Risk Assessment for the Project Laboratory

How to Complete your risk assessment

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For the project lab 6.12MPEB

What is a risk assessment ?

A risk assessment is a careful examination of anything in the workplace that could cause harm and a decision about whether there are enough precautions in place.

The factors that must be considered when carrying out an assessment are:

1. The process or work activity.
2. The environment where the work is carried out including unrelated activities going on in the area.
3. The people who are directly and indirectly affected.

What should the risk assessment cover?

The law states that a risk assessment must be **'suitable and sufficient'** and that it should show:

1. Appropriate checks are made.
2. All who might be affected are accounted for.
3. Deal with all the obvious and significant Hazards while considering consequences and risks whilst taking into account all people directly and indirectly affected.
4. That all precautions and control measures are reasonable resulting in low risks.
5. You involve all people directly effected by the work in the assessment process.

The level of detail in a risk assessment should be proportionate to the risk and appropriate to the nature of the work.

Insignificant risks can usually be ignored, as can risks arising from routine activities associated with life in general, unless the work activity compounds or significantly alters those risks.

Your risk assessment should only include what you could reasonably be expected to know - you are not expected to anticipate unforeseeable risks; although some maybe be highlighted or questioned during the approval process.

2 Part Assessment

When faced with performing a risk assessment for the first time the experience can feel very daunting, frustrating and sometimes over whelming. To help you complete the assessment it is best to split it into manageable parts.

Part 1 - Information Gathering

Things you need to know about your project/work to aid in the risk assessment.

Part 2 – Performing the risk assessment

Applying the information aquired from part 1 to the formal risk assessment.

Part 1. Information gathering

This section is all about finding out and collating some of the specific information about your project so that information is at hand when filling out the formal risk assessment. Think of this an informal ruff assessment before preforming the assessed risk assessment.

To do this split the work into 2 parts and those into smaller manageable sections.

A Background

A general over view of the project.

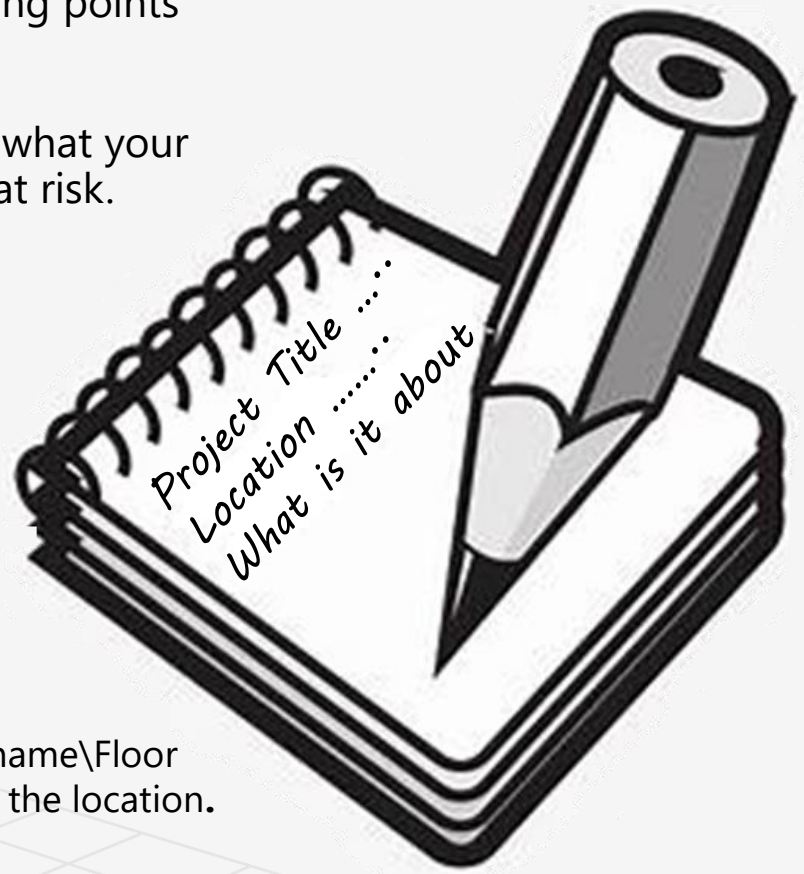
B Activities

A list of tasks you need to perform to complete the project.

