



**Science and
Technology
Facilities Council**

RISK MANAGEMENT

STFC Safety Code No 6

Rev. 3.1, Issued on April 2022

Revisions

1	Initial Launch	January 2007
1.1	Added Quantitative Risk Assessment	August 2007
2.0	Following audit of RA code, code updated to include “On the job risk assessment”, modify responsibilities and remove group leader role and checklist. Addition of new responsibility to consider the need for the use of structured risk assessment tools (HAZOP etc). Remove Group leader responsibilities.	October 2012
2.1	Amendments to training and audit pages	May 2013
2.2	Minor change to Line Manager training requirements	February 2014
2.3	Add Document Retention Policy Minor changes to Appendix 3	November 2014
2.4	Minor changes to reflect launch of SHE Assure	October 2018
3.0	Amendments and updates to most sections following audit of RA code and audit of SHE Management systems.	April 2021
3.1	Update to reflect Assure name change	April 2022

STFC RISK MANAGEMENT

CONTENTS

1. Purpose
2. Scope
3. Definitions
4. Responsibilities and Duties
 - 4.1. Department Director
 - 4.2. Line Managers/Supervisors
 - 4.3. Staff/Facility Users/Visitors/Tenants
 - 4.4. SHE Group

Appendix 1 – Risk Assessment Training Guide

Appendix 2 – Pro Formas

- a. “On the Job”
- b. STFC Risk Assessment Template
- c. Template method statement

Appendix 3 - Line Manager’s/Supervisors Checklist

Appendix 4 – HAZOP/HAZAN Assessments

Appendix 5 - Training Requirements

Appendix 6 – Aide Memoire for ‘Suitable and Sufficient’ Risk Assessment

Appendix 7 – Risk Assessments and Method Statements

Appendix 8 – Audit Checklist

Appendix 9 - Document Retention Policy

1. PURPOSE

Under the provisions of the Management of Health and Safety at Work Regulations (1999) a 'suitable and sufficient' risk assessment must be carried out for any work, activity or procedure, and the risk assessment of significant risks documented.

Risk Assessment is the fundamental basis of effective safety management. As well as being a statutory requirement under the Management Regulations, risk assessment is a valuable tool in planning work, developing procedures, informing and training staff, and reducing the number of accidents in the workplace. Some legislation requires topic specific risk assessments, for example:

- The Control of Substances Hazardous to Health Regulations 2002 (COSHH);
- The Genetically Modified Organisms (Contained Use) Regulations 2000;
- Display Screen Equipment regulations 1992 (DSE);
- The Provision of Personal Protective Equipment at Work Regulations 1992; and
- The Manual Handling Operations Regulations 1992 (as amended).

Use of this code should identify those areas where such specialist assessments are required and address those where no such specific legislation applies.

The aim of this code is to ensure that risk assessment is carried out consistently across the STFC and to a standard that is '*suitable and sufficient*'. The term 'suitable and sufficient' is defined in Section 3.1 and an aide memoir included in Appendix 6 to ensure any completed risk assessment meets these criteria.

Risk assessment is a simple tool to prompt the proactive consideration of the health, safety and environmental implications of any activity and should be used to inform decisions about how an activity is carried out. It is a structured, systematic way of targeting control measures at significant risks. The HSE defines 'significant risks' as those which are not trivial and are capable of presenting a real risk to health and safety which a reasonable person would appreciate and take steps to prevent.

Pragmatic application of this code relies on the judgment of managers and employees to ensure that:

- those activities where significant injury, ill health or environmental harm could arise are the subject of a documented risk assessment; and
- the risks associated with changes to the scope or extent of work during the execution of a specific work activity are also managed.

The outcome of a risk assessment for an activity can range from endorsement of the current health and safety controls; identification of additional actions to further minimise risk; to avoidance of an activity or in extreme cases, cessation of an activity where the health and safety of those involved, or the environmental impact cannot be managed.

2. SCOPE

The requirements of this code apply to all activities undertaken by STFC staff whether working at STFC sites or other locations on Council business.

Carrying out a general risk assessment may indicate the need to conduct a more specialist risk assessment under specific legislation, for example working with hazardous substances, in confined spaces, or for working with heavy equipment, etc. These specialist assessments must be referenced in the general assessment but the topic-specific assessment need not be rewritten in the general risk assessment, but should be linked or cross referenced to it.

Risk assessments for facility user experiments are the responsibility of those responsible for the experiment, they should be based on hazard information provided by the relevant users.

This code does not apply to contractors working on behalf of the STFC. The responsibility for undertaking a risk assessment for such activities lies with the contractor's management. The STFC has a clear responsibility to ensure that all relevant information is provided to enable a suitable and sufficient assessment to be undertaken by contractors.

Tenants are responsible for undertaking their own risk assessments according to their own systems and standards. However, where there is direct impact beyond the tenant's boundary that could affect STFC staff, contractors, visitors, etc., STFC must have access to these documented risk assessments.

