



Doncaster and Bassetlaw
Teaching Hospitals
NHS Foundation Trust

NON - IONISING RADIATIONS SAFETY POLICY (B)

This procedural document supersedes: CORP/HSFS 21 v.7 – Ionising And Non-Ionising Radiations Safety Policy. The previous document has been divided into two documents for clarity and reader convenience.



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Date written/revised:	February 2025
Approved by:	Radiation Safety Group
Date of approval:	26 th February 2025
Date issued:	11.3.2025
Next review date:	February 2028
Target audience:	Trust-wide

Amendment Form

Version	Date Issued	Brief Summary of Changes	Author
Version 8	Feb 2025	Historical ionising and non-ionising radiation policy has been split into two documents for readers clarity. This document is now the first version of the non-ionising radiation policy for trust use.	Sara Elliott/ Jane Davies/ Jen Harvey/ Giles Morrison
Version 7	Oct 2021	Minor amendments made to text throughout the document.	Sara Elliott
Version 6	21 Sept 2020	Substantial additions and alterations made in conjunction with STH advice and taking into consideration the new Trust Divisional organisation. Medical Imaging department is altered to Radiology.	Sara Elliott
Version 5	27 th April 2018	<p>Section 2 - "Purpose", Medico-legal exposures removed and replaced with Non-Medical imaging exposure. Definition included.</p> <p>Section 3 – "Duties and Responsibilities" 3.3 changed to Assistant Division Director. Changed to include – "authorize and approve the Ionising and Non-Ionising Radiations Safety Policy". 3.4 changed to Clinical Governance and Education Manager. 3.6 changed to IRR 2017 and reporting to the Chief Executive included. 3.8 changed to include requirement for MPE under IR(ME)R 2017 regulation 14. 3.12 changed to IRR17 Reg. 35.</p> <p>Section 4 – Changed and updated to allow for specific requirements and new terminology under regulation 17 of IR(ME)R 2017. Section 4.4 created to allow for IRR 2017 regulation 15 and the requirement for refresher training to be scheduled at regular intervals.</p> <p>Section 5 – Changed to reflect the new requirements under IR(ME)R 2017 regulation 15. i.e. see new sub-section 5.2</p> <p>Section 6 – Risk assessments changed to reflect IRR 2017 regulation 8.</p> <p>Section 7- Health Surveillance and Medical Examination changed to reflect IRR 2017 regulation 25 and the requirement for Medical Surveillance for classified workers.</p> <p>Appendix 1) - Changed to reflect update new Regulations.</p> <p>Appendix 2) - Changed to reflect update new Regulations.</p> <p>Appendix 3) - Changed to reflect changes in LPA role, now a purely advisory role, not responsible for implementation.</p>	Peter Thompson

		<p>Appendix 4) - Inserted for statement of MPE duties. Other Appendices numbers altered to allow for insertion</p> <p>Appendix 5) - Changed to reflect updated EPR 2016 Regulations</p> <p>Appendix 6) - Changed to reflect updated IRR and IR(ME)R 2017 Regulations</p> <p>Appendices 7) to 8) - Changed to reflect new management structure within Medical Imaging, including appointment of a new Chair and Vice Chair.</p> <p>Appendix 9) - Changed to reflect changes in LPA role, now a purely advisory role, not responsible for ORSC meetings and implementation of policy.</p> <p>Appendix 10) -New Management Framework within Medical imaging</p> <p>Appendix 11) -Updated Equality and Impact Assessment.</p>	
Version 4	8 th December 2015	<p>Updated policy with some changes and additions –</p> <p>New style and Trust format</p> <ul style="list-style-type: none"> - Section 1, Updated and condensed ‘Introduction’ - Section 2, ‘Purpose’ added - All paragraphs in Section 3 changed with new roles and titles defined to allow for the new Division management system and an additional paragraph added to allow for incident reporting using DATIX. - Section 4 expanded with more detail with the addition of paragraphs 4.1 to 4.3 - Section 5, Incident Reporting, removed. - New Sections 5 to 7, added - Section 8, replacing Section 7 ‘Monitoring and audit’, much more detail and a table included as required by Trust’s new template. - Section 9, ‘Definitions’ added - Section 10, ‘Accountability framework’ - CGQ committee added and amendments made to reflect Division structure. - Section 11, ‘Equality and Diversity’ - Sections 12 and 13 reformatted and references updated where required. - Appendix 9 added 	Peter Thompson
Version 3	September 2012	<p>4. Individual Responsibilities</p> <p>4.7 Changed to RWA from QE under new EPR10.</p> <p>4.10 Laser Protection Supervisor added.</p> <p>4.13 Optical Radiation Health & Safety Committee added.</p> <p>Appendix 4.</p> <p>List of duties of an RWA under EPR10 replaces list of duties of QE under RS93.</p> <p>Appendix 7 altered</p>	Peter Thompson

		<p>Terms of Reference - Radiation Safety Committee Description of the Chair and the Vice Chair of the Committee Circulation of minutes and RPA reports Accountability framework amended to show the Trust's Board of Directors. Appendix 8 added. Term of Reference Optical Radiation Health & Safety Committee.</p>	
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1 INTRODUCTION

The Trust will ensure, as far as is reasonably practicable, the safety of patients, members of the public (including the families of patients), employees and contractors working on its premises, who may be exposed to the hazards arising from the use of non-ionising radiations (e.g., lasers, magnetic fields, ultrasound, and artificial optical radiation sources).

The Trust is committed to a policy of keeping exposures to non-ionising radiation as low as reasonably practicable, social, and economic factors being taken into account. The Trust will maintain a Radiation Protection management structure to implement radiation safety requirements and will appoint suitable LPA/MRSE/Ultrasound specialist(s) to advise on all matters concerning the safe use of non-ionising radiations. Supervisors will be appointed, where appropriate, to cover each department using non-ionising radiation to enable work with radiation to be carried out in a safe manner.

