



RISK ASSESSMENT

In Off Road Four Wheel Drive Motor Sport (UK)

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INTRODUCTION

1. Motor sport is an exciting leisure activity providing enjoyment for competitors, spectators and organizers alike. This guidance has been produced by the **Mid Wales Four Wheel Drive Club Ltd** to provide clear advice to Member Clubs involved in organizing off road four wheel drive motor sport events. It has been written because motor sport covers many different disciplines and current advice to organizers about motor sport safety is understandably very general.

2. The most recent advice issued by the Health and Safety Executive (H.S.E.) is HSG112 “*Health and Safety at Motor Sport Events*” which was published in 1999. It provides a guide for employers and organizers and covers planning for safety, employee and volunteer health and safety, spectator safety, emergency planning, competitor and vehicle safety and provides a reference to relevant legislation and associated advice. For Off Road Four Wheel Drive Motorsport, there is a need to develop, from HSG 112, guidance for which is relevant, proportionate and realistic. A key factor in this branch of motorsport is that safety planning falls on volunteer organizers who run events as a leisure activity and not as part of a business for profit or as a work related activity.
3. Any form of motorsport presents risks. Many club organisers and competitors will be familiar with the regulations, which govern the design and safety of competition vehicles, the role of officials at events, the use by competitors and officials of personal safety equipment and of the requirements on event organisers for the provision of fire control and first aid. Less familiar, however, is the concept of safety planning which involves organisers in pre-event planning by undertaking a risk assessment, putting into place a safety plan and when necessary preparing a major incident plan. This guidance addresses these issues and using the principles and examples set out, is intended to assist volunteer club organizers to produce risk assessments and appropriate safety plans for a particular venue and event.

2.0 **Background**

2.1 **Organization of Off Road Four Wheel Drive Motorsport in UK**

In the UK the Royal **Automobile Club Motor Sports Association** is the National governing body for four wheel motorsport and has drawn up a National set of Regulations which are amended from time to time to reflect changes in safety thinking, developments in the sport and new materials and methods. The MSA General Regulations set out how it exercises its powers. These include administrative powers to recognize Motor Sport Clubs in membership of the MSA and thus able to organize motorsport events. In addition, the MSA have a common set of regulations, (which apply to all motorsport disciplines under MSA control), for organizers and competitors with the roles of the various officials and their duties being clearly defined. For each branch of four wheel motorsport there is then a set of specific regulations with Part H being the Specific Regulations for Off Road events. General, Common and Specific Regulations are all published together annually, in the MSA Competitors’ Yearbook, commonly known as the “Blue Book”.

The specific regulations for Off Road cover requirements for organization of events, officials and their roles, the various types of ORFWD events, technical requirements including safety requirements and materials specifications for vehicle related safety equipment.

The Mid Wales Four Wheel Drive Club is dedicated to the promotion of Trials, Promotional Events and Competitive Safari’s, and. is a member of the MSA. It is also a club able to hold events in its own name. The MSA. insists that all motor sport competitions are run to the exacting standards of both MSA and the clubs own regulations, which aim to ensure fairness in competition, maintain the highest levels of safety and ensure that this form of motorsport remains an amateur one. The MSA. publishes its own handbook known as the “Blue Book” which includes its own set of regulations for the

various types of off-road competitions currently organized within affiliated clubs. These Regulations have been developed over many years as ORFWD motorsport has evolved and are complimentary with the MSA regulations.

2.2 **Types of competitive and non-competitive event**

It is not considered necessary to go into the full details of the various types of ORFWD events run by the Mid Wales Four Wheel Drive Club Ltd in this document. For a full description, the reader should refer to the “Mid Wales four Wheel Drive Club Members Handbook”. Broadly, events can be split into competitive and non-competitive events, the later being principally driver training days and off-road promotional days involving member clubs in facilitating an off-road driving opportunity for day visitors.

Competitive events

Take the form of either un-timed or timed events. Un-timed events are known as trials and are basically an un-timed test of a driver’s skill in negotiating a set course over challenging ground without penalty.

The driver with lowest score at the end of a series of tests wins the event. Speeds involved are generally very low and so the risks to competitors and spectators are also low. Three levels of trial can be organized, TYRO trials for young drivers in road going vehicles, Road Taxed Vehicle trials for drivers of road going vehicles and Cross Country Vehicle Trials designed to test drivers of modified vehicles equipped with roll-over cages and other safety features against more severe terrain.

