

JOB DESCRIPTION

1. JOB DETAILS

Job Title:	Principal Physicist Radiation protection
Band:	8A
Base	Royal Surrey County Hospital, Guildford
Department / Portfolio	Oncology & Medical Physics
Reports to:	Head of Medical Physics
Accountable for	N/A

2. JOB PURPOSE

The Regional Radiation Protection Service (RRPS) provides comprehensive radiation protection, diagnostic radiology physics and X-ray engineering services over the above area and beyond. These include the statutory provision of Radiation Protection Adviser (RPA), Medical Physics Expert (MPE) in Diagnostic Radiology, Laser Protection Adviser (LPA), Radioactive Waste Adviser (RWA) and MR Safety Adviser. It has a team of 9 clinical scientists, 6 medical physics technical officers, a computer scientist and 2 admin staff, plus postgraduate trainees and undergraduate students. The RRPS also provides advice and services to users of non-ionising radiations including MRI, lasers, radiofrequency, ultraviolet and microwaves. The Service provides NHSBSP mammography services for the South East (East) region. The RRPS is active in income generation outside the NHS and provides a wide range of radiation protection advice and services to a variety of employers including corporate organisations, companies, private hospitals, dentists, vets and others. The service is active in research, development and training, including organising courses both locally and at a national level.

2.1 JOB SUMMARY

To be a clinical scientist Principal Physicist and a senior member of the Regional Radiation Protection (RRPS) team, working with other team members in the provision of a comprehensive radiation protection and radiological physics service to the NHS and outside bodies. To act as a Medical Physics Expert (MPE) under the Ionising Radiation (Medical Exposure) Regulations 2017 [IR(ME)R2017]. To participate in all areas of work, and to take on responsibility for key aspects of the service. The postholder works at a senior professional level, providing advice and services to employers facilitating compliance with ionising radiation legislation and working towards further certification such as RPA. Issues are very specialist, varied and highly complex. They will operate with a high degree of autonomy, particularly in the areas for which they are responsible.



3. KEY RESULT AREAS/MAIN DUTIES AND RESPONSIBILITIES:

3.1 Clinical Scientific

- Act as an MPE (diagnostic radiology) for diagnostic radiology clients across the NHS and private sector. Liaise as necessary with clinicians, radiologists, radiographers and other healthcare professional on the protection of the patient and the necessary optimisation of dose and image quality.
- Lead a key area of scientific work within the team.
- Investigate, measure, analyse and report on complex radiation safety, dose and image quality performance issues using electronic devices and computers on a wide variety of diagnostic X-ray installations from simple radiographic systems to highly complicated and sophisticated state of the art digital systems.
- Act as a trainee RPA under the Ionising Radiations Regulations 2017 [IRR17] to NHS Trusts and independent healthcare providers served by the RRPS, with the aim of securing certification as an RPA. Provide expert advice with others as part of training to include highly complex issues such as:-
 - (a) The requirements of IRR17 and the Ionising Radiation (medical exposure) Regulations 2017 [IR(ME)R17] and all other legislation, approved codes and good guidance associated with ionising radiation.
 - (b) The design of new or modified radiation facilities including the undertaking of associated shielding calculations.
 - (c) Radiation equipment specification.
 - (d) Setting up a radiation protection system including notification to the HSE and preparation of local rules and systems of work.
 - (e) Risk assessments relating to the radiation safety of staff, patients & public.
 - (f) Radiation safety training.
 - (g) Testing of equipment.
 - (h) Measurements of patient dose
 - (i) Incident investigations and advice on notification to appropriate authorities regulators.
- To be involved in the provision of non-ionising radiation protection services. To include radiation safety audits and performance measurements where appropriate together with the provision of advice for ultrasound, ultraviolet, MRI and lasers.
- Perform audit and inspection procedures for compliance with relevant legislation, standards and agreed good practice in the following areas:-:
 - (a) For ionising radiations in all types of organisations and departments where radiation is used including hospital departments of radiology, nuclear medicine, radiotherapy, cardiology, pathology plus dental practices, veterinary practices and other commercial and industrial radiation facilities.
 - (b) With others for non-ionising radiations including lasers, ultraviolet and radiofrequency in hospital departments including theatres, physiotherapy and dermatology.
- Calculate dose and risk in the event of unnecessary, inadvertent or accidental exposures, including radiation exposures of the unborn child. Advise the hospital consultants involved and General Practitioner where appropriate.



