Risk Assessment

**GUIDANCE/17/RA/2022**

Health & Safety Guidance

**Risk Assessment Guidance**

# Introduction

It is a legal requirement for the University to assess reasonably foreseeable risks arising out of its work and to put in place control measures to reduce the risks so far as is reasonably practicable. The [University Health and Safety Policy](https://intranet.birmingham.ac.uk/hr/wellbeing/worksafe/policy/hspolicies.aspx) also requires health and safety risks to be identified and assessed in advance of significant exposure to them, and effectively controlled. This document gives guidance on general risk assessment and provides advice on the steps involved in the complete risk assessment process for compliance with University Health and Safety Policy.

# What is covered by the Guidance?

Where similar risks are encountered in different areas of the University, it is expected that there is a single, consistent approach to achieve implementation of the University Health and Safety Policy. This guidance provides practical advice to assist those responsible for carrying out risk assessments using the University’s preferred approach for general and generic health and safety risk assessments.

Where a specialist risk assessment is needed the University has developed specific procedures and forms (e.g. COSHH, Biosafety) for these and they are included within those specific University policies. Further information on these policies and other mandatory risk assessment procedures is available on the [Safety Services](https://intranet.birmingham.ac.uk/hr/wellbeing/worksafe/index.aspx) intranet pages.

# Who is the Guidance aimed at?

This guidance is primarily aimed at those responsible for carrying out risk assessments on behalf of the University. These will include health and safety role holders such as:

* Health and Safety Co-ordinators who will provide support during the risk assessment process by providing advice on specific risks and risk controls. These are people that have the necessary skills, knowledge, experience and training to undertake, on behalf of the manager, risk assessments of the activities undertaken in their area and department.
* Risk Assessors who will undertake appropriate risk assessment training, liaise with other health and safety role holders and carry out comprehensive risk assessments of new tasks, procedures, equipment and personnel, in consultation with others and ensure that these are reviewed as necessary in accordance with this Guidance.

The University Health and Safety Policy also identifies a number of other role holders that have responsibilities relating to health and safety risk assessments. Further information about these role holders and their responsibilities can be found in [Appendix G](https://intranet.birmingham.ac.uk/hr/wellbeing/worksafe/policy/UHS-Policy-%E2%80%93-Appendices-and-other-supporting-materials.aspx) of the University Health and Safety Policy.

# Definitions

* **Hazard** - Is something with the potential to cause ***harm***.
* **Harm** - Includes death, injury, physical or mental ill-health, damage toor loss *of* property, reputation, morale or the environment, or any combination of these.
* **Risk** - is the measure of the likelihood that the ***harm*** from a particular ***hazard*** will occur, taking into account the possible consequence/severity of ***harm***.
* **Risk Assessment** - is the process of analysing the level of ***risk***, considering those in danger, and evaluating whether ***hazards*** are adequately controlled, taking into account any measures already in place.
* **Control Measure –** is the selection and implementation of appropriate options for reducing a risk.
* **Risk Assessment Tracker –** tracks the location and status of all risk assessments.

# Guidance

In most Colleges and Professional Services Departments there will be activities commonly performed by a variety of individuals and groups and it should be possible to divide the assessments into broad categories of work and to produce common procedures. For example:

* Office accommodation, lecture theatres/seminar rooms and general circulation areas
* Workshops
* Research/teaching laboratories
* Peripatetic work and fieldwork

In very large and complex Colleges or Professional Services Departments these categories can be further subdivided. This could mean that research and teaching laboratories are dealt with separately or research is divided into groups or projects. Particular activities performed by a limited number of people may also be assessed separately.

It is important to follow local management or organisational arrangements in the division of the work wherever possible and to ensure that all areas are covered. This also includes considering which types of risk assessment would be most relevant for the local situation.

## Types of risk assessments

**General Risk Assessment**

Any risk assessment that is not a specialist topic risk assessment (e.g. COSHH, Biosafety) and does not fall within the specific categories.

**Generic Assessments**

Generic assessments are assessments produced once only for a given activity or type of workplace. For example, where there are several locations where the same activity is carried out, then a single generic assessment could be completed for that activity to cover all the locations. Similarly, if staff work away from base, such as maintenance electricians, then generic assessments could be used for their hazardous work, rather than attempting to produce an assessment for each activity at each location.

**Be warned,** casual use of generic assessments can result in very poor control, and no improvement in safety. It is important to ascertain that a generic assessment is applicable to a particular situation. If the circumstances of a particular situation (such as extra hazards) differ significantly from those of the generic assessment an extension to the assessment will be required.