3. DEFINITIONS

3.1 Hazard, Significant Hazards, Risk, ALARP and Suitable & Sufficient.

'Hazard' and 'risk' are the two most important concepts in risk assessment. Although the terms are often used interchangeably, they have specific definitions in health and safety and it is important to understand the distinction.

A **HAZARD** is anything that has the potential to cause harm. It is helpful to sub-divide 'Hazard' into several different types. These can be:

- **physical** safety hazards such as working with electricity or working from ladders;
- **health** hazards such as working with hazardous chemicals, biological agents or allergenic materials. There are also, psychosocial hazards that could lead to work-related mental ill-health issues such as stress, anxiety or depression; or activities where staff may be subject to violence or aggression (e.g. front line, customer or public facing staff)
- **environmental** hazards such as activities leading to harmful emissions to atmosphere or contamination of our waste water systems.

RISK is the likelihood that a person may be harmed or suffer adverse health effects if exposed to a hazard and the severity of the harm. Risk is therefore a combined assessment of the 'harm' and 'likelihood' for any given hazard and can be assigned a value (e.g. numerical or descriptive words such as high, medium or low) to identify and rank the most serious outcomes. This allows those involved to target and prioritise action on the most significant risks associated with the task/activity. The highest risks should appear first in the risk assessment.

Deciding whether or not a documented risk assessment is required is a subjective decision, but a sound knowledge of the situation, task, activity or process and objective, informed judgement is essential. Training (Appendix 5) aims to establish consistency across STFC. The key determinant will be whether the activity could foreseeably cause harm to the work environment or any person involved directly or indirectly with it. If yes, then the risk assessment should be performed and documented. Harm can be anywhere on a scale from minor to serious:



Slight - Person is likely to recover fully e.g. a bruise from hitting head on equipment or a cut from a sharp object.

Major - Fatality, e.g. a fall from significant height or hit by fast moving vehicle.

The risk assessment should address all **significant** hazards. Significant hazards are those that could potentially cause harm. Activities which only present risks which are trivial or associated with life in general do not require a risk assessment, e.g. paper cuts from working in an office or pulling a muscle when climbing a flight of stairs or donning a lab coat, unless the work activity compounds or significantly alters those risks.

All **reasonably foreseeable** risks should be considered. 'Reasonably foreseeable' risks are those that an average person would identify and take action to avoid. For example, when working with flammable material and a source of ignition, fire would be a reasonably foreseeable risk.

Critical to the effectiveness of any general risk assessment process is its pragmatic application. STFC is required to reduce risks "so far as is reasonably practicable (SFAIRP)". Sometimes shortened to "as low as reasonably practicable (**ALARP**)". This means taking into account the 'cost', i.e. money, time and effort needed to reduce the risk against its likelihood of occurrence and potential severity. This process is subjective and will depend on the nature of the hazard, the extent of the risk and the control measures to be adopted. The option(s) with the lowest residual risk should be chosen, provided the costs incurred are not grossly disproportionate. There is no requirement to eliminate all risk, but residual risks must be actively managed.

“Suitable and Sufficient” Risk Assessment

The law states that a risk assessment must be 'suitable and sufficient'. What this means is that the assessment must deal with all obvious significant risks, take into account those who may be affected, ensure precautions taken are reasonable, that the residual risk is as low as possible and that workers involved in the activity being assessed are consulted. The level of detail in the risk assessment should be proportionate to the risk. The more complex the task/activity/process and the higher

the risks involved, then the greater the:

- detail to be recorded in the risk assessment;
- effort required for identifying control measures;
- monitoring¹ of implementation of these control measures; and
- level of training required for people undertaking the task.

Appendix 6 provides more detail to assist in the assessment of a risk assessment to ensure it is 'suitable and sufficient'.

3.2 Documented risk assessments

The documented risk assessment should be written using the STFC proforma (Appendix 2B). This sets out a series of steps and prompts to ensure: a thorough assessment of the hazards; the groups of people at risk are identified; and the required control measures have been carried out prior to the activity taking place. Recording in this way also helps to ensure a consistent approach to documenting the risk assessment. The outcome of the assessment must be shared with the people carrying out the work. Ready access to the assessment is important as it is a reference document and training tool for people who may be new to the activity. The documented risk assessment should be logged on Evotix Assure, providing both an audit trail for assurance and a means to demonstrate legal compliance with the Management Regulations.

There are some circumstances when a documented risk assessment will not be possible, for example when on-the-spot decisions are made and/or time does not allow for a documented risk assessment to take place. If this is a work-related activity then consideration should be mentally given to whether there are existing control measures in place to control the risks present, essentially a 'dynamic' risk assessment is performed. This may involve unforeseen events such as emergency situations. If this activity is likely to take place again in the future (now known and no longer unforeseen), then it should be recorded in a new risk assessment or included in an existing one. Risk assessments are not needed for everyday tasks such as climbing a flight of stairs or crossing a road but are required for work-related activities.

The risk assessment should be completed by a team of people including those with expertise in the activity being assessed and active participation should be encouraged. The line manager has overall responsibility for this process and must ensure, once complete, that the risks and requirements to control them are **effectively** communicated to all relevant people, and that a copy of the risk assessment is uploaded to Evotix Assure.

