



RSMA BEST PRACTICE GUIDE

PART 1

General Health and Safety

CONTENTS

Secton 1. Introduction.....	3
Section 2. Law and Regulations, Health and Safety Policy, Statutory Responsibilities.....	4
Section 3. Risk management.....	9
Annexes.....	18

Section 1. Introduction

1.1 The purpose of this chapter is to give guidance and advice on general health and safety considerations that should be taken into account when conducting road markings and associated activities.

Advice and recommendations in this section will have their foundations in law, taking into account the requirements laid down in legislation such as 'The Health and Safety at Work Act 1974,' other regulations and accepted codes of practice where applicable to the road markings sector.

1.2 The health, safety and welfare of anyone associated with, and or affected by road marking activities, must be given the prime consideration when carrying out work, people such as:

- Road marking operatives
- Managers and supervisors
- Members of the general public
- Vulnerable people
- Other road users

These people are often affected by this type of work and must be considered in every stage of any project. If persons not in the employment of a road marking business are affected by road marking activities either directly or indirectly, they will be considered as being owed a 'duty of care' under the 'The Health and Safety at Work Act 1974.'

1.3 Reasonably Practicable

The term 'reasonably practicable' will feature greatly in this document. Subsequent sections will focus on 'sensible risk management' and how to form a sensible and proportionate approach to health and safety. A full understanding of the term reasonably practicable will assist all, in the considerations needed in risk management. The term reasonably practicable refers to 'the most common level of duty in health and safety law'. A simple definition would be: "reasonably practicable is a narrower term than 'physically possible' and the owner of the duty of care must calculate the balance between the 'Risk' and the 'Sacrifice'".



Fig 1.1

This means that, should the risk of injury or ill health be very small compared to the cost in time, trouble and effort required in reducing the risk, no action is necessary. The cost however, must 'grossly outweigh' not balance the risk. This duty requires competent judgement and is the basis for the need for a suitable and specific risk assessment.

1.4 Obvious hazards exist in this sector ranging from the unavoidable interruption to the normal traffic flow, to hazards such as associated with the handling of high temperature equipment and materials. Other less obvious hazards like the incorrect use and maintenance of plant and equipment; the absence of suitable training or supervision in the application of safe systems of work are addressed in this document.

Section 2. Law and Regulations, Health and Safety Policy, Statutory Responsibilities

It is not always necessary to employ a health and safety professional in order to maintain a safe and effective working environment. A basic understanding of legislation is required at some level by all employees and contractors. This can be achieved with effective training, qualifications and supervision. All operations, no matter how small or large must demonstrate a certain level of competency within their organisation in relation to the understanding of health and legislation. This section will show a basic outline of that understanding, and will list the regulations that are pertinent to the road marking sector.

2.1 Laws and Regulations

2.1.1 Introduction to the legal framework.

The health and safety legal framework for this country is made up of both civil and criminal law. The Health and Safety at Work Act 1974 (HSWA) is by far the most important part of that framework.

The Health and Safety at Work Act 1974 is an 'Enabling Act' and most of the relevant regulations encountered in the road marking sector have been made under this act since 1974. Diagram 1.1 lists the more relevant regulations and gives a guide as to how and what they regulate.

2.1.2 The health and safety at work act 1974 and the regulations that sit under the act, aim to help employers to set goals, but leave them free to decide how to control hazards and risks that they identify. Guidance notes and approved code of practice give advice on how best to interpret the law. This best practice guide will provide such a guide. It is however considered the minimum requirements for the sector. Road marking organisations are free to take other routes so long as they do what is 'reasonably practicable' and can demonstrate this should the need arise.

