

Health and safety at motor sport events

A guide for employers and organisers



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ISBN 978 0 7176 0705 1
Price £10.00

This book describes the main risks at motor sport events and some of the steps that can safeguard the health and safety of employees, volunteers and spectators.

Much of the guidance is relevant to all events, except for Formula 1. There is practical advice for people who are organising events, such as grass track meetings, which do not have a permanent venue.

Health and safety aspects covered include fuel storage, noise, manual handling and electrical safety.

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First published 1999

ISBN 978 0 7176 0705 1

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This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance as illustrating good practice.

Acknowledgements

The Health and Safety Executive gratefully acknowledges the assistance of Allan Watson (Rochdale Metropolitan Borough Council) and the RAC Motor Sports Association Ltd in the production of this publication.

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Introduction

- 1 Motor sport is spectacular and exciting, providing enjoyment for competitors and spectators. It takes many forms, from events at large circuits with thousands of spectators, to grass track meetings in a farmer's field, attended mostly by competitors and their families. The organisers of motor sport events range from big companies to small motor clubs whose members take part for the fun of it.
- 2 Motor sport has a number of governing bodies. Many events run under the guidelines of these governing bodies, which often have great experience and expertise in motor sport safety. They may be able to provide detailed practical advice and assistance on how this guidance applies in individual cases.
- 3 The safety precautions for a large car race meeting held at a permanent race track will need to be very different from those for a motorcycle trial on a stretch of moorland, but the basic principles will be the same. Much of this guidance will be appropriate to all events, but it is particularly intended to give practical advice to those people who are organising events which do not have a permanent venue.
- 4 This publication describes the main risks at motor sport events and some of the steps that can safeguard the health and safety of employees, volunteers and spectators. The guidance is not mandatory but it does contain information on the health and safety responsibilities of those involved in motor sport events. It does not apply to Formula 1 events, which are under the control of the Fédération Internationale Automobiles (FIA).
- 5 There are many aspects of health and safety involved in motor sport activities including: fire safety and fuel storage; noise; manual handling; the safe use of work equipment; electrical safety; and possible exposure to hazardous substances. The Health and Safety at Work etc Act 1974 (HSW Act)¹ will apply to any event where there is a work activity. More information about this and other relevant health and safety legislation is given in Appendix 3.

Planning for safety

Pre-event planning

- 6 Before an event takes place, it is useful to plan in advance and put all the factors in place which will ensure it can go ahead safely. Part of the plan should include identifying the hazards (anything that might cause harm), assessing the risks from the hazards, and setting out what you intend to do to eliminate or reduce the risks.
- 7 If you are planning to hold an event at a permanent racing circuit, the site operators are usually responsible for safety at the venue. Their responsibilities include the track, barriers, spectator facilities, car parks etc and ensuring that third parties such as subcontractors are aware of any possible risks. You need to consult the operator and check that their safety procedures are in place.
- 8 If the event is to take place on a temporary site such as a field, you as the organiser are responsible for deciding what safety precautions are necessary. The owner of the land is usually only responsible for advising organisers of hazards which are to do with the land, such as buried electrical cables. In either case, your overall plan might take into account:
 - the way the event is to be organised and who is responsible for what, including regular communication between the organiser and key officials;
 - the overall layout of the site, including entry and exit routes for competitors and spectators;
 - the design or route for the track or course and barriers or other protection for spectators, marshals and officials;
 - accommodation and facilities for spectators, including grandstands, toilets and car parking;
 - the number of officials and marshals needed to run the event safely;
 - communications systems both on the site and with the emergency services;
 - first aid, fire safety and rescue equipment;
 - access for emergency services to all parts of the site, particularly the track, grandstands, pit or paddock, and areas used for camping; and
 - a major incident plan.
- 9 If you are organising a large event which is likely to attract a lot of spectators you might consider holding a pre-event meeting of everyone who will be involved in running the event, together with people from the appropriate emergency services.
- 10 You might consider giving responsibility for safety to one person by nominating a safety officer. Their role would be promoting good practice and increasing awareness of safety precautions as well as implementing safety plans. For larger events, safety procedures may need to be written down in the form of an operations plan or a safety manual. You can bring this to the attention of all employees and volunteers.
- 11 You need to make sure that there are enough officials and marshals to run the event safely. The exact number will be determined at the pre-event planning stage. This is particularly important where volunteers are concerned.

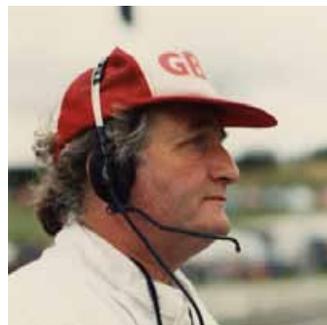
- 12 Getting enough trained marshals might be a problem for large meetings, in bad weather or where other events are taking place in the area, and you may need to make contingency plans.
- 13 You need to arrange safety precautions if the track or course is being used for non-competitive events such as practice or test sessions - marshals and first-aid cover are usually required, even for these.

Event management

- 14 Once the event begins, much depends on good co-ordination and communication between the officials and marshals. Good systems for this are important and everyone concerned should have a clear knowledge of the procedures to be followed, particularly if things go wrong. Marshals or officials need to be fully briefed in order to take appropriate action.
- 15 An effective briefing could usefully include:
 - the responsibilities of the different officials and marshals;
 - communications systems between the various officials and marshals and the emergency services, eg radios, telephones, lights and flag signals. At large permanent venues a closed circuit television system can be useful for gathering information;
 - procedures for controlling the event, and in particular starting and stopping competitors, dealing with accidents or other dangerous incidents and evacuation;
 - the system for dealing with competitors' vehicles leaving or blocking the course;
 - making sure that competitors understand the various flag or light signals which might be used;
 - the programme and type of events. Different safety arrangements may be needed for different classes of competitor or types of vehicle and standards of competition (eg from junior to senior); and
 - the system for monitoring the safety of spectators.
- 16 Before an event starts, an official should inspect the track or course and any barriers to make sure that they are in a safe condition. The official should also check that spectators are not in dangerous positions, and that all officials, marshals, first-aid, fire and rescue services are in place and communications systems are working. A checklist such as the one shown in Appendix 1 can be useful when doing this. Your plan should make it clear that monitoring will need to continue throughout the event so that action can be taken if problems arise.
- 17 Sports' governing bodies will often detail the safety requirements which must be met by the organisers of the event in the track licence or meeting permit. They may also specify the numbers and types of officials and marshals required, along with the way in which an event should be run.
- 18 If you are planning a large event, make sure that you have a system to monitor and control the crowd. For example, you can use crowd management stewards (to check that barriers are in place and that there is no overcrowding) or closed circuit television. Stewards also need to communicate with spectators, particularly if there is a major incident or emergency. If a public address system is used, it is important that it can be heard and understood by all spectators.



Marshals assisting and giving appropriate flag signals



Radio communications



A marshal giving appropriate flag signal

Track or course design

- 19 The layout and design of the track or course should be suitable for the type of event which is planned. When you design a track you need to consider the following:
- the type of vehicle to be used;
 - the skill, experience and number of competitors;
 - the maximum speeds at different parts of the course;
 - the types and positioning of barriers or other arrangements needed to protect spectators;
 - the condition of the surface of the track or course and whether there are any kerbs and run-off areas;
 - the location of the start and finish points and the position of hazards such as bends, sloping or uneven ground and trees;
 - the position of the entry and exit points to the pits, the paddock and the service areas for competitors' vehicles;
 - the siting of various officials and the positioning and distance between marshals' posts;
 - the location of first-aid, fire and rescue services and whether they can quickly reach any point where an incident might occur; and
 - the location of vantage points for officials and marshals - these should be constructed so that the means of access is safe and so that there is no risk of people falling from a height.
- 20 If an event needs a track licence or permit, you need to contact one of the sports' governing bodies. The governing body may require detailed plans or need to carry out an inspection before an event can go ahead.



Sand racing on the beach



Course layout is clearly marked – note marshal facing direction of traffic

Barriers

- 21 You need to ensure that spectators and marshals are protected from competitors' vehicles or parts of them such as wheels or other flying debris. When you consider the type of protection you need, you should take into account the number of spectators, the distance between the track or course and location of the public, the speed and type of vehicle and the level of protection the vehicle gives to the competitor. For example, you may need different barriers for car and motorcycle events; the driver of a car is often well protected, but the rider of a motorcycle is often thrown clear of the machine during an accident and is much more vulnerable.
- 22 Types of barriers and other safety arrangements are often specified by motor sports' controlling bodies, who make judgments based on experience or calculations. They normally include these items in an annual or pre-event inspection. Suitable barriers may include the following types.

