

Rolex Sydney Hobart Yacht Race 2024

Review Committee Report



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Time Zone used in this report is Australian Eastern Daylight Saving Time (AEDST), Universal Time Coordinated (UTC) T+11 hours.

1. Introduction

1. The 79th Edition of the Rolex Sydney Hobart Yacht Race (RSHYR) produced its usual spectacular start from Sydney Harbour on Thursday 26 December 2024 with 104 boats, including 23 double handers, making their way out of Sydney Harbour. There was a challenging weather forecast, with a gale warning, expected to bring hard, strong wind running conditions, building seas and an abrupt, strong south-westerly change within the first 24 hours. These conditions were a major contributor to a number of serious incidents that included two fatalities, one person overboard and separated from the boat, three other serious injuries, three boats dismasted and 14 retirements over the first night.

1.1 Terms of Reference

2. Consequently, the Board of the Cruising Yacht Club of Australia (CYCA) resolved to establish a Review Committee to conduct a comprehensive investigation into the two fatalities and person overboard incident to ensure the ongoing safety and integrity of the Race and minimise, where practicable, the likelihood of recurrent incidents.
3. The purpose of the Review Committee is to:
 - Investigate the circumstances surrounding the three incidents.
 - Identify possible contributing factors, including: weather, equipment, crew preparedness, and Race management protocols.
 - Consider whether any changes are necessary to equipment, training, experience levels, regulations or race documentation to mitigate future risks and enhance Race operations.
4. The review is to establish the facts and make any appropriate recommendations of practical ways to improve safety in offshore sailing. The Review is not to apportion any blame.
5. Without limiting the scope of the Review, the Review Committee is to consider the following:
 - Equipment - Helmets and boom brakes/preventers.
 - Relevance of current crew qualifications and experience for Cat 1 races.
 - Risks of downwind sailing in strong conditions.
6. The full Terms of Reference (ToR) are attached at Appendix 1. The final report is to be submitted to the Board by 15 May 2025.

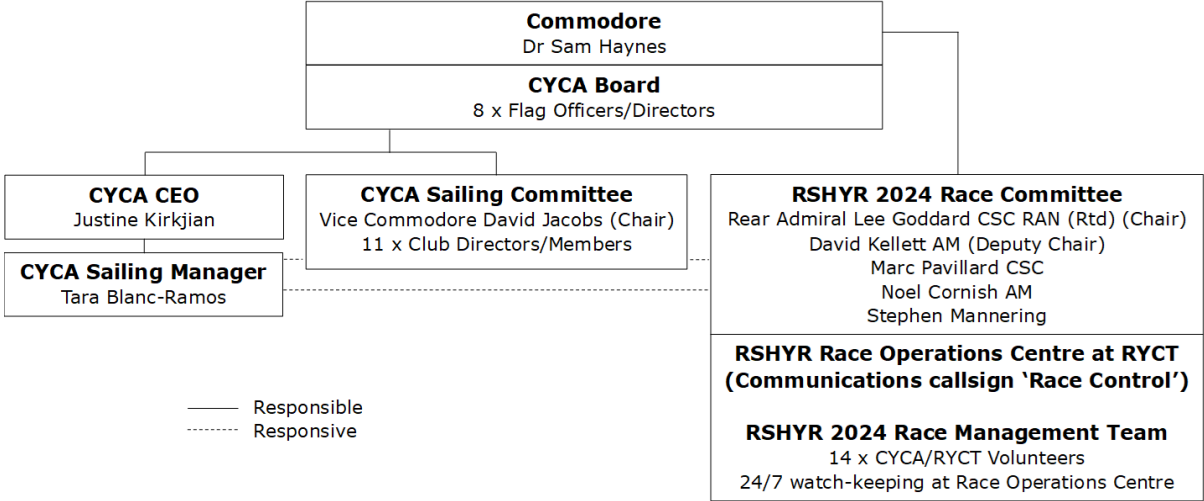
1.2 Independent Review Committee

7. The Board invited Rear Admiral Chris Oxenbould AO RAN (Rtd) to chair the Committee and also invited Adrienne Cahalan OAM and David Jordan CSC to assist as Committee members. Brief resumes of the three Committee members are at Appendix 2.
8. The Review Committee interviewed or received input from over 40 people representing the CYCA, Race administration, boats involved in incidents and other competitors within the

Race as well as experts in some of the areas considered. The Committee sought and received several written submissions.

2. The Race and the Rules

9. The RSHYR 2024 was governed by the rules as defined in *The Racing Rules of Sailing 2021-2024* (RRS) of World Sailing, including the:
- IRC Rules 2024 Parts A, B and C.
 - Rules and Regulations of each One Design Class scored in the Race.
 - Prescriptions and Special Regulations of Australian Sailing (ASSR).
10. The Race is designated as a Category 1¹ race, organised and conducted by the CYCA as the Organising Authority (OA) with the co-operation of the Royal Yacht Club of Tasmania (RYCT). Owners and charterers of eligible boats were invited to enter on the conditions of the Notice of Race (NoR) issued by the CYCA and compete as specified in the Sailing Instructions (SI) also issued by the CYCA.
11. As part of the CYCA’s governance in conducting a very full and busy sailing program it has a standing Sailing Committee that is chaired by the Vice Commodore, David Jacobs, and consists of a mix of 12 Club Directors and members. Under the Chief Executive Officer (CEO), Justine Kirkjian, there is a small Sailing Office team led by the Sailing Manager, Tara Blanc-Ramos.
12. For the RSHYR the Sailing Committee forms a dedicated RSHYR committee, The Race Committee, and nominates a Chair, ideally at least six months before the Race. The Race Committee may also have responsibility for some of the Club’s other major races and the Blue Water Pointscore Series (BWPS) and did so this year. This structure has evolved over recent years and now includes a Race Management Team (RMT) that is set up at the Race Operations Centre at the RYCT to monitor and control the Race and coordinate the provision of any assistance that might be required by competitors as well as liaison with external agencies.



RSHYR Organisation Structure

¹ Category 1: Offshore 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. (ASSR 2.01.2)

13. The internal CYCA arrangements supplemented by the Club's Media team have to work closely with a number of external agencies, including the Australian Maritime Safety Authority (AMSA), NSW Police Marine Area Command, Tasmanian Police Maritime Units, NSW Maritime, TASPORTS, the Bureau of Meteorology (BOM), Marine Rescue in NSW and Tasmania and Defence. The network is connected through a series of closed signal groups using the Apps: Signal, WhatsApp and Text/Call.

3. Deduced Facts - The Incidents

3.1 The Race Committee and Administration

14. The Review Committee interviewed the Chair of the Race Committee, Lee Goddard along with Marc Pavillard, a Race Committee member, who were both in the Race Operations Centre during the critical hours of the night 26/27 December. Lee was first appointed in November 2020 and this was his fourth² race as Chair of the Race Committee.
15. The Race organisation produces a complex series of internal and external interfaces that need to be managed carefully. The Race Chair characterises it as a 'team of teams'. He considers that a high level of synchronisation exists between the various players which has benefitted from the experience gained in the earlier BWPS races and an impressive number of detailed scenario exercises and risk reviews that includes the CYCA and external participants.
16. The Chair of the Race Committee considers his role is to 'operationalise the CYCA's policy and then execute it'. He acknowledges that 'role clarity' is a critical element and believes it worked well with a high level of professional relationships and trust displayed with the external agencies. This was incorporated into the Race Management Plan. The Race Committee agreed the NoR, and SIs, the Risk Matrix and Communications Plan following review of these documents with the CYCA team and a range of experts.
17. Of note, the protocols around the postponing and cancelling of a race before the scheduled start were discussed at length. The principle that a race, once started, will not be cancelled was reviewed, endorsed, and fully understood by the Race Organisation structure.
18. Throughout the lead-up to the start and during the Race, the full Race Committee, Race Management Team, CEO, Media team and Commodore maintained continuous contact via a closed Signal group. All were kept well informed.
19. The Chair of the Race Committee was confident that the organisation was well prepared for the incidents that unfolded on the first night of the Race. Nevertheless, he is not complacent and plans to review in coming months:
- Roles and Responsibilities (CYCA Sailing Committee, RSHYR Race Committee and the RYCT)
 - Race Start – planning and on-water management (with a safety focus)
 - Communications Plan and evolving systems available
 - The overarching Race Management Plan, NoR and SI's
 - Scenario planning for the full range of emergencies and incidents.

² The 2020 RSHYR was not conducted due to COVID

3.2 Overview - Timeline of Events overnight 26-27 December

20. The two Race Committee members provided the Review Committee with a comprehensive overview of the incidents that occurred on the first night of the race. The night was extraordinarily eventful and required the full attention of the RMT and Race Committee. Without including at least nine inadvertent Personal Location Beacon (PLB) activations in the first 18 hours, the significant events were:

2200: *URM* reports dismasted (cutting away rigging with all POB OK)
2216: *Quetzalcoatl* reports boom personal strike and significant head injury
2243: *Philosopher* reports dismasted
2343: Mayday³ from *Flying Fish Arctos* relayed from *Oroton Drumfire*
2244: *FF Arctos* reports very serious incident, a number of yachts assisting
0001: *Comanche* retires
0030: *Calibre 12* retires
0051: 3 yachts report wind strength greater than 40kts (30-35kts Green Cape)
0053: *Wild Oats* retires
0216: reports of very serious injury in *Bowline* – Mayday relayed to Race Control
0241: *Centennial* retires
0307: PLB Activation reported from *Porco Rosso*
0311: PLB activated in *Porco Rosso* confirmed as an actual Man Overboard (MOB)
0320: AMSA launches aircraft for *Porco Rosso* MOB incident
0400: man recovered to *Porco Rosso*
0503: *Mayfair* retires
0610: *Zeus* retires
0627: *Bacchanal* retires

21. The Race Chairman arrived in Hobart at about 2100. The dismasting of *URM* was an ominous warning and within a few hours' boats were reporting wind gusts exceeding 40 knots. He along with the CEO proceeded to the Race Operations Centre when advised of the incident on *Flying Fish Arctos*. They found the incident being well controlled by the RMT watch leader, Ross Mannering.
22. At 2343 a Mayday was relayed by *Oroton Drumfire* reporting a head injury onboard *Flying Fish Arctos* and advising the boat had a nurse onboard, but the patient was not breathing. *Oroton Drumfire* was close by, about 12 miles to the south and relayed what was happening to the Race Operations Centre. Race Control notes that *Flying Fish Arctos* was receiving medical advice directly through AMSA. Two other boats, *Wings* and *Poulpito*, were standing by to assist. *Wings* had a defibrillator onboard and was preparing to transfer it, in the difficult conditions, to *Flying Fish Arctos* if needed.

³ Mayday: a distress signal, typically used on marine VHF radios, where you would say "Mayday" three times, followed by your vessel name, your location, and the nature of your emergency, indicating a serious situation requiring immediate assistance.

23. The external emergency services were engaged with AMSA providing medical advice and the NSW Police vessel *Nemesis* on station nearby. The Race Chairman was being kept well aware of the situation through direct contact with *Oroton Drumfire* – everybody who needed to be was being kept informed. The CEO and Sailing Manager were in the Race Operations Centre and talking with the Acting Commodore⁴ regarding a media plan. Shortly after midnight the injured person, Roy Quaden, was assessed to be deceased.
24. *Flying Fish Arctos* retired from the Race at 0024 and headed for Jervis Bay planning to meet *Nemesis* on the way. Yachts in the vicinity resumed racing. Race Control liaised with Police on requirements to meet *Flying Fish Arctos* when it arrived at Jervis Bay. There was some delay caused by communications difficulties between Race Control and *Flying Fish Arctos* in obtaining the name of the deceased and passing it to the Police.
25. At 0216 on 27 December, a Mayday was relayed by *Flat White* from *Bowline* reporting another accident with an immediate sense that it was a very serious injury. *Nemesis* was nearby, in direct communications with *Bowline* and attempts were made to establish a link with medical advice through AMSA. At 0234 Police advised that *Bowline* was heading towards Batemans Bay and that ‘they are performing CPR on a crew member who is unresponsive and has no pulse’. *Bowline* proceeded to Bateman’s Bay and arrangements were made with Police to meet the boat and receive Nick Smith’s body.
26. At 0307 there was a PLB activation from *Porco Rosso*. Race Control contacted the boat and was advised it was an inadvertent activation. Shortly thereafter there was a report from *Porco Rosso* that confirmed that there was one person overboard and separated from the boat. AMSA had the details of the initial PLB activation and *Nemesis* had heard the Pan⁵ call along with *Comanche* who was heading to the position. *Denali* and *Ocean Crusaders J-Bird* were also standing by to assist. Luke Watkins, the person in the water activated his PLB and AIS beacon the latter being detected and tracked by *Porco Rosso*. After sorting out the boat’s situation the crew was able to turn around and recover Luke from the water. He was back onboard at 0400 after being in the sea for over 50 minutes and the Pan was cancelled.
27. Reflecting on the three incidents the Race Chairman was pleased by the support from the other yachts and the quality of communications. He was also impressed by the role clarity that existed between the external agencies and within the CYCA internal Race organisation. As the Chair he felt fully aware of the situations as they developed and that all relevant people were being kept informed while the most appropriate levels of assistance were being provided where possible.
28. From reviewing the Race Operations Centre and Control Room log books it is clear communications were not perfect and that there were quite a few cases where contact could not be made with a boat. Communications were, however, an improvement on what was available before satellite phones became the primary means of communications, especially in dealing with inadvertent PLB activations which in most cases were dealt with very quickly. Dial-up capability was an important improvement and communications were clear. Even with a Radio Relay Vessel (RRV) accompanying the Race, most opportunities to communicate

⁴ The Vice Commodore, David Jacobs, was acting as the Commodore as the CYCA Commodore, Dr Sam Haynes, was competing in the race.

⁵ Pan call: an "urgency" call, indicated by saying "Pan-Pan" three times, signifying a situation that requires immediate attention but is not considered life-threatening.

with the fleet were centred on the skeds⁶ (radio schedules) and checks, being subject to the vagaries of High Frequency communications, often with a high level of background noise making it difficult.