With the addition of personal safety equipment including helmets and suitable clothing, and certain vehicle safety related equipment, competitors can take part in timed trails where the test is against the clock as well as the ground. The ultimate form of timed competition is known as a competitive safari and involves competitors individually competing over a set course against the clock having been set off individually with a timed interval between competitors. This is a true speed event and the risks associated with it are higher as vehicle rollovers or contact with spectators presents a much greater risk of personal injury. Similarly the vehicles are more stressed and component failure is more common.

Other timed events exist, which the Mid Wales Four Wheel Drive Club Ltd. Are not currently involved.

The winch recovery event involving the use of vehicles equipped with winches to move an object over a set course in a safe manner and team recovery which involves two drivers in two vehicles competing over a set course, as quickly as possible, which cannot be driven without one of the vehicles assisting the other through difficult terrain by means of one or more rope recoveries.

There are also the Hill Rally type of event, which is broadly similar to stage rallying but over more challenging terrain and the recent emergence of a new type of event called a challenge event. This form of event is developing and currently takes the form of vehicles equipped with highly modified suspension and traction aids such as locking differentials and very powerful winches competing with each other over extreme terrain which cannot easily be driven without the use of winch and other self recovery aids. It should be noted that the Blue Book definition of Challenge event allows a wider interpretation and as this discipline develops then other forms of this event will doubtless evolve.

3.0 Risk Assessment

A risk assessment is nothing more than a careful examination of what might cause harm to people attending an event. This assessment generates a list of potential causes of harm or hazards. A hazard is anything, which can cause harm whereas risk is the chance, high or low, that someone will be harmed by the hazard.

Organizers should therefore undertake the following five steps to produce a risk assessment;

- **Look for hazards**

In looking for hazards there is no need to be overcomplicated. Ignore the trivial and concentrate on significant hazards that could result in serious harm or affect several people. The checklist provided at Appendix I will assist with this process.

- **Decide who might be harmed and how**

In deciding who might be harmed, consider each of the hazards identified and decide whether there will be inexperienced competitors, young competitors or inexperienced people at the event who may not be familiar with the type of event

- **Consider the risks and decide whether proposed precautions are adequate or whether more should be done**

In evaluating risks consider just how likely it is that a hazard could cause harm. Be realistic about whether or not the hazard is significant. This will determine whether you need to take precautions and what those might be. Precautions might be as simple as erecting a warning sign or taping off an area of land you wish to keep everyone away from during the event or ensuring that anyone using equipment knows how to use it and has some personal protective equipment Consider how you will communicate the risk to persons on site and aim whenever possible to be proactive such as, for example, informing persons on site via marshals and officials briefings and competitor briefings or via event paperwork or the event programme. The aim is to reduce risk and make it as small as possible and hence control it

- **Record the assessment and findings**

Record the findings. Although not essential, a written record will show a proper check has been made, that the assessment has identified who might be affected, the significant hazards have been identified and dealt with and the precautions taken are reasonable in the circumstances with the remaining risk being low.

Another advantage of a written record is that once an assessment has been carried out for a particular site it can be retained and used for future events at that same venue.

- **Review if things change**

Review assessments. Sooner or later things do change either physically on site or as a result of a change in the form of the scale of the event or type of competition. Again, a review only needs to be carried out when there has been a significant change.

4.0 **SAFETY PLANNING CHECKLIST**

4.1 Safety Planning is part of the Risk Assessment and will be slightly different for each event, to assist organizers; a checklist of potential hazards is set out at Appendix One

5.0 **MAJOR INCIDENT PLAN**

A major incident is one where the available resources on site are insufficient to cope. Thus, for a Trial, a broken leg could well be a major incident, as it would probably be necessary to call in an outside ambulance.

It is the Clerk of the Courses responsibility to initiate the Major Incident Plan.

