



The
 Fitzwilliam
 Museum

 CAMBRIDGE



Supported using public funding by
**ARTS COUNCIL
ENGLAND**

Research Associate, Scientific Research

Salary: Grade 7

£36,024 - £44,263

Contract: Permanent**Location:**

Cambridge

Faculty / Department:Hamilton Kerr Institute,
Fitzwilliam Museum**Responsible to:**

Senior Research Scientist

Working Pattern:

Full Time, Monday – Friday

Purpose of the role

The purpose of this role is to carry out research and scientific analysis of objects and artworks in the collections of the Fitzwilliam Museum and other institutions across the University of Cambridge. Through their work the role holder will support and maintain the University's national and international reputation for excellence in teaching and research. They will contribute to the overall development of scientific investigation, conservation and collections care in the Fitzwilliam and HKI, the UCM, by providing their specialist expertise and by participating in relevant outreach activities.

Under the supervision of the Fitzwilliam's Senior Research Scientist and in consultation with the Deputy Director Conservation and Science/Director of the HKI, the role holder will investigate and document individual objects and works of art with a combination of non-invasive and invasive analytical tools, and microscopic techniques. The emphasis will be on imaging techniques such as Macro-X-Ray Fluorescence, (MA-XRF) Infrared Reflectography (IRR), and Hyperspectral Imaging, as well as microscopic techniques for sample research, including Polarised Light Microscopy and Scanning Electron Microscopy with Energy Dispersive X-Ray spectroscopy (SEM-EDX). As necessary, specific training for the combined, mutually complementary use of different examination and analytical methods will be provided. The work will include data collection, processing and interpretation. Contribution to publications and other research outputs and participation in other dissemination and outreach activities will be strongly encouraged



Main duties and responsibilities**Non-invasive analysis of historical objects and artworks**

- 1
- Carry out non-invasive analysis of historical objects and artworks by means of X-ray fluorescence spectroscopy and imaging (both pXRF and MA-XRF mapping), and other methods as appropriate, with awareness of health and safety implications of the methods used.
 - Interpret data from each method, suggesting identifications and characterisations of constituting materials, including possible materials deriving from later (non-original) modifications.
 - Produce reports summarising analytical results and preliminary interpretation of data.

Invasive analysis of samples

- 2
- In consultation and collaboration with Conservation colleagues, remove micro-samples from historical objects and artworks for micro-analysis.
 - Undertake sample preparation and analyses by optical microscopy, SEM-EDX and/or other methods as appropriate.
 - Interpret analytical data from each method and produce reports summarising analytical results and preliminary interpretation of data.

Data integration and interpretation

- 3
- Compare and integrate analytical data acquired with different analytical and imaging methods to maximise the information gained from the analysis.
 - Be part of a consultation with colleagues across disciplines, to jointly interpret overall data in the context of each object's date, provenance and history to help answer specific questions, with reference to relevant research and databases.
 - Carry out bibliographical research on scientific analysis of historical objects and artworks, as well as work on, or liaise with other colleagues about, research on physical characteristics and the historical methods and materials used by artists and craftsmen.

Other responsibilities

- 4
- Contribute together with the Senior scientist, to the Master in the Conservation of Easel Paintings program, both assisting with seminars and supervision of student projects.
 - Plan own day-to-day research activity within the framework of the agreed programme, coordinating own work with that of others to avoid logistic conflict or duplication of effort.
 - Help deliver public outreach events, both virtual and in-person, such as behind-the-scenes tours and lunchtime lectures.
 - Share research outcomes with colleagues in educational and art institutions by contributing to specialist publications and academic conferences.
 - Liaise with scientists, conservators, other academics and students within Cambridge and beyond to further explore specific aspects of the research and form relationships for future collaboration