3.3 The Weather

29. The official weather forecast was presented by Gabriel Woodhouse, of the BOM, at the CYCA weather briefing at 0800 on Thursday 26 December 2024. It was compulsory for two specified members from each crew to attend. The forecast summary was for:
- NE winds strengthening on Thursday (26 December - race start), with gale-force winds offshore south of Narooma.
 - Strong to gale-force W-SW change arriving Friday morning, turning S-SW along the NSW and eastern Tasmanian coasts during the day. Showers and the slight chance of a thunderstorm possible.
 - NW-SW winds persisting across Bass Strait and Tasmania with a series of passing troughs and fronts until later Sunday, then tending northerly.
 - Winds may be variable at times along the eastern Tasmanian coast.
 - There were potential Strong Wind Warnings likely throughout most of the race and Gale Wind Warnings on Thursday and Friday.
30. From the crew interviews the weather experienced was very much as forecast, though some crews commented that the wind built faster than expected. The winds at the times of the three incidents were from the north and increasing in strength as the fleet moved south. The first incident, *Flying Fish Arctos* shortly before midnight reported winds of 25-30 Knots, possibly slightly stronger, with a rising confused sea.
31. With the later incidents the wind backed through north to about 345°/350° and increased in strength to a solid 35 knots gusting to 42 knots. Some boats in the fleet reported to Race Control gusts exceeding 40 knots in accordance with the SIs. There was some variation in wind strength across the course with slightly less wind close inshore and well to seaward, about 50 miles off the coast. It would appear the wind experienced by *Bowline* and *Porco Rosso* was in the 35 - 40 knot bracket but gusts were not markedly in excess of 40 Knots.
32. All boats interviewed commented on the confused nature of the sea. A building sea from the north east to north with the wind strength increasing to gale force and backing towards the west passing through north at about midnight. Some crews commented that the seas were relatively flat and had not increased in size as normally expected. A frequent comparison was drawn to the 2022 RSHYR, two years previously with bigger waves. There was a low south to south easterly swell of 1 - 1.5 metres providing a cross component and also quite a complex system of current eddies around the southern NSW coast introducing a current/wind mix. A few crews speculated the waves reflected the current being experienced – some crews reported waves without backs while others were surprised the waves were not bigger.

⁶ Skeds – a colloquial term used in the marine environment, particularly in offshore sailing, derived from shortening and modifying the word ‘schedule’ as used in the title Radio Schedule, a routine arrangement for communications between the fleet and the Race Committee i.e. Race Control and other communications points. For RSHYR 2024, the term ‘sked’ was still used to describe the routine communications events albeit, the communications medium was satellite not HF radio.

33. The cross waves were reported to come from either side and ‘slapping’ the boat, making it difficult to steer - ‘the helmsman had to work hard’. *Porco Rosso* reported as they passed Green Cape (37° 15’S) well off the coast that the cross waves became more pronounced possibly influenced by the approaching front.
34. Of significant note was that the night was pitch black with moonrise not until about 0225. It was an old moon, a waning crescent, 25 days old and only about 15% illuminated with the new moon (i.e. no moon) appearing on 30 December 2024. This lack of illumination made the helmsman’s job even more difficult as they could not see the waves they were about to catch or, more importantly, those about to cross the boat’s track.
35. The conditions were certainly challenging but as an indication of the diversity within the fleet, one very experienced Person in Charge⁷ (PIC) described the first afternoon and evening ‘as some of the best sailing he had ever had - fantastic racing 25-30+ knots of wind’, ‘the sea state relatively flat and the boat handling it well’ qualified by ‘lots of white water across the deck and it was dark’.

3.4 Flying Fish Arctos

FLYING FISH ARCTOS – BOAT STATISTICS

McIntyre/Radford 55 (15.2m)

Total Crew: 12

No of Hobart Races by Crew: 10
(7 + 2 + 1)

Cat 1 Experience or Equivalent: 83%

Completed SSSC or equivalent: 75%

36. *Flying Fish Arctos* is owned and operated as a commercial vessel by Flying Fish Sailing. They sail with a number of paying crew and provide qualifications certified by the Royal Yachting Association (RYA). As such they are registered as a Domestic Commercial Vessel and are required to comply with AMSA and RYA regulations as well as the race Organising Authority, the CYCA. A brief will also be prepared by NSW Police for the Coroner.
37. This situation creates a very complex regulatory environment. As such the Managing Director of the Sailing School and the school’s employees, elected not to participate in an interview with the CYCA Review Committee due to ongoing inquiries with other regulatory authorities relating to commercial vessels.

⁷ Person in Charge (PIC) defined in ASSR 1.02: **The safety of a boat and its crew is the sole and inescapable responsibility of the person in charge** who shall do their best to ensure that the boat is fully found, thoroughly seaworthy and manned by an experienced crew who have undergone appropriate training and are physically fit to face bad weather. They must be satisfied as to the soundness of hull, spars, rigging, sails and all gear. They shall ensure that all safety equipment is properly maintained and stowed and that the crew know where it is kept and how it is to be used. Attention is drawn to Regulation 2.04 that specifies the crew experience required for some races. They shall also nominate a person to take over the responsibilities of the person in charge in the event of his incapacitation. (Emphasis added)

38. The Managing Director did state Flying Fish Sailing's support and respect for the work of the CYCA in conducting the review and that he would make contact should the situation change. Nothing was subsequently heard before completing this report.



Flying Fish Arctos

39. Separately as a result of the Review Committee's open invitation for written submissions, a response was received from a paying member of the crew who was onboard *Flying Fish Arctos* during the Race. That crew member was keen to ensure that the Review Committee had "a good understanding of events and that your final report is accurate, fair and above all constructive in helping to avoid such accidents". The Review Committee was able to conduct an interview by teleconference.
40. The crew member is an experienced offshore sailor and had previously competed in his own boat in other major offshore races. The RSHYR was on the 'bucket list' and it suited to participate in the commercial arrangement offered by Flying Fish Sailing as part of a family holiday. That crew member also completed the Safety at Sea Survival Course (SSSC) the week before joining the boat.
41. The crew member was very complimentary about the package provided, considering the atmosphere and lead up to be excellent and one of their best sailing experiences. The crew was 'very harmonious without cross words' – the skipper had a pleasant style 'very experienced and the man management was excellent'. The crew member stated they had a strong bond with Roy Quaden and they were both in the same watch with Roy on the main and the crew member working the mast. Roy was very popular onboard with a gregarious nature.
42. The crew member considered the boat very well equipped and with its traditional design was well setup and suited for the weather forecast. They were sailing conservatively, a little closer inshore than the majority of the fleet. After some spinnaker problems the boat changed down to a poled out No 3 jib. Mid-afternoon to dusk provided excellent sailing in 25 knots of wind well within the crew's capability. The wind built as it became dark and the first reef was put in the main. They were well placed in their division and experienced an exhilarating sail during the first watch.

43. The wind was building and hearing other boats were having trouble they decided to put in a second reef before the change of watch at midnight. While on the port tack the jib was re-sheeted on the leeward side and the boat headed up a little while easing the main and taking the second reef. The crew member was working on the mast with the bowman. On completion the original course was resumed and an attempt was made to sheet the J3 on the windward side – an often practised procedure. The crew member was back in the cockpit and now handling the port lazy sheet tasked to pull the sail to the windward side.
44. The manoeuvre was called by the helm but the headsail would not come across and was thought to be caught on the inner forestay. The crew member was leaning outboard trying to see what was stopping the headsail. They were then hit across the head and flung towards the port side of the boat against the lifelines laying with their right leg out of the boat and their body against the rail while fortunately tethered to the boat. The crew member was being pressed down by a sheet (possibly the mainsheet) – they were stunned. The boat had completed an unintended ‘crash gybe’⁸. The hit to their head occurred only about 30 seconds after the headsail was thought to be caught.
45. The crew member was experiencing a hard pressure on their chest against the rail. The sheet was eased and they were helped from a precarious position and taken down below. Initially the crew member thought they were hit by the mainsheet or they had been hit by the boom but subsequently thinks they were first hit by Roy after Roy had been struck by the boom.
46. The crew member was in quite a bit of pain in their back and shoulder but was not aware of Roy’s injury when taken below. The crew member was in shock and was physically sick for about 20 minutes. They heard the Mayday call being sent and initially thought it was because of their own injuries and were concerned about the attention they were being given. The crew member went on deck to tell the skipper they were OK and saw Roy on the deck receiving treatment from the three medics onboard, an anaesthetist, a plastic surgeon and an Accident & Emergency nurse.
47. *Flying Fish Arctos* proceeded to Jervis Bay escorted by Police for the last hour. The crew member stated that they were very appreciative of the support provided by the Police and the reception at the naval base. Their own injuries needed attention and they returned to Sydney by train before flying to Hobart to rejoin their family and be embraced by the sailing community and its genuine concern regarding the ordeal and sympathy over the loss of Roy Quaden.
48. On reflection, the crew member considers Roy must have stood up for some unknown reason just before the ‘crash gybe’ which occurred while trying to pole out the J3 headsail to port. All onboard were aware of the boom and its potential to injure crew members. The crew member considers that Roy, for some reason, must have been out of his normal position.
49. The crew member considers the incident was not weather related as they were experiencing 25 - 30 knots of winds – normal sailing conditions. Although the situation was compounded by a dark night with a confused sea. The crew member considered the sea state was still OK - ‘a relatively smooth ride, not on the edge of a gybe’. The crew member did not consider the boat overpowered – ‘but this might have been different for the helmsman’. A boom brake was fitted and on all the time but something went wrong. They did not know if it was reset properly

⁸ ‘crash gybe’ an uncontrolled manoeuvre when the stern is passed through the wind and causing the mainsail to flick violently from one side of the boat to the other with a great deal of force.

after taking the second reef in the main. The brake might have slowed the boom but it did not stop it coming across the boat with considerable force.

50. The boats that stood by after the incident report that the wind was stronger than the crew member's estimation more in the order of 35-37 knots. The sea state was also considered rough which would make it difficult to handle the boats and the transfer of the defibrillator although, the latter may still have been possible if required.
51. There was considerable medical assistance immediately available. The crew member advised that there were two doctors onboard *Flying Fish Arctos*, as well as an Accident and Emergency nurse, with one doctor and the nurse on watch with Roy and themselves. The Race Control log also notes that the Telemedical Advisory Service coordinated by AMSA was in contact with the yacht less than 20 minutes after the incident was reported. In addition, on a nearby yacht there was a very experienced sailor readily available on VHF radio who at the time was the Director of Intensive Care Services at Central Queensland Hospital and Health Services and a noted yachting medical expert in Australia and New Zealand.
52. While the point to point communications relayed through *Oroton Drumfire* got the message through and engaged the external services the local coordination on VHF was reported as lacking control - important messages were not able to be passed. Nearby boats, as well as the Race Operations Centre, do not appear to have been aware of the medical expertise onboard *Flying Fish Arctos*. An expert on the scene, on another racing boat, could not make contact. He provided his satellite phone number as an alternative means of communications and also attempted to call *Flying Fish Arctos* on the satellite phone but it was not answered - which could have been for a number of reasons. A lot of the VHF traffic involved the transfer of a defibrillator that, in this situation, was not needed. There was also some well-intentioned but misleading comments from unqualified sources. All the communications took place on VHF Channel 16, the distress and calling frequency, without shifting to a working channel.
53. With respect to the incident the critical questions remain: what caused *Flying Fish Arctos* to 'crash gybe' and injure Roy? Other crew members might be able to assist with these questions.

3.5 Bowline

BOWLINE – BOAT STATISTICS

Beneteau First 44.7 (13.4m) - Farr Yacht Design USA

Total Crew: 9

No of Hobart Races by Crew: 18

(3 + 2 + 2 + 3 + 2 + 2 + 4)

Cat 1 Experience or Equivalent: 78%

Completed SSSC or equivalent: 89%

54. *Bowline* is a solid yacht of a proven popular design that was well prepared for the 2024 RSHYR. The crew contained considerable experience with many who had sailed together a great deal being blended with two less experienced sailors racing to Hobart for the first time.

This balanced crew reflected the owner's 'commitment to stimulate offshore racing programs', acknowledged in the race program and raised with the Review Committee – 'you have to have a growth path in the sport'.

55. This was *Bowline*'s third Hobart race with the owner having previously competed in 2021 and 2022 as well as competing actively in the South Australian offshore program. The delivery voyage from Adelaide was used as a RSHYR qualifier as it had been for the previous two races. The boat's policy requirement is that if you sail in the RSHYR you must do part of the delivery. The crew thought that the 2021 and 2022 deliveries were in wilder conditions than this race.



Bowline

56. Following the race start the crew enjoyed a fast run down the NSW coast sporting a new slightly smaller and heavier spinnaker specifically purchased for the race. Just on dark the spinnaker sheet clip failed and with the wind speed of about 31-32 knots it was decided to drop the spinnaker. During the night as the breeze freshened they put the first reef in the main and later a second reef. The headsail was not particularly useful and was flogging. At 2200 the headsail was dropped and the boat was sailing with just a main with two reefs.
57. At about 2300 one crew member hurt their bicep and had to be taken below and treated. Consideration was given to retiring but as their port of refuge would be Eden and they were heading in that direction sailing down the rhumb line⁹, the skipper decided to continue racing and allow the injury to settle before reviewing the situation at daylight.
58. At this time the wind was a solid and fairly steady 35 - 38 knots with an occasional 42 knots. The gusts were only slightly above the mean wind strength. The sea state was chaotic with a predominant following sea generated by the wind and frequent side or cross seas apparently on both sides of the boat or possibly striking the boat either forward or aft creating difficulty for the helmsman. The night was also overcast, pitch black with no moon at this stage or visual reference. With a comfortable amount of sail, the boat was being sailed at a True Wind Angle¹⁰ of 150°/160° close to the rhumb line. With the occasional wave 'wacking' the side of the boat,

⁹ 'rhumb line' the straight line course from Sydney to Tasman Island

¹⁰ True Wind Angle (TWA) is the angle of the wind relative to the boat if it was stationary. If the TWA is 0 the boat would be heading into the wind and if the TWA is 180° the wind would be coming from right astern, assuming in both cases the boat is stopped.

the helmsmen were working hard and were being relieved about every 30-40 minutes. The boat did not feel out of control and was reported to be sailing comfortably. The crew were not trimming or playing the mainsheet.



