

Health and Safety Department

Risk Assessment & Safe Systems of Work

Document Control

Document Details	
Reference	V6 Draft
Version Number	Draft
Effective From	Approval Date
Approval Date	Committee Date
Review Date	TBA
Author	Oliver Preedy & Bill O'Connell

Document Revision History			
Date	Revisions Made	Revisions made by	Approved by
	V1	H Weaver	
Feb 2014	V2 Committee version for approval	H Weaver	
June 2015	V3 Review and update	H Weaver	
Feb 2017	V4 Review and up date	H Weaver	
Nov 2019	V5	H Weaver	
Sept 2020	V6 Review & Update	OP & BOC	

Contents

1.0	Introduction	4
2.0	Scope	4
3.0	Key Legislative Requirements	4
4.0	Duty Holders	4
4.1	Deans of Schools/Head of Professional Services	4
4.2	University Health and Safety Service	4
4.3	School / Departmental Safety Officers	5
4.4	Line Managers, including academic supervisors	5
4.5	University Staff	5
5.0	Risk Assessment & Safe Systems of Work	6
5.1	Definitions	6
5.2	Completing a risk assessment	6
5.3	Recording risk assessment	7
5.4	Control Measures	8
5.5	Levels of Risk	9
5.6	Work Instruction	10
5.7	Verbal Instruction	10
5.8	Standard Operating Instructions	10
5.9	Method Statement	10
5.10	Safe System of Work and Permit to Work Process	11
5.11	Signing Off Risk Assessments	11
5.12	Monitoring & Review	11
6.0	Appendices	12

1.0 Introduction

Assessing risk is an essential for preventing incidents and controlling risks in the workplace, helping with the planning of work, the development of safe procedures and reducing the number of accidents in the workplace.

2.0 Scope

This policy outlines the University process for identifying and managing risks associated with all significant hazards associated with the University's activities, that may affect the health, safety and welfare of staff, students and others, including external contractors and tenants.

3.0 Key Legislative Requirements

There is a legal duty to ensure that there is a suitable and sufficient risk assessment in place for all processes that take place on campus.

A suitable and sufficient risk assessment should:

- Identify all significant hazards
- Identify anyone who may be harmed
- Evaluate the risk to those identified
- Select appropriate monitoring and control measures
- Agree a review period proportionate to the risk

4.0 Duty Holders

4.1 Deans of Schools/Head of Professional Services

Deans of Schools/ Heads of Professional Services shall:

- Ensure that there are arrangements in place to ensure suitable risk assessments and method statements are in place for work activities
- Ensure that there are arrangements in place required to reduce risk, including the use of the permit to work process
- Ensure that adequate time and resources are made available to control and manage working arrangements
- Appoint Safety Officers or nominated persons

4.2 University Health and Safety Service

The University Health and Safety Service shall:

- Monitor the effectiveness and compliance with this policy
- Review the policy and associated guidance periodically
- Provide suitable information, advice and training

4.3 School / Departmental Safety Officers

School / Departmental Safety Officers / Nominated individuals shall:

- Ensure that suitable risk assessments and method statements are in place for work activities
- Ensure that any required risk reducing measures are implemented, including the use of the permit to work process
- Ensure that that members of staff and students are suitably trained.
- Keep the risk assessment register(s) up to date
- Ensuring incidents, accident and near misses are reported and investigated the SHE system

4.4 Line Managers, including academic supervisors

Staff who are responsible for managing the activities carried out by staff, students or volunteers are considered supervisors. As such they have a duty to ensure the health and safety of the staff/students they supervise and have responsibility for ensuring Safe System of Work (SSOW) and Permit to Work (PTW) procedures are followed where required.

Line Managers will ensure:

- Personnel they manage are competent to complete the task and have been provided with suitable information and training, to manage the risks posed by the activity
- People working with them understand the operation of (and the consequences of non-compliance with) the permit-to-work systems applicable to the areas in which they are responsible for work

4.5 University Staff

University Staff and Students shall ensure:

- They comply with this policy
- They are able to demonstrate a good understanding of the risk assessments and the arrangements for their working activities
- They observe safe working systems that are operated in any location at which they may have to work
- They do not start work on any job requiring a permit until one has been authorised and issued, its content understood, and necessary precautions taken
- The conditions and precautions specified in the permits issued to them, or for work in which they will be involved, are fully implemented, and will continue to be effective throughout the duration of work
- All the precautions and safety measures that the permits and instructions state they should take are strictly followed. If in any doubt, or if any circumstances or conditions change, they stop work, make the work area safe and get advice immediately

5.0 Risk Assessment & Safe Systems of Work

The risk assessment is the start of the safe system of work process. To ensure that the risks identified in the assessment continue to be effectively managed appropriate arrangements for instruction, monitoring and review must be implemented. This section outlines the safe system of work process.

