#### **Royal Naval Amateur Radio Society**



#### **Event Risk Assessment**

#### **EVENT DETAILS:**

	Call signs used	
	Date/s of event	
	Description of event	
	Host organisation	
	Location of event	
	H&S Officer	
_		
Risk assessments c	an be performed by so	meone with a reasonable ability to recognise some of the risks that prevail for the activity.
This Risk Assessme	ent has been conducted	d by

Signed: \_\_\_\_\_\_ Print Name: \_\_\_\_\_ Date: \_\_\_\_\_

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#### **General**

HAZARD	WHO MIGHT BE HARMED?	HOW IS THE RISK CONTROLLED?
Visibility	Event station operators	During all erection and dismantling operations high visibility clothing and a hard hat will be worn by the teams performing the operations.
Poor illumination	Event station operators and members of the public.	A suitable, fully charged torch must be carried to enable safe working at night time (24 hour station operations).
Weather conditions	Event station operators and members of the public.	Suitable protection should be provided for the effects of sunburn. Drink plenty of water and take regular rest breaks.  Antennas will not be erected when there is a possibility of thunderstorms in the vicinity.

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## **Antennas and masts (1)**

HAZARD	WHO MIGHT BE HARMED?	HOW IS THE RISK CONTROLLED?
Erection & dismantling of masts & supports/ supporting systems/guys  "Avoidance of danger from overhead power lines"  – HSE publication GS6 (3rd edition) 1991 ISBN 0 11 885668 5  "Working safely near overhead power lines  – Agricultural information sheet 8"  Available from HSE.	Event station operators	One person will be designated Leader of the antenna team and brief the team accordingly prior to erection or dismantling of antenna systems.  Suitability of the ground to be assessed prior to installation.  Site to be clear of overhead cables.  Ropes and wires to be appropriate for the type of aerial system in each case and windage taken into account (weather).  Safety Clothing to be worn during work on aerial systems; Gloves, footwear, hard hat (page 1)
Trip hazard on antenna mast guy ropes/wires  Trip hazard on the tent guy ropes.	Event station operators and members of the public.	An exclusion zone is to be marked out around tents and antennas with either stakes and warning tape, or crowd control barriers.
Trip hazard on antenna mast guy ropes/wires  Trip hazard on the tent guy ropes (continued)	Event station operators and members of the public.	Ground stakes will be appropriately marked.  'No Entry' signs will be placed along the perimeter of the exclusion zone at regular intervals to warn the public not to cross into the exclusion zone.  Next to each 'No Entry' sign will be placed a 'Warning' sign to remind station operators, and other authorised persons, of the dangers of crossing in to the exclusion zone.

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## **Antennas and masts (2)**

HAZARD	WHO MIGHT BE HARMED?	HOW IS THE RISK CONTROLLED?
Trip hazard on the tent guy ropes (continued)	Event station operators and members of the public.	Ground stakes will be appropriately marked.  'No Entry' signs will be placed along the perimeter of the exclusion zone at regular intervals to warn the public not to cross into the exclusion zone.  Next to each 'No Entry' sign will be placed a 'Warning' sign to remind station operators, and other authorised persons, of the dangers of crossing in to the exclusion zone.
Falling objects, antennas and masts during erection and dismantling.	Event station operators and members of the public.	Where appropriate the area in which the antennae are being erected/ dismantled will be marshalled to keep members of the public away from the site.  Two event station operators will be involved in erecting and dismantling the antennas. They will both check to ensure that all securing bolts are tight. One will hold the mast whilst the other strings out and fixes the guy ropes.
Falling antennas and masts during the operation of event station equipment.	Event station operators and members of the public	All antenna masts will be securely guyed using guys and fixtures specified to exceed a loading of Beaufort Force 5.  All guy ropes will be checked prior to installation and any chaffed ropes will be replaced.  Wind speeds will be constantly assessed and the masts will be dismantled and the Event Station shut down when conditions dictate.

