

ACKNOWLEDGMENT

In this State it is physically impossible for a Coroner to carry out an investigation alone. This particular investigation was complex and lengthy. The normal investigators for the Coroner are members of the NSW Police Service and in this case the investigation on my behalf was carried on by a Detective Senior Constable of Police from Bega and a Senior Constable of the NSW Water Police. Detective Senior Constable (now Detective Sergeant) Stewart Gray and Senior Constable David Upston of the NSW Police Service Water Police took to their task with enormous enthusiasm and made suggestions to me, and to Counsel Assisting which, I hope, made the inquest process far more meaningful than it would otherwise have been. I believe that those who were granted leave to appear at my bar table, to a person, have acknowledged that this investigation was of the highest calibre. I wish both officers well in their careers with the NSW Police Service, which can be justifiably proud of them.

I would also like to thank Superintendent John Ambler, Local Area Commander of Far South Coast Local Area Command, to which Detective Sergeant Gray was then attached. He has made available the provision of resources so as to ensure that the work of investigators could be properly carried out. It is worth mentioning that the cost of much of the testing carried out was considerable (stability testing, "Business Post Naiad" alone, in the order of \$109,000.00 of which \$27,000.00 came from the Local Area Command and the balance from the NSW Police Service) and Mr. Ambler ensured that funds were provided so that it could all be done.

In fact this investigation has cost the New South Wales Police Service well over \$200,000.00 to carry out.

Senior Constable Upston's Commanders, Acting Superintendent Gordon Wellings and Chief Inspector Graham O'Neill always ensured that he remained available to give his full attention to this investigation.

The brief of evidence, or most of it, took up approximately thirty large volumes. In order to facilitate the use of it by the interested parties, the NSW Police Service arranged for it to be copied onto CD Rom. The use of CD Rom will become more and more prevalent in the years to come and this pioneering work, I believe, made the handling of the brief by those using it, much simpler than it would otherwise have been. In this regard I must make special mention of Sergeant Colin Polley of the Information Training Unit, NSW Police Service and his team. Their "back room" work ensured that all interested parties had access to the brief of evidence via CD Rom. Since I concluded hearing the evidence, they have placed on CD Rom all transcripts and exhibits, surely a "first". Those who purchase this decision will also purchase the CD Rom, and will thus be able to look not only at my decision but the transcript of proceedings, the brief of evidence and the exhibits. They will therefore be properly able to analyse the decision - agree or disagree with aspects of it, if you will.

A number of lawyers appeared at inquest each day and others less frequently. Without exception they have understood that the inquisition is a fact finding mission (a concept not always appreciated by lawyers). They approached their task with their clients' interests firmly in view but otherwise were generally of assistance to me and those assisting me. This complex matter ran surprisingly smoothly.

Finally, I must take the opportunity of thanking my own team. Counsel Assisting me, Mr. Alun Hill showed, not only that he possesses an enviable knowledge of maritime law and practice, but an ability as an advocate which has been of great benefit to the inquest process. In Mr. Mark Papallo, Barrister-at-Law, Alun had a worthy assistant who wholeheartedly attended to assisting the Coroner. I have worked before with Solicitor Pamela Lazzarini of the NSW Crown Solicitor's Office in a number of complex cases. Again Pam attended to the myriad duties of a Solicitor assisting a long inquest with patience and competence. This too was noticed by all involved in the inquest. I thank Pam and Michelle Swift (then a paralegal with the Crown Solicitor's Office) for their dedication to their work.

Ailsa McPherson proof read the decision for me and turned up errors which I had missed on a number of readings.

My Court staff, Dawn Stratford, Melinda Flecknoe and the others regularly in Court, attended to their duties tirelessly. I thank them.

SUBMISSIONS RECEIVED

Apart from those granted leave to appear at inquest, submissions were received from a wide range of interested citizens. Without exception, all letters and submissions have been read, digested and considered:-

1. Anonymous letter dated 31st December, 1998.
2. Anonymous letter (undated) received March 2000, re: Radio 2UE discussion.
3. **BEER, Phillip** re yacht design structurally unsound dated 13th March, 2000.
4. **BELL, John**, dated 30th December, 1998.
5. **BRIGGS, Phillip**, dated 1st July, 1999.
6. **BUSH, Peter**, dated 4th January, 1999: Terms of Reference of Review, 1998 SHYR.
7. **CAMPBELL, Keith**, dated 8th January, 1999.
8. **CLEARY, Barry**, Ocean Gas Services, dated 26th July, 2000.
9. **CLIFT, Colin**, weather forecasting, dated 26th March, 2000.
10. **COLLINSON, Michael**, dated 16th July, 1999, and report.
11. **CUNNINGTON, Roger**, dated 1st March, 1999.
12. **DAVENPORT, P.R.**, enclosing copy of letter sent to CYCA re:-
 - (a) Ultimate responsibility with race officials and sponsor;

- (b) Design Rules and encourage more seaworthy yachts;
and
 - (c) Racing yachts being required to pass inside Montague Island.
13. **DOCTORS, Associate Professor Lawrence J,** Naval Architecture Program, University of New South Wales, dated 20th March, 2000.
 14. **FILOR, Captain,** Inspector of Marine Accidents, dated 6th January, 1999.
 15. **FORD, LAWRENCE R.,** dated 11th March, 2000 re Float Pac Flotation system.
 16. **GEORGE, Captain C. (RN)** to CYCA, plus appendices, dated 12th July, 1999.
 17. **GEORGE, Captain C. (RN)** to BL McKeough dated 17th September, 1999.
 18. **GRAHAM, Cheryl J.,** enclosing article from Marine Meteorology by Larry Lawrence dated 3rd August, 2000.
 19. **HAMMOND, Richard,** dated 20th August, 2000.
 20. **HARROP, Paul & Lynette,** dated 26th August, 1999.
 21. **HESSEY, Peter,** dated 5th July, 1999 enclosing letters to CYCA, Alan Jones and from Commonwealth Weather Bureau of Meteorology.
 22. **HOLLIER, William,** Secretary to the Trustee of the Lighthouse Trust.

23. **HOPPER, D.A.**, (Captain), dated 12th January, 1999.
24. **JACKSON, Ronald**, dated 26th April, 1999.
25. **JOUBERT, Professor P.N.**, dated March 2000: seamanship, safety harness, weather, wind speed, wave size, hull strength requirements.
26. **LINKLATER, R.M.**, dated 16th March, 1999.
27. **LORD, Rear Admiral J.R.**, re "Young Endeavour", dated 23rd March, 2000.
28. **McCRACKEN, Alby**, of Para-anchors Australia, dated 18th August, 2000.
29. **MAHER, John H.**, dated 25th March, 1999.
30. **MAY, Roger**, dated 19th April, 1999.
31. **MURMAN, Christopher**, Naval Architect, dated 8th August, 2000.
32. **OTWAY, Dr. Neil**, dated 5th January, 1999.
33. **PAYNE, David**, (Yacht designer) enclosing letter to Peter Bush: letters dated 14th March, 2000 and 18th April, 2000.
34. **PURCELL, Richard**, dated 24th February, 1999 and 3rd May, 1999.
35. **RYVES, Carl**, dated 19th May, 1999, enclosing article by David Payne: from Sydney International Boat Show Hull Stiffness: and from "Yachting World: Unfit for the Ocean" and other articles.
36. **SCHLYDER, Kris**, enclosing letter to CYCA, Prayers and excerpts from Holy Bible.

37. **SMITH, Gary**, dated 22nd March, 1999.
38. **SMITH, Graham**, dated 3rd June, 1999.
39. **SPINNER, Ron**, dated 12th March, 2000 enclosing letter to Peter Bush.
40. **TAYLOR, Anne**, dated 25th August, 1999.
41. **TAYLOR, Kim**, dated 21st October, 1999 and Report: "Racers Lose the Plot".
42. **TRELOAR A.S. and HENDERSON, D.M.**, dated 8th August, 2000.
43. Tritech Technology Pty Limited and Holonomic International Technology Inc.
44. **WALSH, Alan**, life raft design, dated 5th April, 2000.
45. **WATKINS, D.H.**, dated 30th July, 2000.
46. **WRIGHT, Dr. Harley**, dated 12th July, 2000.
47. **AUSTRALIAN YACHTING FEDERATION, (MOONEY, Tony)**, dated 16th July, 2000 re safety harnesses and life rafts.

INTRODUCTION

When I was first informed of the deaths of six yachtsmen competing in the 1998 Sydney to Hobart Yacht Race, I telephoned my counterparts, Graham Johnstone, the Victorian State Coroner and Ian Matterson, then the Coroner for Southern Tasmania. It was decided consensually that the six deaths would be reported to and dealt with by a Coroner of the State of New South Wales as the race originated in this State under the auspices of a NSW sporting club, the Cruising Yacht Club of Australia, Rushcutters Bay. Many if not most of the deceased were ordinarily resident in the State of New South Wales.

There has been criticism in some quarters that the deaths were merely a series of sporting accidents and that no detailed treatment of them was therefore warranted. In this regard, as the deaths were, in five instances, not by way of natural cause, they had to be reported to the Coroner. Further, Section 22, Coroners Act 1980 provides:-

- "(1) The Coroner holding an inquest concerning the death or suspected death of a person shall, at its conclusion or termination, record in writing his findings ... as to whether the person died, and, if so -
- (a) his identity;
 - (b) the date and place of his death; and
 - (c) except in the case of an inquest continued or terminated under Section 19 or 21, the manner and cause of his death."

Whilst, without going to inquest I may have been satisfied as to identity, time, place and even cause of death, an inquest had to take place to investigate the manner of death of these six yachtsmen.

Whilst I know of no definitive rule, Coroners tend to regard "disasters", for their purposes as incidents, (other than private motor vehicle incidents), which involve the death of five or more persons. I think it reasonable to take the view that the 1998 Sydney to Hobart Yacht Race was indeed a disaster. Six men lost their lives and property damage was most significant. Further there was great public interest in this inquest, not only from those involved in the local and Australian yachting movement, but worldwide.

The Sydney to Hobart Yacht Race itself is run according to a set of rules set by an organising body, and had to be looked at in that light. That organising body is federated with the Australian Yachting Federation, which, in turn is federated internationally. Meteorology and its accuracy, and the sailors' understanding of it was very relevant. The rescue involved many organisations and their performance had to be evaluated. Yachts and equipment were considered, as was the expertise of yachtsmen in areas other than the mere sailing of their vessels. My summing up will show the reader the many areas we discovered that deserved evaluation, consideration, comment and recommendation.

The necessary parameters of the inquests were considerable and I considered it beyond the scope of these inquests to look at a number of issues, including financial arrangements between the CYCA Sponsors and sponsors of individual vessels.

In conclusion, I must say that the inquest is a most positive process and the driving force behind this inquest, apart from determining just how each of these men met their deaths, was the desire to consider whether or not constructive recommendations could be made in order to help maximise the chances that a similar disaster will never occur again.

In this regard, there is no doubt at all that the Cruising Yacht Club of Australia has taken this tragedy very seriously indeed, and in the time that has elapsed, not only conducted its own detailed investigation, but made many innovative changes which in turn have made the running of this race much safer for its contestants. Some of these changes,

inflicted, as it were, on contestants have not been well received by a few, as being so draconian that an element of the "sport" of yachting has been taken away. On the whole I view the changes already made as both desirable and necessary. The yachting movement cannot afford another disaster of the magnitude of this one.

It is axiomatic that the examination of the 1998 race by the CYCA has to a large extent rendered nugatory the need for me to make a large number of recommendations pursuant to Section 22A, Coroners Act 1980. That in itself is a positive incident of this disaster.

In general terms the sterling and often heroic work of those involved in search and rescue from the underpopulated South Coast of New South Wales and the East Coast of Victoria underscored that volunteers, by taking to the sea and the air, are prepared to put their own lives on the line in attempting to rescue others. The changes to the running of this race since 1998 will greatly lessen the risk to these courageous men and women.

I have not devoted a chapter to the rescue, though several volumes of the Brief of Evidence are devoted to the topic. I have not needed to do so as there was virtually no criticism of the search and rescue. However the stories of the rescuers make riveting reading. I shall never forget the proceedings of 5th April, 2000 when Senior Constable Darryl Jones and Sergeant David Key of the Victorian Police Force gave evidence of their rescue of a crewman from "Kingurra" on 27th December, 1998 and of three crew from "Midnight Special" (**transcript 5th April, 2000, pp.13-50**). Equally moving tales by other rescuers can be found in the Brief of Evidence, including those of Michelle Blewitt and Kristy McAlister, Paramedics of the ACT Ambulance Service. The rescuers at times showed great courage in doing what they could for the crews of stricken vessels.

Similarly a number of contestant vessels, at considerable risk, stood by disabled yachts until relieved by echelons of the official rescue services.

HISTORY AND DESCRIPTION OF THE SYDNEY TO HOBART YACHT RACE

Throughout my life I have had little to do with sailing. Nevertheless, since I was young, and especially since the advent of television in this country, I, like so many others have been interested in the Sydney to Hobart Yacht Race. Like so many others, however, before I began these inquests, I had little idea of the conditions under which 1,000 or so souls sail each year, in making their way from Sydney to Hobart. I had little idea that the crossing of Bass Strait could be so dangerous; that the meeting of wind, wave and current, especially at "the corner" can create a maelstrom of howling wind and mighty wave; or of the cramped and spartan conditions on board most vessels; of the methods of sailing, navigation and communications.

I have drawn my following comments in part from the Report of the 1998 Sydney Hobart Race Review Committee (May 1999), chaired by former Commodore of the Club, Mr. Peter Hallam Bush. The Report is part of Exhibit One to these Inquests.

The Cruising Yacht Club of Australia (CYCA) has been organising and running the Sydney to Hobart Yacht Race (SHYR) since 1945. In that first race only eight vessels started. Essentially a group of yacht owners got together and decided to race each other to Hobart.

Very quickly, the race became more and more formalised and as the years passed, more and more boats entered the race. By the late 1960's the fleet size was around fifty and grew to just under one hundred by the end of the 1970's. Throughout the 1980's the fleet size was typically around 150, with 179 yachts contesting the race in 1985. The 50th Anniversary Race attracted 371 starters. Throughout the 1990's the fleet has been around 110.

The race has become one of the planet's premier blue water yacht races. In a category range from Category Zero to Category Seven (the former being reserved for the toughest races, such as the "Whitbread

Round the World Race") the SHYR, rated Category One, is regarded as a very difficult race. (The famous United Kingdom race The Fastnet is rated Category Two). In essence, the southerly "buster" on the Coast of NSW and the south-westerly fronts in Bass Strait have given the race the deserved reputation of being one of the toughest ocean races in the world.

The SHYR begins each Boxing Day, 26th December and sails a course from Port Jackson (Sydney Harbour) down the South Coast of the State of New South Wales, Australia, across Bass Strait and down the East Coast of the State of Tasmania to Tasman Island. The fleet then crosses Storm Bay and sails up the Derwent River to the finish at Battery Point, Hobart. The race distance is approximately 1,000 kilometres (630 nautical miles).

Since the early 1980's the fleet has taken three to four days to finish the course. A new race record of just over two and a half days was set in 1996 by the yacht "Morning Glory". Conditions can range from light to strong and tough conditions. 1998 provided the fleet with its first Storm Warning (the highest warning given by Weather Bureaux in non tropical regions).

Bass Strait, compared with the waters at either end of it is shallow to a figure of one fifth. This shallower water, combined with the winds through the Strait have over the years created some challenging sailing conditions - exacting on both boats and crews.

The sailors, of course, participate in the SHYR for the personal challenges it provides. It is sailed in open waters and long distances from assistance. This of course, increases the challenge and the risk. It must be said that prior to 1998 there was little loss of life - leaving aside natural causes - with only two sailors lost, one overboard and another from head injuries after rigging failure.

In relation to changes in yacht design and construction, the Report says this:-

"Yacht design and construction have changed considerably in the past 50 years. Timber has for the most part been replaced by Glass Reinforced Plastic (GRP) for hull construction and aluminium for masts. Even more recently carbon-fibre has emerged as a construction material and has been applied in both hull and rig construction. In layman's terms, displacement hulls that cut through the waves have been replaced by lower displacement hull forms with fin keels that sail over them. Sailing performance has improved with yachts being faster on all points of sailing and being able to point higher into the wind." **(Report 1998 SHYR Review Committee, p.4-5)**

Over the years there have been seven SHYRs where 25% or more have retired from the race for various reasons (including sail damage, dismasting, electrical problems, seasickness and structural damage).

The Review Committee goes on to say:-

"The event is governed by the Racing Rules of Sailing (RRS) of the International Sailing Federation (ISAF) and the prescriptions and safety regulations of the Australian Yachting Federation (AYF). Races are run on a scale from Category 0 to Category 7, with 0 applying the most stringent safety requirements, for races like the "Whitbread Round the World Race". Category 1 safety standards apply to the SHYR, one of only a handful of races around the world to do so. In Australia, the only other Category 1 race is to Lord Howe Island, some 400 nautical miles off the NSW Coast. Category 1 safety standards prescribe: "Races of long distance and well offshore, where boats must be self-sufficient for extended periods of time, capable of withstanding heavy storms and prepared to meet serious

emergencies without the expectation of outside assistance".
(Report 1998 SHYR Review Committee, p.5)

In essence, the various, complex handicap formulae are directly related to the design of boats insofar as boats are designed to optimise performance and handicap within a series of parameters.

So far as communications are concerned, the fleet is monitored by HF and VHF radio. In recent years the communications centre has been on a floating platform, the naval training ship "Young Endeavour". At fixed times, typically three times per day, radio schedules ("scheds") are conducted. During these scheds the contestants receive weather reports and provide the communications centre with their positions in latitude and longitude.

The Review Committee concluded its history of the race in this way:-

"In 1998, the fleet of 115 yachts was hit by a south-westerly storm as it entered Bass Strait on 27th December. Winds gusting at times to over 70 knots combined with heavy seas over a strong flowing East Australian Current to exact the biggest toll ever on the race. Six lives lost, five boats sunk and a further 66 boats retired from the race. The severe and fast developing storm caught the fleet entering Bass Strait waters and resulted in the biggest maritime rescue operation ever in Australian waters with 55 rescued in an operation involving some 25 aircraft, six vessels and approximately 1,000 personnel."

This inquest has focused closely on relevant aspects of the circumstances whereby the 1998 fleet sailed into that storm.

CONCLUSION

I am unable to find an author for the quotation occasionally used in Court by lawyers making submissions:-

"Your Worship, the window of hindsight is the clearest window of all".

Of course that is so true. For over twelve months two Police Officers amassed evidence which was examined by my team and by me. Then, for almost eight weeks a group of skilled lawyers dissected that evidence in my Court. They dissected many aspects of the yacht race minutely.

I hope that I have kept firmly in my mind the fact that the actors in this drama did not have the benefit of that hindsight. Decisions had to be made in seconds, minutes and hours, often based on likelihood rather than certainty. Whether one looks at the role of skippers, crew, rescuers or regatta officials, it is most important that all who read this document keep this principle in mind when considering it critically.

So how did this tragedy occur? How was it that many of the fleet sailed on past "the corner" into such perilous waters?

There is, of course, no single answer. The answers, I hope, lie in this document. It is our hope that the ocean racing movement gains much from this inquest so that the sport of ocean racing will, in future, be safer for all involved in it.

FINDINGS

The provisional findings were given before commencement of the inquest proper. The findings as to date of death of the three crewmen from the yacht "Winston Churchill" were incorrect. On the evidence before me they died on the 28th December, 1998, not 27th December as originally stated. I am now able to return formal findings into each of the six deceased.

My formal findings are:-

THAT BRUCE RAYMOND GUY DIED ON 27TH DECEMBER, 1998, OF ISCHAEMIC HEART DISEASE, A NATURAL CAUSE, IN THE TASMAN SEA OFF EDEN, AT AN APPROXIMATE POSITION OF 37 DEGREES 16.5 MINUTES SOUTH AND 150 DEGREES 11.2 MINUTES EAST, WHILST COMPETING IN THE SYDNEY TO HOBART YACHT RACE AS SKIPPER OF THE YACHT "BUSINESS POST NAIAD".

THAT PHILLIP RAYMOND CHARLES SKEGGS DIED ON 27TH DECEMBER, 1998, OF IMMERSION, IN THE TASMAN SEA, OFF EDEN, AT AN APPROXIMATE POSITION OF 37 DEGREES 16.5 MINUTES SOUTH AND 150 DEGREES 11.2 MINUTES EAST, WHEN THE YACHT "BUSINESS POST NAIAD", OF WHICH HE WAS A CREW MEMBER, WAS STRUCK BY A WAVE AND OVERTURNED, HE BECOMING ENTANGLED IN EQUIPMENT AND REMAINING UNDERWATER WHILST THE SAID YACHT WAS INVERTED.

THAT GLYN RODERICK CHARLES DIED ON 27TH DECEMBER, 1998, OF IMMERSION, IN THE TASMAN SEA, OFF EDEN, AT AN APPROXIMATE POSITION OF 38 DEGREES 15 MINUTES SOUTH AND 150 DEGREES 19 MINUTES EAST, WHEN THE LANYARD WHICH

WAS ATTACHED TO HIS HARNESS FAILED AT THE STITCHING, HE THEN BEING WASHED OVERBOARD FROM THE YACHT "SWORD OF ORION", OF WHICH HE WAS A CREW MEMBER.

I MAKE THIS FINDING NOTWITHSTANDING THAT THE BODY OF GLYN RODERICK CHARLES HAS NEVER BEEN LOCATED.

THAT JOHN WILLIAM DEAN DIED ON 28TH DECEMBER, 1998, OF IMMERSION, IN THE TASMAN SEA OFF EDEN, WHEN THE REMAINS OF A LIFE RAFT FROM THE YACHT "WINSTON CHURCHILL" TO WHICH HE WAS CLINGING, WAS WITHOUT WARNING STRUCK BY A WAVE, WASHING HIM BEYOND ITS REACH.

I MAKE THIS FINDING NOTWITHSTANDING THAT THE BODY OF JOHN WILLIAM DEAN HAS NEVER BEEN LOCATED.

THAT JAMES MICHAEL LAWLER DIED ON 28TH DECEMBER, 1998, OF IMMERSION, IN THE TASMAN SEA OFF EDEN, WHEN THE REMAINS OF A LIFE RAFT FROM THE YACHT "WINSTON CHURCHILL" TO WHICH HE WAS CLINGING, WAS WITHOUT WARNING STRUCK BY A WAVE, WASHING HIM BEYOND ITS REACH.

THAT MICHAEL BANNISTER DIED ON 28TH DECEMBER, 1998, OF IMMERSION, IN THE TASMAN SEA OFF EDEN, WHEN THE REMAINS OF A LIFE RAFT FROM THE YACHT "WINSTON CHURCHILL" TO WHICH HE WAS CLINGING, WAS WITHOUT WARNING STRUCK BY A WAVE, WASHING HIM BEYOND ITS REACH.

RECOMMENDATIONS

My recommendations apply to all Category One races which take place within the jurisdiction of this Court. The jurisdiction is, of course, wide so it is appropriate to address Recommendations 1 to 12 to the Cruising Yacht Club of Australia, Sydney and to the Australian Yachting Federation. These recommendations may be equally applicable to Category Zero and even Category Two races and the CYCA and AYF might consider them in that context. The remaining recommendations are made to Work Cover New South Wales and the NSW Minister for Fair Trading (Product Safety) respectively.

My formal recommendations are:-

- 1) **THAT ALL CREW MEMBERS OF COMPETING YACHTS WEAR A PERSONAL EPIRB (EMERGENCY POSITION INDICATING RADIO BEACON) WHEN ON DECK IN ALL WEATHER CONDITIONS.**

- 2) **THAT ALL CREW MEMBERS OF COMPETING YACHTS BE TRAINED IN THE USE OF PERSONAL EPIRBS.**

- 3) **THAT ALL COMPETING YACHTS CARRY ON BOARD A 406 MHz EPIRB AND NOT A 121.5MHz EPIRB.**

- 4) **THAT ALL INFLATABLE LIFE RAFTS CARRIED ON BOARD COMPETING YACHTS SHOULD COMPLY WITH THE**

**CONSTRUCTION REQUIREMENTS OF
REGULATION 15 OF THE INTERNATIONAL
CONVENTION OF THE SAFETY OF LIVES AT
SEA 1960 ("SOLAS").**

- 5) **THAT THE CONTENTS OF INFLATABLE LIFE
RAFTS CARRIED BY COMPETING YACHTS BE
AS FOLLOWS (I have underlined additions to the
requirements recommended by the Australian
Yachting Federation).**

EQUIPMENT

**EACH RAFT SHALL HAVE AT LEAST
THE FOLLOWING EQUIPMENT, PROPERLY
STOWED AND SECURED SO AS TO BE
AVAILABLE UNDAMAGED AFTER
LAUNCHING AND INFLATING.**

- (a) **One sea anchor or drogue (attachment line
should not be less than 15M) attached so that
the entry point to the raft is leeward (the NMI
- Pattern with anti-tangle lines is
recommended).**
- (b) **One safety knife.**
- (c) **One bellows or hand pump for hand inflation.
(That is of one piece, ready for use and does
not require assembling).**
- (d) **One waterproof torch (signalling). (Together
with one spare set of batteries and one spare
bulb in a waterproof container).**

- (e) **One heliograph.**
- (f) **One bailer. (Easily identifiable as a bailer).**
- (g) **One sponge per person.**
- (h) **One repair outfit capable of repairing punctures in buoyancy compartments. (When such buoyancy compartments are wet with salt or fresh water).**
- (i) **Six emergency buoyancy tube leak stopping plugs.**
- (j) **One buoyant rescue quoit attached to at least 30 metres of buoyant line.**
- (k) **Four red hand-flares and two smoke signals or combination of both.**
- (l) **Two red parachute flares. (Of an approved type capable of giving a bright red light at a high altitude).**
- (m) **One signalling whistle.**
- (n) **Sufficient drinking water, giving 0.5 litres per person.**
- (o) **One tin of emergency rations per person.**
- (p) **Two tubes of sunburn cream.**
- (q) **Five plastic bags, not less than 450 mm x 300 mm per person.**
- (r) **An operational instruction card clearly legible on the life raft and its contents, waterproofed**

or stencilled on the inside of the canopy (and on the inside of the buoyancy compartments).

- (s) A USL Coastal Pack First Aid Kit.**
 - (t) A water maker is recommended for long Category 1 and 2 Races.**
 - (u) Two conventional paddles.**
 - (v) One set of fishing tackle.**
 - (w) Six anti-seasickness tablets for each person the life raft is deemed to accommodate.**
 - (x) One waterproof copy of the illustrated table of life-saving signals referred to in Regulation 16 of Chapter V of SOLAS.**
 - (y) One waterproof copy on how to survive in the life raft.**
- 6) THAT WEATHER FORECASTS WHICH ARE SPECIFICALLY PROVIDED FOR YACHT RACING FLEETS CONTAIN:-**
- (a) AS WELL AS THE AVERAGE WINDS EXPECTED, THE MAXIMUM GUSTS OF WIND THAT ARE LIKELY TO OCCUR; AND**
 - (b) AS WELL AS THE SIGNIFICANT WAVE HEIGHTS EXPECTED, THE MAXIMUM WAVE HEIGHTS THAT ARE LIKELY TO BE ENCOUNTERED.**

- 7) **THAT ALL YACHTS' BATTERIES BE OF THE CLOSED OR GEL CELL TYPE.**
- 8) **THAT COMPETING YACHT CREW WHO ARE ON DECK DURING ROUGH WEATHER SHOULD WEAR CLOTHING THAT WILL PROTECT THEM FROM HYPOTHERMIA.**
- 9) **THAT COMPETING YACHT CREWS USE PERSONAL FLOTATION DEVICES (PFD's) OTHER THAN THE 'MAE WEST' TYPE.**
- 10) **THAT ALL CREW MEMBERS OF COMPETING YACHTS HAVE WITH THEM A PERSONAL STROBE LIGHT WHEN ON DECK IN ALL WEATHER CONDITIONS.**
- 11) **THAT EACH COMPETING YACHT CARRY ON ITS HULL OR DECK SOME FORM OF MARKING THAT CAN READILY IDENTIFY THE YACHT TO AIR RESCUERS.**
- 12) **THAT AT LEAST 50% OF A COMPETING YACHT'S CREW SHOULD HAVE COMPLETED A YACHT SAFETY AND SURVIVAL COURSE EVERY THREE (3) YEARS:-**
 - (a) **THAT SUCH YACHT SAFETY AND SURVIVAL COURSE BE THE COURSE ABF511 OF THE AUSTRALIAN**

**NATIONAL TRAINING AUTHORITY;
AND**

- (b) THAT SUCH YACHT SAFETY AND SURVIVAL COURSE BE TAUGHT BY INSTRUCTORS WHO HOLD A CURRENT AUSTRALIAN NATIONAL TRAINING AUTHORITY CERTIFICATE FOR ASSESSMENT AND WORKPLACE TRAINING BSZ40198.**

The following recommendations are not made to the CYCA and the AYF.

- 13) THAT WORK COVER NEW SOUTH WALES INQUIRES INTO, AND REPORTS TO THE RELEVANT MINISTER OF THE CROWN, ON THE PRACTICES ABOARD RACING YACHTS OF PROVIDING "PAYMENT" TO SOME CREW, AND THE RAMIFICATIONS WHICH MAY FLOW FROM THAT PRACTICE.**

- 14) (a) THAT THE MINISTER FOR FAIR TRADING (NSW) OR OTHER RELEVANT NSW GOVERNMENT MINISTER CONSIDERS ORDERING THE WITHDRAWAL FROM THE MARKET OF ALL HARNESSSES AND LANYARDS BEARING THE NAME "TUFF MARINE AUSTRALIA" OR ANY DERIVATION OF THAT NAME;**
 - (b) THAT THE SAID MINISTER OR OTHER RELEVANT NSW GOVERNMENT MINISTER CONSIDERS REQUIRING**

**THAT ALL HARNESSSES USED BY
YACHT CREWS HAVE A CROTCH
STRAP FITTED; AND**

- (c) THAT THE SAID MINISTER OR OTHER
RELEVANT NSW GOVERNMENT
MINISTER CONSIDERS PURSUING A
REVIEW OF AUSTRALIAN STANDARD
AS2227.**

(John Abernethy)
NSW State Coroner,
GLEBE NSW
12th December, 2000

RACE ORGANISATION

The Sydney to Hobart Yacht Race ("the Race") as organised by the Cruising Yacht Club of Australia ("CYCA") can, for the purposes of this Inquest be divided into a number of topics.

It is my intention to deal with each topic separately though, as with any organising, some topics must of necessity overlap. I should add, that I have not overlooked the fact that each topic has been refined over many years being added to and subtracted from as the need arose. This process usually being done at the race review conducted in the January of each year (**Halls, transcript 2nd August, 2000, p.1**).

In summary the December 1998 Race was to be organised as follows:-

1. The Notice of Race was sent out. The Prospective Applicants would fill in the "Application for Entry" form that was attached and return the Application to the CYCA.
2. Such Applications would be dealt with within the Sailing Office of the CYCA.
3. A yacht having been accepted by the CYCA would pay an entry fee in accordance with its acceptance. The CYCA would then send the Applicant the Sailing Instructions.

I pause here to note that the Notice of Race and Sailing Instructions were and are informative documents that would give an Applicant a reasonable grasp of the requirements of the CYCA for the Race. Indeed these documents embodied the experience of the Race Organisers over many years. As Mr. G. Halls said:-

"... along with various reports that were documented. From year to year the Notice of Race and Sailing Instructions would normally take the previous year's, change the dates, times and the race frequency skeds, whatever they might be that needed changing, insert amendments or recommendations that were applicable from the previous event or changes in the racing rules or regulations that occurred in the past 12 months. That became a document on its own, the Notice of Race and the pretty formal sort of Sailing Instructions." **(transcript 2nd August, 2000, pp.1 & 2)**

4. The CYCA would provide an infrastructure that would do, among other things, the following:-
 - A. Provide a Race Committee which would have charge of the conduct of the Race until the start of the Race at 1pm on Saturday 26th December, 1998.
 - B. Provide the prior administration of the Race that would ensure that yachts that were entrants in the Race complied with the Race requirements.
 - C. Once the Race had commenced its conduct would then be in the hands of the Race Management Team. This Team comprised of Messrs. P. Thompson, M. Robinson and H. Elliott.
 - D. Provide a communications network to the Race Fleet. This would be done via a Radio Relay Vessel ("RRV"), "Young Endeavour", which would carry on board and separate from "Young Endeavour's" communications system, a radio station ("Telstra Control").
 - E. Provide to the Race Fleet the weather forecasts. These would be obtained from the Bureau of Meteorology and

would be broadcast to the fleet at the beginning of and at the end of the two daily radio scheds conducted by Telstra Control.

I now intend to expand on the above infrastructure topics before dealing with the events as they occurred.

A. THE RACE COMMITTEE

The Race Committee comprised of not only CYCA members but also members of the Royal Yacht Club of Tasmania ("RYCT").

The following comprised the Race Committee:-

- * Hans Sommer (CYCA Vice Commodore) - Chairman
- * Howard Elliott (CYCA Member)
- * Robert Badenach (RYCT Immediate Past Commodore)
- * David Boyes (RYCT Commodore)
- * Bruce Rowley (CYCA General Manager)
- * Mark Robinson (CYCA Sailing Administrator) and
- * Phil Thompson (CYCA Sailing Manager)

Of the above Messrs. Rowley, Robinson and Thompson were full-time employees of the CYCA. Of these Robinson and Thompson were involved in the Race administration, whilst Rowley was the Club's General Manager and played no part in the Race organisation.

In essence the Race was administered on a day to day basis by Phillip Thompson who, as the CYCA Sailing Manager, had his normal working area in the CYCA Sailing Office. Mark Robinson and Andrea Holt also worked in the Sailing Office under the control of and answerable to Phillip Thompson.

B. PRIOR ADMINISTRATION OF THE RACE

The prior administration of the Race followed the usual paths that had been laid down over the previous years with the notable exception of the administrative action that should have been taken regarding the IMS (International Measuring System) Certificate of the yacht "Business Post Naiad" ("Naiad").

APPLICATION OF "BUSINESS POST NAIAD"

I have dealt with this topic in greater detail under the heading "The Yacht Business Post Naiad". However I did not deal with what has been described, in the CYCA Race Review, as an "administrative oversight" which allowed the "Naiad" entry to the Race when it was clear on its current IMS Certificate that it was ineligible to race.

In order to deal with this aspect at this point it is sufficient to note the following:-

1. The Sydney to Hobart Yacht Race is a Category 1 race according to the (AYF)'s (Australian Yachting Federation) Racing Rules of Sailing.
2. Category 1 races require a limit of positive stability of 115 degrees or greater. (Though this had been modified under a "grandfathering clause" by the CYCA. That allowed yachts that had previously sailed in the Race, to enter if their limit of positive stability was 110 degrees or greater). Thus a yacht could withstand being rolled to 115 degrees by seas and recover its upright position.

The "Naiad" should, at the very least, have had a limit of positive stability of 110 degrees to be accepted into the Race. Its current IMS

Certificate showed its limit of positive stability as 104.7 degrees. She was therefore clearly ineligible to race under this Certificate.

The question arises why was the IMS Certificate not checked and "Naiad's" application rejected.

To answer this question it was therefore necessary that my investigators interview Messrs. Thompson and Robinson and Ms. Holt. They being the administrative personnel responsible for the Race entries.

As a result I have read and heard evidence on whose duty it was to check the IMS Certificate of entrants and then 'tick' the appropriate column on the broadsheets on the wall of the Sailing Office (referred to as the 1998 chart). That evidence is as follows.

MARK ROBINSON

Mr. Robinson was interviewed on the 19th October, 1999, when, at **pages 29 and 30**, he gave this series of answers regarding current IMS Certificates and eligibility to race:-

"Q. O.K. And if that Certificate's not there then it fails the entry requirements of a valid IMS Certificate with a, with a stability index of over 115 degrees unless otherwise grandfathered at 110.

A. But when it applied for entry ---

Q. Yeah.

A. --- it has already met the requirement by providing a valid, not necessarily a current Certificate ---

Q. Mmm.

- A. --- and is therefore ticked off the board because it has already brought all the documentation in for experience, the IMS Certificate and so forth proving, proving their stability. That's not that one but the ---
- Q. No.
- A. --- original submitted document ---
- Q. O.K.
- A. --- is proof that they complied."
.....
- A. --- when it applied for entry in the Hobart race.
- Q. Yeah, but it's not current.
- A. It's not current, no, it doesn't need to supply a current Certificate, it needs to supply a valid one to prove stability.
- Q. All right.
- A. It has complied with the requirements for application for entry into the Hobart Race.
- Q. Right. O.K.
- A. Or it's proven, the owner has proven that his boat is eligible." (**Interview 19th October, 1999, pp.29 & 30**)

In the above interview from which these questions come it appears that Mr. Robinson does not differentiate between a valid IMS Certificate and a current valid IMS Certificate. However, these answers

by Mr. Robinson are to be contrasted with those furnished in his statement dated 7th July, 2000, a twenty page statement filed through the CYCA Solicitors. Where, regarding the same issue, he said:-

"35. It was my understanding that (Andrea) Holt and (Phillip) Thompson dealt with the Entry Forms put on their desks as follows. They would read the Entry Form and check if an entry fee, insurance certificate, complete crew list, safety certificate, radio certificate and IMS or CHS certificate were included. If so:

- (1) ...
- (2) ...
- (3) Any current IMS or CHS Certificates would be given to Thompson, who would check they complied with the Notice of Race (except in relation to speed) and if so, either:
 - (a) Tick the Certificate column on the 1998 chart and then, put the Certificate on my desk for filing in the IMS Folder; or
 - (b) Put the Certificate straight on my desk for filing in the IMS Folder. This was done on the understanding that in or about December 1998, Thompson would go through the IMS Folder with another staff member and tick off all the yachts on the 1998 chart that had supplied a valid current IMS or CHS Certificate.

I note that if an IMS Certificate related to a maxi yacht, Thompson would ask me to check that the yacht complied with the speed requirement prior to filing the Certificate in the IMS Folder.

37. In the weeks after the close of entries yachts submitted outstanding entry documentation. As that entry documentation came into the Sailing Office, it was the practice in the Sailing Office for the person who received that documentation to:

- (1) ...
- (2) ...
- (3) Put current IMS and CHS Certificates on Thompson's desk for his review and approval. After Thompson approved the Certificates, he put them on my desk for filing in the IMS Folder. Prior to that time, Thompson may or may not have ticked the certificate column on the 1998 chart for those Certificates.

38. To reduce the risk of errors only certain persons in the Sailing Office were allowed to fill in the different columns on the 1998 chart. Only Thompson and Holt filled in the columns relating to entry fees, advertising, class, insurance and crew lists, only Thompson ticked the certificate-column and only Lawson ticked the columns relating to safety. I did not fill in the 1998 chart when I received documentation over the counter or otherwise.

However, if I was standing near the 1998 chart and the person responsible for a column asked me to tick that column for a particular yacht, I would have done so.

39. It was also common in 1998 for the member of the Sailing Office responsible for a column to go through the relevant folder and another staff member to stand at the 1998 chart while that person read through the folder to ensure all yachts had been ticked who had supplied that documentation. Alternatively, the member of the Sailing Office responsible for a column filed all the approved documentation and then, in or about December 1998

went through the relevant folder with another staff member and ticked off all the yachts that had supplied that documentation in one lot." (**Statement dated 7th July, 2000, pp.7 & 8**)

During oral evidence Mr. Robinson said the reason for the disparity in the answers in October 1999 and those in July 2000 was that he was flustered during the Police interview. He then said as to any disparity, the following:-

"Q. Your memory would have been much better when you gave this original statement wouldn't it?

A. I don't believe so.

Q. 19th October, 1999?

A. I believe I went into the interview quite blind and hadn't thought about as much as we have with the current statement that's tendered before the Court." (**transcript 28th July, 2000, p.54**)

When taken through Mr. Thompson's version of whose duty it was to check off yachts' IMS Certificates he finally said:-

"Q. (PARTS OF THOMPSON'S STATEMENT HAVING BEEN READ TO HIM) "... and (2) put current IMS and CHS Certificates on Robinson's desk for his review, approval and ticking on the 1998 chart." Now what do you say to that?

A. I was of the opinion that they had already gone through some sort of vetting process with Mr. Thompson.

- Q. Then he goes a little step further at paragraph 47. He says "to reduce the risk of errors, only certain persons in the Sailing Office were allowed to fill in the different columns in the 1998 chart. Only Holt or I" - that's Thompson - "filled in the columns relating to entry fees, advertising, crew lists and class and insurance. Only Robinson ticked the certificate column."
- A. That's incorrect if you actually look at the chart.
- Q. What do you mean it's incorrect?
- A. There are different ticks from different people on the chart.
- Q. Perhaps I'll put it to you quite bluntly. The way I read this is that Mr. Thompson is saying that as far as the IMS Certificates checking were concerned, you were the person to do it and then you ticked the column. Now what do you say to that?
- A. I was never instructed to vet Certificates by Mr. Thompson.
- Q. So that's wrong?
- A. That is my belief." (transcript 28th July, 2000, pp.54 & 55)

PHILLIP THOMPSON

Mr. Thompson was interviewed by my investigators on this and other issues on the 20th October, 1999.

He was asked the following questions and gave the following answers regarding the checking system of the yachts' IMS Certificates:-

"Q. O.K. So what systems did you have in place to ensure that a re-check was done of, of all vessels so far as documents that were missing, prior to the start of the race?

A. I'd rather not comment on that.

Q. Sorry?

A. I'd rather not comment on that.

Q. O.K. Well, are you able to tell me if a system existed?

A. Again, I, I don't really want to talk about it.

Q. O.K. Can you just, just talk up a little bit?

A. Sorry. Yes ---

Q. You're right.

A. --- I don't want, I don't want to say.

Q. O.K. Certainly, Is that advice that you've received?

A. No.

Q. That, that's your own ---

A. Yeah." (**Interview 20th October, 1999, pp.27 & 28**)

However by the 2nd July, 2000 Mr. Thompson had decided he did wish to speak of the system for checking IMS Certificates that was

in place under his administration of the CYCA Sailing Office. Through the CYCA Solicitors his thirty three page statement with annexures was filed.

The following is how Mr. Thompson described the system for checking IMS Certificates:-

"43. If an Entry Form was put on Holt's desk, it was my understanding she would read the Entry Form and check if an entry fee, insurance certificate, complete crew list, radio certificate, safety certificate and current IMS or CHS Certificate were included. If so, she would:-

- (1) ...
- (2) Put the current IMS or CHS Certificate on Robinson's desk for his review, approval and ticking on the 1998 chart;
- (3) ...

44. I dealt with Entry Forms put on my desk as follows. I read the Entry Form and checked if an entry fee, insurance certificate, complete crew list, safety certificate, radio certificate and current IMS or CHS Certificate were included. If so:

- (1) ...
- (2) In relation to current IMS and CHS Certificates, I either:
 - (a) Checked the Certificate myself (except in relation to speed) and then, put it on Robinson's desk for his review, approval and ticking on the 1998 chart; or
 - (b) Put it straight on Robinson's desk for his review, approval and ticking on the 1998 chart. From early December 1998, I

usually put the Certificates straight on Robinson's desk because by that time I was very busy. ...

46. In the weeks after the close of entries yachts submitted outstanding entry documentation. As that documentation came into the Sailing Office, it was the practise in the Sailing Office for the person who received that documentation to:
 - (1) ...
 - (2) Put current IMS and CHS Certificates on Robinson's desk for his review, approval and ticking on the 1998 chart;
 - (3) ...
47. To reduce the risk of errors only certain persons in the Sailing Office were allowed to fill in the different columns in the 1998 chart. Only Holt or I filled in the columns relating to entry fees, advertising, crew lists, class and insurance, only Robinson ticked the certificate column and only Lawson ticked the columns relating to safety. However, if I was standing near the 1998 chart and the person responsible for that column asked me to tick that column for a particular yacht, I would have.
48. It was also common in 1998 for the member of the Sailing Office responsible for a column to go through the relevant folder and another staff member to stand at the 1998 chart while that person read through the folder to ensure all yachts had been ticked who had supplied that documentation. Alternatively, the member of the Sailing Office responsible for a column filed all the approved documentation and then, in or about December 1998 went through the relevant folder with another staff member and ticked off all the yachts that had supplied that documentation in one lot.

49. I cannot recall if Robinson ticked the certificate column as the IMS and CHS Certificates came in or if he ticked that column substantially in one lot with help of another staff member.
52. As far as I can recall, I was not involved in the processing of "Business Post Naiad's" current but invalid IMS Certificate. I was not aware of the problems relating to "Business Post Naiad's" IMS Certificate until in or about mid February 1999 when Peter Bush asked me to go through all the application and entry documentation as there was a possibility one of the yachts did not comply with the stability requirement. At that time, I checked all the entry documentation and discovered "Business Post Naiad's" current Certificate, which was in the IMS Folder and had a stability of less than 110 degrees ("the current Certificate"). "Business Post Naiad" was the only yacht which did not comply with the stability requirement for the SHYR.
53. The current Certificate does not have a "received" stamp or facsimile markings on it. Hence, it is likely it was received over the Sailing Office counter. As "Business Post Naiad" did not berth at the CYCA marina until after 20th December, 1998, I believe that the Sailing Office must have received the current Certificate over the counter on or after 20th December, 1998 and before 5pm on 23rd December, 1998 (being the day before the Pre-Race Briefing as "Business Post Naiad" was not on the list of yachts with outstanding entry documentation). I cannot offer any explanation as to why the Sailing Office did not detect that the current Certificate was invalid. In accordance with the Sailing Office's practice, it should have been placed on Robinson's desk for his review, approval and ticking on the 1998 chart." (**Statement 2nd July, 2000, pp.11 - 14**)

In his oral evidence Mr. Thompson said as to whom in the Sailing Office should have checked the Certificates:-

"Q. I think that you actually say that it was Robinson's job to actually tick the column?

