Optical Radiation Safety Policy

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Executive Summary

This policy sets out the framework to oversee health and safety relating to uses of all medical lasers within NHS Lothian classified as Class 3R, Class 3B or Class 4. This includes lasers which are owned, loaned, leased or on trial by NHS Lothian.

NHS Lothian will ensure, as far as reasonably practicable, the health and safety of members of the public, of its employees, of students, agency workers and of other outside workers working on the premises who may be exposed to the hazards arising from the use of lasers and other sources of artificial optical radiation.

Optical Radiation Safety Policy

Contents

1.0 Purpose

NHS Lothian (The Board) aims to ensure that:

- there is a robust framework in place for the management of optical radiation safety in NHS Lothian;
- the necessary standards for the protection of staff, patients and the public from the hazards associated with the use of optical radiations are implemented and maintained;
- NHS Lothian meets its obligation to protect staff, patients and the public, as far as is reasonably practicable, from the hazards associated with the use of optical radiations;
- all staff are aware of their roles and responsibilities in relation to managing optical radiation safety, and to ensure these risks are managed effectively, consistently and supportively

2.0 Policy statement

The policy ensures that NHS Lothian will follow the recommendations from national guidance documents associated with the use of lasers and other sources of artificial optical radiation.

3.0 Scope

This policy sets out the framework to oversee health and safety relating to uses of all medical lasers within NHS Lothian classified as Class 3R, Class 3B or Class 4. This includes lasers which are owned, loaned, leased or on trial by NHS Lothian.

This policy does not apply to lasers used to aid patient positioning, for example lasers found on CT scanners and radiotherapy treatment machines. Such lasers are typically Class 2 or below and therefore do not present a hazard under normal use, however caution should be exercised where patients have an abnormal aversion response, due to sedation for example.

This policy also relates to UV phototherapy equipment and other sources of artificial optical radiations

Compliance with the policy is mandatory for all Board staff in all locations.

4.0 Definitions

Optical radiation – region of the electromagnetic spectrum which covers ultraviolet, visible and infrared, and covering a wavelength range from 180 nm to 1 mm.

Artificial Optical Radiation (AOR) – light from all artificial sources in all its forms such as ultraviolet, infrared and laser beams, not including sunlight

Laser – a device which generates directional, coherent, optical radiation through a process of stimulated emission ("laser" is an acronym for Light Amplification by the Stimulated Emission of Radiation)

Medical Laser – any laser product which is designed, manufactured, intended or promoted for the purpose of in vivo diagnostic, surgical, cosmetic or therapeutic laser irradiation of any part of the human body [BS EN 60825-1]

Laser classification – the hazard category assigned to a laser product based on the maximum level of its accessible laser emission. Laser classification helps laser users to identify appropriate control measures to minimise the risk from laser radiation.

Maximum Permissible Exposure (MPE) – the maximum level of laser radiation to which, under normal circumstances, the eye or skin can be exposed without suffering injury or adverse effects [BS EN 60825-1]

Nominal Ocular Hazard Distance (NOHD) – the distance from the laser at which the level of laser radiation equals the appropriate MPE i.e. the distance at which exposure to the eye or skin would not cause injury [BS EN 60825-1].

Laser Controlled Area – an area within which laser hazards may exist and protective measures are adopted

Local Rules – a document which describes the key working arrangements to be followed by all staff when working in a laser Controlled Area where Class 3R, 3B or 4 lasers are used.

Laser Protection Adviser – Person responsible for advising the Employer on compliance with legislation and guidance relating to the safe use of medical lasers associated with practices carried out by the Health Board.

Laser Protection Supervisor – person responsible for ensuring that work involving lasers is carried out in accordance with the laser Local Rules for that Controlled Area.

5.0 Implementation roles and responsibilities

The Board needs to be both assured of compliance and informed of any deficiencies that require action.

The Radiation Protection Committee meets three times a year and receives a report from the Laser Protection Adviser (LPA). The report will provide assurances of compliance and for information on areas where action is required.

The committee is required to produce annual reports to the Health and Safety Committee.

All directorates or departments working with artificial optical radiations (AOR) shall have a set of Local Rules and Written Arrangements detailing Safe Systems of Work.