The traveller and mainsheet winch arrangements onboard Bowline

59. At 0200 the watch was changing and a decision was made to gybe the boat back to the rhumb line - from the starboard to the port tack. After the gybe, Nick Smith, 'the most experienced sailor onboard – having sailed two legs of the Clipper Round the World Yacht Race', was going off watch. For some unknown reason he decided to check the mainsheet traveller or possibly adjust the backstay as the boat settled down on its new course. Nick was on his knees on the cockpit floor forward of the mainsheet traveller. The boat was then hit by a cross sea possibly on the starboard quarter which forced the stern through the wind and the boat 'crash gybed' with the mainsail whipping across from the starboard to the port side. Nick was caught in the bight¹¹ of the mainsheet during the gybe and his chest was forced against the port mainsail winch with great force and catastrophic consequences.
60. The crew suspected instantly that Nick had been fatally injured. He was lifted from the winch and into the cockpit where he was administered CPR by two crew who were members of the Royal Australian Air Force and had an advanced level of first aid training. Nick could not be revived.
61. A Mayday was sent and the boat received good support from boats nearby. They were in direct contact with the NSW Police Vessel *Nemesis*. The Mayday was relayed to Race Control by *Flat White*. Having reported the incident to the Race Operations Centre *Bowline* made for Batemans Bay. 'We did not feel alone' and knew that support was available but there was nothing that could be done to alter Nick's situation.

¹¹ bight: the curved section or slack part between two ends of a line when it is not under tension.

3.6 Porco Rosso

PORCO ROSSO – BOAT STATISTICS

Cookson 50 (15.2m) - Farr Yacht Designs (USA)

Total Crew: 11

No. of Hobart Races by crew: 41

(0 + 22 + 7 + 3 + 5 + 4)

Cat 1 Experience or Equivalent: 64%

Completed SSSC or Equivalent: 73%

62. *Porco Rosso* has an excellent Hobart race history, including a win in 2013 as *Victoire*. The current crew has a mixture of experience and displays the hallmarks of a good team of sailors who have been hardened through sailing together off the Tasmanian coast. The navigator and one other crewman joined the boat in November. The navigator brought with him a record of 22 previous Hobart races. The boat was materially well prepared for the race.
63. Before the start of the race the crew sat down and reviewed safety. Luke Watkins, as the Boat Captain, provided a safety brief featuring the MOB AIS beacon. When he completed the SSSC and its practical component, the owner, was struck by the primacy of safety and the true value of good quality safety equipment. He provided each crew member with a Spinlock Deckvest Vito¹² lifejacket, fitted with a Harness Release System (HRS) and a bum bag containing an Ocean Signal RescueME PLB1, an Ocean Signal RescueME MOB1 AIS beacon along with a glow stick. At our interview Luke described how he slept onboard wearing the bum bag. The boat had strict protocols about wearing lifejackets and using tethers at night or when the wind strength exceeded 20 knots.
64. On rounding the seamark off Sydney, they initially set the A4, their heaviest masthead spinnaker and as the wind increased during the run down the coast they reduced sail in a number of steps. With a steady wind of about 35 knots sail had been reduced to a two reefed main, a furling Jib Top, a J5 and a furling storm staysail. They were set for 40 knots and considered they had the right sails up. The boat was being sailed hard under comfortable control with the centre of effort being low down – they were averaging over 20 knots with regular 25+ knots of boat speed. All calls on reducing sail were considered to be made early at an appropriate time.
65. There were two watches of four people keeping three hour watches. The two primary helmsmen split their watches across the other two watches with a start one hour prior to the main watch. The Primary helm would do 1-1.5 hours and then be relieved for a short spell by one of the secondary drivers – a total of four ‘drivers’ across the watches.

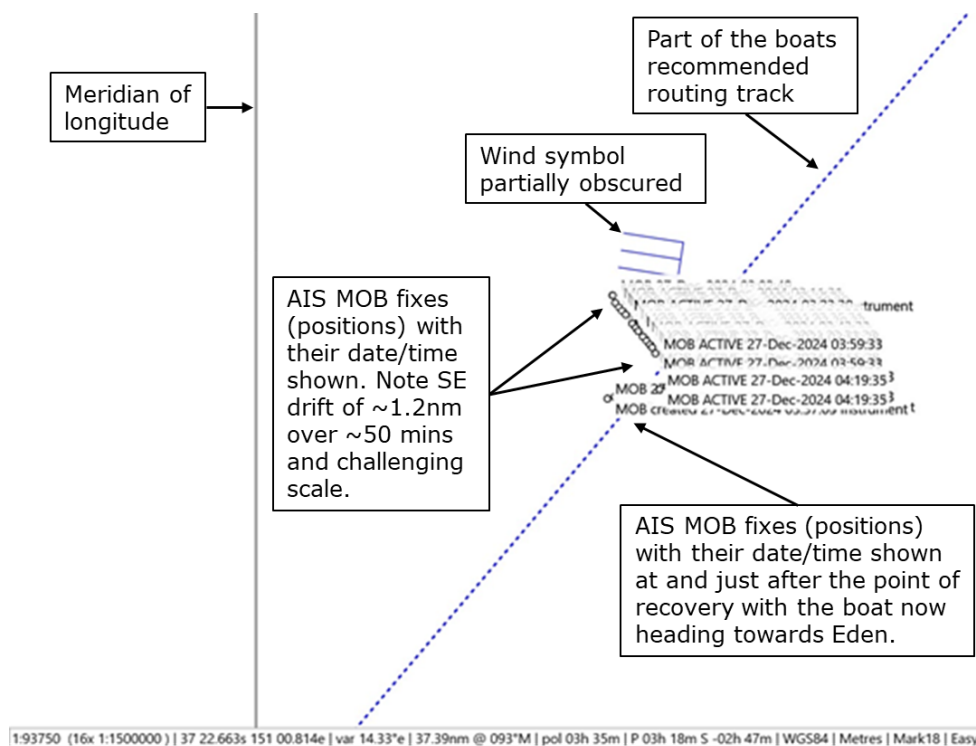
¹² Deckvest VITO is the latest Spinlock inflatable lifejacket harness technology, based on design work for the Volvo Ocean Race in collaboration with a core group of Volvo offshore sailors.



Porco Rosso

66. Although the boat was under control it was a challenging sail. There was no moon, pitch black with no visual reference – ‘one of the most disorientating nights sailing I have experienced’. It was really hard work steering the boat with the lack of visible reference and very confused sea – ‘difficult to judge if you were high or low’ – ‘every now and then we would get a wave on the side’ - ‘the instruments weren’t a great help because of the lag’. The race two years before was recalled as a hard run at night down the Tasmanian coast with probably a bigger sea but with the benefit of a moon made the sail far more manageable. As *Porco Rosso* passed Green Cape, they were well to seaward, the wind was backing to the west at about 345⁰ - 350⁰ and they were sailing fast towards Hobart on the starboard tack.
67. The last hour before the incident was the most comfortable until they were struck by a big wave at about 0300, which washed the helmsman, who was on a long tether, off the wheel. One other crew was washed across the deck and both crew were pinned on the lifelines – ‘pinned to the back of the boat with water up to my neck’. The boat crash gybed with the keel canted 80% to starboard. The boat was lying flat in the water pinned down by the keel canted the wrong way. The crew emphasised the consequences of a crash gybe in a canting keel boat causing the boat to sink deeper on the new leeward side as well as being held down.
68. It must have been violent. Down below one crew member thought the keel had fallen off and the navigator thought they had lost the rudder. The navigator commented that with canting keels you normally get a sense if the boat is about to gybe – ‘soft and spongy’ – but there was no such warning.

69. They had a head count but did not ‘number off’¹³ and in doing so made an error assuming all the crew were onboard. The navigator noticed an internal MOB alarm that must have been inadvertently activated from the helm position at the time of the gybe. No one had deliberately pressed the MOB button. There was then a sat phone call from the Race Operations Centre advising a PLB activation and the initial response was that it must be inadvertent as all were accounted for onboard.
70. The navigator then detected an AIS MOB alert on the Expedition Routing Software installed on the laptop at the nav station. The AIS alert gave a fix but did not provide a range and bearing to the fix so he calculated the range and bearing roughly using a cursor, made more difficult because the only chart available in that area was small scale. At 0311 there was a further message from the Race Operations Centre that AMSA had detected Luke’s PLB. This message was passed on deck only to find that Luke was not on board and the situation was a real MOB. The identification of a name associated with the beacon was a vital piece of information. Fortuitously, the delay in identifying the true situation did not add any delay to the recovery.



Annotated screen shot of what was presented on the Navigator's laptop

71. Shortly before the ‘crash gybe’ Luke Watkins had come on deck for the change of watch. Earlier that evening during his previous watch his lifejacket had inadvertently inflated. Before coming on deck for his next watch he replaced his expended lifejacket with the spare required to be carried by the regulations (ASSR). Even though the Spinlock vests are promoted as being resistant to inadvertent activation the crew had experienced five such activations since the start of the race - a result of sailing the boat hard and a lot of water across the deck.

¹³ ‘Number off’ - A safety procedure to check whether all crew are on the boat following an incident or emergency. Each crew member is allocated a number for the race/passage. When a check is made each crew member is to state their number in sequence to quickly identify if any are missing. When called, a person may only respond with their number.

72. On deck, Luke relieved on the main, sitting on the windward, starboard, side of the boat. When the boat crash gybed he was caught underwater and held by his tether and the lifelines. Running out of breath he activated the Harness Release System on his Lifejacket. The lifejacket had automatically inflated and the buoyancy pulled him free of the lifelines. There was no other decision than to release his tether as he felt he was on 'his last breath'.
73. When he came to the surface he could see the stern light of *Porco Rosso* as it was heeled over on its starboard side. He was out of breath, stating he would not have been able to manually inflate his lifejacket should he have not swapped it with the spare before coming on deck. Almost immediately he grabbed his PLB and personal AIS beacon and activated them. The PLB first and despite the teaching to pause before activating the AIS beacon, he activated the AIS beacon very shortly afterwards.
74. Luke held both in his left hand with the antennae facing up for good signal while having to hold himself up into his life jacket. Even so the AIS beacon's signal on the boat was erratic and not continuous: possibly the result of the aerial going under water or not being held vertically as he was rolled about by the waves. The fact that his AIS signal was being received by the boat was an indication that he was conscious in the water and able to hold his beacons to transmit their signal.
75. He tried the spray hood for about 30 seconds before removing it as it fogged up and he felt the need to be able to see clearly for a searching boat or aircraft. He also noted that the moon had begun to rise and this gave him a sense of direction to judge where he expected the boat to come from. He could not see the boat until he saw the port navigation light nearly on top of him.
76. The boat took quite a bit of sorting out before returning to find Luke. First recovering the two crew washed against the lifelines to the cockpit, then righting the keel and taking down unwanted headsails. The main was also taken down with some difficulty following some damage to the sail track during the gybe. Eventually after ensuring there were no lines over the side the propeller was engaged and the boat began to motor-sail with the J5 headsail back towards Luke. This had taken about 20 minutes and the signal from the AIS beacon indicated that the yacht had opened to about 2.5 miles from Luke's position in the water.
77. The crew on deck was being given a series of ranges and bearings from the navigator as they approached Luke's position. At about 0333, the crew gained occasional glimpses of Luke's light from a range of about 2 miles. This could have been the inflatable pylon light that is a feature of the Spinlock Deckvest and inflates 20 cm above the top of the jacket or his head torch. The sightings were intermittent, infrequent and the light difficult to see as Luke disappeared in the troughs of the waves. Since falling overboard, Luke had drifted about 1.2 miles and he reported rolling down several waves due to the buoyancy of his jacket. It was not possible for a lookout to keep a constant gaze on the light in the water and a modified more general lookout had to be adopted using the ranges and bearings provided by the navigator and the occasional glimpse of a light.
78. The J5 provided some stability while motor-sailing but became a hinderance in the final approach to Luke. The sail was dropped about 1 mile from Luke with the wind blowing 30-35 knots, a predominantly northerly swell with some westerly 'slop' but still 2 hours before the forecast front. One member of the crew was dressed in a dry suit in case there was a need for him to enter the water to assist Luke.

79. Two approaches to recover Luke were needed. The first a doctrinal upwind approach but the bow fell away in the final stages due to the wind. The second was more of a drive-by, slightly displaced, and using the safety throw bag to take advantage of Luke being conscious and able to assist in his recovery. Again, the bow was lost in the final stages of the approach, but they were able to throw the line close enough for Luke to reach. He was dragged back to the boat where after cutting the stern lifelines he was able to be lifted back onboard using the lifting strop on his life jacket to gain a solid hold - and aided by a rush of adrenalin. By this time, it was 0400 and he had been in the water for about 50 minutes.
80. Luke was taken below and provided care. Conscious of hyperthermia and the experience of John Quinn¹⁴ - Luke's clothes were stripped off and another crew member hopped in the bunk with him. *Porco Rosso* retired from the race and headed to Eden. A Pan had initially been called which was responded to by *Comanche*: this was cancelled. The boat was able to talk with Race Control, Marine Rescue Eden and the NSW Police vessel *Nemesis*, to call off the search. AMSA had scrambled an aircraft to assist but it was not in the area and a helicopter was not due to join the search before first light.

3.7 Other Occurrences

81. A number of boats from the Race took advantage of the open invitation from the Review Committee to meet with the Committee or provide a written submission. These have been particularly useful in providing a more complete understanding of what took place on the first night of the Race along with helpful presentations from the perspective of double handers and their experiences. Although some comments were outside the Review's Terms of Reference they have been noted as useful input for the CYCA Sailing Committee and the RSHYR Race Committee to consider. In summary interviewed crews:
- reaffirmed the weather conditions experienced and its very close alignment with the official forecast provided by the BOM, while confirming a confused sea state and dark night – 'we went into it with our eyes wide open';
 - indicated more boats experienced crash gybes than those involved in the three central incidents of the review – 'there were many wipeouts¹⁵';
 - expected (notably the double handers) more weather information routinely broadcast – including gale warnings;
 - expressed the loss of comfort from not having a RRV accompanying the fleet and the associated weather forecasts broadcast as part of the previous radio schedule routine – this opinion was fairly widely held as a noted difference to previous Races but did not extend to seeking a RRV to shadow the fleet;
 - described the different means of coping with the conditions experienced, and demonstrated a consistently high level of prudent seamanship – very alert to the changing weather, shortening sail in a timely manner and selection of the course to be sailed;
 - were impressed by the excellent level of mutual support provided by boats that stood by the three major incidents;

¹⁴ John Quinn - was washed overboard from his boat *Mem* in the 1993 Sydney to Hobart Yacht Race and spent 5.5 hours in the water before being found by the tanker *Ampol Sorrel* and rescued by the yacht *Atari*

¹⁵ Wipeout: lost control and ending up at an alarming angle of heel with the mast close to the water and the boat lying across the prevailing wind and sea.