A. Yes.

Q. For the IMS Certificates?

A. That's correct.

Q. He says that you explicitly instructed him he was not to do that, that was your task.

A. We had very set roles as to who was to tick the varying areas on the chart. David Lawson did all the safety work, Robinson did the IMS, Holt and myself did the other areas such as insurance, entry fees et cetera.

Q. So you say that what he says under oath is not correct?

A. I haven't heard what he said but I believe that it was his responsibility.

Q. You believed it was his responsibility?

A. Yes.

Q. Did you check on that?

A. I'd done random checks of all the paperwork and I found everything to be in order. I didn't at that time specifically ask Robinson as such, were you checking all the

Certificates but by his actions I believed that he was.
(transcript 1st August, 2000, pp.7 & 8)

When asked why he had not informed my investigators of this in October 1999 he said:-

"Q. Look, you've told us that you knew and you've always known that it was Robinson's job to check the IMS Certificates, is that true or not?

A. Yes it is.

Q. Then why did you not tell the Police that that was the situation back in October 1999?

A. As I explained, I found that interview very, very difficult and very traumatic.

Q. So you knew in October 1999 that it was Robinson who should have checked that Certificate?

A. Yes.

Q. But you chose not to tell them"

A. That's correct. (transcript 1st August, 2000, pp.9 & 10)

ANDREA HOLT

Ms. Holt was interviewed by my investigators on the 20th October, 1999. Present at this interview was Mr. J.R.C. Harris, Solicitor. Such interview took the following path:-

"Q. O.K. Now as I've already explained to you prior to the interview, Detective Senior, sorry, Senior Constable Upston and myself are making inquiries in relation to the 1998 Sydney to Hobart Yacht Race and the reason we have you here today to speak to you is basically to cover the role, the responsibilities that you had in the sailing office last year in relation to the Sydney to Hobart Yacht Race. Now we've spoken prior to this interview and you've indicated to me that you don't wish to, to take part in this interview. Is that correct?

A. That's correct.

Q. And that's the way you feel now?

A. Yes.

Q. O.K. Well, as a result of that we'll conclude this interview. The time on my watch now is 11.47am."
(Interview, 20th October, 1999, p.2)

However on the 30th June, 2000 Ms. Holt, having been informed she would be called to give evidence, decided that she would provide a statement regarding the administrative system of the CYCA Sailing Office used for the checking of IMS Certificates. A seven page statement was filed through the CYCA Solicitors. It contains the following paragraphs:-

"9. If a yacht wished to enter the IMS category and had included an IMS Certificate which was valid but not current, I still wrote "OK Gus" (her nickname) on the Application. I did this because current Certificates were frequently unavailable when yachts submitted their Applications and consequently, the Sailing Office had developed a practice of still sending those yachts an Entry Form. However, yachts falling into this category

were not eligible to race IMS unless they provided a valid current Certificate of 22nd December, 1998.

10. After Thompson reviewed Applications, he often asked me to file the accepted Applications in the 1998 SHYR Application Folder ("the Application Folder"). The Application Folder contained all the accepted Applications in alphabetical order.
11. At that filing stage, it was my practice to file all documentation included with the Application in the Applications Folder except current IMS and CHS Certificates. I put any current IMS and CHS Certificates on Robinson's desk for his review and approval and subsequent, filing in the 1998-99 IMS Certificate Folder ("the IMS Folder"). The IMS Folder contained all the current IMS and CHS Certificates in alphabetical order.
...
15. It was my practice in 1998 to read Entry Forms I received and deal with them as follows:-
 - (1) ...
 - (2) If a current IMS or CHS Certificate was included, place it on Robinson's desk for his review, approval and subsequent, ticking on the 1998 chart; and
 - (3) ...
16. As far as I am aware, in or about December 1998 Robinson reviewed the Entry Folder in order to do the division and category lists for the SHYR. At or about that time he ticked the certificate column on the 1998 chart for all yachts for which he had received a current IMS or CHS Certificate. I note the certificate column is only relevant for IMS and CHS category yachts. I cannot now recall if at that time Robinson and I filled in

the class column on the 1998 chart or whether that column was filled in at another time.

17. In the weeks leading up to the SHYR yachts continued to submit outstanding entry documentation. As that documentation came into the Sailing Office, it was the practise in the Sailing Office for the person who received that documentation to:
 - (1) ...
 - (2) Put current IMS and CHS Certificates on Robinson's desk for his review, approval and subsequent, ticking on the 1998 chart; and
 - (3) ...
18. I did not tick the 1998 chart when we received current IMS or CHS Certificates or safety documentation from yachts. Only Robinson was permitted to tick the certificate column and only Lawson was permitted to tick the columns relating to safety. However, if I was standing near the 1998 chart and Robinson asked me to tick the certificate column for a particular yacht, I would have.
19. It was also common in 1998 for the member of the Sailing Office responsible for a column to go through the relevant folder and another staff member to stand at the 1998 chart while that person read through the folder to ensure all yachts had been ticked who had supplied that documentation. This would not have occurred in relation to the Certificate or safety columns unless Robinson or Lawson were present.
20. Once a yacht had ticks in all the columns, the yacht's name was highlighted to indicate that it was eligible to sail in the SHYR. If any material had not been provided, someone from the Sailing Office staff would telephone

the owner of the relevant entrant to remind them to submit their outstanding documentation. This was the reason for having the 1998 chart on the wall, so that any staff member at any time could look at the chart and see what documentation was outstanding for a particular yacht." (**Statement 30th June, 2000, pp.3 to 5**)

In oral evidence she was asked and answered the following questions:-

"Q. Well whose function was it to check the IMS Certificates?

A. Mark Robinson's.

Q. You say Mark Robinson's. Have you seen Mark Robinson's statement?

A. No.

Q. Well he says that it was Phil Thompson's.

A. Phil Thompson checked the Certificates at the application for entries stage, but after entries were received and for boats wanting to race IMS in the Sydney Hobart Race, Mark Robinson looked after all the IMS Certificates.

Q. So as far as you're concerned it was Robinson who was supposed to look after the IMS Certificates?

A. Yes." (**transcript 24th July, 2000, p.52**)

Thus I have before me sworn evidence by Phillip Thompson and Andrea Holt, that it was Mark Robinson's responsibility to check the

IMS Certificate to ensure that the yacht was eligible to participate in the race.

I have the sworn evidence of Mark Robinson, which is just as emphatic, that the responsibility for such checks lay with Phillip Thompson and not with him.

The reluctance of Phillip Thompson and Andrea Holt to speak on this issue in October 1999 is to be contrasted with their evidence of June and July 2000. Now they place the responsibility squarely upon Mark Robinson.

Whereas Mark Robinson when interviewed in October 1999 appears vague and unsure on this issue.

It may well be that the truth is that each thought it was the task of the other to check the Certificates. However, I do not need to decide where the truth lies, because I am, on the evidence, certain of two things, and they are:-

- (a) That someone in the Sailing Office did tick the IMS Certificate column on the 1998 chart which allowed "Naiad" to take part in the Sydney to Hobart Race when it clearly should not have; and
- (b) The responsibility and the duty to ensure that only yachts with current valid IMS Certificates took part in the Sydney to Hobart Race, rested squarely with Phillip Thompson. He was the full-time paid Sailing Manager, a Member of the Race Committee, the CYCA Race Director and head of the Race Management Team. As such it was his duty and responsibility to ensure:-
 - (i) That those under his control knew precisely what their tasks were; and
 - (ii) That they carried out such tasks.

C. RACE MANAGEMENT TEAM

The Race Management Team as I have said comprised of Messrs. Thompson, Robinson & Elliott. Its task being the conduct of the Race after the 1pm start on Saturday the 26th December, 1998.

In theory the Race Management Team would do the following:-

1. Ensure that the start of the Race went smoothly.
2. Spend the remainder of the 26th December in Sydney predominantly at the CYCA.
3. Whilst in Sydney listen to the first radio sched at 8pm on the 26th and the second radio sched at 3am on the 27th.
4. Move to the RYCT in Hobart, Tasmania, in stages on the 27th. So that by the 2pm sched on Sunday 27th December, the whole of the Race Management Team would be in the RYCT and able to listen to this sched.

It is important to understand how the individuals of the Race Management Team saw their particular role within it, and what they actually did.

HOWARD ELLIOTT

According to Mr. Elliott he saw his part in the Race Management Team in the following way:-

- "A. The responsibility that I have there is to basically double check the rest of the organisation, that we have all the communication pieces in place. The communication

pieces include the radio systems, the data communication systems and the telephone systems for the race control centre.

Q. Is that both in Tasmania and in Sydney?

A. It's only in Tasmania.

Q. Do I take it then you were responsible for setting that up in Tasmania?

A. No.

Q. No?

A. That's correct, no.

Q. Who was responsible?

A. The RYCT. I'm sorry. When you say responsible for setting that up --

Q. That is the communication system.

A. No, the RYCT is responsible for setting up their radio room, that's part of their duties prior to the race. My responsibility there is to make sure that that's been done, to remind the team that's one of the things we had to check off. My other responsibilities with regard to communications are in the data area, to make sure that we can communicate with the website, we can get information to and from the website and to make sure that the network has been set up correctly.

Q. As far as you were concerned, who was actually administering the race, the minute by minute administration of the race?

A. The Race Management Team.

Q. The whole of the team?

A. The day to day administration of the race is the responsibility of the Race Management Team, yes."
(transcript 31st July, 2000, p.49)

And at **pages 50 and 51** he said:-

"Q. Who actually gives you your instructions as to what to do, as part of the Race Management Team?

A. Mr. Thompson.

Q. So you answer to him?

A. That's correct.

Q. What position did you hold with the CYCA at that time, that is 1998 December?

A. I was a member of the Club, I was a member of the Race Committee for the 1998 Sydney to Hobart Yacht Race and I was a member of the Race Management Team, I held no other positions.

Q. How did you get onto those positions? Were you asked to do those?

A. Yes, I was invited to be part of the Race Management Team following the 1992 race.

Q. Following the 1992 race?

- A. Correct.
- Q. You'd been in there since then?
- A. That's correct.
- Q. Was it because of your expertise in telecommunications?
- A. It certainly wasn't because of my good looks. I believe it was because of my expertise with computer systems rather than telecommunications.
- Q. So that's why you're really there, because of that expertise?
- A. That's correct.
- Q. Going back to 1998, you attended the briefing, that is on the 24th, did you attend what was being done on the 25th?
- A. I did.
- Q. What was the purpose of your role there?
- A. I wrote the computer programs which do the handicapping, the course construction and the production of handicaps and my role was twofold as part of the Race Committee to interpret the information which we had about the weather and to help them put together the course construction and then the second part was actually to implement that, to put that into the computer systems, produce the results.
- Q. The weather has importance to you on that day?
- A. It does.

- Q. What importance is it?
- A. At that particular time the context of the weather information was for the production of the IMS course construction.
- Q. My understanding of what Mr. Robinson was saying last week, last Friday, was that you were only interested in the weather up to 20 knots of wind, is that right?
- A. No, what Mr. Robinson, and I'll try and interpret what I heard him say, was that the way the IMS system works, the international measurement system works, is that it produces a performance table, the performance table carries performance limits up to 20 knots of breeze and not past that.
- Q. I'll put it to you this way. If the weather showed 21 knots of breeze, for your purposes it wouldn't matter whether it showed 21 or 31 or 41, is that correct?
- A. That's correct.
- Q. Because you're only looking at the weather from a point of view of a period between I think six knots and 20 knots of breeze, is that right?
- A. That's correct.
- Q. Beyond that it's not really your concern, is that how it was?
- A. For the purposes of constructing an IMS course that's correct.
- Q. And that's what you were doing?

A. That's correct.

Q. So your mind was on that and if you've got that window of the breeze that's what you're concerned with?

A. That's correct.

Q. Is that all you did on that day?

A. Yes."

MARK ROBINSON

Mr. Robinson saw his position and part to play in the Race Management Team as follows:-

"Q. Your job, as I understand it, you were part of the Race Management Team?

A. That's correct.

Q. Did you attend the briefing on I think it was the Friday, it was the 24th?

A. Yes, I did.

Q. Then you got together with other people on the 25th, on Christmas Day?

A. Yes, that's correct.

Q. Who was there, can you recall that?

- A. From memory I know that Mr. Thompson was there. There were other people there but I can't recall specifically who they were.
- Q. What was the purpose of getting together on that day?
- A. The purpose of getting together on that day is to construct the IMS course, to issue handicaps for the IMS boats in the fleet.
- Q. You being skilled in IMS measurement, you were the one that worked out the handicap, is that right?
- A. No, it was my skill in IMS scoring --
- Q. IMS scoring is it?
- A. -- that was being utilised.
- Q. So you would work out the handicap for each vessel?
- A. That's correct.
- Q. Do you recall what the weather was?
- A. Not specifically, no.
- Q. We heard that you don't do anything with the winds if they're above 20 knots, is that right?
- A. Yes. The IMS system, international measurement system, only deals in scoring terms with winds from six to 20 knots.
- Q. Having done that, did you do anything else with regards the race on the 25th, or did you go home or what?

- A. We may have done menial tasks, I'm not sure.
- Q. The next day, what time did you come on duty?
- A. This is Boxing Day?
- Q. Boxing Day, yes.
- A. Boxing Day, it would have been six or seven in the morning, quite early.
- Q. As part of the Race Management Team, what position did you occupy?
- A. On the 26th?
- Q. Yes. What was your tasks?
- A. My tasks on that day were - we had to sit down and review the course construction and post handicaps prior to 9 o'clock in the morning, which from recollection we did, we do it every year. I'm not sure whether we made any changes or not, I can't recall. I would have been in and out of the office preparing for the start, organising to have the buoys inflated and so forth." (**transcript 28th July, 2000, pp.56 & 57**)

He was then asked what his specific task with the Race Management Team was:-

- "Q. What was your specific task with the sailing - the Race Management Team?
- A. Some of the tasks that I was to perform was to produce progressive results at the conclusion of each sked, to liaise with the Telstra website and to provide them with

updates, to assist Mr. Thompson, Mr. Elliott with the overall conduct of the race.

Q. I don't want to appear demeaning or anything, but were you the lowest rung in the ladder as far as that team was concerned?

A. I was the one that had done the least amount of Hobarts on the Race Management Team.

Q. Were you looked upon as the junior member?

A. To some degree, yes.

Q. I want to suggest to you primarily your task was to work out the handicap and --

A. Associated.

Q. Is that correct?

A. Primarily, yes.

Q. There was nothing after that that was actually set down, you just --

A. Yes.

Q. -- helped as it were when you were told or you saw a need?

A. Gave my opinion or helped in certain tasks." (**transcript 28th July, 2000, pp.56 & 58**)

It is clear to me that apart from their specific areas of expertise, both Elliott and Robinson regarded themselves as junior members of the

Race Management Team and subordinate to Thompson and his directions.

D. COMMUNICATIONS NETWORK OF THE RACE

The system that was employed for the communications of the Race was as follows:-

1. A radio station designated as Telstra Control was situated on board the vessel "Young Endeavour". "Young Endeavour is an RAN vessel, she is a sailing ship equipped, as well, with two engines. She has a complement of approximately ten RAN crew. She is used to take young people (over eighteen) on voyages to learn sea skills. During the Race she had a complement of thirty seven on board. She was commanded by Lt. Commander N.R. Galletly RAN.

Telstra Control was situated in the mess area of "Young Endeavour". Telstra Control's radio operators were Lou Carter, Michael Brown and Audrey Brown.

Telstra Control's equipment was:-

- (a) A HF radio set supplied by CYCA;
- (b) A VHF radio set supplied by CYCA;
- (c) Access to the mobile telephone that was part of "Young Endeavour's" equipment; and
- (d) A small tape recorder that was switched on to record transmissions as well as conversations within the mess room. This had been supplied by the Browns not the CYCA.

The Race Management Team also had the ability, both at the CYCA in Sydney and at the RYCT in Hobart to monitor the frequencies used by Telstra Control to broadcast to the Race Fleet.

Telstra Control would complete three times each day a radio sched. This entailed each yacht in the Race reporting to Telstra Control its position as at that time. The reporting procedure called through the fleet in alphabetical order beginning with the yacht "ABN Amro" and ending with the yacht "Zeus II". There being 115 yachts in the sched, plus two or three other units who were active on this network from time to time.

These radio scheds were to take place at 0305 hours, 1405 hours and 2205 hours each day of the Race. On the 26th December the first sched was to take place at 2005 hours.

Sailing Instruction 41.3 also provided:-

"41.3 A (sic; All?) Yachts shall maintain a listening watch on 4125 KHz or VHF Ch 16 during the silence periods."

The silence periods are for three minutes every hour and three minutes on every half hour (see **L. Carter, transcript 25th July, 2000, p.9**).

Thus, in theory, the fleet was contactable by radio each hour and half hour for the duration of the Race.

WEATHER FORECASTS

Weather forecasts were provided by the Bureau of Meteorology ("BOM") by agreement with the CYCA. This agreement provided, in part, in a letter to Mr. P. Thompson dated 25th November, 1998:-

"Sydney - Hobart + Southern Cross Yacht Race Weather Services

Dear Philip,

Following our recent discussions, the following services are proposed in support of the 54th Sydney-Hobart Yacht Race, including pre race briefings as discussed for the Southern Cross Yacht Race Series, most notably the Sydney-Hobart Yacht Race. The briefing for the latter event is to be held at 9am on 24 December, 1998.

The quote for the forecasting services is as follows:-

Forecasts provided from Sydney (All times Eastern Summer Time)

(Contact: Senior forecaster 9296 1639)

Pre-race briefing: 0900 Thursday 24 December

(Cruising Yacht Club)

Dec 26 2 forecasts (0500, 1000, 1300) Sydney-Jervis Bay

Dec 27 2 forecasts (0200, 1300) Jervis Bay - Gabo Is

Dec 28 2 forecasts (0200, 1300) Jervis Bay - Gabo Is

Forecasts provided from Hobart

(Contact: Senior Meteorologist 03 6221 2000 - mention Sydney to Hobart Race)

Dec 27 1 forecast (1300) Bass Strait

Dec 28 2 forecasts (0200, 1300) Bass St + E.Coast Tasmania

Dec 29 2 forecasts (0200, 1300) Bass St + E.Coast Tasmania

Dec 30 2 forecasts (0200, 1300) Bass St + E.Coast Tasmania

Dec 31 2 forecasts (0200, 1300) Bass St + E.Coast Tasmania

As is usual, the Sydney Office will provide forecasts to 38 South and the Hobart Office will provide the forecasts from 38 South to Hobart.

The cost breakdown is as follows:

Pre race briefing and General weather support=			\$286.00
16 forecasts	@ \$36.00 each	=	\$576.00
Transmission costs	@ \$ 6.60	=	\$105.60
	Total		\$967.60

This price is based upon sending the forecasts directly to the "Young Endeavour". In addition to this the forecasts will be faxed to the Cruising Yacht Club of Australia and the Tasmanian issued forecasts also to the Cruising Yacht Club in Hobart. Note that payment for the above services should be directed to the NSW Regional Office, not to our Head Office." (**Exhibit 5**)

The above was agreed to and the briefing on the 24th December, 1998 took place, it being given by Mr. Ken Batt of the BOM.

Among the documents to be given out by BOM at the briefing on 24th December, 1998 was one entitled "A Guide to Australia's Marine Forecasts and Warnings", "Marine Weather Services".

This document contained two vital pieces of information required in interpreting weather forecasts; they being:-

"Definitions and Terminology

Wind speed mentioned in forecasts and coastal observations is measured as the average speed over a 10-minute period. Gusts may be 40 per cent stronger than the speed."

And

"The **forecasts of wave and swell height** are meant to represent the average of the highest one-third of the waves. Hence some waves will be higher and some lower than the forecast wave height."

The vast majority of yachtsmen interviewed by my investigators did not know of this rule.

But of greater importance neither did Messrs. Thompson, Robinson and Elliott who were the Race Management Team.

THE 1998 RACE

24TH DECEMBER

On Thursday 24th December, 1998 the pre Race briefing took place at 9am at the CYCA. Skippers and navigators or their representatives from each participating yacht were expected to attend.

At this briefing the CYCA handed out a Skipper's or Navigator's bag to the representative of each yacht. Among its contents were documents from the BOM as in Exhibits 6 and 7. It should be noted that among this BOM information was the document (Exhibit 7) entitled:-

"A Guide to Australia's Marine Forecasts and Warnings, Marine Weather Services."

Which, as I have said, contained the information:-

"Wind speed mentioned in forecasts and coastal observations is measured as the average speed over a 10-minute period. Gusts may be 40 per cent stronger than the speed."

And:-

"The forecasts of wave and swell height are meant to represent the average of the highest one-third of the

waves. Hence some waves will be higher and some lower than the forecast wave height."

It also gave various means by which weather forecasts could be obtained.

Even at the time of the briefing there were still some yachts that had not completed their race documentation. Mark Robinson says of this:-

- "48. Prior the Pre-Race Briefing on 24th December, 1998 Thompson, Hans Sommer, Bruce Rowley and myself discussed how we should deal with the yachts that had not submitted all their entry documentation. We decided that we would announce during the Pre-Race Briefing that those yachts had until midday to submit their outstanding documentation otherwise they would not be allowed to race.
49. Prior to the Pre-Race Briefing, Holt and I handed out the briefing kits as competitors arrived. To the best of my recollection, all entrants received a briefing kit.
50. During the Pre-Race Briefing a list was put on the overhead of the yachts that had not submitted all their entry documentation and, as previously agreed, the owners of those yachts were advised that they would not be allowed to race unless their outstanding documentation was in the Sailing Office by midday. "Business Post Naiad" was not on that list. It was my belief that all outstanding documentation for all entrants was submitted by midday." (**Statement, 7th July, 2000, p.10**)

The weather forecast was outlined by Ken Batt from the BOM. At the conclusion an invitation was extended by Mr. Batt for anyone who required further information to speak with him. He also indicated that prior to the Race commencing, on the morning of the 26th, the BOM would have its weather stand at the CYCA with updated forecasts.

It was widely known that the BOM would be providing the CYCA with the special race forecasts. Of this Mark Robinson says:-

"57. I was not aware of any formal protocol in relation to communications between the CYCA and BOM. My understanding was that BOM would provide special race forecasts for the SHYR and if they thought something dramatic was going to happen to the weather, they would contact Thompson or someone else from the Race Management Team or Race Committee and inform us."
(Statement, 7th July, 2000, p.12)

To facilitate such communication I have been told that a letter was sent to the BOM with an attached list of names of all Race Officials and their telephone numbers, including business, home and mobile numbers. This letter, it was stated, was sent by Phillip Thompson and a copy of this letter would be produced. I was later told, during the July sittings, that the letter could not now be found. However, Mr. Thompson then said in evidence:-

"Q. Did you find that letter?

A. No, I didn't send it via - with a covering letter.

Q. What did you send it via?

A. I gave it to Ken Batt on the night of the Telstra Cup briefing with the bag and other kit.

CORONER: Q. You just gave him the list?

A. Yes." (transcript 1st August, 2000, p.34)

None of this was put to Mr. Batt when he gave evidence.

Of the weather briefing given by Ken Batt, Phillip Thompson said:-

" ... I went through the Sailing Instructions, Sam Hughes, (Australian Maritime Safety Authority, AMSA), spoke about the latest search and rescue recovery techniques and Ken Batt spoke in detail about weather typically experienced during the SHYR and gave a weather prognosis for the period of the race.

69. From listening to Batt's weather prognosis, I understood that BOM was still uncertain how the weather was going to develop and that we needed to wait until the day of the race for a more detailed forecast." (Statement, 2nd July, 2000, p.17)

25TH DECEMBER

On the 25th December, Christmas Day, the Race Committee met at the CYCA. This meeting was, primarily to:-

"... plot the course construction for the IMS handicapping." (Statement of Mark Robinson, 7th July, 2000, p.12)

Of the weather Phillip Thompson says:-

- "77. To the best of my recollection, I telephoned Batt prior to the meeting to obtain some further detail in relation to the forecast so that we could accurately plot the course construction. I also called Batt once or twice during the meeting for further clarification of certain aspects of the weather. Attached and marked "E" is a true copy of Telstra's facsimile dated 6th April, 2000 which lists the local telephone calls made from the CYCA between 24th and 28th December, 1998.
78. I cannot recall the content of the 14:00 forecast. However, I do recall that it contained nothing of concern. At the time of preparing this statement I have read the 14:00 forecast and am still of that view. Indeed, from that forecast it appears that it was going to be lighter than a "typical" SHYR. When I refer to a "typical" SHYR, I mean the winds will gradually build up over 12 hours. Then, for a period 4 to 8 hours the fleet will experience uncomfortable high winds of 40 to 50 knots with a couple of gusts of 55 to 60 knots for a short period of time. Then, the winds will abate over the next 12 hours.
79. After the above meeting, I arranged for BOM's 14:00 forecast to be posted on the Sailing Office Notice Board and distributed to all entrants by putting it in their respective pigeon holes in the Information Shed."
(Statement, 2nd July, 2000, p.19)

It is pertinent here to note that Mr. Thompson explained his understanding, as at December 1998, of weather forecasts to my investigators on the 27th October, 1999, he said at **pp.51 and 52:-**

- "Q. O.K. Were you aware at that time, on the 26th December last year, this technical formula that the Weather Bureau have since made public, the 40 per cent?

A. No.

Q. And the 87 percent ---

A. No.

Q. --- of waves, and ---

A. No.

Q. --- 40 percent winds?

A. No.

Q. Have you ever heard of that formula?

A. No.

Q. What do you understand as gusts over the wind strengths?

A. I take gusts, you know, again as something in excess of the, I take the weather forecast that they give you as an average ---

Q. Yes.

A. --- and a gust is something in excess of that.

Q. Right.

A. And it is something for a short period of time and if it is sustained it becomes a front."

It is also clear from the evidence that whoever Mr. Thompson spoke to at the BOM on 25th December, 1998, it was not Mr. Batt, as he was not on duty. He came on duty on the day of the Race start, that is, the 26th December.

26TH DECEMBER

I have considered the relevant events of Race Day by analysis of the evidence of a number of BOM and CYCA officials.

KEN BATT

Mr. Batt joined his BOM colleagues at the Sydney BOM offices a little after 6am. His colleagues being Brett Gage and Jeffrey Smith.

They were each taking part in making up the BOM weather packages that would be handed out at the BOM stand at the CYCA prior to the Race commencing.

Because the BOM photocopier could not adequately cope with the amount of photocopying, Messrs. Gage and Smith went to the CYCA to use the photocopier there.

Between the time Messrs. Gage and Smith left for the CYCA and approximately 9am, the computer model weather forecaster, began to show winds to gale force developing on the South Coast of New South Wales. As a consequence Mr. Batt telephoned Brett Gage at the CYCA and told him to stop handing out weather packages and that an amended special race forecast would arrive by fax.

This amended special race forecast upgraded the forecast to a gale warning. This having been done Ken Batt then went to the CYCA.

He was asked these questions in evidence:-

"Q. Is that what you said to them?

A. Yes, yes that's right. So we're going through different scenarios.

Q. Did you speak with any - did you speak with the Race Director Mr. Phil Thompson at all?

A. Probably only to pass the time of day.

Q. So there's no to your memory --

A. That's right.

Q. -- no direct conversation about up into the gale warning, is the gale warning in your opinion a serious matter as far as the fleet's concerned?

A. Well yeah the gale warning is the next step up from a strong wind, gale average wind speed is 34 to 47 knots. **(transcript 14th March, 2000, pp.67-68)**

However, according to Mr. Thompson, when he spoke with Mr. Batt that morning the following took place:-

"A. --- and as I had actually said to Ken Batt on the morning of the race, at 10 o'clock, I said, What's the forecast? He said, oh, well they're, and he, and he said, oh, they're going to get a bit of a front down off Eden. I said, How strong? He said, Oh, 25 to 35. I said, oh, that's a pretty standard, you know ---

Q. Yeah.

A. --- weather for them, they usually get a blow up, and I said, What happens after that? He said, oh, it will moderate and go around to the west. And I said, oh well, so it's a pretty standard Hobart race ---

Q. Right.

A. --- nothing to worry about? And he said, Yeah, nothing to worry about, and I said, O.K. I'll speak to you ---

Q. O.K.

A. --- later on." (**Statement P. Thompson, 20th October, 1999, pp.48 & 49**)

Mr. Batt denied this conversation took place (**transcript 15th March, 2000, p.6**). When one considers the whole of Mr. Batt's evidence (and that of Mr. Gage) in context, it is unlikely that such a conversation did take place.

The BOM representatives returned to their office where at approximately 1pm the weather forecasting computer models began to show changes in the wind patterns. Mr. Batt stated what occurred and his colleagues' reaction to it:-

"A. The storm warning. The new model, the new MEESALAPS (?) wind model run becomes available --

Q. That's the --

A. The High Resolution, this is the Bureau High Resolution model and yeah it was the output from that that essentially initiated the - well it initiated the storm warning after like a storm warning is not taken lightly, there's a lot of thought put into that by the Shift

Supervisor at the time in consultation with Victorian colleagues. Anyway to top it all off yes the storm warning was issued.

Q. All right well when did the computer model bring this up, what time was that approximately?

A. It would've been around about oneish, about 1.

CORONER: On the 26th.

HILL: Q. So what did you do?

CORONER: Q. On the 26th?

A. Yeah Boxing Day. What did I do?

HILL: Q. Yes?

A. Well my attention was drawn to the output and --

Q. Who drew your attention to that?

A. It was Brett, Brett Gage and yeah.

Q. Now I want you to be as candid as possible, what did you say, what did you do?

A. Well I saw it and said well to put it crudely "It's going to be a shit fight in Bass Strait". Looking at that model output and it conjured up thoughts of the 1993 race that I was one of the steerers, like helmspersons on 'Solbourne Wild Oats' as well as the weather strategist and it just brought back memories of being quite uncomfortable at sea so yeah I got quite emotional within sort of you know tears welled up and I felt for you know my colleagues at sea.

- Q. What did you do then, what happened next?
- A. Well essentially the storm warning was issued and then I - after it was issued I went out into my office and sat there quite - quite emotional about it all.
- Q. I think you said that in fact you were feeling quite ill about it, this is in conference?
- A. Yes, yeah because it brought back memories of the '93 race for me.
- Q. Now that would've been about 2.15?
- A. About 2.15 yeah.
- Q. So it's just over an hour after the race has begun, what happens next?
- A. Well essentially as soon as you know the storm warning was put together Brett, myself and Peter Dunda decided that you know we should be warning, we should be giving people such as AMSA, the CYC, Eden Coast Patrol a heads up you know to put them on notice that the storm warning was coming and --" **(transcript 14th March, 2000, pp.72-73)**

Mr. Batt then said he tried to telephone the CYCA sailing office, he said of this:-

- "Q. Now the situation was that I think Brett Gage then telephoned people is that right?
- A. That's correct we elected that AMSA should be rung and they would then in turn notify the Navy, of course the

Cruising Yacht Club and I put out a call to the Cruising Yacht Club to the sailing office and eventually the phone was - it wasn't answered in the sailing office so I rang the general number and it was picked up by I think Lorraine was her name.

Q. Someone named Lorraine?

A. Someone named Lorraine.

Q. In the general office?

A. In the general office and because on our check-list we did not have Phil Thompson's mobile number I rang up in order to get that number, she couldn't help me.

Q. What did you say to her?

A. I told her that we were issuing a storm warning for the race and we were anxious to have Phil Thompson's mobile number since we don't have it on our check list and she said "Well sorry I can't help you there's no-one else in the office". So then what happened I rang --

Q. Well did she understand what a storm warning was?

A. She didn't really understand the gravity of the situation.

Q. Now had you phoned her after Brett Gage phoned her?

A. I phoned - I phoned initially and then Brett followed up later but before Brett actually rang I rang the CYC, sorry the Sydney to Hobart Race Media Centre and hoping to speak with Peter Campbell but he wasn't there and I assumed that they were you know on the start boat following the race. I obtained someone in that office who was unable to help me but --

Q. Male or female?

A. A female, I can't recall the name and told her then that a storm warning had been issued for the race and didn't - she didn't have a grasp of the situation as well."
(transcript 14th March, 2000, p.74)

The evidence that Mr. Batt gave conveyed a real sense of urgency that he communicate with someone at the CYCA. However when asked what it was that he would tell them he seemed to have an inability or reluctance to say, as the following questions and answers show:-

"Q. Now I realise that you've said you wanted to speak with someone about the storm warning and it seems to be coming through that there's some sense of worry, you're upset, you're ill by it, what exactly were you going to pass on, what were you going to do?

A. Essentially the information that the storm warning had been issued.

Q. Yes and what (sic, that) you expected them therefore to have the same feeling about it as what you were displaying or what?

A. No essentially to pass on that information and in turn they could be looking for the warning and the up - the update race, special race forecast reflecting - reflecting the newer conditions.

Q. But wouldn't that be passed on by the "Young Endeavour"?

A. Well the "Young Endeavour" would've been in receipt of that but we - Brett and I sort of went over and above what was normally - what's normal policy where we took it off our own bat to actually do this.

Q. Yes but why?

CORONER: Q. That's right, why?

A. Because of the gravity of the situation.

Q. How?

A. The upgrade from gale to storm.

HILL: Q. Yes but look --

A. Because the storm warning as I said earlier is the ultimate at sea.

Q. Well Brett Gage has said in a statement that he feared deaths would result?

A. There was a private conversation that I can vaguely remember between Brett and myself saying "Well you know there could be, there could be a death in this race". But considering the conditions, the wind conditions and the forecast wind and sea conditions you know we saw in the '93 race how easy it was for people to go overboard, we see it time and time and time again so." (**transcript 14th March, 2000, pp.75 & 76**)

During the course of the evidence it was put to Mr. Batt, by Mr. Harris for the CYCA, that:-

- (a) He did have a conversation with Mr. Thompson as set out in Mr. Thompson's statement and referred to above. That it took place in the CYCA sailing office at 12 noon on the 26th December and in the presence of Ms. Andrea Holt (see **transcript 15th March, 2000, pp.43-44**).

However Ms. Holt gave no evidence of such conversation and Mr. Thompson in his statement of the 2nd July, 2000, said of this conversation:-

- (i) It took place at 11am (which differs from the 10am time given to my investigators on 20th October, 1999 and the 12 noon put by Mr. Harris); and
- (ii) He could not recall who was present.

(See also **transcript of 1st August, 2000, pp.13 to 14**)
AND

- (b) That Mr. Batt did not speak with anyone named "Lorraine" at the CYCA on the 26th December.

BRETT GAGE

Mr. Gage gave evidence that was essentially in accord with what Ken Batt had said about the telephone calls after the storm warning forecast.

However Mr. Gage also gave evidence that he was under the impression he was to brief the Race Committee on the weather as soon as he arrived at the CYCA. He said in evidence of going to the sailing office and speaking to a female who was present:-

"A. I said my name is Brett Gage, I'm from the Bureau of Meteorology, could I please see the Race Committee so that I can brief them

HILL: Q. What did she say?

A. She said they're not here, they know the situation, they're on top of it and I said well I was expecting to talk to them and she said it's okay, they know the weather and I was quite surprised by that.

Q. When she said to you they know the weather, did she explain what she meant by they know the weather?

A. I can't remember her exact words, they're probably the best words I can come up with so I'm not quoting her exactly. She just gave me the impression that they were off to do other things, they knew the weather. I thought that I was going to be speaking to them, well I did certainly on the previous year, I spent maybe a good 20 minutes in the office on the previous year with the Race Committee but they weren't around. So I - having been late, I didn't dwell on it, I tried to assist Geoff in getting the stand ready and I knew that a new copy of the forecast would be coming out. At that time I was starting to get requests from yachtsmen about the packages. My --" **(transcript 15th March, 2000, p.68)**

Upon his return to the BOM offices, Mr. Gage, along with his colleagues viewed the computer models. His impressions of what they signified were as follows:-

"Q. What did it mean to you?

- A. Well, to me my first impressions, after I'd gone through all the steps of the model and also a lot of other meteorological knowledge I pulled upon, satellite interpretation, the sea surface temperature gradient, the upper wind analyses and prognosis, there's a whole multitude of factors that I look at to deciding whether I believe the output from the model. In this case all those factors came together and I said yes, it is - it is possible. I believed for various reasons that the output is likely and I wouldn't like to bet against it and I said to Peter I believe - my opinion is I believe we should really put this out as corresponding to the model as a storm warning. I also said if the model's right and we go against it, it's going to look very bad for us as well, though I will still always forecast for how I think's correct, what the situation is, but that was also a concern, that if we went off on a tangent on our own way and the model was correct and we were wrong, that it's quite a serious misjudgment.
- Q. When you say it's quite a serious misjudgment, there were certain ramifications from the model that you could see for the racing fleet, is that right?
- A. Yeah, that's correct.
- Q. What were those ramifications to you?
- A. Those ramifications were I guess very, very strong winds, very large waves, sailing conditions that I would never personally like to experience. Personally I would not like to sail in an area where there were storm force winds, I'd never hope that to happen. And it conjured up all sorts of problems perhaps happening, boats starting to break up, perhaps crewmen overboard and as Ken mentioned in a private conversation with him and only to

him did I mention that there could be possible deaths with this - the strength of this low.

Q. In fact you thought it was life threatening?

A. Yes, potentially life threatening, yes.

Q. I think you even went a step further, you've actually said that to your mind there was a possibility that deaths would result and you would not be surprised if that were the case out of this event?

A. Are they my exact words? I'm not sure.

Q. I can actually take you to them. Do you have a copy of your --

A. Yes.

Q. -- statement? If you'd just bear with me a minute, I'll find that for you. On page 15 of your statement. Without qualification I'm reading from about the first paragraph there. You say "I felt okay, I'd done as much as I could, whatever happens from here is sort of out of my hands but I went home feeling that I'd done as much as I could. I was watching the news. I knew it would not be until the next day when trouble would start but I knew there'd be trouble and my feelings were that I would be very surprised that if the race went through without at least one person having died through the event, so I did have a strong feeling that there would be death". That was your feeling?

A. I thought - a strong feeling would be possible, yes, absolutely." (**transcript 15th March, 2000, pp.74-75**)

It was Mr. Gage who actually faxed the storm warning to the CYCA. He, like Mr. Batt was of the belief that it was for the CYCA to contact the BOM if the CYCA required any further information.

That telephoning and sending a fax to the CYCA was unprecedented. But being unable to make contact with anyone at the CYCA he said in evidence:-

"A. Okay. Ken had tried to contact the office, Ken has much better contacts with the CYCA than I did so I'd left it to him to contact there. The - I knew it was going straight to the "Young Endeavour". The - so I was confident that the - either through the "Young Endeavour" or through the media centre if we couldn't get hold of that the CYCA should receive this warning. Now keep in mind that there was 22 hours lead time on this warning so there was a lot of time before these boats got into the area of storm force winds so I was very confident that during the course of the afternoon that the CYCA - and don't forget it's going through all the radio channels, the internet, the fax lines, I was very confident that the CYCA should at least be listening to one of those lines that they would call back and contact the Shift Supervisor as per protocol in the agreement, in our contract agreement so I had no reason for sudden concern that the ships were immediately sailing into a storm warning area and they wouldn't, there was 22 hours lead time. Now furthering onto that, the other organisations that I contacted, I did that deliberately because I was well aware that they may not be listening to all these channels that we had - I'd given a substantial list which was in all the weather packs to the yachts of internet addresses, fax addresses, recorded phone messages, all of which could be accessed to get the storm warning. Now these other organisations because they weren't directly involved with the race and we hadn't sent them a weather pack, I felt that they should be notified

and in that instance, I notified - I contacted the Australian Maritime Search and Rescue Authority, the Eden Coastal Patrol and the Sydney to Hobart media centre and I had a lengthy discussion with the Australian Maritime Search and Rescue Authority so I was very confident that the CYCA should have contacted the Shift Supervisor way before any ships would enter the area of the storm warning, any yachts enter the storm warning area." (transcript 16th March, 2000, p.4)

PETER DUNDA

Mr. Dunda was the Shift Supervisor at the BOM Sydney offices from 7am to 7.30pm on the 26th December, 1998. He was Messrs. Batt and Gage's Supervisor. He would have reported to the BOM Regional Director.

It was Mr. Dunda who formulated the wording for the "Storm Warning" that was issued at 2.14pm (1414 hours) that day.

As he was the Supervisor on duty he was asked the purpose of Messrs. Gage and Batt making the telephone calls that they did and his observations of them during this point in time. He said:-

"Q. You were in the office with two bureau personnel, Mr. Gage and Mr. Batt?

A. Yes.

Q. Is that correct? That's on 26th December?

A. Yes.

Q. Race day. Now did you observe Mr. Batt and Mr. Gage when the storm warning was to be issued?

A. Mr. Gage was close by me at the time the storm warning was issued.

Q. And how did he appear?

A. Can you be a bit more specific?

Q. Well was he emotional or not?

A. Not particularly, no.

Q. Not particularly. Well what about Mr. Batt, was he emotional?

A. I don't recall seeing him at that specific time.

CORONER: Q. What about after?

A. Nor after.

HILL: Q. Well are you aware that they contacted or tried to contact the CYCA about the storm warning?

A. At the time the storm warning was issued Brett volunteered to make some phone calls to alert some people and I was aware that he was trying to contact the CYCA.

Q. And you were his Superior, what was he going to do?

A. As I understand it he was going to try and contact them to alert them that a storm warning had been issued.

Q. As simple as that?

A. Yes.

Q. You realise a storm warning is the highest warning that your bureau can give in these latitudes?

A. That's right.

Q. Mr. Gage tells us that he considered that life would be in danger. Did you agree with that?

A. I was unaware he considered that.

Q. Well what were you aware of with a storm warning and a yacht fleet?

A. A storm warning is the highest category warning that is issued from my office. I followed all policies and procedures in issuing that warning and I believe that - I have no reason to believe that there is any inadequacy in that.

Q. Is that your answer, you followed all policy?

A. That's right, as I understand your question." (**transcript 20th March, 2000, pp.20-21**)

Mr. Dunda was, as I have said, the Supervisor of Ken Batt and Brett Gage. He was the senior BOM officer on duty in the Sydney office at the time that the telephone calls were being made by his subordinates Batt and Gage. Despite this it would appear from his evidence that he paid little or no attention to the results of those calls. He did not, for example, require their confirmation that the calls had been made; he did not appear to sit down with Batt and Gage to discuss whether anything beyond publication of the forecast ought to be done.

Regarding the seriousness of the situation and the telephone calls made he gave the following evidence:-

- "Q. Were you in the same room when these telephone calls were being made?
- A. I was in the same room as Brett.
- Q. Well you would have heard then these telephone calls being made?
- A. I don't recall hearing what he said, no.
- Q. Have you ever issued a storm warning before?
- A. Yes.
- Q. How many?
- A. I don't know specifically how many.
- Q. Well you knew that the issuing of this storm warning was extremely serious didn't you?
- A. That's right.
- Q. It was a step you did not take lightly?
- A. No.
- Q. And you knew that a fleet of some 117 yachts were setting off down the New South Wales Coast to Hobart?
- A. That's right.
- Q. And you knew that in the path of that fleet was this storm?

- A. I knew that there was the likelihood of this storm force winds developing and issued forecast and warnings accordingly.
- Q. I'll take you back a step. You knew that the fleet was sailing down the New South Wales Coast to Tasmania didn't you?
- A. Yes.
- Q. Yes?
- A. Yes.
- Q. And you knew that you had just forecast a storm, the highest scale that you can put a weather warning on in this latitude in its path?
- A. Yes.
- Q. And that was very serious?
- A. Yes.
- Q. And one of your subordinates was telephoning not only the CYCA but AMSA and the Eden Coastal Patrol in the same room that you were?
- A. Yes.
- Q. And you don't recall any of the conversations on the telephone?
- A. No." (transcript 20th March, 2000, p.27)

I find the evidence of Mr. Dunda, considering the position that he held on that day, to be vague to say the least. Clearly the BOM had no legal obligation pursuant to contract, to contact the race organisers, but if one accepts the evidence of Batt's concern (and it does not just come from Mr. Batt), one wonders why that option was not discussed, even if then discarded.

PHILLIP THOMPSON

According to Mr. Thompson's **statement of 2nd July, 2000, page 19** et seq, on Saturday 26th December he arrived at the CYCA at approximately 5.30am and was in and out of the sailing office until 11.30am. At the latter time he went onto Sydney Harbour in preparation for the Race start at 1pm.

At approximately 6am he telephoned the Senior Weather Forecaster at the BOM and made notes on his weather forecast of 2pm Friday 25th December, 1998. Such forecast had not changed markedly (**statement 2nd July, 2000, p.20**).

Mr. Thompson sets out at **page 21** of his **2nd July, 2000 statement** the following conversation:-

"At or about 11.00am I had a conversation with Ken Batt in the Sailing Office to the following effect:-

I said: "Everything OK? Looks like you got through the bulk of the crew. Thanks for that. Is there anything I should know about the weather?"

Batt said: "Oh there's going to get a bit of a front down off Eden".

I said: "How strong?"

Batt said: "Oh 25 to 35 knots".

I said: "That's pretty standard. They usually get a bit of a blow up. What will happen after that?"

Batt said: "It will moderate and go around to the west".

I said: "So it's a pretty standard Hobart race, nothing to worry about".

Batt said: "Yeah, nothing to worry about".

I said: "Ok, I'll speak to you soon"."

This is in similar terms to the conversation that Mr. Thompson told my investigators in his 20th October, 1999 interview at **page 48**, which was:-

"Q. --- because we've got a, we formed a strong personal relationship with the Weather Bureau over the years, and as I had actually said to Ken Batt on the morning of the race, at 10 o'clock, I said, What's the forecast? He said, Oh, well they're, and he, and he said, oh, they're going to get a bit of a front down off Eden. I said, How strong? He said, Oh, 25 to 35. I said, Oh, that's a pretty standard, you know ---

Q. Yeah.

A. --- weather for them, they usually get a blow up, and I said, What happens after that? He said, Oh, it will moderate and go around to the west. And I said, Oh well, so it's a pretty standard Hobart race ---

Q. Right.

A. --- nothing to worry about? And he said, Yeah, nothing to worry about, and I said, O.K. I'll speak to you ---

Q. O.K.

A. --- later on."

The major difference apart from the opening statement is the time that this is said to have occurred, at 11am not 10am.

