



M2M Racing & ThunderCat Racing UK

Friday 16th June Set-Up, Racing Saturday 17th & Sunday 18th June 2017

CAERNARFON

RISK ASSESSMENT

Issued by Fiona Pascoe - Date 07/04/2017 - Issue No. 1

WILL BE SENT TO: CAERNARFON COUNCIL – COAST GUARDS – POLICE – HARBOUR MASTER AND THOSE CONCERNED

WHEN THE EVENT IS TAKING PLACE - DUE TO THE ENVIROMENT - WORKING WITH TIDES, SEA STATE AND THE TYPE OF EVENT – RACING IN POTENTIAL SURF CONDITIONS. THE RACE COMMITTEE, RESCUE OFFICER, OFFICER OF THE DAY AND EVENT DIRECTOR MAY NEED TO ALTER PROCEDURES, COURSE OR SPECIFIC DETAILS WITHIN THIS RISK ASSESSMENT DUE TO FORCE MAJEURE AND UNDER THE GROUNDS OF SAFETY.

ORGANISING BODY

The ThunderCat Racing Events are organised by event organisers ThunderCat Racing Ltd and M2M Racing Club Ltd, which is an RYA affiliated club formed for organising the racing. ThunderCat Racing Ltd arranges the events and both companies are registered in England and Wales. M2M's committee members have been involved in the organisation of such sporting events for in excess of 25 years at local, national and international level.

GENERAL

The planning and operation of the event falls into three general categories and it is these areas of operation and associated risk that are highlighted, assessed and evaluated within this document:

3.1 PRE-EVENT PLANNING. 3.2 SAFETY COVER FOR WATERBORNE ACTIVITIES. 3.3 SAFETY COVER FOR LANDBASED ACTIVITIES.

3.1 PRE-EVENT PLANNING.

M2M Racing Club Limited, is an affiliated club to the RYA. The RYA is the national authority-controlling powerboat racing in the United Kingdom. The RYA is in turn, affiliated to the Union Internationale Motonautique (UIM), the international governing body of the sport. M2M through their association with the RYA, are able to help formulate the proven guidelines in the planning and execution of racing.

SUITABILITY OF LOCATION

The Pit Areas will be located, in the enclosed area at the end of Bank Quay. The boats will be stored in the pit area within the Dry/Wet Pits as plan, this area will be marshalled and all safety precautions taken and the area will be a no smoking environment, with all the required safety equipment. All the boats will be scrutineered within these areas; after the boats have been scrutineered the boats will be launched as plan. To minimise the risk factor all boats will fuel and re fuel at Fuel compound within the marshalled Dry pit area. Once boats are ready to race they will proceed under the direction of the Pit Marshal to the wet pit area in the Marina.

Good communication with local water users both before and during the event is seen as criteria. This will be carried out by the organisers with regular updates bulletins to all concerned. As with all powerboat racing events throughout the country, harmony between user groups is the key to the event. Our safety will also insure that no third party comes into our racing area. If a third party does encroach into the race area, immediately the red flag is raised to stop racing. It is reasonable to assume that Caernarfon Council accepts the risk elements that are associated with such an event and together with the event organisers can work to minimise public exposure to any dangers envisaged. Correctly planned and executed, with good communication between organisers, national authorities and local authorities, the proposed location offers no greater risk than for other events successfully staged throughout the country.

LAND BASED ADMINISTRATION:

ThunderCat Race control will be based within the Administration tent situated overlooking the race area. This will be used for meetings and will adhere to the site rules and regulations for fire and safety.

SUITABILITY OF COURSES.

It is proposed to run a Circuit type UIM course or an endurance circuit with the equaliser lap, this is a modified course from the UIM standard circuit course. The courses will be laid Friday afternoon and finalised each morning of the racing days. The Officer of the Day and Rescue Officer will confirm that courses are satisfactory and correct and will gain consent with the Event organisers – ThunderCat Racing Ltd and M2M Racing Ltd prior to racing.

Details of the timetable including safety and drivers briefing are included in the Race Instructions.

