# Template Local Procedural Controls Document

Local Procedural Controls for the [Equipment] used in [Department]

|  |  |  |  |
| --- | --- | --- | --- |
| **University Campus, School, and building** |  | | |
| **Room/area where work activity will be carried out** |  | | |
| **Ref. No.:** |  | | |
| **Date of issue:** |  | **Date of next review:** |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Name** | **Title** | **Signature** | **Date** |
| **Author** |  |  |  |  |
| **Approver** |  | DLS |  |  |

1. **Introduction**

These Local Procedural Controls have been prepared for work carried out using [equipment]. Adherence to these procedural controls will help ensure that work with lasers and other AOR sources at the University of Edinburgh is carried out safely, and will assist the University in meeting the requirements of the relevant Legislation, Standards and Guidance; in particular the Control of Artificial Optical Radiation at Work Regulations 2010.

This document must be read by all individuals who are involved in work with the [equipment] in [facility/building/room/etc]. Each individual must read and sign the ‘Declaration’ appended to this document. A record of those signed on is kept by the DLS. Any matters requiring clarification must be discussed with the document author or Departmental Laser Supervisor (DLS) prior to signing the Declaration. Any laser safety matters that the DLS requires assistance with must be raised with the University Radiation Protection Adviser (URPA).

1. **Departmental Laser Supervisor**

The University of Edinburgh has appointed DLSs to oversee AOR safety across the University and to liaise with the University RPA. The University RPA is:

|  |  |
| --- | --- |
| Mr Mark Green  Acting University RPA  Health and Safety Department  Charles Stewart House  9-16 Chambers St.  Edinburgh, EH1 1HT. | Office: 0131 650 2819  Mobile: 07736302598  Email: mark.green@ed.ac.uk |

The DLS for [area covered by the DLS] is:

|  |  |
| --- | --- |
| [Name & Address] | [Contact Details] |

The DLS is assigned the following duties:

[Add/delete as appropriate – bullets below from Appendix D of the NIR Code of Practice Part 2: AOR]

* To liaise with and bring to the attention of management any inadequacies identified in working practice or failures in AOR safety procedures;
* To act as a responsible person for the purposes of securing compliance with the requirements of the relevant AOR safety legislation, standards and guidance and Parts One and Two of the University Non-Ionising Radiation Code of Practice;
* To be aware of the scope of the departments AOR risk assessments and assist in drawing up and approving risk assessments for hazardous AOR sources;
* To supervise the implementation of the Local Procedural Controls document;
* Keep an inventory of hazardous AOR sources and submit an annual summary to the RPU;
* Check that those working with hazardous AOR sources have undertaken appropriate training;
* Notify management where a member of staff deliberately disregards procedures or where the working practice is inadequate or likely to place the University in breach of its legal requirements;
* Ensure that suitable records relating to AOR safety are being kept (as described in the Local Procedural Controls document);
* Liaise with the RPU and LPA (if appointed) as necessary;
* Implement the recommendations of the LPA (if appointed) as discussed with management from time to time;
* Seek the advice and consult with the RPU as necessary where circumstances are out of your area of knowledge or confidence.

1. **Description of Equipment**

[Description of the equipment and set up]

[Where relevant, include details of the Class, Risk Group, type, wavelength and output. Also include details of any aiming beams]

[Include details of the set up e.g. fully enclosed laser cutter, research laser set up on an optical table, etc. Include details of the accessibility of the beam, including any maintenance or alignment procedures.]