- Provide the necessary expertise and back-up as required in the event of a major incident involving radiation, including local incidents and those handled under the National Arrangements for Incidents involving Radiation (NAIR) scheme.
- To be involved in the design, development, organisation and maintenance of the many databases critical to the daily work of the RRPS.

3.2. Managerial

- To act as a senior member of the RRPS team assisting the Head of the RRPS in managing the provision of comprehensive diagnostic radiology physics and radiation protection services. To help ensure that the obligations and targets of the RRPS are met and that the budget is balanced.
- To delegate tasks and responsibilities as appropriate with regard to the areas of responsibility held by the postholder.
- To develop, create and maintain written protocols and procedures for the measurement, testing and survey activities which are the responsibility of the postholder.
- To promote the Section's income generating activities in both the NHS and private sectors by provision of services, support, networking and liaison with existing and potential customers in both hospitals and industry.
- To prioritise and manage one's own work including in particular with regard to the functions of a Medical Physics Expert and a lead in areas of particular responsibility.

3.3 Teaching, training and research

- To be involved with the supervision and training of trainees within the RRPS.
- Be involved in developing and giving training courses and tutorials in radiation protection and diagnostic radiology physics at local, regional and national level
- Present papers at local and national scientific meetings and publish papers in peer-refereed journals.
- Keep abreast of the latest technical and scientific developments in order to further the work of the Department.
- Supervise MSc and other R&D projects being undertaken by clinical scientist trainees and other trainees/students within the Department.



3.4 Professional

- To be State Registered as a Clinical Scientist and to participate in the IPEM Continuing Professional Development scheme or other appropriate scheme to maintain State Registration.
- To maintain Medical Physicist Expert status by an approved awarding body.
- To work towards gaining Certification as a Radiation Protection Adviser by the awarding body RPA2000 by means of a constructing a portfolio of evidence covering both competence and knowledge.
- Keep abreast of the latest scientific and technical development and their application in the relevant clinical fields. Attend appropriate scientific meetings and seminars as appropriate as part of continuing professional development.