1. All relevant regional offices of H. M. Coastguard
2. All relevant harbour and local authorities.
3. All relevant local sailing and cruising clubs

3.2 SAFETY COVER FOR WATERBOURNE ACTIVITIES.

Members of the organisation committee of M2M are recognised trained RYA Officials and nominated personnel are approved national Officers of the Day and Rescue Officers for the Royal Yachting Association. With over 20 years of experience in the running of safety operations networks for powerboat racing it is acknowledged that it is not just the quantity of safety boat cover but the quality in the organisation.

PATROL AND RESCUE CRAFT.

Nothing less than a professional approach to the organisation and administration of pre-event safety planning, through to the running of the safety network on the day. The high profile of an event such as this means that a high priority is placed on safety and as such the team is led by a Rescue Officer whose experience includes not only powerboat race safety but has an organisational background.

The safety control operation for the event is to be situated overlooking the racecourse with radio communication, additionally, there will be a specialist surf team of jet skis/cats on the water at all times that race boats are afloat. A team of safety marshals will patrol the surf line along the racecourse to assist both race and safety/rescue vessels in shallow water up to 1 metre. A doctor and paramedic will be available each day of the event.

All safety personnel receive a mandatory pre-race briefing from the Rescue Officer. Both open and closed radio communication is used dependent upon need. Mobile cell phones are also used to effect. The organisers operate at all times within the guidelines laid down by the RYA's General Safety Plan for Officers of the Day and Rescue Officers. This document includes recommendations for operating the safety support network, safety equipment and incident control procedures. This document has evolved over a period of time and is issued to all relevant officials of the RYA. It is therefore safe to assume that the organisers will use only those personnel qualified under the RYA Approved Race Officer scheme. Providing them with the infrastructure to permit them to set up and run the highest standard of safety network throughout the event in association with the qualified external safety and medical teams employed by the organisers.

ACCIDENTS INVOLVING PARTICIPATING BOATS.

The safety fleet, under the control of the Rescue Officer, monitor the progress of all competing boats throughout the Race. Accidents involving only boats and not involving personal injury to competitors will be dealt with by this fleet.

ACCIDENTS INVOLVING RACE BOATS AND THIRD PARTY VESSELS.

Accidents involving race boats and third party vessels, but not involving personal injury to the crew of either vessel, will be dealt with by this fleet.

ACCIDENTS INVOLVING PERSONAL INJURY.

Accidents involving personal injury to anyone will be (a) assessed and / or dealt with under the strict control of the Rescue Officer and Race Doctor or (b) assessed on the water by Race Paramedics and passed into the hands of other marine safety services for hospitalisation if required.

The Race Secretary maintains a full listing of hospitals with Accident and Emergency facilities for the use of the Rescue Officer, Medical Coordinator and Medical Officer. The Medical Coordinator with direction from the Medical Officer is in contact with any standby medical facilities offered by the local authority. In the event of a serious injury that cannot be recovered within a reasonable time scale at the main event area, subsequent arrangements will have been made for retrieval at other positions on the course. All details are held by the Race Secretary in ready for the relevant safety heads of departments call, whose decision to use them will be based on advice from the attending Medical Officer. The first priority of the safety fleet is the preservation of life.

CAPSIZING OR SINKING VESSELS.

In the event that the responding vessel from the safety fleet cannot deal with a capsizing: or sinking craft, the Rescue Officer will call upon other Patrol boats to assist. The Thundercat boats only weight with engine maximum of 200 kilos, there for deem to cause minimum risk for towing and are manufactured so two persons can right the boats on their own and re start the engines (all boats do carry paddles for emergency purposes).

VESSELS IN A DANGEROUS CONDITION.

Should any vessel be found to be in a condition likely to compromise the safety of either the crew, the attending vessel or the environment (as in the case of a fuel leakage), then the Rescue Officer, or his team attending the incident, shall refer the matter directly to the relevant harbour authority and be advised accordingly. It is the responsibility of the owner to ensure that such instructions are complied with. The overall event organisers do have procedures in place to deal with fuel leakage.