3.3 'On the job' (OTJ) Risk Assessment

The **"On the job" (OTJ) Risk Assessment** can be used to supplement an existing documented risk assessment when there are last minute changes which must be

¹ Note that the monitoring referred to in this context means the ongoing checks undertaken to confirm that the control measures are consistently and properly applied, and that they remain effective in the control of the relevant hazard

documented but where there is insufficient time to re-write the original RA. For example, staff sickness absence on the day of an activity, results in a lone working situation. The control measures to manage this situation are detailed on the OTJ risk assessment and this document is stored until the activity is complete. The OTJ RA **should not** be used in isolation as this alone does not produce a 'suitable and sufficient' risk assessment.

3.4 Method statements

Method statements (sometimes called 'safe systems of work') are an effective way to plan, manage and monitor major/complex projects and work involving contractors to ensure risk is managed and there is effective communication between all parties. See Appendix 7 for more information regarding method statements and a link to the STFC proforma for method statements.

4. RESPONSIBILITIES AND DUTIES

4.1 Department Director shall:

- 4.1.1 Ensure all significant safety, health and environmental hazards within their areas of responsibility have been risk assessed and a record of the risk assessment recorded in the STFC risk assessment database (EvoTix Assure), and that these risk assessments are actively reviewed every 2 years, or when there is a significant change.
- 4.1.2 Ensure that sufficient resource is made available to implement risk control measures identified by risk assessment and where those measures are considered reasonably practicable.
- 4.1.3 When their responsibility includes User Facilities, ensure that a system to risk assess Facility User Experiments is put in place and managed by their staff.

4.2 Line Managers/Supervisors shall:

- 4.2.1 Undertake risk assessments for all activities, existing and planned, within their control. Where the risks are significant the assessment must be documented. Risk assessments should be carried out in conjunction with those who are planning and doing the work. See Appendix 1 and Appendix 2B.
- 4.2.2 Ensure that, as appropriate, actions arising from the risk assessment to implement additional controls are prioritised (when a range of actions compete for resource and priority), and implemented prior to undertaking the activity.
- 4.2.3 Ensure that risk assessments are effectively communicated to all those who are undertaking an activity and who may be affected by it, and that its requirements are understood.
- 4.2.4 As a minimum, all documented risk assessments should be reviewed every **two years**, or when:
 - there is a significant change to the workplace, activity or equipment;
 - there is a significant change in the personnel undertaking the task (e.g. their level of competence, or sudden temporary impairment);
 - a health, safety or environmental incident has occurred;
 - there have been changes to relevant guidance or legislation; or
 - new information emerges on technological advances, including:
 - new techniques;
 - new control measures
 - improved designs and products; or
 - safer equipment or materials.
- 4.2.5 The aim is to ensure that the risk assessment continues to reflect the way the process is actually undertaken and that the risks continue to be managed effectively. The Line Manager's checklist in Appendix 3 can be

used as a tool to help review risk assessments.

- 4.2.6 When the 'main assessor' named in a risk assessment leaves employment with STFC, their name should be removed and an alternative 'main assessor' identified to take ownership. This new named main assessor should ensure they are familiar with any current risk assessment(s) for which they are responsible.
- 4.2.7 Ensure that the control measures identified in all risk assessments continue to be monitored (i.e. checked and reviewed) for effective and consistent implementation, and maintained in the case of safety-related equipment, where activities are ongoing. In areas where significant hazards are present the control measures will require more frequent monitoring. The results of such monitoring should be used to inform the review of any relevant risk assessment.
- 4.2.8 Ensure that where staff, or those working for them, are required to undertake activities for which the use of an OTJ risk assessment is necessary that those staff, and others, are given training and instruction in the OTJ assessment process. See Appendix 2.
- 4.2.9 For major projects with multiple task risk assessments, including projects using the STFC Project Management system, managers should consider if the overall project requires the use of project risk assessment tools such as HAZOP, HAZID or HAZAN (see Appendix 4). Where such tools are utilised, a member of the STFC SHE Group must be consulted.

4.3 Staff/ Facility users/ Tenants/ Visitors shall:

- 4.3.1 Actively contribute to the risk assessment process for the activities in which they are involved. See Appendix 1 and Appendix 2.
- 4.3.2 Discuss with their line manager or supervisor if any significant risks that cannot be managed using the resources immediately available.
- 4.3.3 Ensure they understand the health, safety and environmental risks associated with activities they undertake, and as appropriate asking their supervisor or line manager. Where the risks are significant, read a copy of the risk assessment to ensure they understand the control measures that should be in place prior to undertaking that activity.
- 4.3.4 Employ the "On-the-job" (OTJ) risk assessment process to manage additional risks that arise during the course of any last minute work that does not allow the existing documented risk assessment to be updated. See Appendix 2A.
- 4.3.5 Implement the control measures established by any risk assessment process (whether this is an OTJ risk assessment or a fully documented risk assessment) for activities they undertake and actively monitor these control measures to ensure they remain in place.