**Dynamic Risk Assessment**

In unique situations where people work alone or encounter unpredictable events such as escalating aggression from an individual a dynamic risk assessment may need to be undertaken. This is where the individual will make their own assessment of the situation and if necessary introduce additional control measures or cease the activity. If there is a requirement for these types of assessments then the competency of the people undertaking the roles needs to be considered and additional training and/or a checklist with key questions may need to be provided before the work begins.

## When risk assessments need to be completed

Risk assessments must be carried out **prior** to starting a task or project and cover the implementation, use, cleaning, maintenance, disassembly or removal of equipment and structures. They must be reviewed if there are significant changes to the equipment, working environment, personnel, the introduction of new technology, if an accident happens, when it is believed the previous risk assessment is no longer valid or at least annually (unless otherwise stated in a Policy).

## Who needs to be involved in the assessment process

Risk assessment must only be carried out by people that have the necessary skills, knowledge, experience and training in the risk assessment process. The process should also be carried out in consultation with any staff or students exposed to the risks involved. In research areas the risk assessments must be signed off by the Principle Investigator or Supervisor to confirm approval.

## Risk assessment training

Risk assessment training within the University is provided at a local level in Colleges and Professional Services Departments as well as centrally provided courses delivered by Safety Services. The training provision includes specialist risk assessment courses e.g. COSHH, Biosafety as well as general risk assessment sessions.

For further information on risk assessment competencies and the training required and the courses available within the University please refer to [UHSP Appendix D](https://intranet.birmingham.ac.uk/hr/wellbeing/worksafe/policy/UHS-Policy-–-Appendices-and-other-supporting-materials.aspx), Competence and Training and [Safety Services](https://intranet.birmingham.ac.uk/hr/wellbeing/worksafe/courses/index.aspx) intranet pages.

## Carrying out a risk assessment

To ensure they are suitable and sufficient all University risk assessments need to follow the Health and Safety Executive’s (HSE) Five Steps to Risk Assessment.

Guidance on each of the steps is included in [Section 6: Completing the risk assessment template (Appendix 1)](#Section_6).

## Recording the findings

The General Risk Assessment Form, in Appendix 1, can be used to record risk assessments for all tasks or operations giving rise to hazards. Up-to-date assessments must be available at department level and accessible to staff, students and other people that may need access to them e.g. contractors.

In circumstances where a specialist risk assessment is needed the specific procedures and forms that have been developed (e.g. COSHH, Biosafety) for these must be used. Further information on these policies and other mandatory risk assessment procedures is available on the [Safety Services](https://intranet.birmingham.ac.uk/hr/wellbeing/worksafe/index.aspx) intranet pages.

For more dynamic activities, a more detailed approach to risk assessment may be necessary. In such circumstances, specialist advice should be sought from local Health and Safety role holders and University Advisors.

Once the assessments have been carried out using the relevant processes and the findings recorded on the appropriate form details of the assessments need to be entered onto the Professional Services Departmental or School/College Risk Assessment Tracker**.** The intention of this is to link the tracker to the risk assessments and other relevant documents so they are quickly accessible. Further information about the review of the tracker, can be found in [Appendix G](https://intranet.birmingham.ac.uk/hr/wellbeing/worksafe/policy/UHS-Policy-%E2%80%93-Appendices-and-other-supporting-materials.aspx) of the University Health and Safety Policy.

# Completing the risk assessment template (Appendix 1)

**Top Section –** The Risk Assessor must complete the section at the top of the Form. Once completed and agreed the Academic or Manager leading/managing the work/research or area must sign the assessment.

**Version / Ref No.** – This will be a locally generated unique code/number to identify individual risk assessments.

**Date of Assessment Review -** This should take into account:

* If there have been significant changes e.g. new staff, new/changed accommodation, new equipment, new controls measures introduced/actioned
* If there are still improvements needed to be made
* If problems have been identified
* Any accidents or near misses
* At least annually to make sure it stays up to date

HAZRAD ASSESSMENT

Hazards tend to fall into six main groups:

* Mechanical - unguarded machinery, plant machinery, vehicles - contact/entanglement, crushing, struck by
* Physical - vibration, slips, trips & falls, electrical, radiation, ergonomic
* Chemical - hazardous substances, dusts, fumes, gases,
* Biological - bacteria & viruses: legionnaires disease, HIV, Hepatitis
* Environmental - noise, poor lighting, unreasonable temperatures, dust
* Organisational - bullying, harassment, violence, workload, time constraints, deadlines

Other Factors that should be considered particularly when carrying out risk assessments for research off campus are:

* Work Factors - Work with hazards that have potential to cause permanent injury or fatalities: mechanical, physical, chemical, biological, environmental & organisational
* Travel & transportation - Significant travel to reach placement, prolonged or on local transport facilities known to be high risk (poor driving or vehicle safety standards), demanding travel during project, required to drive in unfamiliar vehicles, night travel, long daily commuting requirement, accommodation
* General /environmental health factors - Regional/local health risks require specific health protection measures e.g. inoculations, very hot/cold working conditions
* Individual researcher factors - The researcher has personal factors (e.g. health, disability, pregnancy, linguistic or cultural)
* Insurance limitations - Locations, activities and/or circumstances that are excluded from the HEI’s travel and other insurance cover
* Location and/or regional factors - Significant risk of civil disorder, crime or similar danger, medical and rescue services not available quickly or locally, means of communication likely to be difficult or compromised

Hazards Identified – Each of the hazards associated to the activity or area must be listed.

**Who might be harmed? –** The number of people at risk must be identified in each of the categories provided.

**How might people be harmed? –** Identify how people might be harmed by the hazard e.g. staff and students may be injured by tripping over a trailing cable in a seminar room.

**CONTROL ASSESSMENT**

**Existing Control Measures -** Each of the hazards identified should be considered in turn and any existing control measures to reduce the risk must be listed. Where no control measures exist, write “None”.

**Initial Risk Rating -** Taking into account the effect of all of the existing control measures, the remaining ***level of risk*** must be calculated using the Model Matrix.

The most commonly used ***consequence/severity*** domain for health and safety risk assessments is the “Impact on the safety of staff, students and public” consequence domain of the Model Matrix as shown below. To calculate the risk both the ***consequence/severity*** and the ***likelihood of occurrence*** (as shown below) needs to be calculated for the health and safety hazard. In each case, the most likely outcome must be considered. If the most likely outcome of the consequence does not relate to the impact on the safety of staff, students and public, then a more appropriate domain included in the full Matrix in Appendix 2 can be used.

|  | **Consequence/Severity score (severity levels) and examples of descriptors** | | | | |
| --- | --- | --- | --- | --- | --- |
|  | **1** | **2** | **3** | **4** | **5** |
| **Domains** | **Negligible** | **Minor** | **Moderate** | **Major** | **Catastrophic** |
| **Impact on the safety of students, staff or public (physical / psychological harm)** | Minimal injury not requiring first aid or requiring no/minimal intervention or treatment.  No time off work | Minor injury or illness, first aid treatment needed or requiring minor intervention.  Requiring time off work for <3 days | Moderate injury requiring professional intervention  Requiring time off work for 4-14 days  RIDDOR / MHRA / agency reportable incident | Major injury leading to long-term incapacity/ disability (loss of limb)  Requiring time off work for >14 days | Incident leading to death  Multiple permanent injuries or irreversible health effects |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Likelihood score** | **1** | **2** | **3** | **4** | **5** |
| **Frequency** | **Rare** | **Unlikely** | **Possible** | **Likely** | **Almost certain** |
| **broad descriptor** | This will probably never happen/occur | Do not expect it to happen/occur but it is possible it may do so | Might happen or occur occasionally | Will probably happen/occur but it is not a persisting issue | Will undoubtedly happen/occur, possibly frequently |
| **time-framed descriptor** | Not expected to occur  for years | Expected to occur  at least annually | Expected to occur at  least monthly | Expected to occur at least weekly | Expected to occur at least daily |
| **probability**  Will it happen or not? | <0.1 per cent | 0.1–1 per cent | 1.1–10 per cent | 11–50 per cent | >50 per cent |

The overall ***level of risk*** is then calculated by multiplying the two scores together.

**Risk Level = Consequence / Severity x Likelihood (S x L)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Likelihood** | | | | |
| **Likelihood score** | **1** | **2** | **3** | **4** | **5** |
|  | **Rare** | **Unlikely** | **Possible** | **Likely** | **Almost certain** |
| **5 Catastrophic** | 5 | 10 | 15 | 20 | 25 |
| **4 Major** | 4 | 8 | 12 | 16 | 20 |
| **3 Moderate** | 3 | 6 | 9 | 12 | 15 |
| **2 Minor** | 2 | 4 | 6 | 8 | 10 |
| **1 Negligible** | 1 | 2 | 3 | 4 | 5 |

**Are the control measures in place adequate –** Using the Risk Level with the existing control measures, determine using the information below whether further measures need to be taken.

|  |  |
| --- | --- |
| **Risk Rating** | **Action** |
| 15 – 25 | Stop & take immediate action |
| 8 – 12 | Action – further elimination/control measures |
| 4 - 6 | Improve – consider further elimination/control measures |
| 1 - 3 | No action |

Risks falling within the “**Green**” section are regarded as acceptable and as such must be managed/controlled and monitored by Academics/Managers or equivalent.