Part1-A. Information gathering. Project Background

This is all about the why, where, when and who. **Make notes** of the following points about your project or work.

When completing the formal risk assessment this part will help explain what your project is about, where and when it will be performed and who will be at risk.



1. **Project Title**
   Be descriptive and note the year of study.
2. **Set Dates**
   Set a date for the start and end of the project.
3. **Outline**
   Describe your project in simple terms. i.e. Is this a group or individual project, who is the supervisor, where/when it will take place, note if you will be using any special equipment.
4. **Location**
   Where will you be working Home/Campus/Field work; Note Building name\Floor number\Room or lab number, who manages the location, contacts for the location.
5. **Documents**
   Do you need to follow codes of practice, Are mandatory rules required, Location of documentation hardcopy/softcopy/online.
6. **Who**
   Who will be effected by your project - Staff members/general public/visitors from industry, fellow students, yourself.

Part1-B. Information gathering. The Tasks and Hazards

This part is all about how you intend to conduct the work and perform the project/experiment. If you have not you done so you need to start thinking about what you are going to do. This part will help you fill out the activities section of the risk assessment process and get you thinking about the types of hazards i.e. equipment you might be using and how you would control any potential consequences.

Create a table as shown on page 9 and populate it with the following information relating to the project activities.

1 **Tasks (Activities that you perform)**
Make a list of all the things you intend to do as part of your project i.e. Performing research, using computers to simulate things, building and testing circuits, connecting things to the body, using/mixing chemicals, etc.

2 **Hazards (things you interact with)**
Any task or activity requires you to interact with a device, substance or object all of these things can cause harm. Make a note next to each task from above to list of all the hazards i.e. Using hand tools, using Laptop\computer, using a soldering iron, mixing epoxy resin, etc.

3 **Consequences (When things to wrong)**
When interacting with a hazard you are putting yourself or others at risk of injury. Next to each hazard list all of the consequences that could happen should something go wrong i.e. water spillage, causing fire, physical injuries like cuts or bruises, getting electric shocks, etc.

4 **Controls (How to control the task safely)**
How to stop, avoid or mitigate the consequence of your action. Controls need to be implemented to make hazards safe. Make a list of ways safely control the hazard. Use the control hierarcy on the next page to assist this part.

5 **Risk level (The chance)**
The risk level is a measure of the likelihood of the consequence happening after safe control measures have been implemented. This is a calculated value based on the table shown. Try to aim for levels in Green and Yellow otherwise reassess the controls..

Severity x likelihood = Risk Level

Severity = Level of injury Likelihood = Chance of injury

Severity	Likelihood: Remote (1.)	Unlikely (2.)	Possible (3.)	Likely (4.)	Certain (5.)
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

Part1-B. Information gathering. Considering Controls

Controls – continued

When considering how to control your hazards try to follow the risk hierarchy starting at the top working down the list and question yourself about the hazard.

Eliminate

Eliminating the hazard; Do I need to use that device/object or can I perform the task in a different way.

Substitution

Can I use a different tool, could I use a different material, use an alternative process or pass the work to someone else, i.e. member of staff.

Engineered controls

Is it possible to use extra mechanisms with my process; Protective Barriers, an Interlock on a machine, current limit set on power supply or use fume extraction.

Systems of work

Following specific rules such as COPs, mandatory work practices, using guidance notes or have supervision present.

PPE

Do I need to wear protective equipment such as a mask, gloves, lab coat, Goggles, etc.

NOTE: *PPE is worst case scenario. If PPE fails you and others will not be protected!!*