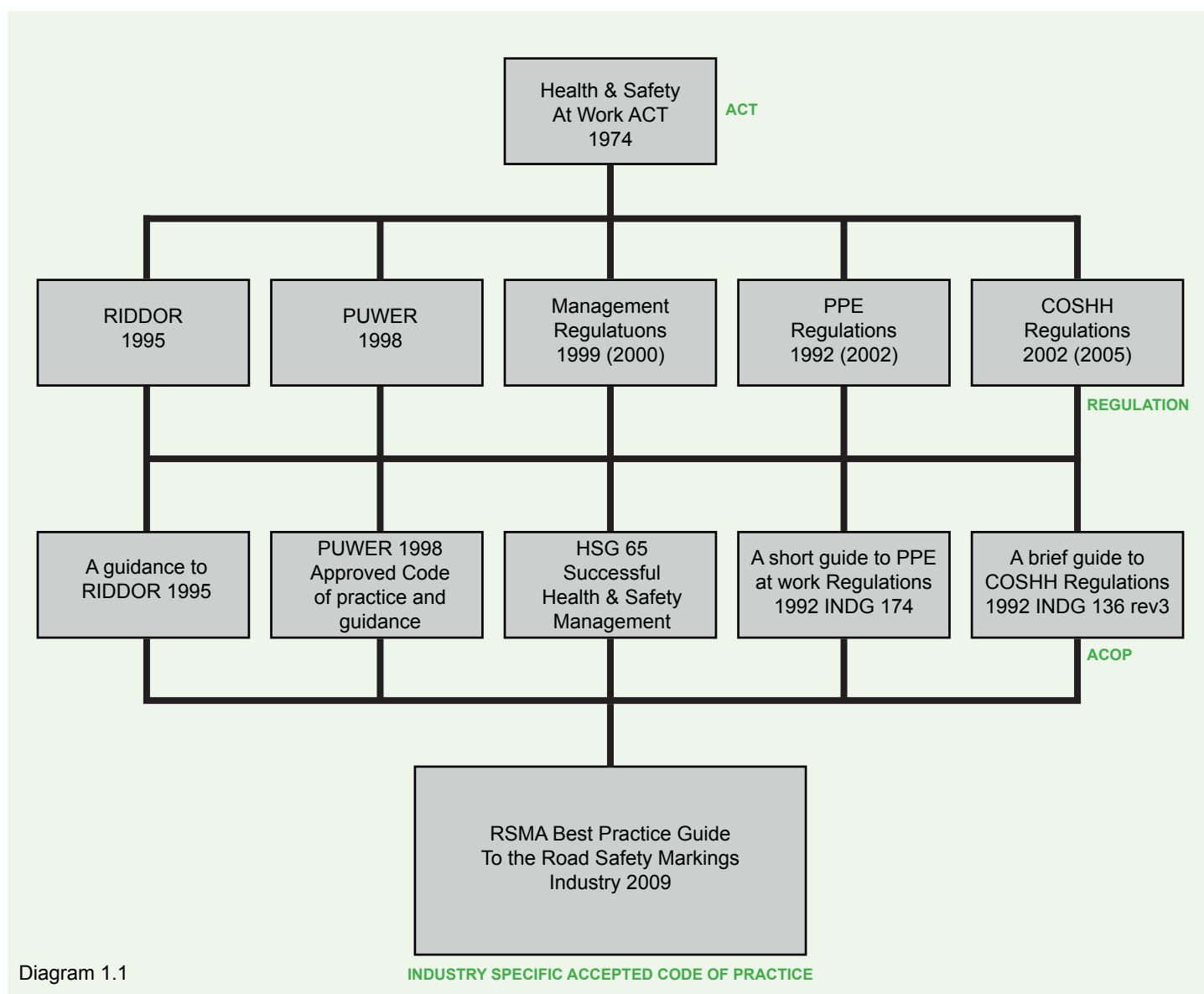


Diagram 1.1

2.2 Health and Safety Policy

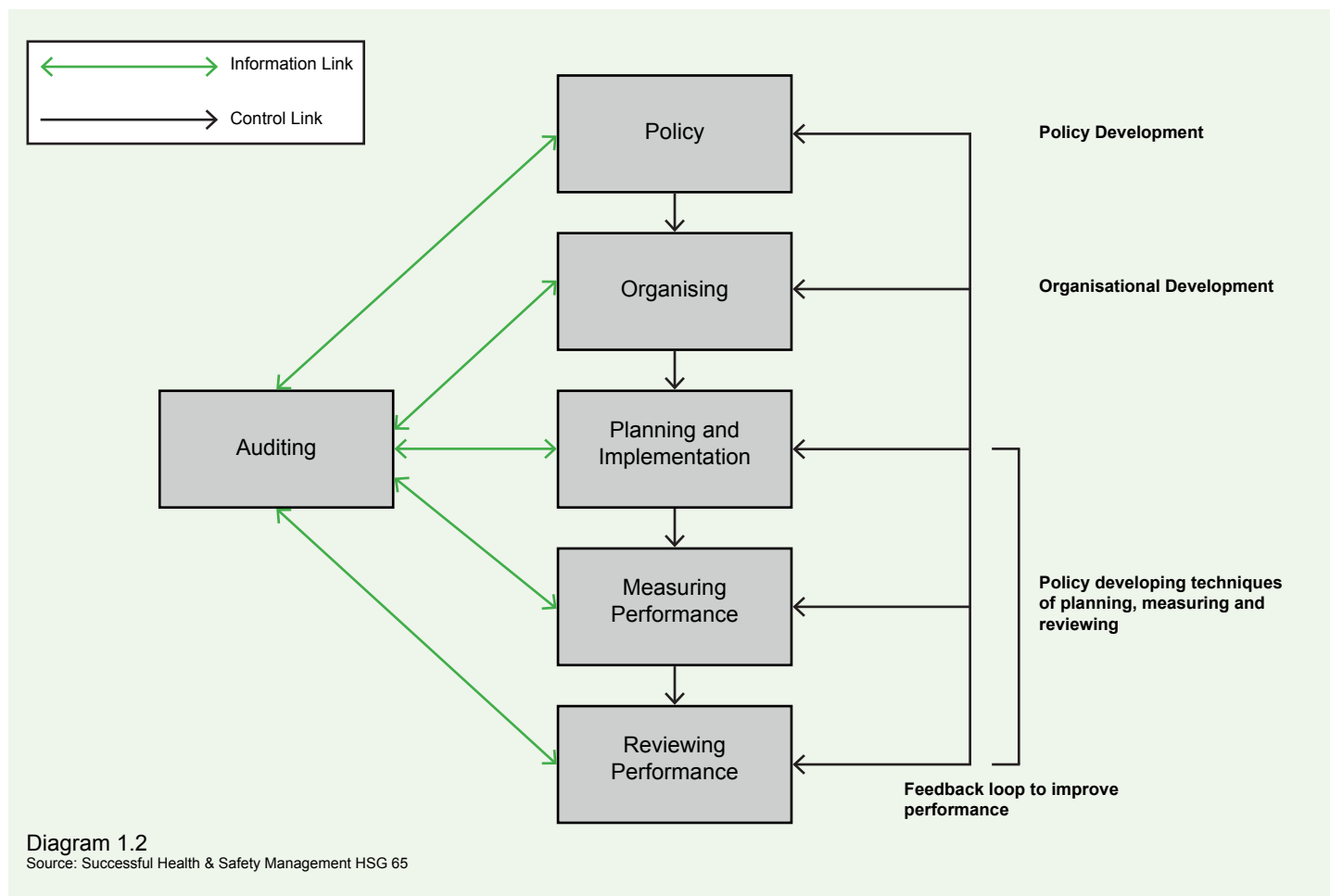
Organisations with five or more employees are required by law to have a written health and safety policy. The Membership criteria of RSMA also require organisations to have a suitable written health and safety policy.

2.2.1

A common characteristic of a good health and safety policy is that it will accurately reflect the values and beliefs of those who devised and implemented it. Effective policies are not simply an example of bureaucratic paperwork mountains for management to pay lip service to. A good policy will detail the organisations genuine commitment to action, record its intentions towards the management of health and safety, its approach and objectives, the company vision and the criteria and principles upon which it bases its actions.

2.2.2

The principles noted above form the basis for managing health and safety and shape the written statement of policy required under section 2 of the HSW Act. The key elements of a successful health and safety management system are demonstrated by the diagram below:



2.2.3

Effective health and safety policies contribute to business performance by:

- Supporting human resource development
- Minimising the financial losses which arise from avoidable unplanned events
- Recognising that accident, ill health and incidents result from failings in management control and are not necessarily the fault of individual employees
- Recognising that the development of a culture supportive of health and safety is necessary to achieve adequate control over risks
- Ensuring a systematic approach to the identification of risks and the allocation of resources to control them
- Supporting quality initiatives aimed at continuous improvement

For further information and guidance in producing a good health and safety policy contact: info@rsma.co.uk

2.3 Statutory Responsibilities

Organisations working in the road markings sector are bound by law. Section 2.1 used Diagram 1.1 to illustrate the legal framework that not only governs this sector but all areas of working life.

The table below lists a selection of the most common regulations and explains in brief how they affect the road markings sector. This table is designed to help source information and guidance regarding regulations.

Act/Regulation	Short Name	Details/Explanation	Table 1.1
The Health and Safety at Work etc. Act 1974	HSWA	The act imposes a duty of care on everyone at work. Is an integrated piece of legislation that is the basis of health and safety at work	
The Environmental Protection Act 1990	EPA	Deals with the control of pollution, waste, noise, and any other environmentally damaging issues and covers more than 2000 processes.	
Construction (Design and Management) Regulations 2015	CDM	CDM in some way will apply to nearly all forms of civil engineering works. The regulation outlines the responsibilities held by everyone within the project	
Construction (Head Protection) Regulations 1989	N/A	These regulations apply to 'building operations' and 'works of engineering construction' and highlights the requirements needed when head protection is deemed necessary.	
Health and Safety (Consultation with Employees) Regulations 1996	N/A	These regulations apply to all employers and employees in Great Britain. Exceptions for trade union reps apply. The regulations cover the requirements to inform employees of many aspects of health and safety arrangements in an organisation.	
Control of Substances Hazardous to Health Regulations 2002 as amended	COSHH	COSHH covers substances hazardous to health in the workplace. Specific assessments are required under the regulation. Some substances like lead and asbestos are not covered under COSHH as they have their own specific regulations.	
Health and Safety (Display Screen Equipment) Regulations 1992, amended 2002	DSE	DSE regulations typically apply to computer equipment. This is a consideration that needs to be addressed with regards to administrative, management and design staff involved in road marking companies.	
Employers' liability (Compulsory Insurance) Act 1969	N/A	Living in a 'Claim Culture' results in a variety of civil claims from employers. 'Compulsory Insurance' ensures that an employer has a satisfactory level of insurance cover against any such claims.	
Regulatory Reform (Fire safety) Order 2005	N/A	The fire safety order places a duty on employers to take such fire precautions that may be reasonable in the circumstances and to ensure a risk assessment is carried out.	
Health and Safety (First Aid) Regulations 1981	N/A	These regulations set out an employers' duties to provide adequate first aid facilities. An employer shall provide or ensure that there are provided; adequate and appropriate facilities and equipment and qualified first aiders to render first aid.	
Health and Safety (Information for Employees) Regulations 1989	HSIER	These regulations require that the approved poster entitled, Health and Safety – what you should know, is displayed or the approved leaflet is distributed.	
Lifting Operation and Lifting Equipment Regulations 1998 as amended	LOLER	LOLER aims to reduce the risks from lifting equipment provided for use at work. This will affect businesses that use fork lift trucks, lifting hoists and offices where passenger lifts are installed.	
Management of Health and Safety at Work Regulations 1999	MHSW regs.	The management regs supplement the requirements of the Health and Safety at Work Act etc 1974 and specify a range of management issues, most of which must be carried out in all workplaces. From Risk assessment to the production of a Health and Safety Policy, these are all legal requirements under this regulation.	