Responsibility for the protection of staff, patients and visitors from the risks of artificial optical radiations arising from their use by NHS Lothian rests with the Chief Executive of the Board.

To advise the Board on the safe use of radiations and on compliance with the relevant legislation, NHS Lothian appoints an LPA. The LPA is appointed in writing by the Medical

Director. The LPA is required to report to the Board Radiation Protection Committee (RPC). Please see the Organisational Reporting Structure for Radiation Protection.

The Board RPC reports to the NHS Lothian Health & Safety Committee. The Medical Director, or another person appointed by the Medical Director, will act as Chairperson and the membership is drawn from Directorates using radiation. Please see the Terms of Reference – Radiation Protection Committees.

The Laser Protection Supervisor Committee (LPSC) meets three times per year, in line with the Board RPC. Membership is LPSs drawn from all areas where lasers are used within NHS Lothian. The LPSC is chaired by the LPA. Please see the Terms of Reference for the LPSC.

It is the responsibility of Clinical Directors and Heads of Service to ensure that lasers are used in a manner that complies with this policy and procedures.

Clinical Directors must formally appoint Laser Protection Supervisors (LPSs) with defined areas of responsibility to assist with implementing these procedures. Each LPS must have a managerial or supervisory role within the area for which they have been appointed, their role must be fully described, and they must be given sufficient time and resources to fulfil their responsibilities.

Local Rules must be available and read by all staff and other people involved in work with lasers, including any persons entering a Controlled Area.

All staff working with lasers are required to adhere to the Local Rules and to ensure that their actions do not cause any unnecessary exposure to themselves, to patients, to other staff or members of the public. They are required to make proper use of the protective equipment provided by their employer and to report to their LPS any deficiencies in the arrangements for laser safety. These requirements must be included in the Local Rules.

The LPS is required to ensure there is a system in place to provide appropriate laser safety training to new staff, to update training as required and to keep a record of training. The level of training should be appropriate and relevant to the area of work.

Responsibility for ensuring the safety of staff working with non-laser sources of optical radiation is managed lies with the Head of Radiation Protection. Other members of the Radiation Protection team act as the lead specialist for UV phototherapy and Artificial Optical Radiations.

5.1 Chief Executive

The Employer, as defined in the regulations, is NHS Lothian, with the Chief Executive taking overall responsibility for implementing the requirements of the policy and procedures.

5.2 Laser Protection Adviser

NHS Lothian appoints a Laser Protection Adviser (LPA) to advise the Board on compliance with legislation relating to the safe use of medical lasers associated with practices carried out by the Health Board.

The LPA is normally a staff member with experience and knowledge in the evaluation of laser hazards and is responsible for advising on their control. They are appointed in writing by the NHS Lothian Medical Director.

The LPA is required to report to the Board RPC. They are required to provide an annual report and to notify the Medical Director of any incident requiring notification to a statutory body, and any matter that cannot be resolved at Directorate level.

Please see the **Duties of the LPA**.

5.3 Laser Protection Supervisor

The role of the LPS is to act as the main point of contact for all laser safety matters arising on a day-to-day basis and is responsible for ensuring work is carried out in accordance with the Local Rules and any other control measures identified in the risk assessment.

The Laser Protection Supervisor (LPS) must be appointed by their Clinical Director or Head of Service in writing using the Appointment letter for LPS in NHS Lothian, for each area where Class 3R, 3B and 4 lasers are in use.

The LPS should ideally have line management responsibilities for the area(s) for which they have been appointed. They are expected to have a certain level of understanding of the laser equipment, practical experience and also knowledge of the clinical applications of the laser in their areas. This may be achieved through completion of a suitable LPS training course and practical laser safety training on the laser(s) they are responsible for.

Once the required LPS training has been completed the staff member must be formally appointed as the LPS by their Head of Service or Clinical Director.

Please see the **Duties of the LPS**.

5.4 Clinical Laser Experts

The Clinical Laser Expert (CLE) is normally the lead clinician (senior consultant) who is associated with the laser and the procedures performed.

The CLE is responsible for specifying, assessing and confirming the competence of all laser users within their area of responsibility, prior to approving and appointing them as authorised Clinical Laser Users. The CLE will work closely with the LPS and will also assist in the supervision and training of laser users.