2 PURPOSE

To establish a framework to ensure compliance with the requirements of the Ionising Radiation Regulations 2017 (IRR 17), the Ionising Radiation (Medical Exposure) Regulations 2017 (IR[ME]R 2017), Ionising Radiation (Medical Exposure) Amendment Regulations 2024 (IR[ME]R 2024), the Environmental Permitting Regulations 2016 (EPR2016) and other relevant legislation.

To establish a framework to ensure compliance with the Management of Health and Safety at Work Regulations 1999.

Significant deliberate contravention of this policy or of the Local Rules and other Trust Controlled Policies will be considered subject to the Trust disciplinary procedure.

This policy does not apply to: Ionising radiation (X-ray)

3 DUTIES AND RESPONSIBILITIES

The Trust will implement this policy through the following organisational arrangements and responsibilities in order to effectively manage and control the risk from non-ionising radiation. The Chief Executive, as the employer, remains responsible in law for ensuring that these arrangements are in place.

The processes for managing all radiation risks are defined within the Trust's Risk Identification, Assessment and Management Policy (CORP/RISK 30).

3.1 Clinical Specialities Division

The implementation of the policy will be the responsibility of the management team working within the Division who are delivering the service, they will liaise with the appropriate expert, (LPA/MRSE/ Ultrasound specialists) regarding policy and procedures.

The following sections summarise the structure for the delivery of ionising radiations safety.

3.2 The Chief Executive

Although the Chief Executive retains overall responsibility for ensuring that systems are in place to manage risks arising out of the use of non-ionising radiations, they discharge this responsibility through designated individuals.

The Chief Executive, as the Accountable Officer, remains responsible in law for making sure these arrangements are in place. They will ensure that the Trust:

- Ensures that appropriate HSE notification, or registration has been made, or HSE consent obtained, prior to work in the Trust involving non-ionising radiation
- Appoints Laser Protection Advisers (LPA), Magnetic Resonance Safety Expert (MRSE) and ultrasound specialist with appropriate experience and qualifications, to advise on all matters concerning the use of non-ionising radiations detailed in this policy.
- Establishes good communications and co-operation between managers and the specialist non-ionising radiation advisers and will give them, in conjunction with management, authority to inspect and advise management on necessary actions.
- Ensures that the relevant Inspectorate or Agency and Chief Executive are notified of any incident involving non-ionising radiation as required and ensures that there are adequate arrangements in their absence.

3.3 Clinical Director

Clinical Directors of the division where non-ionising radiation(s) are being used are responsible for ensuring that adequate monitoring and auditing arrangements are in place within their service to check that staff and facilities are complying with this policy. They are also responsible for ensuring that the necessary responsibilities under this policy are included in staff job descriptions.

Ensures that the relevant Inspectorate or Agency and Chief Executive are notified of any incident involving non-ionising radiation as required and ensures that there are adequate arrangements in their absence.

3.4 Divisional Nurse

Overall responsibility for safety by ensuring the provision of non-ionising radiation protection, staff and patient dose monitoring and non-ionising radiation equipment quality assurance programmes within each Directorate will lie with the Nurse Director (in IMPEL and Community Services this responsibility will rest with the Operations Director).

These individuals will ensure that:

- Non-ionising radiation risk assessments, local rules and written systems of work have been drawn up with approval by the relevant specialist non-ionising radiation adviser as appropriate and are reviewed at least 3 yearly and preferably annually for controlled non-ionising radiation areas.
- All medical non-ionising radiation exposures carried out in their Division will be carried out in accordance with the Trust's Procedures.
- A 'Lead Laser Clinician' is identified for each laser or laser procedure, who will:

- work with the LPS in establishing a protocol for determining the competence of an individual to undertake any given procedure with any given laser within their speciality.
 - assume responsibility for establishing a list of competent Authorised Users in accordance with the above protocol.
 - establish clinical guidelines for the use of the laser within their speciality.
- An MR Responsible Person is appointed, being normally the MRI Modality Lead. They are responsible, following advice from the MR Safety Expert, for ensuring appropriate MR safety policies, procedures and training are in place
 - The MR Clinical Advisor should be a Consultant Radiologist with adequate training, knowledge and experience of MRI in clinical use. The MR Clinical Advisor is the arbitrator in cases of dispute between the MR Safety Supervisor/Expert and the referring clinician. They provide advice regarding the clinical implications of MR safety policy and practice, and act as a liaison between the MR Safety Group and Radiologist colleagues.
 - Instruction/teaching is made available for all staff carrying out work with non-ionising radiation so that they can be adequately trained. This will include:
 - general training in the safe use of non-ionising radiation facilities for staff entering non-ionising radiation areas.
 - staff who are required to respond to non-ionising radiation incidents or emergencies.
 - Records of this training are kept.
 - An inventory of their own non-ionising radiation equipment is kept and all such equipment both satisfies non-ionising radiation safety requirements and is also included in an appropriate replacement programme.
 - Incidents which may require notification to the relevant inspectorate or agency should be reported in accordance with the Trust incident reporting policy using Datix. Specialist non-ionising radiation adviser involvement may be required as part of the incident investigation process. It is essential the Chief Executive, as employer, is made aware of all externally reportable.
 - The appropriate specialist adviser is consulted when the service is considering using non-ionising radiation for the first time or will be implementing a change in practice which may affect staff non-ionising radiation doses.
 - After liaison with the supplier and the DBTH Medical Technical Department Department, arrangements are in place to enable the safe use of any equipment on trial, demonstration, or testing.
 - All instruments used for monitoring levels of non-ionising radiation in controlled areas are tested and examined annually.
 - An investigation is carried out whenever a member of staff receives a dose of non-ionising radiation exceeding the local investigation level set in the local rules.