Hazards with grading of risks that fall within the “**YELLOW**” and **“Orange**”sections can be considered as ***moderate*** and ***high risk***. Further elimination/control measures must be considered according to the following hierarchy:

1. Elimination of the task or hazard;
2. Control by substitution of activity or hazard with something less hazardous (e.g. with regards to community visits, arrange for patients with known aggressive tendency to attend clinic rather than meet in patient’s home);
3. Control by separating or isolating people from the hazard (e.g. removing workers and others from noisy environments);
4. Control by physical safeguards (e.g. provision of guarding to dangerous parts of machinery);
5. Control by safe systems of work (e.g. “permit to work” system for entry into confined spaces and for roof access);
6. Control through use of personal protective equipment;
7. Control through use of safety signs and signals.

All of the above measures must be supplemented with suitable and sufficient information, instruction and training to anyone that could be exposed to the risks. Details of this along with any specific information, instruction and training required for the implementation of the control measures identified must be included in the assessment (e.g. induction training, etc).

**Serious and imminent danger**

Grading of risks that fall within the “**RED**” sections are “**Extreme**” risks andimply that there may be a serious and imminent danger (e.g. for which special procedures may be required). For these there is an additional requirement for **urgent** **immediate** action and review of the control measures which may need specialist advice to be sought. Risks that score 15 to 25 require action to be taken immediately and to “stop the activity causing the risk now” until further controls have been implemented to reduce the risk.

**Changes to / Additional Controls –** Any changes to existing control measures or additionalrisk elimination/control measures necessary must be listed here. Where there are alternative remedies, each must be listed, with the **preferred option** indicated, so that a **cost/benefit** analysis may be undertaken. In cases where more involved remedial measures are required or proposed, then technical, legal or policy assistance may be sought from other Schools or departments. In each case assume the elimination/control measure(s) to be in place and calculate the **Risk Rating after action** to demonstrate a sufficient reduction in the level the risk.

**ACTIONS**

**Owner -** This will identify who is responsible for taking the further action identified.

**Due Date -** This will record the proposed date that the actions are to be completed by.

**Action Complete** – Use this to record when the action has been completed. Once the actions are complete there will be a need to review and revise the risk assessment to include any additional control measures.

# Risk Assessment Approval Process for High and Extreme Risks

Any completed risk assessments that still have “**extreme**” (**RED)** risks once all of the identified control measures have been put in place must be approved via the Chair of the College/Professional Services Health and Safety Management Committee by the Head of College/Professional Service before any activities are started.

Also any completed risk assessments that still have “***high”*** **(Orange**) risks once all of the identified control measures have been put in place must be approved by the Chair of the College/Professional Services Health and Safety Management Committee.

Further information on the Risk Assessment Approval Process is available in the University [Risk Assessment and Mitigation Plan (RAMP) Approval Process](https://intranet.birmingham.ac.uk/hr/wellbeing/worksafe/policy/Research-Risk-Assessment-and-Mitigation-Plans-RAMPs.aspx).

# Risk Assessment Tracker

Once the risk assessment has been completed relevant information from the assessment will be entered into the Risk Assessment Tracker. The purpose of the Risk Assessment Tracker is to act as an inventory of current risk assessments and will allow easy auditing, monitoring, and review of the status (including last date the assessment was reviewed). In accordance with the University Health and Safety Policy the tracker will be reviewed and signed-off by the Head of College or Director of Professional Service Department each year.

# Risk Register

The Risk Assessment Tracker will also assist the creation of a Risk Register which will have the ability to escalate risks that cannot be managed locally to departmental, School, College levels. Where risk assessments indicate that there are significant uncontrolled risks, which cannot be managed at a local level i.e. within the School or Department then these must be escalated to the College / Professional Services Health & Safety Management Committees.