5.1 Definitions

For the purpose of this policy the following definitions apply:

- **Risk assessment:** A careful examination of what in your work could cause harm to people, so you can weigh up whether you have taken enough precautions or should do more to prevent harm.
- **Hazard:** Something with the potential to cause harm including ill health, injury, loss of product and/or damage to plant and property e.g. hazardous chemicals, trip hazards, manual handling etc.
- **Risk rating:** The evaluation of the level of risk which may arise from the hazard, based upon the likelihood of the event occurring and the potential severity of the consequence.
- **Residual risk:** The level of risk remaining once control measures have been applied to reduce risks so far as reasonably practicable.
- **Harm:** Injury, ill-health to people and effects on the University.
- **Control measures:** Preventative and precautionary measures used to reduce or control risks arising from identified hazards
- **Permit to Work:** The permit to work (PTW) is a documented procedure that authorises certain people to carry out specific work within a specified time frame
- **Safe System of Work:** A safe system of work (SSOW) is a formal procedure based on a systematic examination of work in order to identify the hazards
- **Competence:** Competence can be described as the combination of training, skills, experience, and knowledge that a person has and their ability to apply them to perform a task safely
- **Reasonably practicable:** Reasonable practicability involves weighing a risk against the trouble, time and money needed to control it

5.2 Completing a risk assessment

The type of risk assessment required will depend on the process and the hazards to be controlled. Many activities can be evaluated using the simple risk assessment methodology described below, however, more complex methods may be required for special or high hazard activities.

To begin the risk assessment process, the following steps can be used

- **Identify all significant hazards**
Consider the work and the work environment and what may cause harm (hazards). Think about routine, non-routine and emergency activities and how people work and how they use chemicals, tools, and equipment.

- **Identify anyone who may be harmed**

For each hazard, think about how employees, contractors, visitors, or members of the public might be harmed. Remember to consider those workers who may have special requirements e.g. expectant mothers, people with disabilities

- **Evaluate the risk to those identified**

Risks are estimated according to their likelihood and potential severity of harm. Decide how likely it is that someone could be harmed and how serious it could be. A simple method for estimating risk is given in Appendix 1. *Note: If you are using the Loughborough University online form, the risk matrix calculation is undertaken automatically as the form is completed.*

- **Select appropriate monitoring and control measures**

Consider the controls currently used to manage the risk and decide if the risk is tolerable, if not, what further controls are required? See section 5.4 and 5.5

- **Agree a review period proportionate to the risk.**

You must review the controls you have put in place to make sure they are working effectively. See section 5.12

5.3 Recording risk assessment

The school / service is responsible for deciding which method of recording the risk assessment.

The types of risk assessment used can be summarised as:

- Electronic
- Paper
- Additional point of work

5.4 Control Measures

After the hazards have been identified and the risk initially assessed, the risk must be controlled to ensure the level of risk is 'as low as is reasonably practicable'. In practice this means the control measures required to manage the risk need to be proportionate to the level of risk.

The action taken should follow the hierarchy of control, to ensure the most effective measures to manage the risk are considered first. Control measures such as substitution and engineering controls are more effective than procedures or a reliance on personal protective equipment (PPE).