LAUNCHING, BERTHING, RETRIEVAL AND PIT MOVEMENTS.

All launching, berthing, retrieval and pit movements will be under the strict control of the M2M shore side and organising teams for the duration of the event. A rubber matting will be laid down to the launching slipway to prevent slipping and give grip to the teams on recovery of boats.

CONCLUSION

It is reasonable to assume that all risks associated with the monitoring, response to and recovery of personnel or race craft can be handled properly through the fast response of the safety fleet, under the direct control of the event Rescue Officer & OOD, whilst liaison with the necessary services at hand.

3.3 SAFETY COVER FOR LAND BASED ACTIVITIES

The event occupies the land Bank Quay, Caernarfon, Gwynedd, LL55 1SR and will be secured and marshalled throughout the event under the direction of the Event Safety Officer and Rescue Officer. The Pit area will be designated as a NO SMOKING area throughout the duration of the event.

THE M2M SHORE SIDE TEAM WILL BE RESPONSIBLE FOR THE FOLLOWING:

- a) Implementation of safety procedures and other instructions.
- b) Controlled launching and recovering of boats.
- c) Prevention of fire and elimination of risk
- d) Liaison with all safety and emergency services.
- e) Safety of the participants, officials, sponsors, invited guests and the public in general.
- f) Liaison with other authorities as designated

- g) Dealing with emergency situations as they occur.

EQUIPMENT PERMANENTLY MAINTAINED AND AVAILABLE THROUGHOUT THE EVENT WITHIN THE PIT AREA WILL INCLUDE:

- a) Fire extinguishers - dry foam and foam types.
- b) Other as designated by statutory authorities in discussion with the event organisers.

MARSHALS

Marshals are all issued with blue ThunderCat jackets or hi-vis jackets, VHF radios and flags. All Marshals briefed on specific duties where appropriate. A member of the race committee is always present at the race desk to ensure that Marshals are present and aware of their duties. We have designated Marshals to keep general public away from the designated pit areas ensuring general public are at a safe distance, we also have this designated area cornered off with high visibility tape or fencing. We then have Marshals to spot and incidents from shore, notifying boats to stop or be cautious although this happens on the water as well it allows maximum visibility for racers to be notified in the case of an incident. Finally, we have designated Marshals to marshal the pit area and slipway; this involves controlling public, supervising re-fuelling and launching areas and ensuring that all the compulsory health and safety procedures are carried out.

CONCLUSIONS

The risks most associated with the land-based operations of the event have been taken into account and efficient safety and official procedures in place to eliminate the risks where possible. The risks involved with staging a race off Caernarfon under the close supervision of suitable safety boats is very low. If there is a perceived risk of danger, the safety boats will raise a Red flag and the fleet will slow, stop, and await advice on the next course of action.

THE EVENT IS ORGANISED BY THE COMMITTEE OF THE M2M RACING CLUB LTD AND THUNDERCAT RACING LTD

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CONTACT NUMBERS FOR ORGANISING COMMITTEE

PRIOR AND AT THE EVENT

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RISK ASSESSMENT

Key	Estimated Level #	H = High. M = Medium. L = Low	Equivalent Numeric N H = 3. M = 2. L = 1
	Impact M on life	Serious injury or death = 3. Paramedic or Ambulance = 2. First Aid only = 1.	
	On property	Write off = 3. Repairable damage = 2. Minor damage = 1.	

Hazard	No	Description of hazard	Estimated Risk Level Before Measures #	Equivalent Numeric Before Measures N	Likely Impact M	Risk Factor NxM	Control Measures (see Standard Risk Control Measures list in Appendix)	Final Risk Assessment
1. Dry Pits	1.1	Boat paddock	M	2	1	2	1.1 1.4 1.8.1.13	Low