Run-off areas and slowing down devices, such as gravel traps

- 23 The safest way to slow a vehicle is to provide enough room for it to decelerate. However, in many situations this is not practical and barriers are used to stop vehicles from leaving the track or course and from running into areas occupied by spectators.

Barriers of different types, eg motorway-type crash barriers, tyre walls and straw bales

- 24 The construction of the barriers will depend on a number of factors including the type and speed of the vehicles, the level of protection the vehicle gives to the competitor and the likely angle of impact. For example, if a vehicle is likely to collide with a barrier at a 'glancing' angle, the barrier should be of a type which allows the vehicle to slide along it, so that the risk of injury to the competitor is reduced.
- 25 If a collision is likely to occur 'head on', barriers such as tyre walls or straw bales can be used to absorb the impact. Different arrangements may be needed for different types of event. Sports' governing bodies may be able to recommend which ones are the most suitable for individual circumstances.



Clear separation between track/course and spectators



Mesh fence to prevent crash debris entering spectators' area



Marshals on 'in-field', protected by appropriate barrier

Debris fencing or catch netting

- 26 Where there is a risk of debris such as wheels being thrown into the crowd, for example at a stock car meeting, you should provide debris fencing or catch netting. This should be of a suitable height to prevent the debris hitting the crowd and strong enough to withstand any likely impact.

Spectator barriers, marshals or warning notices to advise spectators of prohibited areas

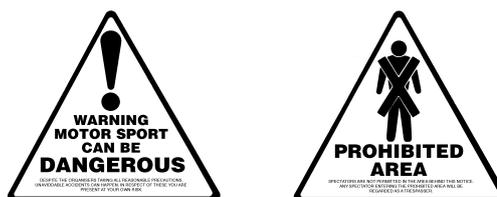
- 27 At some events, such as a rally forest stage, you may not be able to provide barriers. Protection will usually depend on spectators being kept at a safe distance from moving vehicles by marshals. However, at some points, such as severe bends which may attract large numbers of spectators, you should consider whether entry needs to be prohibited. These areas should be clearly marked, for example by coloured tape and warning notices. If spectators refuse to co-operate and insist on standing in dangerous positions, you may have no alternative but to delay or stop the event.
- 28 You ought to consider putting warning signs, temporary barriers or extra marshals in places, such as a public footpath, where members of the public who may not be aware that an event is taking place have access.
- 29 Consider whether you need to construct marshals' posts or other protection in isolated areas or where vehicles are moving at high speed. Marshals or other officials should be able to carry out their duties without being put at unnecessary risk. You should also consider the best places for first-aid personnel, TV crews and photographers to be situated.
- 30 Make sure that you inspect barriers throughout an event. Where a barrier becomes damaged and is no longer capable of doing its job (ie absorbing impact and/or preventing a vehicle penetrating a spectator or hazardous area), you should arrange for repairs to be carried out before the event continues. If you cannot do this you should consider moving the crowd from the area behind the damaged barrier.



Barriers at indoor karting event



Pre-race assembly area



Warning signs

Pit and paddock safety

- 31 The hazards you need to consider in pit, paddock and vehicle service areas include moving vehicles, the presence of fuel and the use of potentially dangerous equipment such as welding tools.
- 32 You need to consider whether there is enough space for competitors' vehicles and transporters to be parked and manoeuvred safely, both when arriving and leaving the site and moving to and from the track or course. If space is confined you may need to limit the number of competitors. You may need marshals to control the movement of vehicles and you may need to impose a speed limit for vehicles in the service area.
- 33 At many events members of the public have traditionally been allowed to enter the paddock or pit area to talk to competitors and view their vehicles. You need to decide whether this is safe and in some circumstances you may need to limit the number of people admitted, the areas or times at which they can enter, or the movement of vehicles.

Use and storage of fuel

- 34 Fuel is a hazard and should be stored and handled properly. You need a system of safety precautions to deal with incidents which might occur when refuelling is taking place or where fuel is being stored.
- 35 At most events individual competitors bring their own fuel in small containers. You should advise competitors that fuel should be brought in containers that are suitable for the purpose and that are appropriately marked, ie 'Petroleum spirit, highly flammable'.
- 36 If petrol or other fuel is being stored, you may need a petroleum licence. Estimate how much fuel will be stored in the pit area. A licence would not normally be needed if the only fuel at an event is in small quantities, brought by competitors for their own use. This advice is correct at the time of publication. However, HSE is working towards replacing the Petroleum (Consolidation) Act 1928, which may result in a number of changes and revisions to current law or

regulation. It is advisable to check with your local authority on the up-to-date position regarding the storage of petrol before taking action. More information on petroleum licensing is given in paragraphs 42 and 43 of Appendix 3.

- 37 Where large quantities of fuel are involved, make sure that you site fire-fighting equipment and trained users around the track or throughout the course and in the pit, paddock or vehicle service areas. Service and inspect the equipment regularly and ensure that it is only used and refilled by people who have been trained.
- 38 If large quantities of fuel are being transported by road, by someone who is working, you may need to consider the provisions of the Carriage of Dangerous Goods by Road Regulations 1996, and the Carriage of Dangerous Goods (Classification, Packaging and Labelling) and use of Transportable Pressure Receptacles Regulations 1996 (see Further reading in the References).
- 39 Refuelling should, if possible, be carried out away from spectators in a designated area in the open air. If it takes place indoors, the area should be adequately ventilated and away from sources of ignition such as hot surfaces or sparks produced by tools. It is essential that the areas where fuel is handled are kept clean and free from rubbish. Appropriate fire-fighting equipment should be maintained in such areas and refuelling personnel trained to use it.

Fire safety

- 40 At a motor sport event fire safety would have to comply with the requirements of both the Fire Precautions Act 1971 (FPA) and the Fire Precautions (Workplace) Regulations 1997. These are designed to ensure that appropriate fire safety precautions are taken and include, among other things, provisions for fire-fighting, fire detection, emergency routes and exits. It should be noted that the Fire Precautions (Workplace) Regulations 1997 also apply to any tent or movable structure. Advice on good practice and the applicability of fire certificates is available from the local fire authority.
- 41 The safety precautions needed at an event depend on the fuel being used, the layout of the course and the number and type of vehicles. For example, the level needed for a motorcycle event is generally lower than one involving cars, as they usually carry less fuel and it is unlikely that a competitor will become trapped in a machine.
- 42 If refuelling takes place during an event, extra precautions will be needed. These might include the use of fuel dispensers, extra fire-fighting equipment and protective clothing for personnel.
- 43 Detailed advice on fire precautions and training is available from motor sports' governing bodies and local fire authorities.

First aid

- 44 The Health and Safety (First-Aid) Regulations 1981² require employers to provide first-aid facilities for their employees. Although there is no requirement for the organisers of events to provide first aid for people they do not employ, because of the nature of the sport they may wish to consider providing first aid for spectators, marshals, officials and competitors. First aid for spectators may be required by the safety at sports grounds legislation. Further information on the Regulations can be found in Appendix 3, paragraphs 19-21.

- 45 Many of the sports' governing bodies make the provision of first aid for competitors and spectators one of the conditions for running an event. They often have a great deal of experience of dealing with motor sport casualties, and may have medical consultants who can provide expert advice. The local ambulance service and voluntary first-aid organisations may also be able to give advice.



Kart circuit ambulance parked in protective position behind marshal's post with easy access to track/course



Medical assistance should be immediately available

First aid for competitors

- 46 At some events where speeds and the risk of accidents are low, such as production car trials, a first-aid kit may be sufficient. However, at many types of event, especially those where high speeds are reached, there is a risk of serious accidents and injury. These demand skilled first-aid and medical care and often a quick transfer to hospital. First-aid personnel and their equipment should be located so that they can reach an incident quickly and easily.
- 47 First aid should be carried out by fully trained and competent personnel. Some basic training for marshals may be needed, to allow them to take the correct course of action until medical assistance arrives. In cases where expert help may take longer to arrive, for example on a remote rally stage, it might be a good idea to make sure marshals have had more detailed training.
- 48 At many large events a suitably equipped ambulance may be needed. If it leaves the site with a casualty, the event should not continue until a replacement is in position. In such cases a suitable back-up vehicle will normally be needed.
- 49 If there is rough or uneven ground, special equipment may be needed to allow casualties to be moved safely and comfortably. A suitably equipped four wheel drive vehicle may be useful in many circumstances.

- 50 It is worth considering setting up a suitably equipped medical room or centre at permanent venues. This will allow treatment to take place prior to a transfer to hospital if necessary or treatment of minor injuries.
- 51 Competitors who have been involved in an accident may need medical clearance before being allowed to compete again, particularly if they have been knocked unconscious.