Act/Regulation (Alphabetical)	Short Name	Details/Explanation	Table 1.1 cont'
Manual Handling Operations Regulations 1992 as amended 2002	MHO	Duties under manual handling regulations are far reaching in every aspect of a road marking business.	
The Control of Noise at Work Regulations 2005	N/A	Noise at work is a very real issue; the requirements under this regulation are to protect people from exposure to harmful noise levels. The main aim is to reduce noise to acceptable levels. The regulation does this by imposing 'Action Levels' (AL) on activities.	
Personal Protective Equipment at Work Regulations 1992 as amended	PPE Regs	PPE Regs follow sound principles for the effective and economic use of PPE, which all employers should follow. Certain basic duties governing the provision and use of PPE apply to all situations where PPE is required.	
Provision and Use of Work Equipment Regulations 1998	PUWER	PUWER defines the term 'Work Equipment' as any machinery, appliance, apparatus, tool or installation for use at work. The regulations primary aim is to ensure that work equipment is used without risks to health and safety. Needless to say, the road marking industry has a vast array of work equipment.	
The reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995	RIDDOR	These regulations require the reporting of specified accidents, ill health and dangerous occurrences to the enforcing authorities. The HSE have made reporting increasingly easier to do. Road marking organisations should not be reluctant to report events as this is a key to prevention.	
Health and Safety (Safety Signs and Signals) Regulations 1996	Signs and signals regs	The regulations require employers to use and maintain a safety sign where there is a significant risk to health and safety that has not been avoided or controlled by other means. This regulation should not be confused with requirements stated in documents such as Chapter 8 (Traffic Signs Manual) or other such publications relevant to the road markings sector.	
The Control of Vibration at Work Regulations 2005	the Vibration Regulations	The regulations impose duties on employers to protect employees who may be exposed to risk from vibration at work, and other persons who may be affected by the work. Hand-arm vibration (HAV) and Whole body vibration (WBV) are common terms. Vibration is closely linked to noise and is another prime consideration in the road marking sector.	
Workplace (Health, Safety and Welfare) Regulations 1992 as amended 2002	Welfare Regs	The welfare regulations deal with the duty the employer has with regards to Lighting, heating and ventilation. Maintenance of the workplace and equipment and the provision of drinking water, canteens, restrooms and toilets.	
Working at Height Regulations 2005 as amended	N/A	The regulations require a risk assessment for all work conducted at height and arrangements to be put in place for eliminating risks. This may be extremely relevant when working from the bed of a vehicle.	
Working Time Regulations 1998 as amended	WTR	This regulation details the requirements for weekly working time, night work limits, rest breaks and annual leave.	

2.3.1

Table 1.1 gives an alphabetical list of regulations that are considered more relevant to the road markings sector. The is by no means an exhaustive list of all regulations in place under the Health and Safety at Work etc. Act 1974. Regulations are often subject to change under regulatory reforms. Regulations are the driving force behind everyday health and safety requirements. A basic understanding of the regulations and indeed how to interpret their requirements will assist road marking companies in maintaining efficient, productive and above all legal activities. This document will refer to industry accepted best practice and will always refer to the regulation/s that apply.



For more information regarding Health and Safety law and Regulation visit www.hse.gov.uk/legislation



2.3.2 Duty of Care

Several judgements have established that employers owe a duty of care to each of their employees. This duty cannot be assigned to others even if a consultant is employed to give advice on health and safety matters or, if the employees are sub-contracted to work with another employer. These duties are sub-divided into four groups.

Employers must Provide:

- A safe place of work
- Safe plant and equipment
- A safe system of work
- Safe and competent fellow employees

Employees (this extends down to each member of the road marking crew) also have a responsibility under the Health and Safety at Work Act 1974. These duties are sub-divided into two main duties:

Employees Must:

- Take reasonable care of the health and safety of themselves and others affected by their acts or omissions
- To cooperate with the employer and others to enable them to fulfil their legal obligations

In addition to the requirements above, further duties for employers and employees are re-defined in the Management of Health and Safety at Work Regulations 1999 as amended in 2003. These duties simply reinforce or amend the requirements under the regulations;

Employers must:

- Undertake 'suitable and sufficient' written risk assessments when there are more than four employees
- Put in place effective arrangements for the planning, organisation, control, monitoring and review of health and safety measures in the workplace (including health surveillance). Such arrangements should be recorded if there are five or more employees
- Employ or contract competent persons to help them comply with health and safety duties
- Develop suitable emergency procedures. Ensure that employees and others are aware of these procedures and can apply them
- Provide employees and others with health and safety information resulting from risk assessment or emergency procedures
- Cooperate with other employers who share the same workplace
- Provide non-employees working on the work site with relevant health and safety information
- Provide employees with adequate and relevant health and safety training
- Provide temporary workers with appropriate health and safety information

Employees must:

- Use any equipment or substance in accordance with any training or instruction given by the employer
- Report to the employer any serious or imminent danger
- Report any shortcomings in the employer's protective health and safety arrangements

2.3.3 Enforcement Authorities

Enforcement of health and safety legislation is through the Health and Safety Executive (HSE) or local authority Environmental Health Officers (EHO) and other regulatory bodies.

The HSE now operates a system called Fee For Intervention (FFI), this is charged at an hourly rate when the HSE investigate a company for H&S breaches.

Actions available to inspectors:

- Take no action
- Give verbal advice
- Give written advice
- Serve an improvement notice
- Serve a prohibition notice
- Prosecute



Section 3. Risk management

3.1 Risk Assessment

Risk assessment is the first and key start point in developing a safe system of work.

Risk assessments are used to decide priorities to set objectives for eliminating hazards and reducing risks. Wherever possible, risks are eliminated through selection and design of facilities, equipment and processes. E.g. If the risks of injury or death due to being run down by a vehicle is considered too high then the only sensible choice would be to fully eliminate the risk. This would mean closing the road. If the risks cannot be fully eliminated, they are minimised by physical controls or, through 'safe systems of work' and as a last resort personal protective equipment (PPE).

3.1.1 Suitable and sufficient

The term 'suitable and sufficient' appears in the 'Management Regs' the following requirements are laid down in those regulations:

The risk assessment shall be suitable and sufficient and cover both employees and non- employees affected by the employer's undertaking (e.g. contractors, members of the public, students, patients, customers, etc.); Every self-employed person shall make a 'suitable and sufficient' risk assessment of the risks to which they or those affected by the undertaking may be exposed; any risk assessment shall be reviewed if there is a reason to suspect that it is no longer valid or if a significant change has taken place; where there are more than four employees, the significant findings of the assessment shall be recorded and any specially at risk group of employees identified. (This does not mean that employers with four or less employees need not undertake risk assessments).