5.5 Clinical Laser User

The Clinical Laser User is the individual who operates the laser to perform the clinical procedure(s) for which they have been authorised to do by the CLE. Only persons who are authorised by the CLE as a Clinical Laser User are permitted to use the laser.

To be appointed as a Clinical Laser User the staff member must demonstrate they have received sufficient clinical procedural training, equipment-based training and have

completed a Core of Knowledge laser safety training course. The training requirements for a Clinical Laser User are summarised in Section 5.9 of this policy.

A Record of Training & Authorisation for Clinical Laser Users Form must be completed by the staff member seeking entitlement and signed by the CLE in order for the staff member to be appointed as a Clinical Laser User.

Completion of this form by both parties is evidence that the staff member possesses the required level of clinical, equipment and laser safety competence to be appointed as a Clinical Laser User for a particular laser and procedure.

A copy of the completed form along with the declared evidence must be provided to the LPS, who will add their name to the list of Authorised Laser Users for that specific laser and clinical procedure(s).

All forms and certificates must be retained and made available to the LPA, LPS or external inspectors upon request.

5.6 Technical Laser User

The Technical Laser user is the individual who assists the Clinical Laser User during a laser procedure e.g., setting up the laser, selecting correct settings and performing laser safety checks, but not firing the laser.

An individual must be appointed to the position of Technical Laser User by the LPS following completion of sufficient equipment-based training and the Core of knowledge laser safety training.

A Record of Training & Authorisation for Technical Laser Users form must be completed by the staff member seeking authorisation and be signed by the LPS for the staff member to be appointed as a Technical Laser User.

Completion of this form by both parties is evidence that the staff member possesses the required level of equipment and laser safety competence to be appointed as a Technical Laser User for a particular laser and procedure(s).

A copy of the completed form along with the declared evidence must be provided to the LPS, who will add their name to the list of Authorised Laser Users for that specific laser and clinical procedure(s).

All forms and certificates must be retained and made available to the LPA, LPS or external inspectors upon request.

The training requirements for a Technical Laser User are summarised in Section 5.9 of this policy.

5.7 Other members of staff working around Lasers

Members of staff, other than those previously described above, may be required to stay in the Controlled Area during the laser procedures, but they will not be operating or assisting in the operation of the laser equipment e.g., nursing staff, theatre assistants and trainees.

These staff members must have a knowledge of basic laser safety. This is achieved through completion of the NHS Lothian *Laser Safety (Foundation)* LearnPro module.

Staff must provide the LPS with a copy of their certificate of completion.

The laser safety training requirements for other staff are summarised in Section 5.9 of this policy.

5.8 All staff

All staff present during laser or UV procedures are responsible for making themselves aware of any hazards associated with lasers or UV equipment.

All staff present in a laser Controlled Area must have read the Local Rules specific to that area and have signed the Laser Local Rules: Declaration to confirm they acknowledge, and will follow, the Local Rules and safety procedures established by the Employer.

All staff are responsible for alerting their LPS or line manager to any potentially hazardous equipment using optical radiations which is being brought into the department, and for reporting all incidents or near-misses.

5.9 Information, instruction & training - Lasers

All staff working within the laser Controlled Area, or in the areas immediately adjacent to the Controlled Area, must undertake appropriate laser safety training which must be documented and repeated at the specified frequency.

The level of training required depends on the role of the staff member and their involvement in the use of lasers. All staff must have the appropriate competency training to undertake their role. Initial training should be completed as part of the induction process.

Training covers three areas - clinical procedural training, equipment-based training and laser safety training.

Staff who have not yet completed their training may work under supervision of a trained member of staff, this may be students or staff new to their role. The LPS should be aware of any students or trainees working in the controlled area.

Evidence of training must be documented, and records retained by the LPS. These training records must be made available to the LPA, LPS or external inspectors upon request.

Please see the Laser Safety Training Recommendations.

5.9.1 Clinical procedural training

All Clinical Laser Users must receive training to perform the clinical procedure using the laser. This training may be provided by the Clinical Laser Expert, another authorised Clinical Laser User, or by attendance at an appropriate training course.

Changes to procedures, or the introduction of new treatments to a department, may require additional training from clinical experts, the manufacturer/supplier, or other healthcare-related personnel.

