RCA

Senior Research Associate in Robotics & AI

May 2026

Artwork: Yiran An (Ceramics & Glass, 2022)

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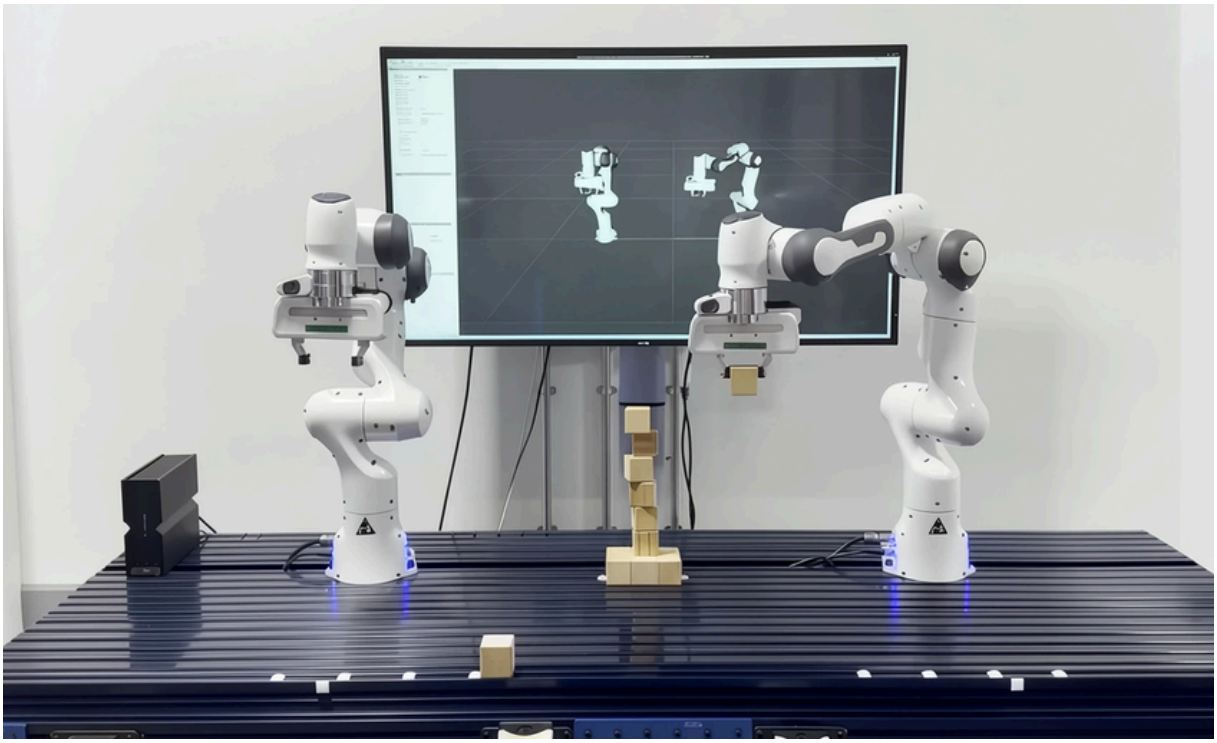

WELCOME TO THE RCA

Photo: Iwan Baan

Founded in 1837, the Royal College of Art is the world's largest postgraduate-only community of art and design students. It has been ranked number one in the world 12 consecutive years (QS World University Rankings by Subject 2015-2026).

Studying at the RCA is the starting point for UK and global creative leaders. With more than 30,000 RCA alumni all over the world, the College's graduates form a diverse international network of artists, designers, creators and innovators.

Around 2,500 students are spread across four schools – Architecture, Arts & Humanities, Communication and Design - and in the RCA's Research Centres. The College creates an environment that champions exploration, collaboration and interdisciplinary learning - using art and design to reframe the possibilities of the humanities, technology, and ethics; and equipping graduates for new futures and opportunities

Research is at the heart of the RCA's impact. In active discussion with the world, the College brings interdisciplinary researchers and partners together in vital areas such as climate and sustainability, technology and society, and leads the field in practice-based research. As a result, the RCA is ranked as one of the most research-intensive specialist art and design universities in the UK [under the Research Excellence Framework 2014 and 2021].

