stop with the liferaft about 100 meters away abreast of the bridge. The engine was put half astern and as expected the stern ran up into the wind and the bow started to swing to starboard. The liferaft moved back toward the bow of the ship about 150 meters away. When it was judged that the liferaft had drawn sufficiently far ahead the rudder was put to starboard and the engine ahead. The bow swung down towards the liferaft. It was found at this stage that there was good control of the ship's heading with 4 'slow' engine movements ahead and frequent helm orders.

At 00.38am the Chief Mate on the focsle had confirmed that the liferaft had drawn astern of the stem about 30 meters away. A final engine movement with hard starboard rudder was used to lay the liferaft in against the ships side at the break of the focsle. A line was successfully passed down to the liferaft and with 2 knots headway on the liferaft was quickly drawn down the ship's side to the midship pilot ladder. Half astern on the engine was used just enough to stop the ship but not allow the quickwater to wash down the ship side and affect the liferaft.

At 00.41am the liferaft was secured near the midship pilot ladder.

At 00.42am the first person started climbing up the 9 meter high pilot ladder.

By 0047am all four occupants of the liferaft were safely on deck.

To be noted is that it took only 9 minutes from the liferaft approaching the ship to getting everyone onboard. During the recovery the ship was on a heading of 300° - 245° slowly swinging to port.

Once it was confirmed that the yacht crew were uninjured and safe onboard, Rescue 417 was informed. The Master advised that the CSCL Melbourne's assistance was no longer required.

At 1.05am the liferaft had been moved down the ships side to a bunker davit in front of the bridge. A mooring winch on deck was used to pull the life raft clear of the water and up to about 2 meters below deck level where it was tied off. All ladders and lines were pulled up onto the main deck.

Rescue 417 asked if it was possible to recover the EPIRB from the liferaft as it was still activated. The Master advised that, as all had gone well so far, he was not prepared to take any unnecessary risks and that attempts would be made to recover the EPIRB at daylight.

The Chief Mate confirmed that all gear was clear of the water. The engine was put ahead and Alltrans was swung back towards Gladstone.

By 1.18am Alltrans was back up to full speed and Engine was rung full away. Deck lights were extinguished and Alltrans' crew stood down.

A crew member from the Silhouette II came to the bridge and the satellite phone was made available so that he could contact a family member.

The yacht crew were given food, drinks and warm clothes and made as comfortable as possible in spare cabins.

A 8.00am the liferaft was successfully hauled up onto the deck using the block & tackle from the bunker

davit and a mooring winch. An EPIRB was recovered from the life raft. Its details were passed to RCC, however later RCC advised that an EPIRB with a different HEX code was transmitting. The yacht crew were asked if they had another EPIRB, and on searching through the interior of the liferaft a second EPIRB was located. This was switched off and RCC was informed.

A meeting was held at 10.30am in the duty mess. The 4 yacht crew thanked the ships crew. The Master also thanked the crew for the excellent job done.

During the day the yacht crew were given dry clothes while their clothing was washed and dried. They made a quick recovery from the condition they had been in when they were brought onboard.

Alltrans arrived off Gladstone at 8.12am on the 15th of February.

The ship was met on arrival by Customs, AQIS and Water Police. The yacht crew were cleared in and debriefed and transport was arranged for them.

Arrangements were made with Ernie' Marine, a Gladstone Liferaft Company to remove the liferaft. The liferaft pyrotechnics have been retained onboard the ship and will be landed next time the ship is in Gladstone as the vessel has some expired pyrotechnics of its own to dispose of then.

Factors that the Master believes contributed to the successful outcome of the rescue are as follows:

The aircraft involved were able to provide much useful information. It was surprising how much they could see and pass on to Alltrans.

The yacht crew were very well prepared and had taken a large quantity of survival equipment into the liferaft with them.

The yacht crew stayed calm and level headed and maintained excellent communications by VHF.

The yacht crew were still strong enough to climb up the ship side by themselves. If they had been injured or weaker it would have greatly prolonged the rescue and perhaps lead to further injury to them and ship's crew.

With the liferaft tethered to the yacht, it was more easily located. Once found however the liferaft had to be cast off to allow Alltrans to approach.

The yacht crew had taken a flashing strobe type lifering light into the raft with them and attached it to the top of the raft. This was very easily seen. Once sighted, at no time was contact lost with the raft. A fixed light would not have been anywhere near as useful.

