

Risk Management Plan

For the

Rottnest Channel Swim

Document Review

Update	Forum
14.11.00	Original document
28.11.01	ECO meeting
23.8.02	Draft review
15.10.02	ECO meeting
16.4.03	Draft review
20.8.03	ECO meeting
9.12.03	ECO meeting
25.10.04	Pre event review
7.11.05	ECO Meeting Feedback

Rottnest Channel Swim – Risk Management Plan

Risk Management Plan - in accordance with AS/NZS 4360:1995.

This is a three-stage process involving;

Section 1 The identification of issues

Section 2 Risk Rating - Assessment of Likelihood and Significance

Section 3 Consideration of response options and control measures

Section 1 Identifying Risks

		PHASES		
FACTORS		Pre – event	Event	Post Event
	Human	1	4	7
	Environment	2	5	8
	Vehicle	3	6	9

Application of this framework to the RCS produced the following identified safety issues;

		PHASES		
FACTORS		Pre – event	Event	Post – Event
	Human	1.1 Medical Condition 1.2 Ability to swim 1.3 Level of fitness 1.4 Not Registered on day 1.5 Knowledge of race 1.6 Dehydration/Toilet	4.1 Sunburn 4.2 Effect of exercise 4.3 Dehydration 4.4 Lost Swimmer 4.5 Duration in water 4.6 Hypothermia 4.7 Overcrowding 4.8 Lack of race confinement 4.9 Identification of swimmer	7.1 Dehydration/Fatigue 7.2 Cramp/Hypothermia 7.3 Exhaustion 7.4 Lost support on island 7.5 Lost swimmer
	Environment	2.1 Competitor Congestion 2.2 Parking 2.3 Hazards on start 2.4 Lighting 2.5 Dropping off on shore 2.6 Area Designation	5.1 Sun exposure 5.2 Cold 5.3 Submerged obstacles 5.4 Stingers 5.5 Sharks 5.6 Winds/Forecast 5.7 Visibility 5.8 Current/Waves	8.1 Egress from beach
	Vehicle	3.1 Boat/Ski failure to show 3.2 Congestion of boats 3.3 Ski access to beach	6.1 Poor Paddlers 6.2 Poor boat Skippers 6.3 Capsize - Boat 6.4 Capsize - Ski 6.5 Ill prepared boats 6.6 Course boundaries 6.7 Commercial Shipping 6.8 Boat Congestion	9.1 Illegal moorings 9.2 Mooring to close to finish 9.3 Boats loading/Unloading 9.4 Hitting other competitors 9.5 Ski Congestion 9.6 Designated gear area

Before discussing possible safety measures, it is appropriate to put into perspective each of the identified issues. This ensures that the types of safety measures proposed were warranted, and in context. The taskforce undertook a risk management assessment of the identified issues in accordance with AS/NZS 4360:1995.

The identified issues were expressed in terms of the associated risk they presented. The associated risks were then analysed by combining estimates of likelihood and consequences in the context of existing control measures. This produces a level of risk.

Human factors - Pre-race

Ref. No.	Identified Risk	Likelihood	Consequence	Level of risk
1.1	Medical Condition	Almost Certain	Minor	Significant
1.2	Ability to swim	Rare	Insignificant	Low
1.3	Level of fitness	Unlikely	Moderate	Moderate
1.4	Not Registering on Day.	Unlikely	Insignificant	Low
1.5	Knowledge of race	Moderate	Moderate	Significant
1.6	Dehydration / Toilet	Likely	Insignificant	Moderate

Environmental factors – Pre-race

Ref. No.	Identified Risk	Likelihood	Consequence	Level of risk
2.1	Competitor Congestion	Almost Certain	Moderate	High
2.2	Parking	Moderate	Minor	Moderate
2.3	Hazards on start	Moderate	Minor	Moderate
2.4	Lighting	Almost Certain	Moderate	High
2.5	Dropping off on shore	Likely	Minor	Significant
2.6	Area Designation	Unlikely	Minor	Low

Craft/Vehicle Factors – Pre-race

Ref. No.	Identified Risk	Likelihood	Consequence	Level of risk
3.1	Boat/Ski failure to show	Likely	Moderate	Significant
3.2	Congestion of boats	Likely	Major	High
3.3	Ski access to beach	Unlikely	Insignificant	Low