The term 'suitable and sufficient' is important since it defines the limits of the risk assessment process. A suitable and sufficient risk assessment should:

- Identify and concentrate on significant risks and not the trivial ones
- Identify and prioritize the measures required to eliminate or reduce the risk whilst complying with the law.
- Remain appropriate to the nature of the work and valid over a reasonable period of time

This requirement will factor heavily in the manner in which road marking contractors do business with clients, main contractors and local authorities. Various methods exist defining how organisations communicate the significant risks associated with a project to each other, legal requirements must be carefully considered as to where the responsibility lies. This must not shadow the real objectives of risk assessment and further guidance will be shown in the section dealing with the Construction (Design and Management) Regulations 2007 (CDM). In all cases it is the aim of this document to influence a culture of 'sensible risk management' by application of the three factors listed above. Risks can be managed appropriately, in proportion and in a sensible manner.

3.1.2 Forms of risk assessment

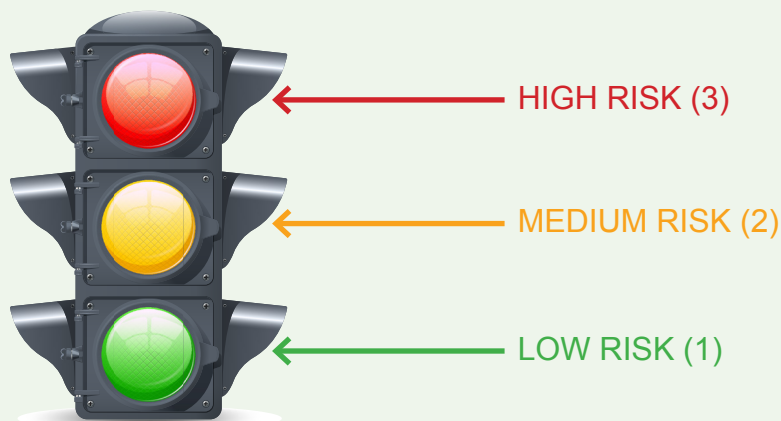
There are two basic forms of risk assessment:

- Quantitative risk assessments
- Qualitative risk assessments

A quantitative risk assessment attempts to measure the risk by relating the probability of the risk occurring to the possible severity and then giving the risk a numerical value. This method of rating the risk is used in situations where a malfunction or failing could be very serious.

The more common form of risk assessment is the qualitative assessment. This type of assessment is based on personal judgement and is normally defined as high, medium or low. The inherent simplicity of this type of assessment quite often means that the process and conclusions of the assessment are easier to understand when communicated to the workforce. This fits well with the sensible risk management theory as more of the workforce are likely to read and understand the assessments. This will therefore have a very positive effect on the overall health and safety performance of an organisation. More complex quantitative assessments can be used by health and safety professionals within organisations when assessing such needs as traffic management.

The guidance given by the RSMA in this document is that both methods are adopted where appropriate. The recommendation of the RSMA is that qualitative assessments take the form of low, medium or high levels of risk, an easy way to illustrate this would be with colour coded levels. Where high risk is **RED**, medium risk is **AMBER**, and low risk is **GREEN**. A simple quantitative risk assessment can be formed by associating a number to the colour or level as shown in Fig 1.2 below:



The simplest yet suitable and sufficient manner used to record the finding of a risk assessment will pay off in the numbers of employees who read and understand the findings.

A combination of low, medium and high with corresponding traffic light colours would illustrate the process and results well, and cater for most levels of learning ability.

Fig 1.2

3.1.3 Generic risk assessments

The term 'generic' risk assessment is sometimes used and describes a risk assessment which covers similar activities or work equipment in different departments, sites or even companies. Such assessments are often produced by specialist bodies, such as trade associations (Road Safety Markings Association).

If generic risk assessments are used, they must be appropriate to the particular job and they may need to be extended to cover additional hazards or risks.

3.1.4 The risk assessments process

Whatever form of risk assessment is considered appropriate to an organisation, the risk assessment process is fundamentally the same. The RSMA recommends that all members adopt the HSE approach to risk assessment known as the (5 Steps).

The 5 steps are known by the acronym IDERR.

- Identify the hazard
- Decide who might be harmed, and how
- Evaluate the risks and decide whether existing precautions are adequate or more should be done
- Record significant findings
- Review the assessment and revise it if necessary

3.1.5 Risk assessments training and competencies

It is recommended by the RSMA that crews using generic risk assessments, who have not been involved with the original assessment activities, are fully trained in the basic elements of risk assessment. Confirmation that they fully understand the control measures written in to the assessment should be gained by means of a signed declaration. Finally it is important that the risk assessment team is selected on the basis of its competence to assess risks in the road markings sector. The supervisor or manager must have health and safety experience and training in risk assessment. Where organisations have little or no competency to fulfil this requirement the RSMA have a dedicated service to assist members with this and all health and safety matters.

- Examples of risk assessment layouts are at annex 1A to this section.

For further information on Risk Assessments contact: info@rsma.co.uk



visit www.hse.gov.uk/risk/ Or read *Five Steps to Risk Assessment (INDG163 (rev2) June 2006*



3.1.6 Accidents.

There are several categories of accident, Table 1.2 below lists the principle accident categories and how these accidents could occur. The reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR) requires certain accidents and near misses (Dangerous occurrences) to be reported. In all cases however minor, accidents and near misses must be reported in some way. By reporting and data collection, trends can be forecast and action taken before the situation leads to a more substantial incident.

Members of the RSMA must have open and honest accident reporting procedures and be willing to share information¹ with the association. The associations' primary aim is to create a safer future for all employed and or affected by road marking activities.

Accident Category	Examples	Table 1.2
Contact with moving machinery or material being machined	Employee getting drawn into any moving parts of a road marking machine, and or road studding machine	
Struck by moving, flying or falling object	Being struck by materials or equipment falling from the line marking vehicle. Or being hit by debris projected from the carriageway by passing vehicles (Stones, nuts, bolts, parts of vehicles)	
Hit by a moving vehicle	Not only other road users! Struck by reversing vehicles in the yard, folk lift trucks and other contractors' vehicles on site.	
Struck against something fixed or stationary	Employee walking into the stationary vehicle, road signs or other obstructions on the carriageway whilst their attentions are on the marking activities	
Injured while handling, lifting or carrying	Lack of Manual Handling assessments and training resulting in injuries whilst lifting materials to and from the vehicle, lifting and carrying the line marking equipment (gas cylinders, pedestrian applied lining equipment (pram) templates and straight edges). Many more manual handling activities that must be risk assessed.	
Slips, trips and falls on the same level	Slipping on spills and wet surfaces, tripping on discarded equipment (Hoses, ropes and marking tools)	
Falls from heights	Falling from the bed of the marking vehicles, falling from a pallet of materials, racking or storage area.	
Trapped by something collapsing	Being trapped under collapsed racking in stores and warehouses.	
Drowned or Asphyxiated	Accidents involving garaged vehicles, 'Carbon Monoxide'	
Exposed to, or in contact, with a harmful substance	Not following the correct procedures when handling harmful and/or irritant materials	
Exposed to fire	Exposed to naked flame either deliberate ignition from line marking equipment or accidental fires involving materials, equipment and/or vehicles.	
Exposed to explosion	As a result of above with worse outcome	
Contact with electricity or an electrical discharge	Electrical supplies from generators, compressors and equipment.	
Injured by an animal	Exposure to wild or domestic animals whilst at work	
Physically assaulted by a person	Aggressive behaviour from members of the public including road rage.	
Other kind of accident	Any other accidents not falling into the above categories.	

The accident categories above are only basic examples and can be used to give an idea of how risk assessments should be approached. If an accident can be foreseen, then it can be controlled. If it is foreseen then it cannot be classed as an accident.