AeroRescue (R441) – from the SAR flight debrief report

Search details – Rescue 441 (Cairns) was tasked by the RCC to fly direct to the Gold Coast to refuel for a hot handover with R471 on scene at position 28 15.4s 156 10.1e to assist with the rescue of persons from a sinking yacht, Silhouette II. After refuelling the aircraft tracked to the search and rescue area, and enroute obtained a situation report from R471. After the handover with R471, the aircraft went into a holding pattern at 1500 ft over the liferaft and yacht.

The aircraft established communications on VHF FM Channel 16 with the Captain on the merchant ship, Alltrans who was assessing the conditions to manoeuvre his vessel for a pick-up of the liferaft with 4 people on board. Communications was also made with merchant ship, CSCL Melbourne who was advised by the Captain of the Alltrans to hold his position to allow him to use the vessel as a visual reference. The people on board the liferaft had communications via a hand-held VHF FM radio on Channel 16 and reported that they were all OK with no injuries. The EPIRB on the liferaft was still activated.

After discussion with the Captain from the Alltrans, it was agreed that the liferaft needed to be away from the stricken yacht, at a safe enough distance (at least 100-150 metres) in order to manoeuvre the vessel for a safe pick up. The crew on the liferaft agreed and let go of the line to the yacht. Initially the deployed a drogue, but it was pulled back into the liferaft to make better distance from the Silhouette II.

The first attempt for a recovery was made at 11.17pm 13th February, but the raft was too close to the stern. After two more attempts, successful recovery was made at 00.41am on 14 February 2008. All four persons boarded the Alltrans with no injuries. Concurrently Rescue 906 (the Defence P3C Orion) was on descent to the position for a hot handover. Rescue 906 and CSCL Melbourne were released from task. The Alltrans Captain advised he will be steaming to Gladstone port with an estimated time of arrival of approximately 28 hours.

R441 relocated the yacht and passed its position to the RCC. The EPIRB was still activated, and the Captain of the Alltrans advised it was too risky to retrieve the raft which was hanging over the side of the Alltrans and would pull it on board and deactivate at first light. R441 off task and relocated to Gold Coast.

General Comments – No digital photos able to be taken due to night conditions. Efforts for rescue were made difficult by weather, but excellent job by Alltrans Captain.

Afterwards...

This case study provides an overview of the same incident from three separate perspectives: the Rescue Coordination Centre – Australia; the MV Alltrans; and AeroRescue R441.

What is demonstrated is the communication between all three, a clear delineation between the responsibility of each, and the cooperative manner in which the rescue was accomplished.

What is also emphasised with this particular rescue is the preparedness of the crew of the Silhouette II for such an eventuality. The crew had all the right safety gear on board including a 406 MHz EPIRB. These digital EPIRBs are registered with the search and rescue authority in the country where the vessel is registered (in this instance, New Zealand). This provides search and rescue personnel with essential information to allow as expedient a rescue as possible. On 1 February 2009, the satellite that currently monitors analogue 121.5 MHz EPIRBs will be switched off. All boat owners are urged to purchase a 406 MHz digital EPIRB as soon as possible. If boat owners activate a 121.5 MHz analogue beacon after 1 February 2009, the signal may only be heard by aircraft overflying the position at the time – this will greatly reduce the chance of you being located by search and rescue authorities in time.

On 1 March 2008, AMSA's Senior Search and Rescue Officer (Maritime) Craig Longmuir presented the Captain of the M.V.Alltrans with a Certificate of Appreciation for the ships involvement in the rescue of the Silhouette II crew.

Given the adverse weather conditions during the rescue and the variance in size between the Alltrans and the liferaft in which the Silhouette II crew had needed to position themselves, the efforts of the Captain to manoeuvre the Alltrans to allow the liferaft to come along side exemplified extraordinary seamanship. The crew were able to secure the liferaft near the midship pilot ladder and all four of the Silhouette II crew were able to climb the 9 metre high pilot ladder to the safety of the deck of the Alltrans.

On Wednesday 11 May 2008 the Port Stephens Police located the upturned SILHOUETTE II 10nm off Port Stephens. Initially the discovery of the vessel was treated as a search and rescue incident until it was subsequently confirmed as being the SILHOUETTE II. The owners have since been notified.



