Artificial Optical Radiation (AOR) Safety Policy

Policy Reference:	
Version Number:	**1.0**
Date:	**11th December 2017**
Effective Date:	**11th December 2017**
Review by:	**December 2020**
Author:	**Alistair Hardwick**

Version	Effective Date	Reason for Change

Contents

1. Introduction

The operation of some artificial optical radiation (AOR) sources, including medium and high power lasers, may give rise to both beam and non-beam hazards that could pose risks to the eyes and skin of staff and students. The University of Sussex is subject to the provisions of health and safety legislation in relation to its operation of hazardous artificial optical radiation sources and has a responsibility to protect its employees and others from the hazards associated with them.

This document sets out the University's policy with respect to the management of artificial optical radiation safety. For implementation please see the Artificial Optical Safety Standard Operating Procedure.

2. Scope

This policy applies to all activities carried out on University premises or by University staff/students involving the use of artificial optical radiation excluding the list of safe light sources outlined in Note 2 of the HSE guidance on the control of Artificial optical radiation (AOR 2010). This will include:

All work involving the operation of lasers or laser products of classes other than Class 1 or Class 2 (see annex 1 for details of the laser classification scheme);

All work involving the operation of non-laser optical sources falling into Risk Group 3 (see annex 2 for details of the non-

they contain embedded lasers of higher class, the beams from which are accessible during servicing or other activities.

3. Optical Radiation Safety Policy Statement

The University of Sussex is committed to the protection of all its employees and students from the adverse effects of exposure to beam and non-beam hazards arising from the use of hazardous artificial optical radiation equipment on its premises.

The University of Sussex will extend these safeguards to its visitors, neighbours, subcontractors and suppliers so far as is reasonably practicable and will expect them to do the same for its employees.

In order to achieve these aims University management will:

Comply with all relevant legislation and authoritative guidance;

Develop and implement artificial optical radiation safety management programmes that deal effectively with the routine uses of hazardous artificial optical radiation sources and reasonably foreseeable abnormal events;

Identify priorities for artificial optical radiation safety, define performance indicators, and monitor to assess success in meeting these;

Implement best practice in relation to artificial optical radiation health and safety;

Enlist specialist support to provide advice and ensure that keep policies and procedures are kept up to date;

Ensure that hazardous artificial optical radiation equipment and associated safety equipment is properly maintained, inspected and serviced; and

Co-operate with and monitor the performance of contractors who work on the University's premises.

The University requires the full and active participation of all employees to assist it in meeting these objectives. The University regards the statutory duties placed on it as the

minimum standard required and aims to achieve best practice in the management of artificial optical radiation (AOR).

4. Applicable Legislation

4.1. The Control of Artificial Optical Radiation at Work Regulations 2010

Work with artificial optical radiation is subject to the requirements of the Control of Artificial Optical Radiation at Work Regulations 2010 (CAOR 10), which implement the requirements of the European Directive on artificial optical radiation. These regulations impose specific duties on the employers where work may result in exposure to artificial optical radiation that could create a reasonably foreseeable risk of injury to the eyes or skin of the employees.

4.2. Other applicable health and safety legislation

The Control of Artificial Optical Radiation at Work Regulations 2010 applies only to exposures of employees. Nevertheless, general health and safety legislation applies to all exposures regardless of whether those exposures are at work or not. Hence the Health and Safety at work etc. Act 1974 and a number of regulations made under it are pertinent to artificial optical radiation activities. The Management of Health and Safety at Work Regulations 1999, the Provision and Use of Work Equipment Regulations 1998, and the Health and Safety (Safety Signs and Signals) Regulations 1996 all need to be adhered too. In particular, Regulation 3 of the Management of Health and Safety at Work Regulations 1999, it assesses health and safety risks to which its employees and others are exposed, and to identify measures to reduce those risks.

4.3. Personal protective equipment legislation

Personal Protective Equipment (PPE) in the workplace is subject to the requirements of the Personal Protective Equipment at Work Regulations 2002. These regulations require that PPE is used only as a last resort when more effective controls are not appropriate. They place specific duties on the employers to assess the suitability of PPE. New PPE cannot be suitable unless it complies with the requirements of the Personal Protective Equipment Regulations 2002.

5. Applicable Standards

5.1. Laser standards

The main laser standard applicable in the UK is BS EN 60825-1:2014, which is equivalent to European (EN60825-1) and International (IEC 60825-1) standards. EN 60825-1:2014 sets out the classification scheme for lasers and laser products and is intended to provide users with a guide to the hazard presented by the laser beam (see Annex 1). BS EN 60825 sets out the control measures that the manufacturer should incorporate into lasers of each class and specifies the labelling required to warn users about the hazard presented by the laser beam. BS EN 60825-14 provides guidance on appropriate administrative arrangements that employers using lasers should put in place.

5.2. Non-laser standards

The main standard for non-laser optical sources is BS EN 62471-1:2008. Like BS EN 60825-1:2014, this is equivalent to the corresponding European and international standards. BS EN 62471 sets out a classification scheme analogous to the laser scheme. In the case of non-laser sources there are four classes: Exempt; Risk Group 1; Risk Group 2; and Risk Group 3. Hazards increase with the risk group number.

