

The following guidance is provided to enable the risk assessment record form to be completed as accurately as possible.

Be honest – assess what actually happens not what should or could happen or what it says in the standard operating procedures. Only by having full details available can decisions be made about priorities.

Assessor(s)

The person/team of people that will carry out the risk assessments. The risk assessment will be conducted by a team of people which consists of:

Management	Department manager
Engineering	Maintenance supervisor or fitter/electrician
Employees	Operators
Health & safety	Health & safety coordinator

Process flow

All tasks within the process flow should be identified and considered for risk assessment. This step should be carried out with personnel actively involved in operating the process line and requires the assessor(s) to physically visit the process area when conducting the risk assessment.

Step / Task

What is being assessed? It may be a single activity or task, a process line or an item of equipment or a project area.

Date of assessment

Date the assessment was carried out. This will be replaced with the review date when this takes place. Risk assessments will be reviewed on an annual basis.

Hazards

For each step/task assessed list anything that may injure anyone, cause an occupational health problem, cause damage to property, equipment, buildings, product & services or damage to the environment. In general it is acceptable to ignore the trivial and concentrate on the more serious harm although it is usually worthwhile recording that trivial hazard and considering it as part of the risk assessment process. Ask people involved in the activity, as they may be aware of hazards not immediately obvious.

History

Previous risk assessments, accidents, incidents and planned inspections should be reviewed to ensure all hazards have been identified for risk assessment.

Risk group

Who might be harmed by the activity under consideration? Don't forget visitors, contractors and all employees who may have reason to work in the area under consideration.

Supervision and training

Is supervision and training adequate in the area being assessed? Are employees competent?

Task analysis and hazard identification for risk assessment

The risk assessment team should conduct an initial review of each area on site to identify the;

- Process steps
- Tasks
- Hazards or potential loss situations
- Controls currently in place or controls required to reduce/eliminate risk

This initial review should be carried out using the task analysis and hazard identification from.

Hazards or potential loss situations could include the following;

Mechanical hazards	Electrical hazards	Operating information and controls
Crushing	Direct contact	Control information clear
Shearing	Indirect contact	Emergency stopping & isolation devices present
Cutting / severing	Electrostatic	Warning notices present
Entanglement	Short circuit / overload	Adequate & accessible control points
Drawing-in / trapping	Source of ignition	Adequate guarding in place for above hazards if present
Impact	Other electrical hazards	
Stabbing / puncture		
Friction / abrasion	Work activity hazards	Supervision & training,
High pressure fluid injection	Highly repetitive actions	SOP's documented
Slips / trips / falls	Stressful posture	Adequate operator competence (knowledge, skill & training)
Falling / moving object	Lifting / handling	Adequate supervision in place
Other mechanical hazards	Mental overload / stress	
Radiation hazards	Visual fatigue	
Lasers	Poor workplace design (space)	
Electromagnetic effects	Stairs / elevated work platforms	
Ionizing / non ionizing radiation	Work flow	
Other radiation sources		
Hazardous substances	Work environment hazards	Property, process & environmental damage
Toxic fluids	Localized hot surfaces	Fire
Toxic gas / mist / fumes / dust	Localized cold surfaces	Explosion
Flammable fluids	Significant noise	Forklift damage
Flammable gas / mist/ fumes / dust	Significant vibration (whole body / hand arm)	HGV damage
Explosive substances	Poor lighting	Product spillage
Biological substances	Hot / cold ambient temperatures	Product contamination
Cleaning chemicals	Access / egress	Diesel / oil spillage
Other hazardous substances	Other environmental hazards (air flow etc)	Other discharge

Once the initial task analysis and hazard identification process has been complete the final risk assessment record can be documented. The final risk assessment record with detail clearly the process steps, tasks, hazards and controls.

Irish Shows Association Affiliated Show	Risk assessment procedure
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Injury severity

What sort of injury might be inflicted? Look at the worst typical injury rather than the worst possible.

Severity score	Injury description
1	Tolerable – insignificant injury resulting in no lost time.
2	Minor – cuts, bruises etc., up to 3 days lost time.
3	Moderate – strains / sprains, between 4 & 28 days lost time.
4	Severe – serious injury, more than 28 days lost time.
5	High – major disabling injury or disease.
6	Very high – fatality.

Enter the value you assign to the risk severity in the appropriate column on the risk assessment form.

Likelihood of injury

It is necessary to consider whether the risk of injury is high, medium or low for the purposes of these risk assessments.

Likelihood score	Likelihood description
1	Very unlikely – not known for an accident to occur.
2	Unlikely – provided existing controls are adequate
3	Occasional – accident may happen in time.
4	Likely - accident likely to occur.
5	Very likely – given time an accident will occur.
6	Certainty – almost certain chance of accident occurring.

Enter the value you assign to the risk likelihood in the appropriate column on the risk assessment form. Unless there is a detailed history surrounding the activity or equipment in question then these likelihood ratings are little more than educated guesses. If a group of personnel carry out the risk assessment then a consensus opinion will often give a more accurate result.