The Plan should contain the following where appropriate:

- The name (or duty) of the individual who will take direct charge of the site of the incident (this will probably be a Deputy C of C, or Chief Marshal or Event Safety Officer, leaving the Clerk of the Course to deal with the overall position.
- Mobile phone numbers of all senior officials, so that radio channels can be kept clear (Confidential information should not go over open radio channels)
- Full details and address of a designated Rendezvous Point(s), for Police, Ambulance and Fire which should be at or adjacent to a premises with a postal address located as close as possible to the site at which the C o C or nominated official can meet the blue light services either with the casualty if they can be moved or to take ambulance/paramedics on site if the casualty cannot be moved.
- Access points onto site which can be marshaled to facilitate a clear route for access / egress of emergency vehicles. If available, a method of calling Air Ambulance, and location of suitable landing site(s) with clear details available to advise emergency services of location
- Location of a camera for taking photographs of incident scene
- Location of secure premises for impounding vehicle
- Location of suitable accommodations for possibly distressed relatives or team, and also suitable premises for taking witness statements
- Name of person who will deal with Press enquires, and statement of policy in respect of Press
- Name (or designated duty) of person responsible for keeping a minute-by-minute log of the incident in order to maintain continuity of evidence.+

6.0 **Volunteer Training and Development and communication of this guidance**

6.1 The Mid Wales Four Wheel Drive Club Ltd recognize the desirability of all volunteer officials engaged in safety planning to be trained and/or at least have access to relevant safety guidance. Mid Wales Four Wheel Drive Club Ltd will arrange for assistance to anyone requiring guidance in using this safety document.

6.2 Club Members are encouraged to read this document thoroughly well before any event they will be involved with to develop familiarity and awareness of safety planning for events.

7.0 **Review of this guidance**

7.1 The Mid Wales Four Wheel Drive Club Ltd will keep this guidance under review and from time to time may amend parts of it to reflect experience and/or any changes in legislation affecting four wheel drive off road motorsport.

7.2 In recognition of the importance of developing safety planning within Member Clubs, the ARC Council will appoint an ARC Safety Advisor to assist member clubs and to act as point of reference for the Motor Sports Association and others involved in this branch of motorsport.

This guidance note has been produced by the Mid Wales Four Wheel Drive Club Ltd and is subject to change as a result of deliberation by the Mid Wales Four Wheel Drive Club Ltd Committee
It is hoped that when this guidance is completed it will form a useful resource for organizers and assist Members in preparing event specific plans, particularly for inter-club and national events organized by Mid Wales Four Wheel Drive Club Ltd

Using the templates provided should enable volunteer organizers to develop their risk management skills to produce Event Safety Plans and Major Incident Plans for Off Road Four wheel Drive Motorsport events

Acknowledgements

Mid Wales Four Wheel Drive Club Ltd wishes to record its grateful thanks to the organizing committees of ARC. 2000 and ARC. 2003 and to the Southern Rover Owners Club and others for permission to use Risk Assessments, Safety Plans and Major Incident Plans in making this guidance document.

NOTES

APPENDIX ONE

CHECKLIST OF POTENTIAL HAZARDS FOR RISK ASSESSMENT

1. Identify the hazards

Competition Site Hazards

Deep water, electricity pylons, presence of farm or other machinery, animals, electricity sub-stations, fuel stores including LPG tanks, chemical or foodstuff stores, standing crops, stored harvested crops such as hay, presence of barns and other areas to be treated as out of bounds, location of any cesspools or septic tanks and discharge systems, footpaths or other byways/highways on the site, potentially conflicting uses on site and whether these can be controlled. e.g. horse riding, stock in fields. Any natural or man made feature which presents a potential danger such as a quarry face or workings, mine shafts, steep drops, deep water, munitions on military land, old machinery or abandoned vehicles on site.

Competition site suitability.

Is the site suitable for the proposed event. i.e. is the ground too challenging for a TYRO trial or a novice drivers training day with severe cross slopes? Are there areas of the site where mineral or quarry working means that ground conditions will be unsafe with loose ground? If the site is to be used for a major event are there sufficient access points to enable an incident to be dealt with if an entrance is blocked? Are there any restrictions on the ground such as a SSSI, which preclude its use without danger to protected species and environments ?

Camping associated with the event

Is the camping area safe from hazards, especially where young children are playing. Is the site access suitable for caravans etc.?

If a weekend event will anyone working be on site e.g. water tanker driver, beer tent staff, entertainers, trade stand staff

Ensure that contractors have health and safety policy covering the work activity and that tents and marquees have fire certification and are provided with fire exits etc.

Organisational capacity

Does the club have sufficient organisers to run the proposed event in a competent manner without undue risks; e.g. for a competitive safari will there be sufficient marshals available to adequately cover the course so as to provide safety / spectator cover and control along the whole length of the course? Will all the main officials posts be covered with competent individuals with deputies available?

Competitor eligibility

Checks of Competition licences or other driver eligibility in order to avoid compromising insurance arrangements

Vehicle eligibility

Are competing vehicles in compliance with the technical and safety regulations? (Scrutineering Checks)

Be clear about how communications are to be provided and maintained during the event Have a radio and marshalling plan which marshals are familiar with.