3.5 Departmental Managers

The departmental managers will be responsible for ensuring that:

- staff carrying out work with non-ionising radiation are appropriately trained or that training requirements are notified to the nominated responsible person

- work with non-ionising radiation is carried out in accordance with documented local rules and safe systems of work (under the supervision of the local supervisors) and staff are notified of any changes in these local rules/procedures.
- the necessary risk assessments are undertaken before carrying out work with non-ionising radiation.
- Where there is exposure to EMF an exposure assessment must be undertaken. Where this demonstrates that
 - the Exposure Limit Values (ELVs) are, or may be exceeded (even when this is permitted, e.g., by an exemption); and/or
 - the indirect-effect Action Levels (ALs) are exceeded; and/or
 - you have employees at particular risk;
- the departmental manager must carry out an assessment of any risks to their employees arising from EMF exposure.

Where a risk assessment is required, you must:

- keep a suitable record of the significant findings of your most recent risk assessment; and
- keep a suitable record of the most recent action plan.

See full guidance on CEMFAW16 risk assessment in Appendix 4

- The risk assessments are reviewed annually.
- Periodic audit of the arrangements for the management of work with non-ionising radiation within their department is undertaken, and a report is made to the relevant Radiation Safety Sub Group meeting detailing the results of this audit.
- If an employee reports a health effect due to exposure of non-ionising radiation, then arrangements are made to provide, and keep records of, health surveillance and medical examinations as appropriate. This should be done by referral to Occupational Health.

3.6 Specialist Radiation Advisors (Appointed via SLA)

These are –

- Laser Protection Adviser – advise on the safe use of artificial optical radiation, currently supported via STH SLA
- Magnetic Resonance Safety Expert – advise on the safe use and optimisation of magnetic resonance systems, currently supported via STH SLA
- Ultrasound Specialist - advise on the safe use and optimisation of ultrasound systems, currently supported via STH SLA
- The responsibility for advising the designated managers set out above, staff and the public on radiation matters will lie with the appointed advisors via an SLA agreement with STH. The relevant Adviser must be involved in the planning of all new radiation facilities and any changes to existing facilities (including the acquisition of new equipment) which may affect staff or patient safety or require alterations to non-ionising radiation protection arrangements.

3.7 Radiation Sub Group

- The Radiation Sub Group has responsibility for the formulation and review of the Trust Radiation Safety Policies (Ionising and Non-Ionising).
- This group will monitor, review and confirm to the Head of Medical Imaging that it is assured that any External/Internal Agency findings and recommendations have been appropriately addressed in order to provide the final 'sign off' for each visit, inspection or accreditation.
- The Chair of the Sub Group is responsible for ensuring that non-ionising radiation is discussed at least twice a year.
- In respect of the naturally occurring gas Radon, responsibility for the safety of occupants of affected buildings rests with the Director of Estates. Planned preventative examination and maintenance of radiation safety engineering controls including radon mitigation and Environment Agency permitted disposal routes.

3.8 Laser Protection Supervisors (LPS)

- Laser Protection Supervisors do not need to be formally appointed, but are identified in the Local Rules. There must be an LPS available wherever and whenever lasers are in use. They must be local to the area where the non-ionising radiation is being used and be able to supervise that people in the vicinity are working to the local rules on a regular basis.
- The Laser Protection Supervisor should be familiar with the requirements of the laser local rules and the relevant British Standards and guidance notes. The laser local rules will list Authorised Users of the lasers. The LPS is responsible for ensuring that the risk assessment is undertaken and local rules are in place. The LPS should ensure that the Local Rules are read, understood and, as far as possible, are followed by the relevant staff.
- The tasks that are carried out by the LPS are given in the LPS Statement of Duties. They include tasks relating specifically to the supervision of local rules and restriction of exposure as required by MHSWR 1999 and additional management functions. Responsibility for these tasks remains with the section manager.

3.9 MR Safety Supervisor (MRSS)

Day to day responsibility for the implementation of the Local Rules and associated policies and procedures in the MRI unit is delegated to the MR Safety Supervisor where the Responsible Person is not present. An MR Safety Supervisor for each Trust site should be designated by the Responsible Person. The MR Safety Supervisors are nominally the Band 7 modality leads.

3.10 Consultant Occupational Health Physician

Responsibility for medical supervision of staff in respect of non-ionising radiation exposure will rest with the Consultant Occupational Health Physician.

3.11 Employees

It is the responsibility of every employee working with non-ionising radiation to be aware of the local rules and precautions necessary to carry out their work in a safe manner. It is their responsibility:

- not to expose themselves or any other person to non-ionising radiation to a greater extent than is reasonably necessary for the purpose of their work,
- to report incidents or defects in equipment in accordance with the Trust's reporting procedure and
- to use any protective equipment that is provided and ensure that it is cleaned and stored correctly between use.
- to comply with relevant local rules and procedures
- to comply with the control measures identified in the relevant risk assessments.
- to complete all necessary records as specified in local rules/procedures.
- Significant deliberate contravention of this policy or of the Local Rules and other Trust Controlled Documents will be considered subject to the Trust disciplinary procedure.

4 EQUIPMENT FOR MEDICAL EXPOSURES (NON-IONISING RADIATION)

- Any equipment or apparatus used in connection with medical exposures will, as far as reasonably practicable, be selected, installed and maintained so that it is capable of controlling the exposure of the patient in accordance with the intended clinical purpose.
- Quality Assurance tests will be carried out at regular intervals on all equipment involved in patient exposure with non-ionising radiation. Resources, access and time must be made available to comply with this requirement. Time scales will be within those required by current legislation or the relevant national or local guidance. Responsibilities will be clearly defined.
- Departments using medical non-ionising radiation equipment should formulate a programme for planning the progressive replacement of equipment whose performance has deteriorated or does not conform to the recommendations in the relevant national guidance. The relevant Advisers should be consulted regarding the selection, purchase, on-going suitability, replacement and disposal of all non-ionising radiation equipment.
- The LPA and MRSE will examine laser equipment and magnetic resonance imaging equipment respectively before it is used on patients.
- Equipment should not be brought on to site by staff or manufacturers etc. for demonstration, trial or testing purposes without prior consultation with Medical Technical Manager and the relevant Adviser. This is so that the relevant statutory provisions such as notification to HSE, non-ionising radiation risk assessments etc. can be satisfied. The supplier of the equipment is responsible for providing details concerning the necessary safety arrangements including:
 - documentation proving that the equipment is safe to use and describing the necessary safe working procedures,
 - testing and maintenance requirements of the equipment whilst on loan and
 - additional personal safety equipment and staff training that might be necessary.

