

**Health & Safety Section**  
**Guidance for the Completion of Risk Assessments**  
**HSG 1/2003**

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## 1 Introduction

The Management of Health & Safety at Work Regulations 1999 (MHSW Regs 1999), Regulation 3(1), require the Brigade (as an employer) to make suitable and sufficient risk assessments of the following;

- (i) the risks to the Health and Safety of employees to which they are exposed whilst they are at work;

and

- (ii) the risks to the Health & Safety of persons who are not employed but who may be affected by the work activity.

The Regulations also require the employer to record these assessments where appropriate.

1.1 The Brigade achieves compliance with these Regulations by producing assessments of significant risk areas, which detail the risks and those persons who are especially at risk. These are then recorded on the risk assessment pro forma.

1.2 The purpose of this guidance note is to provide suitable and sufficient information to those personnel who have been tasked with the production of risk assessments. Personnel will be deemed competent, regarding the completion of risk assessments, if they possess the following qualifications:-

IOSH	-	Managing Safely
NEBOSH	-	General Certificate

## 2 The System of Risk Assessment

Risk assessment can be defined as the decisional process in which judgements are made and risk is categorised as being of high or low priority, acceptable or not. This process includes setting the limit of risk, beyond which exposure is unacceptable.

An assessment is made of significant risks, which may arise out of the work activity. These activities must be identified and shown as a hazard inventory (see appendix 1)

It must be stressed that this inventory is not exhaustive and where new areas of risk are identified or arise, further assessments will require to be made and the inventory amended.

## 2.1 Risk Groups

It is vital that any risk assessment produced takes full cognisance of the people who are affected by the hazardous activity, this includes both employees and non-employees. The assessor must therefore consider who is at risk before any calculation is made regarding the potential for loss. The following list provides guidance on the types of person who may be included within the assessment process. However, it must be noted that this is not exhaustive and that a close examination must be made in all cases in order to ensure that all persons are considered so far as is reasonably practicable.

- Firefighters – Wholetime, Retained and Volunteer
- Support Staff
- Fire Control Operators
- Fire Appliance Engineers
- Police
- Ambulance and Paramedic
- Utility Workers and Other Service Providers such as Building Control, Demolition Advisers etc.
- Members of the Public
- Occupiers

## 2.2 Hazard Identification

A hazard is something with the potential to cause harm. Once the work activity is identified, the potential for loss must be established. Hazards are identified by considering three main areas;

- (i) Hazards which exist in the work area
- (ii) Hazards which may arise out of or in connection with the activity.
- (iii) Hazards associated with the use of equipment or materials.

## 2.3 Control Measures

Once the hazards have been identified the controls, which are put in place to lower the level of risk must be listed.

## Example

### Sewer Incident

Hazard	Control
Flammable, Toxic, Explosive atmosphere	Ventilate sewer Consider TST for atmospheric monitoring. Utilise intrinsically safe lighting and communications. BA must be worn by <u>all</u> crew members who enter the sewer.

It can be seen therefore that control measures include:

- (i) The elimination of the hazard, i.e. is it necessary to carry out the work in this way.

The reduction of the hazard.

- (ii) Isolation - demarcating a hazard area and controlling access to it.
- (iii) Using control measures – such as ventilation, intrinsically safe equipment.
- (iv) Personal Protective Equipment – using BA
- (v) Discipline/Supervision – developing a procedure and ensuring personnel receive training.

## 2.4 Risk Factor – Severity and Probability

Risk is the likelihood that the harm from a particular hazard is realised. Risk therefore reflects both the probability that harm will occur and its severity.

The significance of the risk can therefore be established by using the following formula;

$$\text{Risk Factor} = \text{Severity} \times \text{Probability}$$

In order to complete this calculation a numerical value is given to both severity and probability based on the guidance given in appendix 2.

Although the system of allocating numbers to severity and probability provides a useful method of calculating risk, it should be noted that in some cases low frequency events may have severe consequences, where as high frequency events may only have a slight consequence.

## 2.5 Priority

Once a figure has been given to both probability and severity and the significance of the risk calculated, a priority rating can be established. This is achieved by referring to the “Risk Grid” shown in appendix 3.

The figure taken from the risk grid is then applied to the priority table.

This gives the following information;

Risk definition.

Actions required.

Review period.

Priority.

See appendix 3.

On completion of the assessment, the average figure should be taken for priority values. This figure, when applied to the priority table shall allow a review period to be set. This review date will then be added to the risk assessment pro forma using the “review box”.

The assessor is then required to complete the assessment by printing their name on the box entitled “assessor”. At this stage no reference number should be allocated to the assessment. This task will be completed by the Brigade Safety Officer, who will allocate a unique reference number when the assessment is entered into the risk assessment database

## 2.6 Action Plan

Once the assessment methodology has been completed, the assessor may discover that current risk control strategies are inadequate in terms of lowering risk to an acceptable level. On these occasions further controls, incorporated into an action plan for implementation, must be devised.

- 2.6.1 On occasions where further controls are required, the proposed action plan should be detailed below the current risk controls given on the assessment pro forma. For the new controls the assessor should indicate the revised severity x probability score, risk factor and level of priority. In doing so the assessor will provide proof of risk reduction and thus indicate how effective the action plan will be on treating the risks presented by the work activity. An example of how this exercise should be completed is given in appendix 4.
- 2.6.2 Action plans shall be implemented to a timescale dependant on the level of risk presented. In the majority of cases this will be a period not exceeding six months, however on occasions where the level of risk is unacceptable, the activity shall cease until such times that the action plan has been implemented in its entirety. For guidance on deciding a timescale, reference should be made to the priority index given in appendix 3.
- 2.7 Risk Assessment Approval and Endorsement

The previous risk assessment system required the Brigade Safety Officer to approve all risk assessments. The revisions which have been made allow Directors/Commanders to complete this task.