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## Antennas and masts (3)

HAZARD	WHO MIGHT BE HARMED?	HOW IS THE RISK CONTROLLED?
Falling antennas and masts during the operation of event station equipment (continued)	Event Station operators and members of the public	A flag will be placed on top of the highest mast so that wind speed can be gauged – a method of measuring wind speed recognized by the Metrological Office.  An exclusion zone will be marked out around the tent and antennas in to which the antennas and masts can fall without fear of striking members of the public.  'No Entry' signs will be placed along the perimeter
		of the exclusion zone at regular intervals to warn the public not to cross into the exclusion zone.  Next to each 'No Entry' sign will be placed a 'Warning' sign to remind station operators, and other authorised persons, of the dangers of crossing in to the exclusion zone.
Electric shock hazard from touching aerials during RF transmission	Event Station operators and members of the public	An exclusion zone will be marked out around antennae masts with either stakes and warning tape, or crowd control barriers.  'No Entry' signs will be placed along the perimeter of the exclusion zone at regular intervals to warn the public not to cross into the exclusion zone.  Next to each 'No Entry' sign will be placed a 'Warning' sign to remind station operators, and other authorised persons, of the dangers of crossing in to the exclusion zone.

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#### **Electricity Supplies & Generators (1)**

HAZARD	WHO MIGHT BE HARMED?	HOW IS THE RISK CONTROLLED?
General	Event Station operators	Generators should only be attended by those trained in their use.
"Electrical Safety of Independent Low-Voltage AC. Portable and mobile generators and connected systems" - HSE document OC482/2		Use of generators must be in compliance with the instructions and safety notices published in the manufacturer's manual.
		The generator should be operated on a level surface.
		Generators must have a suitable ground earth spike connected prior and during operation.
		Generators must not be placed within close proximity to antennae and feeder systems where RF fields are likely to cause arcing and fire hazards to generator equipment and to AC supply cables.
		An RCD will be used to minimise the risk of electric shock at all times.
Electrical shock hazard from equipment when operating from a 240v AC power supply.	Event Station operators and members of the public.	When using a generator, it will be earthed at the generator and the earth connection on the electrical supply will be checked to ensure that it is wired correctly.
		The generator is to be placed within an exclusion zone to keep it away from members of the public.

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## **Electricity Supplies & Generators (2)**

HAZARD	WHO MIGHT BE HARMED?	HOW IS THE RISK CONTROLLED?
Electrical shock hazard from equipment when operating from a 240v AC power supply. (continued)	Event Station operators and members of the public.	When using a mains electricity supply, the earth of all 13A sockets will be tested to make sure that they are wired correctly.  The generator must be surrounded by a wind break and placed beneath a shelter suitable to prevent the generator from becoming wet during a rainfall.
		The generator is not to be operated with wet hands at any time.
		Examine all power leads and plugs for damage.
		Look for signs of overheating (burn or scorch marks).
		Ensure correctly rated fuses are fitted to plugs for the load applied.
		Ensure no bare wires are visible from connectors or sockets.
		Ensure all terminal connections are tight. Where appropriate ensure that mains operated equipment is PAT tested for safety compliance.

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## **Electricity Supplies & Generators (3)**

HAZARD	WHO MIGHT BE HARMED?	HOW IS THE RISK CONTROLLED?
Carbon monoxide (CO <sub>2</sub> ) poisoning.	Event Station operators and members of the public.	Ensure generators are at least 1 meter away from any building, tent, vehicle etc. Generators to be placed and run in well ventilated locations.  Generators will not be run indoors.
FIRE - GENERATOR/ GENERATOR FUEL  A suitable extinguisher may be:  1. Carbon Dioxide Gas Extinguisher  2. Dry Powder Extinguisher  Do Not Use Water or Water Based Extinguishers	Event Station operators and members of the public.	Fuel is be kept at least 10m away from the generator when it is in use.  Fuel should be kept in an authorised and clearly marked container.  Generators will not be refuelled with the motor running.  Generators will be left for twenty minutes and allowed to cool down before refuelling takes place.  Naked flames will not be allowed within 20m of any fuel source.  A suitable fire extinguisher is to be located nearby.
Batteries	Event Station operators and members of the public.	All batteries whether in vehicles or stand alone, including supply cables, shall be appropriately fused and an RF earth applied via ground spike where required by radio equipment manufacturers.  Stand alone batteries must be placed on a level surface, properly vented and secured, and out of reach from the public. All cables shall be free from strain.

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# **Trip Hazards**

HAZARD	WHO MIGHT BE HARMED?	HOW IS THE RISK CONTROLLED?
Trip hazard from trailing cables	Event Station operators and members of the public.	All cables within the Special Event Station operating area will be routed to ensure that nobody can trip over them.
Trip hazard from trailing cables (continued)	Event Station operators and members of the public.	Where cables have to cross a floor area of the operating area, they shall either be routed through insulated rubber bridges, specifically designed for the task, or sunk in the ground.
		Where it is essential to route cabling runs along walkways they shall be safely secured to floors or walls.
		Antenna cables/feeders must have a suitable point of entry into building, tent, vehicle etc.
		Ensure cables/feeders do not impede access through doorways, emergency exits etc.
		Antenna cables within the antenna exclusion zone will not be covered as the exclusion zone is designed to keep people out of the area. The 'Warning' signs will remind station operators and other authorised persons of the trip hazard within the exclusion zone.