5 TRAINING/SUPPORT

In accordance with the Trust core Mandatory SET List staff working with ionising and non-ionising radiation will receive appropriate training commensurate with the work being performed and the degree of hazard involved. Appropriate training in the correct use of new equipment will be given to all staff, as required.

Group		Example Staff	Training
1	Occupationally Exposed – regularly works in designated areas.	Ophthalmology, Dermatology, Urology, Magnetic Resonance Radiographers and Imaging Assistants, Anaesthetists and ODPs	As specified in Local Rules, but may include: Nature of Hazard/Risks/Engineering controls/administrative controls/use of PPE/Application of ALARP principle specific to activity.
2	Not occupationally exposed – occasionally enters designated areas under the supervision or someone in Group 1	Radiologists, other clinicians (e.g., Urologists doing lithotripsy/defecating proctograms), porters, nurses accompanying patients	Nature of Hazard/Risks/Administrative controls/use of PPE.
3	May enter/work in areas adjacent to designated areas, but wouldn't be expected to enter designated areas under normal circumstances.	Clinical aides/Staff in theatres, general Radiology department staff	How to identify Hazard/Risks/How to avoid it.
4	Occupationally exposed in non-designated areas	Porters, Estates staff	

- No person will be appointed as LPS or MRSS unless they know and understand the requirements of the Regulations and the local rules as they affect the work that they supervise.

5.1 Lasers

All staff operating therapeutic lasers must have received adequate training as specified in the MHRA Device Bulletin (September 2015) "Lasers, intense light source systems and LEDs – guidance for safe use in medical, surgical, dental and anaesthetic practices".

All LPSs must attend a training course which covers the 'Core of Knowledge' detailed in the above guidance document. Staff assisting with laser work should also receive safety awareness training. Each of the above should also undergo refresher training at least every 5 years.

5.2 Magnetic Resonance Imaging (MRI)

All staff working within the MR Controlled Access Area defined by the Local Rules (MR), must have received adequate training and be approved by the Responsible Person as an MR Authorised Person. Staff should take part in refresher safety training at least every 3 years.

The Responsible Person(s) for MRI and MR Clinical Advisor will, in consultation with the MR Safety Expert (MRSE) review the local MR safety policies on an annual basis. The usual forum for this shall be the Radiation Sub Group.

Staff who may occasionally enter the MR Controlled Access Area under supervision of an MR Authorised Person, and staff who may enter the radiology department (i.e. staff groups 2-4 as defined in 5 must have awareness of the projectile hazard and be trained to recognise the relevant hazard warning signs and their meaning.

5.3 UV, Blue Light and Ultrasound

All staff working in these modalities must have received appropriate training in accordance with relevant legislation and national guidance.

Particular attention should be given to training of staff using Point of Care Ultrasound (POCUS) equipment, following the guidance of 'Recommendations for specialists practising ultrasound independently of radiology departments'. This should include specific understanding of the operation of POCUS scanners and how this relates to image quality safety and clinical diagnosis. This should form part of a documented educational ultrasound training programme.

5.4 EMF exceeding the Exposure Limit Values (ELV)

All staff who may be exposed to EMF exceeding the ELV or an in-direct effect Action Level (AL), or where employees of particular risk are present, must have appropriate training of the hazards/risks and controls for minimising exposure.

6 EQUIPMENT INVENTORY, MAINTENANCE AND QUALITY ASSURANCE

The Radiology department maintains an equipment list for devices it is responsible for which is used to monitor the operational maintenance and provide a capital replacement plan which includes sources of non-ionising radiation, (MRI and Diagnostic Ultrasound). All other devices such as lasers are monitored and maintained through the Trusts' Medical Technical Service. For equipment on radiology's capital list, any replacement is managed by the Medical Equipment Group (MEG) after being agreed at Radiology Senior Management Team Meeting (RSMT). The replacement programme priorities will be based on risk assessment of performance factors including age, clinical performance, reliability and other criteria deemed relevant.

The inventory must contain at least:

- name of manufacturer
- model number
- serial number or other unique identifier
- year of manufacture
- year of installation

Maintenance of other devices purchased from outside of medical imaging are the responsibility of the purchasing departments via the Medical Technical Services Department. Compliance with this policy is required and annual submission of compliance with this policy via the Radiation Safety Group is paramount.

Equipment purchase

- The purchase of equipment which utilises medical non-ionising radiation should comply with the procedures laid down by DBTH Medical Equipment Group (MEG).
- The Trust must be satisfied that adequate provision has been made for compliance with training, safety and legislative requirements prior to approval for usage being granted.
- No equipment involving the medical use of non-ionising radiation for patient diagnosis or treatment should be used on Trust property without satisfactory acceptance testing by the relevant specialist radiation adviser and/or MRSE.
- Where purchase of equipment which utilises medical non-ionising radiation is planned a radiation Risk Assessment for any proposed location must be undertaken by the Departmental Manager in consultation with the appropriate specialist radiation adviser and/or MRSE before the purchase is approved by the Trust.

7 RISK ASSESSMENTS

The Trust is committed to ensuring the safety of patients, staff and the public through the integrated management of all aspects of governance and risk.

The Trust 'Risk Identification, Assessment and Management policy' CORP/RISK 30 is described in an "umbrella" document that defines the strategic direction for risk management in the Trust. It describes the framework and the method that the Trust will use to identify, manage and reduce the risks (actual or potential) which exist within the organisation. Before commencing a new work activity, radiation risk assessments are required that identify the radiation hazards present and evaluate the extent of the risks involved, i.e. IRR 2017 Regulation 8.

8 HEALTH SURVEILLANCE AND MEDICAL EXAMINATION

A medical examination will be made available to any patient or employee following a reported incident involving a suspected over-exposure and when an investigation shows that the employee has been exposed to predetermined levels of ionising radiations. The individual's health record will be made and kept up to date and will contain a summary of the results of the medical examination. Continued Health Surveillance will be made available if appropriate.