3.5 General Working Requirements

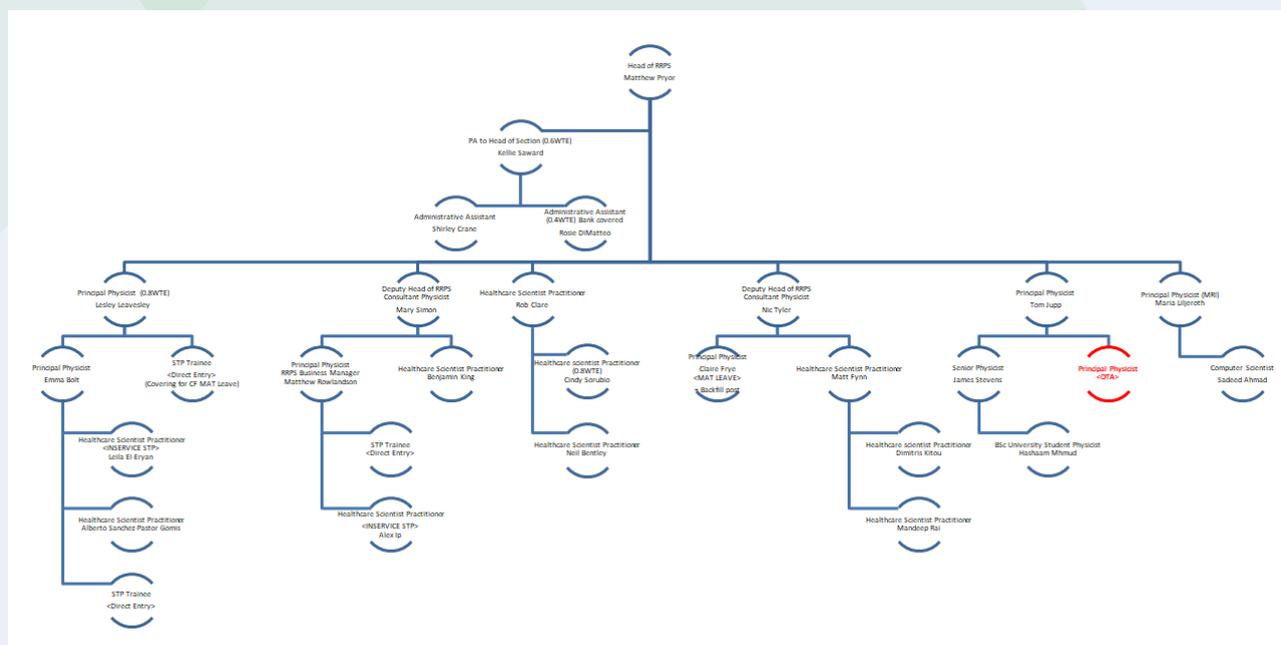
- To work effectively and proactively within a multi-disciplinary team, involving close working, team building and scientific supervision of other technical and scientific team members as appropriate.
- Carry out all duties in accordance with the requirements of IRR17 and IR(ME)R17 and other relevant Statutory Regulations, Approved Codes of Conduct and Local Rules pertaining to radiation, together with the general provisions of the Health & Safety at Work Act.
- Work in other departments, other Trusts, independent hospitals and other institutions and organisations served by the RRPS, in liaison with radiology managers, radiation protection supervisors, heads of departments, medical consultants and managers. Liase also with commercial organisations and industry. When working outside the Trust the postholder will abide by local policies and practices. They will behave professionally and courteously at all times seeking to uphold the standards and increase the reputation of the RSCH.
- On a day to day basis drive many local journeys throughout the South East and regularly be required to drive long distances to clients and premises served by the RRPS over the Country as a whole.
- To be on-call for radiation emergencies under the Trusts Emergency Plan, the National Arrangements for Radiation Emergencies (NAIR) and any other major radiation emergency.
- To carry out extended periods of VDU work on a regular basis.
- Take all precautions when dealing with X-rays and other ionising radiation hazards and when handling radioactive sources or radioactive waste.
- Take all precautions when dealing with non-ionising radiation hazards such as magnetic and electric fields, lasers, ultraviolet, infrared and microwaves.
- Take all precautions as regards electrical and mechanical hazards when operating and investigating sophisticated radiology and imaging equipment.



4. KEY WORKING RELATIONSHIPS AND COMMUNICATION

Internal to the Trust	External to the Trust
All staff groups involved with ionising and non-ionising radiation	External clients involved with ionising and non-ionising radiation, including, NHS and private healthcare providers, dentist, vets, equipment manufacturer, suppliers and universities.

5. DEPARTMENT CHART OR REPORTING STRUCTURE OF THE POST:



6. OTHER RESPONSIBILITIES

Finance

You are required to comply with the Trust Standard of Business Conduct policy and the NHS Codes of Conduct and Standards of Business Conduct for NHS Staff and you are required to declare all situations where you (or a close relative or associate) have a controlling interest in a business (such as a private company, public organisation, other NHS organisation or voluntary organisation) or in any other activity which may compete for an NHS contract to supply goods or service to the Trust.

Confidentiality

All employees must respect and protect the confidentiality of matters relating to patients or other members of staff and must comply with the requirements of the Data Protection Legislation. This means that the protection of personal data in any form of media (e.g. system, paper, word of mouth by any means that personal information can be processed) is a requirement by law. Any member of staff found to have permitted unauthorised disclosure of personal confidential and sensitive



information and is found in breach of their duty of confidentiality could lead to disciplinary proceedings in accordance with the trust's disciplinary policy. No confidential information must be accessed, read, discussed, or disclosed unless it is necessary in the pursuance of the legitimate duties of their role.

Equal Opportunities

- The Royal Surrey is an equal opportunity employer. We celebrate diversity and are committed to creating an inclusive environment for all employees. A copy of Equality and Diversity Policy and our Single Equality and Diversity Scheme are available from the Human Resource department or on the internet/intranet.
- Staff must ensure that they treat members of staff, patients and visitors with dignity and respect at all times and report any breaches of this to the appropriate manager.