[Include an annotated drawing/sketch/photo of the room layout to indicate where the lasers/AOR sources are located]

1. **AOR Hazards**

**The hazards associated with this equipment have been identified in the Risk Assessment (ref), and are summarised below:**

[Describe the main hazards associated with this equipment as identified by the risk assessment for the work. Examples are given below:

The principle hazards presented by the above laser(s)/AOR sources are:

* Eye hazard - The laser beams/AOR are capable of causing damage to the eyes. At the wavelengths of the laser/AOR, damage would occur primarily to the retina/lens/cornea (delete as appropriate).
* Skin hazard – The laser beams/AOR are capable of causing skin damage. Any resulting skin injury will be localised to the beam interaction site.
* Reflections - the laser radiation will be reflected from any shiny surface (and for long wavelength lasers, non-shiny surfaces) and this reflected beam may be hazardous to both the eyes and skin.
* Fire - the Class 4 lasers are capable of initiating a fire if the laser beam interacts with combustible or flammable material.
* Include details of any non-beam hazards such as electrical, fume, hazardous chemicals, gas bottles, mechanical etc.]

1. **Designation of Laser/AOR Controlled Area**

[If there is a laser/AOR controlled area designated, describe the location and extent of the controlled area. Describe the control measures designed to restrict access to this area e.g. warning lights, interlocked doors, laser curtains etc.]

1. **Persons Permitted to Enter the Laser/AOR Controlled Area**

The only persons permitted to enter the Laser/AOR Controlled Area are Authorised Users. These are individuals recorded on the Register of Authorised Users who are authorised and trained to work with the laser(s)/AOR sources. These individuals must have read this local procedural controls document and signed the Declaration in Appendix 1.

1. **Key Security (lasers)**

[Describe the procedure for preventing unauthorised use of the equipment. For example:]

The operating key for the laser(s) must be removed from the laser once laser use has finished. The Authorised User issued with the key is responsible for the key. The authorised user must return the key to the DLS or secure key safe when the laser use is finished.

1. **Routine Checks of the Safety Systems**

[Add the appropriate safety system checks that are required for the equipment or facilities. Examples are given below. Select only the checks that are appropriate for the equipment or facilities to which these procedural controls apply.]

The following routine checks of the safety systems are carried out at the frequency stated in Column 2. Records of these checks are kept and inspected by the DLS.

[Add/delete examples as appropriate to the laser/AOR system]

| **Check** | **Frequency** |
| --- | --- |
| * Check the operation of the warning light on the door(s) to the room | [week/month/etc.] |
| * Check the operation of the door interlocks | [week/month/etc.] |
| * Check the overall condition of the laser equipment | [week/month/etc.] |
| * Check the operation of the interlocks on the equipment access panels | [week/month/etc.] |
| * Check the operation of the warning lights on the equipment | [week/month/etc.] |
| * Check the condition of laser protective filters on the laser equipment, noting any damage including scratches, burns and pock marks | [week/month/etc.] |
| * Check the operation of emergency stop buttons | [week/month/etc.] |
| * Check the operation of the fume extraction system | [week/month/etc.] |
| * Check the process for controlling the operating key for the laser equipment | [week/month/etc.] |
| * Check the condition of the laser protective eyewear, noting any damage on the frame or filters | [week/month/etc.] |

If deficiencies are found when carrying out the safety checks above, the equipment must not be used until the defective safety system has been rectified.

1. **Safe Working Procedures**

[List the safe working procedures for work with the equipment. This is not to be a process for how to carry out the experiment or operate the equipment, but the safety critical procedures. Examples are given below. Ensure that the procedures included are specific for the equipment to which these local procedural controls apply.]

[add/delete examples as appropriate to the laser/AOR system]