- were impressed by the quality of medical advice that was promptly provided through AMSA - available, caring and comprehensive - clear advice provided over clear sat phone communications;
 - offered very complimentary remarks about the quality of the support received in Batemans Bay, Eden and Shellharbour, from CYCA race volunteers, NSW Police and others; and
 - were very supportive of the streaming of the race briefing and weather reports thereby encouraging and allowing broader dissemination of important information to all interested crew members.
82. The Review Committee noted the consistency of the experiences during the period examined by the Review from those interviewed or who made submissions. The main points raised that fall outside the Review's ToR are listed at paragraph 81 above and are provided for consideration by the Sailing and Race Committees in their ongoing drive for continuous improvement of race management. The points raised are not analysed any further or included as formal recommendations of this report.

4. Qualifications and Equipment

83. In addition to the three major incidents, the review has been requested to consider:
- certain pieces of equipment – helmets and boom brakes/preventers,
 - the relevance of current crew qualifications for Cat 1 races, and
 - risks of downwind sailing in strong conditions.
84. In interviewing crews, these items were raised where relevant and some opinions were obtained. Because of the breadth of the topics and potential diversity of views it was also decided to interview a broader mix of accomplished and well-credentialed sailors to gain their input.

4.1 Qualifications

85. When interviewed, the Race Committee representatives were asked about qualifications and experience required for the race. The initial response was fairly academic talking about relevant regulatory fairness, the fleet and race administration being hardened in offshore racing as well as relationships and understandings. When questioned more directly on the possibility of diminishing levels of experience the Race Committee had no concerns.
86. The Race Committee representatives saw no need to tighten any rules or checks but did agree there might be a need to review the wording and requirements for crews to gain their qualifying experience sailing together and clarify the requirement for the PIC for the race to qualify with the crew. They also responded to a number of specific questions regarding qualifications and training.
87. For a boat to be eligible to compete in a RSHYR there is a long list of requirements in the ASSR and NoR that have to be met. Both lists (ASSR and NoR) have to be met by each competitor. The NoR provides several additions to the Special Regulations. These combined requirements are stringently enforced by the CYCA. All boats require an audited Cat 1 Safety Check within six months of the start and are spot checked before the race. There is an extensive list of documentation that needs to be provided by each boat as proof of certification and registration of designated pieces of equipment and verification of qualifications.

88. The NoR lists the requirements for a qualifying race or ocean passage as well as crew qualifications. The qualifying race or ocean passage only needs to be met by the ‘boat’. “A **boat** shall after 26 Jun 2024 have undertaken either:” one of a list of races or “with the prior written approval of the Race Committee, a non-stop ocean passage of not less than 150 nautical miles and a duration of not less than 24 hours” with a list of administrative and safety requirements that must be met. The NoR does not specify that the PIC for the race or a percentage of the race crew members are to participate in the qualifying race or passage.
89. The ASSR does not mention a qualifying race or passage per se but does list a requirement for half the crew (Cats 1 & 2) to have experience in the “same category of race or an equivalent passage”. This requirement does not specify any need for the race crew to sail together or include a time expiry limit for completing the qualifying race or passage. The special regulations do, however, state the “PIC and/or Skipper” must be included which in itself probably needs some clarification as ‘Skipper’ is not defined in the regulations but is generally accepted as being the ‘PIC’
90. The NoR further requires for fully crewed boats:
- a minimum crew of 5,
 - a minimum age for all crew of 18,
 - at least 50% of crew have completed a Cat 1 or higher race or a deemed equivalent,
 - at least 50% have completed the SSSC (with a recommendation that all crew complete the SSSC),
 - at least 2 crew hold a listed first-aid qualifications, and
 - at least two crew hold a designated radio operators certificate.

4.2 Equipment

91. Following the interviews with crews, the Review Committee has decided to include some additional pieces of equipment and the broader topic of communications to those listed in the ToR for consideration. These are listed here and expanded upon later in this section:
- AIS MOB beacons,
 - Harness Release Systems on safety harnesses/flotation devices, plus
 - Communications.

4.2.1 Helmets

92. Immediately following the incidents in the race there was considerable media speculation regarding the need for crews to wear helmets because initially both fatalities were thought, by the general public, to be due to a boom strike to the head.
93. In addition, there had been recent media exposure to the 37th America’s Cup, from August to October 2024, and the SailGP world series where crews have specialised sailing equipment that includes helmets, incorporating an integrated communications system. The unique vessels used in these events are extreme in their design and capable of very high speeds while foiling. Both classes have recorded speeds at above 55 knots (over 100 km/h) and can nosedive and virtually stop dead in the water or capsize. As such the crew may be thrown around and are susceptible to high impact injuries on various parts of the boat. These boats have either a loose

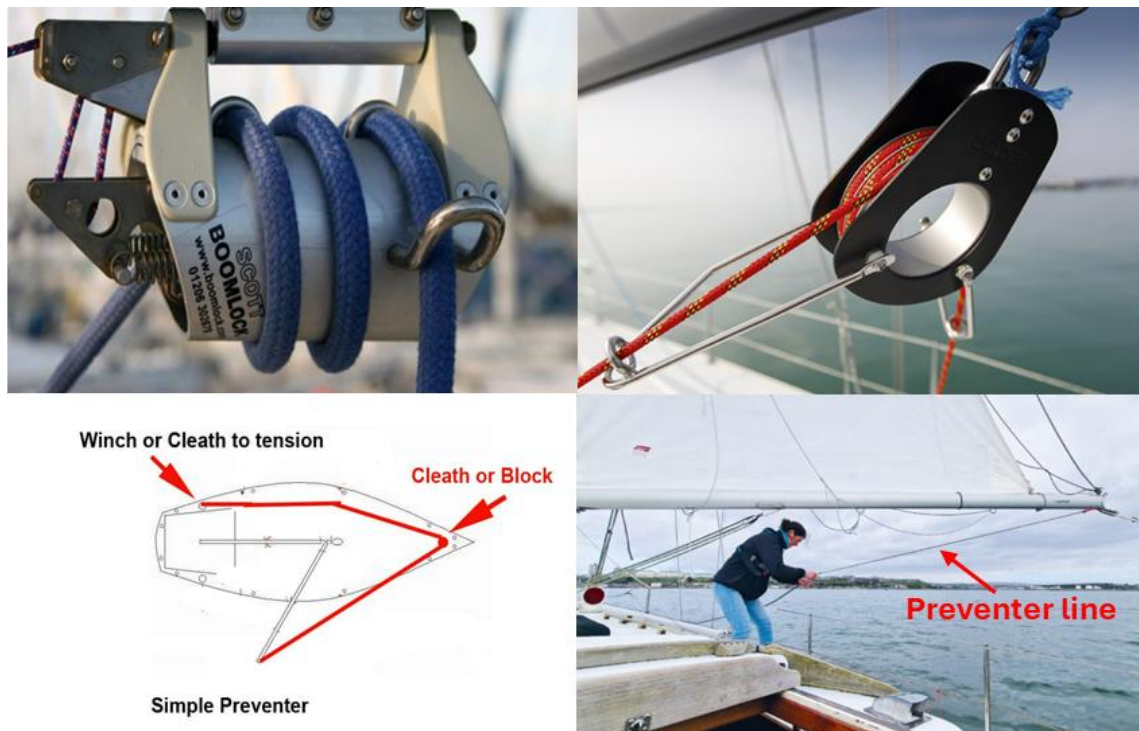
footed mainsail or a modular wingsail without a boom and there is little risk of a boom strike to the head. The races are also of short duration – typically America’s Cup 25 minutes and SailGP 15 minutes – within a narrow band of wind and weather conditions.

94. By comparison offshore racing is very different. The large boats may exceed 30 knots (55km/h) but generally for these larger boats high 20 knots is considered fast sailing – roughly half the speed of the extreme foiling boats. Offshore races may also last for several days, experiencing a full spectrum of weather conditions from hot to cold, wet to dry, calm to gales and everything in-between. Therefore, crew have to wear comfortable gear that may be adapted for this range of conditions and is practical in allowing communications onboard and the crew to do their job on the boat.
95. The Review Committee asked most people interviewed about their opinion regarding helmets. Many boats already carry at least one helmet, primarily for specific tasks such as being required to go up the mast or work on the foredeck in rough conditions. Several boats also spoke of the need to wear a helmet below deck in the bow in rough conditions with a lot of movement and a large, cavernous space forward of the mast.

4.2.2 Boom Brakes/Preventers

96. Boom brakes and preventers are means of limiting the booms ability to swing unexpectedly across the boat, possibly, due to an unplanned gybe. The preventer is the simplest form with various setups. Typically, it consists of a rope that is secured to the end of or along the boom and led outboard of the standing rigging to a point as far forward and outboard on deck as possible where it is secured or led aft to a point where it can be secured and adjusted. The aim being to position the boom in a rigid position with the strain on the preventer balanced against the mainsheet.
97. The boom brake is a more sophisticated device that is set up underneath the boom normally just aft of the vang fitting on the boom and leading to either side of the boat near the mainstay chainplates and run aft to the cockpit where it can be secured and adjusted. The brake control line is either passed through a carabiner arrangement or turned around a drum where the friction creates a braking effect and slows down the boom’s movement. The boom brake can take the place of a boom vang and does require special rope that has a bit of ‘stretch’.
98. Boom brakes can offer some initial slowing of the unintentional boom movement thus providing some warning time before an impending ‘crash gybe’. There are practical size limitations of the size of mainsail that can be controlled. Adequate braking effect can be difficult to achieve with the size of the booms in mid-sized to large yachts with the associated forces. Both devices, preventers and boom brakes, can provide a pause on the point of an unplanned gybe that may be caught in moderate conditions to prevent the gybe. In any event the boom brake is designed to slow the boom’s motion and make an unplanned gybe less dangerous. Both restraining systems can be used in a variety of wind conditions and situations from holding the boom in position in very light winds and sloppy seas to preventing the boom freely crossing the boat in strong winds and large seas (a ‘crash gybe’).

99. Many sailors consider brakes and preventers 'old school' relics, associated with International Offshore Rule (IOR) boats carrying symmetrical spinnakers that used to sail very deep¹⁶ - close to directly downwind and with a higher risk of gybing. Alternatively, they have a place on cruising boats sailing short handed or possibly to assist an inexperienced crew onboard. There is less need for a boom brake or preventer on a modern design racing yacht with a bowsprit, setting asymmetric spinnakers and sailing different angles to the wind, notionally less prone to a 'crash gybe'.



Top – Boom brakes are friction-based mechanical devices affixed to the boom and controlled by a line while,

Bottom – Preventers typically comprise a line rigged at the end of the boom and led forward.

100. In any event, neither device will prevent a 'crash gybe' but the consequences of a 'crash gybe' with a preventer introduces an additional danger point in that it will contribute to pinning the boat down and increasing the difficulty of righting the boat. Preventers also have a reputation for creating significant gear damage because of the extreme forces involved and the shock loads that can occur making many sailors wary of using them in hard running conditions.
101. Those cautious of using brakes and, in particular, preventers are also concerned that it can provide a helmsperson with a false sense of security and control that encourages them to sail deeper and more dangerously. There are many variables in maintaining control when running in hard conditions - the seas, the wind, the motion of the boat and its shifting stability. All are changing constantly and can cause a boat to pass the point of no return ending up in a 'crash gybe' if sufficient safety margin is not allowed with or without a boom brake or preventer.

¹⁶ Deep: referring to the True Wind Angle (TWA). The point of gybing is when the TWA is 180° - sailing deep is sailing close to the TWA of 180°

4.2.3 AIS MOB Beacons

102. If a crew member falls overboard, the best chance of rescue is most likely to be by the boat from which they fell overboard. In any MOB situation the most important thing to know is: where is the person in the water. The more difficult the conditions the harder this can be. The *Porco Rosso* incident was about as difficult as you can get – dark night, gale force winds, large chaotic seas and the crew taking some time to regain control of the boat after a ‘crash gybe’. In these challenging circumstances the AIS MOB Beacon provided the vital link for the boat to zero in on the man in the water – a simple direct link between Luke (the beacon) and the boat (the receiver) – not dependent on any other human input or system interface.
103. A PLB is a valuable back stop or, if there is no crew left on the boat, it is the only means of making the position of the person overboard known. However, the PLB relies on outside parties. Initially the International Search and Rescue Satellite System has to receive and recognise the beacon and pass the details to AMSA as the Joint Rescue Coordination Centre (JRCC) that will initiate the Search and Rescue Operation. The searchers will be provided with a position to centre the start of a search that might incorporate an ability to home on to the beacon. A sophisticated system but dependent on several interfaces - not as comforting as the direct link provided by the AIS Beacon and the boat.
104. There are different navigation systems on which the position of the MOB beacon, once triggered, can be displayed. Crews need to confirm their AIS MOB beacons are compatible with the navigation system and the AIS transponder used on the boat and how the range and bearing of the beacon is displayed to the crew on the boat. This is a vital aspect of the man overboard recovery drills recommended at reasonable intervals by the ASSR (6.01.3) and mandated at least annually by the OSR (6.04). The AIS beacon is of no use unless members of the crew can recognise, interpret and communicate to those on deck the range and bearing of the AIS MOB beacon.

4.2.4 Harness Release Systems

105. When weather conditions warrant, the use of tethers is encouraged and if a crew member does end up in the water, staying connected to the boat is generally safer than being unattached. However, in the event of a crew member going overboard, the crew member can be dragged or trapped alongside or behind the boat. The option to quickly release a safety line can be lifesaving in these situations, as it was for Luke Watkins. This eventuality is recognised in the ASSR by a reminder that “a personal knife or tether cutter may free crew from a safety line in an emergency”. However, as knives can often be inaccessible and hard to use in such situations and clips can be difficult to release when under heavy strain, a HRS has been developed by one manufacturer, to provide a safe and easy way to release the tether from the wearer whilst under load.
106. Although, while the HRS is simple to use and understand, the system may not be suited to every situation. The manufacturer recommends the HRS is more suited to situations where the lifejacket harness is personalised for use by one individual. It is not intended for mass commercial use where the lifejacket’s role is more basic and fundamental. It is envisaged that an individual would need to become familiar with their lifejacket and understand the HRS technology and its activation in an emergency in the more specific situations that are part of ocean racing. Luke Watkins was the Boat Captain onboard *Porco Rosso* and expert in all the boat’s safety equipment – it helped to save his life.

