



*Basic guidance on risk assessment for employers
in small to medium sized businesses*

What is meant by risk assessment?

If you are an employer, the Management of Health and Safety at Work Regulations (Northern Ireland) 2000 require you to carry out a suitable and sufficient assessment of the risks arising out of your work activities, i.e. a risk assessment. This assessment should cover not only the risks to your own employees, but also anyone else who may be affected by your undertaking.

Put simply, a risk assessment is finding out what in your work could cause harm to people and deciding if you have done enough, or need to do more to protect them.

The purpose of risk assessment is to make sure that no-one gets hurt or becomes ill as a result of your work activities.

Risk assessment is basically a 5-stage process which consists of the following steps:

1. Divide your work into manageable categories
2. Look for the hazards
3. Evaluate the risks
4. Prepare a plan for controlling the risks
5. Review and revise the assessment



Where do I begin?

Before starting the assessment, it might be a good idea to conduct a “walk round” survey of your whole operation. This will give you an idea of the size of the task ahead so that you can then plan your best approach for tackling it.

It's important that you involve your employees, or their representatives, in the process of risk assessment as early as possible. After all, if they are the persons actually doing the work, then they may well be aware of important health and safety issues which might not be obvious to you. Also, if they are involved right from the start, then they are more likely to accept any changes resulting from the risk assessment, as they will have contributed to the process and therefore should have a greater understanding of why the changes are necessary.



Stage One

Divide your work into manageable categories

Firstly, for the majority of workplaces it is both sensible and practical to break the task of risk assessment up into manageable categories. Therefore you might divide your work up into either:

- *separate work areas, e.g. stores, production areas, offices, yard, etc.; or*
- *stages in the production process, e.g. handling raw materials, machining, assembling, finishing, etc.; or*
- *defined tasks, e.g. driving, maintenance, scaffolding etc.*

Simply choose whichever method you prefer to use here - whichever one you find the most manageable for you is probably the best.



Stage Two

Look for the Hazards

A HAZARD is anything which can cause harm, e.g. chemicals, electricity, working at a height, poor lighting, etc.

For example, the blade of a circular sawing machine has the potential to cause severe cuts to a person, so the blade is therefore a hazard.

Looking for hazards is perhaps not as difficult as it first appears. An important thing to remember here is that you can ignore the trivial and concentrate only on the significant hazards which could result in genuine injury.

The hazard check-list at the end of this guidance may help you identify most of the hazards associated with your work, but there may be others which are not covered by the check-list. There have also been many comprehensive guidance documents published by a number of bodies which identify the typical hazards found in a wide range of industries. The Health and Safety Executive will be able to tell you if any guidance specific to your industry is available and where to get it (contact details for the Executive are given at the end of this leaflet).



Stage Three

Evaluate the Risk

The risk is the chance or likelihood that someone will be harmed to some extent by the hazard.

Therefore, going back to our earlier example, if the blade of the circular saw is well guarded and the operator properly trained to follow safe working practices then the risk may be low, but if the blade is unguarded or the operator untrained then the risk will be high.

It is important to determine the hazards which are most likely to cause the greatest harm so that the risks from these can be controlled first. If there are only a small number of hazards in your workplace then identifying the most important ones may be fairly obvious. But what if they aren't obvious, or if your workplace has a large number of hazards and you don't know which need to be tackled first?

It is therefore necessary to evaluate the risk associated with each hazard so that you can prioritise the risks and concentrate on the greatest first. In order to evaluate the risk associated with a hazard, you should consider both the severity of the harm **and** the likelihood of that harm actually occurring.

SEVERITY - when considering a particular hazard, first ask yourself "Realistically, what is the worst that could happen?" Is it minor injury or ill health, serious injury or ill health, or could it even be death?

LIKELIHOOD - next make a judgement about the chance or likelihood of that injury or ill health actually happening. Is it unlikely, highly likely, or somewhere in between?

When assessing the likelihood, be sure to take any existing control measures, e.g. guards, training, etc., into account. However, it is equally important to examine the way in which work is actually carried out so that failures to follow procedures or use safety devices are identified and also taken into account. So don't simply rely on what you believe happens, or think should happen, in your workplace - check what really happens by observing the work activities and asking the people involved.

The number of people likely to be exposed to the hazard can also be taken into account when deciding upon the likelihood of any injury occurring. Remember that, in addition to your own employees, you should also consider others who may be affected such as members of the public, contractors, visitors, etc.