I have difficulty with this conversation because at one point during the March sittings it was put to Mr. Batt that this conversation, which Mr. Batt has denied took place, occurred at 12 noon and in the presence of Ms. Andrea Holt (see **transcript 15th March, 2000, pp.43 & 44**).

And, as I have said, Ms. Holt gave no such evidence.

As to witnesses to the conversation I myself asked these questions of Mr. Thompson:-

"CORONER: Q. Who else was with you when you spoke to Mr. Batt, when was it, about 10 o'clock?

A. There were other people in the sailing office but I couldn't tell you.

Q. Certainly not specifically Ms. --

A. I can only assume who would have been there --

Q. -- Holt?

A. -- but I couldn't remember who was there."

If this conversation was correct then it would be most extraordinary. In that the reason for the lateness of Mr. Batt arriving at the CYCA was his need to upgrade the weather forecast to a gale warning, which he had done. Not to inform Mr. Thompson of this gale warning would have been a serious failure on his part.

Mr. Thompson then went out onto Sydney Harbour, with all of the Race Management Team and Ms. Andrea Holt, to ensure that the preparations for the Race start were in place. Regarding this Mr. Thompson gave the following evidence:-

"A. Again prepared for the start and went out to the starting line at about - the boat left the dock at about 11.30 and took about 15, 20 minutes to get down the dock due to the large numbers of people.

Q. How long were you out there?

A. We arrived back at the sailing office sometime between 2.30 and 3.

Q. Who did you leave, that is you, leave in charge of the sailing office during the period you were absent?

A. The Duty Manager looked after the sailing office in our absence.

Q. Who's the Duty Manager that looked after the sailing office?

A. Sorry, the CYC, would have been the Bar Manager looked after the sailing office in our absence.

Q. Looked after the sailing office in your absence? What do you mean by looked after --

- A. Sorry, he was available, he would take any phone calls that came into the sailing office.
- Q. Who was in the sailing office?
- A. Who was in the sailing office?
- Q. Yes, who was in there?
- A. There was nobody dedicated to actually be in the sailing office.
- Q. So in other words you had left no-one in charge of the sailing office?
- A. I had - the Bar Supervisor was going to look after sailing office affairs in my absence.
- Q. What else was he doing?
- A. He was looking - he was looking after the bars and the general office, any enquiries he was taking - he would have fielded any enquiries.
- Q. Alright, so there was no dedicated staff that you appointed to be in the sailing office?
- A. No.
- Q. And there would be no-one actually physically in the sailing office?
- A. Not full time, no.
- Q. What time did you come back?
- A. About 2.30, 3."

The fact that Mr. Thompson had no staff in the sailing office during this period of time concerns me. The statement that a Bar Manager was to ".. field any enquiries" is simply not good enough. The Bar Manager had, after all, other, specific duties to perform at another place.

That it is not good enough is clear from the fact that Brett Gage and Ken Batt could not speak with any person in authority at what they considered a vital time.

Mr. Thompson then continues, at **page 21** of his **2nd July, 2000 statement:-**

"During that afternoon I would have read the 9:04 and 12:09 gale warning forecasts and the 14:50 storm warning forecast, which the Sailing Office received by facsimile from BOM. It is my invariable practise to read all the forecasts facsimiled to the CYCA and RCC by BOM. I do not specifically recall reading the above forecasts. However, I do recall that I did not read any forecasts which struck me as being unusual or alarming for a SHYR."

The vital point of the 14:50 STORM WARNING forecast lies in the understanding of its terminology. I set out below the essential ingredients of the 14:50 forecast viz:-

"ISSUED BY THE BUREAU OF METEOROLOGY,
SYDNEY
UPDATED at 1450 on Saturday the 26th of December, 1998
FOR
AREA: Sydney to Jervis Bay

SYNOPTIC SITUATION: A high near New Zealand is ridging onto the central NSW coast. A low 995hPa near Lord Howe Island is slow moving. A cold front is over central Victoria.

WARNINGS: Storm Warning is current south from Merimbula. Gale Warning is current south from Broken Bay.

WIND: North to northeast wind 20/25 knots ahead of a W/SW change 25/35 knots, with stronger gusts, expected near Jervis Bay around midnight-2am and then near Sydney around 3am-5am Sunday. Wind may tend briefly northwest 15/20 knots prior to the change.

WAVES: 1 to 2 metres, rising to 3 metres offshore with W/SW change."

I then turn to the document "A GUIDE TO AUSTRALIA'S MARINE FORECASTS AND WARNINGS, MARINE WEATHER SERVICES", which was part of the contents of the Skippers or Navigators bags, or kits as Mr. Robinson refers to them, that were handed out at the pre-Race briefing that took place on the 24th December.

Beside the 40% addition to average winds forecasted under the heading "Definitions and Terminology" is the following:-

"STRONG WIND: 25 to 30 kn (remembering this is a 10 minute average) GALE FORCE: 34 to 47 kn STORM FORCE: 48 to 63 kn HURRICANE FORCE: more than 63 kn."

Going back to the 14:50 forecast the words:-

"WARNINGS: Storm Warning is current south from Merimbula."

these words should have alerted Mr. Thompson that from Merimbula south, that is just north of Eden, the fleet would encounter winds of at least 47 knots and gusts that could reach up to 66 knots.

The fact that he says:-

"... I did not read any forecasts which struck me as being unusual or alarming for a Sydney to Hobart Race."

and at **page 22** of that statement says:-

"At the time of preparing this statement, I read the 14:50 forecast and I am still of the view it contains nothing of particular concern."

is confirmation that he did not and still does not understand the gravity of what the forecast means.

For a man who was occupying the position of Race Director and to whom the other members of the CYCA Race Management Team deferred, this lack of understanding then and now is of the gravest concern.

Clearly Mr. Batt and Mr. Gage by making a series of prompt notifications could see the seriousness of the situation. Mr. Batt said to my investigators on the 15th October, 1999, at **page 26**:-

"A. Well, we, we contacted the CYCA and the, the AMSA -

Q. Right.

- A. --- and the Eden Coast Patrol. In, in, essentially the onus is, the onus has always been on the CYC to contact us but we thought that the, the situation was evolving such that we had to make sure that they were aware, the Cruising Yacht Club and AMSA and Eden Coast Patrol. The way the situation was panning out they needed to know because, you know, with those forecast winds we knew that in roughly 18 to 24 hours time that it would be, the situation in Bass Strait would be bad and AMSA should, should be primed ready and Eden because a lot of boats that retire actually go into Eden."

This obvious urgency that the CYCA "needed to know" that the situation in Bass Strait in 18 to 24 hours would be bad, was not, however, shared by their senior officer, Mr. Dunda.

The fact that after approximately 3pm on the 26th December no member of the BOM again sought to convey this "need to know" has not been satisfactorily explained to this inquest. Nor can the "protocol" that "the onus has always been on the CYC to contact us" provide an explanation.

At the 2000 sched on the 26th December the weather forecast was read out, from Telstra Control to the Race Fleet. It was, in part, as follows:-

"V.1 Here is the weather issued by the Sydney Met Bureau at 14:50, Saturday, the 26th December. It is for the area Sydney to Jervis Bay. ---

Warnings, repeat, warnings. There is a storm warning current south from Merimbula and there are gale warnings, repeat, gale warnings current south from Broken Bay. -

-- And here is a further update of the storm warning for the south east area New South Wales coastal waters south of Merimbula. The expected south to south west change of 30 to 40 knots late tonight, changing to west north west 40 to 55 knots late Sunday and expected to last until Monday night."

This sched was monitored by Mr. Robinson at the CYCA and Mr. Elliott at his home.

I pause here to note that Mr. Elliott's understanding of weather forecasts was revealed in evidence as follows:-

"Q. I'm trying to define what your area is. A storm warning is the highest warning we are told that one can get?

A. That's correct.

Q. As far as weather. Did you know that at that time?

A. No.

Q. You weren't aware of that?

A. No.

Q. What did you think the highest warning was?

A. I thought there were two higher, a severe storm and a hurricane.

Q. You thought there was a?

A. That there were two higher warnings, a severe storm and a hurricane.

Q. Is that why this didn't cause you any problems?

A. No.

Q. It just didn't cause you any problems at all?

A. No. In the 8 o'clock sked, in every sked, what I am - what I predominantly do is I'm looking at the production of provisional results. I'm interested in first and foremost where the boats are, what their position is and usually when the weather is being read out by the radio relay vessel I'm preparing myself to actually do those skeds and take that information in. I'm listening to the weather in background. What I'm particularly interested in is the wind range which they forecast. So I did hear the wind range.

Q. We've been told that one is to take the range as in fact an average and then add 40 per cent to it --

SPEAKER: For gusts.

HILL: Q. For gusts is pointed out.

A. I believe you've been told that, yes.

Q. You've undoubtedly been told that as well?

A. It's been impressed upon me for the last year and half, yes.

Q. But prior to the year and a half is what I'm interested in. Did you know of such a manner of interpreting the weather?

A. No.

- Q. And seas, we're told that you must add I think 86 per cent for the highest wave. Had you been told that?
- A. That was not my interpretation of the weather forecast, no.
- Q. You certainly didn't regard the weather and the wind strengths as anything more than what they were saying, is that basically it?
- A. My interpretation of the weather forecast at 2000 hours, at 8 o'clock that night, was that yes, the boats were going to be in tough conditions but the race was going to be very fast. The angle of the breeze that was predicted for the bulk of the race indicated a two sail reach and that suggested record breaking conditions.
- Q. Do I take it then as far as you were concerned the weather, when you were listening to it, you were listening to it for a specific purpose and that was what?
- A. I was not listening to the weather specifically, that was something which was happening in the background while I was doing something else. Yes, I listen to the weather as I do what I'm doing, yes." (**transcript 31st July, 2000, pp.56 & 57**)

Mr. Thompson says he returned to the CYCA at approximately 2.45am on Sunday the 27th. He says he would have read the 02:13 forecast, and goes on to say:-

"I do not specifically recall reading that forecast. However, I do recall that I did not read a forecast at that time containing anything particularly unusual or alarming. At the time of preparing this statement, I read the 02:13 forecast and I am still of that view."

The 02:13 forecast was as follows:-

"ISSUED BY THE BUREAU OF METEOROLOGY,
SYDNEY

Issued at 0213 on Sunday the 27th December, 1998

FOR

AREA: Jervis Bay to Gabo Island.

SYNOPTIC SITUATION: A deepening low near 41S 149E moving ENE at about 20 knots. Cold front through Sydney/38S 152E/41S 149E moving E at about 20 knots.

WARNINGS: Storm Warning is current south from Merimbula. Gale Warning is current south from Broken Bay.

WIND: W/SW winds 25/35 knots, with strong gusts. Winds increasing to the south of Merimbula offshore, reaching 40/50 knots this afternoon as low deepens.

WAVES: 2 to 3 metres, rising to 4 to 5 metres offshore in the south."

Mr. Thompson explains how he interpreted this forecast, at **page 24** of his **2nd July, 2000 statement** he said:-

"I note the following in relation to the 02:13 forecast:

- (1) Deepening low near 41S 149E moving ENE. At the time of this forecast, the fleet would have been approximately 300 miles north of the low. Consequently, as the low was moving ENE, it should have moved out to sea before the fleet reached that area;

- (2) W/SW winds 25/35 knots with stronger gusts. As the wind was in a westerly direction, the fleet should be inshore or on the rhumb line where the water would be flat. They would be having a very fast ride with winds of 25/35 knots with some stronger gusts of say 45 knots.
- (3) Winds increasing to the south of Merimbula offshore, reaching 40/50 knots that afternoon as the low deepens. I interpret this forecast to mean that the winds of 40/50 knots would accompany the low and hence, would have moved out to sea by the time the fleet reached Merimbula. In any case, 40/50 knot winds, although unpleasant, are not unusual for a SHYR. I also note that I interpreted this forecast to be for a maximum of 40/50 knots offshore as the forecast says "reaching 40/50 knots" and does not mention strong gusts; and
- (4) The outlook was for W/SW winds to moderate overnight Sunday to 20/25 knots possibly still reaching 35 knots at times near Bass Strait, which meant that by the time the majority of the fleet entered Bass Strait the winds would only be at a maximum of 40/50 knots for a couple of hours before they would start to drop to 20/35 knots, which is a reasonable wind strength for a SHYR.

Robinson and I monitored the 03:00 sked. I recall after the sked thinking that there were going to be a lot of retirements as the fleet was having a hard fast run down the coast. I also thought it was likely that they would break the race record.

For the remainder of the morning I helped Robinson produce the results and then, we organised everything we needed to take to Hobart."

I accept that the term:-

"Winds increasing to the south of Merimbula offshore, reaching 40/50 knots this afternoon as low deepens."

could mislead the untrained but the position Mr. Thompson occupied required that he have the requisite knowledge to read "reaching 40/50 knots" as including gusts from 56 to 70 knots.

The documents handed out to the yacht crews explained this. If he was uncertain he could have telephoned the BOM.

At **page 25** of his **2nd July, 2000 statement**, Mr. Thompson said:-

"At or about 5.45am I telephoned BOM and spoke to the Senior Forecaster to get an update on the weather. I cannot now recall the specifics of that conversation. However, I do recall that the weather forecast was essentially the same as the 02:13 forecast. I refer to Annexure "E" being the list of the local telephone calls made from the CYCA between 24th and 28th December, 1998."

But on the 20th October, 1999, at **page 62**, he said of this telephone call:-

"Q. --- and you'd be constantly discussing ---

A. What's happening.

Q. --- what's happening? O.K.

A. And we would ring back to Sydney to talk to the severe weather operators ---

Q. Yes.

A. --- and ask them for what was, was happening.

Q. That in fact happened?

A. Yes.

Q. O.K. And was that, did you make those phone calls or --
-

A. Yes.

Q. --- a representative ---

A. No, I did.

Q. O.K. And, and who did you speak to in particular?

A. Whoever was on duty at the time.

Q. Right.

A. And I can remember on the morning of the 27th speaking to the guy, and he said, I said, What's the likely wind strength they're going to get? And he said, 25 to 35. And I said, Oh well, as per what we'd had before?

Q. Yes.

A. He said, yes.

Q. O.K.

A. Now obviously he's talking about 25 to 35 with, under his little scheme that can then be up to 60. I was literally taking him as 25 to 35."

I have difficulty accepting that Mr. Thompson was told that the likely wind strength was to be "25 to 35" knots (gust from 35 to 49 knots) especially when he says in his later statement of **2nd July, 2000** at **page 25**:-

"When I left the CYCA I was not concerned about the weather. However, I did think we would get a lot of retirements because of the speed the fleet was travelling."

This statement does not sit well with the sentence:-

"I was literally taking him as 25 to 35."

It is also important to note that at approximately 5.45am, the time Mr. Thompson states that he spoke with the BOM Senior Forecaster, the following appears in the radio message documents of Telstra Control, which is a transmission from the yacht "Maglieri Wines":-

0538 M. Wines requesting weather update, advised only had 0213 report.

0545 requested CYC MARK to get a weather update for fleet.

0550 CYC advised next weather 1300.

0555 advised "Maglieri Wines" check P 76.78
OFF SHORE" (Exhibit 24C)

It is clear to me that the person referred to as Mark was, Mark Robinson and according to Mr. Thompson he was with Mark Robinson from the 3am sched until they both left the CYCA at 8.30am. As he said at **page 25** of the **2nd July, 2000 statement**:-

"At approximately 8.30am Robinson and I left the CYCA to catch a 10.00am flight to Hobart via Melbourne. Elliott had flown to Hobart on the 6.00am flight to set up the computers in the RCC and monitor the 14:00 sked. Hughes had also flown to Hobart earlier that morning. Sommer and Rowley were to fly to Hobart on the 2.00pm flight that day. We staggered our flights to Hobart so that the Race Committee/ Race Management Team were not all in the air at the same time and hence, that there was always someone on the ground to handle any issue that arose during the race."

Thus according to Mr. Thompson the following timings of Race Management Team/Race Committee departures for Hobart took place on the 27th:-

- (a) THOMPSON and ROBINSON left CYCA 8.30am: arrived at RYCT Hobart 2pm or shortly thereafter.
- (b) ELLIOTT left Sydney for RYCT Hobart at 6am: arrived at RYCT at approximately 11am.
- (c) HUGHES - AMSA REPRESENTATIVE left sometime early AM: arrived approximately 11am RYCT.
- (d) SOMMERS and ROWLEY left Sydney (Sommers from his home) at 2pm: arrived approximately 5pm RYCT.

Mr. Elliott says in his **16th July, 2000 statement** at **page 7**, about the 3am sked, his flight to the RYCT and the 2pm sked on Sunday the 27th December:-

"27th December, 1998

I also monitored the 0300 sked from home. I recall the weather forecast for that sked was similar to that for the 2000 sked. To the best of my recollection, there were no reports of extreme weather being experienced by the fleet. In fact, the speed at which the fleet was progressing down the NSW coast added to my feeling that this was potentially a record breaking race.

After the 0300 sked, I packed my computer and organised my family and at approximately 0600 we flew to Hobart. It had been previously arranged that I would fly to Hobart early on 27th December, 1998 to set up the computers and communication systems in the RCC and to monitor the 1400 sked. Robinson and Thompson were to fly to Hobart later on the 1000 flight.

I arrived at the RYCT at approximately 1100 and attended the briefing for RYCT volunteers. After the briefing, I set up the computers in the RCC and Telephone Information Centre. While I was setting those up, I received a telephone call from Thompson advising that their plane from Melbourne was delayed. To the best of my recollection, Thompson and Robinson arrived at the RCC during the 1400 sked.

14:00 sked on 27th December, 1998

To the best of my recollection, I was the only person in the RCC when the 1400 sked started. I cannot recall the

specifics of the weather broadcasted during that sked as my main focus was ensuring that I recorded the fleets' positions so that the results could be produced after the sked. However, I do recall that "Sword of Orion" advised it was experiencing westerly winds of 50 to 65 knots with gusts of up to 78 knots, which was far more severe than had been forecast, and that the RRV repeated "Sword of Orion's" position and the weather it was experiencing to the fleet. During the position report another yacht advised that they were experiencing similar conditions of "Sword of Orion" and a lot of yachts advised they had retired or were heading to Eden for shelter.

I was not overly alarmed by the weather reported by "Sword of Orion" as I thought it was likely they were experiencing a squall.

During and after the sked, Thompson, Robinson and myself discussed the weather information received from "Sword of Orion" and I gave Thompson an update on everything that had occurred while he was in transit.

Shortly after the 1400 sked, at approximately 1600 or 1630, I left the RCC. At that time, I was of the view that the fleet were going to experience strong winds and consequently, there would be a lot of retirements. I did not envisage that the fleet were going to encounter a storm of the magnitude which occurred later that day.

28th December, 1998

I returned to the RCC at approximately 0245 on 28th December, 1998 to monitor the 0300 sked. At that time, I recall Thompson, Robinson, Hughes and Elizabeth Drolz (Thompson's wife) were in the room. I cannot

recall if Sommer or Badenach were in the RCC at that time.

Prior to that time I was unaware of the escalation of on water incidents throughout the evening of 27th December, 1998. At that point Hughes briefed me on everything that had occurred since I left the RCC the previous afternoon."

Mark Robinson in his **7th July, 2000 statement** at **page 16**, says this of his flight to Hobart:-

"At approximately 9.00am Thompson and I left the CYCA to catch a 10.00am flight to Hobart via Melbourne. Elliott had flown to Hobart earlier that morning to monitor the 14:00 sked. Hughes had also flown to Hobart earlier that morning.

Our flight from Melbourne to Hobart was delayed so when Thompson and I arrived in Hobart, we went straight to the RCC. We arrived at the RCC about half way through the 1400 sked. I recall Elliott, Badenach and Hughes were in the RCC when we arrived.

1400 sked on 27th December, 1998

I cannot recall the specifics of the weather broadcasted during that sked. However, I do recall "Sword of Orion" advised she was experiencing westerly winds of 50 to 65 knots with gusts up to 78 knots. This was far more severe weather than had been forecasted.

During and after the sked, Thompson, Elliott, Hughes and myself discussed the weather information received from "Sword of Orion". I do not recall the content of that conversation except that it resulted in someone

contacting Lew Carter on the RRV and requesting that he broadcast a message to the fleet warning them about the weather being experienced and reminding the skippers that it was their responsibility to decide whether to continue racing."

Phillip Thompson says in his **2nd July, 2000 statement** at **page 25** of his flight to Hobart and arrival at the RYCT:-

"Our flight from Melbourne to Hobart was delayed so when we arrived in Hobart, we went straight to the RCC. We arrived at the RCC just at the start or a little bit into the 14:00 sked. I recall Elliott was monitoring the sked when we arrived.

14:00 sked on 27th December, 1998

I cannot recall the specifics of the weather broadcasted during that sked except that the conditions were expected to abate the following day. However, I do recall "Sword of Orion" advised it was experiencing westerly winds of 50 to 65 knots with gusts up to 78 knots, which was far more severe than had been forecasted, and that another yacht was experiencing similar conditions. Furthermore, that there were a lot of yachts who had retired or were heading to Eden.

I was alarmed by the weather conditions "Sword of Orion" was experiencing as I had expected the fleet to experience maximum winds of 50 knots which would abate over Sunday night. As "Sword of Orion" typically is in the middle of the fleet, I thought that most of the fleet were probably experiencing similar conditions.

During and after the sked, Elliott, Robinson and I discussed the weather information received from "Sword

of Orion" and Elliott gave me an update on which yachts had retired and generally what had happened while I was in the air. I cannot recall the precise content of that conversation.

Shortly thereafter, I contacted the RRV and requested that they broadcast a message to the fleet asking them to assess their situation and the weather being experienced and to seriously consider whether to continue before entering Bass Straight and reminding the skippers that it was their responsibility to decide whether to continue racing based on an assessment of their yacht, crew and the weather. As far as I am aware that message was broadcasted by the RRV to the fleet. However, I did not hear it as yachtcomms did not operate after the 14:00 sked finished."

Effectively between 8.30am and 2pm the only member of the Race Management Team that would have been in a position to know what was occurring to the fleet was Howard Elliott. However his tasks were quite specific and he did not arrive at the RYCT until approximately 11am and proceeded to a volunteers briefing which lasted approximately one hour.

Apart from the Race Management Team, there was of course the CYCA Race Committee, however this consisted of the Management Team and Hans Sommer and Bruce Rowley and their tasks were:-

"HANS SOMMER

My role was to be largely public relations and liaising with yachts and sponsors;

BRUCE ROWLEY

Rowley's role was to be similar to mine. He was to be responsible for liaising with sponsors and being their

host for the duration of the race." (**Statement of H. Sommer, 29th June, 2000, p.8**)

At **page 12** of the same statement Hans Sommer says this of his flight to Hobart:-

"27th December, 1998

On 27th December, 1998 I flew to Hobart at about midday with Rowley. I arrived in Hobart in the late afternoon and checked into my hotel. I then went to the RCC to see the Race Management Team. I arrived at the RCC between 5.00 and 6.00pm.

I recall that Thompson, Hughes, Elliott and Robinson were in the RCC when I arrived. It may be that other members of the Race Committee were also present but I cannot now recall. I am uncertain whether Elizabeth Drolz, Thompson's wife, was in the RCC at that time. However, she definitely arrived later in the evening and assisted with the recording of events as they occurred.

Prior to that time I was unaware of the deterioration in the weather conditions. After arriving at the RCC, I became aware that the fleet had reported very strong winds, some yachts were in serious trouble and that a man overboard had been reported on "Kingurra". From my conversations with the Race Management Team, I quickly grasped there was a crisis on the water. It was my view that the Race Management Team was operating as could have been expected in response to the situation and appeared to be coping well.

At or about the time of my arrival in the RCC, I was informed by someone in the Race Management Team that they had instructed the RRV to broadcast a message

to the fleet urging the fleet to consider the weather being experienced and to take appropriate action for the safety of their crew."

The fact that the weather was not as thought by the Race Management Team was not by any means a well kept secret. At approximately 6am on Sunday the 27th December Mr. John Honeysett, whilst in the RCYT Information Centre, received a weather fax which showed that the wind speed at Wilsons Promontory was approximately 75 knots. He said in his **20th July, 2000 statement** at **pages 3 and 4:-**

"Sometime later we received the coastal reports from the Weather Bureau. These were not forecasts they were data about actual wind direction and speeds around areas Tasmania and Bass Strait. The information relating to all of the reports was on one sheet. I made an observation of that sheet and I observed the following as I recall. Eddystone Point North East Tasmania there was no wind, the southern tip of Tasmania was a strong easterly, I think it was the West Coast, Cape Grim and King Island there were strong southerly winds, I think it was 35 to 40 knots something like that. The outstanding thing was Wilsons Prom, with winds it was either 75 or 79 knots the fax was very hard to read. I can't recall at Gabo Island but I think there was nothing excessive. These positions would have been for about 5.00am in the morning, the times vary a little bit.

The wind strength concerned me, but I am aware that the wind speeds are exaggerated by the landmass, but nevertheless I felt concerned that there was some nasty weather about and the depression was obviously forming somewhere in Bass Strait.

I made a photocopy of that document and placed the original document I received on a desk in the Race Control Centre for their attention.

I can't recall the exact time, I feel it was before midday, I think Phil Thompson, Mark Robinson, I think Sam Hughes arrived either earlier or the same time. I think they were all on the 10am flight from Sydney. I had a talk to them all, I brought them up-to-date on the information I received. I assumed they would have been up-to-date anyway. I recall pointing to the fax I received to Sam Hughes. I recall saying, "Its blowing in excess of 70 knots at Wilsons Prom". I can't recall his reply but he seemed a bit concerned.

Later that morning, it could have been before they arrived, that is Phil and the other chaps, I received a fax in relation to the Melbourne Hobart Race and the Melbourne to Devonport. The fax indicated the start of those races had been postponed. I probably did bring this to the attention of Phil and Sam Hughes."

I should add that Mr. Honeysett is a member of the RYCT who has held various senior positions in that Club and sailed in five Sydney to Hobart Races as well as being on the RRV in 1972.

Mr. Hughes recalls being told of the Wilsons Promontory reading and said:-

"... on the 27th, the first I, first I really became aware of potential problems was when one of the, the staff at the Royal Yacht Club in Tasmania, the, one of the managers of the operations room, said to me that it was blowing 70 knots at Wilsons Promontory and I thought, well, you know, that's, we're in for something here. In fact I think I said, Well, Jeez, I hope it's, it's not right, you know, that's

a ... We were still really in the stages of setting up our race headquarters at that stage and the first sched was at 14.00 from, from our position in Hobart. And by 14.00 it had become quite clear that things weren't going to be very comfortable."

The point is that none of the Race Management Team were either present or in easy contact, nor had a system of communication been set up whereby such information could be passed to them, and the way the Race Management Team, on the evidence before me, was operating, to Mr. Thompson in particular.

That this information was important can be seen by:-

- (a) The fact that this was the highest recording of wind speed at Wilsons Promontory for the month of December since accurate wind recordings were commenced in 1988.
- (b) It gave concern to Mr. Honeysett.
- (c) It concerned Sam Hughes (AMSA).

Mr. Halls, a former CYCA Race Director from 1986 to 1995, said in his evidence:-

"Q. Were you in Court when Mr. Honeysett gave his evidence?

A. I was.

Q. That forecast or that observation rather of 71 knots at Wilsons Promontory, is that something that you would have passed on to the fleet?

A. I would have - I would have contacted the Weather Bureau in Melbourne to confirm that and I probably would have contacted a colleague on one of the oil rigs to see what they had and Loch Sport, Joy at Loch Sport in Victoria, and depending on what the results were with my conversation I would have taken action.

Q. What sort of action? If it confirmed it was --

A. If it confirmed I'd have - I'd have probably got on the radio to Lew or the telephone to advise him of this, and not knowing the procedures that were in place for communications in the 1998 event, made him aware, sent him full briefing on it and said we've got to get this to the fleet immediately, and if we were fortuitous enough to have a sked coming up shortly we may wait for the sked. If it was going to be several hours for the sked and the timing was becoming critical, I'd have probably gone to the three minute period, silence period on the hour and half hour and made a general call over the calling frequencies for all yachts to maintain a listening watch on the race frequency." (**transcript 2nd August, 2000, p.13**)

That this information could have been passed to the Race Fleet is clear as Mr. Carter said in his **27th March, 2000 statement, page 4:-**

"I note that paragraph 41.3 of the Radio Instructions makes reference to "silence periods". My understanding of these periods is that on each hour and each half hour a three minute period of silence is observed. The only exception to that silence is for distress transmissions."

Mr. Thompson in oral evidence, though admitting that this information could have been transmitted on the hour and the half hour to

the fleet, did not give the Wilsons Promontory reading the weight that Messrs. Honeysett, Hughes and Halls gave it. He said:-

"Q. So Mr. Honeysett was concerned, Sam Hughes was concerned. Are you saying that it wouldn't concern you?

A. I'm saying if I'd been given the fax I would have looked at it and I saw the copy of the fax yesterday. When you look at the coastal reports, Wilsons Promontory was 71, the other coastal stations around it in the general area were very low, a lot of them down around the nines and tens. As we've heard, the weather forecast for the rest of Bass Strait was 35 up to 50 knots and had a sea state of up to eight metres. Wilsons Promontory was only giving a sea state of two metre seas.

Q. But the point is you could have found that out on the morning at 7 o'clock of the 27th?

A. I could have?

Q. Yes. Had you been organised and had someone focusing on the weather, you could have found that out, couldn't you?

A. I could have found it out, yes.

Q. Having that knowledge at 7 o'clock in the morning, that could have been communicated to the fleet, couldn't it?

A. It could have, yes.

Q. It could have been communicated to them between three minutes - sorry, between 7 o'clock and three minutes past, couldn't it?

A. Yes.

Q. And it could have been communicated at half past 7?

A. Yes.

Q. Because of the silence periods?

A. That's correct.

Q. So on every hour and every half hour between first being appraised of that knowledge the fleet could have been warned and told what was happening with the weather?

A. The fleet already had the weather from the special race forecast, if they had read the forecast.

Q. That was at 3 o'clock in the morning. You gave - look, the fleet were told about the weather at 3 o'clock - 3am on the 27th, weren't they?

A. Yes.

Q. And the next time they were going to be told about the weather was at 2pm on the 27th?

A. That's correct.

Q. So you could have obtained additional information that some people had concern about at 7am in the morning, that's correct isn't it?

A. Yes.

Q. And that was some hours before the fleet started to encounter that weather, wasn't it?

- A. I don't - I couldn't give you an exact - where the time line sits with the 7am and the fleet.
- Q. "Doctel Rager" at 12.35 said it was getting 50 to 60 and gusts of 70 knots, you've seen those records haven't you?
- A. Yes, yes.
- Q. And that was verified by other vessels around it, you accept that?
- A. Yes, definitely.
- Q. So that's when the fleet appears to start to be getting into the foul weather, you accept that?
- A. Yes.
- Q. So the reality is there was at least four hours from 7am till 11am when the fleet could have been told what they were sailing into and possibly five hours to 12 o'clock?
- A. Yes but the weather at Wilsons Promontory was in isolation." (**transcript 1st August, 2000, pp.26 & 27**)

Although I accept what Mr. Thompson says of his attitude to the Wilsons Promontory reading I am reminded of what was said by one of the first witnesses to be called in this inquest, Mr. Iain Moray, Skipper of the yacht "Siena", when he said:-

"... I was horrified to learn that, basically, after I left Sydney Heads, nobody at the CYC was in a command position. Nobody was taking decisions to do anything about issuing warnings about the extreme conditions, which would have given the sailors out on the sea a chance to save themselves. This, this attitude that it's

every skipper's decision whether to keep, you know, racing or not, that's fine, I go along with that, but if you don't give me information, I want to know why you're not giving it to me, because I would make a good decision if you give me good information; I'll make a bad decision if you give me bad information. And I got bad information." (**Statement 3rd June, 1999, p.23**)

As to whether or not the Wilsons Promontory reading was of concern and therefore important, I prefer the evidence of Messrs. Honeysett, Hughes and Halls to that of Mr. Thompson and in this I note the following. Mr. Honeysett says:-

"My sailing background is as follows. I started sailing as a young fellow in dinghies then graduated to keel boats. I competed in the 1956, 1958, 1960, 1968, 1970 Sydney to Hobart Yacht Races. I was on board the Radio Relay Vessel in 1972.

I have been involved in sailing for the last sixty odd years and I would consider myself an experienced sailor. Through the Australian Yachting Association I was qualified as a Measurer in 1977. I became the Head Measurer of Tasmania. I am currently retired from the CSIRO as an Experimental Scientist.

I hold a Bachelor of Science which I obtained from the University of Tasmania in 1957. I spent the majority of my working life with the CSIRO in Tasmania. My services to the Royal Yacht Club Tasmania have been as a volunteer in the Race Information Centre.

I have been a member of the Royal Yacht Club Tasmania since 1956 and currently a life member. During my membership with the Club I was a member of the Board for ten years. That was from 1970 to 1979."

Mr. Anthony John Hughes ("Sam") is a Senior Search and Rescue Officer with AMSA:-

"Q. I come from a naval background. I was a Communications Officer in the Navy and Principal Welfare Officer and I left the Navy to join the search and rescue organisation some eighteen years ago. I have been involved in search and rescue in that time. I am also a recreational sailor. I've had some 10,000 or so sea miles in ocean racing. I am a qualified Bridge Watch Keeping officer. I hold a Queensland Master's Certificate and I'm a professional qualified Radio Officer as well." (transcript 19th July, 2000, p.1)

Mr. Gregory Halls is an Oceanographer. He has sailed his own yacht since 1965, has been involved with the administration of yacht races from 1976 and was the CYCA Race Director from 1987 to 1994. His present employment requires him to administer to a fleet of vessels that, because of their activities, require ample warning of bad weather.

That this information should have been passed to the Race Fleet I have no doubt, despite Mr. Thompson's emphatic answers to these questions:-

"Q. He had got a weather fax showing that Wilsons Promontory had 71 knots, that was at 7 o'clock in the morning?

A. Yes.

Q. Do you think that was pertinent?

A. To the race?

Q. Yes, to the race?

A. No.

Q. No?

A. No." (**transcript 1st August, 2000, p.25**)

In reality the yacht "Maglieri Wines" had requested a weather update at 0538 that morning. Clearly Mr. Robinson knew of this enquiry. The entries in the Telstra Control log show this. Co-incidentally Mr. Thompson telephoned the Senior Forecaster at the BOM at 0545am, seven minutes after "Maglieri Wines" request.

I note that at 0625 "Maglieri Wines" suffered rig damage and headed for Bermagui.

The radio log kept by Mr. Carter shows yachts asking for weather updates from early morning until at 1235 hours "Doctel Rager" reports the weather conditions she is encountering to Telstra Control.

After "Doctel Rager's" broadcast there followed broadcasts of other yachts giving details of the weather conditions that they were in. I set out below the Telstra log entries of those messages to show that it was abundantly clear from 1235 onwards that the Race Fleet were beginning to encounter the severest conditions:-

"1238 ("Doctel) Rager" severe weather 50.60(kts) to 70 (kts).

1250 "Secret Mens Business" severe weather.

1250 "Wild One" advised severe weather.

1250 "She's Apples II" also have severe weather.

1305 ("Doctel) Rager" confirmed.

1307 "Kendell" 40K westerly.

1318 "Terrafirma" via "Jubilation" 60K @ 280 degrees
37:56.150.18."

There are entries in the radio log, both prior to this time and up to the 1400 hours sched of yachts, not retiring from the Race, but seeking shelter from the weather.

It is clear to me from this and from all that I have heard and read that the Race Fleet required information on the weather conditions from the early morning of the 27th December. The Race Management Team failed to provide this.

The fact that the Race Management Team was involved during this crucial time, as follows:-

- (a) PHILLIP THOMPSON and MARK ROBINSON, who were working on the `results' then left the CYCA at 8.30am arriving in the RYCT Hobart at 2pm or just after; and
- (b) HOWARD ELLIOTT who left Sydney at 0600 and arrived at the RYCT at approximately 1100, was then employed with setting up his computers until 1200, then attended a RYCT volunteer briefing for one hour.

effectively deprived the Race Fleet of any management. To state, as Mr. Thompson did, that their mobile telephones had `message' facilities is not to the point. The Race Fleet required, during those vital hours inforamtion, direction and management, it received none of these things.

The first request for information about the weather had come at 0538 that morning from "Maglieri Wines" via Telstra Control. The answer was that a weather update would be issued at 1300 hours. From

that time until 1655 when they instructed Lou Carter to broadcast to the Race Fleet, the Race Management Team did nothing.

From what I have heard and read it is clear to me that during this crucial time the Race Management Team played the role of observers rather than managers and that was simply not good enough.

At approximately 2pm on Sunday the 27th the Race Management Team had assembled at the RYCT and listened to the 1400 hours sched.

It was towards the end of that sched "Sword of Orion" broadcast the following to Telstra Control:-

- "V.100 "Sword of Orion", 3-8-0-4-1-5-0-1-8. I just want to tell you a little bit about the weather we're experiencing down here. It's a little bit different to the forecast, over.
- V.3 "Sword of Orion", I would appreciate that for ourselves and all of the fleet, over.
- V.100 Yes. We are experiencing 50 to 65 knot westerlies with gusts to 78 knots, over.
- V.3 Gusts 70 ---
- V.1 78 knots.
- V.2 78.
- V.3 For all of the fleet, we have "Sword of Orion" at 3-8-0-4-1-5-0-1-8, winds 5-0 to 6-5 from the west, gusting 7-0 to 7-8 knots. I will repeat that. We have the yacht, "Sword of Orion", at 3-8-0-4-1-5-0-1-8 with winds 5-0 to 6-5 knots from the west with gusts 7-0 to 7-8 knots. Thanks very

much for that, "Sword of Orion". Sydney?
Sydney, are you there?"

I note that Lew Carter, (V.3) had the presence of mind to re-broadcast this to the fleet from Telstra Control.

According to Phillip Thompson the following took place at the RYCT where the Race Management Team was based:-

"During and after the sked, Elliott, Robinson and I discussed the weather information received from "Sword of Orion" and Elliott gave me an update on which yachts had retired and generally what had happened while I was in the air. I cannot recall the precise content of that conversation." (**Statement of P. Thompson, 2nd July, 2000, p.25**)

Mr. Thompson then says, at **page 26** of that statement:-

"Shortly thereafter, I contacted the RRV and requested that they broadcast a message to the fleet asking them to assess their situation and the weather being experienced and to seriously consider whether to continue before entering Bass Straight and reminding the skippers that it was their responsibility to decide whether to continue racing based on an assessment of their yacht, crew and the weather. As far as I am aware that message was broadcasted by the RRV to the fleet. However, I did not hear it as yachtcomms did not operate after the 14:00 sked finished."

I note that according to the Telstra radio log this message was broadcast by Lew Carter at 1655 hours. Mr. Carter said that he had broadcast this message as soon as he was told to.

It is informative that the following took place according to the Telstra radio log:-

"1520 hours The sched was completed.

1527 hours "Dixie Chicken" yacht `Dixie Chicken' going to stand by "Outlaw".

1600 CYCA Howard advised VC offshore 3742 153 43 emergency helio lifting off injured crewmen.

1600 "Team Jag" dismasted rope around prop -crew OK seeking assistance - requesting assistance 0412 450701.

1623 "Pippin" 3747 15026 reports a yacht has rolled over and lost mast 200 - 300 mtrs astern he is Hdg Eden: Solo Globe Challenger is in company.

1644 "Sword of Orion" 3818 150.17 Hdg Eden Hdg 190-200 59K 250 degrees not retiring.

1655 "Telstra Control" Broadcast to the fleet skippers responsibility to continue racing."

That broadcast was in the following terms:-

" ... to all the fleet. Firstly, I would like to draw attention to all yachts competing in the Telstra Sydney Hobart Yacht Race, page 2 of your sailing instructions, paragraph 7. All those taking part in CYCA races do so at their own risk and responsibility. The CYCA is not responsible ---

- V.3 --- of a yacht whose entry is accepted or the sufficiency or adequacy of its equipment. The CYCA is not responsible for any damage or injury either ashore or at sea either to persons or yachts which might result from participating in Club races. The decision to race a boat is solely the responsible ---
- V.1 Responsibility.
- V.3 --- is solely responsible for deciding whether or not to start or continue racing. I ask all skippers, before proceeding into Bass Strait or wherever you're proceeding, to give it your utmost consideration as to what you're doing and talk about it with the crew. No problem to call into Eden and perhaps take off again tomorrow."

Between the time "Sword of Orion" broadcast its weather conditions and the time that the message referred to by Mr. Thompson was broadcast at least one and a half hours had passed. During that period it was obvious that the Racing Fleet was in serious difficulties and management and direction were vital. Yet the only contact between the fleet and the Race Management Team was the above broadcast.

Of this broadcast Mr. Thompson says, in his **Statement of 2nd July, 2000, p.25:-**

"... As far as I am aware that message was broadcasted by the RRV to the fleet. However, I did not hear it as yachtcomms did not operate after the 14:00 sked finished.

Yachtcomms is a Telstra telephone link up with Channel 4483 which allows us to monitor the skeds in the RCC and transmit to the RRV and fleet if necessary.

However, yachtcomms was only operational during the skeds. At all other times the Radio Room, which was next door, kept us informed of what was reported on the radio. The Radio Room had 2 VHF radios, 1 HF radio and an HF receiver and was manned 24 hours a day.

At or about the 14:00 sked on water incidents began to be reported and escalated quickly as the afternoon progressed. During that afternoon VC Offshore rolled and issued a May Day and at approximately 17:00 AMSA declared a May Day for the general area because there were multiple incidents. Not long thereafter, we were advised that "Winston Churchill" had issued a May Day, abandoned their yacht, which was sinking, and that the crew were in life rafts.

Late on the afternoon of 27th December, 1998 Sommer arrived at the RCC. At or about that time Bush telephoned the RCC and told us he was sending Greg Halls to Eden to look after the retiring yachts as they arrived.

During the remainder of the evening the incidents continued to escalate including the issuing of May Days, man overboard ("MOB") being reported on "Kingurra" and "Sword of Orion" and yachts being rolled or knocked down and dismasted.

In relation to "Business Post Naiad", I recall that there was a problem getting the May Day confirmed. After the first knock down, there were some crew that were injured and wanting to be airlifted, however, overall it appeared the crew was not in immediate danger of loss of life as they were motoring to Eden. At or about this time I rang the RRV to see if "Business Post Naiad's" May Day was still current given they were motoring to Eden. We could not get the May Day confirmed. Later that

evening we were advised that "Business Post Naiad" was running out of fuel. At that point, we discussed what we would do if they ran out of fuel and decided to just wait and see what happened and that AMSA would airlift the injured crew when assets were available."

I note in regard to the above statement that:-

- (a) The "Yachtcoms" could have been extended beyond the "14:00 sked" and the Race Management Team would have retained this direct link with the Race Fleet. Why it was dispensed with has not been satisfactorily explained (**transcript 1st August, 2000, p.95**).
- (b) Mr. Thompson did not hear the broadcast from Telstra Control to the Race Fleet because yachtcoms had been dispensed with.
- (c) Neither Mr. Thompson nor any other member of the Race Management Team contacted the BOM to obtain updated weather information during this time.
- (d) Mr. Bush took the initiative of sending Mr. Halls to Eden.
- (e) Instead of putting in place a plan for the rescue of the crew of "Naiad" if she ran out of fuel, it was decided to "just wait and see what happened".

These are not the actions of those who are managing or controlling. The only conclusion that can be drawn is that during this critical period the Race Management Team did no more than adopt a "wait and see" approach and effectively abdicated their responsibility to manage the Race.

FINDINGS

1. I find that both Ken Batt and Brett Gage telephoned the CYCA sometime after 1pm on the 26th December, 1998 but were unable to speak with anyone who understood the urgency of their telephone calls.

I find that both Ken Batt and Brett Gage also telephoned various rescue organisations including AMSA.

However I find that despite the initial sense of urgency that both men displayed in seeking to alert the CYCA with their telephone calls, this urgency:-

- (a) Was not shared by their immediate Supervisor, Mr. Peter Dunda; and
- (b) After the initial telephone calls no further attempt was made by them or any other officer of the BOM to contact the CYCA.

It is this part of the evidence given on behalf of the BOM that remains perplexing.

Why no-one at the CYCA was contacted after the initial attempts by Batt and Gage cannot be explained away with glib statements such as:-

"... I followed all policies and procedures in issuing that warning ..." (**Dunda, transcript 20th March, 2000**)

AND

"The protocol is that the CYCA should ring the Shift Supervisor." (**Gage, transcript 16th March, 2000, p.59**)

If Batt and Gage had genuine concerns for the safety of the fleet, and I accept that they did, then it was incumbent upon them to voice those concerns to the members of the CYCA, particularly Mr. Thompson.

Those concerns should then have been made known to those who would ultimately face the reality of the forecast, the racing fleet.

2. I find that the practice of leaving the CYCA sailing office unattended by a dedicated staff member from approximately 11am to 3pm on the race start day (26th December, 1998) is unacceptable and should cease.

I find further that had the CYCA sailing office been attended by a dedicated sailing office staff member during the above times on the 26th then the fact that Mr. Ken Batt needed to speak to Mr. Thompson regarding the weather would have been known.

As to what may or may not have occurred if the two had spoken is a matter of conjecture.

3. I find that Mr. Phillip Thompson, Mr. Mark Robinson and Mr. Howard Elliott, who formed the CYCA Race Management Team, did not fully understand the formulae used by the BOM in its forecasts. By which wind speed and wave height are to be interpreted.