Corporate Governance

- The Trust, as a public organisation, is committed to acting with honesty, with integrity and in an open way. The Trust Board of Directors is responsible for ensuring that Trust services are managed in this way. We are working together to achieve the highest levels of compliance with the risk management standards promoted through the NHS Executive's Controls Assurance programme and the Clinical Negligence Scheme for Trust (CNST). All of us are expected to become familiar with these standards as they relate to our work and further details are available from your manager.
- One of the controls assurance standards relates to Health & Safety. Under the Health & Safety at Work Act 1974, all of us have a duty:
 - To take reasonable care of ourselves and others at work;
 - To co-operate in meeting the requirements of the law.
- All staff must have an understanding of the Trust's Health and Safety policy and be aware of the responsibilities associated with this.
- All staff must adhere to the Trust's Infection Control Policies and maintain the standards laid down in those policies, complying with dress codes and hygiene codes in all clinical areas.

Further details are available from the Trust's Health & Safety Advisors.

Safeguarding

Royal Surrey NHS Foundation Trust has a safeguarding policy for both adults and children and is committed to the protection of children, young people and adults. The Trust acknowledges that, due to the nature of hospitals, many people who would not normally be considered vulnerable can be in a position where they lack capacity or have reduced control. It also recognises that abuse of vulnerable adults/children can occur within domestic, institutional and public settings, and as such we have a responsibility to protect patients and associated dependents within our care. All employees have a responsibility to meet the statutory requirements to safeguard and promote the welfare of both children and adults to ensure that they come to no harm and to raise any concerns regarding safeguarding. All employees would be fully



supported in raising any safeguarding concerns. All employees must be aware of Trust policies in relation to safeguarding and must adhere to them at all times.

Infection Control

Infection Prevention and Control is the responsibility of all Trust staff.

All staff have a responsibility to protect service users, visitors and employees against the risk of acquiring health care associated infections by consistently observing Trust Infection Prevention and Control Policies and procedures and best practice guidance in order to maintain high standards of Infection Prevention and Control.

Our vision, mission and values

The Trust undertook a listening exercise with its staff which has formed our vision, mission and values. We are currently working with staff to define our new behaviours which will become part of everything we do.

Our Mission

Together we deliver compassionate, safe care every day.

Our Vision

To provide nationally celebrated, community focused health and care.

Our values are:

- **Continuously improving**
Continuously improving is not just a value.
It's what unlocks our innovation.
- **Excelling together**
Excelling together is not just a value.
It's what we do every day.
- **Caring together**
Caring together is not just a value.
It's what sets our Royal Surrey family apart.
- **Learning together**
Learning together is not just a value.
It's what keeps our services safe.



7. RIDER CLAUSE

This is an outline of duties and responsibilities. It is not intended as an exhaustive list and may change from time to time in order to meet the changing needs of the Trust and Division.

Signed (Employee):----- Date:-----

Print name (Employee):-----

Royal Surrey NHS Foundation Trust aims to ensure that no job applicant or employee is unfairly disadvantaged on the grounds of race, colour, nationality, ethnic origin, age, disability, sex, sexual orientation, marital status/civil partnership, religion/belief or trade union status.



PERSON SPECIFICATION

POST: Principal Physicist Radiation Protection

BAND: 8A

*Assessment will take place with reference to the following information

A=Application form

I=Interview

T=Test

C=Certificate

Area	Essential	Desirable	Assessment
Values and Behaviours			
Demonstrable commitment to and focus on quality, promotes high standards to consistently improve patient outcomes	√		A/I
Demonstrable skill to work together to serve our community through delivering safe and excellent clinical care	√		A/I
Value diversity and difference, operates with integrity and openness	√		A/I
Treating others with compassion, empathy and respect and	√		A/I
Share information openly and effectively with patients, staff and relatives	√		A/I
Works across boundaries, looks for collective success, listens, involves, respects and learns from the contribution of others	√		A/I
Uses evidence to make improvements, increase efficiencies and seeks out innovation	√		A/I
Actively develops themselves and others	√		A/I
Qualifications			
Good honours degree in a relevant subject	√		A/C
MSc or PhD in radiation protection, medical physics [or equivalent]	√		A/C
Corporate Membership of IPEM [or equivalent]	√		A/C
MPE Certification	√		A/C
State Registration as a Clinical Scientist with the HCPC	√		A/C
Management qualification		√	A/C
Knowledge and Experience			
Knowledge and understanding of the nature, use, risks and radiation protection of ionising radiations such as X-rays, gamma rays and electrons.	√		I
Knowledge and understanding of all the areas of legislation, approved codes and good guidance, applicable to the use of ionising radiations in the field of medical, dental, veterinary and industry where appropriate. Knowledge to act as a Medical Physics Expert regarding the safety of the patient under IRMER within the field of radiology.	√		I