When you have assessed the severity and the likelihood of injury for each hazard, you can then begin to prioritise the risks. The greater the severity of harm and the more likely the harm is to occur, then the greater the risk.

Simple numerical risk evaluation

If you wish, numbers can be assigned to describe the severity and the likelihood and these multiplied to give a risk rating for each hazard. This does not necessarily make the evaluation any more accurate, but some people may find that using numbers makes the task of prioritising more straightforward. For example, for each hazard the severity might be given a rating of 1 to 3 depending on whether you judge it to be minor, serious or major, and the likelihood also given a rating of 1 to 3 depending on whether you judge it to be unlikely, likely or highly likely. The ratings for severity and likelihood are then multiplied together to give a numerical value for the risk ranging from 1 to 9.

SEVERITY	x	LIKELIHOOD	=	RISK
3 - Major		3 - Highly likely		9 - Greatest
2 - Serious		2 - likely		
1 - Minor		1 - Unlikely		1 - Lowest

It should be recognised that the risk estimated in this way is not an absolute value of risk but simply allows the relative risk associated with each hazard to be compared; the higher the numerical value the greater the risk.

4 Stage Four

Prepare a plan for controlling the risks

The outcome of a risk assessment should be a plan of action which sets out, in priority order, what additional controls are necessary. It should also specify who in your business is responsible for taking action and establish a reasonable timescale for completion.

So, starting with the most serious risks, you should decide if they are sufficiently controlled in order to reduce the risk of injury to an acceptable level and also to comply with relevant legal requirements. Information which may assist you in making this decision can be found in a range of publications such as health and safety guidance on regulations, approved Codes of Practice, British and European Standards, industry specific guidance, etc. Also, don't forget about information which you might be able to obtain from suppliers, manufacturers, insurers, trade unions, consultants, trade associations, health and safety inspectors, etc, many of which can provide advice free of charge!

Controlling the risks

If you decide that additional controls are required, the following list gives the hierarchy of options available to you.

1. Elimination (e.g. buying ready-cut material rather than using a circular saw).
2. Substitution with something less hazardous (e.g. use of a water-based degreasing agent rather than a solvent).
3. Enclosure (e.g. fitting a sound absorbing enclosure around noisy plant).
4. Guarding and/or segregation (e.g. guarding dangerous parts of machines or erecting barriers to keep people away from a hazardous area).
5. Safe systems of work that reduce the risk to an acceptable level.
6. Written procedures that are known and understood by those affected.
7. Adequate supervision.
8. Training (e.g. training for forklift truck operators).

9. Information and instruction (e.g. signs and written guidance).
10. Personal protective equipment (e.g. dust masks)
 - Note that this last option should only be used as a temporary solution or as a last resort measure.

For each risk needing further controls, you should start at the top of the list and consider if this option provides a reasonably practicable solution. It is only if the option is not reasonably practicable, or if it alone does not reduce the risk to an acceptable level, that you should consider the next option on the list. It will often be the case that you will need to implement more than one of the control options in order to control the risk satisfactorily.

Once you have determined what additional precautions are necessary then decide on who is to be responsible for taking the necessary action and set realistic dates for the earliest achievement of the required improvements.

Recording the assessment

If you employ five or more people then you are required by law to record the significant findings of your risk assessment. However, even if you employ less than five people, it still might be a good idea to keep a written record of your assessment (although this is not required by law).

In many cases, employers will need to record sufficient details of the assessment itself, in addition to the significant findings, so that they can demonstrate that they have undertaken a suitable and sufficient assessment. Ideally, information should be recorded about the following:

- *activities or work areas examined*
- *hazards identified*
- *persons exposed to the hazards*
- *evaluation of risks and their prioritisation*
- *existing control measures and their effectiveness*
- *additional precautions needed*
- *who is to take action and when*

The way in which you record your risk assessment is largely up to you, but there is an example of one suggested format given on page 7 which you may find helpful.



Review and revise the assessment

Risk assessment should be seen as a continuing process. Review of the risk assessment is important to ensure that it is kept up to date and takes account of:

- *other activities and hazards*
- *changes in processes*
- *new methods of work*
- *new employees*

In addition to this the adequacy of implemented control measures needs to be reviewed from time to time and revised if necessary. The objective here should always be to “learn, improve and develop”. It is therefore a good idea to record a review date on your risk assessment, say some 6 to 12 months after the original assessment was carried out, to remind you of the importance of reviewing and revising the assessment.