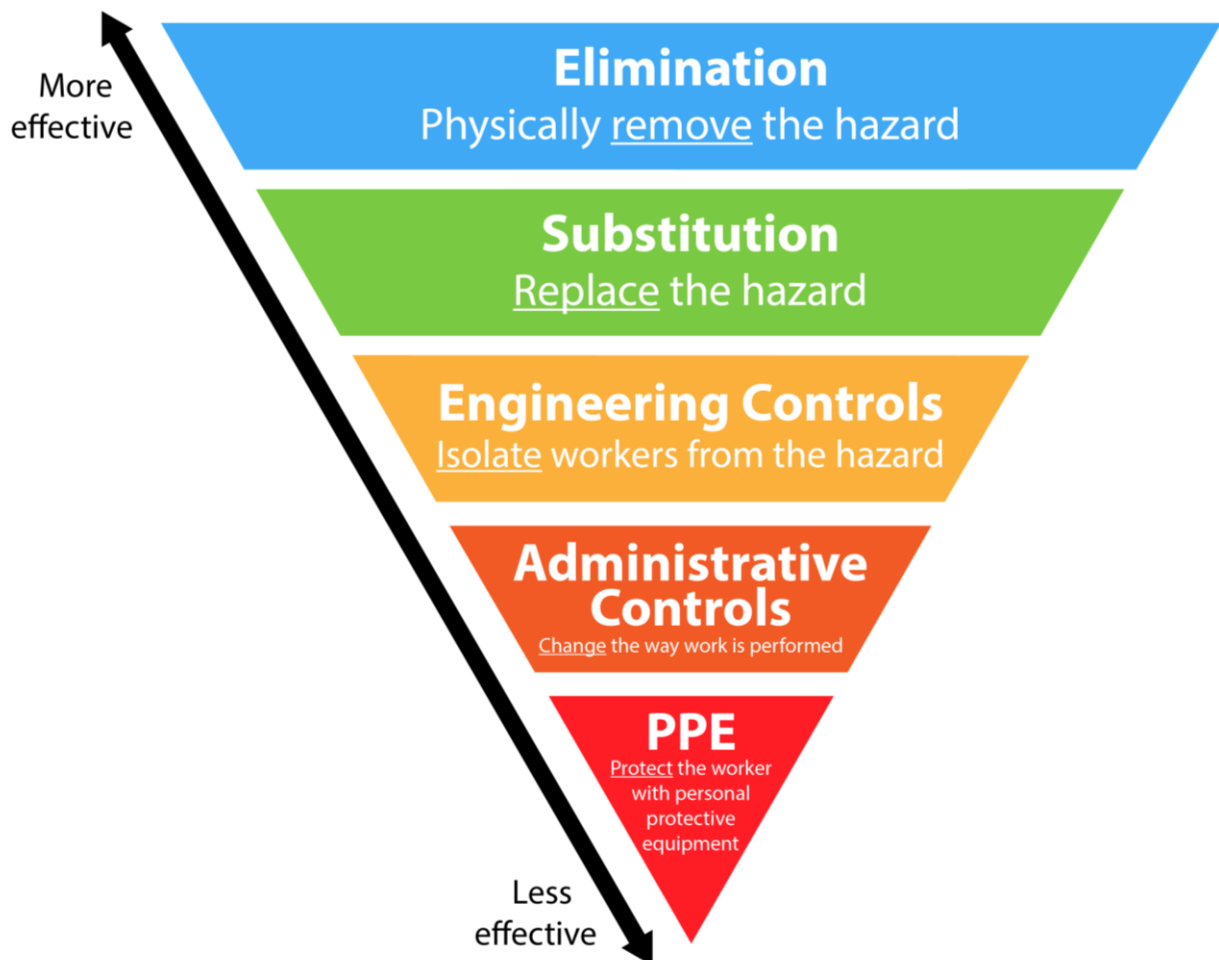


Figure 1 Hierarchy of Controls

It is good practice to involve those undertaking the work activity in the identification of new control measures, to ensure that any "new" proposals will be effective in practice and will not introduce any new hazards.

5.5 Levels of Risk

The potential hazards associated with a task and how they will be eliminated / reduced or controlled will depend on the level of risk.

The requirement to apply a formal safe systems of work will be determined by the findings of the risk assessment process and will depend on the initial risk rating, the interaction between the risk and level of authorisation and documentation can be seen in Figure 2 (below).