4.2.5 Communications

107. Generally, the transfer to satellite phone as the primary means of race communications proceeded well. The noted effective points were clear communications, dial-up accessibility, simplified procedures for the position report skeds and a prompt means of resolving inadvertent PLB activations. Good clear dial up communications greatly assisted resolving the initial MOB situation with *Porco Rosso*. However, two points have emerged from the interviews with crews regarding communications. They are:
- the ability of the simplest satellite phone configurations, that meet the ASSR requirements, to maintain a continuous communications link “for the duration of the race” (NoR 7.3(b)) or receive data at a rate sufficient to make it practical, and
 - the arrangements necessary to control a number of VHF users when dealing with an emergency situation.
108. The Special Regulations (ASSR 3.25.1(a)(ii)) specify “a satellite phone, incorporating voice and SMS¹⁷ capability, retained in a securely fastened mounting, connected to the vessel’s electrical supply, equipped with a permanently located external aerial, and continuous coverage for the race area.” Additionally the NoR (7.3(b)) requires that a boat shall “have access to email and WhatsApp for the duration of the race.” Furthermore the SIs (30.3) requires “A boat’s satphone shall be switched on such that it can receive voice and data for the duration of her race.” These instructions introduce a need for the satellite phone to be able to handle data but the definition of how much data or the minimum download or upload speeds required is not provided.
109. Some boats meet these requirements through the use of low bandwidth phones, which are devices that convert a smart phone into a satellite phone and has been accepted by the Race Committee as meeting the Race requirements. On a small boat the permanent aerial can move about a great deal and in rough conditions some crew felt it became a challenge to hold track with the satellite. This leads to the connection with the satellite system being lost and requiring it to be reinitiated. Given that low bandwidth phones are designed to only provide low rate of transfer of data, such as SMS, crews found the rate of receiving emails and any large messages at times slow – ‘watching the message come through word by word’.
110. Crews reported that the situation was better with systems that had a higher bandwidth such as Starlink and Inmarsat Fleet One, which requires a different aerial and contract. Iridium Go has a maximum speed of 2.4 kilobits per second (Kbps) and is only considered suitable for basic tasks like voice, email and short messages but not for general web browsing or streaming. Iridium Go! Exec has upload speeds of 22 Kbps and 88 Kbps download. Starlink typically provides download speeds of between 25-220 Mega bits per second (Mbps) with the majority of users experiencing download speeds of 100 Mbps and upload speeds of 5-20Mbps. Of note 1Mbps = 1000Kbps making the bandwidth speed difference between Iridium Go and Starlink very significant.
111. This means that boats that are relying on low bandwidth phones may only receive email and data in limited conditions or when within 4G telephone coverage. In other circumstances crews said they were not be able to receive the CSV file with all boat positions following the position sked and the accompanying weather reports from the BOM. Theoretically these small sized files (typically between 3 - 15 Kilo bits) should be able to be received but in practice

¹⁷ SMS Short Message Service

crews said that problems emerged and at best the communications was ‘clunky - restricted in performance and use’. The latter forecasts appear to be the only weather service provided by race administration after the pre-race briefings.

112. A review of the Race Operations Centre logs reveal many examples when boats could not be raised by satellite phone voice calls and messages had to be left. This could be for a multitude of reasons, however, it would be wrong to presume the sat phones, as the primary means of communication, provided continuous voice communications, on call, with all competitors for the duration of the race. While the resolution of inadvertent PLB activations were mainly dealt with promptly, two took nearly two hours to resolve.
113. The second issue involves VHF communications and was related to the boats attempting to assist *Flying Fish Arctos*. Many boats were trying to assist and VHF Channel 16 became jammed with traffic and therefore an ineffective means of communication. Fortunately, this breakdown in communications did not adversely impact the response to the incident but did reduce the potential of the additional support that could have been available.
114. What was needed was one boat to take control and the other boats to comply with the instructions provided. Ideally the controlling boat would not be the boat experiencing the incident as they are likely to be fully occupied in trying to stabilise the situation. Any boat close by with an experienced operator and a good VHF system with a high quality signal could be the controller¹⁸. The controller should shift all boats that wanted to assist from Channel 16 to a working channel. The circuit then needs to be very disciplined with boats communicating through the controller - long messages can only be passed when permitted by the controller. This is difficult to achieve and even more so in a real, high stressed environment.

4.2.6 Downwind Sailing

115. Downwind sailing in strong winds can be one of the most challenging points of sailing – especially in modern boats that are capable of very high speeds with equipment under significant load, requiring a lot of skill to handle the boat and set it up appropriately for the conditions. During the period under review, the challenge of sailing in strong to gale force winds was compounded by a chaotic sea and a pitch black night. Experienced helms described it as ‘very disorientating’. Digital compasses can also be confusing without the situational awareness provided to the helm by a traditional magnetic compass card. In these condition things can ‘go wrong’ very quickly and the consequences might be dire, leading to serious injury or major damage.
116. More control can be gained by slowing the boat down through reducing sail and careful selection of the course to ensure it is compatible with the direction of the waves and the ability to retain control. These decisions influence the boat’s competitiveness but most experienced sailors appreciate that you have ‘to finish to win the race’ and the need at times to ‘sail conservatively to preserve the boat’
117. Heavy downwind sailing is a point of sailing where experience is of great value. Not just in steering the boat but the way the boat is setup and balanced. The recognition of dangerous crew positions is important. The watch leader needs to be aware continuously of the risks and take precautions if a crew member is required to tend to something in a known dangerous

¹⁸ This was very ably demonstrated by Will Oxley the navigator onboard *Yendys* during the incident involving the loss of *Shockwave* in the Flinders Islet Yacht Race in 2009.

area. The conditions and challenges will vary a great deal among the oceans of the world and the various interactions with winds and weather systems as well as currents and topographical features on the ocean floor. The Sydney to Hobart course can, and does, produce conditions that will ‘test the best’.

118. Most sailors gain their knowledge of how to sail downwind from experience in the actual conditions with very few formal training opportunities. There are two sections on the SSSC that are specifically relevant concerning Heavy Weather and Storm Sails - a total of one hour instruction that will depend greatly on the composition of the class and experience of the instructor. It is a valuable start but the skills are slowly accrued depending upon the subsequent experience gained at sea and who is available as a mentor to teach the right lessons.
119. The downwind sailing risk onboard each boat is unique and of such significance that it deserves to be addressed as a separate ‘downwind sailing risk assessment’. This allows preparation of a management strategy for the boat in heavy downwind conditions. Several boats indicated they already addressed this. A possible downwind sailing management strategy/policy will need to include points such as; pre-planned sail configurations to keep the boat balanced and controllable without being over-powered at different wind speeds and sea states; identifying dangerous crew positions and how crew can avoid them; heightened awareness of dangerous rigging or pieces of the boat’s structure that need to be avoided.

5. Analysis and Findings - How can Safety be Improved?

5.1 General Assessment

120. The conditions at the start of the Race were close to ideal and the first afternoon provided an enjoyable and exciting sailing opportunity as the fleet proceeded down the coast. Nevertheless, as the wind strength increased and transitioned through this optimum racing experience many of those interviewed commented on the large number of boats having difficulty in maintaining control in these relatively good conditions, before the winds reached strong and gale force¹⁹ ²⁰. One experienced PIC offered, during interview, that they were surprised at the number of boats towards the back of the fleet that were rounding up or gybing – ‘wiping out’. Giving the matter more thought, the PIC offered that the broader context is a Race that caters for a variety of experiences. The PIC observed that some of the smaller, older design and relatively less performance oriented boats tend to be crewed by less experienced sailors. The PIC also noted that these boats are often the more difficult to sail.
121. All three major incidents were caused by an unintended ‘crash gybe’, the first *Flying Fish Arctos*, in strong wind conditions verging on gale force and the other two, *Bowline* and *Porco Rosso* in gale force winds. The sailing conditions were difficult with a chaotic sea created by the strong northerly winds and influenced by a cross swell and some current eddies. The night was pitch black with a thin crescent of moon not rising until about 0225 – it was overcast with no visual reference. Both fatalities are reported as being instantaneous. There was no opportunity to provide first aid or any lifesaving medical assistance. As such the regulated medical requirements were not fully tested.

¹⁹ strong winds - Average 10 minute wind strength 26 - 33 knots

²⁰ gale force winds - Average 10 minute wind strength 34 - 47 knots

122. ‘Crash gybes’ are a part of sailing - rarely, if ever, planned and fortunately quite infrequent – they are generally involuntary and can be violent. The harder the wind blows and the rougher the sea conditions, the higher the chance that such a manoeuvre might lead to an injury to the crew or major damage to equipment. The risk of a ‘crash gybe’ can be mitigated by sailing a different course or reducing sail or a combination of both but this is not always compatible with competitive racing. The consequences can also be reduced by carefully assessing dangerous positions on the boat in the conditions being experienced and keeping the crew outside them.
123. A balance has to be struck by the crew along with all the other decisions associated with offshore sailing. The balance can be very fine with conditions and external influences that can change in an instant. It is not surprising in the conditions experienced on the first night at sea in Australia’s premier ocean race that a number of boats (many more than the three that are the focus of this report) did a ‘crash gybe’, broached²¹ or wiped-out.
124. The Review Committee noted a common factor that all three incidents being reviewed took place around the change of watch or preparing for the change of watch, illustrating the risk vulnerability at this time despite a number of measures used to reduce the risk. All three boats had some form of staggered crew change between the handover of helmsmen and other members of the watch so that, at all times, there would be somebody on deck who was acclimatised to the actual conditions being experienced.
125. The question that needs an answer is: How can ‘crash gybes’ be prevented? There is a simple answer ‘Don’t sail too low²²’, but it is not that straight forward.

5.2 Race Committee and Administration

126. The race administration is well setup. The RSHYR is a big event with many moving parts - a 104 boats in this year’s race with crews totalling about 1,000 people. The entry requirements are stringently checked, involving a long list of documentary evidence: verifications, declarations, certificates, registrations, disclaimers and acknowledgements of rights. This requirement reflects a number of hard lessons learnt over the race’s history and is more onerous than other international offshore races such as the Fastnet Race in the UK, albeit a Category 2²³ event, which permits a high degree of self-assessment by the PIC or entrant. The RSHYR entry process creates a frustration for many competitors who consider it repetitive throughout the season and lacks currently available practices of automation and monitoring.
127. The Review Committee is not suggesting that the standard should be lowered but believes there is room for more automation starting with a simple on-line accessible electronic checklist that indicates for each boat what requirements have been met for race entry and those which are outstanding.

²¹ broached - when a boat running before the sea, slews round inadvertently, losing steerage control and ending broadside-on in the trough of a wave.

²² ‘too low’ This is referring to the True Wind Angle (TWA). When the TWA is zero (0°) the boat is heading into the wind. When the TWA is 180° the boats sailing directly downwind with the wind right astern - the point of gybing. The closer you get to a TWA of 180° the lower you are sailing.

²³ Category 2: Offshore races of extended duration along or not far removed from shorelines or in large unprotected bays or lakes, where a high degree of self-sufficiency is required of the yachts. (ASSR 2.01.3)

128. When this concern was discussed with the CYCA Vice Commodore and management, the Review Committee was advised that in December 2024 the CYCA Board has approved the development of an improved Information Technology system for race entry. Recent efforts for improvement of race administration have been expended on the race tracker system which has been refined considerably and is now very well accepted and helpful to anybody with an interest in the race. In recent years the Royal Ocean Racing Club (RORC) has updated its race entry process to produce SailraceHQ²⁴.
129. The Review Committee noted that the CYCA has recognised the need for greater automation in the race entry process and has committed to a project to improve the existing system without compromising any of the safety requirements. The committee considers the CYCA Board decision to be much needed and should be pursued as a matter of urgency. Based on the interviews there was a clear depth of feeling that was not challenging the level of qualifications and standards but the process of entry which was leading to 'entry anxiety' and competitor frustration.
130. The race administration structure incorporates a large number of external agencies each with an important role to play. The structure has evolved over recent years and is in a mature state that functions well. It was truly tested on the first night of the 2024 RSHYR (as were the crews at sea) and met the challenge very well. The self-assessment provided by the Race Chairman was strongly supported by David Jacobs, the Acting Commodore at the time and Chairman of the CYCA's Sailing Committee. This was further confirmed by the boat crews interviewed with no suggestion of complaint. Matters appear to have been dealt with promptly by the most appropriate agency and those who needed to be kept informed were informed in a timely manner. The Review Committee is not suggesting any need to modify the race administration or management structure.
131. The Review Committee was advised of two issues associated with the *Bowline* incident that could require adjustment to the notification protocols and a need to provide some extra assistance to crews involved in these high stress situations. The first concerned a premature release that identified *Bowline* as a boat that had been involved in a fatal accident. An announcement was made in the 6.00am news that there had been two deaths and identified the two boats. This was done two hours before *Bowline's* crew could make contact with their families and thereby caused severe additional angst for the family members – not only the shock of the death but they did not know who onboard had died. The Review Committee considers the protocols should be reviewed with the NSW Police in an attempt to ensure the families of the crew have been informed before any public release of names of boats or victims is made whenever possible.
132. Associated with this same event *Bowline's* crew complained that they were hounded by the media and it 'stretched' them at an extremely stressful time. The NSW Police at both Bateman's Bay and Eden provided excellent support and tried to shield the crew from the media but were not able to do so completely. The crew would have appreciated more support. The Review Committee considers, if feasible and time permits, more support, such as a mobile media savvy club representative, should be made available to assist in such circumstances.

²⁴ Following a three-year study and build programme, SailRaceHQ is a totally new system that has many advantages and user-friendly features - simpler entry process; online completion of OSR checklists; online declarations; ability to load a profile of you and your yacht; online record of miles sailed; real time race results; automated notifications of outstanding requirements; updated payment system; crew Match section; race documents all in one location

5.3 Weather

133. From all reports received by the Review Committee, the weather experienced by boats at sea matched the race forecast provided by the BOM that concentrated on the very important elements of wind strength and direction. The incidents occurred early in the race, less than 20 hours after a detailed forecast was given to all competing boats, that proved to be accurate.
134. The underlying hazards in the weather conditions experienced were the chaotic nature of the sea with a cross wave influence on the predominant seas that were building from the strong to gale force prevailing winds plus the darkness of the evening with a late moonrise of an old moon on an overcast night.
135. These hazards preceded the west-south-westerly change that came through later in the morning. They should not have been a surprise to competitors and were predictable from the publicly available data. The hazards produced very challenging sailing conditions and were incorporated into the forecast issued by the BOM namely “gale warning with rising seas and a significant wave height of 3.5 metres”. No mention was made at the briefings of the total darkness with just a little bit of old moon rising 2.5 hours before morning twilight, data that is nonetheless freely available in the public domain.