Person Specification

Criteria	Essential	Desirable
Qualifications		
PhD in cultural heritage science, archaeological science or materials science, or equivalent research experience.	E	
Applicants with a PhD in physics, chemistry or other related disciplines but with experience of analysis of historical objects and artworks will also be considered.	E	
Skills		
Capability to work with the relevant scientific instrumentation (see Key responsibilities). Expertise in the use of MA-XRF, IRR, HSI, PLM, as well as SEM-EDX, would be especially advantageous	E	
Understanding of the foundations, applications and limitations of the scientific techniques covered by the projects (see Key Responsibilities)	E	
Understanding of the nature and use of historical techniques and materials used by artists and artisans.	E	
Familiarity with scientific research of objects and artworks from a variety of disciplines is desirable.	E	
High level of manual dexterity and intuitive skills.	E	
High degree of IT literacy, including the use of software for data acquisition and analysis and image processing.	E	
Ability to contribute to dissemination of research outcomes through writing and presenting at academic conferences, publication in academic journals and monographs, and producing on-line content.	E	
Interpersonal & communication skills		
Effective communication skills, both written and oral; able to communicate complex specialist information to colleagues and work in an interdisciplinary team.	E	
Ability to develop effective working relationships both with colleagues and with external contacts within a museum/gallery/library environment.	E	
A mutually flexible, supportive and collaborative teamwork style.	E	
A practical, 'can do' approach focused on finding solutions.	E	
Experience		
Demonstrable experience with the following:		
Non-invasive analysis of historical objects and/or artworks by means of scientific imaging methods; including data analysis and processing and dissemination of results	E	
Analysis of historical samples with optical and electron microscopy	E	
Experience with any other scientific techniques used in the technical investigation of materials and techniques used by artists and craftsmen would be desirable	E	
Experience with scientific research on objects and artworks from different disciplines.	E	

Some teaching experience would be desirable		D
A publication record in an area of research specialisation is desirable		D
Additional requirements		
An aptitude for dealing with a wide range of individuals, from University academics to the general public	E	
Interest and commitment to the work of the Fitzwilliam Museum and its collection, and participation in the promotion of the Museum generally	E	

Behavioural Attributes

This section summarises the behavioural attributes (or competencies) that we expect the role holder to be able to demonstrate, at what level and whether this is an essential or desirable requirement. Full definitions are at: <https://www.hr.admin.cam.ac.uk/policies-procedures/behavioural-attributes>

Please review these and provide specific examples in your application of how you have demonstrated these attributes in your work, education or other experience. It will assist your application if you explain the situation, what you did and what the outcomes were.

Attribute	Level
Valuing Diversity	A
Achieving Results	B
Communication	C
Innovation and Change	C
Negotiating and Influencing	C
People Development	C
Relationship Building	B
Strategic Focus	C

Professional Services Values

Developed by professional services staff, our values underpin everything we do. By living the values in the work we do, we hope to foster an environment where staff feel empowered. The values encourage staff to; work together and share skills to create a sense of community, act with integrity, take an inclusive and fair approach and develop honest and open relationships that are underpinned by our shared values. We encourage applicants to consider these values within their application.



The Fitzwilliam Museum



The Fitzwilliam Museum was founded in 1816 and opened to the public in 1848. Today, it houses over half a million artworks and objects, spanning over ten thousand years, principally from Europe, North Africa and Asia. The Museum has an international reputation for excellence in research, exhibitions, learning and public engagement. As well as being the principal museum of the University of Cambridge, the Fitzwilliam is one of the largest cultural providers in the region, welcoming between 350,000 and 450,000 visitors a year, pre-COVID. It is also the lead partner of the University of Cambridge Museums (UCM), the Arts Council National Portfolio Organisation consortium of the University Museums and the Botanic Garden.

About the (Insert Department)

The Hamilton Kerr Institute (HKI), a department of the Fitzwilliam Museum is one of the world's leading centres for teaching, research and practice in the conservation of easel paintings.

The Institute undertakes the conservation of easel paintings for public and publicly shown collections as well as the Museum.

In this environment the Institute aims to educate painting conservators to the highest standard and to contribute to scientific, technical and art historical research. The institute hosts a number of archives, carries a continual programme of inter-disciplinary research in addition to the conservation services and teaching on offer.

Terms of Appointment

Tenure and probation

The appointment will be made on a permanent basis.

Appointments will be subject to satisfactory completion of a six-month probationary period.

Hours of Work and Working Pattern

The hours of work for the position are 37 hours per week, working five days Monday – Friday.