4.4 Safety, Health & Environment (SHE) Group shall:

4.4.1 Maintain electronic storage systems to provide:

- a secure database of risk assessments, and management of actions arising from the risk assessment process; and
- data to support and assess the implementation of this Code across the STFC for management teams and committees.

APPENDIX 1: RISK ASSESSMENT TRAINING GUIDE

Currently under review, due to be published in Spring 2021

APPENDIX 2: (A) - “ON THE JOB” RISK ASSESSMENT- IDENTIFY HAZARDS & EVALUATE THE RISK

Date:	Task: Related Risk Assessments:
Name:	Building/Area:

Physical injury hazards	Likelihood	Severity	Risk*	Action to be taken
1: Mobile plant				
2: Moving parts of machinery				
3: Manual handling				
4: Work at Height/Roof Access P				
5: Access and egress				
6: Slips trips and falls				
7: Pressure systems P				
8: Working with Electricity P				
9: Hot work/fire P				
10: Explosion				
Physical agents	Likelihood	Severity	Risk*	Action to be taken
11: Ionising radiation F				
12: Lasers F				
13: Ultraviolet light				
14: Hot/Cold objects				
15: Temperature				
16: Noise/vibration				
Hazardous substances	Likelihood	Severity	Risk*	Action to be taken
17: Hazardous substances (COSHH) F				
18: Micro-organisms				
19: Asbestos F				
20: Fumes/Gas				
Miscellaneous	Likelihood	Severity	Risk*	Action to be taken
21: Weather				
22: Lone working				
23: Confined spaces				
24: Fire alarm/detector isolation P				
25: Other				
26: Other				

Describe elements that create specific risks:

Main risks identified, and control measures required:

P – Denotes that a permit system is used to control most works with these hazards, and a permit may be needed for the work being undertaken.

F – Denotes that a full documented assessment and safe system of work is usually required for work **with** this hazard. This form is insufficient to assess all the risk involved when working **with** these hazards, but should be used to assess the likely impact of that hazard on your work when you are not working directly with it. For example, the form can be used

The “On-the-job” risk assessment pro forma aims to prompt those undertaking work to **STOP** and **THINK** when the scope of their work changes or during the course of planned work when new safety hazards arise.

		*RISK MATRIX			
HARM	Major	High	High	V High	V High
	High	Med	Med	High	V High
	Moderate	Low	Med	Med	Med
	Slight	Low	Low	Low	Low
		Very Unlikely	Unlikely	Likely	Very Likely
		LIKELIHOOD			

The same applies to those undertaking experimental work – when the experimental results indicate a new experiment or experimental set up this pro forma aims to prompt them to similarly **STOP** and **THINK** before proceeding with small changes. Larger changes will require more formal assessment.

Many injuries and incidents occur when work or experiments for which the risks have been assessed and planned changes and those working “plough on” without pausing to **STOP** and **THINK**.

The pro forma is designed to help **YOU** think through the relevant issues when faced with changes or additions to planned work or experiments, or when carrying out quick tasks - a series of prompts for the common safety hazards.

The form should **ONLY** be used in the following circumstances:

- To make specific a generic risk assessment; or
- To manage changing risks within a larger job i.e. the bulk of the job may be covered by a documented risk assessment (which defines the various stages of the job), but if the need to do something differently arises, this method can be used to assess the risk.

Completed “On-the-job” Risk Assessments should normally be kept in hard copy form for two weeks, should there be a need to assess it in the event of an incident.

Where the “On-the-job” Risk Assessments are undertaken as part of a larger job or experimental build it is appropriate to store it for the duration of that larger job.

Appendix 2(B) STFC Risk Assessment template

Ref:	Title:
Assessment Date:	Rm/Building/STFC Site:
Main Assessor:	Department:
Assessment Team involved:	Persons or Groups of people exposed:
Activity/Task being assessed (and any other relevant details, e.g. photos or related risk assessments/COSHH assessments etc. and where to find them):	

Step 1 What are the hazards (activities which may cause harm)?
 Step 2 Who might be harmed?
 Step 3: Existing risk control measures in place?
 Level of risk? (see guidance attached)
 Further control measures, if necessary?
 Step 4: Who will take these actions forward and completed by when?

Hazard/Task or Situation	H Harm	L Likelihood	R Risk	Action by whom	When	Done
<p>Please dedicate one row to any 'other/untrained' people present in the area.</p> <p>(Thereafter these groups and their control measures do not need to be reiterated for other relevant hazards.)</p> <p>[Please delete this row if it is not relevant. If relevant, alter text where necessary and add level of risk]</p>	<p>E.g. Contractors, visitors, students, security guards, cleaners, etc. present in the area.</p>	<p>They are likely to be untrained and may not appreciate the full range of hazards present.</p>	<p>EXAMPLE: (Do not delete category if it does not apply, add 'N/A' as it demonstrates consideration of this element.) Eliminate/Substitute: N/A Engineering Controls: Access control prevents untrained people entering the area. Administrative Controls: Visitors are accompanied at all times by a competent person. Security and cleaners have their own risk assessment which states no equipment to be touched. PPE: N/A</p>			

			Eliminate/Substitute: Engineering Controls: Administrative Controls: PPE:							
			Eliminate/Substitute: Engineering Controls: Administrative Controls: PPE:							
			Eliminate/Substitute: Engineering Controls: Administrative Controls: PPE:							

Distribution List:	Signed:	Date:

Has the assessment been entered into the Evox Assure database? Yes No Evox Assure ref no:

Step 5 Review Date:

- Review your assessment to make sure you are always improving the identification of hazards and control measures.
- If there is a significant change in your workplace, remember to check your risk assessment and where necessary, amend it.