5.4 Flying Fish Arctos

136. The information provided to the Review Committee is not complete and there has been no input to the Review Committee from those in charge of the boat at the time. From the single report from an experienced sailor, it would appear that *Flying Fish Arctos* was well prepared and setup for its relatively unique situation of conducting a commercial sail training adventure within the race. The boat appeared to be sailing in a seamanlike manner noting the conditions and crew limitations.
137. For an unknown reason the boat ‘crash gybed’ during a fairly routine sail adjustment albeit in strong wind conditions and difficult seas. One crew member was caught in the wrong place at the wrong time with catastrophic results. The crew were sailing defensively and trying to set the boat up comfortably for the coming change of watch. Roy Quaden is believed to have been killed instantly and even though there was very experienced first aid available on board, there was nothing that could be done to save his life.
138. The Review Committee did interview crew members from *Oroton Drumfire* and *Wings* who stood by to provide assistance. This information supported the general appreciation of the situation and how quickly the wind built in the afternoon. The conditions were described as ‘boisterous but manageable’, ‘the sea was mixed but not overly dangerous - needed a solid approach and focus’. Communications with *Flying Fish Arctos* indicated an expected level of alarm but there is insufficient information as to what happened onboard *Flying Fish Arctos* to reach any findings with respect to the accident other than Roy Quaden appeared to be struck by the boom when the boat did a ‘crash gybe’.

5.5 Bowline

139. *Bowline’s* incident was also a result of a ‘crash gybe’ and Nick Smith being in a very vulnerable position. He was caught in the bight of the mainsheet and thrown onto the mainsheet winch on the port side. Nick was not struck by the boom. Good quality first-aid

was immediately available onboard however, it became immediately apparent that there was nothing that could be done to save Nick.

140. The crew was experienced and had sailed together a lot; many of them were sailing their third Hobart race together in addition to the long delivery voyages from Adelaide to Sydney each time. The crew were well experienced in rougher conditions than that first night and had a lot of heavy downwind sailing experience. On the delivery trip from Adelaide for this race they had experienced big seas and hard running from Eden to Sydney which provided a good training opportunity. The crew had completed three Haystack Races in South Australia where the last leg from Kangaroo Island to Adelaide is typically a hard spinnaker run in quite heavy weather. The owner noted that he 'had sailed in much windier conditions but could not recall a more chaotic sea'. The crew felt that the boat was being sailed with a conservative amount of sail in the conditions. The crew had experienced much windier conditions but had not recently encountered such chaotic sea conditions.
141. The Review Committee notes that the crew comfortably exceeded the qualifying requirements for the race and the individual crew qualifications. Based on the information provided in the crew interviews, the committee does not envisage that there are any changes to the ASSR or NoR requirements to improve safety that might have prevented the accident. It appears that the incident was not caused by a lack of individual qualifications among the crew or their lack of collective experience as a crew.
142. Shortly before the incident *Bowline* gybed from the starboard to the port tack and was just settling on the boat's new course at the time of the fatal 'crash gybe'. Interviews with other crews indicated that the wind was backing in direction towards the north west and passed through north about midnight. This placed the wind waves more on the quarter when on the port tack and made it more difficult to steer the boat in these challenging conditions.
143. The incident did reveal that the sat phone and charging station installed in the aft cabin would have been better installed in a more central place like the nav station. They were unable to charge the phone when they were using it at the boat's navigation station, which made it difficult to maintain the necessary level of charge during the critical high use period. This is a problem peculiar to the boat but stresses the importance of positioning the satellite communication system and its charging facility in a convenient place on a boat.
144. The owner was aware of boom brakes and preventers, with particular experience with the latter. However, having made the necessary enquiries, the owner was unable to source a suitable boom brake for this type of boat.
145. The support provided to the crew while at sea was good and the Police at Batemans Bay and Eden were very helpful and attempted to shield the crew from the media. However, the media was unrelenting and 'stretched' the crew at this vulnerable time.

5.6 Porco Rosso

146. At the time of the incident *Porco Rosso* was on starboard tack being sailed hard by a competitive and experienced crew. The boat was well prepared for the race and had in place a well-planned watch system. The crew considered that although they were racing hard in challenging sailing conditions, the conditions were not considered extreme. However, the MOB incident occurred when in the darkness, the boat was caught by a side wave that swept

the helmsman from the wheel and the boat ‘crash’ gybed. The impact of the gybe was made worse because the canting keel was canted 80% to starboard pinning the boat down on its starboard side with the gunwale below the water. Immediately prior to the crash gybe and the MOB incident, Luke Watkins was sitting on the starboard side.

147. Luke was extremely fortunate, because a number of factors lined up in his favour:

- Luke was personally well trained, knew his equipment and what to do with it – he remained calm and did not panic.
- The owner had provided the boat with high quality safety equipment and in particular a good quality lifejacket with a personal AIS beacon backed up with a PLB.
- His lifejacket was fitted with a harness release system which Luke was able to activate when in an awkward position and in extreme personal danger. Luke doubted whether he would have had the strength to release a conventional tether hook or the time to access and use a harness cutter such as a knife.
- His lifejacket automatically inflated and provided him with buoyancy at a critical moment to pull him clear of the lifelines.
- He had replaced his lifejacket with the spare vest when his own vest had inadvertently inflated when on deck during the previous watch.
- His crew mates were able to rapidly sort *Porco Rosso* out following the crash gybe and return quickly to recover Luke using the aids available to them to locate him in the water. They displayed good seamanship and boat handling to recover Luke back onboard.
- Good clear communications on the satellite phone with Race Control allowed the initial confusion regarding a MOB to be quickly resolved with Luke being identified as the person overboard and separated from the boat.

148. A failure of any one of these multiple steps could have led to a much worse outcome. Possibly the two most critical steps to saving Luke’s life were the harness release system that allowed him to free himself from the boat and not be drowned plus the AIS MOB beacon to guide the boat back to his actual position in the water.

149. The crew identified some valuable lessons from their experience:

- They should have persevered with ‘numbering off’ immediately after the gybe. The practice could have been better rehearsed leading up to the start of the race. Luminous numbers on the back or arms of foul weather gear could be used to assist the process.
- The importance of AMSA being able to identify and provide the name of the person whose PLB had been activated.
- Obtaining the range and bearing of Luke’s AIS beacon relied on a fairly crude technique that was sufficient in the circumstances but lacked accuracy. A better interface between the beacon and the boat’s navigation system or AIS receiver requires investigation. This is likely to be different between navigation systems, AIS transponders and brands of beacons that are available but it is vital for every boat to understand how the range and bearing back to the person in the water will be made available and displayed in its most convenient form.
- Use of the dagger board may have helped control the bow in the final stages of approaching Luke in the water.

- Following the gybe the most important thing to do was to right the keel. This was difficult given the situation on deck and there may be benefit in having a control switch below deck that could be used in such circumstances. This would require a clear set of well-considered protocols on when and how this control would be used.
- The deck jackstays might be better positioned closer to the centreline of the boat – moved inboard from the gunwales. Short tethers should be used whenever possible.
- Some reflective tape or strands should be incorporated in the MOB throw line so that it can be easily seen at night when illuminated by a torch.
- The throw line used was a new replacement and extended from 15 m to 20m in length – 5m longer than the line it replaced. During the recovery 20m was only just long enough for Luke to reach.
- The importance of being aware of the possibility and symptoms of hypothermia and addressing it promptly.
- Luke only saw the boat's port navigation light when it was very close to him – 'almost on top of me'. A crew might consider switching on the combined masthead lantern or a masthead light to provide some indication of the boat's presence to the person in the water. This could be a source of tremendous comfort to the victim. A white flashing masthead light would be ideal.
- The personal 'Exposure' torches were sufficient for the crew to provide the light that they needed.
- Internal communications onboard were made difficult with the noise created by the weather, flogging sails and the engine running constantly. Messages had to be passed using a crew as relay which was challenging and could be improved by a point to point communication between the helm and the nav station.
- There was a high level of inadvertent activations of lifejackets in the fleet that should be reviewed to consider if there is a requirement to carry more than one spare and/or more than one re-arming kit that are currently required by the ASSR.
- The satellite phone communications were clear and reliable.

150. The Review Committee notes, with the exception of double handers, the ASSR only **"recommends** an AIS personal crew overboard beacon capable of communicating their position to their yacht and other nearby vessels be carried by or attached to each member of the crew when on deck" for Cat 1, 2 and night sailing races. Observing the vital role the AIS beacon played in the recovery of Luke Watkins the Review Committee considers AIS beacons **'should'** be carried and the requirement mandated along with a PLB, noting that a combined unit is available.
151. Similarly, the Review Committee considers that the harness release system was a lifesaver for Luke and in modern offshore racing with the high speeds involved, there are many circumstances where it could be called upon. The committee acknowledges the value of the HRS in some circumstances but not all and the need to guard against a possible inadvertent release in an emergency. Its availability should be widely promulgated but the decision to use one left with the individual crew member, taking into account the peculiarities of their situation and the boat that they are sailing.

152. The Review Committee considers all the lessons identified by the crew of *Porco Rosso* are valuable and should be reviewed for inclusion as appropriate in race documentation and SSSC training.

6. Qualifications and Equipment

6.1 Qualifications

153. The Review Committee notes that the boats involved in the three major incidents met or exceeded all the documented requirements for the race. The race requirements align closely with those set by World Sailing and address the minimum standards required for boats and crew to participate in the Race. The eligibility requirements are designed to be balanced against the ability to attract entries to participate and at the same time encourage people to participate in the sport. It is not practicable nor indeed the intention for sailing events such as the RSHYR to stipulate that only a fleet full of highly experienced experts can enter, as might be the case in very high performance events such as the America's Cup or GPSailing. These specialised events have a small core of professional sailors, big budgets, a heavy level of sponsorship and extensive professional support teams. In local and club offshore racing there is always going to be a mix of competencies and experience levels that are needed for the sport to grow or just provide a platform for sailors to compete.
154. The unknown 'X' factor is experience, which is not easily measured. The number of races sailed by a competitor of a certain Category is a good indicator but each race is different, providing a different learning experience. The gaining of experience is extremely important for the sport as it helps introduce a degree of caution based on experience – often obtained from challenging incidents awakening an awareness of what could go wrong. Experience does not dictate that a person is the most skilled sailor onboard but clearly helps in honing personal skills and recognising potential dangers. It is the wise head on experienced shoulders who reminds us that 'to win the race you have to finish first'.
155. In this type of model, the Review Committee considers the eligibility requirements for the Race are appropriate. Based on the information available, the lack of specified qualifications on the boats involved in the three incidents is not considered to be a causal factor. Furthermore, the required qualifications or levels of experience are not considered deficient, as an entry point, considering the broader requirements of the sport and its need to grow. Of note it was the level of skill, training and experience that contributed to the successful recovery of Luke Watkins.
156. Lengthening the qualifying race or passage by a 100 or 200 miles or increasing the percentage of the crew who had sailed a Cat 1 race or higher by 10%, is unlikely to make a material difference to the combined experience on the boat. The existing requirements comfortably exceed those necessary to prevent a boat full of novices starting in the race. However, the requirement that only the boat needs to be qualified and not with a percentage of crew onboard when the boat qualifies was the subject of much discussion during the interviews.
157. More experience onboard is an advantage but it is a slowly gained attribute. There will always be mixed levels of experience across the fleet in a major event such as the RSHYR. From the interviews conducted there are indications that experience levels could be enhanced through more education and training or more specific education and training as technology changes and the characteristics of certain boats change. This was found to be the case after the 1998

Sydney to Hobart Race and the need to concentrate on 'Heavy Air Sailing'. The Review Committee considers the current levels of experience could be boosted and enhanced through more education and training - a forum or series of discussions on selected subjects could assist in the gaining of experience.

158. The SSSC comprises 15 sessions, mainly covering safety equipment, its use and survival techniques. It could be expanded to include 'Heavy Weather Downwind Sailing' but it is already a very compressed course which may not be able to accommodate another stream concentrating on heavy weather sailing techniques. Separately and outside of this review's ToR, it might also be a suitable time to review the SSSC content. This suggestion is based on comments received by the committee throughout the interviews conducted.
159. As an alternative to an additional module in the SSSC a separate expert forum focused on 'Heavy Weather Downwind Sailing' could be developed in parallel to the SSSC. This might involve an expert panel sourced from the CYCA membership with its extraordinary depth of offshore experience and the invitation extended to race participants. The forum could be interactive and a better medium for the subject than a classroom with a single instructor.
160. There could be a lead role for the CYCA to initiate this forum or develop an expanded race-orientated education and training effort, possibly endorsed by Australian Sailing and further disseminated among other offshore sailors, similar to the offerings of organising committees of other international races. Such a program could be an important contribution of the CYCA's recently announced Offshore Sailing Academy. Historical and contemporary teaching is often focused on either seamanship or performance aspects but the two are not exclusive. Opportunity might exist to treat both in context of a major ocean race. Shared real-life experiences and experiential learning opportunities in a structured and formal manner as part of the overall race program that more specifically would help further the understanding of the risks and consequences of 'crash gybes'.

6.1.1 Changes to Race Documentation

161. Separately, the Review Committee does consider that some changes are necessary to the documentation specifying the Qualifying Race or Ocean Passage. The concern, held by the Review Committee, is that the requirement for a Qualifying Race or Ocean Passage (NoR 3.4) adds little value as written, in that it does not link the boat with the crew. It would be possible for a boat to have an entirely different crew to complete the qualifying race or ocean passage from the crew which participates in the RSHYR (as long as the race crew can meet the stipulated individual requirements at paragraph 90). For fully crewed boats, there is no current requirement for a race crew member to do the qualifying race or passage.
162. Furthermore, for fully crewed boats none of the crew that start in the Race need to have ever sailed together before. Although such a situation is highly unlikely and was not found to exist in the limited interviews conducted, it is permitted. The only requirement is that 50% of the crew must have completed a Category 1 or higher race and as directed in the ASSR, the PIC must be included in that 50% who have completed Category 1 races.
163. There is a clear benefit for a team to sail together before a race like the RSHYR. The Rolex Fastnet Race NoR addresses the issue of qualifying a crew and boat in a fairly simple statement that:
 - lists the percentage of crew required to comply,

- includes the PIC,
- states the qualifying requirement,
- specifies that the qualification must be completed on the boat entered into the race, and
- specifies a time limitation.