5.9.2 Equipment based training

All Clinical Laser Users, Technical Laser Users and LPSs must receive practical training to use the laser(s).

Equipment-based training is usually provided by the laser manufacturer or supplier at the time of installation. After this, training may be provided to additional staff members either by the LPS, manufacturer, or the supplier.

5.9.3 Laser safety training

All staff who work within the Controlled Area, or in the areas immediately adjacent to a Controlled Area, must complete training in laser safety. The level of training will depend on the staff member's involvement in the laser work.

This training must be documented and repeated at the specified frequency.

5.9.3.1 Core of Knowledge course

All Laser Protection Supervisors, Clinical Laser Experts, Clinical Laser Users and Technical Laser Users must complete a 'Core of Knowledge' for laser safety course, the syllabus of which must meet the recommendations in Appendix C of the MHRA document Lasers, intense light source systems and LEDs – Guidance for safe use in medical, surgical, dental and aesthetic practices.

Once the training has been completed, copies of the certificate must be sent to the LPS for record keeping.

5.9.3.2 LearnPro Module

Other staff who have not been named above but who may be present in the Controlled Area during laser procedures, or who work in areas immediately adjacent to laser Controlled Areas, must have a basic awareness of laser safety.

These staff must complete the Laser Safety (Foundation) module on LearnPro. This must be completed every two years and copies of certificates must be sent to the LPS for record keeping.

5.9.3.3 In-person refresher training

In-person, or via Microsoft Teams, refresher training for basic laser safety awareness can be delivered by the LPA to departments or teams.

If required, the LPS should contact the LPA to arrange a date for this to take place.

This is a basic level of laser safety training and does not cover practical training on the equipment. It does not replace the requirement for staff to complete the 'Core of Knowledge' or LearnPro modules, as appropriate.

5.9.4 Laser Protection Supervisor training

Prior to appointment an LPS must have completed a training course specifically for Laser Protection Supervisors.

Typically, suitable courses will cover laser safety (to 'Core of Knowledge' level), laser safety management and usually have a marked assessment at the end.

The LPA can advise a potential LPS or service managers on suitable LPS courses.

Certificates to evidence successful completion of an LPS course should be kept in the laser safety folder and a copy sent to the LPA.

5.10 Information, instruction & training – Non-Laser sources

Staff working in areas where artificial optical radiation is being used must be provided with information regarding how to stay safe in the area. This will include information on warning signs and how to know when a hazard is present.

5.11 Risk Assessment

Prior to the first clinical use of a Class 3R, 3B or 4 medical laser or when a new laser procedure is planned, the Employer must undertake a risk assessment to comply with Regulation 3 of the Management of Health and Safety at Work Regulations 1999.

Risk assessments are also required for other sources of Artificial Optical Radiations as described in The Control of Artificial Optical Radiation at Work Regulations 2010 (AOR 10).

The purpose of the risk assessment is to identify the hazards and risk associated with the use of the laser and to implement suitable control measures to minimise these risks.

The risk assessment will consider the hazards associated with the equipment, the suitability of the environment (theatre, clinic room, hospital ward), requirement for any personal protective equipment (PPE), work procedures, restriction of access and training.

The legal responsibility for undertaking the risk assessment lies with the Employer. However, in practice for lasers the LPA performs the risk assessment with input from the LPS and assistance from the laser manufacturer or supplier where required. Radiation Protection Physicists lead on the risk assessments of other equipment which uses Optical Radiations.

The risk assessment must be reviewed annually by the LPS, or sooner if there has been a change in laser or work practice. The LPA will review the risk assessment with the LPS at each LPA/LPS review meeting which will be at least once every two years.

It is the responsibility of the LPS to inform the LPA of any changes to laser equipment being used (permanent or temporary), or any changes in the types of laser procedures being performed, with at least one calendar month's notice. This is to allow sufficient time for the risk assessment to be reviewed and updated as appropriate.

Similarly, for other sources, the lead clinical member of staff must inform Radiation Protection if there are changes relating to the other equipment which would affect the associated risk assessment.

5.12 Laser Controlled Area

A Laser Controlled Area is a region around the laser where hazards could arise and over which there is some element of control or restriction.