First aid for spectators

- 52 Where first-aid arrangements are made for members of the public, they need to be adequate for the number of spectators attending the event. The type of injuries/ illnesses that may occur include heart attacks, sunstroke and minor injuries like cuts and bruises. Advice is given in *A guide to safety at sports grounds*³ (see paragraphs 50-53 of Appendix 3). First-aid arrangements should be considered as part of your major incident plan.

Reporting accidents and incidents

- 53 If a fatality or accident occurs at an event or at premises where the people organising the event or in charge of the site are working, it will need to be reported to the enforcing authority (usually the local authority for motor sport events) under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR).⁴ For an incident to be reportable it must be connected to a work activity. A report under the Regulations does not have to be made if an accident or fatality happens at an event organised by a club made up of volunteers where no one is working.
- 54 Certain types of dangerous occurrences must also be reported, whether or not anyone is injured. These include the collapse of scaffolding or a temporary stand, an explosion of a gas cylinder or certain types of electrical fire.
- 55 Information on what should be reported, how this should be done and enforcing authorities can be found in paragraphs 29-38 of Appendix 3.
- 56 The report should include the name and address of the injured person and details of their injuries as far as they are known. Event organisers should make sure that they can obtain this information from the first-aid personnel. Where evening or weekend events take place, it may be helpful for event organisers to make arrangements with their enforcing authority for the reporting of incidents.
- 57 Reporting an incident does not mean that you have accepted responsibility or that anyone has committed an offence. However, failure to report an accident, dangerous occurrence or case of disease required by the Regulations is an offence and may result in prosecution. If you are in any doubt, the incident should be reported; those which do not need to be reported will be filtered out by the enforcing authority.
- 58 The reports made under these Regulations are separate to any which might be required by motor sports governing bodies or for insurance purposes.

Spectator safety

- 59 Many motor sport events attract large numbers of spectators. If you are expecting an event to attract a large crowd you need to plan for this. Poor crowd safety management can result in excessive crowding which can lead to panic and possibly serious injuries. It is important that spectators can watch events in safety and that in the event of a fire or other emergency they can be evacuated quickly and safely.
- 60 An important factor in spectator safety is the suitability of the venue for the type of event you are planning. You should make sure that there are enough entrances and exits to the venue and that they are big enough to allow people to leave quickly if there is an emergency.
- 61 If you are expecting people to use their own cars to travel to the event, arrange for adequate parking and for parking areas to be well signposted or for stewards to be available to direct drivers to parking spaces. Make sure that any areas where parking could be dangerous are cordoned off.
- 62 Have plenty of signposts or stewards to direct people to safe viewing areas and to discourage people from entering potentially dangerous areas. Make sure that safe routes to toilets and first-aid posts are well signposted. You will need to check that pathways and walkways stay free from slipping and tripping hazards such as litter, and that combustible material is removed regularly. Remember that you may need to consider people with disabilities who have special needs.
- 63 At some types of event spectators may want to move about to view different parts of the course. You should take this into account when you plan the positioning of stewards. You will need to arrange for crowd management stewards to be easily recognised by spectators. Consider providing them with distinctive tabards or armbands. At larger events they may need to be individually identifiable by means of a name or number.
- 64 In general, you will need to tailor safety precautions to the number and type of spectators you expect and to the layout of the site. A championship motocross event is likely to attract more spectators than a small, club organised meeting. Different types of car racing at a racing circuit will also have different attendances and might need a range of numbers of crowd management stewards. You can use previous attendance figures to help plan future events.
- 65 You will need to include your plans for the safety of spectators in the overall plan for the management of the event, and you should consider spectator safety when planning the layout of the site.
- 66 *A guide to safety at sports grounds*³ gives detailed technical advice for sporting events of all kinds where there may be large crowds. You can find information on safety at sports grounds legislation in paragraphs 44-53 of Appendix 3.
- 67 The HSE publication *Managing crowds safely*⁵ provides practical guidance on managing crowd safety in a systematic way where this is necessary to prevent danger. It does not specify a particular way of achieving crowd safety but sets out a general approach which can be adopted at any venue.
- 68 If you are intending to build **permanent** stands, buildings or other structures, you may need approval from the local authority under the Building Regulations 1991. These Regulations do not apply to temporary structures which are not

going to remain in place for more than 28 days. However, some local bye laws do apply to temporary structures so check with the local authority about these. You need to make sure that they are safe and that the ground beneath them is capable of supporting their load. The local authority building control section should be able to give advice.



Spectators safely positioned behind appropriate barrier

Competitor and vehicle safety

Competitors

- 69 Most competitors are not employees, they compete in the events as a hobby. They have freely chosen to take part in motor sport knowing that there is some degree of risk. Experienced competitors are likely to fully understand the risks and be able to control those risks using their skills and experience. In fact the enjoyment of many sports is often the risk of being in control of a challenging situation.
- 70 However, if novice competitors are allowed to use powerful cars or motorcycles which they may not be able to control, they may be putting themselves and others at unnecessary risk. Before you allow competitors to take part in an event, take reasonable steps to make sure that they can handle the particular type of equipment involved, and they are not going to put members of the public, officials, other competitors or themselves in danger because they are inexperienced or unfit.
- 71 Consider using a licensing system to make sure that competitors are competent to participate. Sports' governing bodies issue licences. In such cases, to get a licence competitors may have to attend an approved training school or take part in an observed practice session. Some organisations have a system of progression starting with less powerful equipment. Different classes of licence are issued as a competitor gains experience.
- 72 Consider giving competitors under the age of 16 separate classes of event. Make sure that the size and power of the equipment, as well as the course or track, match their ability and experience.
- 73 Where inexperienced members of the public take part in events using either their own road-going vehicles or borrowed equipment, you should make sure that they are suitable and safe for use on the track. You should also take reasonable steps to make sure that an individual is capable of driving a vehicle safely. For example, check that they hold a suitable road or competition licence. You also need to check that participants understand the rules or regulations for the event and the flag or light signals which will be used.
- 74 You should make sure that the mixed abilities of competitors and the types of vehicle being used are appropriate for the event. Vehicles of differing standards should not be used at the same time, nor novices allowed to race more experienced competitors. In some types of race event, novices are required to start at the back of the starting grid, display a symbol on their car or, if they are motorcyclists, wear a brightly coloured vest.
- 75 You need procedures to deal with competitors who fail to comply with instructions, putting other competitors, officials, marshals or spectators at risk. This may involve a system of suspensions, fines or licence withdrawal. You also need to take steps to prevent competitors from taking part if they are under the influence of alcohol, drugs or some kinds of medication.



Competitor personal equipment and vehicle equipment contribute to safety (note the fire extinguishers in the pit lane)

Competitors' vehicles and safety equipment

- 76 Most motor sport competitors need to wear safety equipment such as a crash helmet, overalls or race suit. The equipment required will depend on the type of event, the maximum speed, the protection provided by their vehicle and the risk of fire. You need to consider including suitable minimum standards for equipment in any competition rules or regulations. Wherever possible, these should be to recognised national or international standards.
- 77 Competitors whose vehicles are not safe may put other participants, marshals, spectators or themselves at risk. Before the start of an event you need to arrange for vehicles to be inspected to make sure that they comply with suitable safety standards. Many organisers use regulations produced by national or international governing bodies as a standard. If you choose to do this, check that they cover areas such as roll cages, brakes, fuel systems, fire extinguishers, crash helmets, race suits and safety harnesses.
- 78 If there is an obvious safety defect such as defective brakes, loose bodywork or a leaking fuel pipe, you need to make sure that the vehicle is not used in an event. Where a vehicle or equipment has been involved in an accident, it may need to be re-inspected before it is used again.

- 79 If you compile competition rules or regulations, you should take previous accidents into account. Devise your rules to prevent, as far as possible, similar things from happening again. If there is a serious accident, you may need to review and revise your rules immediately afterwards.
- 80 Scrutineers and machine examiners should be suitably trained and experienced. Many of the sports governing bodies organise training and license officials. The number needed will depend on the type of event, the number of vehicles to be inspected, the length of time needed for each, and the time available.
- 81 You need to consider whether the scrutineer or machine examiner needs a suitable area set aside so that they can work without interruption and in safety. A system of records or 'log books' will help to make sure that all vehicles are examined and that all of the necessary checks are carried out. If any defects are found on a vehicle, they should be recorded along with the action taken.