Part1-B. Information gathering. Example Activities Table

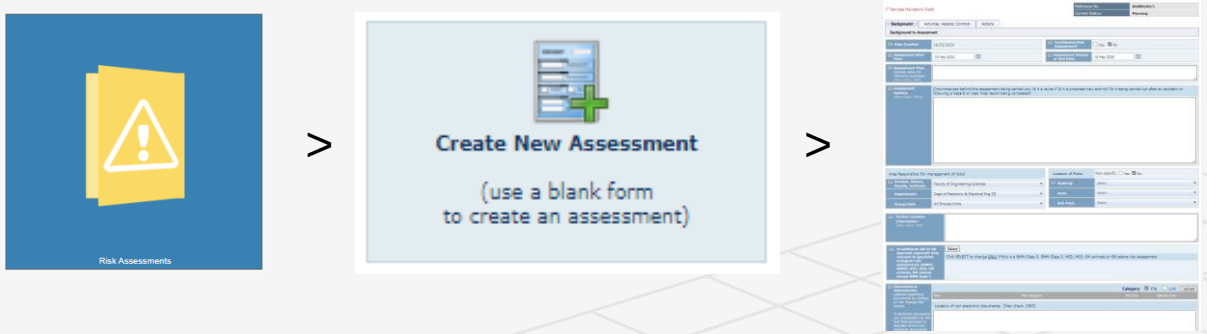
Task or Activity	Hazard	Consequence	Control	Risk level
Writing code in laboratory	Using Desktop computer. Working around other experiments.	RSI, Eye strain, Joint aches, Head aches, Electric shock, Being injured by another experiment.	Check equipment for damage. Follow DSE guidance. Take regular breaks. Don't touch other experiments. Be aware of other lab users. Seeks 1st aid if feeling unwell.	Severity = 2 Likelihood = 1 Risk level = 2
Test circuit on my arm	Attach a custom made electronic circuit to my arm using electrodes.	Electric shock, allergic reaction, Injury to arm i.e. scratches or cuts.	Use low power with battery supply. Main circuit will be enclosed. Test under supervision. Seek 1st aider if reaction\injury occurs.	Severity = 3 Likelihood = 1 Risk level = 3

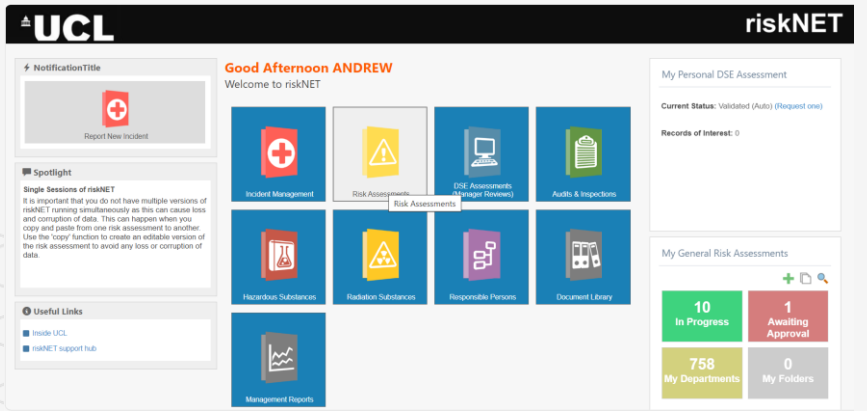
Part 2. riskNet and the Risk Assessment

RiskNET is a UCL safety services IT system that helps departments manage their safety responsibilities. It provides tools that make managing safety simpler and less bureaucratic and gives better and more effective feedback about how Departments are performing.

Risk Assessments are performed using risk net.
Navigate to the following area to start a risk assessment using riskNet.

[riskNET (ucl-safety.co.uk)]





Upon opening starting a new risk assessment you will see it is split into 2 sections; background and activities; just like the previous section information gathering.