The extent of the Controlled Area is specific to the type of laser and the procedures being carried out and will have been determined through the Risk Assessment. For practical purposes however, the laser Controlled Area will usually be physically defined by the walls of the room or theatre where the laser is being used.

Advice should be sought from the LPA on the designation of the Controlled Area.

For each designated Controlled Area there are specific key working instructions which must be followed to ensure safe working; these are called 'Local Rules'.

5.13 Warning Signs and Lights

When a laser is in use, and the area is designated as a Controlled Area, appropriate laser warning signs and lights must be positioned at eye level to each entrance of the Controlled Area. The signs are there to alert staff, patients and members of the public to the activity being undertaken in the area. Signs should comply with The Health and Safety (Safety Signs and Signals) Regulations 1996 and BS EN 60825-1: 2014+A11:2021 – Equipment Classification and Requirements.

Signs should only be displayed or illuminated when the laser procedure is in progress.

The LPA can advise the LPS on suitable signage for their laser.

5.14 Laser Local Rules

'Local Rules' is a document that describes the key working instructions to be followed by all staff when working in a laser Controlled Area where Class 3R, 3B or 4 lasers are used.

The Local Rules must be read and followed by all staff when working in a Laser Controlled Area to ensure staff are working in a safe environment and patients are treated safely.

The LPA will write the Local Rules with input from the LPS.

It is the responsibility of the LPS to ensure all staff who are involved with a particular laser have read and signed to confirm they acknowledge and will follow the relevant Local Rules.

5.15 Laser Safety Reviews

The LPA is required to review the arrangements for laser safety for each Class 3R, 3B or 4 laser used within NHS Lothian. This is conducted every two years, however if there are changes in practice or laser before this date an interim review will be carried out.

The form of the review is via individual meetings with Laser Protection Supervisors and a general inspection of the laser, PPE and Controlled Area. Matters addressed during a laser safety review include: radiation protection documentation (including Local Rules and risk

assessments), personal protective equipment (PPE), staff laser training records, and adverse events.

The LPA will provide a report to the LPS following each laser review. The LPA report will give an assessment of the level of compliance with regulations/guidance and highlight any areas of non-compliance or other issues that need to be brought to the attention of the LPS and the service.

5.16 Laser Safety Folder

Every Class 3R, 3B and 4 laser must have an associated laser safety folder which contains documentation relating to staff training records, equipment maintenance reports, LPA laser safety review reports, and logs of equipment checks carried out.

The documentation can be held in a physical folder or held electronically, however it must be easily accessible and made available to the LPA or external inspectors upon request.

The LPS is responsible for organising the laser safety folder and keeping it up to date.

Please see the Laser Safety Folder Contents.

5.17 Personal Protective Equipment - Lasers

There shall be adequate Personal Protective Equipment (PPE) for all persons, including the patient, who are present within the laser Controlled Area.

The required PPE shall be stated clearly in the Local Rules for the laser being used.

Staff have a responsibility to ensure they use the PPE the Employer has provided them with.

All laser protective eyewear must be CE marked, indicating they comply with the The Personal Protective Equipment Regulations 2002) and BS EN 207: 2017 (Personal eye protection equipment – Filters and eye protectors against laser radiation).

Advice must be sought from the LPA on the selection of suitable PPE.

All protective eyewear must be labelled to indicate which laser it is appropriate for. The LPS is responsible for ensuring all eyewear is appropriately labelled prior to being distributed for clinical use.

Non-compliances regarding the wearing of PPE must be reported to the LPS as soon as possible. The LPS must notify the LPA and report the non-compliance on Datix, using the keyword “laser”, so that an investigation may be carried out.

5.18 Personal Protective Equipment – Non-Laser equipment

For other sources, such as UV, the risk assessment will detail what protective equipment may be required for the eyes or skin. This may require the use of face shields or goggles, or long sleeves may be recommended to limit skin exposure. Staff have a duty to comply with the recommendations given in the risk assessment.

5.19 Control & Security of Laser Key

All Class 3R, 3B or 4 lasers should include a key-operated master control. This may be a physical key or a password incorporated into the laser's operating system.

If the laser has a physical key, this must be stored in a secure location whenever the laser is no longer in use. Only the LPS, and staff who are on the Authorised User List, should be permitted access to the laser key or the password.

The LPS is responsible for ensuring there is no unauthorised access to the laser key or password.

