

Join us at UHB



Building healthier lives

Welcome from our Interim CEO

Jonathan Brotherton



Dear Candidate,

Thank you for your interest in working with us here at University Hospitals Birmingham NHS Foundation Trust (UHB).

Please take some time to read through this application pack to gain a better understanding of our Trust in general, this role in particular, and why UHB is a great place to work.

UHB is one of the largest teaching hospital trusts in England, serving a local, regional, national, and international population. We employ around 22,000 colleagues and are committed to investing in your training, development, health and wellbeing and future career with us.

We see and treat more than 2.2 million patients every year across our four hospital sites - Good Hope, Heartlands, Queen Elizabeth Hospital Birmingham and Solihull Hospital - and through our community services and clinics. We are centres of excellence in many clinical specialties.

But it's not just our patients we invest in at UHB; we also invest in our staff. In fact, we believe we are defined by our people, not the state-of-the-art equipment or facilities we work out of. We have high standards and we want to build healthier lives for patients and our teams, wanting you to enjoy your job, and flourish in it.

To reinforce this commitment, we recently refreshed our values after hearing from over 1,400 colleagues about what made them proud to work at UHB

We will be:

Kind: the kindness that people show to each other every day

Connected: the connections we build with everyone around us

Bold: the ability to be bold in how we think, speak and act

We hope you find this pack useful and look forward to receiving an application from you for this role within our Trust.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'J Brotherton', written in a cursive style.

Jonathan Brotherton
Interim Chief Executive Officer

JOB DESCRIPTION

Job Title	Clinical Scientist in Diagnostic Radiology and Radiation Protection
Pay Band	7
Department	RRPPS
Division	1B
Reports to	Senior Clinical Scientist, RRPPS
Professionally Responsible to	Head of RRPPS

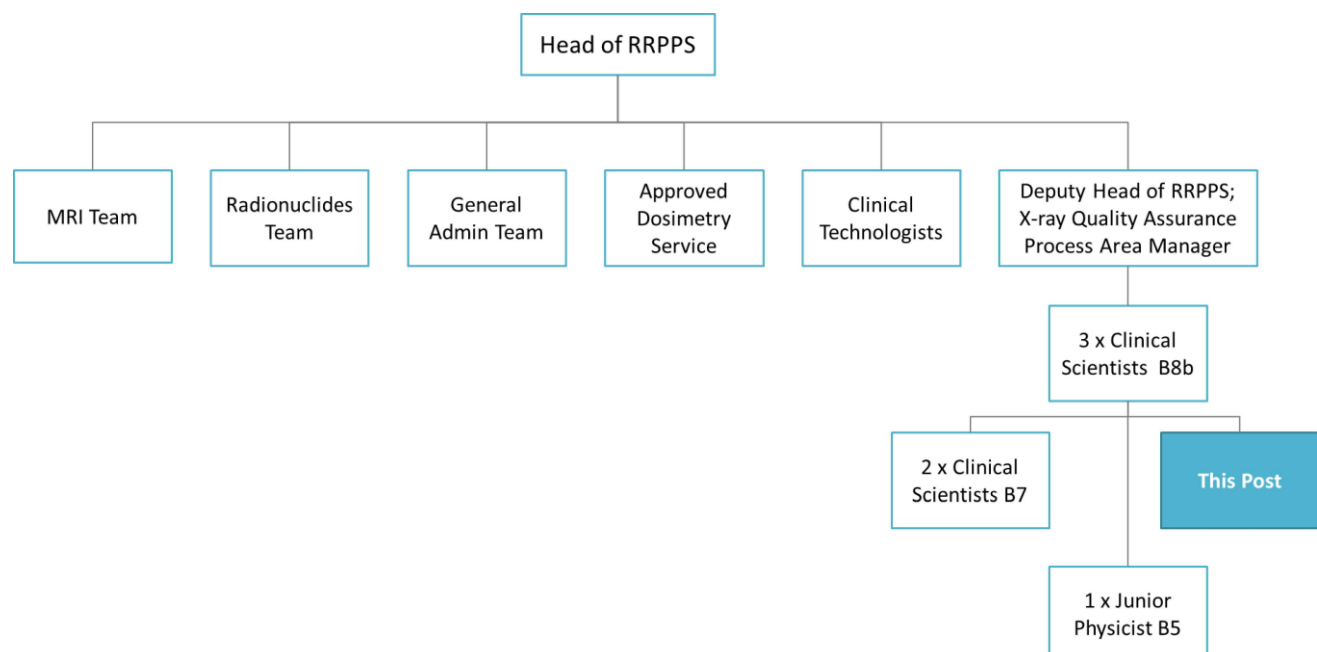
JOB SUMMARY

The post holder is a Clinical Scientist within the highly specialised clinical scientific and technical services of X-ray Quality Assurance (XQA) and Radiation Protection Advice (PAD)

The post holder:

- Assists the Medical Physics Experts (MPE) for Diagnostic Radiology.
- Supports the Radiation Protection Advisers (RPA) in giving radiation protection advice to customers for Diagnostic Radiology and Radiotherapy.
- Performs safety and quality assurance surveys on x-ray equipment.
- Participates in the training of Clinical Scientists and Clinical Technologists within RRPPS.