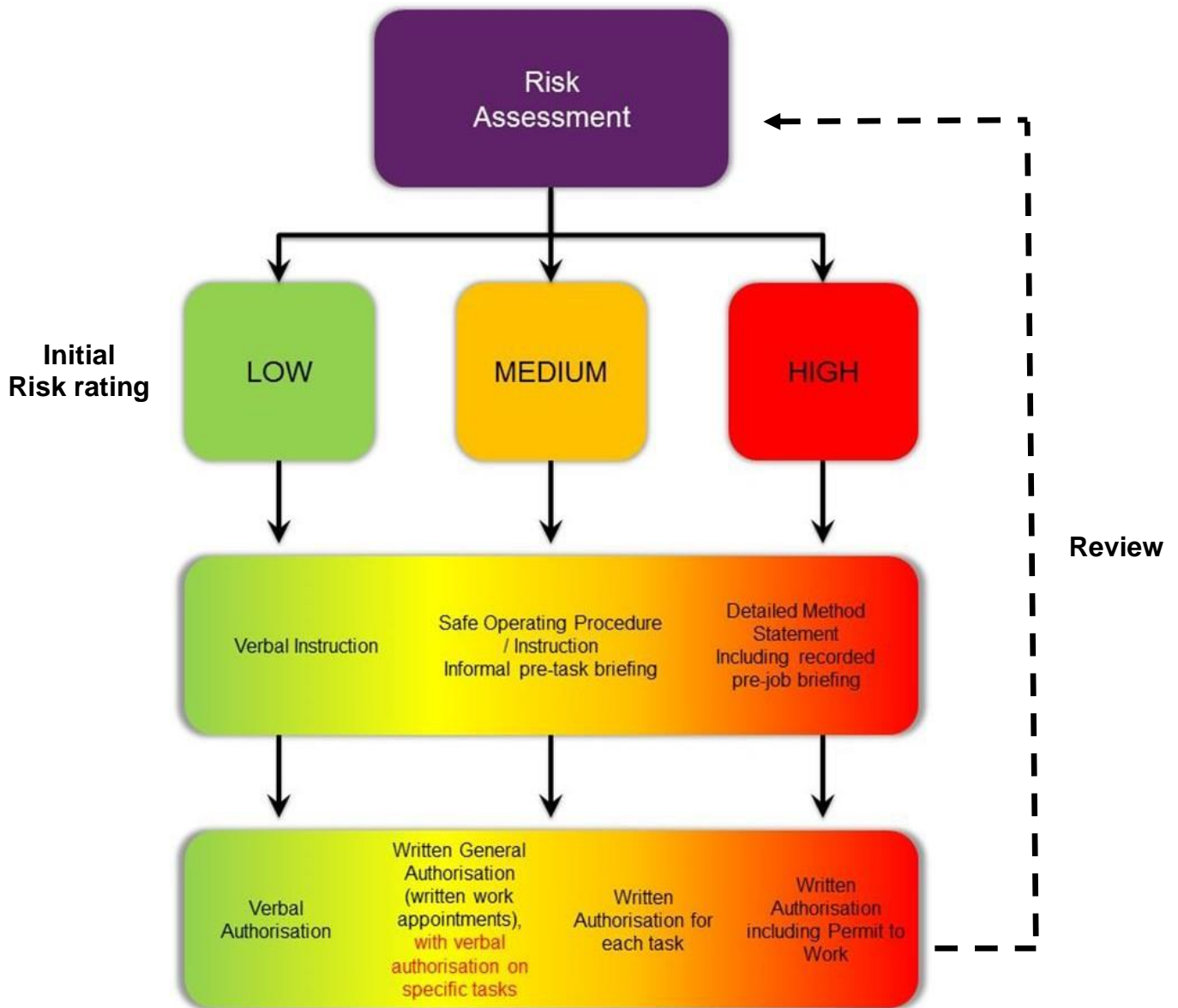


Figure 2: Representation of the Interaction between Risk Assessment, Instruction, and Authorisation

Proving the outlined instructions and authorisations are implemented should ensure the residual risk is tolerable. Examples of activities that fall into the categories outlines in figure 2 are given in appendix 2.

5.6 Work Instruction

The method and detail of the instruction will depend upon the complexity of the task and the risk involved (Figure 1). Instructions may take the form of verbal instruction; formal written instruction; or method statements.

5.7 Verbal Instruction

This should be used for low risk, simple tasks that can be readily understood and accomplished by the operator, without danger to health and safety, if the operations are undertaken in the wrong order. They will be undertaken by competent persons working entirely within their ability.

Verbal instructions will be given via the person's line manager, project manager, supervisor, tutor, academic supervisor workshop and laboratory technical / Maintenance and Facility Managers. Standard office work is an example of work where verbal instruction is normally sufficient.