Considering that the Race Management Team was responsible for the control and conduct of the Race, from just before its start until its finish at Hobart, this lack of understanding, particularly by Mr. Thompson, is inexcusable.

4. I find that Mark Robinson was asked by Telstra Control for a weather update at 0545 hours on Sunday 27th December. That request was from the yacht "Maglieri Wines" via Telstra Control. That the response from Mark Robinson that the next weather forecast was at 1300 hours was an insufficient answer to such request in the circumstances.
5. I find that the weather report of the BOM that the wind conditions at Wilson's Promontory at 0700 hours on Sunday the 27th December was of importance to the Race Fleet.
6. I find that Mr. John Honeysett was rightly concerned by this wind speed and as such placed the facsimile of this weather report on the desk in the Race Control Centre for the attention of the Race Management Team.
7. I find that Mr. (Sam) Hughes of AMSA was informed of this weather report by Mr. Honeysett upon his arrival at the RYCT, and that Mr. Hughes was also concerned by this weather report.
8. I find that Mr. Howard Elliott left his home in Sydney to fly to Hobart, Tasmania, at approximately 0600 hours on Sunday 27th December. He arrived at the RYCT at approximately 1100 hours. He then proceeded to set up his computer equipment for his specific task as part of the Race Management Team and to monitor the 1400 hour sched. Having set up that equipment, at 1200 hours he attended a briefing of RYCT volunteers until approximately 1300 hours.
9. I find that Howard Elliott, apart from his specific task and the monitoring of the 1400 hours sched, had not been given any instructions as to what his role or duties were, during this period, by the Race Director, Phillip Thompson.
10. I find that Phillip Thompson and Mark Robinson left the CYCA at 0830 hours on Sunday 27th December to fly to the RYCT in

Hobart. They arrived at the RYCT Hobart at approximately 1400 hours.

11. I find that because the movement of the Race Management Team, from the CYCA in Sydney to the RYCT in Hobart, was allowed to proceed in the fashion described, it effectively deprived the Race Fleet of any control or management during a critical period.
12. I find that the Race Fleet was contactable by Telstra Control on the hour and on the half hour.
13. I find that the weather report of the wind strength at Wilson's Promontory should have been conveyed to the Race Fleet as soon as it was known.
14. I find that the Race Management Team did not have the necessary knowledge or understanding of meteorology to enable it to fully appreciate what was about to occur or what was occurring.
15. I find that the Race Management Team should have been more active in seeking information relating to the weather and communicating that information to the Race Fleet.
16. I find that the roles of the individual members of the Race Management Team, outside their specialties, were so ill defined as to render their positions within the Race Management Team practically useless.
17. I find that the Race Management Team was organised in such a fashion that at the time of crisis it was to all intents and purposes, valueless to the Race Fleet.
18. I find that the Race Management Team had no emergency or crisis plan from which guidance could have been obtained.

19. I find that the organisation of the radio communications for the Race Fleet was inadequate. To expect Telstra Control to manage the communications of 115 yachts with only one HF radio set and one VHF radio is not realistic in all weather. It was only good fortune and the availability of outside resources that averted a potentially disastrous situation.

Before leaving the topic of Race Organisation I wish to make this observation.

Mr. Thompson was appointed Sailing Manager of the CYCA in 1995. As such he took over the management of the CYCA's Sydney to Hobart Race. Mr. Thompson said in his statement dated 2nd July, 2000, at paragraph 7:-

"Since 1998 I have completed ISAF's (International Sailing Federation) Race Management course and as a result, should qualify as a National Race Officer later this year."

According to the evidence of Mr. Brenac prior to the appointment of Mr. Thompson there existed a system of Vetting Committees that would have detected the non-complying IMS Certificate of "Business Post Naiad". This system employed the scrutinising of certificates of entrants by three individuals. Mr. Brenac said, in answer to a question as to the "Naiad's" IMS Certificate:-

"Q. And you said that that wouldn't have got through?

A. I can't see how it would if three people looked at it. One might miss it, two might miss it but certainly someone's going to see it.

Q. So this was the system that you had certainly up till 1994 that three people saw it probably on different occasions?

A. Yes.

Q. And you think that system would not allow a certificate like the "Business Post Naiad" to get through?

A. It stands to reason with three people looking at it separate I can't see how it - like I say, somebody would have picked it up." (transcript 21st July, 2000, p.39)

What became of this system of vetting after Mr. Thompson was appointed has not been explained.

Mr. Brenac pointed out that the Sailing Office:-

"On race days, weekends, what have you, there was only one person in there, either myself or the Secretary Elaine Gazzard, but it was manned seven days a week, and those quiet days are when you'd catch up with work and that's when I used to sit down there and write sailing instructions and ..." (transcript 21st July, 2000, p.43)

On Sydney to Hobart race days, he said:-

"A. Well Greg Halls being the Race Director would be out directing the start and Mike Fletcher. I would be out, usually stay in the sailing office until about an hour before the start of the race, then I would go out in a boat and just row around the harbour, wait. You know, if Greg Halls or Mike Fletcher want - or the Waterways or the Water Police wanted something done by the Club, then I would zip out there and do it. I just hung around,

you know, in a very fast little boat that I could get around in. You know, marks moving, that sort of thing.

Q. What about the sailing office, was that left ..

A. Elaine Gazzard always stayed in the sailing office. The phone's ringing and, you know, all sorts of odd questions come in. People are ringing up at five to one and saying what time does it start, that sort of thing.

Q. She was there, that's where she stayed?

A. Always.

Q. I think you said always did you?

A. Always.

Q. What time would Halls, Fletcher and yourself get back? Would that be different times or what?

A. Probably - yes, well they were separate to me. Probably around - the race started at one, they would be back in 2.30-ish, 2.30 to 3.

Q. What about if anything had come into the sailing office?

A. Well that would be all put in a file. Normally after the race we'd all come back in and, you know, sit down and have a couple of drinks and say what a great start it was and discuss whatever needed to be discussed, like the upcoming sked. But anything that come in during that time when we were out on the water would be kept in a file and we'd flick through it and anything in it was of interest, you know.

Q. Where would you get the file from?

- A. Elaine Gazzard, the Secretary, would have that ready for you the minute you walked in the door. Just like a Secretary, here are your messages." (**transcript 21st July, 2000, pp.43 & 44**)

As to the organisers; the first sked and the movement from the CYCA to Hobart, he said this:-

"Q. There would then be the first sked, is that right?

A. Yes. The first sked, as I said in the record of interview, was not all that long after the start, probably only about four hours after the start, at which time all the boats are fairly close together, and we would just go through the entire exercise, like calculating results et cetera, and it was usually considered a test sked just to make sure everything worked okay and there were no glitches in the computer programming. But that was, you know, it was a sked and it was run as a complete sked.

Q. Who would be available to listen to that?

A. Normally everybody that was involved with the start would sort of stay around for that sked. It wasn't time to go home.

Q. Who?

A. Greg Halls, Mike Fletcher, myself, normally one or two of the CYC Race Committee, some of the Tasmanian people would stay unless they were catching a flight back to Tasmania. Yeah, it was normally a pretty full office when that first sked came through because we could listen to it in the sailing office as well as "Young

Endeavour" because it was fairly close at that stage, probably only 20 miles down the track.

Q. The group that - I think Halls, Fletcher and yourself, did you all go down to Hobart?

A. No. I never went down to Hobart, I always stayed in Sydney.

Q. What was the purpose of you staying in Sydney?

A. Because all the computing was done in Sydney.

Q. All the ?

A. All the computing. All the - you know, when the sked would come through, all the race calculations, progressive results, that was all done in Sydney and then it was connected to more terminals down in Hobart so that as soon as it was updated in Sydney it was updated down there at the same time. We used to have an ISD n-line(?) from Sydney to the race centre in Hobart, so you'd have a race centre in Sydney and a race centre in Hobart. Normally Greg Halls and - would go - vice versa maybe, but one would go down in the morning of the second day on the 27th and the other would go down in the afternoon. The same with the media centre, half the media centre would move down in the morning and half in the afternoon, so there was always an overlap of people in Sydney and in Hobart. But I always stayed in Sydney and ..

Q. What, in the sailing office was it?

A. Wherever the race centre was set up. Sometimes it was in the sailing office. In `94 and possibly even `93 it was set up in another room, but there were also terminals

there for the phone information lines, volunteers. The Associates Committee used to nominate volunteers to man that, like four hours a day, four hours after each sked, just for phone calls, and they would be able to just pull up boats' names on screens and tell people - you know, answer the queries, where they were, where they were coming on handicap, et cetera.

Q. Well where would the race control centre be, in both places or what was the situation?

A. Well yes, there was a race centre in Sydney, but once the race got started and Greg Halls and Mike Fletcher went to Hobart, the race control centre would be in Hobart. In Sydney it was all the computing, so we would get - in Sydney we would be - we would get the radio skeds in Sydney, enter them in the computer unless they were downloaded directly by satellite, which happened a couple of times, calculate everything and send it down to Hobart." (transcript 21st July, 2000, pp.46 & 47)

As to information received, in particular weather forecasts, he said:-

"Q. Okay, well what was the situation with weather updates?

A. Well much the same as it is now. We used to pay the Weather Bureau a nominal amount to provide special race forecasts for the area which the fleet was in, and that would be - that would be faxed to the sailing office, we always got a copy there as soon as it was issued, and they also used to get a copy straight to "Young Endeavour" and I believe to Hobart as well.

Q. Well did you get them into the sailing office as well?

A. Yes, yes.

Q. Were they discussed, looked at or what?

A. We always discussed the weather forecasts as they came in, the first thing you look at, because we also used to photocopy that and give it to all the telephone information people, because people often ask what sort of weather are they going to get? That's one of the first questions they ask. On that point I should say we - there was a lot of discussion at different times about whether we should continue the practice of getting special forecasts on the grounds that a lot of yachts, as you probably heard in evidence, only listen to that forecast, whereas there are - no, I couldn't count, but at least a dozen other methods of getting the weather forecast. The Bureau distributes to all the coast stations and Sydney radio. As a navigator in the race when I was going down, I would be on the - listening all the time to - because a lot of the broadcasts give you station reports which you don't normally get on the special race forecast. You know, you can make up your own mind about what the weather's going to do, get as much weather information as you possibly can rather than just listening to the three skeds a day. You can listen to one every hour if you want to." **(transcript 21st July, 2000, p.48)**

As to CYCA representatives in Eden, NSW, during the Race, Mr. Brenac had this to say:-

"Q. I notice at page 34 that after 1993 it was decided that there would be a Club representative in Eden.

A. Mm hmm.

Q. For what purpose, what was that for?

A. Well just because the - it's a volunteer organisation down there and in 1993 there were a lot of retirements into Eden, again through bad weather, and they were stretched to the limit. And they don't know the boats, they don't know the people and there were people, you know, public ringing up and overloading the telephones, that we decided we would have a representative down there in a caravan, you know, with a mobile telephone, somebody that knew the boats, knew the people, just so they could assist. And that all came out in a debriefing survey that we would continue that because it was an outstanding success, having someone down there. I wasn't aware that it didn't continue but obviously it didn't, but it was - it certainly was the result of learning by experience, and we learnt by experience that it was a good idea to have someone down there, a Club representative in Eden who could contact either Hobart or Sydney and assist the Coast Patrol and the Water Police down there, if they had any enquiries."
(transcript 21st July, 2000, p.52)

All of this evidence of Mr. Brenac was confirmed by Mr. Gregory Halls in his statements and when he gave evidence before me.

As I have said previously, Mr. Halls was the Sydney to Hobart Race Director for the CYCA from 1986 to 1994. Due to overseas work commitments he relinquished his position after 1994.

Of the CYCA contact with Eden, during his period of Directorship, he spoke of CYCA volunteers who went to Eden during the Race. Of their tasks he said:-

"Q. Where did those volunteers come from?

A. They came out of the CYC. We found in - Eden being the sort of turning point of the race, it's the last stop before you cross Bass Strait and it's historically been an area where most yachts sort of go to. The assistance given by the community of Eden is absolutely fantastic but they are - it stretches their resources to the limit. They also have to maintain from their radio communications point of view facilities for holiday makers, their everyday operations of recording and talking to local fishermen, beach parties, various things. The Police only have three officers on duty and over the Christmas period they're rather stretched. So there are additional resources needed to go in there to assist those people, who also knew - are part of the background of the people involved in running the event.

Q. So you knew these people?

A. Yes.

Q. And then volunteers from the CYCA would actually go down there, would they?

A. Yes.

Q. They would, what, take turns on watch?

A. They'd take turns - they wouldn't take turns on watch, we tried not to interfere with the normal operations of the RVCP but they would usually station themselves adjacent to the radio operator and, you know, talk about the cricket or something. We had a fax facility and telephone facility in Eden for them and it was also liaison with any yachts that had retired, people requiring assistance or transportation, things like that.

- Q. What about documentation to these volunteers down the Coast, did they get documentation?
- A. Not in a formal documentation of a written sort of set of instructions. We sent to the Coast stations usually the same bag that went out on the yachts with some additional information of phone lists. We internally had a phone list of all the key people, including quite a few volunteers. We had also sponsors. We also had included in that list was the movement of key people, you know, flight times they were travelling to and from various places, so that people knew that it was no good trying to contact somebody who was going to Hobart and would be in the air. That list went to the Coast stations in a limited form, there was no sense in them sort of knowing who the CEO of Telstra was or Kodak in those days. But they had a communications list so they could contact people in the CYC direct to the sailing office or the media centre and also Hobart. On there were the relevant phone numbers for the hospitals and emergency services and things like that.
- Q. What about the participants in the race, did they know who was in the race or anything like that?
- A. Yes. What, the Coast Guard?
- Q. Yes.
- A. Yes, they received a fairly detailed spreadsheet of the boats, their names, numbers and in some cases relevant boats we were using as radio relay boats or intended to use as radio relay boats, because we'd go through the yachts and look at their communication system and quite often who was on them and I would talk to them privately before the race to say we may call upon your assistance to go to a different frequency, because the

Coast stations are a limited Coast station, they have certain frequencies which they are licensed to operate on and to go outside those frequencies has incurred the wrath of the Spectrum Management Agency occasionally. So the personal contact once again with the briefing prior to the event was instrumental in ensuring that we could maintain that communication facility but they had that documentation so they knew the boats, they knew the people involved." **(transcript 2nd August, 2000, pp.4 & 5)**

What has been described to me by Mr. Brenac and Mr. Halls, and has not been contested, was a system that ensured:-

- (a) Applications were vetted.
- (b) The sailing office was staffed at all times and messages were passed on.
- (c) Points of contact were available at the CYCA and Hobart.
- (d) Organisers' whereabouts were known.
- (e) Organisers discussed the weather forecasts and other information.
- (f) Information was passed onto the Race Fleet.
- (g) There was always a member of the Race Management Team in Sydney.
- (h) Organisations in Eden, being the Royal Volunteer Coast Guard knew who was in the Race, the yachts and who and when they could be contacted should the need arise.

- (i) Volunteers of the CYCA as liaison officers were in Eden with the Royal Volunteer Coast Guard to facilitate and help.

It is clear on the evidence before me that the organisation referred to by Messrs. Brenac and Halls ceased after Mr. Thompson became the Sydney to Hobart Race Director. Why this occurred has not been explained. In fact Mr. Thompson does not appear to appreciate that the administration of the Sydney to Hobart Yacht Race, during the period 1995 to 1998, when he was in control, had deteriorated and led to problems.

Even to the time of giving his evidence, having told this inquest that he would soon complete an ISAF Race Management course, he did not seem to appreciate that the Race Management Team had failed in its tasks.

Mr. Thompson's inability to appreciate the problems when they arose, and his inability to appreciate them at the time of giving his evidence causes me concern that Mr. Thompson may not appreciate such problems if they arise in the future.

This, however, is a matter for the CYCA to resolve between it and its employee.

THE YACHT "BUSINESS POST NAIAD" - ("NAIAD")

"Naiad" was entered in the CYCA's 1998 Sydney to Hobart Yacht Race.

She was skippered and owned by Mr. Bruce Guy (deceased). Her crew comprised of Mr. Phillip Skeggs (deceased) and Messrs. Tony Guy, Robert Matthews, Steven Walker, James Rogers, Shane Hanson, Matthew Sherriff and Peter Keats - a total crew of nine. Her home State was Tasmania.

One of the conditions of entry was the production of a current IMS Certificate. "Naiad's" application form did annex an IMS Certificate which showed:-

- (a) A stability index of 110.3 degrees;
- (b) A calculated limit of positive stability of 112.9 degrees;
and
- (c) The certificate was endorsed "Not Valid After 30/06/98".

These figures were of great importance as the Sydney to Hobart Race had been classified by the CYCA as a Category 1 race pursuant to the Australian Yachting Federations (AYF) Racing Rules of Sailing. As such no yacht with a limit of positive stability of less than 115 degrees was eligible to compete in Category 1 races.

However prior to and including the 1998 race the CYCA had adopted a system of "Grandfathering" some competitors. In essence this allowed yachts to compete, that had a limit of positive stability of less than 115 degrees provided its limit of positive stability was 110 degrees or greater. The proviso being that such yachts had, prior to the IMS Rule's introduction, competed in a Sydney to Hobart Race.

Thus "Naiad's" IMS Certificate would allow her entry to be accepted on the limit of positive stability figures if the certificate was current. Therefore the CYCA required the owner, Bruce Guy, to furnish to them a current IMS certification before "Naiad's" application to race would be confirmed.

In order to furnish a current IMS Certificate "Naiad" was remeasured in Tasmania in accordance with the IMS Rules, on the 18th July, 1998, the measurer being Mr. Richard Fisher.

However, prior to the 18th July, 1998 the owner, Bruce Guy, had removed approximately 650 kg of internal lead ballast from "Naiad". He had also installed on the vessel additional items that weighed approximately 300 kg. Thus reducing the overall weight of "Naiad" by approximately 350 kg.

In accordance with Mr. Fisher's measurements a current IMS Certificate was issued by the AYF dated 29th September, 1998. This showed:-

- (a) A stability index of 105.6 degrees; and
- (b) A calculated limit of positive stability of 109.5 degrees.

After communications between Mr. Fisher and Mr. Anthony Mooney of the AYF a further current IMS Certificate with an expiry date of 30/6/99 was issued on the 15th October, 1998 for "Naiad".

However it showed the following:-

- (a) A stability index of 102.8 degrees; and
- (b) A calculated limit of positive stability of 104.7 degrees;
- (c) Not valid after 30/6/99.

The figures on both the September and October IMS certificates clearly excluded "Naiad" from competing in the CYCA's Sydney to Hobart Race, even pursuant to the Grandfathering Clause then in place.

However the October IMS Certificate was accepted by the CYCA and "Naiad" was allowed to race. I have dealt with the acceptance of this IMS Certificate by the CYCA in greater detail under the heading of "Race Organisation".

I pause here to note that the purpose of the stability figures required for Category 1, and indeed other category races, is of great importance from a safety point of view.

Put simply, the higher the stability of a vessel the greater the vessel's ability to recover from being "knocked down" by large waves. Also if the vessel is knocked down and inverts by 180 degrees, then, as a general rule, the time it will take in righting itself is less, the higher the vessel's limit of positive stability. However, as Dr. Renilson has pointed out in his work not every vessel with the same limit of positive stability will right itself at precisely the same time. Much will depend on the characteristics of the individual vessel. For more detail see Dr. Renilson's report and his evidence generally.

THE RACE

Having been accepted as an entrant, at 1pm on Saturday the 26th December, 1998 "Naiad", along with one hundred and fourteen other yachts crossed the start line and proceeded in the race to Hobart.

The evidence reveals that "Naiad" enjoyed a good run down the New South Wales Coast under spinnaker and then headsail.

The crew were under the impression that the weather forecast was for a south-wester of forty to forty five knots and that this was later

upgraded to a storm warning of forty five to fifty five knots. They expected the south-wester to last for some ten to twelve hours.

It is important to bear in mind that the crew of "Naiad", and many other witnesses both in their statements and in oral evidence before this Inquest, were not aware the Bureau of Meteorology, when giving a weather forecast, expected a recipient to understand that:-

- (a) Wind speeds mentioned in forecasts and coastal observations are measured as the average speed over a ten minute period. That gusts may be forty percent stronger than the wind speed given; and
- (b) The forecasts of wave and swell height are meant to represent the average of the highest one-third of the waves. Hence some waves will be higher and some lower than the forecast wave height. Some waves being 86% higher than the wave height given.

During the afternoon of Sunday the 27th December the wind increased causing the crew of the "Naiad" to reduce sail to the point of no sail at all not even a storm sail, ie "Naiad" continued under bare poles. This was done as a precaution in that whilst having the jib sail on, "Naiad" had "nearly got rolled while we had the jib on" (**Matthews page 4, 28th December, 1998**).

At sometime between 5pm and 6pm on the 27th "Naiad" was struck by a large wave beam on. Four crew were on deck at the time, viz Matthews, Tony Guy, Rogers and Skeggs.

This wave rolled "Naiad" through 360 degrees in what was described as a very short time:-

"... it went straight over, it would have been a matter of ten seconds at the absolute maximum for it to go a

complete 360." (**Matthews page 15, 28th December, 1998**)

When "Naiad" righted, it had suffered extensive damage, the mast had broken, the cabin roof was damaged, cabin windows smashed and after turning 360 degrees the below deck area had also suffered considerably with various items being dislodged from their stowed position.

"Naiad" had approximately 150mm (6 inches) of water below deck due to the 360 degree roll.

Those crew members on deck were washed overboard remaining attached to the yacht by their harness and lanyards. By various means they each managed to regain the yacht's deck, though each man had been soaked through.

Apart from the broken mast and the other damage referred to, according to Matthews (**28th December, 1998, page 5**):-

"... we didn't look to be in too bad a shape ..."

However, the navigator sent a "MAYDAY", which was received by the yacht "Yendys" and relayed to Telstra Control aboard the "Young Endeavour". "Naiad's" EPIRB was activated.

"Naiad's" motor was started, she was turned about and a course was set for Gabo Island in the hope of obtaining shelter from the storm.

Those crew that had been washed overboard now began to suffer from their immersion in the sea. Difficulty in movement of limbs was noticed and the effects of cold was noted (**Matthews 28th December, 1998, page 6**) (see Hypothermia which is dealt with in "Recommendation - Inflatable Life Rafts" and "Recommendation - Hypothermia").

At 7pm on the 27th, "Naiad" requested a rescue helicopter to remove three crew members who were suffering the effects of sea sickness and hypothermia. This message was relayed to Telstra Control through the yacht "Yendys".

At approximately 11pm on the 27th, "Naiad" was struck again by a large wave and was rolled 180 degrees. On this occasion "Naiad" did not right itself immediately but stayed upside down for approximately five (5) to six (6) minutes.

There had been only two crew on deck at the time that "Naiad" rolled - Robert Matthews and Phillip Skeggs.

Robert Matthews had his harness tethered near the rear of "Naiad" whilst Phillip Skeggs had his harness tethered near the companionway steps (**Matthews 28th December, 1998, page 7**).

Robert Matthews found himself trapped in the back of the cockpit of the upturned yacht. He managed to breathe in a pocket of air caused by a wave and managed to undo his harness from the lanyard. He maintained a hold on the runners of the broken mast and tried to climb onto the upturned hull of "Naiad". He made his way from one side of the vessel to the other by swimming and finally rested by sitting on what he thought was the boom of the upturned yacht, though this may have been the remains of the broken mast. He remained in this position for one and a half to two minutes when the yacht was again struck by a wave which righted it. Mr. Matthews was brought back onto the deck of "Naiad" by the action of this wave (**Matthews 28th December, 1998, page 9**).

His actions as described by Mr. Matthews from the time that "Naiad" was struck by the wave, lend credence to the estimate that the "Naiad" was inverted for five (5) to six (6) minutes given by Mr. Tony Guy who was trapped in the upturned hull of the "Naiad" during this time (**Tony Guy 28th December, 1998, page 3**), and Mr. Matthews' own estimate of the duration of the upturn of:-

"... anywhere between two and five minutes."
(Matthews 28th December, 1998, page 11)

Having regained the deck of "Naiad", Matthews immediately secured his harness lanyard and tried to steer the vessel.

He then saw that Phillip Skeggs:-

"... had been trapped under some stray ropes and he was pinned down hard, right next to the helmsman's seat, so he was right at the end of his harness tether, probably six feet after where he'd started and just wrapped up in ropes as if he'd been trying to get out from the ropes."
(Matthews 28th December, 1998, page 10)

Mr. Matthews then began calling for assistance to the remainder of "Naiad's" crew that had been trapped below decks. Crew members responded to Matthews' calls and CPR was performed on Mr. Skeggs for some fifteen minutes. Unfortunately Mr. Skeggs did not respond to the CPR given by his crew mates.

When "Naiad" was rolled on the second occasion Steven Walker was below decks. He estimates the yacht was upside down:-

"... for probably four to five minutes." **(Walker 28th December, 1998, page 11)**

The upturned yacht was filling with water and the crew were trapped in the upturned hull. They tried to kick out the hatch and started to push out life rafts. Walker could hear Matthews calling to Skeggs through the hull.

A wave struck the upturned hull of "Naiad" and the yacht righted itself. Once righted "Naiad" had about 75cm to 90cm (two foot, six

inches to three feet) of water inside the hull. Walker and Bruce Guy at that stage were:-

"... Bruce and I were trying to manoeuvre the life rafts and Bruce arched heavily as though there was a pain in his chest and his eyes rolled back, I grabbed him and assumed that he must have been having a heart attack."

Mr. Walker then sat with Mr. Guy's head in his lap. Mr. Guy was still breathing at this time (**Walker 28th December, 1998, page 12**). Mr. Walker continued to hold Mr. Guy in this position, unsure if Mr. Guy was still alive.

The below deck area of "Naiad" was in a state of complete disorganisation. Every item had dislodged from its stowed position, the freezer had emptied its contents and, as the engine was operating at the time of the roll-over diesel fuel had emptied out and covered everything (**Walker 28th December, 1998, page 13**).

A life raft was passed out and activated, it was then tied alongside the vessel.

The crew began to bail the water out of "Naiad" and reduced the hull water content to approximately 500mm (eighteen inches). They did not bail further because:-

"... there was probably only eighteen inches of water left in the boat, so that we could sit on the bunks and the ... would be dry and we weren't going to take out too much water cause we wanted the boat to stay stuck in the water, meanwhile Shane Hanson and one of the other guys got the storm jib and the spinnaker tied into ropes and threw them over the side of the bow so they would act as a drogue and hold the boat heading into the waves." (**Walker 28th December, 1998, page 16**)

The second roll and inversion had caused the engine and all electronics aboard "Naiad" to fail. Not having a waterproof VHF radio the crew had no means of communicating:-

"... so we were just there by ourselves." (**Walker 28th December, 1998, page 16**)

"... we did let off about five or six red flares." (**Walker 28th December, 1998, page 19**)

Both "Naiad's" life rafts were placed over the leeward side and tethered to the yacht. At approximately 3am (28th December) a large wave again struck the "Naiad" and the life rafts, it was at that time that Walker saw that the life rafts were gone (**Walker 28th December, 1998, page 18**).

I pause here to note the evidence of Captain Crispin George, Royal Australian Navy, and his caution that the purpose of the "stability pockets" on the bottom of the life rafts are that they fill with water and restrain the life raft from moving freely through the water. When tethered to a moving yacht the life raft will resist being pulled through the water, the strain being placed upon the tether or its anchor point, one of which will eventually fail.

At approximately 8am on the 28th December the remaining crew of "Naiad" were evacuated from the vessel by helicopter. Bruce Guy and Phillip Skeggs were left aboard "Naiad" having been presumed dead by the remaining crew.

"Naiad" was later retrieved by a Police boat with both deceased still on board.

Bearing in mind the above facts, there was initial concern that a yacht with the low limit of positive stability of "Naiad" was susceptible

to being knocked down to 180 degrees and remaining inverted for a greater time than those yachts that complied with the Category 1 race requirements.

There was also concern as to the accuracy of the IMS Certificate of the 15th October, 1998. This question had been raised in a document prepared by Mr. David Lyons, Naval Architect and Yacht Designer.

A third question was, what were the factors which led to the death of Mr. Skeggs?

This question arose from the harrowing experience of Mr. Matthews after "Naiad" rolled for the second time. He told of being unable to release the buckle of the lanyard from his safety harness because of the water pressure exerted on his body when being dragged through the water by the "Naiad". It would appear that the pocket of air caused by the wave that he spoke of, enabled Mr. Matthews to recover enough to release the lanyard buckle.

It was hypothesised that Mr. Skeggs was not as fortunate as Mr. Matthews and remained in a position where he could not release himself from the lanyard to which his safety harness was attached.

I therefore decided that these concerns were best addressed by:-

- (a) Determining the accuracy of the IMS Certificate of the 15th October, 1998. This question was examined by Mr. Andrew Dovell, Marine Architect and Yacht Designer. He performed tests on a yacht which was similar to "Naiad" and examined the IMS Certificates of similar yachts; and
- (b) Determining the knock down characteristics of the yacht "Naiad" in a range of calculated limits of positive stabilities beginning with 104.7 degrees. These characteristics were examined over many weeks in a series of tests performed at the Australian Maritime

College at Launceston, Tasmania by Dr. Martin Renilson;

- (c) Determining the ease with which the release mechanism of harnesses could be operated under pressure. This question was examined by Mr. Hugh Hurst of the Australian Maritime College, Launceston, Tasmania.

Their conclusions are as follows:-

(a) MR. ANDREW DOVELL

- (i) He found the yacht "Naiad" was a one-off design, having been built in New Zealand. However it was very similar in the hull to the Australian built FARR 40's. The most significant difference being that the Australian FARR 40s are approximately 17.5cm (7 inches) longer LBG (length between girths) whilst all other primary design parameters are almost identical. The greater difference in the overall length of the Australian FARR 40s was 40cm (16 inches) but this was due to the longer transom scoop of the Australian made 40s. This had no influence on the stability characteristics of the yachts. Thus the Australian built FARR 40s could be regarded as sister ships to "Naiad" for the purposes of his report.

- (ii) He stated that:-

"Most of the production built FARR 40s have been measured for IMS at some point

over the last five years. While these boats are all configured slightly differently in terms of fittings and fixtures, the primary difference between them is the quantity of internal ballast carried. So the IMS Certificates for these boats provide a fairly good guide as to the displacement to righting moment and the displacement to positive limit of stability relationship for the FARR 40s as well as for "Naiad".

Mr. Dovell then showed in a graph at Annexure 4 of his report that there was good agreement between the theoretical displacement to righting moment relationship produced by the IMS data for "Naiad" and the FARR 40s.

(iii) In regard to the October 1998 IMS Certificate for "Naiad" he said:-

"3.3 The October 1998 certificate does not appear to be consistent with the displacement to righting moment relationship discussed in the previous section of this report; neither in comparison with older stability data for the "Naiad" itself, nor with the other FARR 40s. This becomes very evident when the October 1998 data is plotted on the displacement Vs righting moment graph with the other data; refer to the graph in Annexure 8.

3.4 The inconsistency of "Naiad's" October 1998 and 1997 IMS Certificates also becomes apparent when considering the

vertical centre of gravity for the two configurations.

- 3.5 As part of its stability data the IMS Certificate also calculates the vertical centre of gravity for the given configuration. In the case of "Naiad's" 1997 certificate the displacement was reported as 6020kg at 0.081m below the reference waterline. For the October 1998 certificate the displacement was documented to be 6278kg at 0.106m above the reference waterline; (refer to Annexures 6 and 7).
- 3.6 To effect this change would require adding 258kg 4.1m above the reference waterplane. This is not a realistic scenario.
- 3.7 Given both of these bits of evidence I suspect an error in either the floatation measurements (the freeboards) or the righting moment experiment associated with the October 1998 certificate.
- 3.8 Referring to the graph in Annexure 8, if the reported displacement of 6280kg is correct, the righting moment appears significantly too low.
- 3.9 On the other hand if the righting moment of $130.7\text{kg}\cdot\text{m}/\text{deg}$ is correct, then the displacement of 6287kg is too high; a displacement of approx. 5575kg would be more in keeping with the theory and

with the fleet data presented in Annexures 5 and 8.

3.10 I strongly suspect the latter to be the case based on Richard Fisher's, (the Tasmanian IMS measurer) notes and his correspondence with the AYF office in Sydney which took place during the measurement process leading to the 15th October, 1998 certificate."

- (iv) He noted that the IMS Certificate of 29th September, 1998 showed a limit of positive stability of 109.5 degrees. This IMS Certificate was issued on the original measurement of Mr. Fisher.
- (v) Mr. Dovell then performed experiments on the Australian FARR 40 - Nadia 4. He was assisted in these experiments by Mr. John Anderson, the IMS measurer for New South Wales and Mr. Richard Fisher who had measured "Naiad" in Tasmania.

There were three objectives to these experiments, being:-

- (a) To determine the relationship between displacement and righting moment for the FARR 40s by physically modifying the internal ballast in steps and measuring freeboards and righting moment in each configuration;
- (b) To evaluate the measurement procedures used by Richard Fisher in reference to the more practical techniques of the New South Wales measurer John Anderson;

- (c) The third objective was to see if it was physically possible to modify the internal ballast to achieve the changes implied by "Naiad's" 1997 and October 1998 IMS Certificates.

I do not need to detail the actual experiments as they are fully set forth in Mr. Dovell's report, suffice it to say at paragraph 4.18 he said:-

"4.18 The conclusion from this experiment is that if the October 98 (IMS) certificate were valid, then the implied change of ballast is an increase of approx 250kg, and that it would have to have been added well up in the mast, as adding ballast even on top of the coachroof causes the righting moment to go up, albeit at a lesser rate than when it is added in the bilge."

His overall conclusions were:-

- "5.1 The "Naiad's" 1998 certificate dated 15th October, 1998 was in error. The principal error was the forward freeboard measurement. This in turn produced false calculations for displacement and limit of positive stability as well as effecting other aspects of the certificate including allowable crew weight and rating.
- 5.2 The original measurements taken by Richard Fisher on 18th July and resulting in the September 98 certificate agree well with the

theoretical calculations and the FARR 40 fleet data for righting moment at a displacement of 5550kg. Therefore I consider it most probable that these measurements were not in error and that the certificate dated 29th September, 1998 was an accurate representation of the condition in which the yacht entered the 1998 Sydney to Hobart Yacht Race. The relevant parameters for the yacht in this condition are a displacement of 5547kg, a righting moment of 130.7kg*m/deg, a limit of positive stability of 109.5deg, and a stability index of 105.6deg."

REPORT OF DR. MARTIN RENILSON

1. Experiments were conducted on a 1/12.5 scale model of the "Business Post Naiad" in waves in the towing tank at the Australian Maritime College, Launceston, Tasmania.
2. Two different experimental procedures were used:-
 - (a) Capsizing/self-righting the model in a single breaking wave; and
 - (b) Self-righting the model in steep irregular waves.
3. Four variations of the limit of positive stability were tested, being:-

L.P.S. 104.7 degrees, 110 degrees, 115 degrees and 119 degrees.

4. In addition two variations of the limit of positive stability were tested to represent the condition of 4000kg of water on board.
5. The conclusions that Dr. Renilson and his team drew from these experiments were:-
 - (a) If the limit of positive stability is decreased from 119 degrees to 104.7 degrees the yacht requires a smaller wave to capsize it in beam breaking waves;
 - (b) If the limit of positive stability is decreased from 119 degrees to 104.7 degrees the yacht is much less likely to self-right under the action of waves; and
 - (c) When the yacht has 4000kg of water on board, the effect of the limit of positive stability on the size of wave required to capsize it is much less, however the effect of the limit of positive stability on the likelihood of it self-righting is similar to the effect when there is no water on board.

Dr. Renilson was concerned to point out in his oral evidence that:-

- (a) All vessels will recover to their upright position if knocked down to just below their limit of positive stability eg LPS 120 degrees knocked down to 119 degrees;
- (b) However, vessels with the same limit of positive stability if inverted will not necessarily spend the same amount of time in the inverted position before righting; the reason for this is that vessels differ in their superstructure configurations and therefore react differently in the inverted position.

Thus, though as a general rule, the higher the limit of positive stability of a vessel the less time the vessel will remain in the inverted position, is essentially valid, it must be borne in mind that each vessel will have a unique deck configuration that will dictate the length of time it will spend in the inverted position.

REPORT OF MR. HUGH HURST

1. Tests were conducted over a two day period in September 1999, which tested a number of yacht safety harnesses, lanyards (tethers) and release systems.
2. The aims of the tests were:-
 - (a) To determine the ease of operation of harness release mechanisms under conditions simulating a person who has fallen overboard from a moving vessel; and
 - (b) To determine the ease of operation of release mechanisms under conditions simulating a person who has been dragged under water by a sinking vessel.
3. The tests were conducted at the Australian Maritime College pool and in the mouth of the Tamar River, Tasmania. The personnel involved were from the Tasmanian Police and were divers from the Marine Search and Rescue at Hobart.
4. Mr. Hurst's findings were:-
 - (a) All harness/lanyard release systems trialled were successfully operated from the harness end in all 'drag down' experiments;

- (b) All lanyard release systems trialled were successfully operated from the lanyard attachment point (on the weight on the pool bottom) in all 'drag down' experiments;
- (c) Harness release was not achieved with 25 metres on four of eleven trials at a drag speed of four knots;
- (d) Harness release was achieved at a distance greater than 20 metres on five of eleven trials at a drag speed of four knots;
- (e) Harness release was achieved at a distance of under 15 metres on two of eleven trials. In both instances the release mechanism was an 'on load' remotely activated system (Stormy Seas 0008 Lanyard);
- (f) Harness release was not achieved during three of three trials conducted on the Tamar River at eight knots (all were 'off load' systems).

5. His conclusions were:-

- (a) Operation of lanyard release systems may prove difficult under conditions likely to be experienced at sea such as; darkness, cold sea temperatures (resulting in thermal shock), water turbulence associated with a sinking vessel and loss of manual dexterity due to cold conditions;
- (b) All racing yacht crews should be encouraged to become familiar with the harness and release mechanism, as well as any limitations associated with their equipment;
- (c) Training videos similar to the video footage obtained from these trials should be produced and distributed to yacht clubs;

- (d) `Off load' release systems appear to be awkward to operate due to the need for the operator to `un-weight' the hook from the harness or tether point before release can be effected;
- (e) An `on load' release system appears to overcome the difficulties associated with needing to `un-weight' the tether;
- (f) Additional research into harness/lanyard release systems should be undertaken.

FINDINGS

Based upon these facts I find as follows:-

1. The yacht "Business Post Naiad's" IMS Certificate of October 1998 was incorrect, that the limit of Positive Stability of "Naiad" was, in all probability, 109.5 degrees.
2. Relying on the experiments of Dr. Renilson I find:-
 - (a) That the lower a vessel's limit of Positive Stability the more susceptible it is to being knocked down and being inverted;
 - (b) In general the higher a vessel's limit of Positive Stability the sooner it will be righted from the inverted position;
 - (c) Because of the different deck configurations of vessels no recovery time from the inverted position can be accurately predicted for any limit of Positive Stability.

3. That though the tests carried out by Mr. Hurst shows degrees of difficulty in releasing harness lanyards, it is not clear whether Mr. Skeggs died as a result of:-
 - (a) Not being able to release his harness from the lanyard;
or
 - (b) Being entangled in the ropes as described by Mr. Matthews; or
 - (c) A combination of both (a) and (b).

I find therefore that Phillip Charles Skeggs died of immersion on 27th December, 1998 in the Tasman Sea off Eden when the yacht "Business Post Naiad", of which he was a crew member, was struck by a wave and overturned, he becoming entangled in equipment and remaining underwater whilst the said yacht was inverted.

4. I find that Bruce Raymond Guy died of a natural cause to wit ischaemic heart disease on the Tasman Sea off Eden, whilst competing in the Sydney to Hobart Yacht Race as a crew member of the yacht "Business Post Naiad".

THE YACHT "WINSTON CHURCHILL" ("WINSTON CHURCHILL")

"Winston Churchill" was entered and took part in the CYCA Sydney to Hobart Yacht Race.

It was skippered by its owner, Richard Winning. The yacht had nine crew including Richard Winning, they being Bruce Gould, John Stanley, John Gibson, John Dean (deceased), James Lawler (deceased), Michael Bannister (deceased), Paul Lumtin and Michael Rynan. The yacht's home State was New South Wales.

The "Winston Churchill" was built by Percy Coverdale in 1942. It was a sound construction being made of hardwood ribs and Huon pine hull planking. Richard Winning purchased her in 1995 and had her surveyed at that time by Ian Perdriau a boat builder.

According to Mr. Perdriau he recommended work be undertaken on the yacht, but this was largely of a cosmetic nature. His opinion at the time of his survey was that the yacht was seaworthy.

The work recommended by Mr. Perdriau was undertaken by Mr. Winning along with other work on the yacht.

In the weeks before the 1998 race "Winston Churchill" was slipped and maintenance work was carried out on her. Having been prepared for the 1998 race she was brought to the CYCA Marina and tied up with her starboard side to the wharf. The crew joining her on the morning of the Race (26th December).

Between 7am and 7.30am Saturday the 26th December Geoffrey Bascombe, using diving equipment, was in the waters of the CYCA Marina giving a last minute clean of the hulls below the waterline of several race competitors. Some time between 8.30am and 9am Mr. Bascombe had completed his hull cleaning tasks and prepared to leave the water via the CYCA Marina's boat ramp. In order to reach the ramp

it was necessary for him to swim past the port side of the berthed "Winston Churchill".

Whilst swimming past "Winston Churchill", about three to four metres (ten to twelve feet) away from her he saw what he has described as "a mark at the bow".

Having seen this he swam closer to "Winston Churchill" and inspected the bow area. He saw that where the port side hull planking met the stem was a line of missing caulking, 30cm (one foot) long, the width of a pencil or biro (approximately 7mm or a quarter of an inch) and the thickness of a pencil in depth. The line was black and had a black rubbery compound inside. Mr. Bascombe thought that this was a silastic compound. He stated that this affected area was approximately 25 to 30cm (ten to twelve inches) from the water line.

This loss of caulking in what is termed the rabbit line is the subject of the opinion of two boat builders, Messrs. Perdriau and Quilkey. I will discuss their opinions below.

Mr. Bascombe, being concerned at what he saw as missing caulking from the rabbit line, voiced these concerns to three people. He was unsure whether two of these were on the wharf and one aboard "Winston Churchill", or if there were two aboard and one on the wharf. Though he was unsure of their positions, he was sure that:-

- (a) He told them caulking was missing from the port bow; and
- (b) They indicated that they would let the skipper of the "Winston Churchill" know what he had discovered.

I have seen the statements of the survivors of "Winston Churchill" and listened to their oral evidence. Each has denied being either of the three individuals referred to by Mr. Bascombe.

Richard Winning, both in his statement and oral evidence, states that no mention was made to him of missing caulking at the port bow.

At 1pm on 26th December, the crew having joined her, ("Winston Churchill") crossed the start line without incident and proceeded south towards Hobart.

Her crew were aware of the weather forecast given by Telstra Control at the 8pm radio sked on the 26th. But, it would appear, they did not fully appreciate its significance, as John Stanley, "Winston Churchill's" Sailing Master and an extremely experienced yachtsman, said (29th December, 1998, page 8):-

"The forecast was then, from the radio relay vessel, was for this front to possibly turn back to the west, which is an unusual scenario, it normally doesn't do that sort of thing, and the next day there was going to be some gusts, possibly up to 50 knots, which is fresh, so we had that in the back of our minds, that it was going to be fresh and we needed to be aware of putting the right gear on and once again getting comfortable."

During the morning and early afternoon of Sunday 27th the winds and seas increased. Richard Winning said:-

"We had a mean wind speed prior to losing the vessel of about 55 knots, the highest reading I saw was 60, and I would have thought the mean was around 55 knots. The boat was doing very well, proceeding approximately 180. We were steering and doing about five and a half, six knots, the boat was handling it well, in my opinion, everything was quite satisfactory, I was quite happy the way the boat was going. We then came, we were more or less quartering the seas I suppose at that stage, some were larger than others but none, none particularly frightening, until we got this one breaking just in the

wrong spot." **(Richard Winning, 29th December, 1998)**

The surviving crew members of "Winston Churchill" were all of a like opinion, that is, until the actual wave that caused damage to "Winston Churchill", there had been no cause for alarm and the yacht was handling the weather conditions well.

It is also clear from their statements and oral evidence that as far as the weather was concerned they were taken by surprise. Indeed John Stanley said:-

"There was no doubt about it, that that weather pattern changed into a low depression which became basically a cyclone low ...

And it happened so fast and as we talked about just a while ago that you know, that there's a report out that Wilsons Promontory had forecast it or not forecast it, had recorded 90 knots at 11am. Now if the fleet had known that they wouldn't have been putting themselves into those situations. I know we wouldn't have. We were still going on the 50 knots, possible 60 sou-west, but then theoretically turning to the west, so I mean that's what we based our information on." **(John Stanley, 29th December, 1998)**

At approximately 4.30pm on the afternoon of Sunday the 27th two crew members were on deck, Richard Winning, who was steering and John Dean. What occurred next is best described by Richard Winning:-

"About 4.30 I should've, I should say was around the time we got hit by this wave. I, I, I'm not, not, never been good at judging the height of waves so I couldn't say what it was except to say it was a good deal higher

than the top of the mast so, you know, it'd have to be 60 feet, I should think, not so much the size of the, the wave that concerned me as, as its steepness. It was a very steep wave and breaking at the top when we started to climb up it. We got about halfway up, my intention was to try and just get up as quick as I could and nip right over the top of it, but we just didn't have the pace for that and the shape of the wave didn't, wouldn't have allowed it anyway unless we were going a good deal faster than we were. It picked us up, threw us down on our side. At that stage I was steering, John Dean was on watch with me, sitting beside the helm. That wave picked the, picked the boat up and just threw her down on her side, broke on top of us, John and I were swept over."
(Richard Winning, 29th December, 1998, p.9)

"Winston Churchill" was not rolled by this wave but was knocked down so severely that serious damage was sustained by her. John Stanley described it as like "hitting a brick wall." **(John Stanley, 29th December, 1998, p.11)**

"Winston Churchill's" three coach house windows on the port side were smashed. The port side bulwark had been damaged to the extent that approximately two metres (6 feet) had been carried away in the vicinity of the chainplates **(Richard Winning, 29th December, 1998, p.3)** **(John Stanley, 25th December, 1998, p.12)**. But of greater concern was that "Winston Churchill" had been damaged below the waterline on the port side. There is no firm evidence on precisely where or what this damage was. However the survivors believe it was below the port side chainplates, the mast being stepped about one third of the vessel's length from the bow.