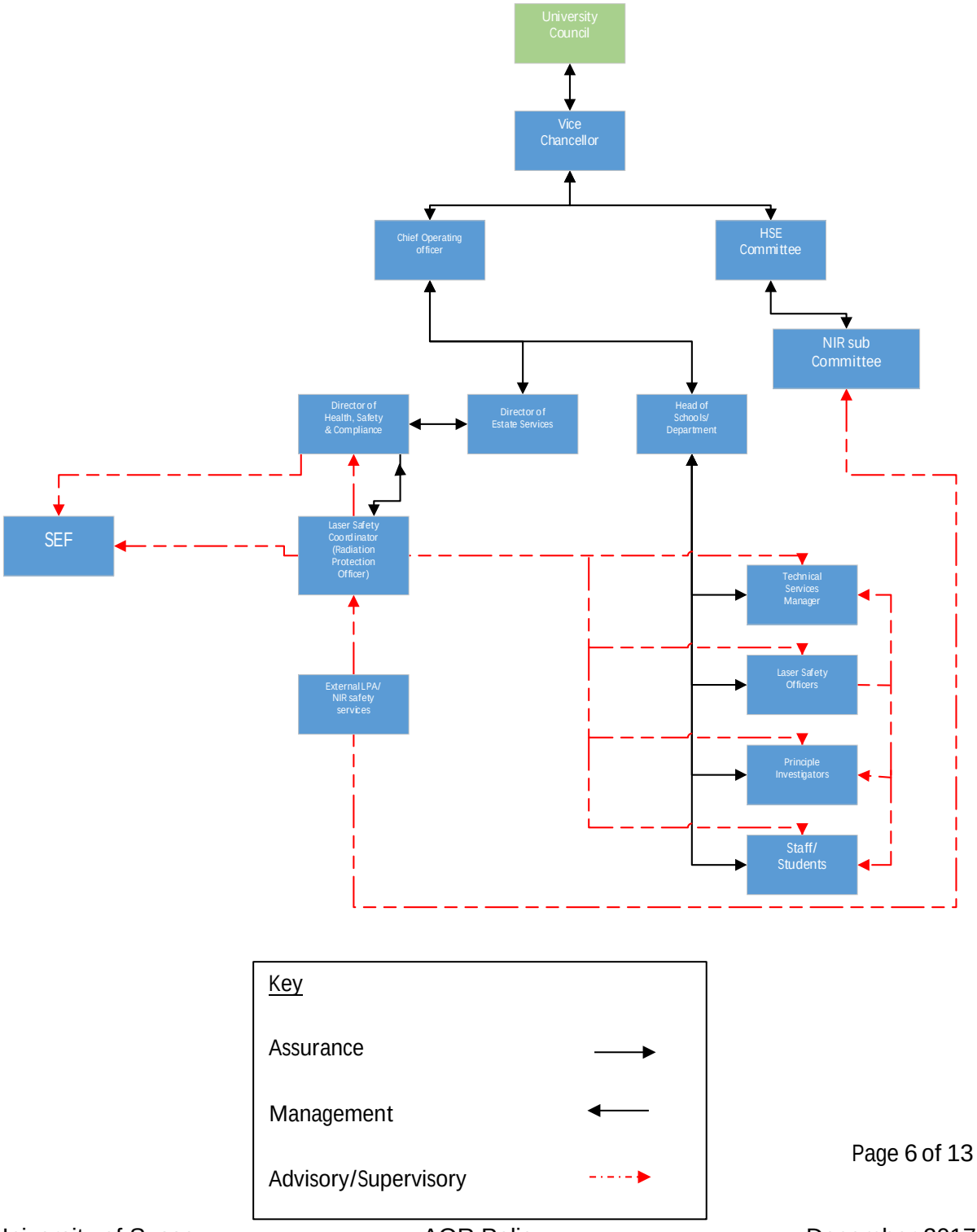
5.3. PPE standards

The principle standard for laser protective eyewear is BS EN 207:2009. Any equipment that does not conform to a relevant standard or otherwise comply with the requirements of the Personal Protective Equipment Directive cannot be used as personal protective equipment within the University. BS EN 207:2009 defines the essential properties of laser protective eyewear that are required to ensure that its performance will be satisfactory and specifies appropriate test criteria.

7. Organisational Arrangements

Optical radiation safety is managed within the overall framework of safety management within the University. The organisational structure for managing optical radiation safety is illustrated in the diagram below.

University of Sussex AOR Management



7.1. University Council

The University Council is responsible for ensuring that overall management arrangements will meet the requirements of AOR 2010.

7.2.

7.6. Non-Ionising radiation sub- committee

The University Non-Ionising radiation sub-committee must ensure consistency in compliance with optical radiation safety requirements and encourage the dissemination

Risk assessments and local rules written by principle investigators are sufficient.

Principle investigators or other owners of equipment receive suitable advice on the provision of suitable

These personnel must be authorised by the School Laser Safety Co-ordinator (LSC) prior to carrying out any work and will be designated as ‘Technical Users’. Criteria for authorisation are recorded in the University Laser Safety Management Programme File

8. Training and Competency

Individuals will only be appointed to positions of responsibility in relation to artificial optical radiation safety if they have sufficient knowledge, experience, and authority to be effective in the role to which they are being appointed. Staff appointed will receive suitable initial and refresher training to enable them to discharge their responsibilities. University management shall satisfy themselves as to the competence and performance of appointed staff and shall formally record evidence of this assessment. The names of those appointed will be promulgated via Laser Safety Management Files, Local Rules and other relevant documents.

Line managers have responsibility for ensuring that all staff, students or visitors required to work with or close to hazardous artificial optical radiation equipment have received

10. Policy Implementation

10.1. Laser safety management programme

The University has set in place an overarching laser safety management programme to