TEAM/DEPARTMENT STRUCTURE CHART



KEY SKILLS

Communication (key skills)

- Communicates complex test results and advice to other healthcare professionals in writing and verbally.
- When working in other Trust and Institutions, liaises with local Heads of Department, Superintendent Radiographers, or their representatives as appropriate, and adheres to local policies and practices.
- Communicates complex information both orally and in writing to large clinical, scientific, technical and other staff groups, e.g. the preparation and presentation of scientific papers to large groups at national and international conferences and for peer reviewed journals.
- Prepares and deliver teaching and training to colleagues, trainees and other groups of professional staff.
- Liaises with manufacturers and engineers on all aspects of equipment performance and safety testing.

Analytical and judgement skills (key skills)

- Produces documents and prepares reports. These are based on legislative requirements and involve the analysis and comparison of highly complex facts, and comparison of a range of options.
- Assists the Radiation Protection Advisers (RPA) and Medical Physics Experts (MPE) in:
 - Preparing procedures, protocols, local rules and risk assessments for Diagnostic Radiology (DR).
 - Considering the plans for new x-ray facilities and carrying out calculations to determine the level shielding required with respect to dose constraints.
 - Carrying out patient dosimetry measurements and optimising doses in DR.
- Possesses the analytical skills and judgment to deal with a range of day-to-day situations such as investigating practical problems with diagnostic x-ray equipment, and choosing appropriate analysis methods for calculation & presentation of results.

Planning and organisation (key skills)

- Organises own work within the XQA and PAD Process Areas.
- Complete careful records of all work performed .
- There will always be a requirement to plan around Clinical Sessions and around the availability of RRPPS test equipment.

Physical skills (key skills)

- Performs tasks involving fine and accurate manipulation, e.g. positioning of phantoms and other equipment .

KEY RESPONSIBILITIES

Policy and service development (key responsibilities)

- Works in accordance with the RRPPS accredited Quality System (ISO 9001:2015).
- Adapts work protocols to suit the specialist tests performed. Guidance may be provided by peers or by external reference points.
- Takes part in writing, reviewing and implementing XQA, PAD and NRS documentation within the RRPPS Quality System.
- Assists in validating new equipment and designing new work methods to meet new service developments.



- Ensures that all activities are carried out within a quality framework and meets regulatory requirement.
- Suggests changes and improvements to quality system documents, and makes changes to be ratified by senior colleagues.

Patient and client care

- Provides a clinical scientific and technical service for users of diagnostic X-rays in hospitals, private clinics, dental practices, veterinary practices and Her Majesty's Prisons.
- Assesses the suitability of a given area for use with diagnostic X-rays, radiotherapy and, including use of appropriate notices and warning signs, provision of a Quality Assurance (QA) programme and other legislative requirements, e.g. Local Rules.
- Undertakes tests on shielding materials pre and post installation. Tests are often carried out using a radioactive source, e.g. 241Americium. The post holder will be required to transport the source to and from site; this will be in accordance with the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009.
- May be called upon in the event of a major radiation incident to provide support at either the A&E Department or Radiation Monitoring Unit. This may include out of hours attendance.
- At all times, the post holder works in compliance with the Ionising Radiations Regulations 2017 and the Ionising Radiation (Medical Exposures) Regulations .

Information resources (key responsibilities)

- Regularly uses a wide range of radiation measuring instruments and various PC IT applications (MS Office, Image Analysis software and relational databases such as Q-pulse and Access) to create reports, presentations, spreadsheets and enter data in databases, e.g. Access., The Excel spreadsheets (which require the setting up and adjustment of formulae) and Power Point presentations, are used by other staff.
- Regularly uses and contributes to the development of bespoke software, for example for the analysis of patient radiation dose data.

Freedom to act (key responsibilities):

- Works independently; reports are countersigned by a senior colleague.
- Exercises initiative when dealing with issues within own areas of competence, guided by departmental procedures and the senior clinical scientists.

BUDGETARY AND RESOURCE MANAGEMENT

Financial and physical resources (budgetary and resource management)

- Performs Critical Examinations and Commissioning tests on the full range of expensive and highly complex X-ray equipment (both new and modified).
- Regularly undertakes QA testing of the full range of expensive and highly complex diagnostic X-ray and phototherapy equipment for use on patients. There will always be a requirement to plan around Clinical Sessions and around the availability of RRPPS test equipment.
- Is responsible for the safe use of expensive (>£50,000) and highly complex diagnostic X-ray equipment, complex radiation and electronic equipment during testing, and for ensuring that on completion of testing the equipment is left in a safe state.