As a result of this hull damage the "Winston Churchill" began to founder. Bruce Gould, who had been below decks took over the helm and described the "Winston Churchill's" situation as:-

"Becoming to me, pretty obvious that the, the boat had taken a lot of water and I was pretty worried about that, so I got John Stanley to check the boat below, and we couldn't see visibly where it was coming in, but I guess my feeling is that we probably created some, some leaks down in the bottom of the mast section, probably around where the, where the boat curves down to, to the keel. And it was pretty obvious we were taking a lot of water, we dropped the headsail, gradually as we became, apparent to me that the boat was getting lower and lower in the water and wasn't looking too good. I then got the boys to get the life rafts on deck, we got everyone into a life jacket, and set ourselves up to see what was going to happen, but I, I had a gut feeling that the thing wasn't lookin' too good, and I didn't think we were going to be there for too long." (**Bruce Gould, 29th December, 1998, p.3**)

Richard Winning proceeded to send a Mayday call. He found that:-

- (a) the HF radio was not working;
- (b) the main GPS would not work, it having been swamped; and
- (c) a portable GPS did not appear to be functioning properly.

As a consequence he used the VHF radio to broadcast the Mayday on Channel 16. This was acknowledged by Mr. G. Ticehurst on board the ABC (Australian Broadcasting Commission) helicopter. (**Richard Winning, 29th December, 1998, p12**).

The position of "Winston Churchill" that was broadcast by Richard Winning was a "guesstimate" (20 miles south east of Two Fold Bay). **(Richard Winning, 7th July, 1999, p.11)**

Unknown to Richard Winning the Mayday he sent was also heard on the bridge of the "Young Endeavour". It has been estimated by Lieutenant Commander Galletly, RAN, Captain of the "Young Endeavour" that he was approximately ten nautical miles from the position given by Richard Winning.

"Winston Churchill's" life rafts were brought on deck and the crew waited until the vessel's decks were awash before taking to the life rafts. It is uncertain exactly how long it took the "Winston Churchill" to sink but it would appear from the evidence to be within the time span of twenty to thirty minutes. According to Bruce Gould **(29th December, 1998, p.18)** the crew abandoned "Winston Churchill" at approximately 5.30pm on 27th December.

There were two life rafts aboard "Winston Churchill", they were:-

1. LIFE RAFT `A' a PRO SAVER 6 MAN, oblong in shape which was supplied by RFD (Australia) Pty Ltd. Upon abandonment its occupants were, John Stanley, John Gibson, John Dean, Michael Bannister and James Lawler.
2. LIFE RAFT `B' 4 MAN, round in shape supplied by RFD (Australia) Pty Ltd. Upon abandonment its occupants were Richard Winning, Bruce Gould, Michael Ryan and Paul Lumtin.

"Winston Churchill's" EPIRB was taken into life raft `B' and both life rafts were roped together. However, the seas soon separated them and they consequently drifted apart. Occupants of life raft `B' last

saw life raft `A' just prior to darkness (**Richard Winning, 29th December, 1998, pp.4 & 5**).

I will now deal with the events that occurred aboard life raft `A' before dealing with the occurrences aboard life raft `B'.

LIFE RAFT `A'

From the time of abandonment of "Winston Churchill" the occupants of life raft `A' were buffeted by the seas but not capsized. A sea anchor had been deployed from the raft but its line had only lasted approximately fifteen minutes before breaking (**John Stanley, 29th December, 1998, p.15**). This state of affairs continued at least until thirty minutes past midnight, that is 12.30am on the morning of Monday 28th December, 1998. It was at that time that John Gibson looked at his watch (**John Gibson, 29th December, 1998, p.16**).

Some time shortly after this time the life raft was struck by a particularly large wave that tipped the raft upside down. The occupants now found themselves standing on the canopy of the raft and the inflated tubing that supported the canopy.

This position was found to be more stable than the correct way up. The raft being less prone to being tossed and buffeted by the seas.

However, the difficulty that then faced the occupants was that the raft in this position did not allow fresh air to enter the confined space. As John Gibson described it:-

"However, it was quite clear that we had a problem with oxygen and air and we were in a sealed situation." (**John Gibson, 29th December, 1998, p.17**)

The occupants considered their options and decided against trying to right the raft as this would entail someone going outside. In order to do that it would require that person to remove his personal flotation device (life jacket). Nor were any of the occupants conversant with techniques of righting capsized life rafts.

(It is necessary to note here that none of the occupants of the life raft had actually been trained in life raft or survival at sea courses. This fact is of concern considering the occupants were experienced sailors and some had been for many years. I will discuss this further when I discuss the evidence of Mr. Tony Boyle of the Australian Maritime College).

Faced with this dilemma and the critical shortage of oxygen, the occupants made the decision to cut a small hole in the floor, which was now the roof, so that air could be taken into the raft. The incision was made and the occupants found that they could now breathe more easily. They were able to obtain air into the raft by pushing the roof up and down. It was, effectively a bellows type action.

This situation did not remain for long. Within ten minutes the life raft was again struck by a wave and after being tossed and buffeted was brought to its righted position. Unfortunately the incision in the raft's floor began to tear and the canopy to disintegrate. As John Gibson described it:-

"In my opinion there was not more than ten minutes then passed before there was another large explosion of water and we were again thrown a considerable distance and spun in the raft with bodies going everywhere and ended up right way up. At that stage we became [aware] that a section of the floor had ripped and it was continuing to rip, the canopy had also started to disintegrate. We remained inside the raft and the remnants of the raft in that position and was struck by several other large waves with similar results of being thrown around and on each occasion the floor of the raft further disintegrated as did

the canopy. We reached a stage where we were still inside the raft, it was dark and we were mainly supporting ourselves on the pneumatic section, which would either be in the upright position, which is the position the raft would be, had we had a floor and the canopy section would make the roof, or otherwise the raft had turned over and it would then become a bottom section, either way it really didn't matter very much." **(John Gibson, 29th December, 1998, p.18)**

The occupants remained clinging to the remains of the raft for some time and seemed to be able to manage in this way. However, without warning the occupants and the raft's remains were picked up and tossed and carried a considerable distance. John Gibson said:-

"Without any warning at all, without even a sound, at terrific speed into what became tumbling white water, it was an extraordinary experience, I was travelling at very fast speeds. It was as if I'd cracked the biggest wave of my whole life. And I continued on in this manner, it was just rushing, tumbling, noise deafening experience ...

The subsequent experience was like moving in a very, very large surf, in a very, very large wave, at high speed over a considerable distance." **(John Gibson, 29th December, 1998, pp.20 & 21)**

When the raft remains settled only John Gibson and John Stanley were still clinging to the raft's inflatable tubing. (Gibson had had the foresight to clip his harness to the pneumatic part of the raft (**transcript 21st March, 2000, p.66**)). They both saw two figures in the water about 75 - 100 metres away across "white water". One of those figures had a strobe light activated and he was believed to be James Lawler (**John Gibson, 29th December, 1998, p.22**).

The inflatable tubing of the raft was then taken by the wind and sea and Gibson and Stanley lost sight of the figures in the water.

Both Gibson and Stanley remained clinging to the tubing of the raft throughout the remainder of the night of the 27th/ 28th December. With dawn on Monday 28th the weather conditions gradually moderated. Gibson and Stanley remained in this position throughout daylight of Monday the 28th.

John Gibson stated of this time:-

"The water was coolish, I believe I was very fortunate in that I was wearing thermal underwear, a Snug, an S-N-U-G, which is fleece lined vest. I also had on a Henry Lloyd buoyancy vest, I had a Henry Lloyd state of the art full jacket and pant-suit on and over that I also had the Mae West jacket. The Mae West jacket on the occasion of the big wave was swept off my body but remained attached around my waist ... John Stanley had also lost his Mae West jacket altogether on that occasion.

From about 4 o'clock onwards there was a lot of aeroplane activity and we attempted to attract attention and there was one small plane which appeared to pass in our direction, but not directly overhead and it wouldn't have been probably 1700 hours I guess at that stage. We attempted to signal it by waving my yellow Mae West because we were very conscious of the fact that the only colours which were available to the air was the top of our wetsuits and that we were in a black rubber ring, that would not be very conspicuous." (**John Gibson, 29th December, 1998, p.25**)

They were not in fact seen until approximately 8pm that night, he says:-

"At that stage I had illuminated my personal strobe, it was quite dark, and John was flashing a quite bright hand-held torch, so we assumed that between the two of us we caught their attention." (**John Gibson, 29th December, 1998, p.26**)

They were eventually rescued by helicopter.

The body of Michael Bannister was recovered from the water by RAN helicopter at approximately 7.50am on Tuesday 29th December, 1998.

The body of James Lawler was recovered from the water by RAN helicopter at approximately 8.45am on Tuesday 29th December, 1998.

Despite searches the body of John Dean was not recovered.

LIFE RAFT `B'

As referred to above "Winston Churchill's" life rafts were initially roped together however the sea conditions soon separated them.

Shortly after being separated the sea anchor that had been deployed broke away from the raft. Some time after this, though still in daylight, raft `B' was capsized by a wave.

Unlike the occupants of raft `A' the occupants of raft `B' decided to right their raft. To do this Richard Winning removed his personal life preserver and then went outside the raft. He used the righting strap attached to the raft's bottom. To do this he had to get down to and through the entrance in the canopy which was underwater, then make his way to the raft's upturned bottom. He was successful in righting the raft

and re-entered it. It was an extremely brave thing to do in those conditions.

During the hours of darkness of the 27th/28th December raft `B' was again capsized by a wave. Again when this occurred Richard Winning went outside the upturned raft and righted it.

In doing this there can be little doubt that Mr. Winning risked his life on both occasions. Had he lost his grip at any stage then without his personal life preserver (life jacket), which he had to remove to get outside the raft, he would have stood little, if any, chance of survival in the sea.

He undertook this task on each occasion because he considered it his duty, as skipper of "Winston Churchill", to do so (see **transcript 21st March 2000, p.22**).

During the night of the 27th/28th the life raft suffered damage - a slit to its floor area. It was not clear to the survivors just how this slit in the floor occurred. It may have been as a result of the life raft's gas bottle, (which was meant to be secured under the raft), becoming free and striking repeatedly the underside of the raft's floor. Another view was the slit may have been caused by the broken metal telescopic aerial of "Winston Churchill's" EPIRB which was tethered to the raft. The only thing that is certain is that this required the constant bailing of the raft.

A further problem developed when it was discovered that the lower inflatable tube of the raft was leaking. To compound this problem the raft's pump came in three separate parts - the pump itself, the tube and a small connection which connected the tube with the valve of the lower inflatable tube. The connection was missing, probably having been washed out of the raft during the two capsizes.

Being unable to inflate the lower tube the bottom of the raft began to assume a `V' shape with the occupants being pushed together so that eventually they were in a standing position.

The occupants then managed to connect the pump tube to the lower inflatable tubes valve by modification and sheer force. They then pumped and bailed, and as a result were able to restore the raft to a semblance of its intended shape. **(Bruce Gould, 29th December, 1998, pp.6 & 7)**

In the afternoon of Monday 28th December those on the raft attracted the attention of a fixed wing aircraft by the use of the life raft's flares. Some twenty to thirty minutes after this the survivors were rescued by helicopter.

Before I go further and discuss the evidence of the various experts who have reported on this tragedy I wish to draw attention to the fact that each survivor both from raft `A' and `B' was critical of his raft and its contents. Without going through each statement I believe that their collective criticism is summed up in the words of Paul Lumtin, who was in life raft `B,' when he said after his rescue:-

"Well, I think the first thing that, I mean, the most obvious thing is that it's definitely not a four-man life raft. Just not even nearly. I suppose when you jump off a boat that's sinking, anything's good, and it doesn't matter how small it is. But in terms of, in terms of survival on a life raft like that, we, we wouldn't have gone another day. It was, it was just a poorly-built raft, it was, you know, poor construction. I don't think it was nearly well enough equipped with any of the safety equipment that you would expect to see on something like that. I mean, even the ties on the door, you know, the, these stupid cotton ties you had to tie up. I mean, you can't untie those things once they get wet. And especially when you flip over and you have to untie them quickly, there's just nothing you can do. So, we, we ended up having to, to cut those and then we couldn't tie them back up again. The provision bag, every, everything was stuck in one big bag, which meant that if

you wanted to get something out of the bottom of the bag, you had to pull all the provisions out to try to get to something, which is not an ideal situation. What you really should have is, maybe four or five different bags that are actually attached to the inside of the raft, so that when you do roll over, they don't go out the door. The, so that was, that was the biggest problem that we did have, because obviously when we were looking in the bottom of the raft to find things we needed, sorry, in the bottom of the bag to try and find things, we had to pull everything else out. And when you're in a very small raft and it's filling up with water and things are floating around, you've just got nowhere to put anything. You can't see anything and, so that was, that was one of the biggest problems. I think the next thing which is the construction of it. This thing just got flipped over and, I mean, the sea anchor broke after two minutes, you know, I mean, that's just not, not good. The ropes that they use to, I mean, the ropes on these rafts were just not the kind of ropes that you need for any sort of condition. They just weren't strong enough, they were tiny little ropes. Most of them broke, I'm sure the sea anchor rope broke. The, the construction of the bottom of the raft was only one-ply material and of course the canister came up and put a hole through it, and I'm sure the, I'm sure you could have actually put a hole through it with your foot. It just felt that, that flimsy. There was a foot pump on board which was obviously designed to inflate the raft again should it go down, which, I mean, the connection just did not fit. Now, in the instructions that we read quite some time after that, which, I mean, you shouldn't have to read instructions in this sort of situation, it should just be, keep it simple, stupid. And we pulled this foot pump out and the, the connection on the end just did not fit in, and so when it was like, well, where's the, you know, where's the little lug? Well, you can't find a black lug out of a rations bag you've pulled apart to try and get a foot pump

out. I mean, you, you expect that you just pull it out and put it straight in. So, if it wasn't for our persistence in modifying the end of it and sticking it in until the bloody thing did work, it, yeah, we would have been, would have been sinking. So that was a problem. I mean, there's, yeah, I suppose I've got a whole lot of things to say about life rafts, but ..." (**Paul Lumtin, 29th December, 1998, pp.19, 20 & 21**)

The circumstances of the sinking of "Winston Churchill" and the deaths of some of her crew after the vessel's abandonment gave rise to various questions. These questions were disparate and ranged between what caused the vessel to sink, the serviceability of the life rafts, the search for the survivors.

Each of the questions required investigation and the majority required the assistance of experts to answer what were on occasion difficult and sometimes confusing facts.

I intend to approach these questions in order of their arising.

THE SINKING

- 1. Did the missing caulking at the port side rabbit line, as described by Mr. Bascombe contribute in any way to "Winston Churchill's" sinking?**

In order to examine this situation, boat builders Ian Perdriau and Cecil Quilkey were consulted.

Accepting what Mr. Bascombe described was seen by him, and there is no reason to doubt that he saw it, each of the above were asked to comment.

MR. PERDRIAU

He was asked if what Mr. Bascombe had seen was a sign that there was movement in the garboard strake (the first plank on the outer hull next to the keel). He was asked this series of questions and gave these answers.

"Q. I'm saying to you that Mr. Quilkey says that where the planks and the sketch that's shown by Mr. Bascombe, that indicates to him movement in the plank next to the keel and I'm asking you what do you say to that?

A. I can say that I don't think it's related at all.

Q. And what do you say that represents, simply the putty fallen out, is that it?

A. It may have been a sliding pack by a piece of driftwood, a dinghy down at the - where it was moored or the putty just falling out, it's not the caulking falling out, it's the putty falling out.

Q. So you think that's consistent with a slight impact?

A. Very slight.

Q. Very slight?

A. Possibly or it could just fall out.

Q. Or it could just fall out?

A. Mm." (transcript 23rd March, 2000, p.10)

MR. QUILKEY

He was asked these questions.

"Q. What's your opinion on what that shows?

A. On the sketch and the evidence that was told to me, when I first went to the Police Station, I said to me it looks like the boat was working in that position which could mean either, because it was the bow of the boat, it could have been a fastening that had snapped or just excessive load on the - from the stem down to the keel, which is usually joined by a large knee. Maybe a fastening had let go or was loose and I believe the planks were working for that amount of putty to fall out.

Q. When you say the planks were working, what exactly do you mean by that?

A. Well, in a conventional built boat, as the "Winston" was built, or in the early days where we used to build them, especially yachts, the loads going to the places of the stem or the stern and to the centre where the chain plates were, the stresses - the boat actually is sort of squeezing. So there's movement and those planks actually - like you can't see them moving but they are moving very slightly and working. Consequently, it forms - in the old days, you could have a plank boat, you could do it all up before a race, go for a sail and when you come back and you can see every plank in the boat. It's just that the boat has worked, the twist and - so obviously if that - there must have been something working very bad for - in my opinion for that much putty to fall out of a seam in that area.

Q. Have you any opinion as to where that working would have been coming from?

- A. Well, I was first told it was just above the garboard.
- Q. Well, it's above the waterline --
- A. Well, above the waterline. I - as I said, I'm not too sure of the "Winston" but I believe she probably would've had a deep 4 foot anyway, the stem of the boat but it could be an area where the large knee is formed and bolted together. It could be in that area. Now if that's working, it will cause this sort of problem.
- Q. It will only work if it basically has a, what a fixing that's not holding properly? Is that what you're saying?
- A. Well, it's possible because that boat's that old - is an old boat, that some of the through bolting could have been getting very weary and it's - unless you pull them bolts out, you wouldn't know and it's only a slight movement but that's enough to cause the planks to do that --"
(transcript 23rd March, 2000, pp.16 & 17)

At page 18 of the transcript he was asked:-

"Q. If it was the case, as described by Mr. Bascombe, and this vessel, the "Winston Churchill", proceeds to Hobart in the race that we're talking about and she's mainly on a starboard tack, so that the port

bow would have been the one taking the weight of water, what, in your opinion, would be the effect of the seas on that area?

A. Well, if the boat had been working as I think it must have been in that area, you would probably be getting a slow leak through there all the time. I don't mean you'd be

able to visually see water squirting through the boat and, being right up the bow of the boat, and been to Hobart a few times and done a lot of ocean racing, you - there's that many sail bags up there you don't see anything much anyway, except sail bags, and that water would just find its way down alongside the keel into the deepest part of the bilge and the pumps that pump it out and it would be a thing that you couldn't control, no way. It would just be automatic, the - during races like that, the water that comes into a boat through hatches and sails changes and that, your pumps are going all the time. When I say all the time, but frequently cut in and out. That's just normal racing.

Q. If the fastening, if it was working, as you've described and you think it was because of that, would that be a weakness in the hull of the "Winston Churchill"?

A. I wouldn't say a weakness, no.

Q. Well, what would you class it as?

A. It'd be just a spot that's causing water to come into the boat but that - just generally sailing would not cause a great concern.

Q. If the vessel was then caught by a rogue wave, taken up and it falls on its port side, and I think you've read the statements of the survivors of the "Winston Churchill" --

A. Yes, I have.

Q. -- as to what happened, would the area, as described by Mr. Bascombe, be a weakness that would cause the vessel to founder?

- A. Reading the evidence that I have read, and being in a similar circumstance once myself, and knowing that it ripped the bulwarks off the "Winston" as she slid down that wave and then I think, when I was here yesterday, day before, someone was saying that the aft alower (?) had been torn out completely, I'd say something else made that boat go down, not that point.
- Q. So that, although we have, if you accept Mr. Bascombe's evidence, a patch where planking could be working, the reality is, in your opinion, that vessel sunk because it was hit by a rogue wave that basically took the bulwarks away and damaged the hull?
- A. It - if - you listen to some evidence which I hadn't heard before - I don't know whether it was John Stanley or Richard that said it, but they seen the aft alower chain plate swinging, or just swinging, so for - and they had been extended and I believe they'd been extended well below waterline. Now to rip those out, I'd say that the bolts, whoever done it and it's done properly, would have large washers welded onto them as they come from the outside. Now if that tore them out, the holes and the planking damage underneath there would have been enormous.
- Q. If those bolts had come out of the chain plates, and people see the bilge filling up and then above the deck and slowly, is it more likely that that's where the water was coming into this vessel, rather than up at the bow area where this putty was missing?
- A. I'd say yes, somewhere in that area. If it tore them out, there would be massive damage.

Q. You don't really see a connection between the working area, the area that had been working, that is the putty area, and the eventual foundering of this vessel?

A. Just hearing the evidence of what I heard in the last couple of days, that boat going down that wave, and as I said I've had the same experience, the tearing and the noise is enormous and that boat would have just - as I said, if it tore that out, the holes underneath there would have been quite large."

On the evidence I have heard it is not necessary for me to make a finding as to whether it was caulking or the putty that had come away from the rabbit line and hull planks on the port side as described by Mr. Bascombe.

It is clear from the evidence that "Winston Churchill" suffered serious damage to her port side, probably at or near the chain plates, that caused her to founder. According to the evidence I have heard from Mr. Perdriau and Mr. Quilkey this damage was unrelated to what was observed by Mr. Bascombe at the port bow.

Accordingly I find that "Winston Churchill" foundered when she sustained damage to her port side when she was struck by a wave as described by her surviving crew. As a result of her foundering the crew were obliged to abandon her and take to her life rafts.

THE LIFE RAFTS

LIFE RAFT 'A' The six man Pro Saver oblong in shape.

The first question that arises is:-

How compelling was it that the occupants in the upturned raft obtain fresh air into the "sealed" area?

From the evidence it is clear that the entrance to the raft, which was in the canopy, was too far under the water to allow any air into the upturned raft. As John Gibson stated, the area that the five occupants now found themselves in was effectively a sealed area (**John Gibson, 29th December, 1998, p.17**). Therefore the oxygen level in this area would be finite.

I therefore considered it necessary to ascertain for how long the oxygen within this area would last before having any deleterious effects upon the occupants.

The answer to this was furnished by Dr. Young, Department of Respiratory Medicine, Royal Prince Alfred Hospital, Camperdown, New South Wales.

He first took the measurement of the sealed area within the upturned raft.

He then calculated that the occupants treading water would consume one to two litres a minute.

He adopted the calculations of Mr. Richard Phillips on the CO₂ concentration in the sealed area.

He stated that because of the synergistic effect of the increase of carbon dioxide and the decrease in oxygen the occupants would have become aware of a sense of suffocation, they would have become disorientated and at risk of drowning within ten minutes.

He said, in answer to the question of how this was likely to occur:-

"A. Within ten minutes they would have been at a level of oxygen lack and carbon dioxide excess, sufficient to cause drowsiness and confusion. Enough, I think, to put them at risk of drowning in the situation where they were. Now that's somewhat different to if we had five people in an upturned raft in this room and sealed it all off, where they could afford to become disorientated and will then just simply lose some degree of consciousness and lie down on the floor. They wouldn't die immediately, but of course there's no floor where they are, so they'd be at risk of drowning. So my point there is that the risk of death from drowning is far earlier than would be their risk of death from suffocation in a dry enclosed space. That's all."

He concluded that:-

"It would therefore seem a very reasonable strategy to open the roof of this space within the first five to ten minutes of confinement."

As to the time in which they had to make a rational decision the following questions and answers reveal the occupants plight:-

"Q. So realistically these men had up to ten minutes --

A. Yes I --

Q. -- of life, but the reality must be that they only had a very short number of minutes in which to make a rational decision?

A. Yes. I think that's right. I think --

Q. -- to do what they did?

- A. -- by the time ten minutes was up, and of course you can't be exactly precise about this, but by the time ten minutes was up they would have been becoming disorientated, confused, distressed certainly from the oxygen lack and the carbon dioxide excess.
- Q. I suppose in reality they would have had up to five minutes to be rational about what they were going to do?
- A. Yes I would think that that's reasonable." (**transcript 4th April, 2000, pp.47-50**)

I therefore find that the occupants of the upturned raft had little time in which to make a rational decision. That under the circumstances that they found themselves in, the decision to slit the roof of the raft was a logical and compelling one.

MAYDAY HEARD BY THE PILOT OF THE ABC HELICOPTER AND THE VESSEL "YOUNG ENDEAVOUR"

As referred to above, the Mayday call broadcast by Richard Winning was heard and acknowledged by the ABC helicopter pilot, Gary Ticehurst. It was also heard on the bridge of "Young Endeavour", which was under the command of Lieutenant Commander Neil Ronald Galletly RAN, who gave evidence to this Inquest on the 21st and 24th July, 2000.

The Mayday position given by Richard Winning was, to use his words:-

"... a guesstimate based on what I had seen when I could see the shoreline earlier that morning, maybe 10 o'clock, it might have been 8 o'clock, I'm not sure, see. I could

see Mount Imlay earlier that morning on a certain bearing and in my head, I thought, well, you know, we're doing x speed so we must be here, and that is what I based the Mayday position on, ..." (**Richard Winning, 7th July, 1999, p.11**)

The position that he gave was:-

"20 miles south east of Two Fold Bay."

(See Richard Winning, 29th December, 1998, p.4; Gary Edwin Ticehurst, 3rd April, 1999, p.9; Lt Cmdr Galletly, 4th January, 1999, p.24)

Immediately after Gary Ticehurst received the Mayday he relayed the message to AUSSAR the Rescue Authority in Canberra.

About thirty minutes after passing the Mayday to AUSSAR he heard a radio message from a fixed wing SAR aircraft giving a positive identification of the "Winston Churchill" and its position.

Ticehurst said, in regard to the position given by the fixed wing aircraft:-

"Now I wasn't in a position to plot that at that stage, but it seemed to me that it was a little bit too far south, and I really don't know whether that aircraft, whether he had a positive ID on that, on that, that yacht or not."

After refuelling Ticehurst contacted AUSSAR again and went to the position given by the SAR fixed wing aircraft and conducted a search for "Winston Churchill". Of this search he said:-

"... and it was a mystery to me, we went to the latitude and longitude where the fixed wing said that he sighted "Winston Churchill", there was just not a sign, there was nothing in the water, and we went right to that point and then started drifting and then doing a square pattern initially, then a circular pattern, to try and establish, you know, if they were in life rafts and they, `cause they told me that they were getting the life rafts on deck, I assumed at that stage that they were, they'd water, sunk and as I understand they did sink pretty quick. But we had to go back to that latitude and longitude and search and obviously I then described our lack of finding anything to AUSSAR on the telephone, it was an analogue telephone, so basically during that period we were in constant contact with AUSSAR, trying to give them a better picture of what was going on out there, because their information was being relayed through various channels back to their office, they didn't have anybody eyeballing the situation like we were. ...

The most important thing on my mind at that time was the fact that there seemed to be dilemma about where "Winston Churchill" was. I put him north of where this so-called latitude and longitude was given by Sierra Alpha Romeo. Just in my mind I didn't have anything to go by other than gut feeling the radio reception, just, just a gut feeling that he had to be a little bit further north, but anyway I never found him. As soon as I, as soon as I finished cleaning the machine, cleaning the engines, putting the helicopter away, I went back to the motel room and rang AUSSAR because I felt that we had a dilemma as to where "Winston Churchill" was and indeed when I rang they were just all sitting down to a round table and they were trying to discuss the, the issue, the "Winston Churchill" issue. They had other issues I'm sure, but they were also trying to figure out where the hell "Winston Churchill" was. So indeed we got the

tapes that we shot and we ran the tapes back to determine exactly what he said, I relayed that back onto, on the telephone to AUSSAR, they were happy with our response, they were happy that, the skipper said 20 miles, they were happy that the time was around about 5.23, I think." (see Gary Ticehurst, 3rd April, 1999, pp.10 to 15)

At the time of the reception of "Winston Churchill's" Mayday on the bridge of "Young Endeavour" the "Young Endeavour" had been "tasked" by Rescue Co-ordination Control (RCC AUSSAR) to proceed to the aid of the yacht "Stand Aside".

Lt. Commander Galletly considered that "Young Endeavour" was approximately one to one and a half hours away from the position given by "Winston Churchill". This position being approximately ten nautical miles to the north of "Young Endeavour". He sent the following message to RCC:-

"FM "YOUNG ENDEAVOUR"
TO RCC AUSTRALIA
RECEIVED MAYDAY FM "WINSTON
CHURCHILL" IN POSN APPROX 20NM SE OF TWO
FOLD BAY. ABANDONING SHIP TO LIFE RAFTS -
VESSEL TAKING ON WATER RAPIDLY. WE
UNABLE TO DETERMINE EXACT POSN ABC A/C
IN CONTACT"

As a result the following message was sent by RCC at 1754 hours [5.54pm local time], with the reference of AUSSAR 98/4372:-

"LES 222 - MSG 9567 - Distress Distress Call to Area:
37 S 150 E 300 -
PosKO
Y1227113
MAYDAY

FM RCC AUSTRALIA 270554Z DEC 98 AUSSAR
AUSSAR 98/4372
YACT "WINSTON CHURCHILL' WITH 9 PERSONS
IN POSITION 27 (sic) 14S 150 19E AT 270615 UTC
DEC HOLED AND TAKING WATER. CREW
ABANDONING TO LIFE RAFTS VESSELS WITHIN
FOUR HRS REPORT BEST ETA AND INTENTIONS
TO THIS STATION OR TO TELEX 7162025. OTHER
VESSELS REQUESTED TO MONITOR COAST
RADIO STATIONS OR SATCOM THROUGH
PERTH LES"

In answer to message AUSSAR 98/4372 "Young Endeavour"
sent to RCC the following:-

"REF AUSSAR 98/4372

CURRENTLY ENROUTE YACHT STANDASIDE 10
NM SOUTH OF "WINSTON CHURCHILL".
REQUEST ADVISE PRIORITY. INTEND
PROCEEDING TO "WINSTON CHURCHILL"
UNLESS OTHERWISE ADVISED. ETA 270800Z."

Informing RCC that unless "Young Endeavour's" decision was
countermanded she would arrive at "Winston Churchill's" position at
1900 hours [7pm local time].

RCC responded to this message at 1746 hours [5.46pm local
time] using the reference AUSSAR 98/4381, as follows:-

"P 270646Z DEC 98
FM RCC AUSTRALIA
TO "YOUNG ENDEAVOUR" VMGW 450300141
BT
AUSSAR 98/4381 - "WINSTON CHURCHILL"

PLEASE PROCEED TO POSITION 37 14S 150 19E
WHICH IS "WINSTON CHURCHILL'S" LAST
KNOWN POSITION. CREW REPORTED TO BE
ABANDONING TO LIFE RAFT.
BT"

Being so requested at 1748 hours [5.48pm local time], "Young Endeavour" altered course to a heading of 010 degrees and proceeded north to "Winston Churchill's" last known position, 37 14 south 150 19 east ie, twenty nautical miles south east of Two Fold Bay. "Young Endeavour's aim was "to look for people in life rafts" (**Lt. Cmdr Galletly transcript 21st July, 2000, p.13**).

It was estimated that "Young Endeavour" would have 45 minutes of daylight left when she reached that position at 1900 hours [7pm local time] (ibid).

However at 1750 hours [5.50pm local time] (two minutes after "Young Endeavour" altered course) RCC, using reference AUSSAR 98/4381 issued the following message:-

"MAYDAY

FM RCC AUSTRALIA 270650Z DEC 98 AUSSAR
98/4381 YACHT "WINSTON CHURCHILL"
SINKING.

POINT HICKS TO MONTAGUE ISLAND CHART
AUS359

YACHT "WINSTON CHURCHILL" WITH 9
PERSONS SINKING IN POSITION 37 46S 150 33E
AT 280700 UTC DEC.

VESSEL WITHIN FOUR HRS REPORT BEST ETA
AND INTENTIONS TO THIS STATION OR TO
TELEX 7161025. OTHER VESSELS REQUESTED
TO MONITOR COAST RADIO STATIONS OR
SATCOM THROUGH PERTH LES"

This message effectively altered the sinking position of "Winston Churchill" from 37 14 south 150 19 east, to 37 46 south 150 33 east. Such position being approximately 30 nautical miles away from the original position given by Richard Winning and in a different direction to "Young Endeavour's" heading.

This new position did not fit in with a position of 20 nautical miles south east of Two Fold Bay. However, Lt Commander Galletly, though having some doubts of this new position sent the following message to RCC:-

"FM "YOUNG ENDEAVOUR"
TO RCC AUSTRALIA

REF AUSSAR 98/4381

PROCEEDING TO "WINSTON CHURCHILL" POSN
AT REF. ETA 271030Z. ATTEMPTING COMMS
WITH SAR AIRCRAFT FOR DIRECTION
BT"

"Young Endeavour's" estimated time of arrival of 2130 hours [9.30pm local time] at the new position, would bring her there after last light.

Although having misgivings about the new co-ordinates, Lt Commander Galletly did not question his instructions at that time. At **page 16** of the **transcript of 21st July, 2000** he stated his reasons for not immediately doing so. They being:-

1. "Young Endeavour" had given its undertaking to co-operate with the RCC.

2. A wish not to clutter the RCC communication systems, which were already stretched, with questions on the validity of their decision.
3. "Young Endeavour" was a relatively small unit compared with the RCC who would be aware of factors beyond the knowledge of "Young Endeavour".
4. The RCC were professionals in rescue work, "Young Endeavour" was not.
5. The RCC may have received EPIRB information of which "Young Endeavour" would be unaware.
6. A positive sighting of "Winston Churchill" had been made by a SAR fixed wing aircraft.

Even with this rational approach to the information, Lt Commander Galletly still maintained doubts about the new position of "Winston Churchill". He said:-

"A. But, it's the RCC, they've got EPIRBS, they've got aircraft saying positive ID, the guys who said, the guys on the "Winston Churchill" who said that they had, were abandoning to life raft, well, they were distressed, maybe they changed their mind, maybe they managed to patch it and didn't indeed. So we proceeded as directed. But I had this feeling, are we going to the right place. `Cause we were quite close to 3714 south and now we're going further away. We get there after dark, at least the first place we could have got there before dark, but there's no point if there's no boat there. So we followed orders."
(Lt Commander Galletly, 4th January, 1999, p.27)

At 2041 hours [8.41pm local time] the RCC sent the following message to "Young Endeavour":-

"P 270941Z DEC 98
RM RCC AUSTRALIA
TO STS "YOUNG ENDEAVOUR" RMGW 450300141
BT
AUSSAR 98/4381 YACHT "WINSTON CHURCHILL"

1. LAST KNOWN POSITION OF "WINSTON CHURCHILL" WAS AS REPORTED BY VH-SAR WHEN IT OVERFLEW YACHT IN POSITION 37 46S 150 33E AT 270639Z. AIRCRAFT REPORTED YACHT HAD NO MAST AND APPEARED NOT BE SINKING. ORIGINAL ADVICE WAS THAT CREW WERE ABANDONING TO LIFE RAFT. THIS INFORMATION CANNOT NOW BE VERIFIED. HELICOPTER SEARCH UNDERWAY. BT"

On the 24th July, 2000 Mr. John Young, Operations Manager of the Search and Rescue Centre, of the Australian Maritime Authority, Canberra, gave evidence as to what had occurred during the search for "Winston Churchill". Mr. Young's statement was succinct and candid. It is for that reason that I produce the whole of his statement:-

"Statement made on 20th July, 2000 at Canberra in the Australian Capital Territory by John Young in respect of the initial search and rescue action for survivors of the sunken yacht "Winston Churchill" on 27th - 28th December, 1998.

My name is John Young and I am employed by the Australian Maritime Safety Authority (AMSA) in Canberra as the Operations Manager of the Rescue Co-ordination Centre (RCC), responsible for the conduct of maritime and aviation search and rescue operations in

accordance with International and Australian SAR agreements. I joined AMSA in May 1998 as the Analysis Officer, responsible for post-incident analysis of search and rescue operations. I was acting in that capacity while in the RCC overnight 27th-28th December, 1998 and in some analytical work I subsequently performed for AMSA regarding Sydney-Hobart operations. I was appointed to my current position in March 1999. Before joining AMSA I was a Seaman Officer and Principal Warfare Officer in the Royal Australian Navy for 31 years.

Although I was present in the RCC during the period covered by this statement I was not actively involved in decision-making. My statement is based on post-incident analysis of AusSAR files and telephone records to establish relevant facts.

On 27th December, 1998 at 0622 UTC [5.22pm local time] Mr. Gary Ticehurst, the pilot of an ABC helicopter (VH-NTV), advised the Australian Search and Rescue Co-ordination Centre (AusSAR) that he had received a distress message from the yacht "Winston Churchill". The distress message said that "Winston Churchill" was sinking rapidly in a position 20 miles south-east of Twofold Bay (Eden, NSW) and that the crew were abandoning the vessel into life rafts. AusSAR advised VH-NTV of an intention to send the "Southcare" helicopter to the scene.

At the same time, the crew of a fixed wing aircraft (VH-SAR) tasked by AusSAR earlier in the afternoon to home on a distress beacon relayed "Winston Churchill's" distress message to another AusSAR officer and advised that he would attend "Winston Churchill".

Between 0626 UTC [5.26pm local time] and 0638 UTC [5.58pm local time] AusSAR attempted to contact the "Southcare" helicopter (VH-NSC) to respond to "Winston Churchill", but "Southcare" was temporarily out of contact having been sent to refuel at Merimbula. The only other rescue helicopter in the area at that time was "Helimed I" (VH-NSP) which was already committed to another known distressed yacht, "Stand Aside".

A distress broadcast notifying shipping of "Winston Churchill" was issued at 0633 UTC [5.33pm local time]. In this broadcast the initial distress position "20 miles south-east of Twofold Bay" was converted into a latitude and longitude search position for ease of reference by ships and aircraft. The converted position was 37 14 South 150 19 East (Position A hereafter for the purpose of this statement).

At 0644 UTC [5.44pm local time] "Young Endeavour" advised that the vessel was enroute to "Stand Aside" but now intended to change course for "Winston Churchill". At 0646 UTC [5.46pm local time] AusSAR agreed with that intention and requested "Young Endeavour" to proceed to Position A.

At about the same time "Helimed I" began winching the first of 12 survivors from "Stand Aside".

At 0652 UTC [5.22pm local time] AusSAR contacted the fixed wing aircraft VH-ILM on the ground at Merimbula and tasked the aircraft to search for "Winston Churchill" or life rafts in the vicinity of Position A.

At 066 UTC [5.55pm local time] Melbourne Flight Service advised AusSAR that the aircraft VH-SAR was overhead a yacht in distress in position 37 46 South 150

33 East (Position B) and that there were still people on board (based on information reported through Air Services Australia's aeronautical communications).

At 0657 UTC [5.51pm local time] AusSAR was contacted by VH-SAR directly. The aircraft advised that it was overhead a vessel in position 37 46 South 150 33 East (Position B) believed to be the "Winston Churchill". The vessel was in distress, with no mast and people were on the deck. VH-SAR noted that there was apparently a rescue boat on the way.

The AusSAR officer acknowledged the information and requested the aircraft to confirm that the yacht was definitely the "Winston Churchill". VH-SAR responded "Affirm" (Yes). In response to further questioning the aircraft advised that it looked like the yacht would remain afloat. This was acknowledged and AusSAR directed VH-SAR to remain overhead the yacht pending the arrival of a helicopter at about 0745 to 0750 UTC [6.45pm-6.50pm local time].

At 0657 UTC [5.57pm local time] "Helimed I" departed "Stand Aside" with 8 survivors, leaving 4 still to be rescued. The "Southcare" helicopter then undertook this task.

Effectively from 0657 UTC [5.57pm local time] the "Winston Churchill" operation was progressively shifted from a search for life rafts near Position A towards a winch rescue from a floating yacht at Position B.

At 0705 UTC [6.05pm local time] Melbourne Flight Service was asked to communicate with VH-ILM, tasked at 0652 UTC [5.52pm local time] with searching for "Winston Churchill", to conduct a wider search for distressed yachts north of 3730 South. The rationale for

this decision was that all the other fixed wing aircraft were now holding over yachts and AusSAR desired to identify further problems in the remaining daylight. AusSAR records do not indicate exactly how long VH-ILM spent searching for life rafts 20 miles south-east of Twofold Bay before the revised tasking reached it. Officers on shift at the time recall the aircraft was there for about 40 minutes.

In the hours following the tasking of VH-ILM AusSAR made continuous efforts to relocate the yacht still believed to be "Winston Churchill" and rescue survivors. "Young Endeavour" was proceeding to Position B. At 0836 UTC [7.36pm local time] the "Lifesaver 3" helicopter (VH-SLS) was tasked to search in the vicinity of Position B assisted later by "Helimed I" which was tasked at 0909 UTC [8.09pm local time]. At 0906 UTC [9.06pm local time] the ship "Patsy N", alerted by AusSAR's distress broadcast, passed through the area but reported making no sightings.

However, aviation weather conditions also influenced the effort, along with competing demands from other distress events. "Sword of Orion" absorbed substantial effort. VH-SAR was at one time driven off the scene by adverse weather.

At 1205 UTC [11.05pm local time] an AusSAR officer again spoke with Garry Ticehurst (VH-NTV) to confirm the distress message received from "Winston Churchill". Mr. Ticehurst confirmed the original wording of the distress message and indicated that he had communicated personally with "Winston Churchill" briefly, but had to leave the scene to refuel.

At 1212 UTC [11.12pm local time] AusSAR spoke with Mr. Neil Boag aboard VH-SAR, enroute to Moorabbin,

to confirm the information relating to Position B. Mr. Boag confirmed that the position was 37 46 South 150 33 East. However, when questioned about identification of the yacht he advised that VH-SAR had not been able to get low enough to identify the yacht positively and was unable to communicate with it.

Based on the information from Mr. Ticehurst and Mr. Boag AusSAR concluded that the yacht reported at Position B at 0657 UTC [5.57pm local time] had not been "Winston Churchill". The search was then re-oriented to a search for survivors in life rafts in the vicinity of Position A." (**Exhibit 43**)

Mr. Young's statement confirms the doubts of Lt Commander Galletly, that "Young Endeavour" was turned from the area where "Winston Churchill" foundered.

It is not possible to say that had "Young Endeavour" proceeded to the first position as given by Richard Winning, that she would have found "Winston Churchill's" life rafts.

However I can say that:-

1. "Young Endeavour" knew what to look for at the position, ie, people in life rafts.
2. "Young Endeavour" would have reached the position before last light. That approximately forty five minutes of light would have been available.
3. "Young Endeavour" was a fully crewed vessel with the advantage of height for any look-outs posted.

4. "Young Endeavour" would have remained in the area during the hours of darkness. The crew of "Winston Churchill" had torches, strobe lights and flares.
5. "Young Endeavour" would have been in the area during the daylight of Monday 28th December. I note that the survivors of "Winston Churchill" were found and rescued late in the day on the 28th.
6. That according to Dr. P.G. Luckin the deceased from "Winston Churchill" life raft `A' would have probably survived until the middle of the day of the 28th December. **(report of Dr. Luckin, Exhibit 53 and his evidence generally on 31st March, 2000)**

However it must be borne in mind that the sinking of "Winston Churchill" and the search for her survivors is not an occurrence that can be taken in isolation. As Mr. Young points out:-

"However, aviation weather conditions also influenced the effort, along with competing demands from other distress events ..." **(Exhibit 43, p.3)**

And as Mr. B.J. Willey, Senior Search and Rescue Officer who was at the RCC on the night of Sunday 27th, said during his evidence:-

"... we were getting 150 - odd phone calls an hour during that shift and there were a lot of things happening at once ..." **(transcript, 19th July, 2000, p.34)**

And at one point the officers within the RCC were questioning their ability to resource the rescue effort. In regard to this Mr. Willey said:-

"Q. Did the fact of the resources that you had enter into this?

A. The suggestion was made that we were having trouble coping with the rescue effort. There's only a certain number of helicopters available, there's only a certain number capable of operating at night and they're the Navy helicopters. In the rescue co-ordination centre itself I think we had about 20 people there at the time and all of us were flat out doing various tasks. So it was the resources available to us in the rescue centre and it was certainly the physical assets, helicopters and vessels at sea, who we could call on to help. We felt they were stretched. I think that was the consensus or the sum of the conversation. We felt they were stretched and we didn't know if it got worse if we were going to be able to cope with it. So --

Q. Sorry, go on.

A. I was just going to say that having had this discussion with two or three of the team, I felt it was quite reasonable to ask for the race to be called off, to relieve the pressure on us I guess was the ultimate objective." (transcript, 19th July, 2000, p.35)

FINDINGS

Considering the foregoing facts I make the following findings in regard to the yacht "Winston Churchill".

1. I find that "Winston Churchill" foundered when she sustained damage to her port side when she was struck by a wave as described by her surviving crew. As a result of her foundering the crew were obliged to abandon her and take to her life rafts.

2. I find that the occupants of the upturned raft, John Stanley, John Gibson, John Dean, James Lawler and Michael Bannister, had little time in which to make a rational decision. That under the circumstances that they found themselves in, the decision to slit the roof of the raft was a logical and compelling one.
3. That John Dean died of immersion on the 28th December, 1998 in the Tasman Sea off Eden when the remains of a "Winston Churchill" life raft, to which he was clinging, was without warning struck by a wave and he was washed beyond its reach.
4. That James Lawler died of immersion on the 28th December, 1998 in the Tasman Sea off Eden when the remains of a "Winston Churchill" life raft, to which he was clinging, was without warning struck by a wave and he was washed beyond its reach.
5. That Michael Bannister died of immersion on the 28th December, 1998 in the Tasman Sea off Eden when the remains of a "Winston Churchill" life raft, to which he was clinging, was without warning struck by a wave and he was washed beyond its reach.