Pension

You will automatically be enrolled to become a member of USS (Universities Superannuation Scheme) – a hybrid pension scheme. For further information please visit: www.pensions.admin.cam.ac.uk

Annual leave

Full time employees are entitled to annual paid leave of 41 days inclusive of public holidays. For part-time employees, annual leave will be pro rata'd based on days worked.

General information

Right to work in the UK

We have a legal responsibility to ensure that you have the right to work in the UK before you can start working for us. If you do not have the right to work in the UK already, any offer of employment we make to you will be conditional upon you gaining it.

Health declaration

Once an offer of employment has been made the successful candidate will be required to complete a work health declaration form.

Qualifications

The person specification for this position lists qualifications that are essential and/or desirable. Please note that if you are offered the post you will be asked to provide your relevant original certificates of these qualifications.

References - offers of appointment will be subject to the receipt of satisfactory references.

Screening Checks:

This role requires a standard Disclosure and Barring Service (DBS) Check and Security Check. Any offer of employment we make to you will be conditional upon the satisfactory completion of these checks whether an outcome is satisfactory will be determined by the University

Equality and Diversity

We particularly encourage candidates from a Black, Asian and Minority Ethnic background to apply for this vacancy as they are currently under-represented at this level within our University.

Information if you have a disability

The University welcomes applications from individuals with disabilities. We are committed to ensuring fair treatment throughout the recruitment process. We will make adjustments to enable applicants to compete to the best of their ability wherever it is reasonable to do so and, if successful, to assist them during their employment. Information for disabled applicants is available at <http://www.admin.cam.ac.uk/offices/hr/staff/disabled/>

We encourage you to declare any disability that you may have, and any reasonable adjustments that you may require, in the section provided for this purpose in the application form. This will enable us to accommodate your needs throughout the process as required. However, applicants and employees may declare a disability at any time.

Working Conditions

Office based. Some travel to similar sites may be required. Normal health and safety requirements will be followed.

The University

The University of Cambridge is one of the world's oldest and most successful universities. We are a renowned centre for research, education, and scholarship that makes a significant contribution to society. The University is consistently ranked amongst the top universities in the world. Our affiliates have won more Nobel Prizes than any other University.

Our sustained pursuit of academic excellence is built on a long history of world-leading teaching and research within a distinctive collegiate system. For eight centuries our ideas and innovations have shaped the world. Our principal goal is to remain one of the world's leading universities in an increasingly competitive global higher education sector. Today the University of Cambridge is at the centre of a cluster of over 4,300 businesses employing 58,000 people.

Our capital investment projects include academic and commercial growth at both the West Cambridge Innovation District, and the Biomedical Campus in the south of the city. Eddington, in North West Cambridge, is a mixed-use development including key worker housing for staff, a community centre and a new primary school, managed by the University. Through these projects, the University is deeply embedded in, and committed to serving, our local community. These are all conspicuous signs of a University that is not only adapting to new needs, but also anticipating the future.

Our mission is to contribute to society through the pursuit of education, learning, and research at the highest international levels of excellence. Our core values are:

- freedom of thought and expression; and
- freedom from discrimination.



About Us

The University is one of the world's leading academic centres. It comprises 150 faculties and departments, together with a central administration and other institutions. Our institutions, museums and collections are a world-class resource for researchers, students and members of the public representing one of the country's highest concentrations of internationally important collections.

The University has an annual income of £2 billion. Research income, won competitively from the UK Research Councils, the European Union (EU), major charities and industry, exceeds £500 million per annum and continues to grow.