MANAGEMENT , SUPERVISORY, TEACHING, TRAINING RESPONSIBILITIES

Human resources (management, supervisory, teaching, training)

- Participates in the teaching and training commitments of the department, including training of Clinical Scientists , Clinical Technologists and other professional groups, e.g. lecturing on the nationally advertised Radiation Protection Supervisors Course (>20 people).
- Supervises students (up to MSc level) undertaking projects within the department.
- Undertakes research activities within the department, and collaborate with other academic and NHS colleagues in such areas.
- Presents research results at national and international meetings, and by publication in peer-reviewed journals.
- Presents relevant information gained from course and conference attendance to other RRPPS staff.

RESEARCH AND DEVELOPMENT

Research and development

- Undertakes, and keeps records of, Continuing Professional Development in order to enhance practice and maintain conditions of registration.
- Keeps abreast of current scientific, technical and legislative developments in Diagnostic Radiology Radiation Protection, Radiation Metrology, and associated fields. This is achieved by attending meetings and reading appropriate publications.

EFFORT

Physical effort (effort)

- May be required to lift some heavy weights, e.g. phantoms and other equipment.

Mental effort (effort)

- Able to concentrate frequently and for prolonged periods, e.g.:
 - Performing quality assurance tests on complex equipment.
 - Analysing results and producing reports.
 - Lecturing and presentation of scientific papers: occasional very high concentration both for preparation and presentation.
- Able to cope with unpredictable work patterns such as emergency testing of repaired equipment required for the diagnosis of patients with a very short timescale.

Emotional effort (effort)

- Exposure to distressing circumstances is rare.

Working conditions (effort)

- Works with x-rays, understanding the hazards posed and precautions and security needed.
- Works in a patient environment, maintaining patient confidentiality and dignity and being aware of infection control hazards and policies.
- Occasional requirements to drive long distances (up to 3hr journeys each way).

TRUST VISION & VALUES

DO NOT AMEND THIS SECTION

The Trust is clear on its vision and values and aims to make sure that they are reflected in all areas of activity. Our vision is simple; building healthier lives. Our values apply to every member of staff and help us in all we do and how we do it. They are:

Kind: The kindness that people show to each other every day

Connected: The connections we build with everyone around us

Bold: The ability to be bold in how we think, speak and act

ADDITIONAL INFORMATION

This job description is designed to assist post holders with understanding what is expected of them in their role. University Hospitals Birmingham NHS Foundation Trust may ask them to undertake other duties, as required, which are not necessarily specified on the job description but which are commensurate with the grade of the post.

The job description itself may be amended from time to time in consultation with the post holder, within the scope and general level of responsibility attached to the post.

All post holders must take responsibility to ensure that they are aware of and adhere to all Trust policies, procedures and guidelines relating to their employment regardless of their position within the Trust.

Last Updated: 23rd January 2023

PERSON SPECIFICATION

JOB TITLE:	
TRAINING, QUALIFICATIONS AND PROFESSIONAL REGISTRATIONS	
ESSENTIAL	DESIRABLE
<ul style="list-style-type: none"> Honours degree in Physics or other relevant subject, or equivalent Relevant higher degree (eg MSc, MPhil, PhD) or equivalent Has completed and passed the NHS Scientist Training Programme (STP) or equivalent. Has state registration as a Clinical Scientist with the Health & Care Professions Council 	
EXPERIENCE & KNOWLEDGE	
ESSENTIAL	DESIRABLE
<ul style="list-style-type: none"> Has experience of quality assurance and safety surveys of diagnostic x-ray equipment Has experience of radiation protection in diagnostic radiology Specialist knowledge of a range of working practices and equipment in diagnostic x-ray, building on theoretical knowledge and practical experience. Knowledge & experience to provide specialist advice to customers about complex issues such as potential risks from ionising radiation. Good understanding of radiation protection principles and legislation, e.g. IRMER & IRR17 	<ul style="list-style-type: none"> Has experience of radiation protection in radiotherapy
SKILLS & ABILITY	
ESSENTIAL	DESIRABLE
<ul style="list-style-type: none"> Able to perform highly-complex, specialised tests on Imaging equipment such as x-ray, CT and fluoroscopy Able to perform complex calculations in order to produce radiation protection advice 	
OTHER SPECIFIC REQUIREMENT	
ESSENTIAL	DESIRABLE
<ul style="list-style-type: none"> Full driving licence 	<ul style="list-style-type: none"> Access to own car