What is the level of risk? For each hazard, choose the ‘Harm’ and ‘Likelihood’. Choose ‘the most likely reasonably foreseeable injury’ and **not** just the worst case outcome. For example, it is very unlikely that someone would be killed from falling from a footstool, the most common injury is likely to be a minor injury which may or may not require attention from a First-Aider.

E.g. if Harm was ‘Moderate’ and Likelihood ‘Unlikely’ the Risk would be ‘Medium’.

		If control measures are not adhered to potential harm is likely to be:				
HARM	Major	Fatality	High	High	V High	V High
	High	Fatality or life changing injuries or serious health effects	Med	Med	High	V High
	Moderate	Time off work, e.g. broken bones, stress or musculoskeletal injury	Low	Med	Med	Med
	Slight	Minor injury which may or may not require First-aid treatment	Low	Low	Low	Low
			Very Unlikely	Unlikely	Likely	Very Likely
			Conceivable but difficult to realise. Would require a combination of several failures	Can be envisaged but is unlikely. Never previously happened in STFC	Can be anticipated to happen. Has previously been known to happen in STFC	Can be anticipated to happen. Has previously been known to happen on site
			LIKELIHOOD			

[Please note this matrix is reversed on Evotix Assure, this is due to the software design and currently is unable to be altered. However, the meaning of the risk categories are the same.]

Where:

Low Risk	No additional controls are necessary unless they can be implemented at very low cost (in terms of time, money and effort) or there is a mandatory requirement within legislation. Actions to further reduce these risks can be assigned low priority.
Medium Risk	Consideration should be given as to whether the risks can be lowered, where applicable, to a low risk level, but the costs of additional risk reduction measures should be take into account. The risk reduction measures should be implemented within a defined time period.
High Risk	The controls put in place are critical and it is imperative that they are monitored by a line manager (or equivalent) on a regular basis to ensure they are in place. Risk reduction measures should be contemplated as per the hierarchy and favour engineering controls over administrative controls and PPE. Additional controls may require extra resources and these would be justifiable.
Very High Risk	Additional control measures must be implemented to reduce the risk, regardless of cost, or a decision taken to terminate the activity until the risk level can be reduced.

What are you already doing? The 'Control Hierarchy' provides a simple prompt to consider the various types of control measure that are or could be established for any given hazard. The examples below are provided for illustration but are not an exhaustive list.

Eliminate/Substitute	Redesign job or substitute a substance so hazards are removed or eliminated. For example, avoid working at height or substitute a carcinogenic substance with a less hazardous substance.
Engineering Controls	For example: Local Exhaust Ventilation (LEV) to control risks from dusts or fumes; Interlocks/guarding of machinery; Access control; Emergency stop within reach. Also, the complete enclosure of the operator or the hazardous machinery/equipment. Give priority to measures which protect collectively over individual measures.
Administrative Controls	For example: training; reducing the time workers are exposed to hazards (e.g. by job rotation); prohibiting lone working; prohibiting use of mobile phones in hazardous areas; safety signage. Also, performing risk assessments, safe systems of work or a laser standing order.
Personal Protective Equipment (PPE)	Only used as a control measure after all the previous measures have been considered and determined to be ineffective in controlling the risks to a reasonably practicable level. For example: safety shoes, gloves, safety spectacles, hard hat, fall arrest harnesses. It is not sufficient to say 'PPE used', the type of PPE required must be specified.

Note: if one section such as PPE is not applicable, do not delete it but instead insert "PPE: N/A". This shows that it has been considered and deemed not relevant for this activity.