“at least 50% of the boat’s crew (but not less than 2), **including the person in charge**, must have completed 300 nautical miles of RORC offshore racing **on the boat entered into the race**. The qualifying miles to be completed within 12 months of the start of the Rolex Fastnet Race” (emphasis added)²⁵

164. The Review Committee considers the 50% requirement for fully crewed boats, including the PIC, to complete the qualifying race or passage, in the boat entered in the race, is a sensible benchmark that should be set while giving the Race Committee a discretion upon application to determine special exemptions. However, a Fastnet type crew stipulation would make it more difficult for boats to comply and possibly without a more sophisticated entry system, more difficult for the Race Committee to confirm compliance. The Review Committee has found that many entrants do meet the 50% compliance benchmark as a natural part of the sport to attempt to build a cohesive team as a crew for both safety and competitive reasons.

6.2 Equipment

6.2.1 Helmets

165. Several companies, Zhik, WIP and Mystic for example, produce a helmet for marine use, that is mainly targeted at surf and board sports as well as sailing in high performance dinghies and multi-hulls along with junior introductory sailing. These helmets are lightweight and designed to get wet while remaining comfortable to wear. There is no scientific data on deformation force or protection from blunt force trauma for these helmets.
166. Of those who use helmets offshore, most crew interviewed by the Review Committee preferred the specialised marine helmets or the lightweight mountaineering type. The aim being to protect the crewman who may fall or be forced into contact with the rig and are not commonly used as protection against a possible boom strike in an uncontrolled ‘crash gybe’. Even though some boats advised they had helmets onboard none of the crews interviewed mentioned that the helmets were used on the first night of the 2024 RSHYR. The helmets had not been carried to protect crew from a boom strike.
167. A number of the crew interviewed acknowledged the risk of a boom strike and its possible consequences, but none stated a preference to wear a helmet as protection. While acknowledging the risk they would prefer to deal with it differently – avoiding ‘crash gybes’ and dangerous positions on the boat in certain conditions – being risk aware. The crews felt that it was very important to ‘feel the weather’ especially when helming or trimming and to be able to communicate with other crew members, which wearing a helmet would impede. In offshore yacht racing as in any situation, helmets can change aural, feel and sight perception. When conducting a difficult manoeuvre, several crew members mentioned removing their headgear so they could hear instructions or responses from crew and feel the weather.

²⁵ Notice of Race 6.1.1 2025 Rolex Fastnet Race

168. Large motorcycle type helmets that may provide some protection in the event of a boom strike would be impractical to wear for an extended period on an ocean racing yacht over many hours or days.
169. The Review Committee received the benefit of advice from Associate Professor Dave Austin²⁶. As well as a medical expert he was a competitor in the 2024 RSHYR. He is an experienced yachtsman and offshore regulator, who has worked closely with Australian Sailing and Yachting NZ. Associate Professor Austin undertook to do some investigative work into the use of helmets and carried out some analysis with Steve Wilson, a co-founder of ‘Southern Spars’.
170. This analysis indicated that in a ‘crash gybe’ in strong wind conditions (this is at wind speeds of 26 knots or more) a boom strike in the aft part of the cockpit could generate the following impact forces (subject to a number of variable assumptions):

Boat type	Impact Force
TP 52	80g ²⁷
100 footer	162g
30 foot cruiser	64g

Boat types and possible impact forces of a boom strike

171. Associate Professor Dave Austin also said that the medical literature indicates that impacts surpassing 80g may result in serious and/or lethal head injury. The science surrounding head injury is complex and the extent of injury depends on the age of the patient, the force involved and the region of the head struck. It was also stated that the brain’s vulnerability to injury may change, shaped by age, illnesses (co-morbidities) and unique bodily differences.
172. For context, Associate Professor Dave Austin offered that a professional boxer may generate more than 50g in a punch, highlighting the fine line between a standard punch and the possibility of a life threatening injury.
173. Associate Professor Dave Austin advised that medical literature notes: “Whilst helmets are important to protect against more serious head injuries, their ability to protect against concussion appears to be limited, as they do not act to reduce the amount of acceleration of the head and the neck, which is the primary mechanism behind concussion injuries.”
174. In summary Associate Professor Austin was of the opinion that “a loaded boom on a large boat ‘crash gybing’ in a big breeze generates enormous force and if a sailor is struck directly on the head, the injury is almost certainly not survivable either with or without a helmet. Associate Professor Dave Austin stated that “a helmet may provide some protection for low velocity impacts” but he did **not** recommend mandating their use for ocean racing. However, if sailors choose to wear them voluntarily, he could see no objection.
175. The consequences of injuries this year with two lives lost were extreme and catastrophic. The tragic loss of Roy Quaden from a head injury and Nick Smith from a compression of his chest

²⁶ Associate Professor Dr Dave Austin: Former Director Intensive Care Services, Acting Director Anaesthetics Department, Central Queensland Hospital and Health Services. Experienced Ocean racer logging over 45,000 nautical miles, Medical Director of Yachting NZ and member of the Australian Sailing National Safety Committee.

²⁷ ‘g’ - a measurement of force used in this type of work. One ‘g’ is the force per unit mass due to gravity at the Earth’s surface

serves as a powerful reminder of the risk and the need to take particular care in the type of conditions that prevailed. A helmet would only have been of very limited help to Roy Quaden but, unlikely to have saved his life.

176. Based on the crews interviewed and the information provided to the Review Committee by Associate Professor Dave Austin, the Review Committee considers that helmets should remain optional, dependent on an individual's preference or any specific requirements on an individual boat.

6.2.2 Boom Brakes/Preventers

177. *Flying Fish Arctos* had two reefs in the mainsail at the time of the 'crash gybe'. It is not known to the Race Committee if the fitted boom brake had been tensioned following the second reef being taken.



Wichard Gyb'Easy Boom Brake – Rumchaser

178. *Bowline* had investigated the option to use a boom brake several years ago when the boat was purchased but was not able to find one suitable for the boat. *Rumchaser*, a J/122e two hander, had a "Gyb'Easy' boom brake system installed that ran through a semi-rigid carabiner on the boom, immediately aft of the vang, and led back to the helm on either side of the boat for easy adjustment.

179. Essentially, *Rumchaser's* system provided some warning time of an impending gybe and could provide an opportunity to reverse the helm and prevent an unplanned gybe. If this manoeuvre is not successful the subsequent movement of the boom across the boat is slowed but it does not act as a rigid 'hard stop' preventer.

180. *Rumchaser* did not experience any crash gybes throughout the race and is happy with the performance of the brake noting that the boat uses asymmetrical spinnakers and 'we limit how deep we sail'.

181. *Bowline* had experimented with preventers but did not consider them suitable and in their experience, could cause considerable damage to the boat. The owner was wary of preventers.
182. Among the other boats interviewed there was quite a variation in approach to these devices with a tendency for preventers to be more popular with heavy full length keel boats, such as *Oroton Drumfire* and *Silver Fern*, with large mainsails and their specific handling characteristics.

183. However, preventers need to be carefully tensioned. If the tension is insufficient the boom may still gybe, but if it is too tight it can damage the vang and overload the rig. Boom brakes are favoured by some crews as they can be permanently set up and if correctly tensioned, will slow the boom but it really does depend on the type, size or design of the boat.
184. Preventers can be rigged but were widely viewed by the crews interviewed as introducing an additional risk if the boat does crash gybe as well as potential significant gear damage if the setup is overloaded. Some of the larger boats use them and one explained to the Review Committee how the preventer is very important in their normal gybing routine. The outcome of the interviews suggested that preventers are possibly more suited to short handed cruising and the selection of safer downwind courses than those adopted in a racing profile.
185. The Review Committee considers that awareness and understanding of boom brakes and preventers should continue in training courses but their use should be a personal choice that does not need to be regulated. The practical application should be left to the PIC along with the selection of the TWA to be sailed and the sails to be set.

6.2.3 AIS MOB Beacon

186. It is hard to imagine a clearer demonstration of the value of an AIS MOB beacon than the recovery of Luke Watkins by *Porco Rosso*. The conditions were extremely challenging but the location of Luke using the AIS MOB signal in the water greatly simplified and made his recovery possible. Many sailors already carry an AIS MOB beacon whenever sailing offshore but, it is only a recommendation in the ASSR for it to be “carried by or attached to each member of the crew when on deck”. Such is its importance that many of the sailors interviewed thought it already was mandated and carried one as a personal choice.
187. The Review Committee considers the existing recommendation in the ASSR should be mandated so that an AIS MOB beacon ‘**should** be carried by or attached to each member of the crew when on deck’. This change should be implemented as a priority. This requirement could be satisfied with a combined beacon that incorporates both an AIS and Personal Locator beacons.

6.2.4 Harness Release Systems

188. The HRS can also be a lifesaver and probably did save Luke Watkins’ life, yet it is not as straightforward as the recommendation to carry an AIS MOB beacon. There are some circumstances where it might be more important to remain connected with the boat than chance being inadvertently released from the tether. This would depend on many factors covering the boat, quality of the release system, the type of sailing, whether sailing fully crewed or double handed, forecast conditions etc.
189. The Review Committee considers that the availability and utility of a HRS should be widely promulgated but it is unnecessary to mandate or even recommend the use of such a release system. Also of note is that the release system only appears to be provided by a single, although highly reputable manufacturer. Release systems are not commonly available in the market and the Review Committee is not aware of any independent evaluation of the product. The choice of incorporating an HRS lifejacket harness and tether should be left with the individual crew member. Similar to the decision as to whether to use a manual or automatically inflated personal floatation device.

6.2.5 Communications

190. Arguably, the issue of communications is outside the ToR of this Review but invariably the matter arose with the crews interviewed. Two issues emerged, the:
- capability of some simpler satellite phone arrangements to meet the specified requirements for a continuous satphone capability able to provide voice and data, and
 - problems controlling VHF communications during a major safety incident.
191. The Review Committee considers that the Race Committee should review the practical performance of the low bandwidth satellite phones to confirm they have sufficient capability to meet the satellite phone requirements expected of competitors. In particular, whether the data transfer capability provides a boat with the ability to receive the files emailed by the Race Committee after each position sked such as the CSV file of boats positions and the BOM weather reports prepared for competitors. The specified level of data transfer is provided in the ASSR, NoR and SIs, in imprecise terms (SMS, email, WhatsApp and data) and should be redefined more precisely by bandwidth and data transfer rate to define the minimum level of acceptable capability.
192. The shift to satellite communications has been a big step and has proved successful but from some of the crews interviewed there appeared to be a sense of unease and a lack of confidence or understanding of the equipment, technology and what is available or allowed. This was evident in the need to release Notice to Competitors 1 by the Sailing Manager on 23 December 2024 clarifying that Starlink could be used. Some crews interviewed were also confused about weather services and forecasts that were available and seek an education and training opportunity with the new communications systems as they evolve and are refined.
193. The satellite phone represents a single point of failure that can cripple a whole race campaign through forced retirement or heavy time penalties if a boat is unable to provide its position report or make its declaration passing Green Cape. The lack of experience in using and relying on this technology and the mixed results achieved appear to have caused some unease among the fleet.
194. The Review Committee notes the intention of the Race Committee to review the Communications Plan and evolving systems available and strongly supports this initiative. The Review Committee also considers that a communications seminar in the lead-up to the next RSHYR race would greatly assist in understanding and gaining confidence in the satellite communications based framework. This could include the sourcing of weather and emergency services that are available as well as the VHF techniques that are required in managing an emergency situation. The seminar could be recorded and made readily available.

6.2.6 Downwind Sailing

195. The Review Committee has been specifically asked to consider the risks of downwind sailing in strong conditions. The risks are considerable, multifaceted and focus responsibility on the PIC's all-encompassing responsibilities. The thought of regulating downwind sailing safety is very challenging as it depends upon the actual situation in the particular boat - the state of the boat and crew, level of experience, any breakages or defects, how the boat is handling the conditions and forecast conditions, seasickness, tiredness, ability to cope – and the external factors – wind, sea-state, weather, visibility, forecast changes, other traffic etc, that the boat

is actually or likely to experience. These will all vary markedly from boat to boat and situation to situation, reflecting the experience and ability of the crew, the material state of the boat and where they are on the course relative to navigation dangers and weather systems.

196. The Sailing Instructions list a number of important items that “a boat shall assess and be satisfied” it can meet as it passes Green Cape and enters Bass Strait. The decision depends on judgements made by the PIC on the boat – similar to those considerations and judgements made when sailing downwind in heavy conditions such as when to set a spinnaker and when to take it down, what sail combination best balances the boat, how deep to sail in the prevailing wind and sea state. The Review Committee does not consider it appropriate to attempt to regulate downwind sailing nor the responsibilities of the PIC – there was no support for regulation from any of the crews or sailors interviewed.
197. The Review Committee does however consider that it would be possible to provide a boost to the education experience levels within the fleet in heavy downwind sailing. This could be achieved through a forum in ‘Heavy Weather Downwind Sailing’ that could be incorporated in the lead up to the next RSHYR. The forum could draw upon the more experienced sailors within the fleet to present what they have learnt from their very considerable experience and what they consider necessary to sail downwind safely in heavy conditions – for example what they do to prevent a ‘Crash Gybe’. The Review Committee was reminded of the success of such an approach following the tragic 1998 Sydney to Hobart with a series of Heavy Weather Sailing modules.
198. The ‘Heavy Weather Downwind Sailing Forum’ could comprise a panel of experienced and respected sailors from the club and include an audience with all race entrants invited to be represented. The event could be recorded and made available to others who wished to be informed of the outcomes and used as a future reference on the subject. It could be built upon to provide an important training aid for the sport.

7. Recommendations

199. The first night of the 2024 RSHYR provided some very challenging sailing conditions that tested the competing boats and the Race administration. There were three significant incidents that resulted in two fatalities and one person overboard. The losses of Roy Quaden and Nick Smith have once again reaffirmed that ocean racing is conducted in a very challenging environment which can prove to be fatal and needs to be treated with caution. For two boats the race turned to a tragedy very quickly.
200. The Review Committee was asked to:
 - Investigate the circumstances surrounding the three incidents.
 - Identify possible contributing factors, including: weather, equipment, crew preparedness, and race management protocols.
 - Consider whether any changes are necessary to equipment, training, experience levels, regulations or race documentation to mitigate future risks and enhance race operations.
201. Following the gathering of information from crews involved, race management and others, the Review Committee has analysed this data to make a number of findings in the areas

directed by the ToR – Training and Experience Levels; Regulations and Race Documentation; and Equipment. These have led to the following recommendations for the CYCA to consider.