Part2. Risk Assessment. Background

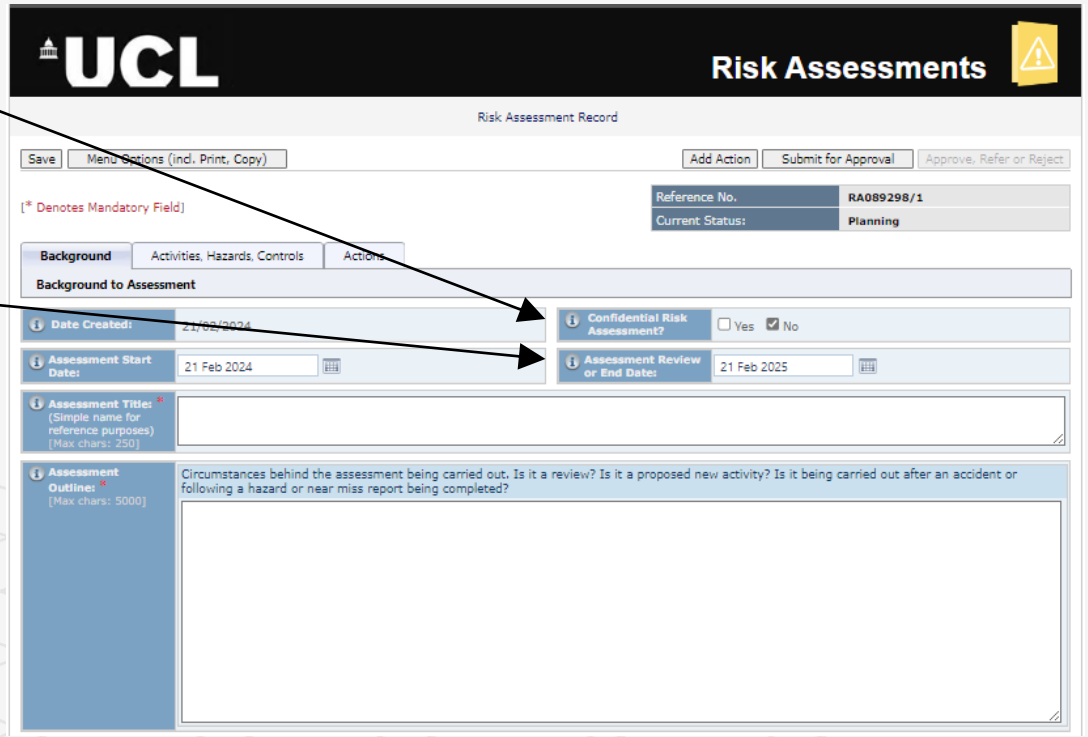
The background section is where you layout all of the why, what and where of your assessment regarding the project. Use the information gathered from part 1 To fill in the assessment. Hopefully you will have this information to hand so will be a quick to enter.

1 **Is the assessment confidential**
Normally this it left as NO unless the assessment contains confidential Information. Such as medical, military, industrial IP and protected information.

2 **Set dates**
When you are going to start and end the work.

3 **Title your assessment**
This should match your project reports and include year of study.

4 **Supply an outline of your project**
This should state what the project is about/the nature of the work, if the assessment is for a group or individual, where and when you will be working, who your supervisor is, what special equipment will be needed, etc.



Part2. Risk Assessment. Background (continued)

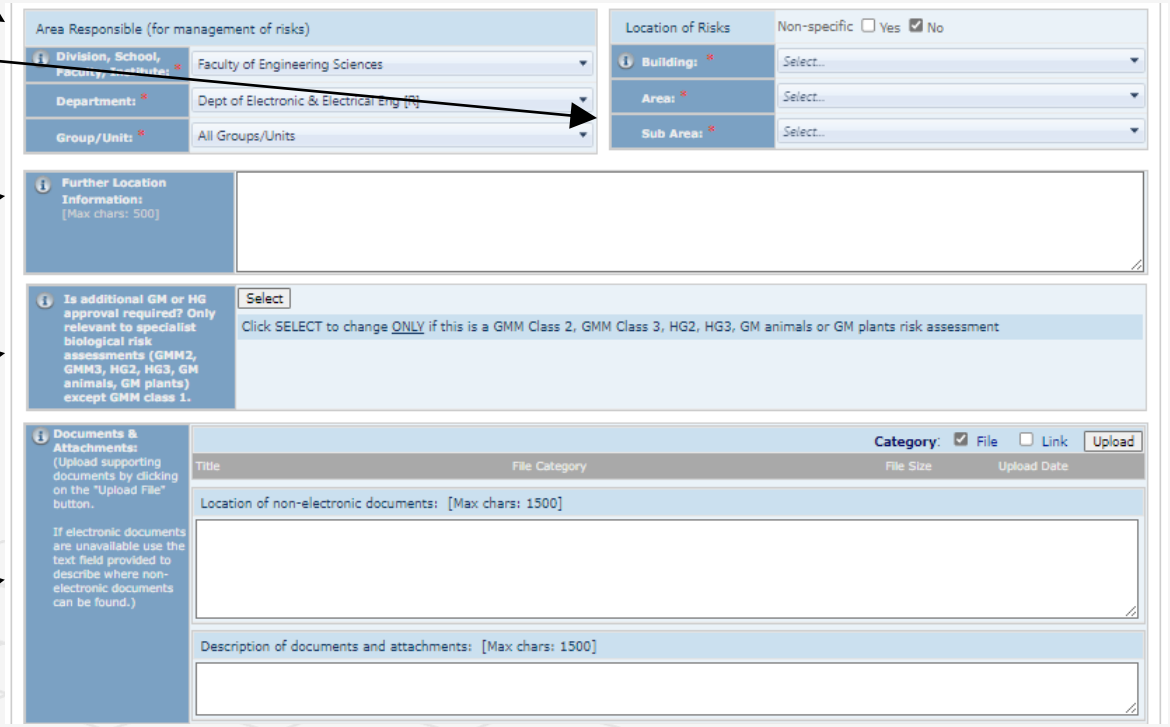
5 **Area responsible**
Automatically populated; check if this information is correct.