Be clear about how the event is to be run

For example at a Competitive Safari determine whether or not there will be live recovery and if so will radio requirements and MSA requirements all be met, are marshals trained and competent to undertake live recovery?

Is appropriate first aid and fire cover available for the type of event being run?

Are all appropriate personnel and equipment in position when the event is ready to start?

Communications up and running, back up of important officials, signing on sheets complete, appropriate first aid cover and fire precautions and other emergency vehicles in place; essentially ready to run a safe event.

Control over hazards from vehicles and vehicle movement “off the course”

Are there any potential hazards in the competitors’ parking area, line-up collecting areas or Service areas? Is it necessary to deploy marshals to control spectators, to exclude spectators from area(s) possibly fence or tape off areas and / or erect “no entry” or other warning signs? It is also important to ensure sufficient fire cover at such locations.

Are there any potential hazards in spectator areas, if so are any potentially dangerous? Plan spectator marshalling, tape off “no-go” areas, perhaps issue spectator guides, and ensure sufficient marshals to control spectator movement for example across a competitive safari course with a properly marshaled crossing point. Ensure Start and finish areas are double taped and signed to prevent spectator access onto the course

Ensure emergency vehicles are able to rapidly deploy under full control

Location of Rescue units, fire extinguishers, communications

Know the on site emergency capabilities and be prepared to call in blue light service assistance if necessary

Have and be able to implement a Major Incident Plan and be clear who will do this

2. **Consider the significant risks**

How will the risk be controlled?

What physical measures can be taken to reduce the risk? Consider the nature of the risk is it high or low? If a high risk is identified consider whether a proactive approach is required to control the hazard. For example a high risk of personal injury from competing vehicles is likely to require active marshalling to achieve either total exclusion of spectators from a particular area, or control over spectators to secure and maintain a separation distance between course and the spectator viewing area or for a lower risks then passive exclusion by means of warning signs and / or tape may be sufficient.

Who will control the risk during the event?

Will the hazard be marshalled to control the risk? Who will brief and make the marshals aware? Is training required to control the risk or will a few words of advice be sufficient? If the risk is lower who will ensure that the necessary warning signs are put up?

Are all hazards which require action dealt with?

Protect if possible with warning notices prior to the hazard or tape off “out of bounds areas” or appoint a marshal to control access for example to a refueling area or the pits area

Are the Officials and anyone else who needs to be aware of possible hazards before, during and after the event?

Briefing of Senior Officials, who in turn brief all the other officials via marshals briefing and competitor briefing and notices if appropriate in event program or on entry forms

STATEMENT OF INTENT

“It is the intention of Mid Wales Four Wheel Drive Club Ltd. to run a safe and enjoyable event. The organizing team has made every effort, to make all areas of the event competitor and spectator friendly. The organizing team wishes you an enjoyable, and above all a safe, day’s motor sport.”

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APPENDIX TWO

RISK ASSESSMENT, SAFETY PLAN AND MAJOR INCIDENT PLAN FOR A COMPETITIVE SAFARI OFF ROAD EVENT

Risk Assessment.
Who's Who.
Safety Plan
Reaction to Incidents
Contact details for Outside Assistance
Flag Signals.
Duties in the event of a fire

RISK ASSESSMENT

HAZARD	OUTCOME	ACTION
Danger to spectators officials & competitors from moving vehicles in competitive stage	Serious personal injury / fatality.	Display warning signs and tape critical areas. Marshals & competitors to be briefed before event commences. First Aid on site.
Danger to spectators, officials & competitors from vehicles off the competitive stage.	Serious personal injury.	Display warning signs. Maximum speed limit of 5mph. First Aid on site.
Danger to spectators, officials & competitors during vehicle recovery.	Serious personal injury.	Marshals to be briefed, only assigned marshals to undertake recovery. Marshals to clear area before commencement of recovery. First Aid on site.
Injury to competitors due to driver error	Serious personal injury / fatality.	Drivers briefing. All competitors to wear seatbelts and helmets in accordance with MSA regs. All vehicles to pass MSA scrutineering First Aid on site.
Injury due to tripping and falling	Minor personal injury.	Warning notices clearly displayed. First Aid on site.
Fire	Injury to person or damage to environment.	Fire extinguishers to be carried by all competitive vehicles and marshals. Fire extinguishers to be placed at areas of higher risk e.g. re-fuelling area. First Aid on site.
Environmental spillage in pit area	Ground contamination	All competitors to put a sheet down to catch spillages whilst working on vehicles
Environmental spillage due to mechanical and breakdown or accident on course	Ground contamination	Shovels and strong containers available to contain fluids and remove contaminated soil.