¹ = Accident statistics reported to the RSMA are for data collection and trend analysis purposes in order to assist the association in addressing sector wide health and safety issues. Data will be stored and handled as per current data protection legislation. At no point will any commercially sensitive information be published and or recorded. Statistics will be kept anonymous unless specific permission has been gained from the said organisation.

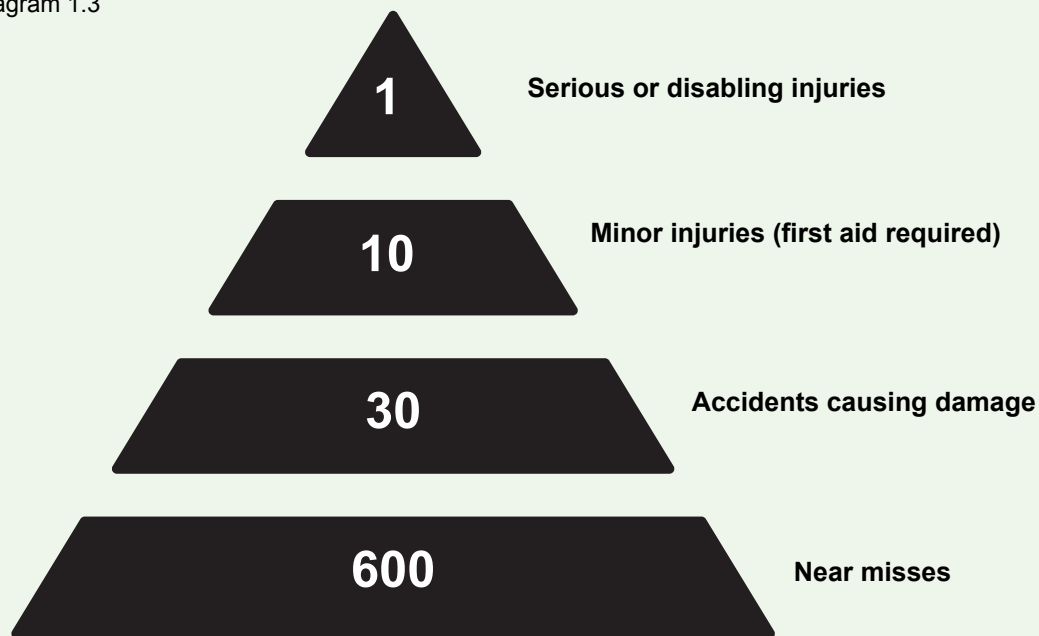
3.1.7 Near misses & dangerous occurrences

A near miss is an INCIDENT that could have resulted in an ACCIDENT.

A dangerous occurrence is a 'near miss' which could have led to serious injury or loss of life. Dangerous occurrences are defined in the RIDDOR regulations. Any dangerous occurrence listed in RIDDOR MUST always be reported to the enforcement authorities (HSE).

The accident triangle, Diagram 1.3 below, illustrates the relationship between the number of near miss accidents, damage accidents, minor injuries and serious or disabling injuries. The study that was used to produce the triangle shows that most accidents are predictable and avoidable.

Diagram 1.3



If an organisation actively reports and controls near miss accidents, then the cost in ill health, lost time and damage can be reduced. This will help the organisations overall profitability.

3.1.8 Ill health

Risk assessment should not only be concerned with physical injury and damage in the workplace but must also consider occupational ill health. Health risks fall into the following four categories:

- Chemical (e.g. paint solvents, exhaust fumes)
- Biological (e.g. bacteria and pathogens)
- Physical (e.g. noise and vibration)
- Psychological (e.g. occupational stress)

Occupational ill health can affect people in two ways:

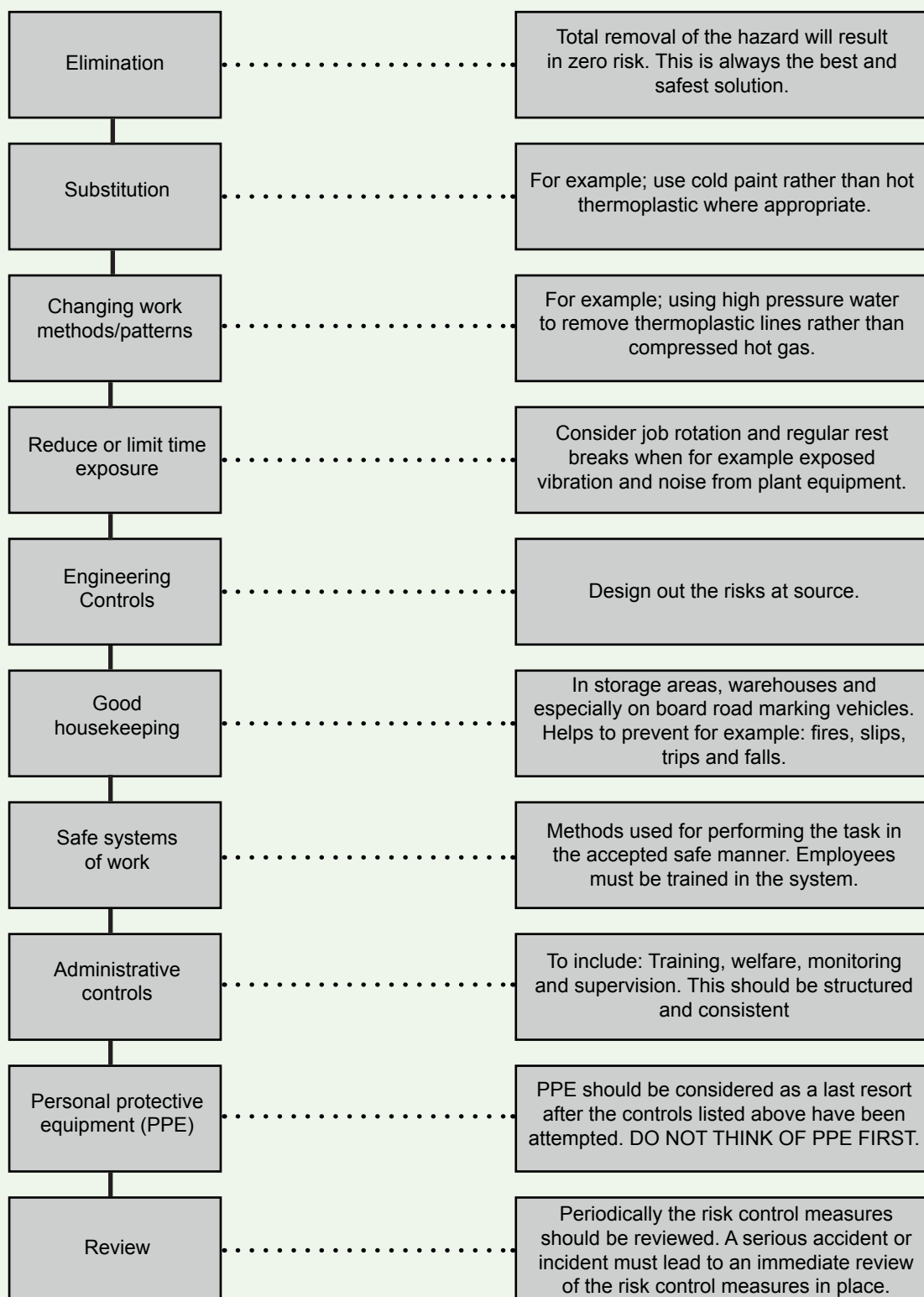
Acute: ill health that occurs soon after exposure and is often of short duration.