That completes the final stage of risk assessment. Hopefully, you’ll now appreciate that risk assessment is not really all that complicated or difficult. However, should you require further advice or information on the subject of risk assessment, you should firstly contact the Health and Safety Executive who will give you details of where to obtain assistance.

For further information contact:

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FOR NORTHERN IRELAND**

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Example of a Risk Assessment Format for *Colours (NI) Ltd*

Hazard Identification and Risk Evaluation:

ACTIVITY	HAZARDS	PERSONS EXPOSED	SEVERITY 3 - major 2 - serious 1 - minor	LIKELIHOOD 3 - highly likely 2 - likely 1 - unlikely	RISK 9 - greatest 1 - lowest
Working at Circular saw	Wood Dust (health hazard)	All workers in woodworking shop	3	2	6
	Moving blade (cutting)	Operator and assistant	3	1	3
	Noise (hearing damage)	All workers in woodworking shop	2	2	4
	Ejection of work - piece (being struck)	Operator & assistant	2	1	2
Use of forklift truck (FLT)	Dangerous driving (overturning)	Driver and all pedestrians incl. visitors	3	2	6
	Blindspot at warehouse (collisions)	Driver and all pedestrians incl. visitors	3	3	9

Action Plan:

HAZARDS	EXISTING PRECAUTIONS	ADDITIONAL PRECAUTIONS NECESSARY	ACTION BY WHOM	ACTION BY WHEN
Blindspot at warehouse	Drivers instructed to sound horn but not always done.	Mount mirror at corner. Reiterate instructions to drivers. Look at re-routing FLTs or pedestrians.	G. Black H. White H. White	25/06/07 07/06/07 31/07/07
Wood Dust	Dust masks provided but rarely worn.	Dust extraction required at this machine.	B. Blonde	23/01/08
Dangerous driving	Drivers all trained and certified 7 years ago.	Refresher training for all drivers.	H. White	30/08/08
Noise	Hearing protection available but not always worn - uncomfortable!	Find comfortable PPE and enforce wearing. Look at segregating other persons from noise e.g. acoustic screens.	D. Green B. Blonde	31/07/07 18/07/07
Moving blade	Guard fitted and push stick available. Guard not always set at the correct height.	Remind operator of importance of keeping guard properly adjusted and monitor compliance.	D. Green	12/06/06
Kickback of workpiece	Riving knife fitted but slightly damaged.	Repair riving knife.	B. Blonde	22/06/07

Completed by: **C. Red**

Date: **04/06/07**

Review Date: **02/04/08**

Hazard Identification and Risk Evaluation

Company Name: Completed by: Date:

ACTIVITY	
HAZARDS	
PERSONS EXPOSED	
SEVERITY	
LIKELIHOOD	
RISK	

Action Plan

Company Name: Completed by: Date:

Activity: Review Date:

ACTION BY WHEN	
ACTION BY WHOM	
ADDITIONAL PRECAUTIONS NECESSARY	
EXISTING PRECAUTIONS	
HAZARDS	



Hazard Checklist

1. Mechanical

Entanglement
Friction/abrasion
Cutting
Shearing
Stabbing/puncturing
Impact
Crushing/trapping
Ejection

2. Transport

3. Access

Slips, trips and falls
Falling or moving objects
Obstructions or projections
Confined spaces

4. Handling/lifting

5. Electricity

6. Chemicals

Toxic
Irritant
Sensitising
Flammable
Corrosive
Explosive
Carcinogenic

7. Fire and Explosion

8. Particles and dust

Inhalation
Ingestion
Abrasion of skin or eye

9. Radiation

Ionising
Non-ionising

10. Biological

Bacterial
Viral
Fungal

11. Workplace factors

Noise
Vibration
Light
Humidity
Ventilation
Temperature
Pressure/vacuum

12. Organisational

Poor maintenance
Lack of supervision
Lack of training
Lack of information
Unsafe systems
Provision of unsuitable equipment

13. The individual

Individual not suited to work
High work rate
Unsafe behaviour of individual

Note: The above list is not exhaustive and other hazards may exist depending on the nature of your work.

► **Health & Safety Executive for Northern Ireland**

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