Photo: Richard Haughton

The RCA champions exploration, collaboration and interdisciplinary learning - using art and design to reframe the possibilities of the humanities, technology, and ethics. We experiment, question and discover, putting research and practice at our heart, to equip students for new futures and opportunities and build on current knowledge.

Current ‘real world’ practices of our disciplines are fully integrated into our teaching delivery and student learning. The RCA model also consciously uses both the high research active levels of faculty, and the absence of undergraduate provision, to provide concentration and focus, in order to use research to creatively ‘disrupt’ the learning experience.

Our People

Photo: Richard Haughton

The strength of the RCA lies in its people: our students, academic community, researchers, technical specialists, professional services teams and our global network of alumni and partners.

The RCA's Chancellor is Sir Jony Ive, one of the world's most influential designers. The Pro-Chancellor and Chair of Council is Sir Peter Bazalgette, and the President & Vice-Chancellor — the College's Chief Executive — is Professor Christoph Lindner, who joined the RCA in 2024.

The RCA's academic faculty bring world-leading expertise and industry knowledge to the College's model of teaching. All faculty are actively engaged in their relevant industries and professional practice beyond academia, and the RCA is the only specialist art and design university where all of our permanent academic staff are also research active and included in the RCA's submissions to the UK Research Excellence Framework.

The RCA has a total academic and research workforce of over 400 people, which includes Associate Lecturers, Visiting Professors and Guest Lecturers who bring 'live industry' experience into the taught curriculum

The RCA also employs a team of over 100 highly skilled technicians, many of whom themselves have postgraduate qualifications and are well established and recognised practitioners in their fields of specialism. Our skilled technical staff and technical resources are integral to delivering an interdisciplinary approach which is a key part of the student experience.

OUR STRATEGIC DIRECTION: TOWARDS THE RCA AT 200 (2026–2030)

The RCA's new Strategic Plan sets out a transformational five-year phase as we begin our journey towards our bicentenary in 2037. Our ambition is to become the world's most influential art and design community, with a global footprint and a renewed approach to research, education, partnerships and organisational culture.

By 2030:

- The College will operate across two revitalised central London campuses, including a reimagined Darwin Building at Kensington.
- We will establish research and education hubs outside the UK for the first time.
- We will strengthen our global partnerships, increase access to scholarships and widen participation for students from all backgrounds.
- We will be recognised for leadership in emerging creative technologies, especially AI, and for our contribution to sustainability, regenerative practice and public good.

Our work is underpinned by the RCA's four values — Collaboration, Curiosity, Inclusion and Integrity — and by commitments to long-term resilience, financial sustainability, staff and student wellbeing, and a culture where creativity and innovation thrive.

The College's ambitions will be delivered through three Strategic Pillars:

Strategic Pillar One
Creating and delivering the best art and design education, dialogue and research.

Strategic Pillar Two
Championing a community with outstanding potential who are diverse, inclusive and connected.

Strategic Pillar Three
Convening transformational exchanges of art and design expertise and ideas.

Our Values

Photo: Shaun James

The RCA community operates in line with four agreed values:

Curiosity

We have a tenacious commitment to innovation and openness to change. We positively interrogate ideas, assumptions and plans and welcome the honest scrutiny that is alive in a learning community.

Inclusion

We celebrate diversity and embrace difference as a source of strength. We strive for an inclusive RCA community, removing barriers and challenging exclusionary and discriminatory practices.

Collaboration

We value what happens together and we help and support each other to achieve our collective goals. We work in partnership with our students, staff, alumni, institutions and communities across the globe to make a lasting difference.

Integrity

We are always willing to listen, we offer constructive feedback and we promote accountability, building relationships of mutual trust and respect. We are resilient in the face of challenges, pursuing outcomes with individual, cultural, societal and economic impact.

The School of Design at the RCA offers programmes that engage with a broad spectrum of design, ranging from industry-focused projects and collaborations with engineering and science to experimental and theoretical explorations. With a strong culture of innovation, experimentation, and debate, the School also offers research degrees at MPhil and PhD levels, enabling researchers to undertake deep exploration and develop a comprehensive understanding of topics such as industrial design, service design, systems thinking, sustainable production, and robotics. Through these programmes, researchers and students are equipped to address complex technological and societal issues with innovative, industry-relevant solutions. The School also offers a range of renowned MA programmes, including the MA/MSc in Innovation Design Engineering, delivered in partnership with Imperial College London. These programmes attract students from diverse academic and professional backgrounds, fostering a collaborative environment for tackling complex global challenges through design and engineering.