6 **Location of risks**
This is the building and area where your work will carry out.

7 **Location information**
This the specific location of work. Floor and room number, contact information, operating times.

8 **GM\HG Approval**
Only required if working with biological hazards and risks of which extra approval is mandatory.

9 **Documents & attachments**
Use this area to attach extra safety documentation and state reasons why is has been attached. Such as codes of practice, Mandatory rules, COSSH data sheets, other supporting documents, e.t.c.



Part2. Risk Assessment. Background (continued)

10 **Approvers**
A minimum of 2 approvers are required, These should be the people in charge of the location. You may need to visit the working area to find out who these are.

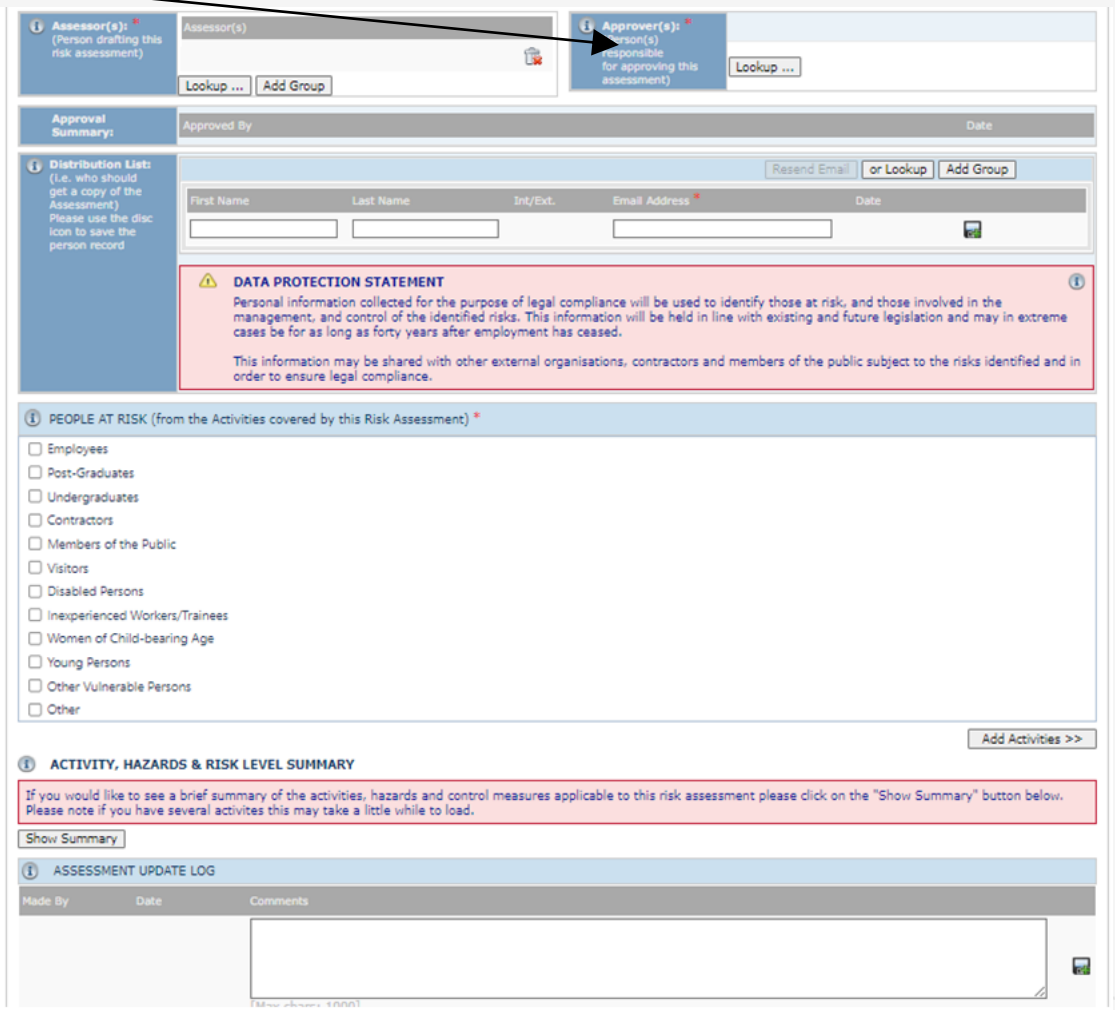
11 **Assessors**
This should be populated with your name as you are performing the assessment. Also add all other group members.