Before I turn to the facts surrounding the yacht "Sword of Orion", there is one further matter regarding "Winston Churchill" with which I should deal. I am informed that this matter has caused some concern to the widow and family of Mr. John Dean.

The concern centres around "Winston Churchill's" radio transmission of its position at the 2pm radio sched on Sunday 27th December, 1998. It arises in the following way:-

1. In evidence given on Tuesday 21st March, 2000 Paul Lumtin, who was "Winston Churchill's" radio operator gave the following evidence:-

- "Q. So you heard other vessels during the sked?
- A. Oh, sorry, I misunderstood your question.
- Q. That's all right?
- A. I thought that you meant between skeds, had I heard other vessels radioing to us.
- Q. No, my fault. During the sked you could hear other vessels?
- A. Yes.
- Q. Did you hear any of those giving weather warnings during the skeds?
- A. No.
- Q. You didn't hear the "Sword of Orion"?
- A. No, I didn't, no. I, by the way, didn't do all of the skeds; because we had on and off shifts generally somebody else would do the sked if I was down below sleeping.
- Q. Do you recall who did the 2 o'clock, 2pm Sunday afternoon?
- A. Yes, that was John Dean.
- Q. John Dean did that one, I see, all right. Where were you when that one was being done?
- A. I was actually still up on deck at the time the sked was about to commence and I kind of rushed down very quickly to catch the beginning of the sked and the weather forecast and I was actually a bit late for it. I

thought - well, that's not a problem because they do one before and one after - so I sat down, I was - I did my normal thing that I do before a sked, I take a plot, I mark it on the chart, I do a bit of cross referencing, check the instruments, make a log note and I was getting really, really tired and I was finding it hard to stay awake so I asked John would he mind just sitting down and radioing out our position when we were called and he did that.

Q. Okay, because you were I take it quite exhausted?

A. I was really exhausted, yeah.

Q. And once you sat down and you began to fall asleep?

A. That's right.

Q. And so John took over for you?

A. That's right.

Q. Now, did you remain asleep after that or what was the situation?

A. What happened was I left the coach house and I went downstairs and I knew that I was actually going to be down there asleep for a while because I'd been up for so long and I thought - well, the first thing I'm going to do is to get some comfortable dry clothes on and jump into my bunk and see if I can get some sleep - so I think it might have been around about 2.30 by the time I went to sleep, a quarter to three.

Q. How long does the sked take?

A. The sked - it depends - on average around 40, 50 minutes and we were always at the end because we're W so it was

always a bit of a week - a drag to wait till W so I was finding it hard to stay awake.

Q. So by the time it starts at 2 o'clock?

A. It's normally finished by about ten to three.

Q. And you're one of the last ones on?

A. That's right, yes.

Q. So you actually did plot where you were?

A. Yes.

Q. At 2pm on the Sunday?

A. That's right.

Q. And that was radioed through you presume?

A. Yes, I assume it was. I wasn't there when it happened but, yes.

Q. And then you went to get some sleep?

A. Yes.

Q. What's the next thing that occurs as far as you know?

A. Well, as John said before, I was asleep in a little cubby house which is after the mast on the starboard side of the boat and all I remember is waking up with a really loud crash and I got thrown from the starboard side rear of the boat to the port side just in front of the mast. I got literally thrown out of bed. **(P. Lumtin, transcript 21st March, 2000, pp.5 & 6)**

The radio transcripts from Telstra Control aboard "Young Endeavour" show the following when the 2pm sked was in progress:-

"(voice 3. Lou Carter)
V.3 28/12 "Winston Churchill"

(V118 "Winston Churchill" radio operator)
V.118 (no audible reply)"

I point out that the phrase "no audible reply" means nothing is heard. As the transcription unit has used the following:-

"..... = cannot decipher; and
(s.c.) = sounds like."
(see pages 5 & 13, tape 3, Vol.8)

At **page 22 of tape 3** the following appears:-

"V.3 (Lou Carter)
Any sightings or copy on "Winston Churchill"

V.72 (Radio Operator "Nattel
Adrenalin")
..... about an hour ago, "Winston Churchill", or
sorry, correction, half an hour ago, at the
beginning of the sched, but I think "Winston
Churchill" was approximately a mile and a half --
_"

Then shortly after this:-

"V.72 Telstra Control, this is "Nattel Adrenalin". At the beginning of the sched, we had "Winston Churchill" approximately a mile to the west of us, over.

V.3 Roger. Could you work out that lat and long for me and relay it back?

V.72 the lat and long that I gave you as my position, over."

I have checked with the appropriate person who was on the radio of "Nattel Adrenalin", Mr. Michael Bennet, and am assured that this information that was passed to Telstra Control was of a sighting of "Winston Churchill" and not as a result of a relayed radio message.

This does not mean that the position of "Winston Churchill" was not sent by the radio. It simply means that the radio message was not received by Telstra Control. Indeed after each sched it appears that various yachts were radioed, by Telstra Control, as their radio messages had not been received.

Regarding that I note that after this particular sched a number of yachts had not been recorded as received by Telstra Control.

However, I can be certain on the evidence that I have that if John Dean was asked by Paul Lumtin to radio "Winston Churchill's" position as required by the sched, then he would have done so.

THE YACHT "SWORD OF ORION"

The "Sword of Orion" was entered in the CYCA's 1998 Sydney to Hobart Yacht Race.

It was skippered and owned by Mr. Robert Kothe. The crew included Steve Kulmar, Glyn Charles (deceased), Darren Senogles, Carl Watson, Adam Brown, Andrew Parkes, Nigel Russell, Sam Hunt and Simon Reffold.

DAMAGE TO THE BOAT

The Race started at one o'clock on Saturday 26th December, 1998 just before which "Sword of Orion" had a collision with another yacht in the Race, "Nokia". As a result of the collision "Sword of Orion" damaged three stanchions on her starboard side aft section as well as her bowrail. Darren Senogles described the damage to the starboard side as follows:-

"A. ... the only structural damage was the one hole in the back of the boat where the rail went through and punched a hole in the deck which is, was glass with a, a layer of foam which is about 15 or 20 ml thick, underneath that's another layer of glass. Well inside the boat that glass had actually delaminated because it didn't actually pierce, it was pushed away from the foam, so it didn't actually leave a hole, it was just pushed away from the foam which was delaminated, that was the only damage.

Q.30 How far would that delamination occur in the area of the stanchion?

A. I guess in a 3, oh, 4 to 5 inch diameter of the stanchion". (Darren Senogles, 26th July, 1999, p.5)

"... the aft line rail had been bent in and the inner support had punctured through the deck the next two stanchions along had been damaged as well, they'd been bent." (transcript 23rd March, 2000, p.25)

The bowrail at the very front of the boat had been lifted free off its mounting due to the tension placed on the lifelines during the collision.

Darren Senogles repaired the stanchions by straightening them as best he could and covered the hole at the back of the boat with a plywood pad (ie, an inspection hole cover which he had removed from inside the cabin) to seal it and give some support for the stanchion that had pushed through the deck.

It was during the time he was assessing the damage to "Sword of Orion" that Darren Senogles noticed there was a bump on the mast about two metres above the deck on the port side. Darren Senogles described the bump as being "... a little dent outwards just below the first spreader ... As big as a twenty cent piece." (transcript 23rd March, 2000, p.25)

Initially, in an email sent by Robert Kothe to the CYCA, the damaged mast was reported as being a compression crease. To quote from the email:-

"... during the start line incident "Sword of Orion" sustained severe damage.

The damage to the three starboard stanchions has been repaired, however delamination occurred in a metre long section at the starboard stern quarter.

Of major concern however is the damage sustained by the mast. There is a compression crease about 2 metres above the deck."

(I note that this email exaggerates the length of the delamination damage and the compression crease compared with what I have been told on oath).

However, by 4 o'clock that afternoon it was clear to Robert Kothe that the damage to the mast was not a compression crease but simply a rub mark which was not caused by the collision with "Nokia". Mr. Kothe stated:-

"And we finally realised was that there was a, a line rubbing against it and that it was just a shiny spot that, from a line." (**Robert Kothe, 4th June, 1999, pp.6-7**)

(How a "line rubbing against" the mast can form a "little dent outwards" as described by Mr. Senogles was not explained).

The crew had been closely checking the mast up to that time and according to Robert Kothe his concerns were allayed by the "Sword of Orion" having then been on two different gybes going downwind in winds of at least 25 to 30 knots which were, in his opinion, testing conditions for the mast:-

"... by 4 o'clock in the afternoon it became very clear that the mast was perfectly all right." (**transcript 30th March, 2000, pp.28 to 29**)

"We had been on two different gybes. When you are going downwind that is the most testing condition for the mast. The winds were ... certainly up to 25 to 30 knots, and we had people closely looking at the mast." (**transcript 30th March, 2000, p.29**)

The only other damage to the boat occurred in the morning of the 27th December, 1998 when the vang broke whilst taking down the mainsail. In order to then hold the boom in place it was lashed to the port side of the boat. Carl Watson gave evidence that he did not believe this affected the stability of the boat (**see transcript 24th March, 2000, p.2**).

WEATHER

The navigator of "Sword of Orion" was its skipper, Robert Kothe.

Part of the responsibilities which Mr. Kothe had assumed, was to collect and interpret weather information and forecasts. In this regard he considered himself the most experienced person on the vessel. This, according to Mr. Kothe, was relevant to when the decision was made to change course for Eden. I will deal with this below. In his evidence Robert Kothe said:-

"I had better knowledge of meteorology and weather than anybody else on the boat." (**transcript 30th March, 2000, p.42**)

"I had 10 years experience flying sail planes with charts on my knees and the whole thing was about the weather. Your success or failure was your ability to understand the weather." (**transcript 30th March, 2000, p.68**)

"On my boat I was by far the most experienced in meteorology." (**transcript 30th March, 2000, p.69**)

At 9.40am on the morning of the start of the Race the Bureau of Meteorology ("BOM") issued a gale warning south of Broken Bay. The warning, which was contained in a special Race forecast, was current and was for the area from Sydney to Jervis Bay.

After the Race had started, at 2.50pm, the BOM issued a storm warning for waters south of Merimbula. This being the highest grade of warning that the BOM can issue for those waters and such a warning denotes winds of 48 knots and above. That warning was received by Mr. Kothe at approximately 3.30pm on the 26th December, 2000. From that forecast Mr. Kothe was, mistakenly, expecting 40 to 50 knot mean winds. It is clear from his evidence that he was unaware that a storm warning was the highest grade of warning that could be issued for those waters, he said:-

"As we came down the coast they, they issued a storm warning which was only one short of a hurricane warning and so I was aware that we were expecting 40 to 50 knot winds." (**Robert Kothe, 2nd January, 1999, p.11**)

"In the 40 to 50 part, I would reasonably have expected 30 through 60 from lulls to gusts." (**transcript 30th March, 2000, p.71**)

Throughout the morning of the 27th December, 1998 the crew had noticed that the winds had picked up considerably as had the seaway. They were experiencing conditions worse than what they understood was forecast. Robert Kothe, who said he was the most experienced of the crew in meteorology, stated:-

"I certainly was expecting, you know, that winds could get up to 60 knots, 65 knots even as gusts. We were experiencing winds much greater than that not as gusts." (**transcript 30th March, 2000, pp.73-74**)

Steve Kulmar described what he was experiencing on deck from about 10am:-

"... I went off watch at 7 and when I came back up, and it wasn't probably three hours, maybe two and a half hours later, the conditions had been extreme, building up, and I was on deck as I said from about 10 through - for a good part of the morning ... the lulls were not long and the wind continually increased over a period from about certainly 10am in the morning through to midday and with the increasing wind we had a lot of rain and an increasing seaway to where I guess around midday we had - in fact I remember quite distinctly the strongest gust of wind we had was at about 82 knots." (**transcript 27th March, 2000, p.4-5**)

"... I'd been across Bass Strait sixteen other times but I'd never seen it quite like this and I'd done the 1993 Hobart ... and that was recognised as the killer Hobart in `93 and I'd actually sailed in 1984 ... which was the other really tough Hobart Race." (**Steve Kulmar, 12th April, 1999, p.7**)

The problem was that the crew, like many other crews in the fleet, did not know the BOM's rule that gusts may be 40% stronger than the forecast wind speeds and wave heights may be 86% or more higher than forecast (ie, rogue waves). More importantly, Mr. Kothe, who claimed to have the most meteorological experience on the boat, was unaware of these matters.

THE EVENTS LEADING UP TO AND THE CHANGE OF COURSE FOR EDEN

The "Sword of Orion" had three senior and very experienced helmsmen. These were, in order of seniority, Steve Kulmar, Glyn Charles and Adam Brown. On Sunday morning the 27th December, 1998 at between 11am and 12 o'clock Steve Kulmar told Robert Kothe that in his opinion "Sword of Orion" should be turned around and retired. Mr. Kulmar gave evidence as to what he said:-

"Q. What did you say to Mr. Kothe between 11 and 12 about --

A. Well, as I have already expressed to you I mean the conditions had deteriorated and deteriorated in a way that I hadn't seen previously in that over that two hours or so it had got worse on a progressive basis and I had expressed to Rob at that time that I was concerned about the safety of the crew and I had suggested to him, or basically suggested to him, that we should be thinking about retiring." (transcript 27th March, 2000, p.6)

Steven Kulmar was concerned with the wind strengths which were greatly exceeding what he understood to be the forecast wind speeds. He remembers that the strongest gust was 82 knots. It seems that the highest gust of 82 knots was experienced some time between 11am and 1.20pm on the 27th December, 1998.

Steve Kulmar remembers the gust occurring before midday:-

"Q. Did you get a weather forecast at 12 noon?

A. Yes, we did.

Q. Was that before or after this gust that you have told us about of 82 .. (not transcribable) .. --

A. Well no, it was around that time, it was slightly after that time."

"Q. The weather forecast, did it come before or after the gust of 82 knots that you have told us about about noon?

A. After.

Q. It came after that?

A. The weather forecast came after." (**transcript 27th March, 2000, p.7**)

Darren Senogles remembers gusts of almost 80 knots occurring after midday:-

"... the breeze picked up as the afternoon went on, sort of 12 o'clock on, picked up to 50 to 60 knots constantly, and then it got 60 knots constant, gusting to 70 to 75, nearly 80 knots ..." (**Darren Senogles, 7th January, 1999, p.5**)

Carl Watson remembers gusts in the vicinity of 80 knots occurring around 1pm, 1.20pm:-

"... and I think by about 13.00, 13.20, we were experiencing winds in the vicinity of 75 to 78 knots ... and I think the top gust we recorded was in the vicinity of 80 knots." (**Carl Watson, 2nd January, 1999,p.14**)

Notwithstanding Mr. Kulmar's concern for the crew and the yacht, Mr. Kothe wanted to wait for the BOM forecast which was due at 12 o'clock to have a better idea as to the position of the low pressure

system which he equated with the position of the storm. Mr. Kulmar agreed with this course. Mr. Kothe gave the following evidence:-

"Q. When Mr. Kulmar raised with you at 11.30 the proposition of retiring from the race, what did you say?

A. I said I'm puzzled about the weather, we need to wait till the 12 o'clock official radio - the official Bureau of Meteorology forecast.

Q. We need to wait?

A. Yes, we need to wait till the forecast.

Q. In effect you were overruling him?

A. Yes but I don't feel at that stage he in any way - he didn't disagree with the proposition, there was no oh I don't think we should do that Rob, I think we should turn around regardless. He certainly didn't raise any such proposition to me." **(transcript 30th March, 2000, p.35)**

Mr. Kulmar gave evidence as follows:-

"Q. So when you got that gust of 82 knots did that renew any conversation about the turning back --

A. Well, I mean it was from that - it was really because of that wind strength that I had been talking with Rob about considering our position and we agreed that we'd wait for the 12 o'clock forecast to get a fix on where the low pressure system may well be. When that forecast came through of course unlike the forecast from the evening before it went incredibly vague. It just referred to the

low pressure system in eastern Bass Strait, it no longer gave us a position for the low pressure system."
(transcript 27th March, 2000, p.7)

The BOM forecast was a little after 12 o'clock which according to Mr. Kothe and Mr. Kulmar was vague in terms of estimating the position of that low pressure system. That is, the forecast simply said that the low pressure system was in eastern Bass Strait.

That forecast, however, still gave a storm warning south from Merimbula. If one accepts that a storm warning is the highest grade of warning which can be issued for those waters it concerns me that such importance was placed by Mr. Kothe on locating the low pressure system alone. It is illustrative to note the evidence of Captain George RAN who dealt with the Naval and Naval Aircraft's approach to storm warnings. As he pointed out, one of the RAN aircraft crew said:-

"... the weather was that which we are trained to avoid,
..." **(transcript 19th July, 2000, p.72)**

And from a ship's point of view he said:-

"... But a storm even in a large vessel like a frigate is - there's a call for you to assure your survival by taking specific actions regarding where you're heading, the aspect to the weather, how long you're going to remain in the weather, because you just don't have the option of carrying on at the speed that you are generally. You must take very specific actions to assure your survival, you're talking survival in storms. And most ships just cannot sustain storms, no matter how big they are, without suffering some form of structural damage, and by that - in a yacht, you know, the smallest objects will

be produced into lethal missiles. ..." (**transcript 19th July, 2000, p.72**)

It is clear that the experience that Mr. Kothe claimed to have in meteorology did not extend to this knowledge.

After receiving the 12 o'clock weather forecast and being dissatisfied with its content, Robert Kothe said that he tried to get in contact with Eden Coastal Patrol so as to obtain further weather information:-

"I had around 12.30 been dissatisfied with the brevity of what I saw the Bureau of Meteorology forecast. I spent some 25 minutes attempting to get through and finally getting through to the Eden Coast Guard to get more weather data. The problem I found when I got that weather data, it seemed to me inconsistent with the forecast." (**transcript 30th March, 2000, p.38**)

I have difficulty in reconciling this evidence of Mr. Kothe with what he said to Senior Constable Upston in an interview on 2nd January, 1999 some six days after these events had taken place. Then he stated:-

"... I had a long conversation with, with, on VHF, with the Eden Coastguard ... I had probably a 15 minute conversation where I got all the oil rig information, this was about probably an hour and a half before the storm hit. I had the oil rig information, I had the barometric pressure, I had the wind temperatures, everywhere, you know, I had the whole thing plotted, so I did have a pretty good idea ... And so we, the weather we got didn't surprise us, it might have surprised other people, but we were expecting it and we were prepared for it. So there was adequate, there was no, no shortage of available

weather information." (**Robert Kothe, 2nd January, 1999, p.47**)

At 1 o'clock Mr. Charles voiced to Mr. Kulmar his desire that they retire from the Race. Mr. Kulmar said in evidence:-

"... when Glyn came on deck at 1300 hours Glyn expressed to me in no uncertain terms about his concern about the weather conditions and he did ask me to try - endeavour to convince Rob to retire." (**transcript 27th March, 2000, p.8**)

Robert Kothe says that he gave little weight to Mr. Charles' concern because, according to Mr. Kothe, Glyn was not in a position to make an informed decision as he had not been briefed by him on the weather:-

"Well, to be honest I didn't give a lot of credence to the reporting that Glyn Charles felt we should turn around because he had at no time had a weather briefing in the intervening three or four hours. So what I knew was that he was probably being lent on and, you know, suggested that that'd be a worthwhile - but I hadn't had the opportunity to talk to him." (**transcript 30th March, 2000, p.38**)

During this time, the third senior helmsman, Adam Brown, was on the helm. Robert Kothe took him off the helm at about 1.10pm, Glyn Charles taking the helm. It was seen that Adam Brown was shaking and it was thought he was going into shock:-

"... he'd been on the wheel and came down, you know, this big guy, came down, absolutely trembling with exhaustion, I mean his ... muscles had just gone on him,

and he was sitting like jelly on the bottom of the stairwell, and we put him, you know, I made him, the guys, and I said, "he's going into shock, for Christ sake give him something to drink"." (**Robert Kothe, 24th July, 1999, p.47**)

Mr. Kulmar gave evidence that he then spoke to Mr. Brown about retiring from the Race:-

"I went and spoke to Brownie, he was below deck in one of the bunks. Rob had agreed that the decision should be made by the helmsmen and I went and spoke to Adam at that time and Adam said that he did not consider his experience or level of experience to be such that he should be making the decision so he deferred to me." (**transcript 27th March, 2000, p.9**)

Prior to Glyn Charles taking the helm at about 1.10pm he had been below decks and feeling very sea sick.

Darren Senogles gave the following evidence when asked about Glyn Charles' condition just after the yacht had changed course for Eden at about quarter to five on 27th December, 1998:-

Q. Mr. Charles, was he tired or was he sick at that stage?

A. He had been downstairs for most of the day. He was seasick. He wasn't incapable of doing anything. He was just not feeling well. He - prior to the boat turning around he started to go on deck and to help the crew out as he did and hopefully being upstairs in the fresh air would make him feel better. (**transcript, 23rd March, 2000, p.45**)

According to Mr. Kothe, in his oral evidence, it was due to this lack of certainty of the weather that delayed him taking heed of the opinion of his helmsmen and instead decide to wait for the 2pm forecast at the next sched:-

"A. ... I was not in disagreement with changing course, I was just concerned that if we changed course that we went the right way ...

Q. When they came to you, or rather when Mr. Kulmar came to you and told you that it was the opinion of your helmsmen to turn around, you effectively overruled him?

A. I said I want to wait - the answer is yes. I want to wait till the 2 o'clock sked. ..." (**transcript 30th March, 2000, p.38**)

"Q. At 2 o'clock - I withdraw that. At quarter to 2 when you overruled Mr. Kulmar --

A. Yes.

Q. -- you knew that the low was still to the south of you, didn't you?

A. I believed it was to the south of us.

Q. So if you went north you would be going away from the low?

A. Yes but what was really worrying me was the ground information from the coastguard." (**transcript 30th March, 2000, pp.38 & 39**)

At the 2pm sched a weather forecast was broadcast to the fleet. The forecast was in Mr. Kothe's opinion a repeat of that which he had obtained at 12 o'clock:-

"We had from Telstra Control we had a repeat of the 12 O'clock weather at the beginning of the sked and at the end of the sked ..." (**transcript 30th March, 2000, p.42**)

Either shortly before or during the 2 o'clock sched Robert Kothe and some of the crew discussed broadcasting to the rest of the fleet the weather conditions that they had been experiencing. It was decided to make the broadcast in the hope that other boats further ahead would do the same and thereby indicate what weather they were experiencing. The broadcast was recorded as follows:-

"... I just want to tell you a bit about the weather we're experiencing down here. It's a little bit different to the forecast, over ... We are experiencing 50 to 65 knot westerlies with gusts to 78 knots, over." (**Vol. 8, Tape 3, p.10**)

"Sword of Orion" was the first boat in the fleet to make such a broadcast during the 2 o'clock sched (though "Doctel Rager" had broadcast similarly at 12.35pm). The only other yacht during the sched to broadcast the weather conditions that she was experiencing was "Yendys". It must be borne in mind that the sched is run through alphabetically and "Sword of Orion" was close to the end of the sched. Therefore it is not surprising that more boats did not follow suit.

The sched finished at about 2.50pm and Robert Kothe remained at the navigation station until about 3.45pm. Although he intended to go on deck immediately after the sched to speak with Glyn Charles about the weather, Mr. Kothe got caught on the radio relaying messages for some of the yachts which were in distress:-

"I'm about to get up from the nav station to go upstairs to stand next to Glyn Charles to make an assessment and talk to him when I hear "Ausmaid" calling. That was great. That was really good. But Telstra Control couldn't hear "Ausmaid" and "Ausmaid" had been missing for two skeds, so I sat back down at the nav station and I relayed and then I relayed that and that meant they didn't have to send search and rescue aircraft out. I then relayed for "Team Jaguar", again this was not my choice but I happened to be there and ..." (**transcript 30th March, 2000, p.43**)

By about 3.45pm the weather conditions started to moderate and very soon after there was a patch of blue sky and the winds reduced to 15 knots. The crew seemed to think that this was the eye or centre of the storm. It seems unlikely that "Sword of Orion" passed through the eye of the storm being the centre of the low pressure system. None of the crew reported a change of wind direction on the "other side" of that lull in the weather conditions. It would be expected that such change in wind direction would have been encountered. In an article by Mr. Ken Batt in "Offshore" magazine (December/January 1998 edition) he explains how the wind arranges itself in corridors of strong winds, interspersed with lighter winds (see **Exhibit 25, p.40**). It is possible therefore, and in this case most probable, that what was experienced by "Sword of Orion" was simply a corridor of lighter winds as described by Mr. Batt.

Robert Kothe then made a decision that the conditions up ahead could be worse and that if the winds got back up to 65 knots they would retire from the Race:-

"... if the weather ahead was going to be another 12 hours of what we'd just had, we didn't have enough helmsmen. That was plain." (**transcript 30th March, 2000, p.44**)

"... I said if the wind goes back above 65 we're going to, we're going to go home ..." (**Robert Kothe, 2nd January, 1999, p.17**)

Despite previously intending to do so, Robert Kothe did not speak to Glyn Charles about the weather.

The winds then increased to 55 and 60 knots and the decision was made by Robert Kothe to turn "Sword of Orion" around but not to retire. The Telstra Control radio log shows an entry for 16.44 hours on 27th December, 1998 for "Sword of Orion" which indicates that the yacht is heading to Eden and not retiring. Mr. Kothe gave the following evidence:-

"Q. You simply were turning back for shelter, and it was your intention that having sought shelter and rode out the storm, you would continue the race?

A. That was my hope but I - you know, we hadn't closed our options." (**transcript 30th March, 2000, p.52**)

The motor was turned on and put in gear. The boat was gybed to turn it around. This was executed without any problems.

With the turn completed the boom was left on the port side, which was now the weatherside of the boat. In order to get the boom back onto the leeward side it was lifted and strapped to the starboard side of the boat. Mr. Senogles was responsible for securing the boom. In oral evidence he was asked questions in relation to what he had done:-

"Q. How was it secured to the starboard side?

A. It was tied through a strong point or a padeye.

Q. Where was the strong point?

A. Just aft of the first stanchion." (**transcript 23rd March, 2000, p.41**)

"A. It was through the padeye around the boom twice --

Q. Twice?

A. Through the padeye twice and then tied to itself.

Q. And you were happy with that?

A. More than happy with that." (**transcript 23rd March, 2000, p.43**)

This evidence is not the same as what Mr. Senogles said in an interview with Senior Constable Upston on 26th July, 1999:-

"I had tied it to the stanchion base, which was through bolted, and that's on the gunnel join." (**ROI Vol.6B.12, 26th July, 1999, p.13**)

This issue of securing the boom to the starboard side is important because, as I will elaborate below, the boom came loose in the capsize and ended up on the port side from where Glyn Charles was helming the boat.

CAPSIZING OF "SWORD OF ORION" AND LOSS OF GLYN CHARLES

Once the boom was secured the only two crew that remained on deck were Glyn Charles and Darren Senogles.

Mr. Charles was helming the boat from the port side. He was sitting on the deck with a leg either side of the wheel; the wheel being about 6 feet in diameter. He was not wearing a life jacket but was wearing a harness with a lanyard which was clipped to a strong point (ie, a padeye) on the port side of the boat.

After securing the boom and tidying up the deck Darren Senogles went and sat next to Glyn Charles for about fifteen minutes:-

"... in the 15 minutes with Glyn sitting beside Glyn I was actually sheltering the wind and the rain the driving rain from hitting his face cause it was quite hard to look forward which is what he had to do, so sheltering him and then also looking over my shoulder for bad waves coming through ..." **(transcript 23rd March, 2000, p.44)**

Adam Brown then called Darren from the companionway. Darren could not hear Adam and so he moved forward and away from Glyn Charles. Adam wanted to discuss the course that Glyn was steering. As the discussion took place the yacht was struck by a large wave. Darren Senogles describes the action of the boat being hit:-

"Q. So I take it that the wave that struck the vessel came from the stern area?

A. It came - yeah beam on but more towards the stern other than instead of on the bow where it should have been." **(transcript 23rd March, 2000, p.45)**

"A. Picked the boat up, dropped it into the body of the wave so onto its side.

Q. Starboard side?

- A. Onto its starboard side and then rolled over a little more by the white water ...

- A. -- the mast is now laying parallel to the wave so its over 90 degrees, then the boat's then pushed down the wave on its side -- ...

- A. Like 90 degrees to the wave, and then when the mast has hit the bottom of the water, the bottom of the wave, the mast has just pierced into the trough of the wave and started to collapse. The boat has hit the bottom of the wave and rolled upside down and stayed down for two or three seconds and then righted back to the way its supposed to be, upright." **(transcript 23rd March, 2000, p.46)**

As a result of the action of the yacht it seems that Glyn Charles was thrown or fell from the port side to the starboard side of the yacht. Professor Cross gave evidence on this issue, with which I will deal with below.

As a result of the roll the yacht's mast had been broken and lay in the water. The boom had come away from the starboard side of the boat ending up on the port side destroying the wheel as it came across.

After the roll Darren Senogles went immediately to see if Glyn Charles was alright. He saw that he was no longer connected to his lanyard, but was in the water about fifteen to thirty metres behind "Sword of Orion". I pause here to note that Mr. Charles' lanyard was recovered from "Sword of Orion" before being abandoned. It was found attached to a strong point on the port side of the yacht. The stitch pattern on the harness end had failed completely and at the other end approximately 50% of the stitching had also failed.

In evidence Mr. Senogles described what he then did and saw:-

- "A. I screamed at him to swim back to the boat. The boat you could actually see being pushed through the water by the wind and was moving at let's say 2 knots. Glyn couldn't swim as fast as the boat was moving. He did all of six strokes and then that was as much as his attempt to swim back to the boat well.
- A. He tried overarm but it was a half hearted effort. It wasn't a full stroke, it was more half a stroke as if he could barely lift his arm out of the water.
- Q. Well what's your opinion of why he did that, that you could see?
- A. Because he was injured.
- Q. So you think he was injured?
- A. I definitely believe he was injured." (**transcript 23rd March, 2000, p.47**)

Senogles eventually lost sight of Charles. He said:-

- "A. It's clear that he wasn't going to get back to the boat for one reason or another. I screamed to the guys down below to get on deck and was quite annoyed as to why only a few people came on deck. I wasn't aware that there were injured people downstairs. I called for a rope to tie around myself and had intentions of jumping into the water, and I figured if I could swim to him and he could swim to me, that we'd hopefully meet in the middle and then both get dragged back with the boat and then get pulled in. Finding a rope long enough or ropes to tie together to get long enough took a couple of minutes, at which stage he was getting further and further away.

Finally I got a rope and was outside the life lines, ready to jump in the water, and another really bad wave came through and I was held until that wave went through, and the boat was pushed some 100, 150 metres away from Glyn, which made it impossible for me to be able to swim back to Glyn. Once I was in the water I wouldn't have been able to see him at all and wouldn't know what direction to swim to, and I couldn't have swum that far back anyway. ...

Q. When did you last see Mr. Charles?

A. About two minutes later.

Q. How far away was he?

A. Some 150 to 200 metres away. The next wave actually, at that stage, instead of him being on the same wave as us and having visual contact with him all the time, we'd be in one wave and he'd be in the back of another wave, so it wasn't until we came up onto the top of a wave that we could see him, and that happened two or three times and at which - each time we saw him we could see him just treading water, and obviously losing the battle and was struggling and starting to go under water, and he'd disappear under water and then he'd come back to the surface. And then a wave would go through and then he'd come back and you'd see him again, and then he'd struggle and he'd go under. That happened three times. The third time he went under and didn't come back."
(transcript 23rd March, 2000, pp.48 to 49)

After sight of Glyn Charles was lost Darren Senogles and Simon Reffold kept a lookout on the spot that he was last seen. Darren Senogles remained on lookout for about five minutes and Simon Reffold for about fifteen minutes.

Neither saw Glyn Charles again. His body was not recovered.

AFTER THE CAPSIZE OF "SWORN OF ORION"

In terms of recording the position where Glyn Charles went overboard, Steve Kulmar pressed the man overboard button on the global positioning system (GPS), just after the boat righted itself whilst on his way up to the deck (see **transcript 27th March, 2000, p.15**).

In addition, between five and forty five minutes after the capsize Mr. Kulmar activated an EPIRB, let it out into the water and secured it to a stanchion. The discrepancy in the time comes from the two different versions given by Mr. Kulmar and Mr. Senogles. Kulmar said in evidence:-

"I actually got the EPIRB out and put the EPIRB out on the weather side of the boat about 5 minutes after the capsize ... let it out into the water and tied it up onto the stanchion." (**Kulmar, transcript 27th March, 2000, p.15**)

Whilst Mr. Senogles stated that after stopping to look for Glyn Charles he began cutting the rig from the yacht, which took some thirty to forty minutes. It was then that the EPIRB was deployed:-

"... the EPIRB, once the rig was gone was put into the water, because they need to be in the water to work properly." (**Senogles, 7th January, 1999, p.13**)

Mr. Kothe states that because of the weak string by which it was attached to the boat the EPIRB broke away some two to three hours afterwards (see **Robert Kothe, 2nd January, 1999, p.52**).

Robert Kothe noticed after the roll that there was smoke and sparks coming from the HF radio. In order to ensure that there was no electrical shorting, he turned off the HF radio and pulled all the cables from the computer. Only the VHF radio and GPS remained operational.

It was about five or six minutes after the roll that Robert Kothe started to broadcast a `mayday' giving the position that was recorded by Steve Kulmar. However, the VHF radio aerial was broken in the roll over and Darren Senogles had to install a spare VHF aerial to the back of the yacht, which he did. It took about twenty minutes before Robert Kothe could get a good signal on the VHF radio.

The other major damage to the boat was to the starboard quarter. The deck had physically parted from the hull and the port light had been blown out. The port light was "... an aluminium framed window with a perspex cover which sits and is bolted to the side of the cockpit."
(transcript 24th March, 2000, p.18)

Carl Watson described how the hull of the yacht was beginning to break up:-

"You have an outer skin of the boat and an inside skin and they're both laminated to that foam with high density glue and ... they put a layer of kevlar down ... What happened around the side of the cockpit was that the kevlar and the foam had started to shear and what happens is that the two sides go like this and it becomes like rubbing your hands together and that foam turns to powder and gradually surely that will just work its way around and make the boat very very unsafe ..."
(transcript 24th March, 2000, p.18)

As I have already noted, the mast had broken into pieces. However, it was still attached to the yacht. As Mr. Kulmar explained:-

"Q. What happened then, when did you --

A. We couldn't start the motor, the motor had sort of moved out of its housing completely. The rig was out the side of the boat. The boat was lying side to the sea as it was being held side to the sea because of the way in which the rig had folded around the boat on this side and the sea was coming in this side, so it was being held side-on to the sea. What we then did was Simon stayed aft and kept an eye on Glyn and we desperately got everything out and started cutting the rig away from the boat."
(transcript 27th March, 2000, p.14)

He described the state of the cabin after the roll:-

"... the bottom of the boat, in water up to sort of my knees. At that time I could see the boat was in a hell of a mess. The actual capsizing probably only took four or five seconds, couldn't have been much longer than that. The hatchway stairs, the stairs that come down the hatch, had been completely broken away from it so it made it quite difficult to get up out of the hatch ... I was about the fourth man to make it on deck, had to sort of climb over the top of the debris inside the boat and the motor housing had sort of collapsed and as I say the water was quite deep inside the boat. There were sails floating everywhere, I mean the boat was a complete disaster below deck ..." **(transcript 27th March, 2000, p.14)**

Because the motor was broken and the rig was lying in the water, the motor could not be started in order to attempt to go towards the last known position of Glyn Charles:-

"The switches to start the, the motor were gone, so we couldn't start the motor. The, the engine we thought had moved in its mountings, anyway, there was a God almighty bang from that and we couldn't, we, and we couldn't steer the boat anyway in terms of, of any meaningful direction and we had rigs lying in water, so that last thing you do in those circumstances is start the motor and try and motor anywhere because there was lines everywhere, we would have guaranteed to have no motor at any stage." (**Robert Kothe, 2nd January, 1999, p.26**)

As the yacht had taken water it had to be continuously bailed from then on. There had also been a number of sails jettisoned and the main anchors were let out. Letting the anchors out helped to keep the boat as close to head to wind as possible as well as slowing the drift of the boat:-

"We tried to slow the boat down as much as we could by having the anchor and the chain and everything else out of the boat, we jettisoned quite a lot of the sails off the boat to get, they were very wet." (**Carl Watson, 2nd January, 1999, p.22**)

SIGHTING OF "MARGARET RINTOUL II"

About an hour and a half after the capsizing, Steve Kulmar and Nigel Russell, sighted another yacht being "Margaret Rintoul II":-

"I can't remember whether it was he or I who first sighted the yacht but at that stage they were almost due north of us so they were actually pointing at us and they were - at that stage it was raining slight drizzle, the sea conditions

and weather conditions had abated considerably, we probably had around 40 maybe 45 knots maximum and three to four metre seas.

... We first sighted them and I guess at that stage they were a kilometre away from us and as they sailed - and they didn't alter course at all as they sailed this way we drifted away from them to when they were dead to weather of us they were probably 250 metres dead to weather of us." (transcript 27th March, 2000, p.16)

As "Margaret Rintoul II" sailed towards the "Sword of Orion" the crew of "Sword of Orion" let off some flares to attract attention, Carl Watson said:-

"Q. Did you - I think you said something about you heard the call for flares?

A. Yes.

Q. What did you do to that?

A. We passed up our flare container. We carry, which we have to do, each yacht in the race has to carry I think it is 12 flares. These flares were passed to Nigel who - each person on the boat before the race we were all aware of where - we had a tour of the boat if you like as Darren had run the boat and he had stowed the safety gear, so each person had to know in the boat where each piece of safety gear was and Nigel was what we called the minister-in-charge of flares. He had a very good handle on the use of the flares, where they were, how they were actually packed into containers.

Q. What happened with the flares?

A. Nigel and Steve were on deck and Nigel grabbed the first set of flares and there was a lot of talk of the trajectory that we should be aiming there flares up at because if we aimed them directly above us the flare would disappear quickly down wind because obviously with the height, there would be an increase in wind pressure. I think the call was given to something like 45 degrees above the horizon or a little more. So that as the flare went it would lift and give a longer span and basically try to get up wind of our position.

Q. So were you firing them at anything?

A. We were firing them towards the boat basically directly off wind of us, like directly into the wind and that was why our trajectory was up off the horizon so that it would go out towards that vessel before it went up. If we had fired them directly up, the flare would have been going down --

Q. So it's towards the "Margaret Rintoul"?

A. Towards the vessel that was going past us yes.

Q. Could you see any people on board the other vessel?

A. For the time I was up there I thought I could visualise three people on deck of the boat. I couldn't be exactly sure. From looking, I thought I could see three people."
(transcript 24th March, 2000, pp.20 to 21)

Carl Watson was able to identify the yacht as "Margaret Rintoul II":-

"Q. Did you recognise it?

- A. I think I recognised it by it as the "Margaret Rintoul". Nigel Russell concurred with me, he actually had said that's the "Rintoul". (transcript 24th March, 2000, p.20)

"Margaret Rintoul II" did not alter its course nor did it make radio contact with "Sword of Orion".

It seems clear from the evidence of the crew aboard "Sword of Orion" that as "Margaret Rintoul II" sailed past it was close enough to identify. Richard Purcell, the skipper of "Margaret Rintoul II", stated that he saw a dismasted yacht with people on deck with a hand held orange flare:-

"... I sighted, I sighted a hand-held orange flare and it's hard to tell how far he was down, this boat, but, without the flare I wouldn't have sighted him because he blended in so well with the water, the water was sort of white-ish, blue-ish, with a lot of veins running through it `cause of the speed of the wind and I reckon I had that yacht in my sight for about five seconds and the flare, the flare went out. I then said to Bill, "I've sighted a yacht down below", and I asked Dave Wiggan who was sitting in the cockpit with me, to find a torch, he found a torch and I stood up and I flashed a torch back in the general area I thought the yacht was. I then yelled out to Col, who was in his bunk to get, to get a fix on where we were, then I, I'd sighted a yacht, a yacht to leeward of us and I said, he asked me what sort of yacht it was, I said I thought it was a Far 37, it was laying at an angle, it was laying, it was trying to lay head to wind but it couldn't, it also had drogues out the front of the boat, I think it must have had drogues because otherwise he would've been facing, his stern would've been facing us. I could see men on deck in the cockpit, how many I can't remember, I can

remember the one person with the flare ..." (**Richard Purcell, 29th January, 1999, pp.8 to 9**)

"Q. When you say that you saw this boat at some stage, was it dismasted?

A. It was dismasted" (**Richard Purcell, 29th January, 1999, p.15**)

The issue of "Margaret Rintoul II" sailing past "Sword of Orion" is relevant to this inquest in providing answers to the following questions:-

1. Had "Margaret Rintoul II" not sailed past, could a search have been instituted for Glyn Charles or would such search have been futile?
2. What did "Margaret Rintoul II" do once its skipper, Richard Purcell, had sighted "Sword of Orion"? Specifically:-
 - (a) What information passed between Richard Purcell and Colin Betts?
 - (b) Was Telstra Control told by "Margaret Rintoul II" that she was not going to provide assistance to "Sword of Orion"?
 - (c) Did "Margaret Rintoul II" try to communicate with "Sword of Orion"?

In dealing with the second question I will examine the evidence of Richard Purcell, Colin Betts and Lou Carter (the radio operator aboard "Young Endeavour" of Telstra Control).

Before dealing with these questions I will first deal with the questions of:-

- (a) How did Glyn Charles die; and
- (b) When did Glyn Charles die.

In order to answer these questions it is necessary to deal with the evidence of the following:-

1. The evidence of Dr. Luckin.
2. How and why the lanyard worn by Glen Charles broke.
3. The evidence of Professor Cross.

THE EVIDENCE OF DR. LUCKIN

The lanyard which secured Glyn Charles to the port side of "Sword of Orion" was retrieved and shows clearly the stitching securing the clip that would have connected the lanyard to Mr. Charles' harness had failed (see **Exhibit 30A**).

In the opinion of Dr. Luckin, Glyn Charles died immediately following his last being seen on the surface of the water as a result of likely injuries he sustained. Dr. Luckin sets out what he considers to be the probable patterns of injury that Mr. Charles would have sustained when "Sword of Orion" rolled 360 degrees:-

- "5. Probable patterns of injury:
 - (a) **Thorax:**

- * Rib fractures, with or without a flail chest.
- * Pneumothorax (collapsed lung with air in the chest), haemothorax (blood inside the chest compressing the lung) or haemopneumothorax, or tension pneumothorax (air under pressure in the chest, collapsing the lung, displacing the heart and major vessels and impeding function of the lungs and heart).
- * injury to the great vessels (aorta, superior vena cava, inferior vena cava, pulmonary artery, pulmonary veins). These injuries cause major bleeding into the chest.

(b) **Abdomen:**

- * major intra-abdominal haemorrhage (bleeding from liver, spleen, mesenteric vessels).
- * fractured pelvis, with massive blood loss into the pelvic cavity.

(c) **Spinal column:**

- * fracture and/or dislocation, with possible spinal cord damage causing loss of sensation and paralysis in the upper and lower limbs (cervical cord damage), or lower limbs alone (lumbar cord damage).

(d) **Limbs:**

* long bone fractures, especially of the femur, with extensive blood loss.

5.1 Mr. Senogles' statements support these as probable mechanisms of injury, with the exception of significant cervical spine and cord injury." (**Report of Dr. Luckin, 12th March, 2000, Exhibit 53**)

Dr. Luckin then gave evidence as to the effect the injuries would have had on Mr. Charles' ability to survive in the water:-

"A. ... I believe it was not possible for him to survive those injuries under the prevailing circumstances ... His chances of surviving the injuries I believe he sustained under those circumstances were essentially nil.

Q. You then go on to say at 7.2 "Considering the probable mechanism of injury I believe it highly improbable that Mr. Charles was left alive and uninjured in the water following the roll over." So what you have is the description of what Mr. Senogles saw and the effort to swim and you say that that is indicative that there were injuries and injuries of the type you have described.

A. I believe that that statement entirely supports what we would believe to be the most likely mechanism of injuries.

Q. All right, and the probability is that if he was seen to do that that he was injured and would have died shortly afterwards?

A. Yes, that would be my conclusion.

A. ... I'm firmly of the opinion that he was very severely injured at that time, that his survival was basically

impossible and that he died immediately following or the last time that he was actually described as being seen on the surface of the water." (**transcript 31st March, 2000, p.24**)

The injuries that Dr. Luckin believes Glyn Charles suffered as a result of the roll of "Sword of Orion" are listed in his report dated 12th March, 2000 as quoted above. They presuppose certain possible events being:-

- (a) Glyn Charles "fell directly downwards from the port side towards the boom and water and his fall was arrested by the harness or by hitting the boom or other parts of the boat"; or
- (b) "Was hit by the boom swinging upwards"; and/or
- (c) "Was dragged through the water as the boat rolled through 360 degrees." (**Report of Dr. Luckin dated 12th March, 2000, Exhibit 53**)

Dr. Luckin further states in his report:-

"The possibility of being hit by the boom, or hitting the boat itself, and the fact that the lanyard was broken, suggest specific patterns of injury. The lanyard was attached to the chest harness, and was broken at this point. The forces required to do this, and the acceleration and/or deceleration of the thorax, (**Prof. A. Cross, 5th January, 1999**), while the rest of the body was in motion, make major thoracic and spinal injuries probable, even if Mr. Charles was not hit by the boom." (**Report of Dr. Luckin dated 12th March, 2000, Exhibit 53**)

HOW AND WHY THE LANYARD WORN BY GLYN CHARLES BROKE?