5.8 Standard Operating Instructions

Standard operating instructions are detailed instructions on how to undertake a specific task, they often accompany routine work, and are used during training, or for less frequent standard tasks so that the operator knows exactly how to perform operations and in what order they should be undertaken in order to do the task safely.

Standard operating instructions should identify the hazards of the work and the precautions to be taken, this may include such things as checks of work equipment and guards prior to operation and wearing of suitable protective equipment.

Standard operating instructions should be approved by the person in charge of the work.

5.9 Method Statement

Where a risk assessment indicates that there are significant residual risks, there will be a requirement for additional control. A method statement can provide such controls.

A method statement will normally be required for most construction work, confined space work, work requiring access to energy systems or stored pressure, work involving hazardous chemicals, etc. (as well as any work identified as requiring it by a risk assessment).

A typical method statement will contain the relevant parts of the following:

- Details of the task
- Area of work
- Supervisory arrangements
- Results of appropriate risk assessments including controls to be in force
- Required competence (including special training) of those carrying out the tasks, including specific sub-tasks
- Special PPE required (above that for general site requirements)
- Required monitoring arrangements
- Health and safety implications for employees and others
- If it is considered that special controls (such as PTW) are required.

5.10 Safe System of Work and Permit to Work Process

Control of higher risk non-routine activities or routine activities where the hazard could affect the people involved, others who are not involved in the work and any high risk work performed by contractors is managed by the issue of a written SSOW or PTW.

The purpose of the SSOW or PTW is to provide a system to identify and record the various hazards, the actions necessary, allocation of responsibilities, and to provide the framework to ensure that everyone who needs to know about the activity is informed.

Typical work activities covered by PTWs include:

- Work on building services
- Work at height
- Confined spaces
- Hot work, etc

The LU policy on the Permit to Work system provides additional information on the application of the permit to work process.

5.11 Signing Off Risk Assessments

Risk assessments should typically be completed by the person completing the work, instances where this may not be the case are for generic procedures such as cleaning where a risk assessment may be completed by a supervisor and disseminated by use of an induction or tool box talk.

Once completed risk assessments should go through a dual stage sign off process. The first stage will be by the person who manages the work for example a supervisor or line manager. This will be to ensure the work is being completed in the agreed manner and captures all the hazards associated with the work.

The second stage should be completed by a relevant safety officer or nominated person(s). Their role is to review the quality of the risk assessment, where some review of the hazards may be necessary. Once signed it is the responsibility of the safety officer/nominated person to add the risk assessment to the risk assessment register.

5.12 Monitoring & Review

Once the work has started the staff member supervising the work should ensure the risk assessment is being adhered to, by inspecting the work at time intervals proportionate to the level of risk identified by the risk assessment.

The risk assessments and associated safety documentation should be reviewed within the time agreed in the risk assessment. The safety officer or nominated individual who manages the risk assessment register(s) are responsible to identifying when the review period has elapsed and should notify the supervisor/line manager responsible for the work.

6.0 Appendices

Appendix 1

Simple Risk Evaluation:

The aim of the risk assessment process is to identify the significant risks to health and safety to individuals. The process provides a simple tool to inform decision making by assisting in the understanding of the nature and degree of risk.

The risk assessment should consider hazards which are a reasonably foreseeable cause of harm; you are not expected to anticipate risks that were not foreseeable, however, you should consider non-routine and emergency situations.

Use the tables below to rate the likelihood of an injury occurring and the impact of that injury. The numerical values are multiplied together to give an overall risk rating. The matrix overleaf can be used to quantify risk.

Likelihood

When looking to establish the likelihood of harm occurring, the adequacy of the existing controls should be taken into account. For new activities, the initial assessment should be based on the implementation of the intended controls.

In assessing the likelihood of harm, sole reliance should not be placed on historical data (accident reports) as this may not reflect the current environment and working practices. You can also consider:

- how many people perform the task?
- how often is the task completed and for how long?
- the people involved including their competency and experience,
- the environmental conditions e.g. lighting temperature noise levels,
- organisational pressures e.g. workload.