5.20 New Equipment

Responsibility for ensuring that all Class 3R, 3B and 4 laser equipment is installed, accepted and maintained to satisfy laser safety requirements, and is included in the equipment replacement programme of the Board, lies with the relevant Director. UV phototherapy equipment is also managed in the same way.

All equipment purchases will be routed through appropriate committees (e.g. LMERG) established by the Board. In conjunction with the lead specialist, these committees will ensure that any equipment purchased is designed, constructed and installed so that it is capable of restricting exposure in line with the intended clinical purpose.

Prior to being brought onto NHS Lothian premises, or being used clinically by NHS Lothian employees, all new, loan or demonstration Class 3R, 3B or 4 laser equipment must be approved by the LPA.

5.21 Maintenance of Laser Equipment

It is the responsibility of the relevant Director to ensure that all Class 3R, 3B and 4 laser equipment and phototherapy equipment is regularly calibrated, serviced and maintained to a defined scheduled based on the manufacturer's recommendations.

It is advised that all class 3R, 3B and 4 laser and phototherapy equipment have appropriate service contracts in place. The LPA or lead specialist will act as technical reviewer of proposed service contracts and advise the service of its suitability.

It is the responsibility of the LPS or clinical lead to co-ordinate with clinical users and service engineers to ensure the equipment is made available for maintenance when required and that there is an approved laser Controlled Area available.

The NHS Lothian Transfer of a laser Controlled Area form must be used during all maintenance or repair visits by service personnel. The equipment should only be put back into clinical use if the service engineer has indicated on the form it is safe to do so.

Maintenance reports for all equipment, including ancillary equipment (e.g. fume evacuators), should be retained by NHS Lothian. The LPS is responsible for ensuring all laser maintenance reports are kept in the laser safety folder and made available for inspection by the LPA or external inspector.

It is advised regular safety checks of the laser equipment and PPE are carried out and documented in the laser folder. The LPA will advise the LPS on the specific safety checks and their frequency. This will also be documented in the Local Rules for each laser.

The LPS is responsible for ensuring the laser equipment safety checks have been completed and documented. Evidence of safety checks being carried out should be kept in the laser safety folder and made available for inspection by the LPA or external inspector.

5.22 Reporting of Laser Adverse Events

Any incident which leads to the inadvertent exposure of patients, staff or members of the public to laser radiation must be reported as soon as possible to the LPS, appropriate line manager and LPA.

The LPS must notify the LPA directly of any incidents and report through the DATIX incident reporting system using the keyword “laser”. In addition, the incident reporter and the LPS must complete a Record of Laser Incident form.

The LPA and LPS will then carry out an investigation into the incident.

Near-misses or non-compliance with the Local Rules must also be reported in the same manner.

Any incidents or near-misses where an equipment fault or malfunction has occurred will be reported to the Incident Reporting and Investigation Centre (IRIC).

5.23 Reporting of non-laser adverse events

Adverse events involving phototherapy or other optical radiation must be reported on DATIX using “Radiation” as the main category. This will allow the lead specialist in the Radiation Protection Team to review the incident and provide and support or guidance as appropriate.

5.24 Laser Protection Supervisors Committee (LPSC)

The Laser Protection Supervisors Committee (LPSC) meets 3 times per year and is chaired by the LPA. Membership for LPSC is drawn from all areas across NHS Lothian and NHS Fife using Class 3R, 3B and 4 medical lasers with an LPS from each area in attendance, where possible.

The LPSC provides a forum in which to share important laser safety advice, changes to national legislation and guidance, and provides mechanism for LPSs to share learning across NHS Lothian and NHS Fife.

Feedback and issues raised at the LPSC will be included in the LPA report to the Board RPC.

5.25 Getting help

The Laser Protection Adviser (LPA) is identified in the Local Rules for each laser. The role of the LPA is defined in Section 5.2.

The Laser Protection Supervisor (LPS) is a role specific to each laser and is identified in the Local Rules for that laser. The role of the LPS is defined in Section 5.3.

For support with lasers, the Laser Radiation Protection team may be contacted via loth.lasers@nhslothian.scot.nhs.uk or through the main Medical Physics office number 0131 242 2371.