9 MONITORING COMPLIANCE WITH THE PROCEDURAL DOCUMENT

Implementation of this policy will be monitored by:

- Clinical Directors are to ensure that radiation protection responsibilities are included in personal development review and personal objectives of their staff.
- Laser Protection Supervisors / Magnetic Resonance Safety Supervisors via attendance at a radiation safety sub-group and/or submission of an annual written report to the relevant radiation safety sub-group, which will include summaries of significant non-compliances and

incidents with respect to the relevant legislation. Laser Protection Supervisors should attend the radiation sub-group at least twice a year and raise any issues of concern.

- The annual programme of equipment performance testing and radiation protection surveys and the issue of written reports. The written reports will be sent to the departmental head, the radiation/laser protection supervisor and other relevant officers as appropriate.
- The Radiation Sub Group meeting conducting its business including periodic reviews of this policy, equipment performance and radiation protection surveys, occupational dose records and radiation incidents. A report detailing the activities of the group is sent to the Trust Effective Group annually.

In the event of persistent non-attendance the responsible manager will contact the staff member's line manager and develop an action plan to ensure this training takes place in a timely manner.

What is being Monitored	Who will carry out the Monitoring	How often	How Reviewed/ Where Reported to
Current Legislation	RPA/RWA/MPE etc.	Annually or when deemed appropriate by the RPA/LPA	Change in Policy reported to RSC Group
Risk Assessments	RPS/Manager/ RPA/	Annually or in response to a change in working practice	RPS/RPA Self- Assessment. Actions reported to RSC and Service managers.
Local Rules	RPS	Annually or in response to a change in working practice.	RPS/RPA Self- Assessment and Service managers.
RSC Meeting Attendance	Chair of RSC through group secretary	Annually	Line Manager at PDA with reference to minutes from RSC meetings.
RPS Update Training	Manager/RPA	Every three years	Line Manager at PDA/RSC with reference to the minutes from RSC meeting

10 RELEVANT LEGISLATION AND DOCUMENTATION

Health and Safety at Work etc. Act 1974

<https://www.legislation.gov.uk/ukpga/1974/37/contents>

Management of Health & Safety at Work Regulations 1999 (SI 1999/3242)

<https://www.legislation.gov.uk/uksi/1999/3242/contents/made>

The Control of Artificial Optical Radiation at Work Regulations 2010

<https://www.legislation.gov.uk/uksi/2010/1140/contents/made>

Control of Electromagnetic Fields at Work Regulations (CEMFAW) 2016

https://www.legislation.gov.uk/uksi/2016/588/pdfs/uksi_20160588_en.pdf

The Personal Protective Equipment at Work Regulations 2022

[Personal protective equipment \(PPE\) at work regulations from 6 April 2022](#)

The Personal Protective Equipment Regulations 2002.

The Electricity at Work Regulations 1989.

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

The Control of Substances Hazardous to Health Regulations 2002.

11 EQUALITY IMPACT ASSESSMENT

The Trust aims to design and implement services, policies and measures that meet the diverse needs of our service, population and workforce, ensuring that none are disadvantaged over others. Our objectives and responsibilities relating to equality and diversity are outlined within our equality schemes. When considering the needs and assessing the impact of a procedural document any discriminatory factors must be identified.

An Equality Impact Assessment (EIA) has been conducted on this procedural document in line with the principles of the Equality Analysis Policy (CORP/EMP 27) and the Fair Treatment for All Policy (CORP/EMP 4).

The purpose of the EIA is to minimise and if possible remove any disproportionate impact on employees on the grounds of race, sex, disability, age, sexual orientation or religious belief. No detriment was identified. (See Appendix 11).

12 ASSOCIATED TRUST PROCEDURAL DOCUMENTS

Equality Analysis Policy – CORP/EMP 27

Medical Devices Management Policy - CORP/PROC 4

Risk Identification, Assessment and Management Policy – CORP/RISK 30

Trust Policy for the Referral of Imaging Examinations by Qualified Non-Medical Healthcare Professional - PAT/T 1

13 DATA PROTECTION

Any personal data processing associated with this policy will be carried out under ‘Current data protection legislation’ as in the Data Protection Act 2018 and the UK General Data Protection Regulation (GDPR) 2021.

For further information on data processing carried out by the trust, please refer to our Privacy Notices and other information which you can find on the trust website:

<https://www.dbth.nhs.uk/about-us/our-publications/information-governance/>

14 REFERENCES

Environmental Permitting Regulations 2016

The Personal Protective Equipment Regulations 2002

Management of Health and Safety at Work Regulations 1999

Medicines and Healthcare Products Regulatory Agency (MHRA) Safety Guidelines for Department of Constitutional Affairs Mental Capacity Act (2005): Code of Practice, 2007

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/497253/Mental-capacity-act-code-of-practice.pdf

APPENDIX 1 – NON-IONISING RADIATION GUIDANCE

General guidance

Guidance for Employers on the Control of Artificial Optical Radiation at Work Regulations (AOR) 2010, HSE

A Non-Binding Guide to the Artificial Optical Radiation Directive 2006/25/EC Radiation Protection Division, Health Protection Agency

Proposal for a Council Directive on the minimum health and safety requirements regarding exposure of workers to the risks arising from physical agents, 1993 Official Journal of the European Communities, 36, No. C77

Lasers guidance

MHRA Guidance: Lasers, intense light source systems and LEDs – guidance for the safe use in medical, surgical, dental and anaesthetic practices (September 2015).