RCA Robotics Laboratory: Established in 2017, the RCA Robotics Laboratory is a leading research hub at the Royal College of Art, dedicated to advancing robotics through interdisciplinary collaboration across design, engineering, and experimental sciences. Led by the College's Academic Leader in Robotics, the lab's mission is to develop advanced robotic systems that enhance human safety, accessibility, and efficiency in industrial and challenging environments while promoting environmental sustainability. Located on the Battersea campus in central London, the lab features state-of-the-art facilities for designing, prototyping, and testing a diverse portfolio of robotic systems, from aerial robots and ground-based platforms to underwater robots.

Drawing inspiration from both natural and artistic realms, the lab adopts a unique, design-led approach to robotics, integrating creative insights with cutting-edge scientific methodologies. This approach not only drives technological sophistication but also ensures that robotic solutions are environmentally friendly and human-centric, addressing complex operational needs in diverse settings.

The lab has secured substantial funding for several high-impact projects as PI or Co-I, including the £4 million Innovate UK-funded MIMRee project, which developed intelligent robotic systems for offshore wind turbine blade maintenance; the EPSRC-funded Getting a Grip, advancing anchoring systems for robot mobility and manipulation; and the Interoperability in Robotics and Autonomous Systems Proving Ground, focused on advancing robotics standards and enhancing system integration. Other notable initiatives include Haptic Illusion and Topographies of Pain, supported by MedTech SuperConnector, and Artificial Intelligence in Design Lab, a collaboration with Hong Kong Polytechnic University.

A current initiative is the Circular Robot 5.0 project, an EPSRC-funded project that leverages AI-driven predictive maintenance, blockchain traceability, and comprehensive life-cycle assessments to promote a circular economy in industrial robotics.

Through these projects, the RCA Robotics Laboratory continues to push the boundaries of what is possible in design-led robotics, shaping the future of intelligent systems and contributing to a safer, more accessible, and sustainable world.

Project Description: Circular Robot 5.0: Circular Robot 5.0: Industry-Wide Data-Driven Circular Economy of Industrial Robots is a £1.9 million EPSRC-funded research project led by the RCA Robotics Laboratory in collaboration with co-investigators from Loughborough University, King's College London, UCL, and the Manufacturing Technology Centre (MTC), and industry partners such as NVIDIA, OMRON, ASTM International, Katlas Technology, Wootzano, and Inovo Robotics. The project aims to extend the lifespan of industrial robots through the integration of AI, blockchain, and intelligent lifecycle management.

The UK is set to dramatically increase the deployment of industrial robots (IRs), with a projected 40% annual growth in the sector from 2020 to 2030. This presents both an opportunity and a challenge as the rapid scaling of robotic systems could result in substantial waste and resource depletion, due to frequent decommissioning. Circular Robot 5.0 addresses these challenges by:

1. Prolonging the operational life of IRs, thereby reducing the need for repairs or replacements.
2. Facilitating remanufacturing and circular use of critical raw materials.
3. Developing a digitally-enabled end-of-life management system for IRs. This system aims to predict future IR failure scenarios, promote industry-wide collaboration, and enhance operational efficiency and resilience.
4. Implementing a proactive, data-driven lifecycle maintenance approach that is cost-efficient, optimizes equipment performance, and ensures environmental sustainability.
5. Ensuring early intervention and informed decisions regarding IR recovery processes using real-time metrics and Life Cycle data.

A highly talented and experienced researcher is sought for a Senior/ Postdoctoral Research Associate position on the project to closely work with the Academic Leader, Project Officer and members of Circular Robot 5.0 consortium, as well as RCA Robotics Lab's existing and new PhD students and staff. The lab provides a design-led disruptive research environment for the development of new approaches to innovation in robotics. The Senior/ Postdoctoral Research Associate will form a key research role within the group, undertaking applied research addressing project milestones through combining the scientific and technological advances with the RCA's world-leading research strengths in design-led innovation. The output the research undertaken by the Research Associate is expected to be publishable in high impact journals and top conferences of robotics and design.