	1.2	Fire on boats	M	2	3	6	1.1 1.2 1.4 1.8 1.13	Low
	1.3	Movements	L	1	1	1	1.1 1.4 1.8 1.13. All vehicle movements with in the pit area will be kept to a minimum and display hazard warning lights. Any vehicle reversing will be supervised by a marshal	Low
	1.4	Protruding machinery, unattended tools and other trip hazards around boats	L	1	1	1	1.1 1.4 1.13 Propellers to be covered equipment in storage	Low
	1.5	Falls from boats.	L	1	2	2	1.1 1.4 1.13	Low
	1.6	Transfer of Fuel	M	2	2	4	1.1 1.2 1 4 1.5	Low
2.Wet Pits	2.1	Mooring	L	1	1	1	1.1 2.2 4.5	Low
	2.2	Boat Movements	L	1	1	1	1.1 2.2 4.5	Low
	2.3	Falls from boats	L	1	1	1	1.1 1.8 1.13	Low
	2.4	Fire	M	2	2	4	1.1 1.4 1.13 3.1	Low
	2.5	Transfer of Fuel	M	2	2	4	1.1 1.2 1.13	Low
3. Launching & Recovery	3.1	Access to launch area	L	1	1	1	1.1 1.2.1.13 When not in use to be kept clear for emergency access.	Low

	3.2	Recovery of sinking vessels	M	1	2	2	1.1 1.2 1.9 2.2 2.7 2.8 4.2 4.3 4.5	Low
	3.3	De-fuelling damaged boats	M	2	2	4	1.2 1.2 1.13.	Low
	3.4	Crowd control at an incident	L	1	1	1	1.1 1.4 1.9	Low
	3.5	Recovery of crews requiring medical attention	L	1	1	1	1.1 1.3 1.5 1.13	Low
	3.6	Movement of boats from dry to wet pit and back	L	1	1	1	1.1 2.2	Low
4. Pre Race Hazards	4.1	On water boat testing	L	1	1	1	1.6 2.2 2.6 2.10 2.13 3.1 3.2 No on water testing is allowed without the permission of the OOD and Rescue Officer.	Low
	4.2	Muster area	L	1	1	1	3.3	Low
	4.3	Spectator craft	L	1	1	1	2.2 2.3 2.6 2.8 2.10 2.13 3.2	Low
	4.4	Start procedure	M	2	2	4	Starts will be as per UIM Rule	Low
5. Collisions	5.1	Start Lap	H	3	2	6	1.6 2.1 2.2 2.6 2.7 2.8 2.9 2.10 2.11 3.2	Medium
	5.2	Racing boat with racing boat	M	2	2	4	1.6 2.2 2.6 2.7 2.10 2.11 2.13 3.2	Medium
	5.3	Racing boat with spectator boat	L	1	2	2	1.5 1.6 2.1 2.3 2.4 2.6 2.7 2.8 2.103.2	Low

	5.4	Racing boat with commercial traffic	L	1	2	2	1.5 1.12 2.3 2.6 3.2	Low
	5.5	Commercial vessel with	L	1	2	2	2.10 2.13 3.2	Low
	5.6	Spectator boat with spectator boat	L	1	2	2	2.10 2.13 3.2	Low
	5.7	Safety boat with spectator boats	L	1	2	2	2.2 2.10 2.13 3.2	Low
	5.8	Racing boat with safety boat	L	1	2	2	2.10 2.11 2.13	Low
	5.9	Equipment failure	M	2	2	4	3.1	Low
	5.10	Capsize due to sea state	L	1	2	2	1.6 1.11 2.6 2.12 3.2	Low
	5.11	Capsize due to equipment failure.	L	1	2	2	3.1	Low
6. Personal Injury	6.1	Man overboard	M	2	2	4	1.13 2.6 2.7 2.8 2.9 3.1 3.2	Low
	6.2	Injury requiring external rescue services	M	2	2	4	1.9 1.13 2.7 2.8 2.9 2.10 3.2 4.6	Low
	6.3	Injury in the wet pits.	L	1	2	2	1.13 2.9 all safety marshals on surf line to be adequately dressed with buoyancy aid and helmet.	Low