Human factors – During race

Ref. No.	Identified Risk	Likelihood	Consequence	Level of risk
4.1	Sunburn	Rare	Insignificant	Low
4.2	Effect of exercise	Likely	Major	High
4.3	Dehydration	Likely	Major	High
4.4	Lost Swimmer	Likely	Catastrophic	High
4.5	Duration in water	Moderate	Minor	Moderate
4.6	Hypothermia	Likely	Major	High
4.7	Overcrowding	Almost Certain	Minor	Significant
4.8	Lack of race confinement	Almost Certain	Minor	Significant
4.9	Identification of swimmer	Likely	Minor	Significant

Environmental factors – During race

Ref. No.	Identified Risk	Likelihood	Consequence	Level of risk
5.1	Sun exposure	Almost certain	Minor	Significant
5.2	Cold	Unlikely	Major	Significant
5.3	Submerged obstacles	Unlikely	Minor	Low
5.4	Stingers	Almost certain	Minor	Significant
5.5	Sharks	Rare	Catastrophic	Significant
5.6	Winds/Forecast	Almost certain	Major	High
5.7	Visibility	Unlikely	Minor	Low
5.8	Current/Waves	Almost certain	Major	High

Craft/Vehicle factors – During race

Ref. No.	Identified Risk	Likelihood	Consequence	Level of risk
6.1	Poor Paddlers	Likely	Moderate	Significant
6.2	Poor boat Skippers	Likely	Catastrophic	High
6.3	Capsize – Boat	Unlikely	Catastrophic	High
6.4	Capsize – Ski	Likely	Minor	Significant
6.5	Ill prepared boats	Moderate	Minor	Significant
6.6	Course boundaries	Likely	Major	High
6.7	Commercial Shipping	Unlikely	Catastrophic	High
6.8	Boat Congestion	Almost Certain	Catastrophic	High

Human factors - Post-race

Ref. No.	Identified Risk	Likelihood	Consequence	Level of risk
7.1	Dehydration/Fatigue	Almost Certain	Moderate	High
7.2	Cramp/Hypothermia	Almost Certain	Moderate	High
7.3	Exhaustion	Almost Certain	Moderate	High
7.4	Lost support on island	Unlikely	Insignificant	Low
7.5	Lost swimmer	Likely	Catastrophic	High

Environmental factors – Post race

Ref. No.	Identified Risk	Likelihood	Consequence	Level of risk
8.1	Egress from beach	Rare	Insignificant	Low

Craft/Vehicle factors – Post race

Ref. No.	Identified Risk	Likelihood	Consequence	Level of risk
9.1	Illegal moorings	Likely	Minor	Significant
9.2	Mooring too close to finish	Almost Certain	Moderate	High
9.3	Boats loading/Unloading	Almost Certain	Catastrophic	High
9.4	Hitting other competitors	Unlikely	Catastrophic	High
9.5	Ski Congestion	Unlikely	Insignificant	Low

Section 3 Consideration of response options and control measures

A systematic approach based on the Australian Standard for Risk Management (AS/NZS 4360:1995) was used to assess the level of risk associated with the identified safety issues

The types of countermeasures for the different levels of risk are listed below;

- High risk = detailed research and policy planning. Control of activity by Officials
- Significant risk = attention needed at a policy level. Inclusion of measures in RCS race rules
- Moderate risk = responsibility must be specified. Inclusion of information to participants.
- Low risk = manage by routine procedures. Signage, boundaries, bunting. etc

The Royal Life Saving Society has applied its knowledge and understanding of the RCS to assess, judge the value of, and discriminate between the value and merit of a range of possible safety strategies.

The proposed control measures are tabled below:

HUMAN FACTORS - PRE-RACE

Reference No. 1.1	Identified Risk Medical Condition	Rating Significant
While there is no pre-requisites to entry into the RCS for duo's and teams the medical condition of participants can affect their ability to safely participate.		
<p>Strategies :</p> <ul style="list-style-type: none"> - Within the entry form will be a statement that all those participating will declare themselves medically fit to compete in the race. - A series of (4-6) state and community newspaper info-articles on 'how to prepare' for the event will be run in the weeks leading up to the event. - The 10km, Cottesloe, Swanbourne and North Cottesloe ocean swims will be promoted to race entrant as valuable 'lead-up' events. - Skippers will be provided with a resuscitation flow chart and it will be recommended that all craft will carry first aid kits. 		