Scrutineer checking machine prior to going on circuit



Scrutineer checking helmet is of appropriate specification and in good condition

Employee and volunteer health and safety

Noise

- 82 Exposure to loud noise can damage hearing. Instant damage can be caused by exposure to high and peak levels of noise but lower levels can also cause damage if exposure is prolonged. At motor sport events some people may be exposed to high levels of noise, for example from competitors' vehicles. They might be working as trackside marshals or noise test officials, or be competitors or mechanics. Some of these people attend motor sport events regularly and will be at greater risk of long term damage due to repeated or continual exposure periods.
- 83 The Noise at Work Regulations 1989 (NAWR) contain the legal duties of employers to prevent damage to the hearing of workers from excessive noise at work. These Regulations do not apply to non-employees (ie volunteer marshals or spectators) though employers have general duties under the HSW Act in relation to non-employees. The NAWR require employers to arrange for a competent person to assess the risk of damage due to exposure to noise of their employees. This assessment should take account of all exposure to noise and should identify the dominant sources of noise and their duration. This noise assessment should identify the daily personal noise exposure of all employees who might be at risk of hearing damage, and should give enough information to allow the employer to control the noise exposure. Noise control at source should be considered first and implemented where reasonably practicable.
- 84 Planning the layout of the area of work activity will assist in implementing noise control measures. This might include the use of noise barriers or screens placed close to the noise sources or close to those exposed. The levels of noise produced by vehicles can often be reduced by effective silencing. Organisers could also look at the work patterns of staff and consider whether the number of people working in a noisy area or the time spent in them could be reduced. Some jobs may be done in quieter locations. Selection and use of adequate and suitable hearing protection should be considered as a last resort, and if used, should be capable of protecting all employees so that their exposure is below the second action level in the NAWR (see Appendix 3, paragraphs 22-25).
- 85 The publication *Reducing noise at work. Guidance on the Noise at Work Regulations 1989*,⁶ together with the book of practical noise reduction case studies *Sound solutions: Techniques to reduce noise at work*,⁷ will assist in planning and implementing control measures.

Manual handling

- 86 At motor sport events there may be a range of manual handling tasks, for example recovering competitors' vehicles or transporting and constructing safety barriers. If these tasks are not carried out safely, sprains and strains of the back and limbs can happen. One bad lift can cause harm and injuries can also occur over time, particularly where handling is repetitive. Other injuries such as severed or crushed fingers are also common. In extreme cases even permanent injury may result.

- 87 Where an initial general assessment identifies a potential risk from handling, the requirements of the Manual Handling Operations Regulations 1992⁸ must be followed. Wherever possible, employers should avoid the need for heavy lifting and pulling which may cause a risk of injury and consider alternatives such as mechanical handling assistance if the activity cannot be avoided. These Regulations will not apply to non-employees. See paragraphs 26 and 27 of Appendix 3 for more detail.
- 88 The way a task is carried out can often be reorganised to remove the need for lifting, pulling or pushing.^{9,10} For example, this can be achieved by making sure that there are enough people to move a bulky item or using simple handling equipment such as a trolley. Should mechanical means not be possible to lift an object or person, a more detailed risk assessment should be carried out.

Work equipment

- 89 Many types of equipment can be dangerous; if not used correctly, they can cause serious and sometimes fatal injuries.
- 90 You might find work equipment like the following in use at a motor sport event:
- cutting equipment used to free a trapped competitor;
 - tractors or breakdown trucks for recovering competitors' vehicles;
 - welding or cutting equipment used for constructing or repairing safety barriers; and
 - mowing and grounds maintenance equipment.
- 91 Work equipment is subject to the requirements of the Provision and Use of Work Equipment Regulations 1998 (PUWER).¹¹ The primary objective of PUWER is to ensure that work equipment does not give rise to risks to health and safety, irrespective of its age or place of origin. Detail can be found in Appendix 3, paragraph 28.
- 92 People using equipment need enough training and experience to allow them to operate it without risks to themselves or others. Training and relevant experience are also needed where routine maintenance of equipment is carried out. If tasks are only carried out occasionally, for example felling trees, you should ensure that people carrying out the work are competent to operate equipment such as chainsaws and that their competence is up to date.
- 93 Members of a breakdown crew, competitors or mechanics should not be allowed to travel on the outside of recovery vehicles in a position where there is a risk that they might fall off and become injured.

Tractors

- 94 Every year people are killed or seriously injured in accidents involving tractors and equipment driven from power take-off (PTO) shafts. At motor sport events tractors may be used for the recovery of competitors' vehicles or for maintenance work.
- 95 A tractor power take-off and the moving PTO shaft of a machine can be extremely dangerous and must always be guarded. Further information is given in the HSE information sheet *Power take-off shafts*.¹²

- 96 If tractors are used on-site they should be fitted with an approved cab, frame or roll bar to protect the driver if it overturns. Drivers will need to be given training on the use of tractors and in particular how to recognise situations, ie sloping ground, which may cause them to roll over. See HSE information sheet *Prevention of tractors overturning*.¹³



Official checking vehicle noise level (note the use of ear protectors)



Tractor and equipment used for maintenance

Electrical safety

- 97 Electricity can cause shocks, burns, start fires and can be fatal. The Electricity at Work Regulations 1989¹⁴ control the use of work involving electricity in all workplaces by placing duties on employers, employees and self-employed people.
- 98 The Regulations require all electrical systems to be designed, installed and maintained so that they are safe to use. The Institution of Electrical Engineers (IEE) produces guidance on the construction of fixed installations - the Regulations for Electrical Installations are recognised as a British Standard (BS 7671: 1992).¹⁵ Although they are called Regulations, they only provide guidance and are not a legal requirement. However, installations which conform to the standards laid down in BS 7671: 1992 are regarded by HSE as likely to achieve conformity with the relevant parts of the Electricity at Work Regulations 1989.
- 99 Where work is being carried out on electrical systems or equipment, it should be done by a competent person. No one should carry out electrical work unless they have sufficient training and experience to prevent danger to themselves or others. This may mean using an outside contractor; if you do, you should make sure that the contractor is competent to do the particular kind of work you are employing them for. For example, a contractor who is competent to work on fixed wiring installations may not be competent to repair portable electrical equipment.¹⁶ Certification by the National Inspection Council

for Electrical Installation Contractors (NICEIC) indicates contractors' competence to carry out installations in accordance with BS 7671: 1992.

- 100 Effective maintenance includes checking all equipment visually on a regular basis to make sure that it is in good repair and that cables and plugs are in a good condition. In some cases periodic inspection and testing may be necessary. Equipment which is installed or used outside should be of suitable weatherproof construction and may need to be protected from mechanical damage, for example cables which are likely to be driven over by vehicles.
- 101 Hand-held equipment, especially if used outdoors, should be supplied at reduced low voltage if possible, eg:
- a centre tapped earth (CTE) system from a safety isolating transformer; or
 - if operating at mains voltage, the equipment should be connected through a residual current device (RCD) suitable for protection against an electric shock.
- 102 Electricity can 'flash-over' from overhead power lines to nearby objects with fatal results. This may be a particular danger if scaffolding, temporary stands, hospitality suites or public address systems are being set up or if anyone is working with a ladder. More information on this can be found in the HSE guidance note *GS6 Avoidance of danger from overhead electric power lines*.¹⁷
- 103 Where batteries are charged, for example in vehicle maintenance workshops, it should be done in a well-ventilated area away from sparks or other sources of ignition.

Hazardous substances

- 104 Many products and substances found at motor sport venues are hazardous and can affect health. Some of them can cause harm immediately but it can also happen over a longer period of time. They might include:
- paints, solvents and timber preservatives used for maintenance of the site;
 - exhaust fumes in vehicle workshops or where events take place indoors;
 - cleaning chemicals in bars or food areas;
 - waste oil;
 - clinical waste;
 - fuel (this is dealt with earlier as a separate item in paragraphs 34-39); and
 - asbestos - see following paragraph.
- 105 Some vehicle parts, such as brake linings, contain asbestos. Working with them can create dust and breathing this dust is harmful although it can take many years for the diseases to develop. Asbestos dust fibres, which can be breathed in, are too small to be seen by the naked eye. You should consult the label on the packaging or the material safety data sheet accompanying the part to determine whether or not it contains asbestos. But where this information is not available or there is any doubt, contact the supplier for further information. Alternatively, treat such parts as containing asbestos and take the appropriate precautions. A checklist at Appendix 2 provides advice on how to prevent asbestos dust getting into the air.
- 106 The Control of Substances Hazardous to Health Regulations 1994 (COSHH)¹⁸ make requirements where hazardous substances are used for, or produced

- from, a work activity.
- 107 At many small events, it is unlikely that fuel would be the only hazardous substance present. Domestic products such as cleaning materials may also be present. In these cases all that is needed is to follow the manufacturer's instructions. However, many commercial products may be hazardous and will be marked with warning labels.
- 108 Where a hazardous chemical or substance is identified, the aim should be to prevent or control exposure to it, eg finding a safer alternative or changing the way in which it is used. Where this is not possible, protective clothing, eg gloves or goggles, may be needed.
- 109 If drugs or medical equipment are stored on-site, suitable secure storage should be provided.
- 110 Harmful products which might be used on sites where motor sport takes place also include pesticides, such as weedkiller, timber preservatives and pest control products. Their use is controlled by the Control of Pesticides Regulations 1986.¹⁹ More information on the Regulations can be found in Appendix 3, paragraphs 62-65.
- 111 At permanent venues the use of pesticides should be timed so that no harmful residues remain which could pose a risk to members of the public attending events. At temporary sites the organisers of events may need to make enquiries to find out whether land has been treated recently with products which might have harmful effects.