	6.4	Injury in the dry pits	L	1	2	2	1.13 2.9	Low
7. Other Hazards	7.1	High winds	M	2	2	4	1.3 1.11 2.12 4.1	Low
	7.2	Fog	L	1	2	2	1.11 2.12.4.1	Low
	7.3	Engine failure or other breakdown	L	1	1	1	2.6 2.7 3.2 4.2 4.3 4.5	Low

APPENDIX: STANDARD RISK CONTROL MEASURES

1: PLANNING

	Measures	General Comments	Specific Event Comments
1.1	Venue	Selection of venue and necessary facilities.	All areas within the event to be monitored and controlled by marshals. No Smoking. No public access to pit areas. Controlled by barrier or tape Fire points to be placed within pit areas and as necessary within event.
1.2	Fuel	Fuel Supply	Fuel to be purchased by authorised supplier – Petrol pump unleaded only as per rules.
		Transfer of fuel	Transfer of fuel is prohibited except in the authorised area within the marshalled pit area. Spill trays and absorbents are to be on site.

		Movement of Fuel	Fuel is to be moved in sealed approved fuel containers designed for this use and used on the race boats. Any leak is to be reported to the chief marshal immediately. In case of Emergency Chief marshal or Safety team to oversee. Any area where fuel is moved to or from is to be non smoking. Any area where fuel is present must be covered by fire points.
		Storage	Kept out of direct sunlight in storage bin and well ventilated. Max amount in any one bin to be agreed. Controlled at all times by marshals and sited within the pit area with no public access. This area to be surrounded by a clear area and have adequate fire points. Spill trays and absorbents are to be on site.
1.3	Use of Tidal Predictions	Event planned around tidal range to facilitate launching and recovery.	Racing for all disciplines are aware of the tidal restrictions and are working within its boundaries.
1.4	Advance Briefing of Race Management	By email and oral instructions	
1.5	Advance Safety Briefing with Authorities	Liaison between organising committee, Safety Organisations and Harbour Authority	The organisers have and will continue to liaise with all organisations and the race committee.
1.6	Course Planning	Courses should be planned and required authorities notified.	Note that the course will change during the racing due to tidal movements. Standard practice.
1.7	Other Waterborne Events	The committee has notified other associations about our intention to stage the event and enquired about any clash of timetables.	
1.8	Event Manning	The event officers have been chosen from approved RYA lists and have experience of running events.	See separate list

1.9	Emergency Procedures	Action plan for emergencies.	In accordance with RYA guidelines.
1.10	Media Management	Establish point of contact, especially in the event of an emergency to control information to the media.	Race Secretary and the RYA Press Office will liaise with the press in the event of an incident
1.11	Weather Monitoring	Use of weather forecast information when deciding whether to proceed.	Regular weather updates will be obtained and notified to crews at briefing times.
1.12	Shipping Movements	Includes obtaining details of planned movements from authorities.	Any shipping movements in the area will be notified to crews at briefings.
1.13	Medical Emergencies	Suitable medical facilities should be made available at the event.	Doctor and Paramedics will be at the event and onsite at all times during the race.

2: COMMUNICATIONS

	Measures	General Comments	Specific Event Comments
2.1	Advance Programme	Advise competitors of the race status, timetable and conditions of entry.	Advance programme will be issued to all licensed drivers, officials and authorities.
2.2	Race Instructions	Event Racing Instructions are issued to competitors and officials to include specific rules and amendments, compliance with harbour by-laws and collision regulations.	The facility exists to issue amendments to the instructions as appropriate
2.3	Notification to Mariners	Appropriate information about the races will be posted by authorities if required.	