For support with other sources of optical radiation, the Radiation Protection team may be contacted via RadiationProtection@nhslothian.scot.nhs.uk or through the main Medical Physics office number 0131 242 2371.

Further information and document templates, such as for recording equipment safety checks and reading of Local Rules, can be found on the NHS Lothian Medical Physics Intranet page.

6.0 Associated materials

Organisational Reporting Structure for Radiation Protection, approved by the Radiation Protection Committee, March 2023

Radiation Protection Committees – Terms of Reference, (including Terms of Reference for the NHS Lothian Radiation Protection Committee, X-Ray Radiation Protection Committee, Cancer Services Radiation Protection Committee, and the Radionuclide Radiation Committee), approved by the Radiation Protection Committee, March 2023

Terms of Reference - Laser Protection Supervisor Committee, approved by the Laser Protection Supervisor Committee, July 2023

Duties of the Laser Protection Adviser (LPA), NHS Lothian Department of Medical Physics, August 2023

Duties of the Laser Protection Supervisor (LPS), NHS Lothian Department of Medical Physics, August 2023

Laser Safety Training Recommendations, NHS Lothian Department of Medical Physics, November 2022

Record of Training & Authorisation for Clinical Laser Users, NHS Lothian Department of Medical Physics, July 2023

Record of Training & Authorisation for Technical Laser Users, NHS Lothian Department of Medical Physics, July 2023

Record of Laser Incident Form, NHS Lothian Department of Medical Physics, July 2023

Laser Local Rules: Declaration, NHS Lothian Department of Medical Physics, July 2023

Template for transfer of a laser Controlled Area, NHS Lothian Department of Medical Physics, August 2021

Appointment Letter for LPS in NHS Lothian, NHS Lothian Department of Medical Physics,

Laser Safety Folder Documents checklist, NHS Lothian Department of Medical Physics, August 2023

NHS Lothian Adverse Event Management Policy, approved by the Policy Approval Group, June 2018

NHS Lothian Adverse Event Management Procedure, approved by the Policy Approval Group, July 2018

7.0 Evidence base

A version of this information was previously available in the NHS Lothian Radiation Protection Policy (v2.0, 2019). Having a stand-alone policy is best practice and intended to make this more accessible to the stakeholders.

7.1 Regulations

Management of Health and Safety at Work Regulations 1999

The Control of Artificial Optical Radiation at Work Regulations 2010

The Personal Protective Equipment Regulations 2002

The Health and Safety (Safety Signs and Signals) Regulations 1996

7.2 Guidance

Lasers, intense light source systems and LEDs – Guidance for safe use in medical, surgical, dental and aesthetic practices, HMRA, September 2015

Non-binding guide to good practice for implementing Directive 2066/25/EC 'Artificial Optical Radiation' European Commission, June 2010

7.3 Standards

BS EN 60825-1: 2014+A11:2021 – Equipment Classification and Requirements

PD IEC/TR 60825-8:2008 – Safety of Laser Products – Part 8: Guidelines for the safe use of laser beams on humans

BS EN 207: 2017 - Personal eye protection equipment – Filters and eye protectors against laser radiation

8.0 Stakeholder consultation

The LPSC, and Clinical Leads in UV phototherapy, were consulted with in the development of this policy.

9.0 Monitoring and review

The Board must be both assured of compliance and informed of any deficiencies that require action.

The LPA is required to review the arrangements for laser safety for each Class 3R, 3B or 4 laser used within NHS Lothian at least every two years.

Matters to be reviewed include: radiation protection documentation (including Local Rules and risk assessments), personal protective equipment, staff laser training, and adverse events. The form of the review is individual meetings with the Laser Protection Supervisor and a general inspection of the laser equipment, PPE and Controlled Area.

Reports are issued to the LPS and Deputy LPS, where applicable. Any significant findings are included in the LPA's report to the Laser Protection Supervisor Committee (LPSC) and the Board RPC. A verbal report, accompanied with the minutes of the Board RPC, is tabled at the NHS Lothian Health and Safety Committee.

The LPA report will give an assessment of the level of compliance with regulations and highlight any areas of non-compliance or other issues that need to be brought to the attention of the Board. The Board can then take such measures as it sees fit to rectify any deficiencies in compliance that cannot be dealt with within the committee and line management structure.