Radiation safety of laser products, equipment classification, requirements and user's guide 2007 [BS EN 60825-1]

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APPENDIX 2 – QUALITY ASSURANCE PROGRAMME (LASERS, ULTRASOUND, MRI)

Task	Responsibility	Frequency
Preventative maintenance	Departmental Manager	As recommended
Radiation Protection Surveys & equipment performance	Identified Radiology Physics Section staff	Annually, biannually or more frequently depending on national guidance.
Quality assurance test by Department	Department	As recommended by relevant Adviser
Commissioning test	LPA (after notification) MRSE (after notification)	Before use on patients

APPENDIX 3 – OPTICAL SOURCES GUIDANCE

Control of Artificial Optical Radiation at Work Regulations (AOR) 2010

These Regulations require you to protect the eyes and skin of your workers from exposure to hazardous sources of artificial optical radiation. AOR includes light emitted from all artificial sources in all its forms such as ultraviolet, infrared and laser beams, but excludes sunlight. Some forms of artificial light can be harmful to workers unless protective measures are in place.

The full guidance can be found here: [The Control of Artificial Optical Radiation at Work Regulations 2010](#)

AOR includes light emitted from all artificial sources i.e. light in all its forms such as ultraviolet, infrared and laser beams, but excluding sunlight. It is likely that your workers will be exposed to some form of artificial light at work, whether from general lighting, equipment or from a work process.

The majority of light sources are safe, such as those described in List 1 below. If you only have these sources, or similar, your workers are not at risk and you don't need to do anything further.

When making this decision, it is also worth considering the following points to satisfy yourself that all workers are protected:

- If you have workers whose health is at particular risk, (e.g. those with pre-existing medical conditions made worse by light).
- If workers use any chemicals, (e.g. skin creams) which could react with light to make any health effects worse.
- If you have workers who are exposed to multiple sources of light at the same time.
- If exposure to bright light could present unrelated risks, (e.g. temporary blindness could lead to mistakes being made in hazardous tasks).

List 1 Safe light sources

- All forms of ceiling-mounted lighting used in offices etc. that have diffusers over bulbs or lamps.
- All forms of task lighting including desk lamps and tungsten-halogen lamps fitted with appropriate glass filters to remove unwanted ultraviolet light.
- Photocopiers.
- Computer or similar display equipment, including personal digital assistants (PDAs).
- Light emitting diode (LED) remote control devices.
- Photographic flash lamps – when used singly.
- Gas-fired overhead heaters.
- Vehicle indicator, brake, reversing and fog lamps.
- Any exempt or Risk Group 1 lamp or lamp system (including LEDs), as defined in British Standard BS EN 62471: 2008.
- Any Class 1 laser light product, as defined in British Standard BS EN 60825-1: 2007, for example laser printers and bar code scanners.

There are also some sources of light that, if used inappropriately, e.g. placed extremely close to the eyes or skin, have the potential to cause harm but which are perfectly safe under normal conditions of use. Examples include:

- Ceiling-mounted fluorescent lighting without diffusers over bulbs or lamps.
- High-pressure mercury floodlighting.
- Desktop projectors.
- Vehicle headlights.
- Non-laser medical applications such as: operating theatre and task lighting; diagnostic lighting such as foetal/neonatal trans illuminators and X-ray light/viewing boxes.
- UV insect traps.
- Art and entertainment applications such as illumination by spotlights, effect lights and flash lamps (provided that any ultraviolet emissions have been filtered out).
- Multiple photographic flash lamps, for example in a studio.
- Any Risk Group 2 lamp or lamp system (including LEDs), as defined in British Standard BS EN 62471: 2008.
- Class 1M, 2 or 2M lasers, as defined in British Standard BS EN 60825-1: 2007, for example low-power laser pointers.

The above list is not exhaustive. If you have sources that are not listed but you know have not caused harm previously, and you have no reason to suspect they present a risk in the way they are used, you can assume no special control measures are needed.

Some sources of light can cause a risk of ill health, such as: burns or reddening (erythema) of the skin or surface of the eye (photokeratitis); burns to the retina of the eye; so-called blue-light damage to the eye (photoretinitis) and, damage to the lens of the eye that may bring about the early onset of cataract. Examples are listed below.

List 2 Hazardous light sources

Examples of hazardous sources of light that present a 'reasonably foreseeable' risk of harming the eyes and skin of workers and where control measures are needed include:

- Metal working – welding (both arc and oxy-fuel) and plasma cutting.
- Pharmaceutical and research – UV fluorescence and sterilisation systems.
- Hot industries – furnaces.
- Printing – UV curing of inks.
- Motor vehicle repairs – UV curing of paints and welding.
- Medical and cosmetic treatments – laser surgery, blue light and UV therapies, Intense Pulsed Light sources (IPLs).
- Industry, research and education, for example, all use of Class 3B and Class 4 lasers, as defined in British Standard BS EN 60825-1: 2007.
- Any Risk Group 3 lamp or lamp system (including LEDs), as defined in British Standard BS EN 62471: 2008, for example search lights, professional projections systems.

Less common hazardous sources are associated with specialist activities – for example lasers exposed during the manufacture or repair of equipment, which would otherwise not be accessible.

The above list is not exhaustive. If you are still unsure whether the sources you have are hazardous you could use information provided by suppliers, who have a duty under Section 6 of the Health and Safety at Work etc. Act 1974 to design, manufacture and supply articles for use at work that are safe, so far as is reasonably practicable, in all reasonably foreseeable circumstances of use. If a source presents a risk of harm, they should provide information and instruction on how this risk should be managed as well as making sure the articles they supply for use at work are appropriately CE-marked.

If you are still unsure whether you have hazardous sources, you may wish to refer to a trade association who may have produced sector specific guidance and may be able to give advice. Other Standards and guidance may also be relevant.

Note

If you use hazardous sources of light, you must put in place control measures to reduce the risk of harm to the eyes and skin of your workers, to as low as is reasonably practicable. This is the key requirement of these new Regulations. Some sensible measures are suggested in List 3 below and should be considered on a case-by-case basis for your particular activity. Table 1 gives examples of work activities where hazardous sources of AOR are commonplace, the industries where they are used and the control measures considered appropriate.

In order for these controls to have the best chance of success, you need to involve your workers in developing and delivering them.