2.4	Notification to Sailing Clubs	Sailing Clubs in the area and nearby areas will be notified if required.	
2.5	Competitors shore contact	Crews complete next of kin forms prior to racing.	Usually when signing on at race control
2.6	Signals	Notification of cancellation, postponement and abandonment will be communicated to crews by flag signals from the committee boat and from safety boats.	<p>Red from start boat before start run – Race Abandoned.</p> <p>Red flag from start boat or beach start during start – Start Aborted.</p> <p>Green flag from start boat or beach start – Race Started.</p> <p>Chequered flag from committee boat –Race Finished</p> <p>Red flag from safety boats or beach - Race Stopped.</p> <p>Yellow flag waved from safety boat or beach – Caution Danger Nearby.</p> <p>Pink Flag to be followed to muster point after incident or for restart.</p> <p>(Any crew that fall into the water whilst racing the safety boats raise the red flag to abort and show other vessels to stop, race aborted. Race boats are not to move until instructed by the safety team.)</p>
2.7	VHF Radio Announcements	Crews and safety boats will be in communication with the Rescue Officer.	<p>VHF for Race Boats Channel given in safety & drivers briefing</p> <p>VHF for mark boats</p>
2.8	Communications with Authorities	Rescue Officer, OOD and Race Control will be in contact with HM Coast Guard, Harbour Masters and RNLI by VHF and telephone if required.	Event Secretary OOD Safety Officer equipment
2.9	Internal Communications	Race Officers and key personnel will have use of a private VHF channel and mobile phones.	A list of mobile numbers will be issued to officials when they sign on at race control.

2.10	International Regulations for the Prevention of Collisions at Sea	Used for right of way for racing and non-racing traffic	Reiterated in Race Instructions
2.11	Race Briefing	Mandatory Briefing on racing and safety matters will be given to all competitor crews.	The OOD, Rescue Officer will brief the crews prior to racing each day.
2.12	Weather Briefing	In the event of bad weather the OOD will give crews a further briefing closer to race start time.	Time to be announced at drivers briefing.
2.13	Safety Briefing	Briefing for safety fleet.	The Rescue officer will give a briefing to mark boats, safety boats and patrol boats.

3: CONTROL MEASURES BEFORE THE START

	Measures	General Comments	Specific Event Comments
3.1	Safety Inspections	Full check of safety equipment by race scrutineers according to RYA requirements.	Scrutineers will check seaworthiness of boats, equipment and personal safety equipment required at the event.
3.2	Marshalling boats/patrol and escort vessels	Safety patrol vessels for control of competitor's spectators and other traffic during the event.	The rescue officer will organise sufficient safety and mark boats for the safe running of each race.
3.3	Competitor Marshalling Areas	Designated waiting areas for the start and postponement of the race	Muster area described in race instructions are for the gathering of boats before the start. Notification of postponement will be by flag signals and instructions will be given by the start boat.
3.4	ThunderCat HQ Tented Area	Allocation of site and setup use of onboard	Allocation of site by M2M Racing club set up and use as per M2M and ThunderCat

		equipment	Racing Ltd guidelines.
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4: CONTROL MEASURES AFTER THE START

	Measures	General Comments	Specific Event Comments
4.1	Abandonment	In the event of adverse weather or other factors.	If the race is stopped early safety boats will red flag all race boats as per directive in race briefing and race instructions.
4.2	Towing of Breakdowns	Provision of safe towing of boats without means of propulsion.	The rescue officer on VHF (Channel given in race briefing) will make the selection of suitable safety boats for the towing of race boats and instructions of safe towing will be given at safety briefing.
4.3	Retirement of race boats	Monitoring of the race boats by the safety fleet and Safety officer.	Retired boats must move off of the line of racing to a place of safety, signalling by hand to a safety boat if it does or does not require assistance. After the race has finished it will make its way back when instructed to do so by a safety boat.
4.4	The Finish	Control of boats at the finish.	When a race boat passes through the finish gate and takes the chequered flag it will go to the designated muster area that was explained in race briefing, all boats must come off the plain and wait till the safety boat has signalled for the race boats to return to shore.
4.5	Boat Recovery	Control of boats after the race.	Boats having completed the race or having been towed back will proceed to the wet pits at 5knots or less and tie up. Marshals will supervise the safe recovery and loading

			of trailers.
4.6	Recovery of Fatalities	Dealing with recovery of fatalities from safety vessels.	Any fatalities will be recovered and taken to the designated first-aid unit instructed at the time by the medical officer to await transportation to the hospital Police will be notified and the vessels involved will be secured for the Coroner, according to RYA guidelines. Relatives will be taken to a private room.