The RCA's strategic vision is to increase its influence on the world stage of globally ranked universities, punching significantly above its weight, and attracting, supporting and convening the world's most talented faculty, students, artists, designers and creative leaders. For more information on The RCA's Strategic Plan 2022–27, please click on this link.

Senior Research Associate

Purpose of the Post:

The Senior Research Associate will work closely with the Academic Leader in Robotics and the Circular Robot 5.0 consortium to develop data-driven solutions that extend the lifecycle of IRs in manufacturing. This involves using advanced AI, blockchain technology, and robotics, with a focus on system integration and testing.

The postholder will lead on research activities including (1) Developing blockchain-enabled digital passports for industrial robots to ensure secure data management and interoperability, (2) Designing and testing data-driven predictive maintenance systems to monitor robot health and inform the end-of-life (EoL) decision-making process, and (3) Integrating RCA's systems with partners' systems and contributions.

Key Responsibilities

- To undertake high-quality, rigorous, and (where relevant) collaborative research projects which lead to robust research outcomes.
- To be present on campus, participate in project and lab meetings and activities, events and workshops, contributing ideas for development, delivery and promotion of projects.
- To develop personal research objectives and interests that align closely with wider project or RCA Robotics Laboratory plans, working with the Academic Leader in Robotics to ensure these are in line with the strategic direction of the lab and of the College as a whole.
- To contribute to the development of new research funding proposals in consultation with the Academic Leader, to support the lab's research agenda and the post-holder's own research career development plans.
- In collaboration with team members, to manage any awards won, ensuring execution of proposed research, efficient management of resources, and effective delivery of research outcomes and impacts.
- To work with academic, industry and third sector partners as appropriate on collaborative research and knowledge exchange projects. This may involve traveling to partner locations.
- To support engagement with any sponsor companies, undertaking collaborative research projects and contributing to working relationships to maintain a productive partnership.
- To produce and disseminate research outputs that are effectively shared with the world through appropriate channels (for example books, peer-reviewed journals, conferences) to the discipline.
- To produce research outputs. These outputs may be suitable for submission to the national Research Excellence Framework (REF) exercise, with a quality of at least 3* as per the REF definition.
- To support communication of research outcomes to a wide variety of audiences, including through public engagement, tailoring content and style to a broad range of specialist and non-specialist audiences. This may involve international travel.
- To participate in relevant academic, industry, government and policy networks as appropriate, presenting selected works of, and representing the RCA Robotics Laboratory, in consultation with Academic Leader.

Key Responsibilities

- To contribute to the RCA Academic community through presentations or teaching in appropriate forums and participation in RCA-wide activities such as Across RCA or Committees and boards as requested.
- To support the delivery of Executive Education courses and workshops.
- Where appropriate and relevant, to assist the lead researcher in supervision of junior researchers or project workers engaged in projects, ensure they are equipped to deliver outputs within agreed timescales and are undertaking work at an appropriate level.
- To conduct all research reflecting best practice in ethics, integrity, research data management, and research governance, ensuring compliance with RCA policies and external funding terms and conditions and sector standards.
- To ensure compliance with RCA processes and procedures in relation to procurement and use of equipment and facilities, including health and safety policies, working with relevant departments across RCA.
- To ensure confidentiality of sensitive project information is maintained, through appropriate project data protection.
- To undertake general administrative and other tasks relevant as part of the team's and the lab's work, as required by senior staff.
- Provide comprehensive verbal and written reports on all research activities to the Academic Leader, and project stakeholders via the Project Officer.

Person Specification

Essential:

The successful candidate must be able to demonstrate at least one of the following

- PhD in a relevant discipline,
- or equivalent level of experience in a different sector
- or a Masters degree and significant experience in research projects