Chronic: ill health effects that develop over an extended period of time. May take several years for the associated diseases to develop and the initial effects may be slight. It is recommended that organisations take advice from occupational health professionals when dealing with health hazards associated with road marking activities. Health surveillance can improve a business's overall performance and productivity.

3.1.9 Hierarchy of risk control

The hierarchy of risk control sets out clear considerations needed when selecting adequate control measures when dealing with specific risks. The management regulations set out the general principles with an example of the control measures listed below. In all cases it must be noted that, to fully eliminate the risk would be the most effective control measure but this is not always reasonably practicable; therefore prioritisation of the implementation of risk control measures will depend on the risk rating.

Diagram 1.4



3.1.10 Special risk assessment cases

There are several groups of people who require an additional specific risk assessment, due their being considered as more 'at risk' than other groups. The group includes the following:

- Young persons (anybody under the age of 18 yrs)
- Workers with disabilities (physical, mental and learning)
- Lone workers

It may be uncommon for many of the people listed above to be considered in the general health and safety issues associated with the road marking sector. It must however be noted, that due to the uncommon nature the level of risk to these special cases is significantly higher. Office staff, domestic staff and others who assist the business in its everyday operations who are not in an operational role are still employees and require the same level of attention with regards to their health, safety and welfare.

For further information on Risk Assessments for special risk cases contact: info@rsma.co.uk

3.2 Safe systems of work

An accepted description of a 'safe system of work' is noted below:

The integration of personnel, articles and substances in a laid out and considered method of working which takes proper account of the risks to employees and others who may be affected, such as visitors and contractors, and provides a formal framework to ensure that all of the steps necessary for safe working have been anticipated and implemented.

3.2.1 What is a safe system of work?

In simple terms, a safe system of work (SSW) often referred to as a method statement (MS) is a defined method for doing a job in a safe way. A SSW/MS takes in to account all foreseeable hazards to health, safety and the environment and seeks to eliminate or minimize the hazards by using in most cases a formal written operating procedure. In some cases, a SSW may only require a verbal system to be in place. The start point for any SSW is a suitable and specific risk assessment.

When producing a SSW, it is important to recognise that most accidents or incidents are caused by a combination of factors. In our case it is important to take into account such factors as listed below:

- Plant and equipment (Hand operated and vehicles)
- Substances (Gas, fuel oil, bitumen and thermoplastic)
- Methods of working
- External factors (General public and other road users)
- Road and carriageway safety (Provision of adequate traffic management (TM) where needed)
- Level of training (To the required sector scheme level)
- Levels of supervision

In order to produce an effective SSW that assists in the prevention of accidents and incidents, it must be based on an integral approach and not one which deals with each factor in isolation. An effective SSW resulting in an integrated MS is:

- Based on looking at the job as a whole
- Starts from an analysis of all foreseeable hazards. Such as physical, chemical and health hazards (Risk Assessments)
- Brings together all the necessary precautions, including design, physical precautions, training, monitoring, working procedures and PPE

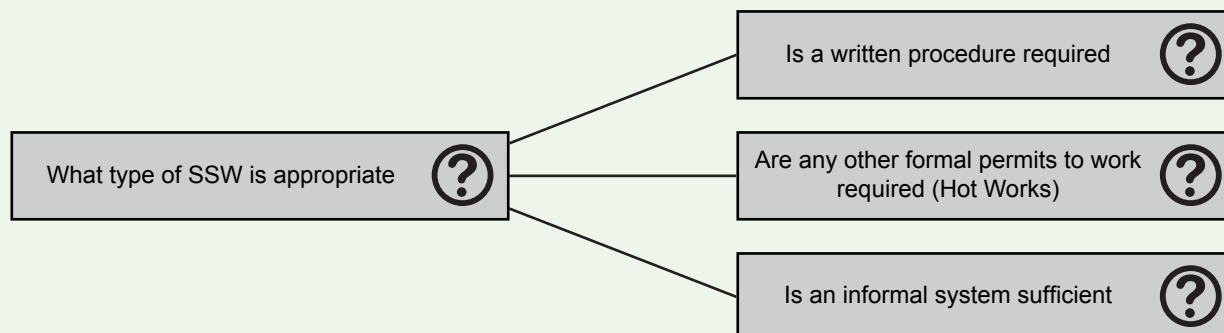
An effective SSW or MS is by no means a replacement for other precautions, such as good equipment design and maintenance, effective use of traffic management systems and the correct use of physical safeguards such as effective issue and use of PPE.

3.2.2 Developing a safe system of work

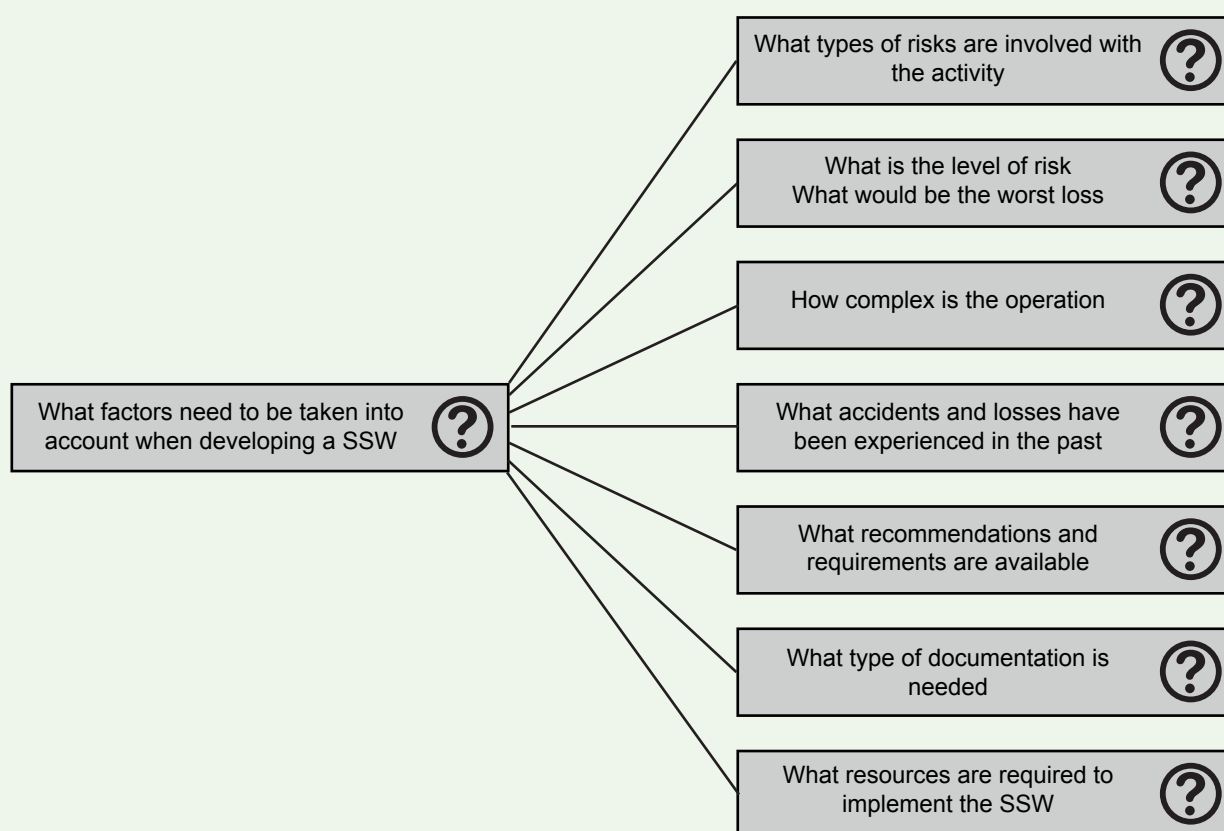
The HSW Act Section 2 requires employers to provide safe plant and systems of work. In addition to this requirement many of the regulations referred to in Table 1.1 of this section requires information and instruction to be provided to employees and others. In effect the regulations make more specific requirements regarding the provision of SSW. Many of the safe systems required under these regulations will need to be in written form.