Appendix 2(C) – STFC Method Statement template

Company/ Organisation	
Address	

Project/Task	
Location	
Project/Task number	

RA number			MS number	
RA date			MS date	

Project/task description Provide a brief description of task and its expected duration	
---	--

Known hazards List hazards identified in the risk assessment and those hazards associated with project/task's proximity to other activities	
--	--

Responsible person(s)	
----------------------------------	--

Monitoring How will you monitor the project/tasks health & safety and environmental performance? Are workers aware of the STFC SHE incident reporting process.	
---	--

Operational Sequence	
---------------------------------	--

<p>How will the work be structured & organised to be carried out in a safe manner? How controls detailed in the RA will be implemented. What PPE will be required.</p>	
--	--

<p>Permits/ Authorisations</p> <p>Are any special permits required, e.g. hot works, confined spaces, statement of services etc.?</p>	
---	--

<p>Labour</p> <p>List competency & relevant qualifications of labour you are using.</p>	
--	--

<p>Plant/ Equipment</p> <p>Detail the equipment to be used explaining safe working practices, statutory checks and relevant operator training qualifications.</p>	
--	--

<p>Materials</p> <p>Identify materials to be used and potential safety issues such as manual handling & storage and disposal.</p>	
--	--

<p>Deliveries</p> <p>Identify routes and drop locations</p>	
--	--

<p>Emergency arrangements</p> <p>Identify first aid and fire or other emergency procedures, first aiders and location of first aid and fire</p>	
--	--

Environmental issues Detail controls of harmful emissions to air, water & land.	
---	--

Name	
Date	
Position	
Signature	

APPENDIX 3: STFC - LINE MANAGER/SUPERVISOR RISK ASSESSMENT (RA) CHECK LIST

This checklist is designed to help line managers and supervisors assess their RAs to ensure they are 'suitable and sufficient' and meet the STFC standards for RAs.

RA Ref.		RA Assessor:				
RA Title:						
Checklist				Yes	No	N/A
1. General						
a. Has the activity/task being assessed been explicitly described? <small>(It is important to complete all fields in the top brown box of proforma. If operation of equipment is being assessed, is it possible to add a picture of equipment in final box?).</small>						
b. Have all those with relevant knowledge and experience been involved in the undertaking of the assessment? <small>(Have all parties involved in activity been consulted? Operators of equipment? Any specialist advice obtained e.g. Radiation hazards – Radiation Protection Adviser/Supervisor (RPA/S) or Radiation Waste Adviser; or Biological hazards - Biological Safety Officer?)</small>						
2. Activity [first column of STFC proforma]						
a. Have all significant hazards been identified? <small>(Significant hazards are those with the potential to cause harm to the individual, e.g. working at height or the environment, e.g. a large diesel spill. Remember nothing should sound nasty/painful, those are 'outcomes' for the second column).</small>						
3. Who and How [second column of STFC proforma]						
a. Have the persons at risk been identified? <small>(All individuals or groups who are exposed to the hazards should be included, even those not directly related to the activity. They may need a separate horizontal line in the assessment if different groups are subject to different control measures).</small>						
b. Has it been noted how persons are at risk? <small>(The "how" people are at risk is needed to put the control measures in context, and show that they are sufficient).</small>						
4. Current Controls in place [third column of STFC proforma]						
a. Are existing controls suitable – are the risks ' as low as reasonably practicable '(ALARP)?						
b. Has the control hierarchy been followed? <small>(If possible, leave the hierarchy from proforma in place and indicate N/A where there are no entries to demonstrate control measures were considered in this order, i.e. eliminate/substitute then engineering controls, followed by administrative controls and lastly PPE).</small>						
c. Are all persons undertaking activity competent? <small>(If it is not clear who is doing the work – it may be generic – then the required training, skills and knowledge to perform the work safely should be indicated).</small>						

5. Risk Calculation			
a. Is the level of residual risk acceptable in your opinion? (Could any action/intervention lower the risk even further, even if risk is currently low?)			
b. Have any future actions been entered on Evotix Assure? (It is important that these actions are Specific, Measurable, Achievable, Realistic and Timely).			
6. Environment			
a. Has RA considered how waste arising from a task or activity will be managed - can it be re-used or recycled before direct disposal?			
b. Has use of raw materials: chemicals; equipment; or utilities (gas, water, electricity) been considered and their use minimised?			

Specific Issues raised by the check list to be addressed:

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....

APPENDIX 4: HAZOP/HAZAN ASSESSMENTS

Historically associated with the process industry Hazard and Operability (HAZOP), Hazard Identification (HAZID) and Hazard Analysis (HAZAN) should be applied to some major projects within STFC such as the design of major facilities or even large beam lines or experimental facilities. These techniques provide a structured and systematic method of assessing current or planned processes or operations to identify and evaluate potential SHE hazards thereby informing design and operation.

The question of which projects would benefit from such assessments is not clear cut but if there is a significant risk of a catastrophic failure which could result in a fatality, severe damage to STFC estate or result in an environmental release which would cause a breach of an environmental permit then such an assessment may be beneficial. In addition a seemingly small change to a larger system, which may originally have been the subject of a HAZOP, may also warrant a further HAZOP.

At the other end of the scale single beamlines which do not involve complex process infrastructure would not normally need such an assessment.

As these assessments are undertaken infrequently within STFC it is likely that external help may be required at least to facilitate the assessment, if not to lead it. If you are unsure about the need for such an assessment or would like advice on getting external support you should contact your local SHE group.