Likelihood		
5	Very likely – risk will occur repeatedly	Typically experienced every month by an individual
4	Likely – will occur several times	Typically experienced once every 6 months by an individual
3	Possible – may occur sometimes	Typically experienced once every 5 years by an individual
2	Unlikely – but may occur	Typically experienced during the working lifetime of an individual
1	Very unlikely	less than 1% chance of being experienced by an individual during their working lifetime

Impact:

Assessing the impact of the realisation of a hazard involves an assessment of who might be harmed, how the harm might arise, and its physical effects and severity. When considering this a commonly used approach is to consider the outcome in terms of a reasonably foreseeable injury.

Reasonably foreseeable injury

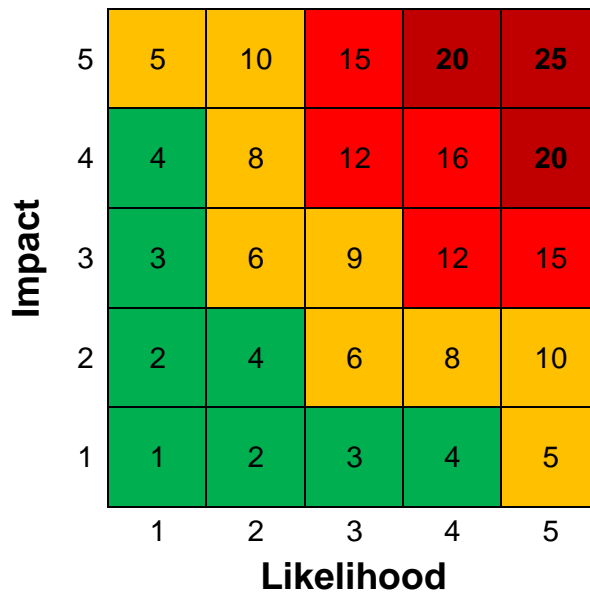
That which we might hope to sustain or would expect to be the most common in reality.

For the purposes of completing a “simple” risk assessment, you should consider the impact to be the resulting level of harm to an individual(s) that they may reasonably be expected to sustain.

Impact		
5	Critical	Fatality
4	Very Significant	Major injury - permanent disability
3	Significant	Over 7-day injury - employee unavailable for normal work over 7 days
2	Minor	Minor injury - less than 7 days lost
1	Not Significant	No injury - no lost time

Risk Matrix:

The risk matrix table and acceptable risk table below can be used to quantify risk and determine if further action is required.



Threshold	Risk Rating	Level of Exposure	Action
Extreme	20 - 25	Unacceptable	Immediate corrective action
High	12 - 19	Concern	Decision required by ELT
Medium	5 - 11	Acceptable	Action and regular monitoring
Low	1 - 4	Acceptable	Action and regular monitoring

Low (1-4) - Acceptable risk. No additional controls are required. Consideration may be given to a more cost- effective solution or improvement that imposes no additional cost burden. Monitoring is required to ensure that controls are maintained.

Medium (5–12)- Tolerable risk. Efforts should be made to reduce the risk, but the costs of prevention should be carefully measured and limited. Risk reduction measures should be implemented within a defined time period. Where the moderate risk is associated with extremely harmful consequences, further assessment may be necessary to establish more precisely the likelihood of harm as a basis for determining the need for improved control measures.

High (12-20) – Substantial risk. The event should not be started until the risk has been reduced. Considerable resources may have to be allocated to reduce the risk. Where the risk involves work in progress, urgent action should be taken.

Extreme (20-25) - Intolerable risk. The event must not be started or continued until the risk has been reduced. If it is not possible to reduce the risk even with unlimited resources, work must remain prohibited and further advice sought from a health and safety specialist.

Appendix 2

Risk and Level of authorisation - Examples

Low	Medium		High
Verbal Instructions	General authorisation plus additional verbal authorisation	Written site-specific authorisation for each task	Written Authorisation Permit to Work
Simple non-hazardous tasks in non-hazardous environment	Routine semi-skilled activities	Skilled activities - non activities	Inherently hazardous material properties or situations Intrusive Work on building fabric
Office work	Cleaning	Lab work	Hot Works
Reception desks	Catering	Building trades	Confined Space
Classroom based activities			HV electricity
			Work at height
			Electrical isolations
			Isolation of Pressure systems
			Asbestos
			Roof work

Note: Activities listed are examples of work which may fall into the categories, however individual circumstances need to be considered to ensure risks are categorised correctly and the appropriate controls introduced.