- Extensive programming skills (e.g. C++, Python, Robot Operating System).
- Demonstrable skills and relevant subject knowledge in artificial intelligence for robotics, cloud computing, hardware and software integration, testing and validation of results.
- Evidence of producing quality research outputs relevant to the career stage and discipline. At least two outputs in peer reviewed academic journals with one as the first author
- Ability and willingness to work regularly on campus to support hands-on robotics experimentation, hardware integration, laboratory testing, and close collaboration with project partners and research staff.
- Be aware of the risks in the robotics laboratory work environment and the relevant Health & Safety issues.
- Willingness to travel to attend conferences and meetings within and outside the UK.
- Experience of contributing to and reporting on projects.
- Experience of working on collaborative projects, preferably involving HE/industry collaborations in a relevant field.
- Ability to be an effective and collaborative member of a broader team working constructively with senior staff and supporting the work of less experienced staff or students involved in projects.
- Flexibility and confidence to tackle a wide range of tasks, with an open, pro-active, creative and problem-solving approach.
- Excellent writing, communication and presentation skills, able to adopt an appropriate style for a range of specialist and non-specialist audiences.
- Strong interpersonal and team-working skills .
- Genuine commitment to the aims of the research group.

Desirable experience and skills:

- Experience in simulation, implementation and testing of new technologies for predictive maintenance, e.g. leveraging sensor data, machine learning models, and digital twins to optimize maintenance schedules and reduce downtime.
- Experience of implementing blockchain to manage asset lifecycle data for industrial equipment.
- Knowledge of and commitment to interdisciplinary design-led approaches to robotics research.
- Experience of working on relevant projects at post-doctoral level in a research centre, or equivalent experience in industry or another sector.

Pay & Benefits

Additional Information:

- Full time salary: Grade 7 £44,693 - £48,269 per annum including London Allowance
- 30 days annual leave plus extended breaks at Christmas and Easter, at the discretion of the College. Pro rata for part time employees,
- interest-free season ticket loan are available alongside many other benefits
- Location: London, Battersea on site
- Department: School of Design
- 1fte fixed term role for 18 months initially with possible extension until 31 March 2028.
- Responsible to: Academic Leader in Robotics
- Working hours 9.30am to 5.30pm with an hour each day for lunch.

Application Process

To apply, please submit a CV, cover letter, and one recent publications through the RCA recruitment portal. For informal enquiries, please contact the Academic Leader in Robotics, Dr. Sina Sareh, at [sina.sareh@rca.ac.uk].