Protective clothing and equipment

- 112 The Personal Protective Equipment at Work Regulations 1992²⁰ require employers to provide suitable protective clothing or equipment for those employees who may be exposed to risks to their health and safety which cannot be controlled by other means. The clothing or equipment should be provided free of charge. Although it is not a requirement of the Regulations, there may be circumstances where organisers may wish to provide protective clothing or equipment for volunteer officials. For example:
- flame-retardant overalls for fire marshals, and where there is a greater risk of a serious fire, such as at a drag race meeting, equipment which provides additional protection;
 - safety footwear where there is a risk of foot injuries;
 - eye protection and gloves where cutting equipment is being used to free a trapped competitor;
 - high visibility clothing where marshals might need to go close to high speed competition vehicles;
 - ear protection in noisy areas;
 - suitable clothing for marshals who might use a fire extinguisher; and
 - coloured vests or armbands so car park, pit or paddock marshals are easily noticed.
- 113 It is important that clothing and equipment are suitable for the circumstances they are being used in and are of the correct type. For example, marshals' overalls should be of a colour which competitors are not likely to confuse with flag signals, and they should have similar coloured waterproofs for wet weather.

Emergency planning

Major incident plan

- 114 At events with large numbers of spectators you need to think about the possibility of emergencies or incidents which the first-aid and rescue personnel at the event may not be able to handle on their own. You should consider how you would deal with a major fire or an accident where there might be many casualties. You will need a plan for this which should contain clear information about what must take place in an emergency situation. It should set out key responsibilities and action. The amount of detail that needs to be included depends on the type of event and the number of people likely to attend.
- 115 Procedures to deal with serious and imminent danger in the workplace, including evacuation, are a requirement of the Management of Health and Safety at Work Regulations 1992²¹ (see Appendix 3, paragraphs 13-18).
- 116 You may need to contact the ambulance, fire and police services and the local authority in advance, to produce an agreed plan to deal with all foreseeable incidents. When drawing up a major incident plan, you need to take the following into account:
- How soon will the plan be put into action?
 - Will any evacuation be total, partial or phased?
 - How will the first-aid and rescue services already on-site be used? Will additional emergency services be needed? Who will decide when to alert them?
 - What will be the responsibilities of various employees and officials?
 - What communications systems will be used between employees and officials and with the emergency services? How will radio messages be prioritised?
 - Where are the access routes and rendezvous points for emergency vehicles? Can they reach all parts of the site?
 - What action do marshals, crowd management stewards and car park attendants take? Is any training needed?
 - When will an event be abandoned? Bear in mind that large numbers of spectators leaving the site might delay the arrival of the emergency services.
 - What announcements will be made to spectators?
 - Which areas will be used as a medical centre for the treatment of minor casualties, for the accommodation of anyone fatally injured and as an interview room for witnesses?
- 117 Your plan should specify who will decide whether the event is to continue after an incident. If it is to carry on, this should not happen until adequate first-aid, fire and rescue services are in place. Everyone on-site should be made aware of the plan and its arrangements. Training programmes for employees, officials, marshals, crowd management stewards and temporary staff could include an explanation of the plan and what their individual roles will be. It may be useful to have a training exercise to allow those involved to practice their roles.
- 118 Further information can be found in *A guide to safety at sports grounds*³ and paragraphs 44-47 of Appendix 3.



Rescue unit on training exercise using hydraulic cutting equipment



Marshals being trained in use of fire extinguishers (wearing flame-resistant overalls and gloves)

Rescue

- 119 Rescue equipment may be needed where there is a risk of a competitor becoming trapped in a vehicle. Equipment should be readily and easily available and of a type which, as far as possible, does not pose any additional risk to the injured person. For example, with some cutting equipment there is a risk of sparks, which could cause a fire if there has been a leakage of fuel or flammable vapour. Equipment powered by compressed air or hydraulic systems may be a safer alternative.
- 120 Personnel or marshals who may operate rescue equipment should be regularly trained and competent in its use. Where necessary, protective clothing should be worn, ie suitable gloves or goggles. The sports' governing bodies and the fire service may be able to provide training. Casualties should also be protected from fragments of metal or glass which may be produced by the equipment.

Fatalities

- 121 Although they are rare, fatalities do sometimes occur at motor sport events. If someone is killed, you should inform the Coroner, or in Scotland the Procurator Fiscal, immediately. You can do this by contacting any police officer. You should not disturb the scene of the accident. The police may wish to carry out an investigation if they think there has been a contravention of the Road Traffic Act 1991. Further information on road traffic legislation can be found in paragraphs 54-61 of Appendix 3.

References

- 1 *A guide to the Health and Safety at Work etc Act 1974* L1(rev) HSE Books 1992 ISBN 0 7176 0441 1
- 2 *First aid at work. Health and Safety (First-Aid) Regulations 1981. Approved Code of Practice and Guidance* L74 HSE Books 1997 ISBN 0 7176 1050 0
- 3 *A guide to safety at sports grounds* HMSO 1992 ISBN 0 11 341001 8
- 4 *A guide to the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995* L73 HSE Books 1996 ISBN 0 7176 1012 8
- 5 *Managing crowds safely* HSG154 HSE Books 1996 ISBN 0 7176 1180 9
- 6 *Reducing noise at work. Guidance on the Noise at Work Regulations 1989* L108 HSE Books 1998 ISBN 0 7176 1511 1
- 7 *Sound solutions: Techniques to reduce noise at work* HSG138 HSE Books 1995 ISBN 0 7176 0791 7
- 8 *Manual handling. Manual Handling Operations Regulations 1992. Guidance on Regulations* L23 HSE Books 1992 ISBN 0 7176 0411 X
- 9 *Manual handling: solutions you can handle* HSG115 HSE Books 1994 ISBN 0 717 606937
- 10 *Getting to grips with manual handling* INDG143 HSE Books 1993 Single copies are free, multiple copies in priced packs ISBN 0 7176 0966 9
- 11 *Work equipment. Provision and Use of Work Equipment Regulations 1998. Guidance on Regulations* L22 HSE Books 1998 ISBN 0 7176 1626 6
- 12 *Power take-off shafts* AS24(rev) HSE Books 1997 Free information sheet
- 13 *Prevention of tractors overturning* AS22(rev) HSE Books 1997 Free information sheet
- 14 *Memorandum of guidance on the Electricity at Work Regulations 1989* HSR25 HSE Books 1989 ISBN 0 7176 1602 9
- 15 *Institution of Electrical Engineers (IEE) Regulations for Electrical Installations* (sixteenth edition) 1991 BS 7671: 1992 BSI 1992 ISBN 0 852965 57 5
- 16 *Maintaining portable and transportable equipment* HSG107 HSE Books 1994 ISBN 0 7176 0715 1
- 17 *Avoidance of danger from overhead electric power lines* GS6 (third edition) HSE Books 1997 ISBN 0 7176 1348 8
- 18 *General COSHH ACOP, Carcinogens ACOP and Biological Agents ACOP. Control of Substances Hazardous to Health Regulations 1994* L5 HSE Books 1997 ISBN 0 7176 1308 9
- 19 *The safe use of pesticides for non-agricultural purposes. Control of Substances Hazardous to Health Regulations 1994. Approved Code of Practice* L9 HSE Books 1991 ISBN 0 7176 0542 6

- 20 *Personal protective equipment at work. Personal Protective Equipment at Work Regulations 1992. Guidance on Regulations* L25 HSE Books 1992 ISBN 0 7176 0415 2
- 21 *Management of health and safety at work. Management of Health and Safety at Work Regulations 1992. Approved Code of Practice* L21 HSE Books 1992 ISBN 0 7176 0412 8

Further reading

Five steps to risk assessment INDG163 HSE Books 1995 Single copies are available free, multiple copies are in priced packs ISBN 0 7176 0904 9

Successful health and safety management HSG65 (second edition) HSE Books 1997 ISBN 0 7176 1276 7

Writing a safety policy: advice for employers HSC6 HSE Books Free leaflet

Storage of flammable liquids in containers HSG51 HSE Books 1998 ISBN 0 7176 1471 9

Basic advice on first aid at work INDG215 HSE Books 1997 Single copies are free, multiple copies are in priced packs ISBN 0 7176 1070 5

British Standard Code of Practice for Safety of Machinery BS 5304: 1988 ISBN 0 580 16344 X

The carriage of dangerous goods explained: Part 2 Guidance for road vehicle operators and others involved in the carriage of dangerous goods by road HSG161 HSE Books 1996 ISBN 0 7176 1253 8

Carriage of Dangerous Goods by Rail Regulations 1994 L51 HSE Books 1994 ISBN 0 7176 0698 8

Health and safety in motor vehicle repair HSG67 HSE Books 1997 ISBN 0 7176 0483 7

Everyone's guide to RIDDOR HSE31 Single copies are free, multiple copies in priced packs ISBN 0 7176 1077 2

Carriage of Dangerous Goods by Road Regulations 1996 SI 1996 No 2095 HMSO

Carriage of Dangerous Goods (Classification, Packaging and Labelling) and Use of Transportable Pressure Receptacles Regulations 1996 SI 1996 No 2092 HMSO

HSE

HSE priced and free publications are available by mail order from:
HSE Books, PO Box 1999, Sudbury, Suffolk CO10 2WA
Tel: 01787 881165 Fax: 01787 313995
HSE priced publications are also available from good booksellers.