Reference No. 1.2	Identified Risk Ability to swim	Rating Low
While there is no pre-requisites to entry for duo's and teams, the RCS is a large (19.2km) open water event that attracts those who have a fair knowledge/background in swimming. Nevertheless the ability to swim the distance required is paramount their safety.		
<p>Strategies:</p> <ul style="list-style-type: none"> - Refer to 1.1. - Swimmers will be instructed on how to summons help should they get into difficulty and be unable to continue in the event. 'Raise one hand above the head.' - Within the entry a form will be a statement that all participating will declare that they have the swimming ability to complete the event. - Solo competitors to supply evidence of competency in completing the swim in less than 10 hours. 		

Reference No. 1.3	Identified Risk Level of fitness	Rating Moderate
While there is no pre-requisites to entry into the RCS for duo's and teams. The physical condition of participants can affect their ability to safely participate		
Strategies: <ul style="list-style-type: none"> - Please refer to 1.1 / 1.2 		

Reference No. 1.4	Identified Risk Not registering on day	Rating Low
While people may be on the starting list. It is possible they will not register on the morning of the start. This makes accounting for their presence impossible during the race.		
Strategies: <ul style="list-style-type: none"> - There will be constant PA announcements advising all participants to register. - A clear registration area will be available with sufficient officials to prevent excessive queuing. - There will be information on registering in the notification pack and race briefing. - Implementation of the electronic timing straps giving incentive for competitors to register and get a recorded time on completion of the event. 		

Reference No. 1.5	Identified Risk Knowledge of Race	Rating Significant
Knowledge of the race is extremely important. Entrants must be clear as to the size, scope and nature of the race. It is important they know 'what they are getting themselves and their support crews into.'		
Strategies: <ul style="list-style-type: none"> - All competitors will be made aware of race rules, as well as the race details in the race briefing. - Details of the race will include the distance, mean duration, water temp, depth as well as where the key navigational points. - PA and marine radio announcements to the competitors advising them of the effects weather conditions would have on swim duration. 		

Reference No. 1.6	Identified Risk Dehydration/Toilet	Rating Moderate
Competitors will arrive on the morning often a few hours before the race start. Facilities must be provided to ensure competitors can continue to hydrate themselves and go to the toilet.		
Strategies: <ul style="list-style-type: none"> - Hire / access of toilet facilities - Access to drinking water. (PowerAde Tent) - Constant PA announcements alerting all to the available facilities. 		

ENVIRONMENTAL FACTORS – PRE-RACE

Reference No. 2.1	Identified Risk Competitor Congestion	Rating High
<p>The Royal Life Saving Society is aware that there will be overcrowding before the start of the event. This can cause disorientation, lose of support crew/ski paddler. Missing of allocated race time. As far as possible steps must be taken to ensure the 'start crowd' is orderly.</p>		
<p>Strategies:</p> <ul style="list-style-type: none"> - Designated areas ie. Competitor marshalling. ski area, start line, registration tents. (Annexure H) - Designated areas covered in race briefing - Continuous PA announcements on location of designated areas. - Dedicated broadcast channel to support vessels as well as competitors on start line. 		
Reference No. 2.2	Identified Risk Parking	Rating Moderate
<p>Due to the amount of spectators/competitors, traffic has to be taken into consideration.</p>		
<p>Strategies:</p> <ul style="list-style-type: none"> - Permission from the Town of Cottesloe to enable road traffic controls to be placed as necessary. - Traffic wardens as necessary. 		
Reference No. 2.3	Identified Risk Hazards on Start	Rating Moderate
<p>Rocks, syringes, drop off areas can all cause harm.</p>		
<p>Strategies:</p> <ul style="list-style-type: none"> - Appropriate sign placement. - Early morning foot patrols that will sweep the beach of any hazards. (Tractor sweep with Town of Cottesloe) 		
Reference No. 2.4	Identified Risk Lighting	Rating High
<p>The start line set up crew will commence before it is light. To erect tents, poles and PA system safety sufficient artificial light is required for the competitors and marshals.</p>		
<p>Strategies:</p> <ul style="list-style-type: none"> - Town of Cottesloe to provide park lighting from 4.00 am. - The hiring of flood lights as required to enable the start and registration area visible to before sunlight. 		
Reference No. 2.5	Identified Risk Dropping off on shore	Rating Significant
<p>Many competitors accompany their support boats from the harbour (Fremantle/Hillarys) in the morning. Landing on shore often involves a tender boat or the support boat coming very close to shore. Lack of surf knowledge and congestion in this area could cause injury.</p>		