List 3 Control measures to consider when managing AOR risks

- Use an alternative, safer light source that can achieve the same result.
- Use filters, screens, remote viewing, curtains, safety interlocks, clamping of work pieces, dedicated rooms, remote controls and time delays.
- Train workers in best-practice and give them appropriate information.
- Organise the work to reduce exposure to workers and restrict access to hazardous areas.
- Issue personal protective equipment, e.g. clothing, goggles or face shields.
- Use relevant safety signs.

Whatever measures you use, you will also need to have a system for dealing with potential over-exposures, for example, referral to a physician or occupational health provider.

It is expected that using the right combination of measures in List 3 will make sure your workers are protected. The vast majority of businesses will be able to satisfy themselves at this stage that no further controls are needed. If, after this process you still suspect that workers may be at risk, a more detailed risk assessment will be required which will include calculations or measurements.

This should only apply in a very small minority of cases. If you have no experience of conducting these types of assessment, seek advice from a relevant trade association or a specialist consultancy and stop the work until you are satisfied that risks have been reduced to a sufficiently low level.

APPENDIX 4- ELECTROMAGNETIC FIELD SOURCE GUIDANCE

Control of Electromagnetic Fields at Work Regulations (CEMFAW) 2016

Employers have a duty to take reasonable steps to prevent harm in the workplace and this duty includes considering any risks arising from exposure to electromagnetic fields (EMFs).

It requires that Employers:

- identify sources of electromagnetic fields (EMFs) in the workplace;
- assess the exposure of your employees to EMFs;
- decide what, if anything, you need to do to protect your workers from the risk arising from exposure to EMFs;
- assess and control any risks from EMFs in the workplace;

The full guidance can be found here: <https://www.hse.gov.uk/radiation/nonionising/emf.htm>

What is an EMF?

An EMF is produced whenever a piece of electrical or electronic equipment (i.e. TV, food mixer, computer, mobile phone etc.) is used.

EMFs are static electric, static magnetic and time-varying electric, magnetic and electromagnetic (radio wave) fields with frequencies up to 300 GHz.

EMFs are present in virtually all workplaces and if they are of high enough intensity, you may need to take action to make sure your workers are protected from any adverse effects.

Exposure to EMFs

Exposure to high levels of EMFs can give rise to effects that may be irritating or unpleasant.

The effects that occur depend on the frequency range and intensity of the EMFs to which a worker is exposed.

The CEMFAW Regulations require you, as an employer, to:

- assess the levels of EMFs to which your employees may be exposed;
- ensure that exposure is below a set of ELVs, see 'Exposure limit values';
- when appropriate, devise and implement an action plan to ensure compliance with the exposure limits;
- when appropriate, assess the risks of employees' exposure and eliminate or minimise those risks. You must make sure you take employees at particular risk, such as expectant mothers and workers with active or passive implanted or body-worn medical devices, into account.
- provide information and training on the particular risks (if any) posed to employees by EMFs in the workplace and details of any action you are taking to remove or control them. This information should also be made available to their safety representatives, as appropriate;
- take action if employees are exposed to EMFs in excess of the ELVs;
- provide health surveillance or medical examination, as appropriate.

Sources of EMF at levels below the ELVs and which will not exceed the indirect-effect ALs (for more information see 'Action levels')

Wireless communications

- Phones (landlines, mobile phones, cordless, digital enhanced cordless telephone (DECT) base stations) and fax machines in workplaces
- Wireless communications devices (e.g. Wi-Fi or Bluetooth) including access points for wireless local area network (WLAN) (NB: Special consideration should be given
- to employees with active implants – see ‘Employees at particular risk’)

Office

- Audio-visual equipment: TVs, DVDs etc.
- Communication equipment and wired networks
- Computer and IT equipment
- Electric fans, fan heaters and room heaters
- Office equipment, e.g. photocopiers, printers, shredders etc.

Buildings and grounds

- Workplaces accessible to the general public which meet the exposure limits for the general public specified in Council Recommendation 1999/519/EC2
- Alarm systems
- Electrical room heating equipment
- Base station antennas outside operator’s designated exclusion zone
- Electric garden appliances
- Electric handheld and transportable tools
- Household and professional appliances, e.g. washing machine/dryer, oven, toaster, as long as wireless local area network (WLAN) and Bluetooth are not involved; if they are, special consideration should be given to employees with active implants, see ‘Employees at particular risk’
- Lighting, including desk lamps

Electrical supply

- Overhead line at any voltage crossing the workplace (magnetic)
- Overhead line at any voltage crossing the workplace if the exposure is indoors, or if the exposure is outdoors but not directly underneath the line (electric)
- Overhead line at any voltage up to and including 275 kV. If the exposure is outdoors and directly underneath the line (note that 400 kV lines will often not pose a risk either, but it is theoretically possible for some low-clearance line to exceed the low action level) (electric)
- Any electrical circuit or installation (including cables, busbars, switchgear and transformers), where the cables carrying the electrical currents are bundled together so that they are always touching or nearly so and there are no unusual earthing arrangements that could create unbalanced currents
- Any electrical circuit or installation (including cables, busbars, switchgear and transformers), where the cables or busbars carrying the electrical currents are separated, and the rating of the circuit or that part of it is <100 A (equivalent to 23 kW for a single-phase 230 V circuit, 69 kW for a three-phase 230 V circuit, or 1.9 MW for a three-phase 11 kV circuit)

Light industry

- Coating and painting equipment
- Control equipment not containing radio transmitter
- Measuring equipment and instrumentation not containing radio transmitters

Miscellaneous

- Equipment placed on the European market as compliant with Council

- Recommendation 1999/519/EC or harmonised EMF standards
- Battery chargers, non-inductive coupling designed for household use
- Battery-powered portable equipment that does not contain radio frequency transmitters
- Hydraulic ramps
- Workplaces containing electrical handheld, portable tools

Employees at particular risk

You must give special consideration to the safety of employees at particular risk. This includes employees who have informed you of any condition which could mean they are more susceptible to effects from EMF exposure (such as their wearing of active implanted medical devices (AIMDs), passive implanted medical devices (PIMDs) or body-worn medical devices (BWMDs) or of their pregnancy) and employees who work in close proximity to electro-explosive devices, explosive materials or flammable atmospheres.