Specialist knowledge of the techniques employed to measure the performance and radiological safety of digital and analogue state of the art X-ray imaging equipment.	√		I
Knowledge and understanding of ultrasound and non-ionising radiations including magnetic, electric fields, ultraviolet, infrared, microwaves and particularly lasers.		√	I
Experience in medical physics and radiation protection. Analysing and interpreting highly complex and varied situations and judging measures required to assess performance, risk and benefit in comparison with relevant legislation, codes, guidance and standards.	√		I
Specialist experience or awareness in the use of physics testing equipment and complex procedures employed to measure the application, performance and safety of a wide variety of X-ray and other ionising and non-ionising radiation equipment.	√		I
A level of understanding of clinical risks to patients, staff and public arising from ionising radiation exposure.	√		I
Awareness of relevant legislation, national standards, professional and other guidelines	√		I
Skills and Capabilities			
Capacity to act and to exercise own initiative when dealing with issues within own specialist areas of competence.	√		I
Able to prioritise and manage own work.	√		I
Able to use complicated image display and graphical software in the analysis of clinical and test object medical X-ray and other images.		√	I
Able to input, analyse and extract data and present in graphical or other forms from data files, spreadsheets and databases.	√		I
Able to undertake scientific, clinical and other information searches using on-line journal and other internet search facilities.	√		I
Able to use Excel, Word, Powerpoint and other MS packages to create documents, spreadsheets, presentations and data files.	√		I
Manual dexterity: ability to make accurate measurements using sophisticated testing equipment.	√		I
Able to lift medium weight (up to 20 Kg) testing instrument cases, in and out of vehicles, occasionally over difficult terrain, throughout hospitals including upstairs.		√	I
Able to analyse complex and difficult scientific issues.	√		I
Able to concentrate frequently when subject to unpredictable working patterns.	√		I
Able to concentrate for prolonged periods under pressure and in difficult or emergency situations.	√		I
Able to communicate complex information at all levels in both Trusts and small and large non-NHS organisations.	√		I
Able to write scientific papers and make presentations at local, national and international conferences.	√		I



Able to train varied groups of other professional and non-professional staff at all levels.	√		I
Able to deliver teaching and training on complex subjects to a wide range of professional and non-professional groups.	√		I
Personal Attributions			
Used to working in a busy environment	√		I
Adaptability, flexibility and ability to cope with uncertainty	√		I
Willing to engage with and learn from peers, other professionals and colleagues in the desire to provide or support the most appropriate interventions	√		I
Professional calm and efficient manner	√		I
Effective organiser / prioritisation skills	√		I
Demonstrates a strong desire to improve performance and make a difference by focusing on goals	√		I
Attention to detail	√		I
Highly motivated with ability to influence and inspire others	√		I
Ability to work independently	√		I
Adheres to NHS Managerial Code of Conduct	√		A/I/R
Commitment to providing improvement to Patient experience	√		A/I/R
Able to relate and adapt to the perspective of others, tenacity in getting the job done	√		A/I/R
Professionally credible & confident	√		A/I/R
Clarity of thought and articulate in presenting ideas	√		A/I/R
Commitment to Trust Policies and Values & Behaviours	√		A/I/R
Other			
Willing to work some unsocial hours	√		A/I
Enthusiasm and commitment	√		A/I
Willing to travel off-site	√		A/I
Entitled to drive in the UK (having a UK license or equivalent – please check at https://www.gov.uk/driving-nongb-licence)	√		A/C