#### **FIRE**

HAZARD	WHO MIGHT BE HARMED?	HOW IS THE RISK CONTROLLED?
Fire in the tent  Based on the assumption that there may be a station operating under canvas for one or more days	Event Station operators and members of the public.	A fire extinguisher is to be kept inside the tent to deal with electrical fires.  A fire blanket or a suitable extinguisher is to be kept inside the tent to deal with kitchen or cooking area fires.  Where possible, two exits are to be maintained within the tent to ensure everyone can evacuate quickly.

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## Cooking

HAZARD	WHO MIGHT BE HARMED?	HOW IS THE RISK CONTROLLED?
Burns from cooking equipment, fats and oils where a kitchen/cooking area is being used.	Event Station operators and members of the public.	The kitchen area is to be permanently manned at all times when cooking is in progress.  Once used, hot pans and kettles, etc are to be placed safely out of reach where they cannot be knocked over, or taughed by assident.
		or touched by accident.  Cooking equipment shall not be kept burning whilst not in use or when the tent is not manned for that purpose.

#### **Motor vehicles**

HAZARD	WHO MIGHT BE HARMED?	HOW IS THE RISK CONTROLLED?
Installing radio equipment in motor vehicles	Event Station operators and members of the public.	Batteries should be correctly vented to prevent gas build up.
		Batteries should be secured to prevent spillage.
		All connectors and cables should be adequately protected.
		The termination of flexible cables should be free from strain.

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# **Equipment Handling**

HAZARD	WHO MIGHT BE HARMED?	HOW IS THE RISK CONTROLLED?
Personal injury from the handling and lifting of equipment.  The maximum weight to be lifted by a woman to elbow height is 13Kg and 20Kg for a man.  Refer to:	Event Station operators	Before lifting any equipment the operator should assess the equipment to be lifted. If the operator feels that the equipment will be too heavy to lift on their own a lifting aid shall be used. Where a lifting aid is not available, an operator must seek assistance or seek to reduce the weight of item to be lifted.
http://www.hse.gov.uk/pubns/indg143.pdf		The operator will adopt a suitable stable position during the lift.  The operator will seek to clear the path to be taken before attempting the lift and carry procedure.

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#### WHERE THE RNARS HQ BUILDING IS PART OF AN EVENT OR USED AS A PRIMARY SITE ON OPEN DAYS

Including all of the foregoing risks in the previous risk assessment, additional hazards might arise from the building environment, fixtures and fittings. Event organisers should be familiar with the RNARS Building Health & Safety Checklist in order to make whatever required adjustments are necessary to maintain adequate health and safety for RNARS members/operators and visitors.

#### In particular:

- All furnishings, carpets, curtains and loose items shall be properly sited or stowed away or placed in such a way to prevent trip hazards.
- All furniture to be likewise placed and used as intended. Damaged furniture that is weak and unsuitable (rickety) shall not be used.
- Wheelchair ramps are to be employed at the entrance to the building and at the kerb from the pathway across the grass from the car park.
- The workshop is to be locked at all times, and when work is being carried out in the workshop the door is to be kept closed.
- There shall be no trailing electrical or aerial wires and cables within or extending from the building. All cables to be properly secured.
- All temporary aerials and aerial systems shall be properly secured and arranged so as not to be hazardous by falling/easily dislodged.
- The kitchen door is to be kept closed at all times, bearing in mind there are toilets beyond the kitchen.
- All equipment and equipment wiring in the bays are to be properly stowed and attached to the equipment, or if loose, locked away.
- All aerial patch boards are to be properly setup prior to an event and left in a safe configuration for non-hazardous operation.
- Using the aerial patch boards during an event should be discouraged to prevent RF burn hazards occurring during transmission.
- All radio demonstration systems shall be appropriately located and properly constructed to prevent hazards to people and other equipment.
- Where visitors are invited or ask to 'have a go' on any equipment they must be properly supervised by appropriately qualified members.
- All equipment, equipment displays must be manned at all times. Members/Operators must be prepared to stand-in for comfort breaks.
   The RNARS Building Checklist is available for information.

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