12 **Summery**
This show who has approved the assessment based on the specified approvers list.

15 **Distribution list**
This is list of any extra people who need to be informed of your assessment and work practices such as your project supervisor, visitors, members of public, etc.

14 **People at risk**
Select the types of people at risk from you/your project.

15 **Notes & comments**
An area where you can leave comments and notes and read any comments made about your assessment during the approval process.



Part2. Risk Assessment - Activities

Activities

In this part you use the information gathered from Part1-B about your tasks to complete the risk assessment activities section, This part is repeated until all activities are listed.

1

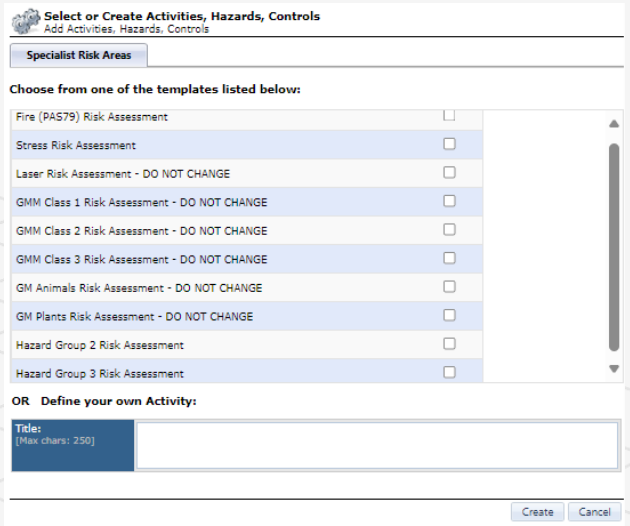
Activities, Hazards, Controls
Choose this option for the activities section.

2

Add Activities
Use this to start adding tasks\activities to your assessment.

3

Specialist risk area
Premade templates to supplement specialist activities. such as using class3 or above lasers, handling biological materials, working with animals, etc.



4

Title
This is for specific activities as listed in part1 gathered information. The title should state what activity is you will be performing. Such as soldering a PCB, building a circuit on bread board, coding on a computer, etc.

Part2. Risk Assessment - Activities (continued)

Hazards, consequences, controls, risks

In this part each activity requires all hazards you come in contact with the possible consequences, how to control the activity to make it safe, and evaluate the risk level.

5 **Activity**
Select the activity to evaluate and asses.