It is the responsibility of management in each organisation to ensure that its operations are fully assessed to determine where SSW including MS need to be developed. The following list of questions can assist in the decision making process when considering the development of an SSW:

Diagram 1.5



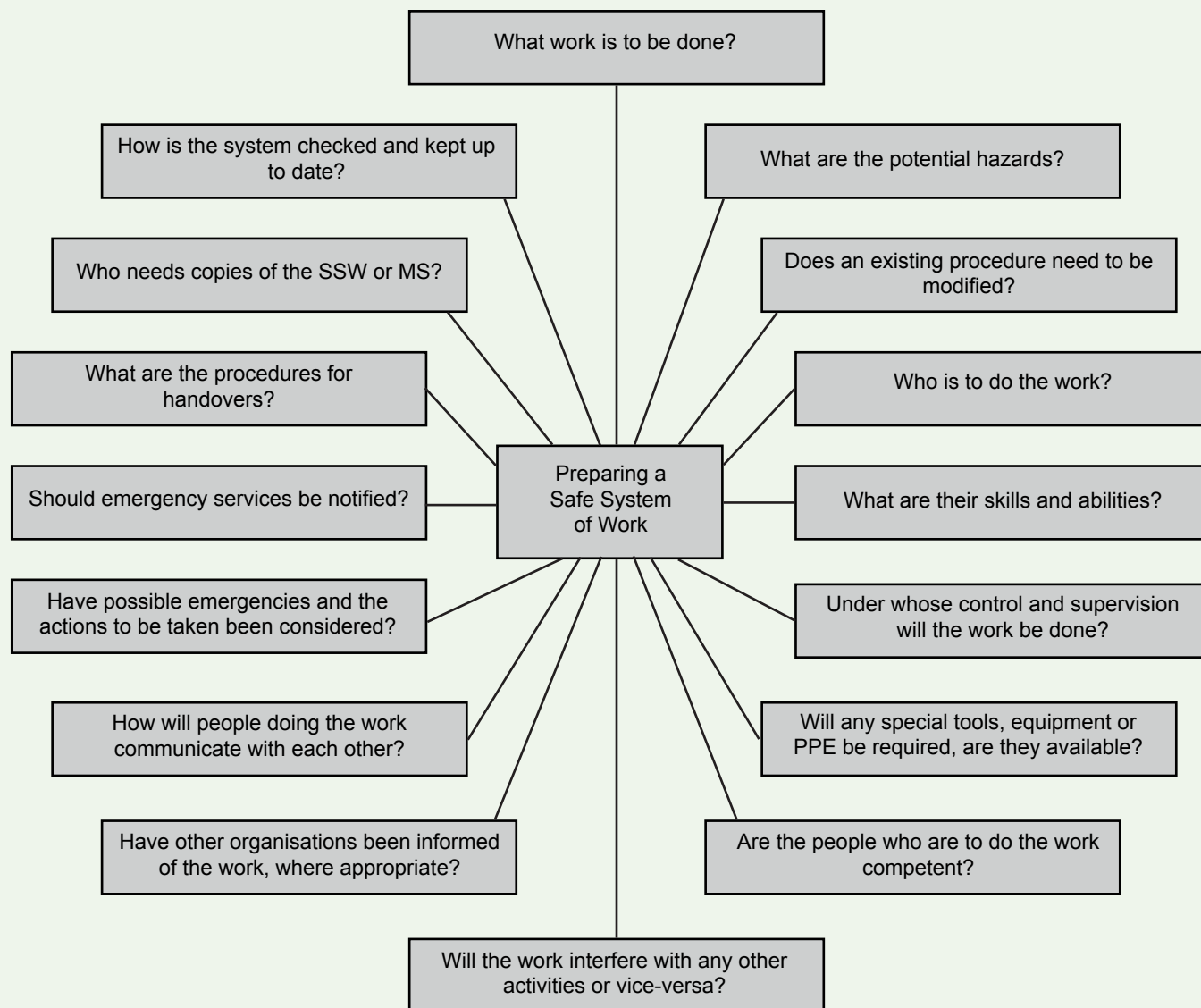
It is recognised and should be widely accepted that road marking organisations must have the freedom to devise systems that match the risk potential associated directly with road marking activities, and are practicable in each situation. Effective communication with clients and principle contractors is essential when developing SSW's



3.2.3 Preparation of safe systems, job and task analysis.

Diagram 1.6 is designed to work as a checklist guide for use when preparing new or checking current safe systems of work:

Diagram 1.6



3.2.4 Competent persons, task (job/activity) analysis & consultation

Competent person;

Primarily management is responsible for the provision of an SSW. Road marking managers and employees know the detailed way in which the tasks associated with road markings are carried out. A competent person should assist managers in the process of drawing up suitable guidelines for SSW, including MS and task analysis. The competent person should advise management on the adequacy of the safe systems produced. Assistance with the provision of a health and safety competent person is available through the Road Safety Markings Association. Members of the RSMA will receive a level of support in this field as part of their membership.

3.2.5 Analysis;

The SSW should be based on a thorough analysis of the job, task or operation to be covered by the system. Often referred to as a 'task analysis' the manner in which the analysis is performed will depend greatly upon the nature or complexity of the task. If the operation being considered is a new one, E.g. with the introduction of new machinery, equipment or substances, then the use of formal hazard analysis techniques should be considered as the level of potential loss can be high. However, where the potential for loss is lower, a more simple approach will be sufficient. A simple analysis approach will involve three key stages:

1. Identify the key steps in the job/operation, what activities will the work involve?
2. Analyse and assess the risks associated with each stage, considering what could go wrong.
3. Define the controls and precautions to be taken. Consider what steps need to be taken to ensure the operation proceeds without danger, either to the people doing the work, or to anyone else?

The results of this analysis is then used to draw up the safe operating procedure,

- *An example of a simple job / task safety analysis form is at annex 1B to this section.*

Consultation;

Road markers who actually operate the equipment and or follow the processes associated with road marking activities are best positioned to help with the preparation of an SSW. Consultation is not only a good idea it is a legal requirement. The importance of the input at a very early stage, of those involved in the work or charged with the supervision of the work, cannot be emphasised enough. From a management perspective the involvement of all employees in such a way can reinforce the commitment to safety from all concerned with the 'ownership' and 'buy in' required for an effective safety culture.

3.2.6 Documentation

SSW must be properly documented. It is advised that they are always incorporated into normal operating procedures. This is to ensure that:

- Health and safety is seen as an integral part of, not an add-on, to normal operating procedures
- The need for operators and supervisors to refer to separate manuals is minimised.

Written systems of work must be signed by the relevant manager to indicate approval or authorisation. Reference numbers including version numbers must be included in the document and any cross references checked. A system for updates and amendments must be formalised.

Systems and documentation should be written in a non-technical style and should be as user friendly as possible. This will ensure the documents are read and clearly understood.