# Further Information

University:

**Health and Safety Policy and Appendices**

[Health and Safety Policies (birmingham.ac.uk)](https://intranet.birmingham.ac.uk/hr/wellbeing/worksafe/policy/hspolicies.aspx)

**Workplace Wellbeing**

<https://intranet.birmingham.ac.uk/hr/wellbeing/index.aspx>

<https://intranet.birmingham.ac.uk/hr/wellbeing/worksafe/topics/riskassessment.aspx>

<https://intranet.birmingham.ac.uk/hr/wellbeing/worksafe/courses/index.aspx>

**POD: Learning & Development Courses**

[Courses (sharepoint.com)](https://bham.sharepoint.com/sites/POD/SitePages/Courses.aspx)

External:

**HSE**

<http://www.hse.gov.uk/risk/index.htm>

**European Agency for Safety and Health at Work**

<https://osha.europa.eu/en>

APPENDIX 1

GENERAL HEALTH AND SAFETY RISK ASSESSMENT FORM

| Site | |  | | | **Department** | | | | |  | | | | | | | **Version / Ref No.** | |  | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Activity Location** | |  | | | **Activity Description** | | | | |  | | | | | | | | | | |
| **Assessor** | |  | | | **Assessment Date** | | | | |  | | **Date of Assessment Review** | | | | |  | | | |
| **Academic / Manager Name** | |  | | | **Academic / Manager Signature** | | | | |  | | | | | | | | | | |
| Hazard Assessment | | | | Control Assessment | | | | | | | | | | | | Actions | | | | |
| Hazards Identified | Who might be harmed?  Staff Students Contractors Others | | How might people be harmed? | Existing Control Measures | | Initial Risk Rating | | | Are these adequate?  Yes/No | | Changes to/ Additional Controls | | Residual Risk Rating | | | Owner | | Due  Date | | Action Complete |
| S | L | R | S | L | R |
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**APPENDIX 2**

|  | **Consequence/Severity score (severity levels) and examples of descriptors** | | | | |
| --- | --- | --- | --- | --- | --- |
|  | **1** | **2** | **3** | **4** | **5** |
| **Domains** | **Negligible** | **Minor** | **Moderate** | **Major** | **Catastrophic** |
| **Impact on the safety of students, staff or public (physical / psychological harm)** | Minimal injury not requiring first aid or requiring no/minimal intervention or treatment.  No time off work | Minor injury or illness, first aid treatment needed or requiring minor intervention.  Requiring time off work for <3 days | Moderate injury requiring professional intervention  Requiring time off work for 4-14 days  RIDDOR / MHRA / agency reportable incident | Major injury leading to long-term incapacity/disability (loss of limb)  Requiring time off work for >14 days | Incident leading to death  Multiple permanent injuries or irreversible health effects |
| **Statutory duty/ inspections** | No or minimal impact or breach of guidance/ statutory duty  Minor recommendations | Non-compliance with standards  Letter of Contravention  Reduced performance rating if unresolved | Single breach in statutory duty  Challenging external recommendations/ improvement notice  Reduced performance rating | Enforcement action  Multiple breaches in statutory duty  Multiple challenging recommendations  Improvement notices  Low performance rating  Critical report | Prosecution  Multiple breaches in statutory duty  Complete systems change required  Zero performance rating  Severely critical report |
| **Adverse publicity/ reputation** | Rumours  Potential for public concern | Local media coverage - short-term reduction in public confidence  Elements of public expectation not being met | Local media coverage - long-term reduction in public confidence | National media coverage with <3 days service well below reasonable public expectation | National media coverage with >3 days service well below reasonable public expectation.  Total loss of public confidence |

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| --- | --- | --- | --- | --- | --- |
| **Likelihood score** | **1** | **2** | **3** | **4** | **5** |
| **Frequency** | **Rare** | **Unlikely** | **Possible** | **Likely** | **Almost certain** |
| **broad descriptor** | This will probably never happen/occur | Do not expect it to happen/occur but it is possible it may do so | Might happen or occur occasionally | Will probably happen/occur but it is not a persisting issue | Will undoubtedly happen/occur, possibly frequently |
| **time-framed descriptor** | Not expected to occur  for years | Expected to occur  at least annually | Expected to occur at  least monthly | Expected to occur at least weekly | Expected to occur at least daily |
| **probability**  Will it happen or not? | <0.1 per cent | 0.1–1 per cent | 1.1–10 per cent | 11–50 per cent | >50 per cent |

**Risk Level = Consequence / Severity x Likelihood (C x L)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Likelihood** | | | | |
| **Likelihood score** | **1** | **2** | **3** | **4** | **5** |
|  | **Rare** | **Unlikely** | **Possible** | **Likely** | **Almost certain** |
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| **1 Negligible** | 1 | 2 | 3 | 4 | 5 |

|  |  |
| --- | --- |
| **Risk Rating** | **Action** |
| 15 – 25 | Stop & take immediate action |
| 8 – 12 | Action – further elimination/control measures |
| 4 - 6 | Improve – consider further elimination/control measures |
| 1 - 3 | No action |