This change reflects the ownership Directors and Commanders have with regards to the development, implementation and monitoring of safety systems and policies as laid down in the Corporate Health & Safety Policy.

The Brigade Safety Officer will continue to provide guidance and advice on the completion of assessments. To this end all completed assessments will be forwarded to the Brigade Safety Officer. Once satisfied that the assessment is complete and that no further guidance is required, the assessment will be endorsed by the Brigade Safety Officer and returned to the relevant Director/Commander for distribution.

### **3 Risk Assessment Pro forma**

The HS3a pro forma shall be used to record all risk assessments. An example is shown in appendix 4. This appendix also provides sample guidance on how to complete the risk assessment pro forma.

The abbreviated pro forma – HS3b shall be issued to the relevant stations/sections. This form will provide personnel with the relevant information required. An example of this is shown in appendix 5.

Once received at Stations, Sections etc., form HS3b should be filed within the relevant sections of the Station's Health & Safety folder, before filing, the contents should be brought to the attention of all personnel and individual training records updated accordingly. Any personnel who do not receive this training due to sickness, annual leave etc., should be provided with it on return to work.

### **4 Risk Assessment Database**

All assessments will be recorded on a database, this will help control overall management of the system and will ensure that assessments are reviewed at appropriate intervals.

This database will be managed by the Brigade Safety Officer and updated at the endorsement stage of the risk assessment process.

## Hazard Inventory

### Operational Incidents – Fires & Special Services

<b>Within a Structure</b>	<b>Outwith a Structure</b>
Dwellings	Pipelines
High Rise Property	Plant & Machinery
Property Under Construction / Demolition	Road Vehicles including R.T.A.s
Derelict Property	Aircraft – Civil & Military
Prisons & Secure Accommodation	Forestry
Industrial Premises	Coups & illegal Tips
Commercial property	Ships
Hospitals & Places used for Treatment or Care	Rail
Further Education Establishments	Electrical Apparatus & Installations
Schools	Refuse and Other Secondary Fires
Recreational Buildings	Civil Disturbances
Tunnels & Confined Spaces	Hazardous Materials
Sewers	Rescues from Height
Farms & associated Buildings , Equipment Etc.	Flooding. Working In Or Near Water , Ice , Mud & Unstable Ground .
Use of Positive Pressure Ventilation	Collapse of Structures, Scaffold & Access Platforms
Fire Investigation & Other Post Fire Operations	Rescue of Animals
Incidents Involving Asbestos	Discovery of Munitions
Biological Hazards	Lifts & Escalators
Petro Chemical Installations	Trenches & Pits

## Probability & Severity Guidance

### Severity Values

#### Potential For Injury, Disease Or Loss

Severity value	Risk Phrase	Injury / Loss	Implications of Injury / Loss	Financial Implications
1	Minimal	No Injury	None	None
2	Slight	Minor	Slight – First Aid only	Slight loss
3	Minor	Moderate	Absence – up to 3 days	Moderate loss
4	Moderate	Serious	Absence – up to 28 days RIDDOR - reportable	Measurable loss
5	Serious	Temporary disabling Injury	Absence – more than 28 days RIDDOR – specified injury	Significant
6	High	Permanent disabling injury	HSE involvement. Medical retirement	Significant
7	Very High	Single fatality	HSE involvement. Criminal liability	Major
8	Extreme	Multiple fatalities	HSE involvement. Criminal liability	Major

### Probability Values

#### Probability of Incident Actually Occurring

Probability Value	Details
1 – Unlikely	Potential for loss to occur, but is so rare as to be unquantifiable.
2 – Exceptional	Potential for loss to occur every 10 – 30 yrs. within UK Fire Service.
3 – Rare	Potential for loss to occur every 10 – 30 yrs. within SFB.
4 – Occasional	Potential for loss every year within UK Fire Service.
5 – Likely	Potential for loss to occur every year within SFB.
6 – Very Likely	Potential for loss to occur monthly.
7 – Frequent	Potential for loss to occur weekly.
8 – Extreme	Potential for loss to occur daily.

## Risk Grid

*Severity*

8	7	6	5	4	3	2	1
16	14	12	10	8	6	4	2
24	21	18	15	12	9	6	3
32	28	24	20	16	12	8	4
40	35	30	25	20	15	10	5
48	42	36	30	24	18	12	6
56	49	42	35	28	21	14	7
64	56	48	40	32	24	16	8

*Probability*

## Priority Index

Risk Factor	Risk Definition	Action Required	Priority	Review Period
48 - 64	<b>Unacceptable</b>	Implement <b>immediate additional controls / action plan</b> or cease activity.	5	*
28 - 42	<b>High Risk</b>	Action plan / additional controls to be developed and implemented.	4	6 months
18 - 25	<b>Moderate Risk</b>	Enforce existing controls. Monitor work activity.	3	1 year
5 - 16	<b>Low Risk</b>	Risk assessment recorded. Monitor work activity.	2	3 years
1 - 4	<b>Minimal Risk</b>	Risk assessment recorded. No further action required.	1	5 years

\* Review assessment once action plan / additional controls have been implemented.



