ARRANGEMENTS FOR THE USE OF LASER EQUIPMENT

The University’s overall arrangements for health and safety are set out in the University’s health and Safety Policy. This document outlines the arrangements for safety in the use of lasers.

Advice regarding the laser safety is provided by the NHS Grampian Radiation Protection Service under a service agreement. The University of Aberdeen has appointed a Laser Protection Adviser (LPA) to ensure that the university procedures relating to laser safety are followed. The LPA will ensure that arrangements are in place for identification of lasers and users of equipment, inspection of all new laser facilities, routine auditing of laser facilities and training of staff for laser safety.

1.0 NEW INSTALLATIONS AND ANY MODIFICATIONS TO CURRENT EQUIPMENT (APPLICABLE ONLY TO CLASS 3B OR 4 LASER SYSTEMS)

The Laser Protection Adviser (LPA) must be informed of any planned introduction of class 3B or 4 lasers or change of use, for both trial use and purchase, so that a risk assessment can be made and hazards identified before the intended use commences. The LPA must be informed of any modifications or upgrading of current laser equipment. In this case, the laser must be tested for laser safety before the device is put into use.

The Laser Protection Adviser, or his/her deputy, must be satisfied with safety arrangements, and is consulted for the appointment of an appropriate Laser Protection Supervisor for each laser facility.

2.0 LASER PROTECTION SUPERVISOR (LPS)

For each laser facility where Class 3 or Class 4 lasers are used, a Laser Protection Supervisor must be appointed if the LPA considers it necessary. The appointment must be confirmed in writing. LPSs are responsible, as described in the local rules, for the safe use of the laser in the area specified in their appointment letter. They must bring the local rules and procedures to the attention of all staff affected by them. Any compromises in safety must be reported to the LPA or the University Safety Adviser. The LPS is responsible for the safe keeping of the laser keys and must issue the keys only to an authorised user. The LPS MUST inform the LPA if they leave their current job and another LPS will then be appointed in writing. The LPS should perform the quality assurance checks as specified in the local rules.

3.0 LOCAL RULES

Local rules are required to be written and followed for each laser controlled area where Class 3 or Class 4 lasers are used. The local rules must contain

- Identification and description of the laser controlled areas
- Names of the LPS and LPA with contact details
- Register of authorised personnel intending to work with Class 3 or Class 4 lasers
- Details of personal protective equipment
- Quality assurance checks
- Method of safe working
- Adverse incident procedure
4.0 AUTHORISED USERS
The use of Class 3 or Class 4 lasers for research and teaching is restricted to authorised users. All authorised users should sign a register (as part of local rules) to indicate that they understand and accept the local rules. All authorised users should adhere to all appropriate safety measures, including the local rules.

5.0 RESEARCH LASERS
The day-to-day health and safety management of individual research projects is normally the responsibility of the research supervisor. All work involving hazardous lasers must be covered by risk assessments and where appropriate by written schemes of work and protocols. The research supervisor should also ensure that their laser workers are effectively trained in the operating techniques required and that inexperienced staff are adequately supervised.

6.0 LASERS USED FOR TEACHING
If a Class 3 or Class 4 laser is used for teaching purposes, then the lecturer must make sure that the students are well protected and are made aware of the risks of using lasers. Appropriate personal protective equipment such as laser safety goggles should be provided. Students should follow a written scheme of work.

7.0 TRAINING
7.1 Equipment Training
The manufacturer or their supplier usually provides the equipment based training to the authorised users at the time of installation. The training should ensure that they understand their responsibilities to themselves and any other person(s) working with them. No Authorised User’s names will be added to the list in the Local Rules until their training has been verified.

7.2 Safety Training
All laser users intending to work with Class 3R, Class 3B and Class 4 lasers, and others who may be working with modified Class 1M or Class 2M devices, will need to be identified and receive training in the safe use of lasers.

8.0 REPORTING AND INVESTIGATION OF INCIDENTS
All incidents involving laser use will be reported through the University’s system for reporting accidents and near misses as described at http://www.abdn.ac.uk/safety/general/accidents
The University Safety Adviser and LPA will investigate incidents, and report those to the radiation safety committee or any other governing bodies as required.

9.0 SAFETY AUDITING
The Radiation Protection Service will audit the safety arrangements in each area using lasers on an annual basis. Reports on the audit findings will be made available to the University’s Radiation Hazards Sub Committee.

10.0 RISK MANAGEMENT
The risk assessment may be drafted by the Laser Protection Supervisor and/or other appropriate staff. The LPS, in conjunction with the Authorised User(s), should review the risk assessment on a routine basis to assess the effectiveness of the control measures in place. If necessary, advice should be sought from the LPA.
11.1 SERVICING AND CALIBRATION

The University of Aberdeen has many Class 1 lasers in use. Class 1 lasers are safe under reasonably foreseeable conditions of operation, either because of the inherently low emission of the laser itself or because of its engineering design such that it is totally enclosed and human access to higher levels is not possible under normal operation. If access panels of a totally enclosed system are removed for servicing or calibration, then the laser product is no longer Class 1 and the precautions applicable to the embedded laser (which can be a class 4 laser) must be applied until the panels are replaced.

11.2 Protocol for servicing or calibration of a laser as explained above:

1. Only persons with appropriate protective goggles are allowed to be in the room where the laser is situated. Any other research staff/students should be requested to leave the room/lab until the servicing or calibration is complete.

2. Person(s) performing the calibration or servicing must be qualified to carry out the procedure and must have had training in laser safety.

3. Person(s) performing the calibration or servicing must have the approval of the Laser Protection Supervisor responsible for the laser.

4. Person(s) performing the calibration or servicing must wear appropriate protective equipment such as laser protective goggles and must follow written protocol.

5. Appropriate warning signs must be displayed outside the room and if possible the room should be locked to avoid entry by any staff/student.

6. All servicing records/calibration must be recorded and be available for inspection by the LPA.

VERSION HISTORY

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<tr>
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<td>A Manivannan (LPA)</td>
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