Work activities/equipment where EMFs may exceed the ELVs

Some work activities will involve exposure to levels of EMFs which may exceed the ELVs and so potentially pose a risk to employees; the table below contains a non exhaustive list of such work activities/equipment, where further consideration will be necessary.

Please note that this does not mean you need to measure exposure directly – you can refer to other sources of information first to determine whether the ELVs are exceeded.

Sources of EMF which may exceed the ELVs and/or the indirect-effect ALs

Infrastructure (buildings and grounds)

- Broadcast and telecoms base stations, inside operator's designated exclusion zone
- Radio frequency or microwave energised lighting equipment
- Radio and TV broadcasting systems and devices
- Electrical supply
- Any electrical circuit or installation (including cables, busbars, switchgear and transformers), where the cables carrying the electrical currents are bundled together so that they are always touching or nearly so, but there are earthing arrangements that mean the cables collectively carry an unbalanced current of >100 A Any electrical circuit or installation (including cables, busbars, switchgear and transformers), where the cables or busbars carrying the electrical currents are separated, and the rating of the circuit or that part of it is >100 A (equivalent to 23 kW for a single-phase 230 V circuit, 69 kW for a three-phase 230 V circuit, or 1.9 MW for a three-phase 11 kV circuit)

Light industry

- Dielectric heating and welding
- Resistance welding: manual spot and seam welding
- Induction heating
- Induction soldering
- Magnetic particle inspection (crack detection)
- Industrial magnetiser and demagnetisers, e.g. tape erasers
- Microwave heating and drying
- RF plasma devices including vacuum deposition and sputtering
- Electromagnetic fields at work
- Heavy industry
- Industrial electrolysis
- Furnaces, arc and induction melting

Construction

- Microwave drying in the construction industry

Medical

- MRI equipment
- Medical diagnostic and treatment equipment using EMFs, e.g. diathermy and transcranial magnetic stimulation
- Transport
- Electrically-powered trains and trams (for overhead line equipment and third rail you should also refer to 'Electrical supply' in this table)
- Radar, air traffic control, weather and long range

Exposure limit values

ELVs are limits specified to protect your employees from the health and sensory effects of EMFs. Health-effect ELVs are used to prevent possible harm from the heating of tissue and electrical stimulation of nerve and tissue caused by exposure to EMFs. Sensory-effect ELVs are used to prevent effects such as magnetophosphenes (a flickering sensation), or a feeling of nausea, vertigo or a metallic taste caused by static magnetic fields.

Exceeding the ELVs

In certain circumstances the ELVs can be exceeded.

Exposure may exceed the sensory-effect ELVs during work activities as long as the applicable safety conditions stated in the schedule to the CEMFAW Regulations are met. You will not need to produce an exposure action plan and no further risk assessment will be needed **unless** exposure exceeds any of the indirect-effect ALs or the workplace includes employees at particular risk.

Where any sensory effects are reported to you, the risk assessment must be updated as necessary.

Risk assessments

You must undertake a suitable and sufficient assessment of the risks arising from your employees' exposure to EMFs.

Where your exposure assessment demonstrates that:

- the ELVs are, or may be exceeded (even when this is permitted, e.g. by an exemption); and/or
- the indirect-effect ALs are exceeded; and/or
- you have employees at particular risk;

you must carry out an assessment of any risks to your employees arising from EMF exposure.

The risk assessment must include, as relevant, consideration of:

- the ALs and ELVs;
- the frequency of the EMFs, level, duration and type of exposure, including the distribution over the employee's body and the variations between areas in the workplace;
- direct effects;
- indirect effects;
- employees at particular risk;
- simultaneous exposure to multiple frequency fields;
- multiple sources of exposure;
- information available from the manufacturer of relevant equipment;
- information obtained from any appropriate health surveillance undertaken;

- the existence of replacement equipment designed to reduce the level of exposure to EMFs;
- other health and safety-related information.

Where a risk assessment is required and you employ five or more employees you must:

- keep a suitable record of the significant findings of your most recent risk assessment; and
- keep a suitable record of the most recent action plan.

APPENDIX 8 - EQUALITY IMPACT ASSESSMENT PART 1 INITIAL SCREENING

Service/Function/Policy/Project/Strategy	Division	Assessor (s)	New or Existing Service or Policy?	Date of Assessment
COPR HSFS 21 v.8	CSS	Andrew Grierson	Existing Policy	31/12/2024
1) Who is responsible for this policy? Name of Division/Directorate: The CSS Division – Radiation Safety				
2) Describe the purpose of the service / function / policy / project/ strategy? Trust-Wide – all users of potentially hazardous Ionising/Non-ionising Radiations				
3) Are there any associated objectives? Yes				
4) What factors contribute or detract from achieving intended outcomes? None				
5) Does the policy have an impact in terms of age, race, disability, gender, gender reassignment, sexual orientation, marriage/civil partnership, maternity/pregnancy and religion/belief? No				
<ul style="list-style-type: none"> • If yes, please describe current or planned activities to address the impact [e.g. Monitoring, consultation] – 				
6) Is there any scope for new measures which would promote equality? [any actions to be taken]				
7) Are any of the following groups adversely affected by the policy?				
Protected Characteristics	Affected?	Impact		
a) Age	No			
b) Disability	No			
c) Gender	No			
d) Gender Reassignment	No			
e) Marriage/Civil Partnership	No			
f) Maternity/Pregnancy	No			
g) Race	No			
h) Religion/Belief	No			
i) Sexual Orientation	No			
8) Provide the Equality Rating of the service / function / policy / project / strategy – tick (✓) outcome box				
Outcome 1 ✓	Outcome 2	Outcome 3	Outcome 4	
<i>*If you have rated the policy as having an outcome of 2, 3 or 4, it is necessary to carry out a detailed assessment and complete a Detailed Equality Analysis form – see CORP/EMP 27.</i>				
Date for next review: February 2028				
Checked by: S Elliott		Date: 18.2.2025		