In order to determine the answer to this question a number of tests were carried out by Crashlab (a division of the Roads and Traffic Authority of New South Wales which tests safety products) with assistance from Chris Turner of Workcover (NSW) who has expertise in this area and is Chairman of the Standards Australia Committee for Industrial Belts and Harnesses. In addition to the tests a visual inspection of the lanyard worn by Glyn Charles was carried out.

The tests included:-

1. Testing a harness and lanyard assembly from "Sword of Orion" in accordance with the dynamic drop test set out in Australian Standard AS2227:1992 but with a pass criteria of only 12 kilonewtons to allow for the age and use of these items.

The test set out in Australian Standard AS2227:1992 is set out in Appendix B of that Standard. The procedure is explained in the Crashlab Special Report SR99/004 dated 24th August, 1999:-

"The complete yachting harness and line assembly supplied from the "Sword of Orion" yacht, was tested to the dynamic test requirements of Appendix B of AS2227:1992. Refer to photographs 2 and 3 in Appendix B.

The assembly was thoroughly soaked, then fitted onto the 136kg test dummy as per the donning instructions. The adjuster was then marked to determine the amount of webbing slippage. Refer to photographs 4 and 5 in Appendix B. The yachting line was then attached to the front 'O' ring attachment point of the harness and to the rigid anchorage point of the harness drop tower. The dummy was raised in an upright position and held via a quick release device until released to fall through the

appropriate dropping distance of 1.47m. Refer to photographs 6 and 7 in Appendix B." (**Crashlab Special Report SR99/004 dated 24th August, 1999, p.4**)

Mr. Turner further explains in his report dated 10th March, 2000 the pass criteria of 12 kilonewtons that was applied to the test carried out on the lanyard and harness assembly from "Sword of Orion":-

"In general, the Standards for products such as webbing and the stitched joints, which are subject to wear and degradation with age, incorporate factors of safety in their specifications to allow for some reasonable degradation to occur during use. This results in a product with a reasonable life expectancy and makes discard criteria more obvious during a visual inspection.

It is therefore inappropriate to test a used product, such as these used lines, to the Standard test for new product and expect it to pass. An alternative test program needed to be developed to determine whether the used harnesses and lines were in a useable condition.

Australian Standard AS2227 - **Yachtsmen's Safety Harnesses and Lines** was first published in 1978 and has been revised 3 times, 1983, 1986 and 1992. In all 4 versions the webbing strength requirement has been a minimum 22 kN webbing, whilst the requirement for hooks and other "non-deteriorating" components has been 12 kN. Thus, on the basis of a system being only as strong as its weakest link, it would be reasonable to expect an in-service used harness or line to withstand a load of at least 12 kN.

It is also noted that no edition of AS2227 includes any requirement or recommendation on the maximum service

life, or shelf life of the harnesses and lines." **(Report of Chris Turner dated 10th March, 2000, p.2)**

2. Carrying out a test on a lanyard from "Sword of Orion" to determine the failure load of the hooks, stitch pattern and webbing. The method of testing was as specified in Appendix A of Australian Standard AS1753:1990 "Webbing for Restraining Devices for Occupants of Motor Vehicles". The pass criteria was 12 kilonewtons for the hooks and stitch pattern and 22 kilonewtons for the webbing in accordance with Australian Standard AS2227:1990.
3. Carrying out tests on two newly manufactured lanyards which were made to replicate the lanyards on "Sword of Orion" ("replica lanyards") to determine whether the failure load of the hooks and stitching would meet a force of 12 kilonewtons in accordance with Australian Standard AS2227:1992. Although that Standard requires the lanyard to be wet, further tests were carried out with the lanyards totally dry. Once again the method of testing was that specified in Australian Standard AS1753:1990.
4. Testing of four other replica lanyards, each assembled with a Burke Pty Ltd harness, in accordance with the dynamic drop test set out in Australian Standard AS2227:1992. Although that Standard requires the harness and lanyard assembly to be wet, one of the tests was carried out with the harness and lanyard assembly totally dry.

On a visual inspection of the lanyard worn by Glyn Charles it was observed that the stitch pattern on the harness attachment end failed completely and at the other end approximately 50% of the stitching failed. Although the stitching failed the webbing was intact. In the opinion of Mr. Turner:-

"The lack of damage to the webbing .. was of concern. Structural stitch joints in webbing usually cause considerable damage to the webbing when tested to failure. The lack of webbing damage in this case raises the possibility that the stitched joint was significantly weaker than the webbing, because of the joint design, thread selection or degradation of the stitching." (see report of Chris Turner dated 10th March, 2000, p.2)

Each lanyard that was tested failed. That is, both the lanyards from "Sword of Orion" and the replica lanyards.

The pertinent results of the test carried out on the harness and lanyard assembly from "Sword of Orion" were as follows:-

<u>Test Number</u>	<u>Item(s) Tested</u>	<u>Type of Test</u>	<u>Load at which Failed</u>
1	Harness and lanyard assembly from "Sword of Orion"	Dynamic drop test	6.7 kilonewtons

The results of the tests carried out on the four newly made replica lanyards were as follows:-

<u>Test Number</u>	<u>Item(s) Tested</u>	<u>Type of Test</u>	<u>Load at which Failed</u>
4	4 newly made replica lanyards	Dynamic drop test	
		(a) in dry conditions	9.7 kilonewtons

(b) in wet
conditions 10.5 kilonewtons

(c) in wet
conditions 9.0 kilonewtons

(d) in wet
conditions 10.8 kilonewtons

From the visual assessment of the lanyard worn by Glyn Charles it could not be determined conclusively whether it afforded the same level of protection represented by the Australian Standard. However, given that the replica lanyards were unable to meet the Standard, it is unlikely that a new lanyard of the design of that worn by Glyn Charles would meet the Standard (**see new documents, 22nd February, 2000, Crashlab Report SR2000/002, p.6**).

Given the inconclusive results of the visual inspection and testing my investigating officers went to the manufacturer of the subject lanyard to further investigate the matter.

It was found that the manufacturer, Tuff Marine Accessories Pty Ltd, obtained approval from Australian Standards to manufacture the subject lanyards on 10th February, 1986. To ascertain whether the lanyards complied with the approval it was necessary to approach Standards Australia, now administered by Quality Assurance Services, to find out whether a duplicate of the lanyard that was used for testing by them was retained. The retention of duplicates of tested items is, I understand, the usual procedure.

Unfortunately Quality Assurance Services did not have any such duplicate lanyard in its possession. Accordingly it is impossible to attempt a conclusive determination of whether the lanyard worn by Glyn Charles was manufactured in accordance with the Australian Standard or not.

PROFESSOR CROSS

Professor Cross is a Professor in the School of Physics at Sydney University and holds a PhD in physics. He was asked to determine what, in his opinion, would have happened to Glyn Charles at the time "Sword of Orion" was rolled. He reported to me on the 5th January, 1999.

In order to make his report Professor Cross relevantly considered, amongst other things, the transcripts of interviews of Darren Senogles and the results of the test carried out on the harness and lanyard assembly of the type that had been worn by Glyn Charles as well as the conclusions that were made by Crashlab from visually inspecting Glyn Charles' lanyard.

Although Professor Cross states that he cannot rule out several other possibilities, he gave evidence on what he considers is the most probable reason that the lanyard worn by Glyn Charles failed, he said:-

"The most probable reason that the lanyard failed in my opinion is that, and according to the descriptions that were given of the event, obviously there was no video recording of exactly what happened and in fact nobody saw what happened, but it's known that the yacht rolled over, it's known that the yacht was hit by a wave of 10 metres or more travelling at about 60 kilometres an hour, there's a description that the yacht fell down the face of the wave and one can imagine that the face of the wave is almost vertical.

The yacht would therefore have hit the bottom of the wave at considerable speed and at an angle. That was observed by David (sic) Senogles. The yacht was tilted so that the mast was below the horizontal. There's also a description of the large force involved where the starboard side of the yacht was torn apart, the boom was unleashed. People have said that the boom possibly swept through the steering wheel and also swept Glyn

Charles overboard. My calculations indicate that that was unlikely to have happened and that the most likely event is that the side of the yacht hit the bottom of the wave, Glyn Charles was travelling with it, the yacht would have suddenly stopped, the lanyard would have stretched, there would have been a force of at least 6 kilonewtons on that lanyard and the lanyard would have broken at that point." (transcript 4th April, 2000, p.65)

Professor Cross was then asked to consider the evidence that had been given by Mr. Senogles and Dr. Luckin, that Glyn Charles was most likely injured in the roll over:-

"Q. ... One of the problems is we've got evidence from some witnesses, particularly Mr. Senogles, that he appeared to be injured but we have medical evidence which goes to simple injuries as a result of the force applied coming to the end of the lanyard. ...

A. The only way the lanyard can snap from that position is if the boat suddenly slams into the bottom of the wave and it suddenly stops and he keeps going because of his inertia. Now whether or not he hit the boom is irrelevant in that circumstance.

Q. I follow it's irrelevant from what your putting forward but it's a possibility that once he's in free fall the boom is there and he could well have hit it?

A. Yes he could have been --

Q. He could as well have missed it?

A. -- and been injured, yes, certainly.

Q. And if someone said he looked injured whilst he was in the water, then there's a distinct possibility even probability that he did in fact strike something, if not the boom he struck something?

A. Most definitely." (transcript 4th April, 2000, pp.71-72)

FINDINGS

After considering the above evidence, I make the following findings:-

1. Glyn Charles was washed overboard when his lanyard, which was attached to the harness he was wearing, failed at the stitching. I make the following findings in relation to the lanyard:-
 - (a) I find that the lanyard used by Glyn Charles bore the manufacturer's label "Tuff Marine Australia" which stated that it complied with Australian Standard AS2227;
 - (b) That the lanyard had also, at one time, borne the label of the Standards Association of Australia;
 - (c) It is more probable than not that the lanyard stitching did not meet the Australian Standard (as modified for use and age) at the time it was being worn by Glyn Charles;
 - (d) I have grave doubts that the lanyard that Glyn Charles was using, would have, at the time of its manufacture, met the Australian Standard.

2. Glyn Charles died immediately or shortly after he was last seen on the surface of the water, the time being approximately 5.10pm on the 27th December, 1998.
3. Glyn Charles died from drowning, having probably sustained injuries in the roll over of "Sword of Orion" and being unable to stay afloat.
4. That a search for Glyn Charles by the yacht "Margaret Rintoul II" would have been futile in the circumstances.

The above would normally conclude my interest in what occurred aboard "Sword of Orion" and indeed aboard "Margaret Rintoul II".

However the following submissions were made regarding Richard Purcell, the owner and Master of "Margaret Rintoul II" by Mr. N. Hunt, Solicitor. He said:-

"To move to your Worship's question as to whether and why "Margaret Rintoul II" did not try to communicate with "Sword of Orion", the essence of Mr. Purcell's evidence was that he left the job of the radio communication to his navigator, Colin Betts. Mr. Betts' evidence was that he did not think of attempting to contact the other yacht by VHF due to the fact that the vessel was dismasted.

That comes to the question of Mr. Purcell's delegation as it were of the whole of the radio work to Mr. Betts. I guess it raises the question as I said at the opening as to whether or not it was appropriate for Mr. Purcell to so delegate. It would be our submission that if by analogy with other professions, indeed the legal profession, it was reasonable for Mr. Purcell to rely upon the expertise of

navigators, as was his practice, as his evidence stated of people like Richard Hammond or Colin Betts. As an example, as a principal of a law firm I am entitled to delegate responsibility to an experienced Solicitor in my employ. If I were to inadequately or failed to supervise a junior Solicitor in my employ, it may call into question my professional conduct. However, if I delegate to an experienced Solicitor it does not. I think the analogy here is similar and as I will say in summary that in fact the running of a boat without the right of delegation may become impractical. (**transcript 13th September, 2000, pp.6 & 7**)

I am therefore compelled to address those submissions less my silence should be interpreted as condoning any action or inaction of either the Master or crew of the yacht "Margaret Rintoul II".

MARITIME LAW AND PRACTICE

As long ago as 1820 Sir William Scott, later Lord Stowell, said, of the requirement to give aid to those in distress at sea:-

"It is the duty of all ships to give succour to others in distress; none but a freebooter would withhold it." (see "Waterloo" (1820) 2 Dods 433 at 437; 165 ER 1537 at 1538-9)

Sir Robert Phillimore approved of this statement of the law of the sea in "The Thetis" 1869 LR 2Ad & Ecc and it was referred to with approval by Cockburn CJ in Scaramanga v Stamp 1880 5 CPD 301.

In 1914 Sir Samuel Evans, President of the Admiralty Court, said:-

"Apart from such duties arising from the contract they would have others of a moral kind, which must be distinguished from the former. Thus the duties of tugs may be only of such a character as are common to all honest seafaring persons, apart from any legal obligations; such moral duties as were in the mind of Lord Stowell, when he said: "It is the duty of all ships to give succour to others in distress; none but a freebooter would withhold it" (**vide The Waterloo (3)**)." (see "The Leon Blum" 1915 P 90 at 96)

This statement is adopted and used in such learned texts on Maritime Law as "Shipping Law", Davies & Dickey 2nd Edition 1995; "Maritime Law in Australia", Butler & Duncan 1992.

This obligation to render assistance has been enshrined in statute by the Parliament of the Commonwealth. Thus, Section 265 of the Navigation Act 1912 provides for severe penalties for failure to render assistance.

As with all such onerous obligations they do, of course, depend upon the ability, of those who are so obliged, to carry them out. As Section 265(1) states:-

"Obligation to render assistance

265. (1) If:

- (a) a ship to which Part II applies is at sea; and
- (b) the Master of the ship has reason to believe that persons on or from a ship or aircraft are in distress;

the Master shall, unless he is unable so to do or, in the special circumstances of the case, considers it unreasonable or unnecessary so to do, cause his ship to proceed with all practicable speed to the assistance of those persons and, if possible, inform them that he is so doing.

Penalty: \$10,000.00 or imprisonment for 4 years, or both."

In the 1998 Sydney to Hobart Race, the yacht "Siena" altered course and came back to assist the stricken yacht "Stand Aside". "Siena" did so because her Master Iain Moray and her crew considered it their duty to do so. Even to the extent that when her radio operator, Tim Evans, was severely injured, they remained near "Stand Aside" until sure that the crew of "Stand Aside" were to be winched to safety. Only then leaving the scene to retire from the Race.

However there was a difference between "Siena" and "Margaret Rintoul II". The "Siena" had her engine working and could therefore use it not only to turn back to "Stand Aside" but also to remain on station near her.

"Margaret Rintoul II" did not have, at the time "Sword of Orion" was sighted, her engine working. The only method that could have been used by "Margaret Rintoul II" to turn would be sail power and she would have to use sail power alone to remain on station, to "Sword of Orion".

Mr. Purcell, the Master of "Margaret Rintoul II" says that if he tried to go to the assistance of "Sword of Orion" without an engine it would place "Margaret Rintoul II" in danger and the lives of his crew at risk. He therefore decided not to render assistance.

I accept that under the circumstances, as stated by Mr. Purcell, his decision to consider the safety of his own vessel and crew above any obligation to "Sword of Orion" was justified.

However, the submissions on behalf of Mr. Purcell go further, they in essence state that a Master can delegate to a crew member a task and having done so is absolved of all responsibility from that time on regarding that task.

In order to address this submission and as I have said, I am compelled to do so, it is necessary to examine what occurred aboard "Margaret Rintoul II" when "Sword of Orion" was sighted. In evidence I am told the following took place.

At approximately 6.45pm on Sunday 27th December, Richard Purcell sighted a yacht which was subsequently determined to be "Sword of Orion". In an interview with my investigators on 29th January, 1999, one month after the event, he said the following:-

"... I sighted a hand-held orange flare and it's hard to tell how far he was down, this boat ... for about five seconds ... I stood up and I flashed a torch back at the general area I thought the yacht was ... I then yelled out to Col ... to get a fix on where we were, then I, I'd sighted a yacht ... and I said, he asked me what sort of yacht it was, I said I thought it was a Far37, it was laying at an angle ... I think it must have had drogues because otherwise ... his stern would have been facing us. I could see men on deck in the cockpit, how many I can't remember ... I did say to Col when he got through, to advise Telstra that we could not render assistance, that we didn't have a motor and I felt that it was too dangerous to make an, an attempt to, to turn the boat in those conditions." (**Richard Purcell, pp.8 to 9**)

Mr. Purcell also said:-

"Q. When you say you saw this boat at some stage, was it dismasted.

A. It was dismasted." (see **Richard Purcell, 29th January, 1999, p.15**).

Colin Betts was the navigator and radio operator on "Margaret Rintoul II" and it was he who passed on details of the sighting to Telstra Control under the direction of Mr. Purcell (**Richard Purcell, 29th January, 1999, p.17**). Mr. Purcell, however, did not take steps at that time to ascertain whether his navigator actually got through to Telstra Control nor whether there was a reply to such call or its content. He said of this:-

"Q. When the, after the sighting of the orange flare and the call was made to Telstra Control to the fact that you were unable to render assistance, do you know if that call was actually answered and you got a reply?

A. No, I don't know that, I, I understand that Col put it through to Telstra at 5 past 7.00, he said, "I got through to `em", at 5 past 7.00, now I didn't know at the time, I've asked him since, I asked Colin that since." (**Richard Purcell, 29th January, 1999, p.18**).

Mr. Purcell further stated:-

"I didn't know the condition of "Sword ... but I made a decision and I said to Colin, "Am I making the right decision?", and Colin has done 35 Hobarts and these guys know what they are doing ... he said, "You are making the right call." (**Richard Purcell, 29th January, 1999, p.11**)

That conversation took place, according to Mr. Purcell, at about 10.30pm that night, some three and a half hours after the decision, not to render assistance, was made (**transcript 26th July, 2000, pp.21 & 22**).

Mr. Purcell was asked a series of questions as to why "Margaret Rintoul II" did not try to make radio contact with "Sword of Orion". Those questions and their answers were as follow:-

"Q. Well look, the reality is this. When you'd made your decision to continue on, you made no attempt to contact that vessel that was dismasted, did you?

A. I personally didn't, no.

Q. And you gave no order that an attempt be made to contact the vessel, did you?

A. No, I didn't.

Q. And you had a VHF set and you knew that Channel 16 is the channel where people speak on when they're in distress?

A. That's correct, but the vessel was without a rig and perhaps at the time I thought that contact via VHF 16 wouldn't have worked. But I wasn't thinking about radio. I was not thinking about the radio. I have to - I'm being open with you. I left that job to Colin Betts.

Q. But you are the Master of the vessel?

A. Correct.

Q. You are the one who makes the decisions. That's correct isn't it?

A. I make most of the decisions, yes.

Q. Well you made the decision for Betts to contact Telstra Control. You told him to do it?

A. Correct.

Q. You had taken, if you like - or you were in command of the situation. That was the situation you had and the first thing you did was order Betts to communicate with Telstra Control?

A. Correct.

Q. And you made the decision because you told them it's my call. That's the reality.

A. Correct. I was reminded of that fact by Bill Riley.

Q. Don't you think you had a responsibility to try and make contact with that other vessel?

A. Yes, I do.

Q. But you didn't. You didn't even attempt it.

A. The other vessel was dismasted and I had full faith in Colin Betts in operating the radio and navigating the boat.

Q. You told Colin Betts to take a fix where you were?

A. Yes.

Q. He did that. He obeyed your instruction?

A. Yes.

Q. You told him to contact Telstra Control. He did that, he obeyed your instruction. Do you think perhaps he might have been waiting for instructions from the Master of the vessel?

A. I don't know.

Q. But isn't it your responsibility to know as the Master of the vessel?

A. Yes." (**transcript 26th July, 2000, pp.19 & 20**)

In the Telstra Control radio log there is an entry at 19.20 hours on 27th December, 1998 which records a call by "Margaret Rintoul II". It reads:-

"38.15.150.22 Red flare sighted @ 18.45."
(**Exhibit 24A, Sheet 19**)

There is also a partial recording of a radio transmission by Colin Betts to Telstra Control, V.64 being radio operator "Margaret Rintoul II", V.3 Lou Carter Telstra Control:-

"V.64 --- force winds here, and the visibility is extremely bad, but the stand-by-officer on board saw, did see a flare. Over. ...

V.3 Yes, we're having a problem in that area. Just stand-by, ..."Margaret Rintoul", "Margaret Rintoul" ... Yes, I've logged that. There are some problems in that area, but I haven't heard of a red flare being lit, over.

- V.64 Roger, Lou. ... it's very difficult ... decisions to, to see very far. ...
- V.3 Yeah, Roger to that. Look, I've logged it and I'll just see if --- ... We've got about 10 things going on at the same time, maybe more, actually. I'll log that and I'll, I'll come back to you, "Margaret Rintoul". ..." (**Vol.8, tape 4, pp.32 to 33**)

Unfortunately the recording of the radio transmission is incomplete and it seems apparent from listening to the recording that a portion of what Colin Betts was telling Telstra Control has been left out. That is, there is a break in the recording just before the commencement of the extract I have just quoted.

Colin Betts was the navigator on "Margaret Rintoul II". He was a veteran of thirty three Sydney to Hobart races with a vast experience of sailing. He described the winds as the strongest and the seas as the biggest that he had experienced in a Sydney to Hobart race.

In relation to what he was told by Richard Purcell at the time of the sighting Mr. Betts has stated:-

"Richard called to me he said, "I've seen a red flare, will you call Telstra Control", which is "Young Endeavour", "and report the time and position."" (**Statement of Colin Betts, 10th February, 1999, pp.16 to 17**)

As to the subsequent events Mr. Betts said:-

"And I immediately went and read the GPS to get the position and recorded the time and turned the radio on, but there was, I could hear "Young Endeavour" on the

radio but there was a lot of traffic ... There were all sorts of people wanting to talk to them. And I said to Richard, "what are we going to do?", and that might have been three or four, five minutes later, and he said, "we are not going to try and assist ..." and he said "that is my call", and that was sort of, that's definite ... anyway it was 15 minutes, I could have, could have been a few minutes longer but it would have been 15 minutes before I got a chance to break into the traffic and, and speak to "Young Endeavour", but they heard me straight away, and I spoke to Lou Carter who was on the radio. I said, "Lou, it's Colin Betts on "Margaret Rintoul II", we have just sighted one red flare, it's bearing 090 from our position, approximately half a mile", and I gave him the lat and long, and he repeated that to make sure he had it down right and to the best of my knowledge that was, he said "thanks for that". And ... I think that was the end of our conversation, I listened for quite a while, there was no, I didn't volunteer any information as to whether we were going down to see if we could see them and what their problem was. Richard did say he'd seen a dismasted yacht but he couldn't identify it ... There was nothing back from "Young Endeavour" as, asking us were we going to stand-by or asking us to do so. And I left the radio on for a while, but I didn't hear any more, so I turned the radio off and we carried on." (**Statement of Colin Betts, 10th February, 1999, pp.16 to 18**)

In evidence Mr. Betts was asked "Why didn't you volunteer any information", he answered:-

"A. It wasn't asked and Lew did say, it's on the tape, that stand by "Margaret Rintoul II" I'll get back to you." (**transcript 25th July, 2000, p.61**)

In his oral testimony Colin Betts also qualified his statement as to what Richard Purcell had initially told him regarding the sighting. Mr. Betts gave evidence that Mr. Purcell had told him he had seen a dismasted yacht:-

"Richard did say he'd seen a dismasted yacht bearing 090, distance approximately half a mile." (**transcript 25th July, 2000, p.56**)

This is quite different to "Richard called to me, he said "I've seen a red flare will you call Telstra Control and report the time and position".

He then changed this evidence, saying that the information he received from Mr. Purcell as to there being a dismasted yacht could have been some minutes after the initial instruction, seven or eight minutes at most (**transcript 25th July, 2000, pp.63-64**).

Furthermore, Mr. Betts states that he passed onto Telstra Control the fact that there was a dismasted yacht (**transcript 25th July, 2000, p.60**). Needless to say this would have been a vital detail to have communicated to Telstra Control. And as Mr. Carter said:-

"The radio log records a transmission received at 1920 hours from "Margaret Rintoul II". This information is accurately transcribed from my note paper (folio 51). The information provided was the then location of the "Margaret Rintoul II" and the fact that a red flare had been sighted at 1845 hours. No information was supplied as to whether the vessel which sent the red flare had been sighted or identified or the location of that vessel. From my experience, I was aware that a flare could be seen for up to seven miles from the point of its launch. Radio air time is valuable.

Accordingly, I assumed that if the "Margaret Rintoul II" had had any further information concerning the identity

or the location of the boat which had dispatched the flare, it would have been conveyed in this transmission."

I have difficulty with Mr. Betts' oral evidence in that:-

- (a) The words "dismasted yacht" are not recorded in the Telstra Control radio log;
- (b) Nor are those words recorded in the transcript of the radio communications (although I note the inadequacies of that recording); I am also sure that if such words were heard by Lou Carter at Telstra Control they would most certainly have been recorded for Lou Carter does say on the radio transcript:-

"I've logged that. There are some problems in that area, but I haven't heard of a red flare being lit, over."

- (c) The claim that he told Telstra Control that it was a "dismasted yacht" was never mentioned by Mr. Betts to my investigating officers at the time of his interview on 10th February, 1999; and
- (d) Mr. Betts was, at first, uncertain in his oral evidence as to whether he did inform Telstra Control about there being a dismasted yacht:-

"I think I did." (**transcript 25th July, 2000, p.60**)

But within a very short time of "thinking" he changed this evidence to:-

"I'm sure I did." (**transcript 25th July, 2000, p.60**)

Also of concern to me is the following:-

1. Colin Betts did not volunteer to Telstra Control details of the decision by Richard Purcell not to render assistance to "Sword of Orion" (see **transcript 25th July, 2000, p.61**).
2. No attempt was made by Colin Betts to try to contact "Sword of Orion" either on HF or VHF radio (see **transcript 25th July, 2000, p.62**). ("Sword of Orion" was, in fact, transmitting on Channel 16 using her spare VHF aerial and had been from approximately 5.30pm).
3. Colin Betts did not have "Margaret Rintoul II's" VHF radio switched on and was not listening on Channel 16 (being the International Distress Frequency) (see **transcript 25th July, 2000, pp.61 to 62**).
4. That after Mr. Betts was not contacted by Telstra Control with further instructions he simply turned the HF radio off (see **transcript 25th July, 2000, p.62**).
5. Mr. Betts also said in evidence:-
 - "A. And I assumed - and I assumed that if the vessel that was dismasted had lost its VHF aerial they should have been carrying a spare aerial as we did for our high frequency radio and trying to listen on 4483, if they couldn't - even if they couldn't transmit."

And shortly thereafter:-

"Q. Did you think that perhaps being seamen they may have gone to the VHF channel which is set aside for distress, Channel 16, that enter your mind at all?

A. I assumed they'd have probably lost their aerial when they lost their mast.

Q. Do you have a radio operator's licence?

A. I do." (transcript 25th July, 2000, pp.61 & 62)

If this was, in fact, his belief, then without radio communications the stricken yacht was in grave peril. If no more than an answering flare had been used to acknowledge the distress flares that had been seen this would have at least allayed any fears of the stricken yacht crew that they had not been seen. That someone knew of their plight and would alert rescuers.

I am concerned that a man with the experience of sailing, as Colin Betts has, could consider this conduct, adequate under the circumstances.

As I have said it has been submitted to me that having delegated the task of the radio transmission to Colin Betts, Richard Purcell was thereby absolved of any responsibility.

I reject that submission for two reasons:-

(a) Richard Purcell was Master of the vessel and as such was completely responsible for the running of "Margaret Rintoul II".

- (b) Richard Purcell did not delegate the task of radio communication to Colin Betts as submitted. Quite the contrary. It was Richard Purcell who ordered Colin Betts to communicate with Telstra Control and to take a 'fix' on their position.

Colin Betts did as he had been instructed. From that time (approximately 6.45pm) until approximately 10.30pm Richard Purcell gave no further orders to Colin Betts and Betts sought none.

To seek to elevate this silence on the part of Richard Purcell to a delegation of the "radio communication" to Colin Betts is unjustified.

To then seek to lay all responsibility for the failure to try to communicate with "Sword of Orion" at the feet of Colin Betts is wrong and unwarranted. And I reject such submission.

Richard Purcell did not communicate with Colin Betts for some three and a half hours after his initial instructions to contact Telstra Control. For that amount of time Betts was left to his own devices without any instructions from Richard Purcell.

It was during that time that Richard Purcell should have ordered and controlled the attempt to communicate with "Sword of Orion", if by no more than an acknowledging flare, and displayed the conduct reasonably expected from Masters of vessels.

RECOMMENDATIONS

INTRODUCTION

I make the following recommendations based upon the factual evidence and the opinions that have been expressed by experts in their respective fields.

I make these recommendations bearing in mind that Yachting Clubs, such as the CYCA, are voluntary organisations that depend upon the willingness of their members to implement change. In this respect, such organisations are unlike statutory bodies, which can regulate with the force of law.

I also realise that the costs of these recommendations will, ultimately, be borne by the yacht owners and crews themselves. However, when one considers the cost of the rescue to the community, not just in monetary terms, nor in risk of damage to rescue aircraft and vessels, but in the very real risk of injury to the rescuers themselves, then such costs to the yachting community are not great. When these costs are considered, society, which never hesitates to aid those in distress, has the right to ask of the yachting community that it also plays its role in such efforts and adopts these recommendations.

It must again be stressed that by the end of the Inquest hearing I was satisfied that the CYCA through its own Inquiry had, by the 1999 Race, achieved radical change. For example it had made it mandatory for competing vessels to be equipped with Sat Com C technology; for crews to undergo training; for BOM personnel to be more involved with the Race Management Team throughout the Race. Some of its change was mandatory and some "recommended". In several instances, CYCA's "recommended" changes now form part of my recommendations.

I should also add that during the Inquest many matters regarding the sailing of yachts were brought to my attention. Such matters as the

use of sea anchors and drogues by yachts; the size and type of storm sail or storm jib that should be carried and when they should be used. These and other issues were brought to my attention and I thank all those concerned individuals for doing so.

However, I have refrained from making any recommendations on these issues because, at the end of the day, they really are matters of seamanship that sailors should know and employ when they consider it right to do so.

I have therefore confined my recommendations to those issues which impact on the deaths of the deceased either directly or indirectly.

RECOMMENDATION - PERSONAL EPIRBS (EMERGENCY POSITION INDICATING RADIO BEACON)

I recommend that all crew members of competing yachts wear a personal EPIRB when on deck in all weather conditions.

I further recommend that all crew members of competing yachts be trained in the use of personal EPIRBS.

These recommendations are based upon the following rationale.

Mr. John Young, Manager Operations of AusSAR provided me with the following briefing note regarding the carriage of personal distress beacons by yacht racing crews:-

"AusSAR Briefing Note Carriage of personal distress beacons by yacht racing crews

Purpose

The briefing note is to advise the NSW Coroner investigating deaths during the 1998 Sydney-Hobart Yacht Race of the implications of a possible recommendation that each yachtsman should carry a personal distress beacon operating on 121.5 MHz.

Benefits to be realised

In a search and rescue (SAR) operation the most critical issue is the time remaining until a survivor will die if not helped. An operational distress beacon will help to reduce the time to rescue by:

- * communicating an indication that a distress is in progress directly to an authority with the means to respond (AusSAR in this case); and

- * moving the operation directly to the "rescue" stage without the need to engage in time-consuming search operations to find the survivor.

The resulting time taken will vary significantly between individual incidents. The most influential factors would include:

- * the frequency of satellite passes which can pinpoint (to within about 20 km) the beacon. For the Sydney-Hobart a good working average time between passes is about 1 hour, noting that (being an average) some times will be longer; and
- * the availability of a suitable rescue platform. The Sydney-Hobart race occurs generally within range of rescue helicopters. These aircraft have the ability both to home on the beacon and recover the survivors.

It would be difficult to predict accurately the expected time taken to rescue a Sydney-Hobart survivor. However, it could be characterised as "a few to several hours" with a beacon or "very many hours or even days" without. The time differential could very well be fatal, particularly in rough weather, cold water or for injured survivors.

Hence, AusSAR would prefer that a survivor, or a group of survivors, has a distress beacon. Since the 1998 Sydney-Hobart involved two separate cases of a man in the water alone, that could also indicate that personal carriage of a distress beacon would be an important last line of defence for any individual participant.

Difficulties to be overcome

The prospect of multiple 121.5 MHz beacon activations would, however, present AusSAR with some operational problems to overcome.

The Cospas/Sarsat satellite system for detecting 121.5 MHz beacons is capable of processing a maximum of 10 active beacons on any one satellite pass. In the 1998 Sydney-Hobart case, which was characterised by yacht usage of beacons rather than personal usage, AusSAR detected 9 beacons. Indiscriminate use of more than 10 personal beacons in the one area could saturate the satellite system and thereby exclude other beacon detections, perhaps more urgent.

That potential problem is mirrored at the scene of operations. A rescue aircraft despatched to the scene could have difficulty in homing quickly to a beacon because the direction-finding equipment is not designed to cope with multiple signals. This problem was experienced to an extent in 1998 but was overcome by experienced aircrew on the spot. While a viable technique in 1998, the number of beacons detected was still very small compared with the number of which might occur through indiscriminate use of personal beacons. A larger number of beacons could well present an unmanageable problem for aircrew on-scene.

Potentially, these two factors could undermine the effectiveness of distress beacons as a means of prioritising the rescue effort towards those most urgently in need. If presented with an overwhelming number of beacons, AusSAR might well need to revert to other means to direct the rescue effort.

Regrettably, the only means available to control this potential problem is disciplined usage by individuals. Discipline would need to be based on an understanding of how distress beacons fit into the larger SAR system, and reinforced by guiding protocols for beacon usage.

Conclusion

In summary, personal beacons have a vital role in the larger SAR system. For a single Sydney-Hobart person overboard and separated from his yacht, a personal beacon would likely represent the difference between recovery alive and disappearance without trace, particularly if night intervenes. On that basis alone, AusSAR could not do other than support the personal carriage of distress beacons.

Indiscriminate usage in large numbers, however, could undermine their value in an operation of the scale of the 1998 rescues. Since the power to obviate that situation would lie only in the hands of the individuals, it would be incumbent upon those best placed (arguably the Australian yachting Federation and/or the CYCA working together with AusSAR) to ensure that the individuals had an adequate understanding of the beacons and the protocols of their use.

Prepared by:
John Young - Manager Operations, AusSAR"

As Mr. Young points out there can be difficulties in the use of personal EPIRBs, if used indiscriminantly, presenting problems for rescuers.

He further points out the AYF, CYCA (and other Yachting Clubs and Associations) working with AusSAR can overcome these problems by the training of yachting crews.

As Stephen Simpson, a rescuer with Lloyd Helicopters, which went to the assistance of the yacht "Solo Globe Challenger", said in his statement of 20th April, 1999, at **page 18**:-

"... all that sort of thing but they won't go and spend 2 or \$300.00 on a personal E.P.I.R.B. If everyone had had a

personal E.P.I.R.B. then we would have picked them all out of the water within an hour. That's you know, that's what we do, we home in on beacons, it's the easiest way to pick someone up. We constantly do beacon searches out in Bass Strait down here."

Senior Constable David Keys, Victorian Police Airwing which assisted the yacht "Midnight Special", said, in his statement of the 17th April, 1999, at **page 43**:-

"Personal emergency beacons, no one had any of those. You know, for a couple of hundred dollars, if you're washed off and you set that off, the satellite will find you and then we'll find you ..."

These statements and the sentence of Mr. Young's briefing note that:-

"... a personal beacon would likely represent the difference between recovery alive and disappearance without trace, particularly if night intervenes."

compels me to make these recommendations.

Before leaving the topic of personal EPIRBS it should be borne in mind that the 121.5 MHz system will, in a few years, cease to function. I am told that the 121.5 system will be superseded by the 406 MHz system.

Although a 121.5 MHz EPIRB will still be useful for search and rescue aircraft to "Home In" on the beacon, if they are in the vicinity, they will no longer function through a satellite.

As a consequence of this I would suggest that the 406 MHz personal EPIRB be acquired in preference to the 121.5 MHz. Also the 406 MHz EPIRBS reduces the area of search from 20 km to a 5 km area.

RECOMMENDATION - YACHTS EPIRBS (EMERGENCY POSITION INDICATING RADIO BEACON)

I recommend that all competing yachts carry on board a 406 MHz EPIRB and not a 121.5 MHz EPIRB.

This recommendation is based upon the following rationale:-

1. The 121.5 MHz EPIRB will in the next few years be phased out. I am told that the satellite system will cease to function. As a consequence search and rescue centres will no longer receive the 121.5 MHz EPIRB signal. At best it will only function as a homing signal for search and rescue aircraft that are actually in the vicinity of the signals source.
2. The 121.5 MHz EPIRBS signal will bring a search and rescue aircraft or vessel to within a radius of 20km. The rescuers will then be required to search this 20km area for the distressed vessel (or life raft).

Whereas the 406 MHz EPIRBS have:-

- (a) A radius of 5km from the source of the signal. Thus the area of search is greatly reduced; and
- (b) The 406 MHz EPIRBS can be encoded with the name of the vessel, so that rescuers can readily identify the who and where.

From the evidence I also note the following:-

3.
 - (a) Some EPIRBS were secured to the yachts in distress by lines that were inadequate and broke away. I should not have to say that they should be secured with a line that will not break and knots that will not come undone;
 - (b) The EPIRB aerial of "Winston Churchill" was of an extendable type similar to a motor car aerial. It snapped, leaving a jagged end. It was suspected by some of the survivors aboard life raft "B" that this may have been responsible for the puncture of the buoyancy tube. Whether it was or not is conjecture, but such aerials are to be avoided and aerials which are flexible are to be preferred.

RECOMMENDATION - INFLATABLE LIFE RAFTS

I recommend that all inflatable life rafts carried on board competing yachts should comply with the construction requirements of Regulation 15 of the International Convention for the Safety of Lives at Sea 1960 ("SOLAS").

This recommendation is based upon the following rationale:-

1. The life rafts that were used by the crew of "Winston Churchill" were:-
 - (a) A PRO SAVER six man, oblong in shape, supplied by RFD (Australia) Pty Ltd (Life raft "A"); and
 - (b) A four man round in shape, also supplied by RFD (Australia) Pty Ltd (Life raft "B").
 - (c) Neither of these life rafts complied with Regulation 15 of SOLAS or Appendix J of Section 10 of the Uniform Shipping Laws Code made pursuant to an Order under Section 427 of the Navigation Act (Commonwealth) ("the USL Code").

2. Life raft "A" became unusable as a life raft after a small incision was made to the floor. This cut tore and eventually caused the floor to come away from the lower buoyancy tubes. These buoyancy tubes depended upon the oblong shape of the floor to maintain their oblong shape. When the floor tore and came away from the buoyancy tubes these tubes, not being mitred at

their corners, simply reverted to nothing more than inflated tubes without any definite shape, though tending to come together. The canopy had also torn and disintegrated during raft "A's" subjection to the heavy seaway. (For further detail see heading "Winston Churchill").

Three crew of "Winston Churchill" died after being washed away from these inflated tubes.

3. Life raft "B" also suffered damage during the storm, being a split to the floor and a puncture to one of the buoyancy tubes.
4. Having read and listened to the evidence of the survivors of life rafts "A" and "B" it was abundantly clear to me that these life rafts were not fit for the purpose for which they were intended. It is no answer to say that had the incision not been made in life raft "A" the floor may have remained intact, the reality of not making the incision was asphyxiation for the occupants within a very short time. While the split to the floor of life raft "B" occurred as a result of its use.
5. I am fully aware that the quest for lightness has led to the production of life rafts for racing yachts that are considerably lighter than life rafts that comply with SOLAS or the USL Code requirements. However, when safety is sacrificed for the sake of lightness the whole purpose of the life raft is subverted. It has to be remembered that the life raft will more probably than not be required during heavy seaways such as those experienced by the crew of "Winston Churchill". It must therefore be adequate for its task in such seaways.
6. I am also aware that the cost of a life raft that complies with the SOLAS requirements is greater than the range of costs for lightweight life rafts and even life rafts that comply with the USL Code. But when cost and weight are measured against a greater chance of survival from a shipwreck, then the answer is clear.

7. I am also sure that given the ability of manufacturers to exploit the demand that was created for lightweight life rafts in the first place, their ingenuity will lead them to the production of lightweight life rafts that comply with SOLAS requirements. But I would also ask such manufacturers to read the evidence of the survivors of "Winston Churchill" and the report of Mr. Boyle of the Australian Maritime College regarding life rafts and improve the standard of life raft construction.

8. As I have said I realise that by recommending life rafts that comply with Regulation 15 of SOLAS I am setting a standard higher than the USL Code ("USL") requires. I have not done this lightly but I have found this necessary for the following reasons:-

The main difference between the USL Code and SOLAS requirements, for my purposes, are:-

SOLAS requires:-

"(k)The floor of the life raft shall be waterproof and shall be capable of being sufficiently insulated against cold."

The USL Code requires:-

"1.10 The floor of the life raft shall be waterproof."

I have read and heard evidence of survivors of both life rafts that whilst they sat in the rafts they were suffering from cold.

The following is some of that evidence.

Richard Winning, who was aboard life raft "B", said:-

"A. Because of this slow leak in the lower chamber as the air pressure lessened in that chamber the floor of the raft formed with the weight of the four people in there, into a cone shape, so you more and more assumed a standing position, if you like, rather than a sitting position, as the chamber deflated. I personally was aware of what hypothermia can do, not that anyone was particularly cold at this stage, with the currents the way they were the water temperature can't have been much below 18 degrees, so it was comfortable in that sense but we didn't want to have our chests submersed, so the decision was taken to just keep pumping because the more pressure we got into the lower chamber the flatter the floor became, and then with bailing we were able to keep ourselves reasonably dry. We were still sitting, obviously, in a couple of inches in water, but our upper torsos were dry." **(transcript 21st March, 2000, pp.24 & 25)**

Paul Lumtin, also aboard life raft "B", said:-

"A. Well apart from being pruned, it wasn't uncomfortable but our main problem was that we didn't mind sitting in the water if the water was the right temperature. Our main concern was that it was a choice between getting hypothermia or getting tipped up again and we talked about that and I said to Richard, I said, "look I think that this raft is so much more stable with water in it, I don't think we should bale it out", and Richard said, "well I've never ever heard of anybody getting hypothermia of the arse so let's get up on our haunches and sit in the water and tough it out", that's what he said. So that's what we did. So we kept the water in the raft and we didn't get tipped up again." **(transcript 22nd March, 2000, p.9)**

He described the hole in the raft floor and its effect, as follows:-

"A. ... what I did was, I saw the hole there because I could feel the cold water starting to rush in and it was just getting more and more and more and I thought gee I'm feeling cold because I was shivering. And I just got up and as soon as I got up all this water started pouring in the raft. So I sat back on it and it kind of stopped."
(transcript 22nd March, 2000, p.14)

The survivors in life raft "B" had been in the life raft for approximately twenty four hours when they saw the first rescue aircraft. Paul Lumtin said:-

"A. Well when we saw the first aircraft we - none of us was brave enough to acknowledge that we were actually hearing an aircraft because we'd been hallucinating pretty much all day and hearing helicopters and aircraft and seeing boats simply because I think - I mean we're all shivering, we're all very cold so probably hypothermic, we were all dehydrated, very thirsty and we were really, really tired because we'd been up for so long and I don't know what it was but you know, even myself, I was sitting near the door and I could bet my house that I saw a boat on the horizon and sometimes the waves would make funny noises, you could hear helicopters. As Richard said I think maybe a lot of wishful thinking with your mind but that was happening quite a bit and I'm sure at least all of us said something throughout the day, you know, I've seen a boat, I've heard a plane, I've seen a helicopter, blah, blah, blah. So when the real plane came we all kind of looked at one another for a second to see whether the other one would say well you know I can hear that. And it wasn't until maybe after about ten seconds or so that one of us actually said, gee I can hear a plane. So what we did was we got the flares out. Now the problem with the flares is that when you've been in

the water for 20 odd hours or 22 hours and that, it was 25 hours at that time, you're just numb, you know our legs were totally numb, you can't feel your legs, your hands are numb, you're tired, you can't write your own name, it's really hard so the operation of removing the flare out of the plastic bag and then unscrewing the end of it and then pulling the cable out and pulling it and letting the flare go is actually quite a complicated thing. So it wasn't as if we saw the plane, boom, boom, boom, let the flare go, it was really quite difficult and you know we're fumbling and trying to - getting the plastic bag undone was just a monstrous task so it took longer than what we thought to get the flare out and of course the plane passed us. Our door as I said was facing on the leeward side of the weather so the plane was passing us from behind and by the time we got the flare off the plane was at our 2 o'clock, heading away from us." (**transcript 22nd March, 2000, pp. 17 & 18**)

THE MEDICAL ASPECT

The Offshore Racing Council's Special Regulations for 2000-2001 states, in Appendix E:-

"HYPOTHERMIA WHAT IS IT?

A condition in which exposure to cold air and/ or water lowers body core temperature. Death can result from too low a brain and heart temperature.

WHY BE CONCERNED?

Hypothermia, even mild cases, decreases crew efficiency and increases risk of costly accidents. **Proper planning against hypothermia can give a winning competitive edge."**

"SURVIVAL IN COLD WATER (under 75 degrees F, 25 degrees C) (all UK waters)

- * **If boat is in trouble**, put on dry or survival suits if carried. Radio for help; give position, number of crew, injuries, boat description. Make visual distress signals. Stay below if possible. Remain aboard until sinking is inevitable.

- * **If going overboard**, launch life raft and EPIRB (Emergency Position Indicating Radio Beacon). Take grab bag, visual distress signals and waterproof hand-held VHR. Get into raft, stay out of water as water conducts heat out of the body 20 times faster than air. Remain near boat if practicable."

The following description of the symptoms of hypothermia is given:-

"RANGES OF HYPOTHERMIA SYMPTOMS

NOTE: Most physical symptoms vary with each individual and may be unreliable indicators of core body temperature. Only a low-temperature rectal thermometer gives reliable core temperature (the mouth cools too rapidly). In general, as body temperature falls, symptoms will increase.