Useful reading:

HAZOP and HAZAN, Trevor Kletz, IChemE, ISBN 0 85295 421 2

HAZOP: Guide to Best Practice, Brian J Tyler, IChemE, ISBN 0 85295 525 1

Practical HAZOPs, Trips and Alarms, D MacDonald, Elsevier, ISBN 0 75066 274 3

APPENDIX 5: TRAINING REQUIREMENTS

Role	Initial Training	Refresher	Frequency	Comments
Staff writing risk assessments or reviewing quality of risk assessments	STFC awareness training (2 hours) Includes live demo of RA in Evotix Assure.	Awareness course repeated.	5 years or sooner if required.	
Line Managers / Supervisors	Risk Assessment is also covered by the 3 day – Safety Management for Technical Managers course (equivalent to the ‘risk assessment awareness’ course)		5 years after attendance at 3 day course, attendees should attend the awareness course above.	
Staff using the ‘On the job’ risk assessment pad	OTJ risk assessment training from manager using SHE Group PowerPoint presentation.		As needed.	
Contractors	N/A	N/A	N/A	Contractors must provide STFC with relevant risk assessments and method statements relating to work carried out for STFC.

APPENDIX 6:

AIDE MEMOIRE FOR PRODUCTION OF A 'SUITABLE AND SUFFICIENT' RISK ASSESSMENT

A6.1 Describe the task, activity or situation that you're assessing from start to finish. This frames your risk assessment and makes it clear what needs to be included. Have you considered the HSE's 5 step process in your risk assessment?

Step 1: Identify all hazards associated with the particular activity being considered.

Hazards may be identified by observation, using various sources of information such as legislation, published guidance, trade publications, industry codes of practice, manufacturers or suppliers information (e.g. Material Safety Data Sheets), STFC safety codes, incident records, or drawing on previous experience.

All aspects of the work must be considered, not just the obvious. For example, a raised paving stone on a path presents an obvious trip hazard, while the shedding of wet, slippery leaves from an adjacent tree may be overlooked if the assessor considers only summer conditions. In workshops the use of a band saw presents a hazard in terms of the cutting blade but there are also hazards associated with the release of dust in the atmosphere (explosion, inhalation of a hazardous substance). Similarly the use of a lathe will have particular machine hazards, but there may be other hazards associated with the use of cutting oils (skin contact with a potential carcinogen).

Non-routine aspects of the activity must also be considered e.g. during maintenance and repair.

Step 2: Identify groups of people of people who are not directly involved in the work but who could potentially be harmed (and how). Have you thought about anyone other than staff who could be affected by the activity, e.g. visitors, cleaners, maintenance staff, contractors, etc.?

Consideration must also be given to vulnerable individuals (e.g. those with certain medical conditions, which may be permanent or temporary) or specific groups (e.g. young or inexperienced workers who may lack maturity and expertise) and expectant or new mothers (e.g. who may need to refrain from manual handling or handling certain hazardous substances). However, other groups should not be overlooked e.g. persons with disabilities or impairments (ability to hear alarms, see / read warning notices, difficulties with access / egress) and some overseas workers (with experience of different safety cultures, and potential difficulties with the nuances of language or their comprehension).

Step 3: Consider all precautions and control measures that you already have in place and take account of them. Evaluate the level of risk.

The assessment should acknowledge any existing measures that control risk. These may have been introduced for other operational reasons but they may, nevertheless, mitigate problems. The assessment should also consider the impact of existing control measures suddenly becoming unavailable e.g.

power loss to an external light or basement, or loss of mains water supply in a water cooled system.

Step 4: Record the finding of the risk assessment (and implement the measures identified)

Step 5: Review the risk assessment at regular intervals and when there are material changes.

The STFC proforma identifies these 5 steps so it is important to complete all entries.

Do you focus on prevention? The control hierarchy forms part of the control measure column in the proforma to ensure prevention is considered first. In deciding what additional control measures are to be applied priority should be given to those that protect the whole workforce or workplace, by avoiding the risk completely or combating risks at source.

A6.2 Does your risk assessment reflect what actually happens 'on the ground'? Is your methodology accurately reflected in the risk assessment? Should an incident take place and highlight discrepancies in the risk assessment, a court may rule that the risk assessment was not 'suitable and sufficient'.

A6.3 Does your risk assessment consider factors that might adversely impact an individual's ability to do the task? E.g. the ability to manually handle heavy items if the individual has a history of back problems?

A6.4 Is the focus on high risks, i.e. have you checked that major risks have not been overlooked and minor risks given too much priority? One way to help prevent this is rank the hazards in your assessment from high to low.

A6.5 Have control measures for the highest risks been incorporated into a regular monitoring scheme? Should the implementation of control measures take time, have interim measures been put in place to minimise risk?

A6.6 Do you involve your team:

- a. By asking their views about the workplace, the tasks they undertake, and the risk assessments that are relevant to them?
- b. By seeking their suggestions, advice and comments on potential solutions to problems (e.g. improvements to working conditions, changes in the way work is organised, etc)?
- c. By ensuring that people are empowered to contribute and feel that their views are listened to and acted on?
- d. By effectively communicating outcomes (e.g. action plans)?

A6.7 Do you seek to develop and adopt solutions that are 'reasonably practicable' (i.e. taking into account the cost and effort needed to reduce the risk against

its likelihood of occurrence and potential severity)?