3.2.7 Communication and training

All personnel involved with doing the work or supervising the activities covered by the SSW must be made fully aware of the laid-down system. The system will identify training needs and can, in itself, become an element of training in such methods as 'toolbox talks'

3.2.8 Monitoring and review

It is essential that all systems are monitored and reviewed on at least an annual basis. This is to ensure that they are effective in practice and are not merely a paperwork exercise.

Reviewing the systems will keep them current and up to date. Reviews will also ensure they are being effectively implemented.

3.2.9 Summary.

The road marking sector will understand the widely used term 'method statement' whilst other industries use other terms. Generally, an SSW is exactly what it says, a set procedure or way of doing the job safely.

Other commonly used SSW are:

- Permits to work (Hot works or working at heights)
- Fire routines and evacuation procedures
- Lock off and isolation procedures
- First aid procedures

RISK ASSESSMENT NO. 4A		Task Description: ROAD MARKING (Vehicle movement around the depot/yard)	
Date of Initial Assessment: May 2007	Assessor: A Another	Page 1 of 1	
Date of Last Revision: May 2009	Assessor: A Another	Revision No. 3	Version No. 3

Risk Ratings: **High** Medium Low

RISK = Severity x Likelihood = Risk Rating

Risk Level: 1-4 = Low 5-8 = Medium 9-16 = High



Activity/Task	Hazards Identified	Who might be harmed	Risk Level (pre-controls)	Controls	Risk Level (After Controls)	Comments
Site access and egress (Depot or Yard)	Colliding with other vehicles	Marking crews. Other road users.	Medium 2 x 3 = 6	Vehicle conspicuity. Vehicle checks (Lights/beacons). Use of Banksman. Driver Competency. Vehicle cleanliness. Traffic controls.	Low 2 x 2 = 4	Follow SSW for vehicle maintenance. Banksman training for crews. Site signage policy.
	Pedestrians being struck by a vehicle (Marking vehicle) (Visitors car) (Delivery vehicle) (mobile plant & equipment)	Office staff and visitors crossing the yard. Other pedestrians. Operatives working in the yard.	High 4 x 3 = 12	Pedestrian walkways. Site one way system Speed limits Use of Banksman Driver competency Vehicle cleanliness	Low 3 x 1 = 3	Follow SSW for traffic controls. Banksman training for crews. Site signage policy.
	Buildings and structures being struck by vehicles	Building occupants. Marking crews. Visitors.	Medium 3 x 2 = 6	Site one way system. Speed limits Use of Banksman Driver competency	Low 3 x 1 = 3	Follow SSW for traffic controls. Banksman training for crews. Site signage policy.

Assessment produced by: A Another

Assessment checked by: A Another

Assessment review date: In a year or any significant changes



RISK ASSESSMENT PROFORMA

Company/Location:

Assessor:

Activity/Task:

Date Assessment:

Relevant Publications:

Review Date:

Steps relate to the Risk Assessment Process:

Generic Risk Assessment: YES/NO



Ser	Activity/Element/Task	Hazards Identified	No. of people exposed	Severity 1-10	Likelihood 1-10	Risk Rating 1-100	Current Controls/Control Measures Required/References/Comments	Result

Current Controls - Control Measures Required - References - Comments Agreed by:

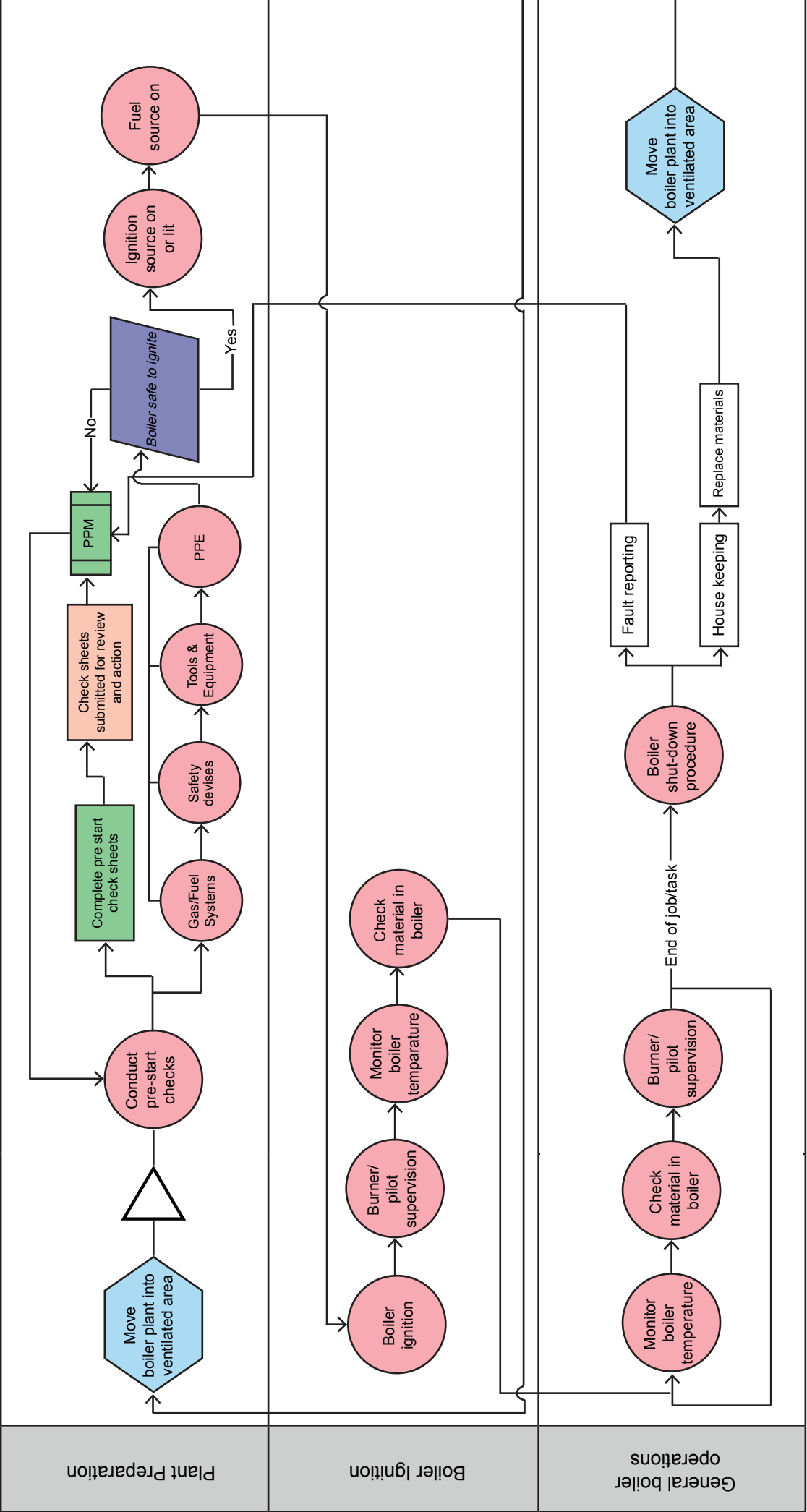
Name:	Position:	Signature:	Date:

RESULT KEY: T = Trivial Risk A = Adequately Controlled N = Not Adequately Controlled
Severity Rating = 10 is High (Risk of Death or Major Injury) 1 is Low
Risk Rating = 100 is Extremely High 1 is Extremely Low

Likelihood Rating = 10 is High (Will always occur) 1 is Low



Job/Task Analysis (Boiler ignition process)



Example job/task safety analysis form (Annex 1 B)