HMSO

Copies of the acts, regulations and other Stationery Office (formerly HMSO) publications mentioned in this guide are available from:
The Publications Centre, PO Box 276, London SW8 5DT
Tel: 0870 600 5522 Fax: 0870 600 5533 Website: www.tso.co.uk
(They are also available from bookshops.)

British Standards

British Standards are available from BSI Customer Services,
389 Chiswick High Road, London W4 4AL
Tel: 020 8996 9001 Fax: 020 8996 7001
Website: www.bsi-global.com

Appendices

APPENDIX 1 CHECKLIST FOR MOTOR SPORT ORGANISERS

The following is not an exhaustive checklist but it may be helpful to people organising motor sport events:

Site layout Is the site laid out so that competitors and spectators can enter and leave safely? Wherever possible, participants' and spectators' vehicles should be segregated.

Can emergency vehicles gain access to all parts of the course or site?

Track or course Is the track or course suitable for the type of vehicle and level of skill and experience of the competitors? A limit on the number of competitors who can use the course may be needed.

Is the surface of the track or course in good condition?

Are safety barriers adequate and of a type which will not put competitors at unnecessary risk?

Are there any natural features such as trees which might be a hazard to competitors?

Are marshals' posts or other protection provided where possible?

Spectators Are spectators protected from risks from moving vehicles or debris? They should be kept at a safe distance from competitors by fencing or marshals and barriers or catch-netting may be needed.

Are all areas to be occupied by spectators safe for the numbers expected? This should include permanent and temporary stands, hospitality units and bars.

Is it safe for spectators to enter the pit or paddock area?

Should access be restricted or the movement of vehicles controlled?

Where large numbers of spectators are expected, is there a major incident plan? Does this cover how to deal with an incident involving a large number of casualties and the evacuation of spectators?

Officials and marshals Are there enough officials and marshals present to run the event safely? They should be suitably trained and experienced so that they can carry out their duties safely.

Do marshals need high visibility clothing?

Are noise test officials or marshals exposed to high levels of noise? You should undertake a noise assessment and, if it is necessary to reduce the risk of hearing damage, control the level of noise or provide hearing protection.

Are crowd management stewards and car park attendants easy to identify? They could be provided with identifying markers such as coloured armbands.

Competitors Has the ability of competitors to handle their vehicle safely been assessed? Does their level of experience allow them to compete safely against other participants?

Are the types of vehicle taking part at any one time compatible?

Is there a system for inspecting competitors' vehicles to make sure they are not likely to cause danger to other competitors, marshals, spectators or themselves?

Are competitors' protective clothing and safety equipment adequate?

Are there enough suitably trained or experienced scrutineers or machine examiners present?

Control of the event Is there a suitable system for starting and stopping the event and dealing with accidents or incidents?

Are all officials, marshals and competitors familiar with the flag or light signals which might be used?

Are radio or telephone communications also needed?

First aid and rescue Are adequate first-aid and rescue services provided? Can they reach all parts of the course quickly and do they have suitable equipment?

Is cutting equipment of a type which will not put a trapped competitor at unnecessary risk? Those using it should be trained and may need goggles or other protection.

Are all recovery vehicles and tractors fitted with a suitable cab or safety cage? Are all moving parts adequately guarded?

Fire safety What precautions have been taken to deal with fires involving competitors' vehicles or the handling of fuel? Suitable fire-fighting equipment should be available throughout the course and in the pit or paddock areas. If refuelling takes place indoors or during an event, what additional measures have been taken? A petroleum licence may be needed if fuel is stored on-site. You might wish to put up 'No Smoking' signs near to vehicles, strawbales, grandstands and refuelling areas.

What training has been provided for marshals who may need to use fire-fighting equipment? Do they have suitable protective clothing?

Electrical equipment Is all the electrical equipment in a safe condition? It should be inspected regularly by a competent person.

Is outdoor electrical equipment of weatherproof construction?

Are hand tools which are used outside supplied at reduced voltage or protected by a residual current device?

Manual handling Do you really need to move heavy loads?

Do you make heavy and awkward loads easier to handle?

Do you try to avoid the need for strenuous pushing and pulling?

Communications Have adequate arrangements been made in order that emergency and other services can be called on if needed?

Are appropriate officials aware of emergency procedures and arrangements, the location of appropriate equipment and how to use it?

APPENDIX 2 ADVICE FOR EMPLOYEES ON ASBESTOS

- USE asbestos-free substitutes.
- DON'T blow dust out of brake drums or clutch housings with an air line.
- DO use properly designed drum cleaning equipment which prevents dust escaping, or use clean, wet rags to clean out drums or housings. Dispose of used rags in a plastic waste bag while still wet.
- DON'T grind or drill linings unless the machine has exhaust ventilation or there is a ventilated booth to do the work in.
- DON'T use brushes to sweep up dust.
- DO use a special (Type H, BS 5415) vacuum cleaner to remove dust.
- DO wet dust thoroughly and scrape it up if you haven't got a vacuum cleaner.
- DO wear the protective equipment clothing, such as overalls and respirators.

APPENDIX 3 RELEVANT LEGISLATION

Copies of the statutory instruments for the legislation listed below are available from the Stationery Office, the publishing arm of what was formerly known as HMSO. See page 42 for the address.

The Health and Safety at Work etc Act 1974

- 1 The Health and Safety at Work etc Act 1974 (HSW Act) applies to all employers, employees and self-employed people. The Act protects not only people at work but also members of the public and volunteers who may be affected by a work activity. Where there is no work activity taking place, for example at an event run by a club made up of volunteers, the Act applies only in a limited way. In these cases it makes requirements for the people in control of sites, equipment or substances which are provided for people to use.
- 2 Similarly, the regulations made under the Act only apply where there is a work activity.

Duties of employers to employees

- 3 All employers have a general duty under the Act to make sure that as far as reasonably practicable the health, safety and welfare of their employees are protected when they are at work. In practical terms, employers must make sure that:
 - the workplace is safe and without risks;
 - safe methods of working are set and followed;
 - machinery and equipment is properly maintained and safe to use;
 - equipment and harmful substances are used properly and stored safely;
 - the welfare of employees is not affected by noise, dust or fumes;
 - employees are provided with the training, information and supervision needed for them to work safely; and
 - employees have healthy working conditions, including adequate lighting, heating, ventilation and toilet facilities.
- 4 Employers with five or more employees must prepare a written safety policy. This is a working document which describes responsibilities for safety, explains procedures such as accident reporting and gives information on operating methods which should be followed so that employees work safely. The policy may include information on dangerous equipment or hazardous chemicals. The employer must make sure that employees are aware of the policy and provided with any information which may be relevant to them. This should be included in the employer's training programme.

Duties of employers to people not employed by them

- 5 Employers and self-employed people have a responsibility for the health and safety of members of the public, other self-employed people or contractors' employees who may be affected by their work operation.
- 6 The people who should be considered include the following:
 - spectators;
 - competitors;
 - volunteer officials and marshals;
 - people hiring equipment, for example at a racing school or karting centre; and
 - contractors erecting temporary stands or carrying out maintenance work.

- 7 Some of the people at risk could be children or have a disability and might be especially vulnerable. People can be absent-minded, careless or simply unaware of danger, particularly where there are moving vehicles or dangerous equipment, and this should be taken into account.
- 8 Contractors and people such as food vendors also have their own duties to comply with health and safety legislation. However, they may need to be given information about a site so that they are not put at risk. For example, workers carrying out repairs to fencing should be told that a racetrack is to be used for a practice session. Those hiring contractors do not need to supervise them, but may need to exchange information about the way in which a job is to be carried out, so that their own employees or members of the public are not put in danger.