A6.8 Have all risk assessments been logged on Evotix Assure and are all actions captured on Evotix Assure action manager?

APPENDIX 7: RISK ASSESSMENTS AND METHOD STATEMENTS

Risk assessments and method statements

7.1 General

Risk assessments and method statements go hand in hand when ensuring all risks are managed on any project. A method statement can take information from a risk assessment and add further details for complex work, projects involving a number of high risk activities or work involving contractors to ensure a high level of communication.

7.2 Template Method statement

STFC provides a template method statement for general use ([WORD](#) | [PDF](#))

7.3 Areas for consideration in a safe system of work

These include:

- **People**
 - competency of contractors
 - the work activity being carried out
 - the duration and timing of the work
 - proximity of other people in the area
 - lone working
 - physical status of the workers such as pregnancy or vertigo sufferers
- **Equipment**
 - suitability of equipment for task including guarding
 - effect of equipment on people or environment (noise/vibration etc.)
 - the equipment to be used and its inspection and maintenance
 - control of possible falling objects or unstable equipment
- **Materials**
 - condition and stability of work surfaces such as fragile materials, slippery surfaces, hot, cold, sharp, heavy etc and
 - disposal of wastes including any radioactive materials:
 - How will they dispose of wastes (our skips or will they have their own contractor)
 - Who will transfer their waste (are they registered as a waste carrier with EA/NRW/SEPA)
 - Can they provide evidence of waste contractor, waste carriers licenses etc.

- How do they manage hazardous waste
- Will they segregate waste (general and recyclables)
- **Environment**
 - the location in relation to the presence of hazards such as open excavations, overhead services, radiation etc
 - the working environment with regard to weather, wind or lighting
 - safe and appropriate control of hazardous substances (e.g. dusts, chemicals, etc.)
 - safe means of access and egress
 - frequency of access
 - prevention of access by unauthorised persons and
 - separation of work from other people in the area

A typical method statement might contain the following:

- **Description of the work**
 - why is the work being carried out
 - the scope of the work, how long it will take etc.
 - the resources required to carry out the task
 - the sequence of operations necessary
 - controls required (e.g. PPE, LEV, atmosphere tests, etc.) and
 - completion criteria
- **Location of the work**
 - where on site the work is to be carried out
 - details of how the work might affect or be affected by other work in the area and how that will be controlled (e.g. warning signs, fencing etc.)
 - what preparation work needs to be carried out and
 - location of any signage
- **Access/Egress**
 - give details of any special access or egress requirements
 - Emergency procedures
 - details of fire and first aid procedures
 - how to deal with possible spills
 - reporting of incidents and near misses and
 - contact details of personnel involved

In assessing documentation from contractors, managers may need expert advice.

7.4 Related STFC SHE information

- [STFC SHE Code 5, Incident Reporting and Investigation](#)

- [STFC SHE Code 6, Risk Management](#)
- [STFC SHE Code 13, CDM](#)

7.5 References and further reading

Health and Safety Executive	Managing contractors – a guide for employers
Health and Safety Executive	Use of Contractors – a Joint Responsibility (INDG368)
Health and Safety Commission	Management of health and safety at work (Management of Health and Safety at Work Regulations 1999) Approved code of practice and guidance. L21
Health and Safety Commission	Safe use of work equipment (Provision and Commission Use of Work Equipment Regulations 1998) Approved Code of Practice and Guidance L22
Health and Safety Executive	Personal protective equipment at work (Personal Protective Equipment at Work Regulations 1992) Guidance on regulations L25

All STFC SHE documentation can be found on the [STFC SHE Website](#)

The STFC has also established free access to a source of HSE guidance and documentation as well as British Standards technical documents - [Info4Education](#)

APPENDIX 8: AUDIT CHECKLIST

Ref.	Item	Rating	Comments
1 (Section 4.1.1) (Section 4.2.1)	Have risk assessments been conducted for all activities with the potential for injury, harm to health or damage to the environment?		
2 (Section 4.1.1)	Are risk assessments documented in Evotix Assure?		
3 (Section 4.2.2)	Have actions arising from risk assessments been added to Evotix Assure and implemented to plan?		
4 (Appendix 5)	Have all supervisors/managers been trained in risk assessment techniques and the STFC Risk Assessment database? Has refresher training been undertaken?		
5 (Section 4.2.4)	Have all risk assessments been reviewed at least on a 2 yearly basis?		
6	Have Business Unit Managers/Directors conducted an annual review of the state of risk assessment in their area of responsibility?		

APPENDIX 9: DOCUMENT RETENTION POLICY

Records Established	Minimum Retention Period	Responsible Record Keeper	Location of Records	Comments/Justification
SHE Risk Assessments	Current + 5 Years	Line Management	Evotix Assure	SHE Group Maintain Evotix Assure Facility
HAZOPs et cetera.	Lifetime of the Facility to which HAZOP relates	Line Management	Local Record System	Should be retained for the duration of the subject of the HAZOP