MILD CONDITION

(97-93 degrees F, 36-34 degrees C)

- * Shivering, cold hands and feet
- * Still alert and able to help self
- * Numbness in limbs, loss of dexterity, clumsiness
- * Pain from cold

MODERATE CONDITION

(93-90 degrees F, 34-32 degrees C)

- * Same as above
- * Confusion, loss of time estimation and reasoning power

SEVERE CONDITION

(90-82 degrees F, 32-28 degrees C)

- * Shivering decreases or stops
- * Further loss of reasoning and recall, confusion, abnormal behaviour
- * Victim appears drunk, very clumsy, slurs speech, denies problem and may resist help
- * Unable to help themselves
- * Victim semiconscious to unconscious
- * Muscular rigidity increasing

CRITICAL CONDITION

(82 degrees F, 28 degrees C and below)

- * Unconscious, may appear dead
- * Little or no apparent breathing
- * Pulse slow and weak, or no pulse found
- * Skin cold, may be bluish-grey colour
- * Very rigid"

I note that these statements are also to be found in the AYP's Racing Rules of Sailing for 1997-2000.

Dr. Luckin, an expert in this field, gave evidence, and spoke of his report, on the 31st March, 2000. He dealt with hypothermia regarding Glyn Charles, though his statements are applicable to hypothermia generally. He said:-

"A. Well from the Royal Australian Navy Sea Surface Temperature Charts I learned that the water temperature was close to 21 degrees and while it's not possible to calculate with absolute precision as I said the rate at which the core temperature would have declined, I think it is reasonable to assume that his temperature would have declined at a rate similar to that of Mr. Gibson and Mr. Stanley and that he would have had a temperature of about 34.5 degrees by 2300 hours on 28th December and at that type of temperature one would expect to see the early effects of cooling of the brain, cold narcosis such as hallucinations, delusions, periods of memory loss, starting to become fatigued and drowsy, and that's the sort of thing that you see in that temperature range, roughly 34 degrees and thereabouts. Hallucinations often occur at slightly lower temperatures but I think that fits well with the description given.

Q. And I think you said that it would have then gone down to approximately 33 degrees?

A. Yes, I think that once his temperature continued to drop by the time you reach a range of 33 degrees, some remain conscious until 30 or the very high 20s, but that region, 33 degrees to about 30 degrees, that temperature range is the type of temperature at which virtually everybody would be rendered unconscious by hypothermia alone." (transcript 31st March, 2000, p.26)

Clearly the need to protect survivors from the effects of hypothermia is, and must be, paramount.

I also note in this regard that the Offshore Racing Council ("ORC") in its "2000-2001 Special Regulations" say, at paragraph 4.19(c):-

"Insulated floor. The National Authority or Notice of Race should specify whether or not an insulated floor (Appendix A(k)) is required. (An insulated floor is mandatory in all SOLAS rafts and is strongly recommended by the ORC in every raft)."

Faced with the evidence of the survivors, the medical evidence, the International Convention for the Safety of Lives at Sea (SOLAS) requirements and the strong recommendation of the Offshore Racing Council, I am compelled to recommend that life rafts have a floor capable of being sufficiently insulated against cold.

9. SOLAS requires:

"(c) The construction of the life raft shall include a cover which shall automatically be set in place when the life raft is inflated. This cover shall be capable of protecting the occupants against injury from exposure, and means shall be provided for collecting rain. The top of the cover shall be fitted with a lamp which derives its luminosity from a sea-activated cell and a similar lamp shall also be fitted inside the life raft. The cover of the life raft shall be of a highly visible colour."

The USL Code requires:-

"1.3 The construction of the life raft shall include a cover of a highly visible colour. This cover shall be capable of protecting the occupants against injury from exposure. The top and the inside of the cover shall be fitted with a lamp which derives its power from a sea-activated cell."

True it is that both life rafts from "Winston Churchill" did have covers which automatically set in place upon inflation, but the USL Code does not make this mandatory. It should be.

In this particular race one entrant had on board his yacht, for the CYCA safety inspection, a life raft capable of accommodating all of the yacht's crew. After the CYCA safety inspection had been completed this life raft was removed and replaced with a life raft that was not capable of accommodating all of the yacht's crew. I am told that particular owner has been banned from further races.

Clearly I have no choice but to recommend to the higher standard as there will always be those who will be prepared to sacrifice safety for advantage.

10. SOLAS requires:-

"(m) The life raft shall be of approved material and construction, and shall be so constructed as to be capable of withstanding exposure for 30 days afloat in all sea conditions."

The USL Code requires:-

"1.12 The life raft shall be of suitable material and construction, and shall be so constructed as to be capable of withstanding exposure for 30 days afloat in all sea conditions."

SOLAS requires the life raft to be "of approved material and construction" the USL Code does not. That aspect causes me concern because on 5th October, 2000 Senior Constable David Upston of the New South Wales Water Police (one of my investigators) received an email from Mr. Tony Mooney of the Australian Yachting Federation ("AYF"). I set this email out in full:-

"David

Just been advised that there is a BFA brand life raft on the market in Australia that is made in the same factory as the PRO SAVER and is so close to being identical to the PRO SAVER that only an expert could detect the difference.

I understand that the BFA raft has been tested to the USL Coastal requirements and that it has been passed as compliant.

I believe that what I said from the stand (first appearance) was that the Coroner had heard that:-

- (a) The AYF and ORC had not required the 30 day testing procedure but the Court had not heard that the raft had or had not been so tested.
- (b) The literature supplied by RFD and included in the report by Boyle indicated that the "PRO SAVER life raft will meet all regulatory requirements for coastal, offshore and ocean voyages" which would indicate that it had been tested.

It now appears that the identical raft has been tested and PASSED as I indicated that it could have been.

I understand there is a Department in Melbourne that does the testing for the USL code.

Tony Mooney
Technical Manager
Australian Yachting Federation"

It is of the greatest concern to me that there is "a BFA life raft on the market in Australia that is made in the same factory as the PRO SAVER and is so close in being identical to the PRO SAVER that only an expert could detect the difference".

The understanding of Mr. Mooney is that the BFA raft "has been tested to the USL coastal requirements and that it has been passed as compliant".

I find this extraordinary and if the above is correct then the USL code `requirements' should be revisited by those who are responsible for them and amended to bring them in line with the SOLAS requirements.

I must add that RFD Australia Pty Ltd, the supplier of the Pro Saver six person life raft, life raft "A", chose not to take part in this Inquest.

Lastly I would say this, the recommendation of a life raft complying with the SOLAS requirements is not, as one submission states, for:-

"A possible slight gain in people comfort in the unusual circumstance of a crew having to take to the raft"

It is so that if the unusual circumstance does arise, the crew will have the best opportunity of survival and they are entitled to that.

EQUIPMENT OF LIFE RAFTS

The contents of inflatable life rafts are set forth in Regulation 17 of the International Convention for the Safety of Life at Sea.

I note that Mr. Mooney on behalf of the Australian Yachting Federation ("AYF") has put forward a submission that the equipment of the inflatable life raft be as the AYF proposes. These proposals are similar to those requirements as listed at pages 185 and 186 of the AYF "Racing Rules of Sailing for 1997-2000".

I have looked carefully at the AYF proposal and compared them with Regulation 17 of SOLAS and Appendix J of the USL code. After doing so I am prepared to recommend the AYF proposal for the equipment of life rafts with minor additions that were highlighted by Mr. Boyle in his report and the survivors of "Winston Churchill".

I set forth below my recommendations as to what a life rafts equipment should be. I underline those additions that I have spoken of:-

"EQUIPMENT

Each raft shall have at least the following equipment, properly stowed and secured so as to be available undamaged after launching and inflating.

- (a) One sea anchor or drogue (attachment line should not be less than 15m) attached so that the entry point to the raft is leeward (the NMI-pattern with anti-tangle lines is recommended).
- (b) One safety knife.

- (c) One bellows or hand pump for hand inflation. (That is of one piece, ready for use and does not require assembling).
- (d) One waterproof torch (signalling). (Together with one spare set of batteries and one spare bulb in a waterproof container).
- (e) One heliograph.
- (f) One bailer. (Easily identifiable as a bailer).
- (g) One sponge per person.
- (h) One repair outfit capable of repairing punctures in buoyancy compartments. (When such buoyancy compartments are wet with salt or fresh water).
- (i) Six emergency buoyancy tube leak stopping plugs.
- (j) One buoyant rescue quoit attached to at least 30 metres of buoyant line.
- (k) Four red hand-flares and two smoke signals or combination of both.
- (l) Two red parachute flares. (Of an approved type, capable of giving a bright red light at a high altitude).
- (m) One signalling whistle.
- (n) Sufficient drinking water, giving 0.5 litres per person.
- (o) One tin of emergency rations per person.
- (p) Two tubes of sunburn cream.

- (q) Five plastic bags, not less than 450mm x 300mm per person.
- (r) An operational instruction card clearly legible on the life raft and its contents, waterproofed or stencilled on the inside of the canopy, (and the inside of the buoyancy compartments).
- (s) A USL Coastal Pack First Aid Kit.
- (t) A water maker is recommended for long Category 1 and 2 Races.
- (u) Two conventional paddles.
- (v) One set of fishing tackle.
- (w) Six anti-seasickness tablets for each person the life raft is deemed to accommodate.
- (x) One waterproof copy of the illustrated table of life-saving signals referred to in Regulation 16 of Chapter V of SOLAS.
- (y) One waterproof copy on how to survive in the life raft."

Without making a recommendation I would draw the following to the attention of those responsible for the equipment on board life rafts and their manufacture. They are from the report of Mr. Tony Boyle of the Australian Maritime College on life rafts.

His recommendations are derived from the tests he conducted and the evidence of the survivors, some of whom were present during these tests. They are to be found at **page 15** of his report and are as follows:-

1. "Equipment items which will be required early in abandonment and may be required immediately on boarding a life raft such as:-

- * Paddles;
- * Torch;
- * Emergency leak stopping plugs; and
- * Seasickness prevention medication;

should be stowed separately from the equipment pack, inside the life raft, secured via a lanyard to prevent accidental loss."

2. "The equipment pack should be attached to the life raft via a permanent lanyard which will reduce the likelihood of being lost overboard once the initial securing lines have been removed to allow access. These lines should be capable of easy operation by people with cold hands."

3. "The equipment bag should be easy to open and reseal (eg velcro or plastic zipper). Should be easily operable by people with cold hands."

Also, without making a recommendation I would suggest the following be looked into by life raft manufacturers:-

(a) The cotton ties that seal the entrance to the life rafts were found to be impossible to undo by the survivors. This method of sealing the entrance is unsatisfactory.

I have, however heard no evidence on what could be substituted and cannot make any formal recommendation. I simply believe that the present cotton ties are not satisfactory; and

- (b) Having read and listened to the evidence of the rescuers that there is difficulty in seeing dark objects on the waters surface, the reason that the buoyancy tubes and floors of life rafts are made of black coloured material escapes me.

Again, I have heard no evidence as to why they are manufactured black instead of "a highly visible colour" as commonsense would require.

As I have said, I have heard no reason for this and so I can only suggest that manufacturers look into making the buoyancy tubes and floors of rafts "a highly visible colour".

- (c) I also note that the survivors, as well as those who participated in the tests conducted by Tony Boyle, found difficulty in entering the rafts using the rope ladder that were provided with some life rafts. Entry was easier with the "ramp entry" design which was preferred. Manufacturers should discontinue the rope ladder entry in favour of the ramp entry.

Finally I would urge the yachting community, both organisations and individuals, to help bring these recommendations to fruition, by patronising those manufacturers of life rafts who adopt these recommendations, because the reality is, these recommendations for life rafts are the result of the experience of their fellow yachtsmen who survived the sinking of "Winston Churchill".

RECOMMENDATION - WEATHER FORECASTING

I recommend that weather forecasts which are specifically provided for yacht racing fleets contain:-

- (a) As well as the average winds expected, the maximum gusts of wind that are likely to occur; and
- (b) As well as the significant wave heights expected, the maximum wave heights that are likely to be encountered.

This recommendation is based upon the following rationale:-

1. During my investigators' inquiries, and during the oral evidence it became abundantly clear that the racing yacht crews as well as the race officials, were unaware that the Bureau of Meteorology in its weather forecasts gave only average winds and significant wave heights. That having received a weather forecast the recipient was then to:-
 - (a) Add to the average wind forecasted 40% of that average wind to take into account the gust that may occur; and
 - (b) That the maximum wave height likely to be encountered is:-
 - (i) One out of every 100 waves is likely to be 50% higher than the significant wave height;
 - (ii) Rising to 76% of significant wave height for the case of one wave in 500 waves;

- (iii) Rising to 86% for the case of one wave in 1000 waves; and
- (iv) Rising to 95% for the case of one wave in 2000 waves.

(Source letter 1st May, 2000 from Mr. Geoffrey Love, Acting Director Meteorology, Bureau of Meteorology, to Counsel Assisting).

I am quite sure that all those who have followed this Inquest would be reasonably conversant with these, now well published, formulas. However as with all knowledge it may be forgotten or simply not passed on.

I note that the Bureau of Meteorology did in fact adopt the approach of giving maximum wind gusts and wave heights in the 1999 Sydney to Hobart Race. The example of such a weather forecast shown to me states the following regarding wind and wave forecasts:-

"Gabo Island to Eddystone Point

Weather: Occasional showers developing around noon with possible small hail.

Winds: Northerly winds increasing to 30 knots with gusts to 45 knots during the morning. Winds shifting: Westerly averaging 40 knots with possible squalls to 65 knots in the early afternoon.

Seastate: Rising to 3.0m during the morning then increasing to 6.0m with the change. Confused 1.0m swell. Maximum wave height of 11m late in the day."

And:-

Outlook for Tuesday:

Westerly wind averaging 30 to 35 knots with gusts to 50 knots."

The simplicity of this approach is commendable. It enables recipients to know what the wind and waves are likely to be and to make their own informed decisions as to what they will or will not do.

RECOMMENDATION - YACHTS' BATTERIES

I recommend that all yachts' batteries be of the closed or gel cell type.

This recommendation is based upon the following rationale.

From the evidence collected by my investigators and from what I have heard at Inquest many yachts during this storm were knocked down, inverted or rolled through 360 degrees.

On some of these yachts the crew members who were below decks were affected by the vapours given off by battery acid that had leaked out of upturned yachts batteries.

The fact that the yachts' batteries are relied upon for the radio and engine makes it imperative that their functioning should remain unimpaired. The closed or gel cell type battery will resolve this problem.

I note that this is a requirement of the CYCA in its Notice of Race for the December 2000 Sydney to Hobart Race.

RECOMMENDATION - HYPOTHERMIA

I recommend that competing yacht crew who are on deck during rough weather should wear clothing that will protect them from hypothermia.

This recommendation is based upon the following rationale.

Neither Glyn Charles from "Sword of Orion" or the crew of "Winston Churchill" were wearing survival suits.

Of Glyn Charles, Dr. P.G. Lukin, an expert in this field, said:-

"A. Well from the Royal Australian Navy Sea Surface Temperature Charts I learned that the water temperature was close to 21 degrees and while it's not possible to calculate with absolute precision as I said the rate at which the core temperature would have declined, I think it is reasonable to assume that his temperature would have declined at a rate similar to that of Mr. Gibson and Mr. Stanley and that he would have had a temperature of about 34.5 degrees by 2300 hours on 28th December and at that type of temperature one would expect to see the early effects of cooling of the brain, cold narcosis such as hallucinations, delusions, periods of memory loss, starting to become fatigued and drowsy, and that's the sort of thing that you see in that temperature range, roughly 34 degrees and thereabouts. Hallucinations often occur at slightly lower temperatures but I think that fits well with the description given.

Q. And I think you said that it would have then gone down to approximately 33 degrees?

- A. Yes, I think that once his temperature continued to drop by the time you reach a range of 33 down to about 30 degrees that is the typical temperature range during which the majority of people lose consciousness. Some people lose consciousness at above 33 degrees, some remain conscious until 30 or the very high 20s, but that region, 33 degrees to about 30 degrees, that temperature range is the type of temperature at which virtually everybody would be rendered unconscious by hypothermia alone." (transcript 31st March, 2000, p.26)

Of John Dean he wrote:-

"From the time he was lost from the raft Mr. Dean was largely immersed in water at close to 21 degrees C (LEUT A. McCrindell, Royal Australian Navy; sea surface isotherms 23rd December, 1998 and 30th December, 1998).

It is not possible to calculate with precision the rate at which his core temperature would have declined. It is however again reasonable to assume that his temperature would have declined at a rate similar to Mr. Gibson and Mr. Stanley, ie that he would have had a temperature of about 34.5 degrees C by 2300 hours on 28th December, 1998. At this temperature one would expect to see early effects of cooling of the brain, such as hallucinations, as described by Stanley and Gibson (Fatal Storm, page 286; Gibson 7312-99/2225 page 25), delusions, periods of memory loss, fatigue, and drowsiness.

It is also reasonable to assume that Mr. Dean continued thereafter to cool at the same rate, of roughly 0.7 degrees C per 10 hours.

It follows that by daylight on 29th December he would probably have had a temperature of between 33.5 and 34.0 degrees C. At this temperature hypothermia is a major threat to life, due to the decreasing level of consciousness, and increased risk of laryngospasm from inhalation of water. By the end of the day (29th December) Mr. Dean's temperature would be expected to be in the region of 33.0 degrees C.

At this temperature unconsciousness is usual. Once a person floating or swimming in the water loses consciousness, drowning is inevitable within a short period." (**report of Dr. P.G. Lukin, 12th March, 2000, p.7**)

On the other hand, John Gibson, a survivor of life raft "A" of "Winston Churchill" said of his position, the day after the sinking:-

"The day went on and we constantly asked ourselves the question as to what was happening and my concern for the missing crew members increased as the hours went by. The water was coolish, I believe I was very fortunate in that I was wearing thermal underwear, a Snug, an S-N-U-G, which is fleece lined vest. I also had on a Henry Lloyd buoyancy vest, I had a Henry Lloyd state of the art full jacket and pant-suit on and over that I also had the Mae West jacket. The Mae West jacket on the occasion of the big wave was swept off my body ..." (**statement of John Gibson, 27th January, 1999, p.24**)

There are recommendations in the Offshore Racing Council's Special Regulations 2000-2001 and in the AYF's Racing Rules of Sailing for 1997-2000.

Both recommend its prevention by "wearing warm clothing and personal floatation devices. Have survival suits available for all crew. Insulate all areas of the body especially the high-heat loss areas; head, neck, armpits, sides of chest and groin."

The evidence is that hypothermia contributed to the deaths of those who were lost from life raft "A" from "Winston Churchill".

It is clear that in water below 25 degrees C (75 degrees F) a person will be affected by hypothermia.

I am pleased to note that as a result of correspondence between Captain C.F. George A.M.R.A.N. and Mr. Peter Bush of the CYCA that the topic of hypothermia is "specifically referred to at the Race briefing on 24th December".

Hypothermia is a real threat to those who find themselves in the water. It should not be dismissed as not affecting Australian waters, it does, and yachts' crews should be aware of this.

RECOMMENDATION - PFD (PERSONAL FLOTATION DEVICES)

I recommend that competing yacht crews use PFD's other than the Mae West type.

This recommendation is based upon the following rationale:-

- (a) The survivors of "Winston Churchill" had difficulty with the use of the Mae West style PFD's; and
- (b) Rescuers had difficulty placing the helicopter rescue strap over the heads of those requiring rescuing, who were wearing Mae West style PFD's.

SURVIVORS "WINSTON CHURCHILL"

1. John Gibson had difficulties boarding the life raft, part of this difficulty was his Mae West PFD. He said:-

"Q. I think you were helped on board the raft by the other people on board, is that correct?

A. Yeah, well I was a bit embarrassed about that because I had hopes of getting in the raft by myself but I wasn't able to. I must have tried five times, your Worship, and there was no way I could physically get to that raft and so I asked for assistance and I was virtually pulled into the raft. The Mae West in those conditions really is very impeding and it was just for me a physical impossibility to get into it." (transcript 21st March, 2000, p.59)

Mr. Gibson was wearing other flotation devices, he said:-

"Q. Just stopping you there, I think that when the ship was abandoned you came off like everyone else with a life preserver on but you also had your harness on. How did that come about?

A. I discussed with my son, who's done several Hobarts, what was appropriate in that type of conditions and he suggested that it was appropriate to maintain full weather gear and harness on at all times so that if you were called on deck you were ready. So that's how I was. I was in full wet weather gear with an internal buoyancy vest and quite a lot of clothing on and then a heavy Henry Lloyd sailing jacket, full Henry Lloyd pants, sea boots and a safety harness and strap.

Q. And you had those on?

A. I had those on and then on top of that I had donned a Mae West." **(transcript 21st March, 2000, p.63)**

The Mae West PFD caused irritation problems for the survivors. John Gibson said:-

"A. The canopy of the raft didn't give any foothold at all. It was a floating membrane without any capacity to take a person's weight. If you put your foot on it it just floated away. It was a floating membrane or kerpy. The section on the model there which holds the roof I think is about a six inch pneumatic tube and if one stood on that it again would just - there was no buoyancy or footholds as such. We were virtually dependant for buoyancy on our Mae Wests with the consequence that we all were complaining of significant chin rash from the vest riding

up but my recollection was that there was - that the upside down section of the raft did not provide a foothold or a buoyancy hold as such." (**transcript 21st March, 2000, p.64**)

Movement was impeded wearing a Mae West PFD. He said:-

"Q. He would have had to take off his Mae West to do that, his life preserver?

A. I think it would have been almost impossible to exit that raft. I think it could have been done but it wasn't going to be easy and it wouldn't have been easy with the Mae Wests in attempting to clamber on the upturned model of the raft with a Mae West on. I think it would have been a difficult exercise." (**transcript of John Gibson 21st March, 2000, p.65**)

The Mae West PFD is susceptible to being washed off the wearer; John Gibson said:-

"The water was coolish, I believe I was very fortunate in that I was wearing thermal underwear, a Snug, an S-N-U-G, which is fleece lined vest. I also had on a Henry Lloyd buoyancy vest, I had a Henry Lloyd state of the art full jacket and pant-suit on and over that I also had the Mae West jacket. The Mae West jacket on the occasion of the big wave was swept off my body but remained attached around my waist ... (John Stanley had also lost his Mae West jacket altogether on that occasion)." (**statement of 27th January, 1999, pp.24 & 25**)

Dr. P.G. Luckin gave evidence on the Mae West style PFD and said:-

"Q. ... what you have before you now is a life preserver that was found on a beach in Tasmania but it clearly belongs to the "Winston Churchill", it has "Winston Churchill" on the front, and I think that you had something to say about these?

A. Well I note that when Mr. Dean was lost from the raft, both Mr. Stanley and Mr. Gibson had their jackets of this type washed off.

CORONER: That's right.

A. One of them, I think it was Mr. Gibson, retained his because it was still attached by the linen tape around his waist. But this type of jacket is extremely easy to lose in those circumstances in that it fits over the - fits over the head and is then secured by a tape around there, and it doesn't require much of a wave or much of a blow to actually lift this, and if you're unfortunate they should come off a lot more easily than that in the water, to wash it right off. A jacket that actually fits more as a vest is a very much more secure type of jacket to wear and is far less likely to come off, particularly if one is in the situation for example of jumping from the side of a boat with one of these. As you hit the boat it's very easy for it to ride up, very easy for the tapes to come undone or snap and for you to lose your life jacket. A vest type that fits around the thorax, fastens at the front, especially if it has a crutch strap fitted, is a very much more secure type of jacket to wear, especially in very extreme weather conditions.

Q. So that particular life preserver, you would not recommend that?

CORONER: For ocean racing, in the context of the Sydney Hobart yacht race.

A. I would not. I would recommend a better fitting, more secure type of jacket. I don't consider those adequate for my family to wear in the closed water of Moreton Bay. My family all wear full vest jackets, not jackets of that type.

Q. In Moreton Bay?

A. Even in Moreton Bay, sir. And if one looks at the jackets worn by for example Water Police and water rescue units around the country, they are not jackets of this type, they are jackets that are more securely fastened to the body and are far less likely to ride up, to break, to become lost." (**transcript 31st March, 2000, p.30**)

THE RESCUERS PERSPECTIVE

Michelle Marie Blewitt was a paramedic with the Australian Capital Territory (ACT) Ambulance Service. On Sunday 27th December, 1998 she was a crew member aboard the Southcare Helicopter which was required to lift crew members from the yacht "Stand Aside". She said, in her statement of 5th June, 1999:-

"... then I've gone down to get the third guy who was hanging on to the life raft. I've got down to him, got the strap, tried to put the strap over his head, it wasn't going to work because of the strap that we had was not long enough in length to go over the preserver vests that they had on ..."

David Key was a Senior Constable, Air Observer, Victorian Police Airwing. He was crew member of the Victorian Police Helicopter that rescued crew members of the yacht "Midnight Special", in his statement of 17th April, 1999, at **pages 36, 37 and 38**. He said:-

"... And the four off the "Midnight Special", because of their life jackets, again I was unable to do the chest strap up but I was able to secure them sufficiently enough and put my hands through their life jacket to, to hold them. Just going on the life jackets that we have, the buoyancy jackets we, we have for passengers and that, the RFD type 80 life jacket, which is the inflatable type, which keeps the head buoyant in the water and plenty of buoyancy around the chest area to keep the person above the water. The type of jackets that the "Midnight Special" crew had were, I'd say of the old type, they had just a thick foam, solid rigid foam blocks in them, which I don't think were suitable to that type of racing, and if you looked on the inside it actually stated that if it's in rough weather these won't, won't support you in the water. They were just very loose and, where the other type jackets fit you very snugly and even if you roll in the water it will roll back and keep your head out of the water automatically. So I thought that, that's why I said if they were, the boat sank and they were in the water they, they wouldn't have survived.

Even when they were coming to me they were having trouble, their heads were sinking in the head hole of the actual jacket. The jacket was being buoyant but they weren't, because of all their heavy clothing on they were starting to sort of go under their, under their jacket, which, which was a bit of a problem. I don't think, I don't know if that's a, a standard type of life jacket that yachtsmen use but it just didn't seem to be up to, to be able to handle those conditions.

Do you know if any of these life jackets had crutch straps at all?

No, none, none of them did.

They were just basically around the waist and supported around the head and neck?

Yeah."

From this it is clear that the Mae West style PFD is unsuitable as a PFD and should no longer be worn or allowed to be worn.

RECOMMENDATION - STROBE LIGHTS

I recommend that crews of competing yachts should have with them a personal strobe light when on deck in all weather conditions.

The recommendation is based upon the following rationale.

When the occupants of life raft "A" from "Winston Churchill" were separated John Gibson said in his statement of 27th January, 1999, at **page 22:-**

"... I heard voices, at least two voices, and I don't recall the words they were using but to the best of my recollection was, "Who's there" and "Where are you", or words to that effect. I recall seeing a strobe light being activated, which I immediately recognised to belong to Jim Lawler, because I recall that we had discussed these small strobe lights that we both carried an identical type of instrument. I recall that I activated my strobe light and I estimate that we were at least 100 yards apart, maybe not as much but certainly 75 yards."

If John Gibson could see this strobe light at sea level for that distance then it could be seen at a greater distance by sea or air rescuers.

RECOMMENDATION - IDENTIFICATION OF YACHTS

I recommend that each competing yacht carry on its hull or deck some form of marking that can readily identify the yacht to air rescuers.

This recommendation is based upon the following rationale.

During the Sydney to Hobart Yacht Race air/sea rescue aircraft, both fixed wing and helicopter were tasked by the Rescue Authority AUSSAR to search for particular yachts.

From the aircraft point of view one dismasted yacht was the same as another. When radio communications were established between the rescue aircraft and the distressed yacht the problem of identification ceased. However, not all rescue aircraft could communicate with the distressed yacht leaving room for confusion as to whether the yacht seen by the rescue aircraft was in fact the yacht it was searching for.

This will probably not be a problem where rescue aircraft are searching for one yacht. But it does become a problem when there are many yachts, in various states of distress, in a particular area. This occurred in the 1998 Sydney to Hobart Yacht Race. This confusion led to tragic circumstances.

The confusion arose when a search and rescue fixed wing aircraft was tasked by AUSSAR to search for "Winston Churchill". It located a dismasted yacht which it identified as "Winston Churchill". AUSSAR, relying upon this confirmation, redirected "Young Endeavour" to the position of the dismasted yacht and away from the area reported as the position of the sinking "Winston Churchill".

The reality was that in all probability "Winston Churchill" had already sunk at the time of the dismasted yacht's sighting; that the dismasted yacht seen by the aircraft was probably "Stand Aside".

The result of this confusion was:-

- (a) "Young Endeavour" was diverted away from the position where "Winston Churchill" sank;
- (b) Precious hours of daylight searching were lost;
- (c) Search and rescue aircraft could have been searching not for a distressed yacht but for survivors in life rafts;
- (d) "Young Endeavour" could have reached the position of the Mayday of "Winston Churchill" before last light, and thus could have remained there during the hours of darkness and have been there at first light. The dead from "Winston Churchill" probably survived until the middle of the next day.

It would have helped greatly had the search and rescue aircraft been able to identify the yacht it mistook for "Winston Churchill".

This is the rationale for requiring some form of marking on the hull or deck of a yacht that will readily identify it to searching aircraft. It must be done.

RECOMMENDATION - CREW TRAINING

1. I recommend that at least 50% of a competing yacht's crew should have completed a Yacht Safety and Survival Course every three (3) years.
2. That such Yacht Safety and Survival Course be the course ABF511 of the Australian National Training Authority; and
3. That such Yacht Safety and Survival Course be taught by instructors who hold a current Australian National Training Authority Certificate for Assessment and Workplace Training BSZ40198.

This recommendation is based upon the following rationale.

Before I set forth the reasons for this recommendation I note that the CYCA in its "Notice of Race 2000, Telstra Sydney - Hobart Yacht Race" requires, for eligibility to race, the following:-

"6.2.1 General Requirements

All competitors shall meet the requirements of RRS Appendix K.

The minimum number of crew on a boat is Six (6).

The minimum age of all crew on a boat is eighteen years of age (18).

At least fifty percent of the crew on a boat shall have long offshore racing experience. Particulars shall be supplied on the Crew Experience Declaration Form and submitted with the Application for Entry. The Race Committee's determination as to the acceptability of the Crew Experience is final and binding.

Changes to the Crew Experience Declaration Form shall be lodged with the CYCA on forms available from the Sailing Office.

At least fifty percent of the crew on a boat shall have completed a CYCA Safety Seminar or AYF Yacht Safety and Survival Course or a CYCA approved equivalent. A copy of the crew member's Course Attendance Certificate, or equivalent, shall accompany the Crew List (refer to NoR 4.3). Safety Seminar Certificates are valid for three years. It is recommended that all crew attend seminars.

At least two crew members on a boat shall have a Senior First Aid Certificate or higher first aid qualification. A copy of the crew member's Senior First Aid Certificate shall accompany the Crew List.

At least two crew members on a boat shall have a HF Radio Operators Certificate of Proficiency issued by a relevant authority, or higher qualification. A copy of the crew member's Radio Operators Certificate of Proficiency or other qualification shall accompany the Crew List.

It is recommended that the Skipper or Sailing Master have a recognised AYF Certificate (or equivalent) of at least an Offshore Skipper certification."

In a submission to me Mr. Peter Bush on behalf of the CYCA set forth the CYCA's developments in the area of training since the 1998 race. It stated:-

**"B2 Crew Experience - Education & Training
(Compulsory)**

CYCA, developed a comprehensive series of training seminars, assisted by manufacturers of safety equipment, Navy and BOM.

(Schedule of seminars, number of attendees and other information pertinent to seminars - **Attachment 5**).

These included:

- * Flare `day' practical sessions of launching pyrotechnics.
- * Life raft deployment, education and use of equipment found in the rafts.
- * Helicopter rescue (Navy).
- * Weather forecasting (BOM).
- * Heavy weather sailing (several experienced heavy weather sailors discussed techniques, plus review of 1998 experiences).
- * MOB.
- * Safety booklet provided (**sample attached "Survival at Sea" - Attachment 6**).
- * Much of this was repeated at the Race Briefing on 24th December (**see video attached**).

Recommended:

- * More than the required 30% of crews attended the Safety Seminars, estimated to be 50%.
- * Compulsory attendance at seminars is increased to 50% of crew for 2000.
- * The safety booklet was placed in all yacht satchels, given out at the Race Briefing, to be taken on board."

The Notice of Race 2000 reflects creditably upon the CYCA's ongoing program of safety training and requirements of competitors since the 1998 race. I also note that the Safety Seminar Certificates are valid for three years. Thus requiring the competitors' continual safety training.

I realise that such training will, of course, take time and effort. Not only from the yachting organisations but also from the individual yachtsmen and yachswomen.

There will also be those who will consider this training unnecessary because of their knowledge acquired over many years of yacht sailing.

But before dismissing safety training as simply another requirement I would ask each crew member to look at the facts from which this recommendation sprang.

"WINSTON CHURCHILL" SURVIVORS

The occupants of life rafts "A" and "B" of "Winston Churchill" were experienced yachtsmen. However the yachtsmen aboard life raft "A" did not know of the righting strap beneath the life raft or its use. They did not try to right the life raft but elected to cut a small hole in the floor.

Of those aboard life raft "B", Richard Winning knew of the righting strap and its purpose. He twice went outside the life raft and righted it. This is what he said in evidence:-

"Q. Had you any training in life rafts?"

- A. I'd seen them inflated before from a demonstration point of view, but I'd never actually been in one before.
- Q. Had you ever seen them being righted, that is, when they're upsidedown turned back the other way?
- A. I think I'd seen it done in one of those training films years ago I think they showed as part of some first aid course I did. I think I had seen that on film. I was aware there was a righting line on the bottom.
- Q. Did you know about a righting line?
- A. Well, from what I'd seen in this film, I understood that they all had righting lines.
- Q. And you knew about that when you were upsidedown?
- A. Yes.
- Q. What happens next?
- A. Well, I thought, well, I've got to get out and turn up the right way, because if I don't we're all going to asphyxiate. So I - there wasn't a great deal of discussion about it, in fact, I don't think there was any. I just took my life jacket off because I had to exit the raft through the door of the canopy, if you like, which was now under water, it wasn't possible to duck dive down and come out that way with a life jacket on, so I took that off, dived down, exited the raft, came up alongside it, positioned myself so that I was on the lee side of the raft, climbed up on the side of it, got hold of the tripping line, and pushed - and pulled I should say. It righted quite easily. **(transcript 21st March, 2000, p.21)**

Mr. Richard Stanley, a yachtsman with forty years experience and sixteen Sydney to Hobart Races, was a survivor of life raft "A". He said this of the need for safety training:-

"Q. Did you have any life raft training or anything like that?

A. I observed life raft inflation and I had a basic look at some of the contents that's in some of them. At Yacht Clubs they do seminars but I haven't actually been in one until that incident. So we then talked about it ...

Q. If I could stop you there, what's your opinion about yachtsmen being physically trained in life raft procedure?

A. Not as good as what it should be that's for sure, I mean that was proven.

CORONER: Q. What is your opinion of having it done for entrants into the Race?

A. Oh I think it's, it should be essential, especially in a Category One Race.

Q. They should be trained in that?

A. I believe they should have some sort of training, yes."
(transcript 22nd March, 2000, p.62)

Having known of this evidence prior to the hearings, and not being prepared to make a recommendation except on a sound basis, I asked that a study be performed showing the performance of trained and untrained yachts' crews in safety survival. This test was carried out by the Australian Maritime College in Tasmania.

I set out below the pertinent portions of this study which was conducted by Mr. Tony Boyle. The complete study is to be found in his 'Report Issues' relating to life raft operation:-

"Sea Survival Training

6.2 Impact of Sea Survival Training on Survival Skills

In order to determine whether there would be any observable difference between racing yacht crew members who had been trained in sea survival to those who have not received such training, a small pilot study was developed and conducted at the AMC in September 1999.

6.3 Study Rationale and Aims

This pilot study was conducted in order to address the issue of whether or not sea survival training should become mandatory for crew members participating in long Category 1 yacht races. The study was opportunistic in nature, taking advantage of the presence of volunteer crew racing yacht crew members as subjects for life raft trials.

Aims of the study included:

1. Determining whether sea survival training has significant effects on survival knowledge and skills; and
2. Identification of any physical difficulties experienced by subjects in operating life rafts and a helicopter rescue strop.

6.4 Methodology

Trials were initially conducted in still water at the AMC Survival Centre pool. 29 volunteers from the Northern Tasmanian yachting community were used as samples from the racing yacht

crew population. These subjects were observed in order to make an assessment on the possible impact of training on individuals' general knowledge of survival skills and practical ability to operate a life raft and helicopter-lifting strop.

This was achieved by providing a one day Sea Survival Course based on learning outcome 2 of the Australian National Training Authority Module ABF 511 Occupational Health and Safety at Sea, with additional emphasis placed on AYP life saving appliances and equipment. Appendix 4 contains an outline of the training conducted for half of the study subjects two weeks before the comparative trial was conducted. On the day of the comparative still water trial, the 15 trained and 14 untrained subjects were asked to complete a short written test paper relating to survival at sea knowledge (Appendix 5). The subjects had no prior warning that this test would be administered as a part of the study. The subjects were then observed and recorded on video tape as they individually performed the following sequence of practical tasks in low light conditions:

1. Swim two laps of the pool (50m in total) wearing yachting foul weather gear and a coastal Personal Flotation Device Type 1.
2. Board a 10-person Beaufort SOLAS life raft via an inflatable boarding ramp.
3. Retrieve and pull on board a simulated unconscious casualty using a Police Diver as an assistant for lifting.
4. Swim to, and board a 6-person RFD AYP standard Pro Saver life raft.
5. Secure the canopy entrance.
6. Remain inside the raft during a capsize.

7. Exit the raft after capsize.
8. Right the 6-person RFD AYP standard Pro Saver life raft.
9. Right the 10-person Beaufort SOLAS life raft.
10. Don a helicopter lifting strop and signal when ready for hoisting.

Subjects had no prior knowledge of the nature or sequence of practical tasks, and were not permitted to observe the conduct of these tasks until they had completed their turn." (**Boyle report, pp.57-59**)

Then, at **page 62** et seq:-

"In addition to the generally distribution of higher scores attained by the trained subjects, further evidence that training may be valuable for a survival situation can be derived from the following observations made during the trials:

- * 1 untrained subject failed to board the Pro Saver life raft.
- * 3 untrained subjects failed to right the 10-person Beaufort life raft.
- * 4 untrained subjects became entangled in lines or in the canopy hatch during the underwater escape and required assistance from the safety diver to get free.
- * 9 untrained subjects failed to don the helicopter strop in a manner that would not result in injury or falling from the strop compared to 1 trained subject.

- * 9 untrained subjects failed to maintain contact with the life raft via the rescue quoit and line.

6.7 Conclusions Relating to Sea Survival Training

- * Sea survival training makes a significant difference to the general survival skill knowledge of a racing yacht crew member.
- * Trained racing yacht crew members were observed to be generally better able to perform practical survival tasks than untrained racing yacht crew members.

6.8 Recommendations Relating to Sea Survival Training

1. The recommendation for 50% of a yacht crew to undertake a "Survival at Sea", "Marine Survival Course" should be implemented as a minimum requirement. Such a course should be independent of general safety and seamanship courses. This would allow it to be delivered in 1 day as is currently the case with mandatory survival courses conducted for the small commercial craft industry such as the survival component of ANTA Module ABF 511 (Learning outcome 2). This approach would ensure that race participants would have a large choice of training institutions to choose from. There is at least one training provider accredited to deliver this training in each state.
2. Any sea survival course considered should include assessment criteria that require all participants to:
 - * Board a life raft;
 - * Locate and use a rescue quoit;

- * Bring a simulated unconscious casualty on board a life raft;
 - * Escape from a capsized life raft;
 - * Right a capsized life raft; and
 - * Don and be lifted in a helicopter rescue strop.
3. Yacht owners should be encouraged to organise for the racing crew to inspect the vessel's life raft, fittings and equipment during its annual survey. The familiarisation gained would provide valuable knowledge for any crew member who is subsequently required to use the raft in an abandonment in dark and adverse weather conditions."

From the evidence of the survivors of "Winston Churchill" and the tests conducted by Mr. Tony Boyle, it is indisputable that trained crew have a greater likelihood of survival than untrained crew.

I would therefore ask each crew member of a yacht to pursue this training and to look upon it as an extra safeguard and part of the ordinary practice of sailors. It is, after all, for your own benefit.

RECOMMENDATION - WORKCOVER NEW SOUTH WALES

I recommend that Workcover New South Wales enquires into and reports to the relevant Minister of the Crown, on the practices aboard racing yachts of providing "payment" to some crew and the ramifications which may flow therefrom.

This recommendation is based upon the following rationale.

During the investigation of this Inquest it has come to my attention that:-

- (a) Some crew members were paid, in one form or another, to crew the racing yachts by the owners of the yachts;
- (b) Some crew members were given food and lodging, by the owners of the yachts, aboard the yachts for varying periods of time prior to, during and after the Sydney to Hobart Race in return for crewing such yachts; and
- (c) Some crew members were given air tickets from and to various places by the yacht owners in exchange for the crewing of the yacht.

In one notable instance the deceased, Glyn Charles was paid \$1,000.00 by the owner of "Sword of Orion" to be one of the yacht's helmsmen during the race.

Bearing in mind that as well as the death of Mr. Glyn Charles, other injuries were sustained by crew members. With this in mind Workcover should investigate whether:-

- (a) The Occupational Health and Safety Act 1983 (NSW) has been complied with; and
- (b) Whether insurance under the Workers Compensation Act 1987 (NSW) should have been obtained by yacht owners.

RECOMMENDATION - HARNESSSES AND LANYARDS (OR LINES)

1. That the Minister for Fair Trading (NSW) or other relevant NSW Government Minister considers ordering the withdrawal from the market of all harnesses and lanyards bearing the name "Tuff Marine Australia" or any derivation of that name.
2. That the said Minister or other relevant NSW Government Minister considers requiring that all harnesses used by yacht crews have a crotch strap fitted.
3. That the said Minister or other relevant NSW Government Minister considers pursuing a review of Australian Standard AS2227.

These recommendations are based on the following rationale.

The harness and lanyard used by Glyn Charles failed at the stitching of the lanyard. For further details see "Sword of Orion".

The harness and lanyard was labelled "Tuff Marine Australia" and stated that it complied with the Australian Standard AS2227.

Mr. Chris Turner of Workcover New South Wales in his report dated 10th March, 2000 in which the testing of the "Tuff Marine Australia" lanyard and harness from "Sword of Orion" is set out, said the following:-

- "a. The testing clearly proved that the used lines at the time of test were unable to withstand a force of 12kN, whether applied as a shock load in a drop test, or a gentle pull in a tension test. Of the three tests performed the highest peak load was

only 6.7kN. The testing also showed that the stitching was the weak point in the lines.

- b. The testing of the used lines and the new "replica" lines raises serious doubt as to whether the lines complied with AS2227-1983 at the time of manufacture. The testing was however not conclusive proof that they did not comply.
- c. The testing of the used harness recovered from the "Sword of Orion" is inconclusive, even though the harness remained in tact after the test. As the line failed, the peak load that the harness was subjected to was significantly less than it would reach in a test where the line passed."

He then went on to make the following recommendations:-

"9. **RECOMMENDATIONS**

- a. All "Tuff Marine" harnesses and lines, of the type tested, remaining in use be withdrawn from service.
- b. The Australian Standard AS2227 be reviewed and the following points be considered in the review:
 - i. The marking of the manufacture date and maximum life, or an expiry date, on the products.
 - ii. Adding a requirement that all load bearing joints in lines, and at the line attachment point on the harness, whether stitched, glued, spliced or fused be capable of withstanding either the same

load as the base material, or a specified load that includes a safety factor for reasonable in-service degradation. This should be confirmed by a test.

- iii. As the fall factor results in a higher peak load for a shorter line it may be appropriate to test the shortest line to be manufactured.
- iv. There is little point in simply calling for a stronger line, as there is a limit to the forces the body in the harness can withstand."

Standards Australia said, of the lanyard from "Sword of Orion":-

"LANYARD NO. 9 WAS NOT A PRODUCT WHICH WAS CERTIFIED BY STANDARDS AUSTRALIA AS MEETING THE REQUIREMENTS OF AS2227

- 9. The evidence overwhelmingly suggest that Lanyard No. 9 was not a product certified by Standards Australia for the following key reasons:
 - (i) The lanyard which was tested and certified in 1986 was fundamentally different to Lanyard No. 9;
 - (ii) There is no actual evidence that the production of Lanyard No. 9 was ever certified by Standards Australia;

- (iii) Lanyard No. 9 would never have passed AS2227 certification requirements."

Standards Australia point out that neither the stitching on the lanyard nor the clip attached complied with its requirements which were set out in a letter from "Tuff Marine Accessories" which stated:-

"Stitch the buckles down by at least 6 3/4" of stitching in a pattern as the example given for production (a zig zag pattern from side to side 3/4" apart from point to point and started and finished by more than 3 straight sews back and forward and at least a 6 stitch back to finish)."

CROTCH STRAP

This recommendation is based upon the fact that John Mathew Campbell, whilst unconscious, was actually pulled out of his harness which was not fitted with a crotch strap. He said:-

"Despite having full over the shoulder, um regulation harness that was fitted properly, this was actually a harness that was worn that was fitted in the lining of my jacket, it was not worn over the top of the jacket like many of the traditional harnesses, it was actually integrated into the jacket. At some point while trying to hoist me over the lifelines, still unconscious, the jacket turned inside out and I slipped out of the harness. It happened in just, um, a split second. There was very little warning that any of the guys had that this was going to happen. It was just one second I was in the harness and the next second it was turned inside out."

The fact that Mr. Campbell was in the water seen by the helicopter rescue crew was extremely fortunate. See the evidence of David Key.