Strategies:

- Rescue boats to be strategically positioned to direct boats in to shore. If surf is running offer a ferry service.
- Utilise a clearly marked area protected by the Cottesloe groyne. (leave space for morning swimmers – public)
- The rules and guidelines of drop-offs will be included in the notification pack.

Reference No. 2.6	Identified Risk Area designation	Rating Low
Lack of crowd control and confusion in the location of registration tents, ski areas etc could cause an injury.		
Strategies: Please refer to 2.1.		

CRAFT/VEHICLE FACTORS – PRE RACE

Reference No. 3.1	Identified Risk Boat/Ski failure to show	Rating Significant
Mishaps, breakdowns, sleeping in can all cause a ski/boat to miss the start. The first swimmer is unaware of the situation and starts the race. This leaves the swimmer without a support crew, which could lead to injury.		
Strategies: <ul style="list-style-type: none"> - Competitors, ski/boats will be able to call a phone number enabling them to ring if they are unable to make it on time/at all. This message will be broadcast over the PA system. - Competitors without support will be marshalled at the PA area awaiting the status of their support crew. - The reserved area will also be used for the linking of any swimmer to paddler. 		

Reference No. 3.2	Identified Risk Congestion of boats	Rating High
The movement of support boats waiting to link with their swimmer could lead to an unsighted swimmer being run over causing injury.		
Strategies: <ul style="list-style-type: none"> - Holding areas for support boats to be established 500m either side of the start channel. - Boats will not be able to engage with their swimmer until 1000m off shore. (ski paddlers can link after 500m) These exclusion zones will be clearly marked with buoys. - Competitors will be started in waves with colour coded swimming caps (compulsory for first swimmer). This will enable boat to search the right wave of swimmers. - Support boats will be given a starting order chart (including colours) at the race briefing. - The status of the starting sequence will be broadcast over the marine radio communication system. - Support crews are to stay in the boat holding area until their wave is due to start. An official calling of the wave to the start line marks this. - In the event of a delay, broadcasts are to be made to inform crews that a delay has occurred, and to keep the boat starting area unobstructed. 		

Reference No. 3.3	Identified Risk Ski access to the beach	Rating Low
Skis come to the beach to find their swimmer. Their size (18 feet) and the fact they are often left lying on the ground could cause some one to trip up and be injured.		
Strategies: <ul style="list-style-type: none"> - Designated areas will be set out. Refer to 2.1 - Designated area will be covered in race briefing. 		

HUMAN FACTORS – DURING RACE

Reference No. 4.1	Identified Risk Sunburn	Rating Low
The mean duration of the RCS is in excess of 5 hours. The sun in February is intense even early in the morning. Swimmers, support boats and skis need to be prepared to protect themselves from the effects of sun exposure.		
Strategies: <ul style="list-style-type: none"> - Inclusion of information at race briefing (for ski and boats as well) - Support boats will be supplied information on injury management. 		

Reference No. 4.2	Identified Risk Effect of Exercise	Rating High
The mean duration of the RCS is in excess of 5 hours. Competitors need to be informed of the effects of exercise and preventative measures. Failing to do this could cause injury.		
Strategies: <ul style="list-style-type: none"> - Rescue teams (Emergency Control Organisation) will be on the water to respond to any distress call with a maximum arrival time of 15 minutes – the average ambulance response time (Annexure A) - Race briefing will cover emergency procedures. - Support boats will be supplied information on injury management. - Inclusion of preventative information at race briefing. - Introduction of the 10km and 15km checkpoints with cut-off times to accommodate for the 5 pm deadline. 		