* Check that the room is free from clutter and any unnecessary combustible materials and that there are no reflective objects in the in the vicinity of the equipment.
* Check that the temporary safety signs, namely the: ‘Laser/AOR Controlled Area’ sign, ‘Prohibition of Access’ sign and the ‘Protective eyewear must be worn’ sign are displayed on the door(s) to the room.
* Verify that a fire extinguisher, of the right type, is readily to hand within the room. If this is not practicable, verify that there is a fire extinguisher in an easily accessible location (e.g. in the corridor outside the room) and record the location of this fire extinguisher in these Local Procedural Controls.
* Confirm that all personnel present have appropriate protective eyewear for the equipment being used and wear the correct protective eyewear if required during use.
* When a laser is in use, ensure the number of people in the room is kept to a minimum.
* The laser must not be left unattended with the key in the key switch (if this is not possible see below).
* Where the laser equipment needs to be left running for long periods and will not be attended at all times, the key may be left in the equipment as long as the following control measures are implemented:
  + [List the measures used (as identified in the risk assessment) to ensure there can be no unauthorised access to the laser equipment, and other persons in the area are adequately protected].
* Door warning signs must be removed/reversed and illuminated signs switched off upon completion of work.
* Any fault affecting the equipment or safety system, any suspected accidental exposure to laser radiation or any other dangerous occurrence must be reported to the DLS as soon as possible. The equipment must not be used until the issue has been investigated and rectified.

1. **Special Procedures**
   1. **Laser Alignment**

[If laser alignment is carried out, include procedures for carrying out the alignment. This should be a detailed step by step process including details of the controls used, e.g. use of low power alignment beams, use of laser safety alignment eyewear, use of beam stops and beam covers etc. See the further information given section 7.1 of the main guidance document].

* 1. **Servicing/Maintenance/Repair**

Servicing or repair of equipment must only be carried out by a qualified service engineer. If this work is to take place on the University premises, then the service engineer must be asked for a risk assessment and method statement prior to work commencing.

Where additional hazards will be introduced through this work, University staff must not access the area. In particular, if additional laser beam hazards will be introduced, University staff must not have access to areas where there could be stray/errant beams. If it is necessary to prevent University staff from accessing an area when servicing is being carried out, the area must be handed over to the service engineer and the transfer of control form in Appendix [enter appropriate appendix reference] must be completed and kept on file.

1. **Use of Personal Protective Equipment (PPE)**

[If PPE is required for the work, describe the situations where the PPE must be worn e.g. laser beam alignment.]

The PPE required for work with the [equipment/area] is as follows:

[Describe the PPE required, e.g. for laser protective eyewear detail the specifications of the eyewear required e.g. wavelength range, output type (D, I, R or M) and protection factor (LB number).]

[Describe the storage arrangements for the PPE]

Personal Protective Equipment (PPE) must be checked by the user before use. The following checks must take place to assure the user the PPE is fit for use:

[Add/delete examples as appropriate]

* The PPE is appropriate for the work e.g. it meets the minimum required level of protection and covers the correct wavelengths for the laser/AOR source being used.
* The PPE is not damaged [e.g. look for: pitting, scratches or discolouration on the lens of laser safety eyewear, and mechanical integrity of the frame].

The outcome of the pre-use checks does not need to be recorded each time the PPE is used, but must be recorded every [week/month] along with the safety systems checks in Part 8 of this Local Procedures Document. Damaged PPE must be removed from service. The document author or DLS must be informed where PPE needs to be replaced.

1. **Emergency Procedures**
   1. **Fire**

In the event of fire, the normal fire evacuation procedures will apply.

* 1. **Eye Injury**

In the event of a suspected eye injury arising from an accidental exposure:

* Switch off the laser/AOR source by normal means or use the emergency stop if necessary.
* [Add the School’s normal procedure for contacting a first aider/initiating an emergency procedure. Also consider an out of hours injury if this is a possibility.]
* Immediately arrange for the individual to be taken to the Accident and Emergency Department at:
* [include address of nearest, most appropriate A&E]
* Retrieve the Grab Card from the laser/AOR controlled area and, in the case that there are multiple lasers/sources of AOR, indicate which equipment was involved.
* This must be followed by an examination carried out by an Ophthalmologist within 24 hours.
* A record must be kept of any examinations carried out.
* The DLS and the URPA must be informed of the event and an investigation into the circumstances of the exposure must be carried out. **The equipment must not be turned back on until the University RPA has given permission.**
  1. **Skin Injury**

Any skin injuries must be treated in the same way as they would be for non-laser sources. Follow normal first aid procedures.