Risk rating

Multiply the severity and likelihood figures together and enter the result in the overall risk-rating column. This figure will be used as an aid to determining priorities. A high figure may indicate the need for some immediate action.

	Severity rating ↑						
	6	12	18	24	30	36	High risk
	5	10	15	20	25	30	
	4	8	12	16	20	24	
	3	6	9	12	15	18	
	2	4	6	8	10	12	
Low risk	1	2	3	4	5	6	Likelihood rating →

Risk rating

1 to 9 =	Low risk
10 to 21 =	Medium risk
22 to 36 =	High risk

Controls (existing and additional required)

What controls are currently in place to reduce the possibility of hazards causing injury, loss or damage? This could be PPE, operating procedures, guarding on dangerous parts of machinery or isolation and emergency stops or cut off interlock switches together with training and competency levels.

Is it necessary or possible to apply additional controls to reduce the level of likelihood or severity? Even if the risk is already deemed acceptable it may be possible to reduce it still further. The control measures should involve engineering, administration and personal protective equipment as a last resort. Once the additional control measures are in place the risk can be reassessed and a new rating given in order to determine the effectiveness of the additional controls.

Once the risk assessment has been carried out and the additional controls identified an action plan should be put in place detailing the action required and who is responsible for carrying out this action. Follow up reviews should be carried out to check the effectiveness of the new controls and reassessment of the hazard should be conducted to ensure the new controls are reducing the risk rating as required.

Task analysis and standard operating procedures (SOP's)

The SOP's should be reviewed to reflect the requirements of risk assessments. Key safety practices and procedures should be documented in the SOP for each task. The hazards and precautions required based on risk assessment should be listed in the SOP. These SOP's can be developed through task analysis where each step in carrying out a task/job is documented. Task analysis should be carried out with the cooperation of the employee.

Risk assessment record sheet

Once the hazards have been identified and rated and the controls (existing and new) identified and put in place or planned in the case of new controls the risk assessment should be recorded on the risk assessment record sheet and filed in the risk assessment file. It may be simpler and clearer to document occupational risk assessments, property risk assessments and product & services risk assessments separately.

Risk assessment review and responsibility

Risk assessments should be reviewed annually from the date of their initial completion to ensure their relevance to the process. Risk assessments should be reviewed if the process changes or if an accident occurs in order to identify hazards and appropriate control measures to prevent injury or loss occurring or reoccurring in the case of follow up to an accident situation. This review should be carried out by the frontline manager, safety coordinator, employees and any other relevant person whose contribution will be beneficial to the risk assessment.

Employee review

All employees will receive an annual review of risk assessments and SOP's relevant to their area of work. This review will be carried out by the frontline manager in conjunction with the training coordinator.

When conducting risk assessment and endeavouring to manage the identified hazards remember the principals of prevention and the hierarchy of control as outlined in health & safety legislation.

The principals of prevention

- **The avoidance of risks**
- **The evaluation of unavoidable risks**
- **The combating of risks at source**
- **The adaption of the place of work to the individual**, especially as regards the design of places of work, the choice of work equipment and the choice of systems of work, with a view, in particular, to alleviating monotonous work and work at a predetermined work rate and to reducing their affect on health.
- **The adaption of the place of work to technical progress**
- **The replacement of dangerous articles**, substances or systems of work with non-dangerous or less dangerous article, substances or systems of work
- **The development of an adequate prevention policy** in relation to safety, health and welfare at work, which takes account of technology, organisation of work, working conditions, social factors and the influence of factors related to the working environment
- **The giving to collective measures** of protection priority over individual protective measures
- **The giving of appropriate training** and instruction to employees

Hierarchy of control

- **Elimination of the hazard** – achieved by stopping the operation, changing the machine, changing the process, installing physical barriers, guards or interlocks which prevent operators from coming in contact with the hazard
- **Substitution** – of safer chemicals in place of more hazardous ones. Devise more effective guards. Change to low voltage electricity, pneumatic or hydraulic power
- **Housekeeping** – a place for everything and everything in its place. Avoid trips and falls. Remember planned inspections.
- **Isolation** – enclose the operation or the operation
- **Environmental control** – suitable lighting and heating. The accident rate is lowest around 20/21 degrees celsius
- **Ventilation** – hazardous chemicals, fumes or fibres may be removed by local or general ventilation or containment in a fume hood or cabinet. Think of the environment
- **Safety awareness** – increase safety awareness by notices, posters and slogans
- **Training & supervision** – consider if more training or retraining may reduce the risk. Are work manuals clear and precise? Are emergency procedures concisely stated and capable of being exercised? Is the supervision suitable and adequate?
- **Personal protective equipment** - must be regarded as the last resort when all the above are not a practical reality. PPE is rarely more than 90% effective.

Controls can be engineering, administration (standard operating procedures - SOP's & training) or PPE in nature and can be used individually or in combination with each other to maximise control of the identified hazard.