WHO'S WHO?

TITLE.	NAME.	COURSE LOCATION.
EVENT MANAGER		
CLERK OF THE COURSE		
SECRETARY OF THE MEETING STEWARD		
SAFETY OFFICER		
FIRST AID		
RESULTS CO-ORDINATOR CHIEF TIMEKEEPER		
CHIEF SCRUTINEER		
ASSISTANT SCRUTINEER		
RADIO CONTROL		

SAFETY PLAN

- No live recovery will be undertaken during this event unless stated in the Additional Supplementary Regulations and made clear to all drivers before start.
- Only designated Rescue & Recovery vehicles will be allowed to recover vehicles. No other vehicles will be permitted on the course. Recovery will only be to a safe place off the course.
- RESCUE, MEDICAL AND RECOVERY VEHICLES MUST ONLY ENTER THE COURSE UNDER THE DIRECT AND EXPLICIT INSTRUCTIONS OF THE CLERK OF COURSE.
- The event will be stopped by the CLERK OF COURSE and the start / finish timekeepers informed by control immediately that a medical unit is being dispatched onto the course.
- Following any incident involving personal injury, ensure that an accident report form is completed and returned to Control.

- ALL SAFETY MATTERS MUST BE CO-ORDINATED VIA THE DESIGNATED OFFICIAL. This role will be made clear to all Officials and Competitors at the Drivers briefing.
- All retirements must leave the course at nearest exit, and return to pit on the off course roads slowly. Start & Finish Marshals to be informed upon their arrival at the pits.
- Check that Radio and possibly Mobile phone reception is good across the site.

REACTION TO INCIDENTS

Person taken ill on site or Injuries not specified

Control: 1. Notify Steward/ Medical Officer.
 2. Dispatch First Aid to scene if required.

Medical: 1. Respond to control's instructions/directions.

Record: 1. Written report to be completed.

Minor Injuries: 1. To be referred to First Aid Cover.

Incident within Course - Minor Incident (e.g. vehicle stopped on course)

Marshal: 1. Display on course YELLOW flag
 2. Inform control of exact location and nature of incident, vehicle number, and responds to instructions.

Control: 1. Inform Clerk of Course
 2. Radio Start / Finish (for their information)
 No requirement for other units to respond at this stage.

Serious Incident (Possibly with injury e.g. roll-over or crash, course blocked)

Marshal: 1. Display on course **YELLOW** Flag.
 2. Inform control of exact location and nature of incident, vehicle number, and respond to instructions. (i.e. display **RED** Flag if course blocked).
 3. Keep spectators away.

Control: 1. Inform clerk of Course.
 2. Place First Aid on standby
 3. Radio Start/Finish, and instruct as to course status.
 4. Dispatch First Aid to location if required.

Vehicle: 1. Car to be re-scrutineered before recommencing competition.

Record: 1. Accident report to be completed by CoC.

FLAG SIGNALS

YELLOW NO Overtaking, slow sufficiently to ensure full control.

RED Red flag indicates event has been stopped.
Drivers are required to return slowly to the pits.

DUTIES IN THE EVENT OF A FIRE

In the event of a serious fire within the course area all persons will assemble in car park / pit area, in an area designated well away from re-fuelling area and vehicles.

Marshal:

Identify exact location of fire and inform control with details.
Prepare to Red flag course (upon instruction from control)
Direct all spectators to the assembly area.
Once satisfied that all persons are clear, return to control area and report to controller.

Control:

Upon receiving notification of a fire within the course, notify Clerk of Course.
Radio start / finish to hold all starters.

Medical:

Report to control area, and await instructions.

MAP OF SITE

It is important to have a map of sufficiently detailed scale to enable all the main features of the site to be clear from the map and the relationship of the site to adjoining roads and access points to be obvious.

This need be nothing more than a hand drawn map on a separate sheet, or if possible a print of a large scale OS map printed from the OS website.

The Site Access, Start / Finish, First Aid, Fire Point, and Marshal Stations should be marked.

SITE SPECIFIC NOTES & OTHER USEFUL INFORMATION.