Duties of employees

- 9 Under the HSW Act employees have a legal duty to take reasonable care of themselves and other people and co-operate with their employer where safety is concerned.

Duties of self-employed people

- 10 Self-employed people have duties under the HSW Act similar to those for employers and should not create risks to themselves or other people. They may also be subject to the requirements of the regulations made under the Act.

Duties of people in control of premises or equipment

- 11 Many motor sport events are organised as a leisure activity by clubs made up of volunteers. Where there are no employees or self-employed people at work at an event, large parts of the HSW Act and regulations made under it do not apply.
- 12 However, section 4 of the HSW Act does make some requirements. Where machinery, equipment or substances are provided for people to use (eg cutting gear, electrical equipment, recovery vehicles or fire extinguishers), each person who has any control of it must take reasonable precautions to make sure that it, and the site where it is to be used, are safe and without risks to health. Also, where people come on to a site to use it as a place of work, for example contractors putting up temporary stands, people working at food stalls or mechanics employed by works teams, the people in control of the site should make sure, as far as possible, that it is safe and without risks to health.

The Management of Health and Safety at Work Regulations 1992

- 13 The Management of Health and Safety at Work Regulations 1992 require employers to assess the risks which might exist in the workplace and might affect employees or non-employees (members of the public). They also require them to decide whether safety precautions are adequate and, if they are not, what other control might be needed. Self-employed people must also take similar steps. This would include:
 - identifying dangerous equipment, chemicals or tasks and who might be affected by them;
 - making sure that hazardous tasks are carried out in a safe way;
 - training staff to carry out their work safely;
 - making sure that non-employees, such as volunteer marshals who are involved in race control procedures or might have to use rescue equipment or fire extinguishers, are properly trained so that they do not put themselves or other people at risk; and

- monitoring the way in which work is carried out and changing working methods where this can improve safety standards.
- 14 Where there are five or more employees, the assessment must be recorded. The record should include the significant findings of the assessment and details of any employees identified as being especially at risk, and what measures are in place to control the risk. The level of detail should be broadly proportionate to the risk. Trivial risks can usually be ignored.
- 15 So that employers can carry out their responsibilities properly, the Regulations require that a competent person is appointed to assist them with their health and safety duties. This can be a member of staff or someone from outside the organisation. Motor sports governing bodies may be able to provide some of the necessary expertise.
- 16 The assessment should include occasions when employees work outside their normal base. For example, it would need to cover mechanics employed by a racing team who visit different race tracks as part of their work. The different pieces of equipment, hazardous substances or working methods they might use should be identified during the assessment and included in the safety procedures.
- 17 Where employers share their workplace with another employer or self-employed person, or have another employers' staff working in their premises, they have a duty to co-operate with each other and exchange information on health and safety.
- 18 The Regulations also require employers to have procedures in place to deal with serious and imminent danger. This might include evacuation of the workplace. The employer must nominate a sufficient number of people to implement the procedures. They should be trained and competent to carry out their role in an emergency situation. The evacuation of spectators at a sporting event is usually included in a major incident plan.

The Health and Safety (First-Aid) Regulations 1981

- 19 Under the Regulations arrangements for first aid should be made at places where people work. The level of first aid needed depends on a number of factors, including the number of employees and the type of work they are doing. The Regulations will apply both to motor sport events where there is a work activity and where employees are on-site carrying out maintenance or administration work.
- 20 The HSE publication *First aid at work. Health and Safety (First-Aid) Regulations 1981. Approved Code of Practice and Guidance²* gives advice on how to comply with the Regulations.
- 21 The requirements of the Regulations are separate to the first-aid arrangements which may be needed for competitors and spectators.

The Noise at Work Regulations 1989

- 22 The Regulations require employers to reduce the risk of damage to the hearing of workers from noise at work. The main requirements apply where noise exposure is likely to be at or above any of three 'action levels'. The two main action levels are related to 'daily personal noise exposure' which depends on the noise level in the working area and how long people spend in it during the day. The 'first action level' is a daily personal noise exposure of 85 dB(A) and the 'second action level' is a daily personal noise exposure of 90 dB(A). There is also a 'peak action level' which depends on the maximum pressure reached

by the sound wave. The Regulations set this at a pressure of 200 pascals, though it is often also quoted as 140 dB(A).

- 23 If people have to shout or have difficulty being understood by someone about 2 metres away, there might be a noise problem. It is likely that people might be exposed above the first action level. In this case the employer is required to ensure that a competent person makes a noise assessment. The noise assessment should identify the daily noise exposure of all the employees who might be at risk of hearing damage, and should give the employer information sufficient to enable him or her to control the noise exposure. The employer can then draw up an informed action plan to reduce the risk of hearing damage.
- 24 Employers are required to take other specific measures at the first or peak action level including giving employees information and training and providing them with ear protection on request.
- 25 At the second or peak action level employers are additionally required to reduce noise exposure and, if employees are still exposed at or above those levels, to provide ear protection, ensure it is worn, and demarcate ear protection zones.

The Manual Handling Operations Regulations 1992

26 Employers must:

- avoid the need for hazardous manual handling if reasonably practicable;
- assess the risk of injury from any hazardous manual handling which cannot be avoided; and
- reduce the risk of injury accordingly.

27 Employees must:

- follow safe systems of work laid down by their employers;
- use mechanical aids provided by their employers properly; and
- remember to use the training provided on lifting.

The Provision and Use of Work Equipment Regulations 1998 (PUWER)

28 PUWER contains requirements concerning the selection of suitable work equipment for the job, and maintenance and inspection of work equipment so that it is in a safe condition for use. PUWER also contains requirements relating to 'hardware' such as the prevention of access to dangerous parts of machines and guarding, marking work equipment, suitable warning signs, stability, isolation from sources of energy and stop controls. Requirements for training, information and instructions are also specified by PUWER.

The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR)

- 29 The Regulations make requirements for fatalities, certain types of injury and other incidents to be reported to either the local authority or HSE. The purpose of making the report is to allow the enforcing authority to make an investigation of the incident if it thinks this is necessary. The person who is responsible for making the report is either the employer of the individual involved, the person who has control of the premises or, in some cases, a self-employed person.
- 30 The Regulations only require a report to be made where an accident or dangerous occurrence happens as a result of a work activity, where the work is being carried out by an employee, self-employed person or trainee.

- 31 Certain types of dangerous occurrence, and diseases which affect people as a result of their work, must also be reported under the Regulations.
- 32 More information is available from your enforcing authority or can be found in *Everyone's guide to RIDDOR* (see Further reading in the References section).

Notification of fatalities and injuries

- 33 There are two ways in which incidents have to be reported to the enforcing authority, by telephone and the completion of a Form F2508. The severity of the incident and any injuries dictate what you must do.
- 34 Fatalities and some specified injuries (eg fracture, amputation, eye trauma, electric shock or burn leading to unconsciousness or requiring resuscitation, or exposure to a harmful substance leading to acute illness) which occur as a result of a work activity must be reported as quickly as possible. This is normally done by telephone, and then confirmed in writing using Form F2508 within ten days. The forms can be purchased from HSE Books (the ISBN is 0 7176 1078 0 and the HSE Books address can be found on the inside back cover of this book).
- 35 Accidents which affect a person who is working and which keep them off work or stop them doing their normal job for more than three days must be reported by the employer within ten days using Form F2508. 'Over-three-day' injuries to people who were not working at the time of their accident do not need to be reported.

Notification of dangerous occurrences

- 36 Certain dangerous occurrences must also be reported to the enforcing authority using Form F2508. A full list of dangerous occurrences is given in the booklet *Everyone's guide to RIDDOR* (see Further reading in the References section). The most relevant to motor sport events are:
 - the collapse or partial collapse of scaffolding which is more than 5 metres high;
 - an electrical short circuit or overload which causes fire or explosion and might have caused death or a specified injury to any person;
 - the collapse, overturning or failure of any mobile powered access platform, lift or hoist;
 - the explosion, collapse or bursting of any closed vessel, for example a pressurised gas cylinder; and
 - any incident where equipment comes close to, or into contact with, an overhead electric line.

Notification of reportable diseases

- 37 Where a person at work suffers from a reportable disease which is linked to certain work activities, the person's employer must send a written report to the enforcing authority. This will normally happen following a report from the person's doctor. The report should be made using Form F2508A. Details of the diseases which must be reported are given in *A guide to the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995*.⁴

Record keeping

- 38 Employers should keep a record of all reportable accidents and dangerous occurrences. The records should include the date and time of the incident, the name and occupation of any person affected, details of any injuries, the place where the incident happened and a brief description of the circumstances. Employers should also keep a record of any cases of a reportable disease. The records should be kept for three years.