Reference No. 4.3	Identified Risk Dehydration	Rating High
The mean duration of the RCS is in excess of 5 hours. Each competitor will be made aware of the importance of fluid intake and the quantities required to prevent dehydration.		
Strategies: Please refer to 4.2.		

Reference No. 4.4	Identified Risk Lost Swimmer	Rating High
A swimmer lost without his support crew is an early indicator to a major emergency.		

<p>Strategies:</p> <ul style="list-style-type: none"> - There will be a prominent craft positioned a distance of 1500m from the start directly on the course to Rottnest. Competitors that have not linked with their support crew will be instructed to swim to this craft. Teams that have linked up will be instructed to alter course to swim around this focal point. The craft will have marine radio communications to assist in the location of the support crew. A swimmer without support will not be allowed to progress beyond this point. - If the swimmer is not found within 30 minutes then the ECO base will notify the Water Police to commence search proceedings - Covering of the above at the race briefing. - Refer to Annexure A – Emergency procedures.

Reference No. 4.5	Identified Risk	Rating
	Duration in water	Moderate
The mean duration of the RCS is in excess of 5 hours. Each competitor will be made aware of the affects of the water. Eg. salt, skin, ears etc .		
<p>Strategies:</p> Please refer to 4.2		

Reference No. 4.6	Identified risk	Rating
	Hypothermia	High
The mean duration of the RCS is in excess of 5 hours. Each competitor will be made aware of the affects and danger of hypothermia.		
<p>Strategies:</p> <ul style="list-style-type: none"> - Please refer to 4.2 - All rescue boats will have hypothermia blankets on board in case of emergency. 		

Reference No. 4.7	Identified Risk	Rating
	Overcrowding	Significant
Overcrowding of swimmers especially at the start could cause an injury.		
<p>Strategies:</p> <ul style="list-style-type: none"> - Buoys will be positioned to ensure that there are distinct swimming/boating areas. Inflatable rescue boats to patrol the starting area. - Competitors will be sent off in waves to reduce the size of field at the start. - Competitor wave sizes to be limited (as appropriate). - Please refer to 3.2 		

Reference No. 4.8	Identified Risk	Rating
	Lack of race confinement	Significant
While the race has a set length of 19.2km. If the field spreads width-ways this has a multiplier effect on the area to be covered by emergency crews. Excessive spread of the race field could hinder and water down the effectiveness of the Emergency Control Organisation.		

Strategies:

- Please refer to Annexure H
- Indicative race boundaries will be put in place for support crews to navigate by. (maximum width of 1000m).
- To control the length-wise spread of the race field, prognostic cut of times will be set at various coordinates. Competitors that fail to make the prognostic cut off times will be approached by race officials and notified of their removal from the race. The decision to continue to swim is still their own but only at their own risk (Annexure H).
- Markers are to be positioned at the 10km and 15km points large enough for good visibility.
- Minimum height of markers is 2m.

Reference No. 4.9**Identified Risk**

Identification of swimmer

Rating

Significant

Difficulty in identifying your swimmer can cause panic by support crews leading to unsafe behaviors.

Strategies:

- Please refer to 3.2/4.4

ENVIRONMENTAL FACTORS – DURING RACE**Reference No. 5.1****Identified Risk**

Sun exposure

Rating

Significant

Please refer to 4.1

Reference No.5.2**Identified risk**

Cold

Rating

Significant

Please refer to 4.6

Reference No. 5.3**Identified Risk**

Submerged obstacles

Rating

Low

As swimmers enter the water it is possible submerged obstacles (exposed reef) could injure them.

Strategies:

- Start line will be located in a area free from obstacles. If this is not possible information will be provided to swimmers on the start line of any submerged obstacles.
- Inflatable Rescue boat with lifesavers will patrol the start area. (Annexure H)

Reference No. 5.4**Identified Risk**

Stingers

Rating

Significant

Being stung by marine stingers can cause reactions as mild as slight discomfort too as severe as allergic reactions. The RCS is conducted in February when it is possible marine stingers will be present.