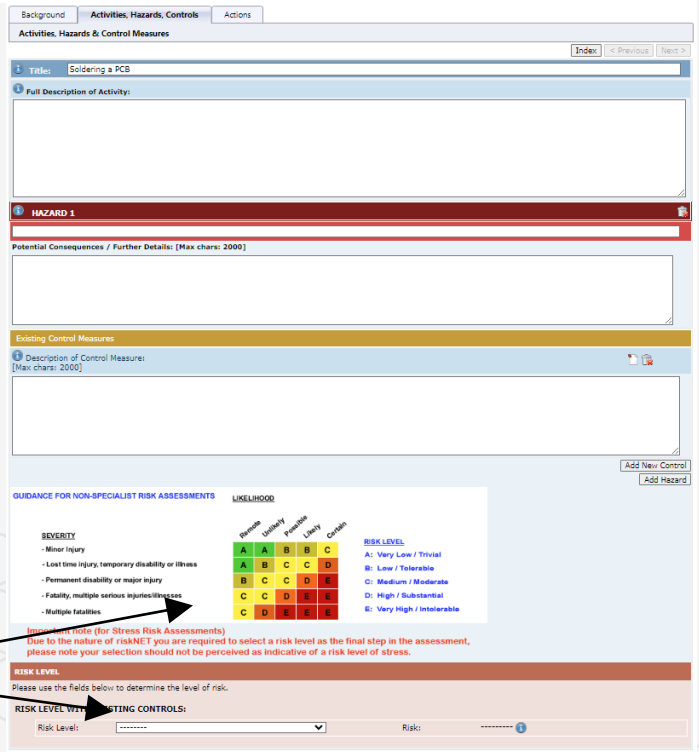
6 **Background**
State what the activity is about, where it takes place, etc.

7 **Hazards**
List all the hazards one at a time. Note a hazard is something you interact with. i.e. Computer, Power supply, Super glue, Soldering iron, Glue gun, etc.

8 **Consequences/injuries**
Each hazard has the potential of causing an incident like fire, spillage, injury to you/others, expelling gas/vapor. List all of the likely consequences of your actions. i.e. burns, blindness, dizziness, electric shock, spillages, etc.

9 **Controls**
Each consequence and action needs to be made safe so the likelihood of anything going wrong can be isolated. For each consequence state a method of controlling the situation to make it safe to perform.

10 **Risk level**
After the control measures are in place the risk factor of a potential incident happening will be reduced to an acceptable level. Use the table to evaluate the likelihood of anything bad happening and supply a Risk level A to E.
Use the previous table in Part1-B to help.



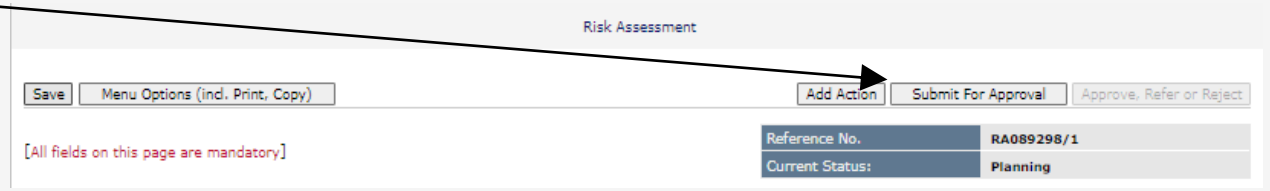
Risk Assessment - Part C. Submission & Approval

1

Submit
Once all of the background has been added and activities covered check your assessment before submitting.

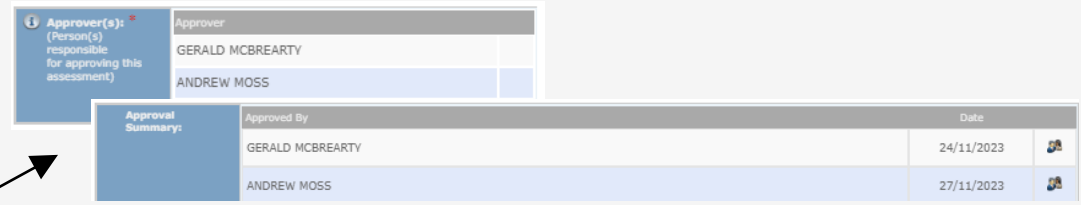
Once submitted riskNet informs all of the approvers listed that an assessment needs to be reviewed and assessed for approval.

Note: Once submitted you will not be able to modify the assessment.



2

Review and Approval
There is no grading for the assessment the outcome is ether approved or rejected.



Approved
If all is well with your assessment it will be approved and the risk assessment will show the approvers who have approved it.

Rejected
If the assessment is rejected a note will be left detailing what is required for approval. This could be things like extra information required, not fully understanding what you have written, approvers may ask to see you to discus various elements of the assessment, etc.
After updating the assessment it can be resubmitted.
Note many assessment are rejected 1st time.