Fire safety

- 39 The Fire Precautions Act 1971 is the main piece of legislation which deals with fire safety. It is designed to make sure that there are adequate general fire precautions and escape routes in various classes of building.
- 40 A fire certificate is required for certain types of building where more than twenty people are employed or where more than ten people work on a floor other than the ground floor. The areas at a motor sport venue which might need a fire certificate include administration offices and areas where refreshments are sold.
- 41 Detailed advice on fire safety in buildings is available from the local fire authority.

Storage of fuel

- 42 Where petrol is stored, a petroleum licence may be required under the Petroleum (Consolidation) Act 1928. Exemptions for the storage of fuel for use in motor vehicles are given in the Petroleum Spirit (Motor Vehicles etc) Regulations 1929 and the Petroleum Spirit (Plastic Containers) Regulations 1982.
- 43 A petroleum licence may also not be needed where less than 275 litres of petrol is kept in a suitable store, in metal containers of maximum capacity 10 litres or plastic containers holding no more than 5 litres. People storing fuel should contact their local petroleum licensing authority for advice. They are the Fire and Civil Defence Authorities in Greater London and the metropolitan areas, County Fire or Trading Standards Departments in the rest of England and Wales, and the Regional or Island Council Trading Standards Departments in Scotland.

Safety at sports grounds

- 44 The safety at sports grounds legislation developed following disasters at a number of British football grounds, and makes requirements to protect spectators at all types of sporting events.

The Safety at Sports Grounds Act 1975

- 45 The Safety at Sports Grounds Act 1975 defines a sports ground as 'any place where sports or other competitive activities take place in the open air and where accommodation has been provided for spectators consisting of artificial structures or of natural structures artificially modified for the purpose'. The Act will apply to many of the venues used for motor sport. Its aim is to make sure that places where sports take place are safe for spectators.
- 46 Responsibility for the safety of spectators lies with the ground management at all times. However, where a local authority think that there is a risk to safety, they can issue a prohibition notice requiring the entry of spectators to all or part of a sports ground to be prohibited or restricted.
- 47 A system of safety certificates was also introduced by the Act for certain classes of 'designated ground'. This currently only applies to grounds which have capacity for more than 5000 spectators where FA Premier and Football League matches are played, and grounds which can accommodate more than 10 000 spectators for rugby and cricket matches.

The Fire Safety and Safety of Places of Sport Act 1987

- 48 Under this Act, a stand at a sports ground which has not been designated under the 1975 Act, and which holds more than 500 spectators under cover, is defined as a 'regulated stand', and must have a safety certificate from the local authority, regardless of the sport taking place at the ground.
- 49 The purpose of a safety certificate issued under the 1975 Act or 1987 Act is to set the safe capacity, and lay down the terms and conditions which must be met to maintain that capacity. In determining the safe capacity of a venue and/or individual stands within it, ground management and the local authority should refer to *A guide to safety at sports grounds*.³

The guide to safety at sports grounds

- 50 The primary purpose of *A guide to safety at sports grounds* is to provide guidance to ground management, their technical advisers and local authorities, in order to assist them in the assessment of how many spectators can be safely accommodated at the venue. The guide is an advisory document for use by competent persons. It has no statutory force but many of its recommendations will be given force of law by their inclusion in safety certificates.
- 51 The guide is intended to cover grounds where sporting activities of all kinds are held and where spectators are present. Much of the information contained in it will be helpful to people organising motor sports events, especially where there may be large numbers of spectators.
- 52 The guide acknowledges the difference between individual sports and different venues hosting the same sport. It recommends that a flexible approach should be maintained to take account of the individual type, function and layout of venues.
- 53 The guide does not attempt to provide a minimum standard of safety. It may therefore be possible to deviate from individual guidelines without detracting from the overall safety of a venue. However, the recommendations contained in the guide are based upon research and experience. Deviations from the guide should therefore only be acceptable when considered to be necessary and reasonable. In addition, it is the responsibility of ground management to ensure that any decision to deviate from the guide should be recorded, with supporting written evidence, including the details of a risk assessment.

The Road Traffic Act 1991

- 54 Under this Act the offences of causing death by dangerous driving, dangerous driving, careless and inconsiderate driving and causing death by careless driving also apply to the use of a vehicle in a public place off the highway. In some circumstances this could affect motor sport competitors.
- 55 The offences do not apply to people taking part in 'authorised' motoring events, providing they are driving in accordance with the authorisation for the event.
- 56 The Motor Vehicle (Off Road Events) Regulations 1995 name a number of bodies who can authorise events.
- 57 Indoor events which are attended by members of the public may require an entertainment licence, or in Greater London an indoor sport licence, from the local authority. Purpose-built stadiums or race tracks where the public have no right of access to the track are not public places and events held there do not need to be authorised.

- 58 It is not an offence to organise or take part in an unauthorised event in a public place, but those taking part should be aware that they may be liable to prosecution if they drive dangerously or carelessly.

Events on the highway

- 59 It is an offence to organise or take part in a race or trial of speed between motor vehicles on a highway in England or Wales or on a public road in Scotland, except under special circumstances, for example an event run under an Act of Parliament.
- 60 Other events which use the highway must be authorised under the Motor Vehicle (Competition and Trials) Regulations 1969 or the Motor Vehicle (Competition and Trials) (Scotland) Regulations 1976. Certain events are automatically authorised by the Regulations; these include navigational events and road safety events.
- 61 For other types of event authorisations can be issued by the RAC Motor Sports Association for events in England and Wales, and by the Royal Scottish Automobile Club, both of which can provide more detailed information.

The Control of Pesticides Regulations 1986 as amended by the Control of Pesticides (Amendment) Regulations 1997

- 62 The Regulations were made under the Food and Environmental Protection Act 1985. They cover the advertising, sale, supply, storage and use of products such as insecticides, wood preservatives, weedkillers, fungicides and pest control products. They are intended to safeguard the health of human beings, animals and plants and protect the environment and are enforced by the environmental health department of the local authority.
- 63 Everyone who uses these types of product should have been trained and given instructions so that they can work safely and legally.
- 64 The Regulations prohibit the marketing and use of a pesticide unless it has been approved by Government Ministers. The label on the container should include a MAFF or HSE number. If you are unsure you should check with the supplier or the manufacturer. The instructions on the label should be followed precisely. If the label has become unreadable or if the pesticide is no longer needed, it should be disposed of safely. Local waste regulation authorities can provide advice on this.
- 65 All pesticides should be kept in a suitable storage container capable of resisting fire, theft, vandalism or impact damage. The store needs to have a sump in case containers leak and must carry warning signs and 'No Smoking' notices.

Further information

Motor sport organisations

The following organisations may be able to provide additional information on the subjects covered in this document:

Amateur Motorcycle Association Ltd

28 Mill Park, Hawks Green Lane, Cannock, Staffordshire WS11 2XT
Tel 01543 466282 Fax 01543 466283

British Oval Racing Safety Executive

PO Box 1081, Cannock, Staffordshire WS12 1ZF
Tel 01543 422046

Association of Motor Racing Circuit Owners

c/o Thruxton Circuit, Andover, Hampshire SP11 8PN
Tel 01264 772607 Fax 01264 773794

International Organisation of Professional Drivers Ltd

The Motor Sports Centre, Sandbed, Hebden Bridge HX7 6PT
Tel 01422 843651 Fax 01422 844171

Association of Racing Drivers Schools

c/o Octagon Motor Sports, Silverstone Circuits, Northamptonshire NN12 8TN
Tel 01327 320461 Fax 01327 320470

National Autograss Sport Association Ltd

53 Andrew Drive, Haywood Oaks, Blidworth, Nottinghamshire NG21 0TX
Tel 01623 796494

Auto Cycle Union

Wood Street, Rugby CV21 2YX
Tel 01788 566400

National Karting Association Ltd

Devonia, Long Road West, Dedham, Colchester, Essex CO7 6ES
Tel 01206 322726 Fax 01206 322726

British Motor Racing Marshals Club

58 Alfred Road, Buckhurst Hill, Essex IG9 6DP
Tel 0208 502 9304

Royal Automobile Club Motor Sport Association Ltd (MSA)

Motor Sports House, Riverside Park, Colnbrook, Slough SL3 0HG
Tel 01753 681736 Fax 01753 682938

Speedway Control Bureau Ltd

ACU Headquarters, Wood St, Rugby CV21 2YX
Tel 01788 565603 Fax 01788 552308

British Off-Road Driving Association (BORDA)

Leisure House, Salisbury Road, Andover, Hampshire SP11 7DN
Tel 01264 712093

For information about health and safety ring HSE's Infoline Tel: 0845 345 0055
Fax: 0845 408 9566 Textphone: 0845 408 9577 e-mail: hse.infoline@natbrit.com or
write to HSE Information Services, Caerphilly Business Park, Caerphilly CF83 3GG.

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