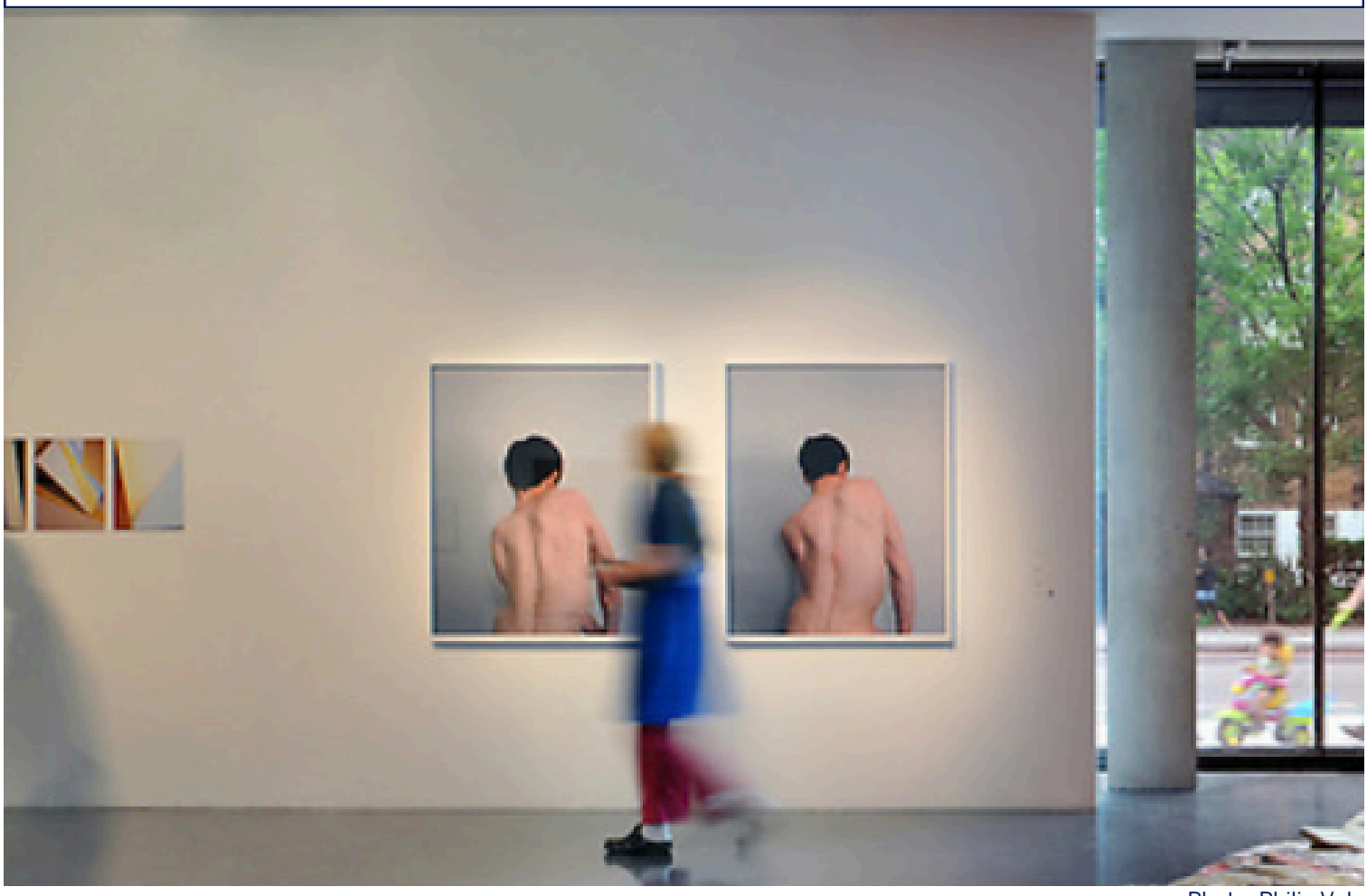

Photo: Philip Vale

Pension
The Royal College of Art is a member of the Superannuation Arrangements of the University of London (SAUL) which is a contributory defined benefit pension scheme. The college will contribute a sum equal to 16% of your salary while you pay 6%.

Holiday
30 days paid leave a year plus bank and public holidays normally observed in England and Wales. In addition, the college is normally closed for six days a year, one day on either side of Easter and the remainder between Christmas and New Year. Part-time staff will be entitled to the pro rata equivalent.

Season ticket loans
Interest-free loans are available for staff to purchase annual season tickets.

Enhanced maternity and adoption pay
Qualifying employees are entitled to enhanced maternity/adoption pay: 26 weeks' full pay, 13 weeks Statutory Maternity/Adoption Pay. This compares to the statutory provision of 90% of average pay for 6 weeks followed by Statutory Maternity/Adoption Pay for 33 weeks.

Enhanced paternity pay
Qualifying employees are entitled to six weeks' paternity leave entitlement at full pay.

Enhanced sick pay
Occupational sick pay after three months' service is three months full pay/three months half pay.

24/7 confidential support
Staff and family members in their household have access to a free, external confidential support service for work, financial, legal, family and personal problems 24 hours a day, 365 days a year.

Occupational health
Occupational Health support for the College is provided by Imperial College's occupational health service at their South Kensington Campus.

Life Cover
Active members of the SAUL pension scheme automatically receive life cover. A lump sum of four times your salary together with a refund of your contributions and a 2/3 pension for your dependent/spouse is payable should you die whilst in employment.

Library
All staff are welcome to join the college library.

Events
All staff are welcome to attend exhibitions, lectures and private views held by academic schools and programmes.

Equality, diversity and inclusion - Disability and neurodiversity

Disability Confident

RCA is a Disability Confident Committed employer. You may recognise the logo from our job adverts.

Disability Confident is a government scheme designed to encourage employers to recruit, retain, and develop disabled people. RCA was originally awarded the Disability Confident certificate in October 2022, which broadens and deepens our existing commitment as an employer.

As a Disability Confident Committed employer, we commit to the below core activities:

- ensure our recruitment process is inclusive and accessible
- communicating and promoting vacancies
- offering an interview to disabled people who meet the minimum criteria for the job
- anticipating and providing reasonable adjustments as required
- supporting any existing employee who acquires a disability or long-term health condition, enabling them to stay in work
- at least one activity that will make a difference for disabled people

Together, the RCA community can generate change now for a sustainable future everywhere.