7.1 Training and Experience Levels

7.1.1 Downwind Sailing

(paragraphs 115 – 119 and 195 – 198)

202. Overall, the Review Committee considers the qualifying criteria for the crew to participate in the RSHYR is appropriate to specify a minimum standard for participation. All three incidents occurred when sailing downwind in strong to gale force winds, chaotic seas and around the time of the change of watch. Each of the three boats ‘crash gybed’. The conditions were very challenging. Other boats also ‘crash gybed’ and had difficulties but with lesser consequences and some sailed through the night relatively trouble free.
203. Within the race fleet there is a range of experience – some crews with hundreds of Hobart races per yacht; participants from other classic ocean races; many laps of the world and some sailors who have sailed around the world several times. This experience could be shared to boost the ability to cope with these normal conditions in offshore racing.
204. The Review Committee **recommends** that a forum on ‘Heavy Weather Downwind Sailing’ be convened in the lead up to the next RSHYR which draws upon the CYCA’s most experienced sailors to form a small panel to discuss their very considerable experience in sailing downwind safely, especially in heavy weather. All Race entrants could be invited to be represented and interact with the panel. The event could be recorded and made available to others who wished to learn more about the subject and retained as a reference.

7.1.2 Communications

(paragraphs 107 – 114 and 190 – 194)

205. During the interviews several points were raised with the Review Committee that indicated the fledgling state of satellite phone communications as the primary means of race communications. The evolving nature of the communications plan was also acknowledged by the Race Committee with plans for further refinement. Communications form a vital link across the fleet and without them a boat cannot continue to race.
206. In addition, problems were reported in managing the local on scene VHF communications during the *Flying Fish Arctos* incident.
207. The Review Committee **recommends** that:
 - the minimum requirement for a satellite phone capability be better defined and a list of acceptable systems for the Race be provided.
 - a recorded and widely disseminated communications seminar be convened in the lead up to the next RSHYR to:
 - assist in understanding and gaining confidence in the satellite communications based framework,
 - outline the sourcing of weather and emergency services that are available, and

- understand the VHF communications techniques that are required in managing the on-scene aspects of an emergency situation.

7.1.3 MOB Training

(paragraphs 66 – 80 and 147 – 149)

208. The Review Committee **recommends** that the lessons learnt from Luke Watkins experience and the recovery by the crew of *Porco Rosso* be provided to Australian Sailing for dissemination to SSSC instructors and used in the training of MOB recovery. The lessons being:

- The importance of each crew member to take responsibility for their own safety equipment and be well trained and practiced in its use.
- Individual consideration be given to the need for a harness release system that could be activated in situations of extreme personal danger.
- The need for frequent crew training to respond to a MOB situation and use of all the aids available to locate and recover the person in the water. Currently this training is “recommended” at “reasonable intervals” (ASSR 6.01.3) along with other safety drills while it is mandated “at least annually” in the OSR 6.04.
- Crews should be familiar with the interface between the MOB AIS beacon and the boat’s navigation system or AIS receiver. This is likely to be different between navigation systems, AIS transponders and brands of beacons that are available, but it is vital for every boat to understand how this range and bearing will be made available and that it is displayed in its most convenient form. Without this knowledge the beacon could be useless, and the matter is of such importance that it should be considered as a subject for a widely promulgated webinar.
- Crews should persevere with ‘numbering off’ until successfully completed. The practice should be rehearsed leading up to the start of a race. Luminous numbers could be considered for attaching to foul weather gear to assist the process.
- The importance of AMSA being able to identify and provide the name of the person whose PLB had been activated.
- Where available dagger boards may assist to control the bow in the final stages of approaching the MOB in the water.
- In canting keel boats consideration should be given to a control switch below deck that could be used to centre the keel in extreme circumstances. This would require a clear set of well-considered protocols on when and how this control would be used.
- Each boat should assess where jackstays are best positioned on the boat. In some instances, this may be inboard away from the gunwales.
- Some reflective tape or strands should be incorporated in the MOB throw line so that it can be easily seen at night when illuminated by a torch.
- The throw line used was a new replacement and 20m in length - 5m longer than the line it replaced – and only just long enough.

- The importance of being aware of the symptoms of hypothermia and addressing it promptly.
- Without impairing the crew's night vision attempts should be made to make the boat visible to the MOB. Some form of masthead light should be switched on – a white flashing masthead light would be ideal.
- The personal 'Exposure' torches were sufficient for the crew to provide the light that they needed.
- Crews should have in place and practice a system or plan to establish a communications link between the helm and the navigation station in emergency situations depending on the size and type of boat and expected ambient noise levels.
- Is a single spare inflatable lifejacket (ASSR 5.01.1(f)(i)) and a single re-arming kit (ASSR 5.01.1(f)(ii)) that are currently required sufficient for the boat and number of crew?

7.2 Regulations and Race Documentation

209. The Review Committee is not proposing any structural changes to the administration or management of the race or its documentation. The Review Committee does **recommend**:

- An update of the Race entry procedure to make it more automated and user friendly. There is a clear depth of feeling that the current entry system is cumbersome and time consuming. Race Management is aware of the issue and an Information Technology update for the entry system has been approved by the CYCA Board. This is strongly supported as a matter of urgency by the Review Committee. As a start a simple on-line check list of what has been accepted or not accepted as part of a boat's entry would be a welcome improvement. (paragraphs 126 - 129)
- the protocols associated with the public release of details of a major incident be reviewed with the NSW Police in an attempt to ensure that next of kin of crews involved in the incident have been informed of the incident before any public release or naming of the boat(s) involved whenever practicable. (paragraph 131)
- whenever feasible assistance be provided to crews to deal with the media when a boat has been involved in a significant incident. (paragraphs 131 – 132)

7.2.1 Race Documentation

(paragraphs 161 – 164)

210. The review Committee **recommends** the wording associated with the passage or qualifying race in the NoR be amended to link the crew with the boat such that the 50% requirement for fully crewed boats, including the PIC, complete the qualifying race or passage in the boat entered in the race, subject to a Race Committee discretion upon application to determine special exemption.

7.3 Equipment

7.3.1 Helmets

(paragraphs 92 – 95 and 165 – 176)

211. The Review Committee **recommends** that helmets should remain optional and dependent on an individual's personal choice or the requirement on a boat.

7.3.2 Boom Brakes/Preventers

(paragraphs 96 – 101 and 177 – 185)

212. The Review Committee **recommends** that awareness and understanding of boom brakes and preventers should continue in training courses, but their use should be a personal choice that does not need to be regulated.

7.3.3 AIS MOB Beacon

(paragraphs 102 – 104 and 186 – 187)

213. The Review Committee **recommends** that the existing recommendation in the ASSR (5.01.1(b)) should be mandated so that an AIS MOB beacon '**should** be carried by or attached to each member of the crew when on deck'. In the first instance the CYCA should introduce the change in the NoR for all future events and an approach should be made to Australian Sailing to amend the Special Regulations.

7.3.4 Harness Release Systems

(paragraphs 105 – 106 and 188 – 189)

214. The Review Committee **recommends** that the availability and effectiveness of a HRS should be widely promulgated but the choice of incorporating an HRS lifejacket harness and tether should be left with the individual crew member.

8. Appendices

1. Terms of Reference
2. Review Committee Short Resumes
3. List of Acronyms

Appendix 1 - Terms of Reference



Terms of Reference (ToR) for the Review Committee: Independent Review of the Two Fatalities and MOB Incident in the 2024 Rolex Sydney Hobart Yacht Race (RSHYR)

Background

The Rolex Sydney Hobart Yacht Race conducted by the Cruising Yacht Club of Australia is one of the premier offshore yacht races in the world, known for its challenging conditions and high safety standards. During the 2024 race on the evening of 26 December, three significant incidents occurred, resulting in the deaths of Roy Quaden on *Flying Fish Arctos* and Nick Smith on *Bowline*, along with a man overboard incident (Luke Watkins) on *Porco Rosso*.

The CYCA Board has resolved to form a Review Committee to conduct a comprehensive investigation into these incidents to ensure the ongoing safety and integrity of the race and where possible and practicable, to minimise the likelihood of any recurring incidents.

Purpose

The purpose of the Review Committee is to:

1. Investigate the circumstances surrounding the three incidents.
2. Identify possible contributing factors, including: weather, equipment, crew preparedness, and race management protocols.
3. Consider whether any changes are necessary to equipment, training, experience levels, regulations or race documentation to mitigate future risks and enhance race operations.

The purpose of the review is to establish the facts and make any appropriate recommendations of practical ways to improve safety in offshore sailing. The review is not to apportion any blame nor is the review to consider issues relating to responsibilities to employees.

Without limiting the scope of the review, the Review Committee is to consider the following:

- Equipment - Helmets and boom brakes/preventers
- Relevance of current crew qualifications and experience for Cat 1 races
- Risks of downwind sailing in strong conditions

Scope of Work

The Review Committee will:

1. Collect and analyse all relevant data, including:
 - Interviews with skippers, crews, and race management.
 - Consideration of received submissions.
 - Weather reports and forecasts during the race.
 - Vessel tracking and performance data.
 - Available reports of the deaths of Roy Quaden and Nick Smith.
 - An examination of the man overboard incident involving Luke Watkins.
2. Examine the role of equipment failures, if any, in the incidents.
3. Provide a report to the CYCA Board.

Deliverables

The Review Committee will produce a report that includes:

1. A detailed account of the three incidents.
2. An analysis of the causes and contributing factors.
3. Findings on the adequacy of existing safety measures and protocols.
4. Recommendations for:
 - Enhancing safety standards.
 - Updating equipment and training requirements.

Composition of the Committee

Rear Admiral Chris Oxenbould AO RAN (Rtd) will chair the committee and be assisted by Adrienne Cahalan OAM and David Jordan, providing a broad base of sailing and incident investigation experience.

Methodology

1. All competitors in the 2024 RSHYR and CYCA club members will be advised of the review, provided access to these ToR and encouraged to provide written submissions to the committee or participate in an interview.
2. The Committee will hold meetings as required and provide updates to the CYCA Board.
3. The committee has no power of compulsion on any person. Every person who gives evidence must be advised concerning their entitlements to privacy and privilege against self-incrimination.
4. Those that make written or oral submissions or comments to the Review Committee are to be advised that the findings and recommendations of the review and submissions received may be made public.
5. All findings or recommendations are to be evidence-based.

Timeline

A final report is to be submitted by 15 May 2025. A preliminary report may be provided if it is considered necessary to highlight any safety recommendations that may require immediate attention.

Reporting and Accountability

The Review Committee will report directly to the CYCA Board through the Vice Commodore, David Jacobs as chair of the CYCA Sailing Committee. The final report may be made available to key stakeholders and, where appropriate, to the broader sailing community.

Budget and Resources

The CYCA will provide the necessary budget and resources to facilitate the work of the Review Committee, including administrative support and access to data and stakeholders.

Amendments

These ToR may be amended by the CYCA Board in consultation with the Review Committee if required.

Dr. Sam Haynes Commodore

Appendix 2 - Review Committee Short Resumes

Rear Admiral Chris Oxenbould AO RAN (Rtd)

Chris Oxenbould had a distinguished career of over 37 years in the Royal Australian Navy, in which he specialised as a navigator and gained substantial command experience. On retiring from the Navy in 1999 he worked for the NSW Government in positions, including, the Chief Executive of Newcastle Port Corporation 2001-04 and CEO of NSW Maritime, the state's maritime regulator, from 2004-08.

Chris has been an active sailor for most of his life, competing in 10 Sydney to Hobart races and several seasons of offshore racing out of Sydney and a season in England. He was Chair of the Sydney Hobart Yacht Race Committee in 2000 and 2001, Chair of the Flinders Islet Inquiry in 2009, the VOR Independent Report into the Stranding of Vestas Wind in 2015 and the VOR Independent Report into Ocean Racing at Night in Areas of High Vessel Traffic Density in 2018. He is the former Chair of Australian Sailing's National Safety Committee 2011-15.

Adrienne Cahalan OAM

Adrienne has been a professional sailor competing in races in Australia and worldwide since the late '80's. She is probably best known in Australia for having sailed a record 32 Sydney to Hobart Yacht Races, the most sailed by any woman and 7 of which were sailed on the well-known 100 ft maxi yacht "Wild Oats XI". Adrienne was a director on the board of Australian Sailing from 2004-2010 and from 2009-2016 on World Sailing the international body governing yachting worldwide, was a council member, chairman of the Women's Forum, committee member of the International Regulations Commission and Offshore Sailing Committee. Adrienne has combined a career in international professional yacht racing with her work as a maritime lawyer and work in navigation and weather.

Dave Jordan CSC

During a 25-year permanent career in the Royal Australian Navy, Dave had the privilege and rare opportunity of commanding three ships: a frigate, a patrol boat and the Sail Training Ship Young Endeavour. Dave continues to serve as a Reservist and has spent the last 15 years in the defence industry in a variety of senior roles across small, medium and large enterprises. His sailing started at an early age, and he has competed in many offshore races including the RSHYR. Dave served on the RSHYR Race Committee for twelve years, including serving as the Race Committee Chairman for two years. He served as a member of the then Yachting NSW Safety Committee.

Appendix 3 - List of Acronyms

AEDST	Australian Eastern Daylight-Saving Time
AIS	Automatic Identification System
AMSA	Australian Maritime Safety Association
ASSR	Special Regulations of Australian Sailing
AWA	Apparent Wind Angle
BOM	Bureau of Meteorology
BWPS	Blue Water Pointscore Series
Cat(s)	Category(ies)
CEO	Chief Executive Officer
CPR	Cardiopulmonary Resuscitation
CSV file	Comma-Separated Values (plain text file that stores data)
CYCA	Cruising Yacht Club of Australia
HRS	Harness Release System
IOR	International Offshore Rule
JRCC	Joint Rescue Coordination Centre (at AMSA)
MOB	Man Overboard
NoR	Notice of Race
OA	Organising Authority
PIC	Person in Charge
PLB	Personal Location Beacon
POB	Persons on Board
Race Control	Radio Communications Centre RYCT Hobart
ROC	Race Operations Centre (RYCT Hobart)
RORC	Royal Ocean Racing Club
RMT	Race Management Team
RRS	Racing Rules of Sailing

RSHYR	Rolex Sydney to Hobart Yacht Race
RRV	Radio Relay Vessel
RYA	Royal Yachting Association
RYCT	Royal Yacht Club of Tasmania
SailRace HQ	New RORC Race IT System
SI	Sailing Instruction
SMS	Short Message Service
SSSC	Safety and Sea Survival Course
TASPORTS	Tasmanian Port Authority Pty Ltd
ToR	Terms of Reference
TWA	True Wind Angle
UTC	Universal Time Coordinated (or Greenwich Mean Time)
VHF	Very High Frequency (radio band)