<p>Strategies:</p> <ul style="list-style-type: none"> - Rescue teams (Emergency Control Organisation) will be on the water to respond to any distress call with a maximum arrival time of 15 minutes – the average ambulance response time (Annexure A) - Race briefing will cover treatment of marine stingers. - Support boats will be supplied information on injury management. - Inclusion of information at race briefing.

Reference No. 5.5	Identified Risk Sharks	Rating Significant
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While the chance of injury is very low, with little or no injury being recorded during the RCS. The consequence could be catastrophic. A shark attack is classified as a major emergency.

<p>Strategies:</p> <ul style="list-style-type: none"> - Rescue teams (Emergency Control Organisation) will be on the water to respond to any distress call with a maximum arrival time of 15 minutes – the average ambulance response time (Annexure A) - Race briefing will major emergency response procedure. - Support boats will be supplied information on first aid. - Inclusion of information at race briefing.

Reference No. 5.6/5.7/5.8	Identified Risk Winds/Visibility/Current/Waves	Rating High
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Poor weather conditions can make progress in the RCS very slow to the point where many teams will be subjected to an event that they are not prepared for, which has the potential to cause injury. While this point will depend the ability of each individual team. A bottom line must be draw by the RCS.

<p>Strategies:</p> <ul style="list-style-type: none"> - Deciding on the weather conditions needs to objective so that the Race Director is not placed in a position where he must make a subjective decision. - Reference to the weather rating matrix (Annexure H). - Inclusion of policy in race notification packs. - Inclusion of information at race briefing. - Inclusion of 5, 10 & 15km cut-off times - Decision to proceed given by the ECO race committee, consisting of, Race Director, Race Referee, RLSA Representative, ECO Director & RCS Representative, RCSA member - ECO to make regular announcements (30 minutes apart) over the airwaves reminding teams to stay inside the northern markers

CRAFT/VEHICLE FACTORS – DURING RACE

Reference No. 6.1	Identified Risk Poor Paddlers	Rating Significant
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With no pre-requisites to being a support paddler it is possible that a support paddler could get into difficult and need assistance.

<p>Strategies:</p> <ul style="list-style-type: none"> - Race briefing for ‘skippers’ will include ‘paddlers’. - Information on preparation and safety precautions will be covered at the briefing. - Wearing a personal flotation device will be recommended.

Reference No. 6.2	Identified Risk Poor Boat Skippers	Rating High
With no pre-requisites to being a support boat skipper it is possible that a support boat could create its own incident by running over swimmers, boat breaking down etc.		
Strategies: <ul style="list-style-type: none"> - Recommended that all support boat skippers attend a 'Boat Smart' course. - Rescue teams will be on hand for emergency (Refer to Annexure A) - Race briefing for all skippers that will cover all areas of the race. - Information provided to skippers on how to supervise swimmers, extraction from water, first aid kits, radio communication, responsibilities of a skipper (maritime law) etc. - Creation of a list of compulsory items on support boats including emergency equipment, seasickness equipment and procedures for treatment. - Support vessels are required to take responsibility of minor illness on board. - Vessel size restrictions introduced – 10m and larger vessels must use a tender craft to communicate with the swimmer. 		

Reference No. 6.3	Identified Risk Capsized boat	Rating High
Strategies: Please refer to 6.2		

Reference No. 6.4	Identified Risk Capsized ski	Rating Significant
Strategies: Please refer to 6.1		

Reference No. 6.5	Identified Risk Ill prepared boats	Rating Significant
With no pre-requisites to being a support boat skipper it is possible that a support boat could fail to prepare for the event effectively and ultimately endanger the health of their swimmer/s and/or support crews.		
Strategies: <ul style="list-style-type: none"> - Please refer to 6.2 		

Reference No. 6.6/6.7/6.8	Identified Risk Boundaries/shipping/congestion	Rating High
The RCS course is not closed. It is open to outside users such as major shipping liners and commercial vessels. Their lack of awareness of the RCS could cause injury.		
Strategies: <ul style="list-style-type: none"> - Gain permission form Fremantle Port Authority, WA Water Police and Dept Fisheries Marine Safety. - Support craft will be advised of commercial vessels expected to pass through the field. - Dept Fisheries Marine Safety identified as controlling authority for vessels travelling through the field. - A designated race course will be established within which other traffic can expect event support craft to be. 		

Reference No. 6.9	Identified Risk Communication	Rating Significant
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Communication is the key to a safe and enjoyable event. In case of emergency it is an essential element in a quick response time.

Strategies:

- Phone lines / Radio channels created to enable communication between organisers, support crews and emergency control organisation. Refer to Annexure A.
- One channel to be dedicated for information broadcasts from officials to support boats only.
- A central station is to be introduced for communication regarding the locations of swimmers, withdrawals from the event and incidence reports.

HUMAN FACTORS – POST-RACE

Reference No. 7.1/7.2/7.3	Identified risk	Rating
	Dehydration/fatigue/cramp etc...	High
Although a competitor may have finished the event, the effects may manifest into an injury shortly after completion.		
Strategies: <ul style="list-style-type: none"> - A manned first aid tent will be set up on the finish line. - The Rottneest Island nursing post to be part of the ECO. - The Rottneest Island nursing post to be informed of all conditions. 		
Reference No. 7.4	Identified Risk	Rating
	Lost support on island	Low
The finish line may be fairly congested as the swimmers come in. It is important that they can find their support crew on the beach to supply clothes, fluids, food etc.		
Strategies: <ul style="list-style-type: none"> - A PA system will be put in place so that constant announcements can be made regarding finishing teams and any lost support/swimmers. - A recovery area is set up as a meeting area. - Post event planning information required as part of entry, eg: mooring destination 		
Reference No. 7.5	Identified Risk	Rating
	Lost Swimmer	High
Just as competitors had to register at the start, all competitors will be crossed off at the finish. If after all competitors (visible) have finished and some names have not been crossed off, this is a sign of a possible incident to either support crew or swimmer.		
Strategies: <ul style="list-style-type: none"> - Support crews for swimmers that fail to finish will be instructed to contact the RCS to advise of withdrawal (inclusion of information at briefing and race pack.) - Competitors will try to be located on the island. - Support crew will try to be located on marine radio - Refer to Annexure A. Major emergency - Lost support crew swimmer. 		
Reference No. 7.6	Identified Risk	Rating
	Delineating between competitors and visitors	High
At the conclusion of the event competitors who are no longer involved in the event become injured or ill.		
Strategies: <ul style="list-style-type: none"> - Refer 7.1 - Visitors to the island to be the responsibility of the RIA nursing post 		

ENVIRONMENTAL FACTORS – POST-RACE

Reference No. 8.1	Identified Risk	Rating
	Egress from beach	Low
The finish area includes pathways, rocks and potentially syringes etc which all pose a risk to competitors and spectators..		
Strategies: <ul style="list-style-type: none"> - Gain permission from the Rottneest Island Authority - Sweep beach of any hazards before finish. - Sign post fixed hazards - First Aid tent at finish line. 		

CRAFT/VEHICLE FACTORS – POST-RACE

Reference No. 9.1	Identified risk	Rating
	Illegal Moorings	Significant
While illegal moorings is not the role of the RCS. It is an area of potential risk not so much to the competitors but more so to the reputation of the race organisers		
Strategies: <ul style="list-style-type: none"> - Information on expected mooring location will be gathered from participants entry form applications - Evidence of craft expecting to moor in crowded areas will be advised to locate to other areas prior to race day. - The Rottneest ranger will be alerted and on hand to police any illegal moorings. - RCS will assist RIA Rangers by supplying additional rangers for the day 		

Reference No. 9.2	Identified Risk	Rating
	Moorings to close to finish	High
When some teams have finished and have moored other competitors will be still finishing. In the final stages of the race, competitors will swim through the moorings. This congestion could cause an incident.		
Strategies: <ul style="list-style-type: none"> - Course markers will be in place from the 15 km mark to guide craft along safest route. - Finish lanes will be constructed through the moorings. - Two rescue boats will patrol the finish area to assist in control. - An area will be set aside for support crew unloading and swimmer loading. - Movement around the finish area will be controlled. Refer to Annexure H. 		

Reference No. 9.3	Identified Risk	Rating
	Boats loading/unloading	High
Please refer to 9.2		

Reference No. 9.4/9.5	Identified Risk	Rating
	Hitting Competitors / Ski Congestion	High
Please refer to 9.2		