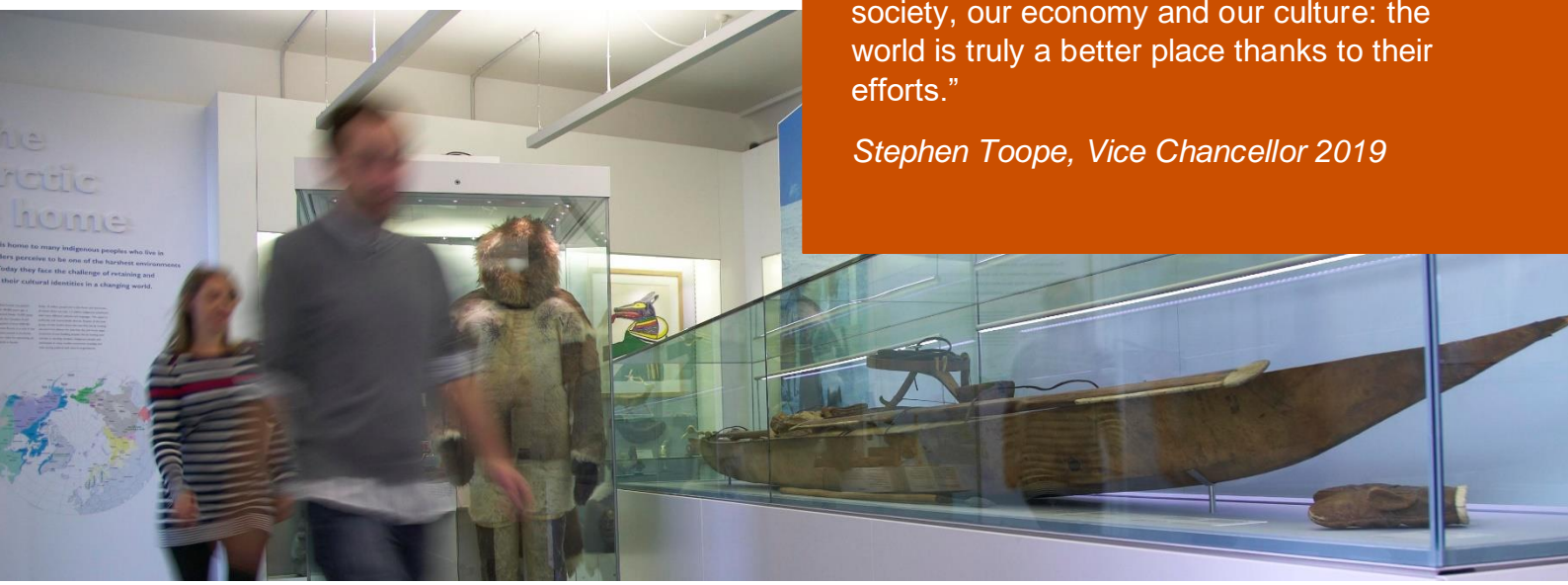
The Colleges and the University remain committed to admitting the best students regardless of their background and to investing considerable resources both in widening access and financial support. The 31 Colleges are self-governing, separate legal entities which appoint their own staff. Many academic staff are invited to join a College as a Teaching Fellow, which provides a further social and intellectual dimension. The Colleges admit undergraduate students, provide student accommodation and pastoral support and deliver small group teaching for undergraduates.

The University awards degrees and its faculties and departments provide lectures and seminars for students and determine the syllabi for teaching.

Our instinct for seeking out excellence and setting up enduring and mutually beneficial collaborations has led us to establish strategic partnerships across the globe. Whether it is the successful Cambridge-Africa Programme involving universities in Ghana, Uganda and elsewhere on the African continent; or the close association with the government of India to pursue new research in crop science; or the creation, with Germany's Max Planck Institutes, of a Cambridge-based centre for the study of ethics, human economy and social change – international partnerships are now an inextricable part of the University's make-up.

“Cambridge graduates and researchers have made – and continue to make – a colossal contribution to human knowledge and the understanding of the world around us. Their work touches on the lives and livelihoods of everyone from patients diagnosed with life-threatening diseases, to residents of areas critically affected by climate change, to children growing up in conflict zones. It has a lasting impact on our society, our economy and our culture: the world is truly a better place thanks to their efforts.”

Stephen Toope, Vice Chancellor 2019



Working at the University

Working at Cambridge you will join a diverse, talented and innovative community, with more than 23,000 students and over 16,000 staff from all walks of life and corners of the world.

The University continually explores strategies to attract and retain the best people. It is committed to supporting its staff to achieve their best. We are a fair, diverse and inclusive society and we believe our staff are our greatest asset. There is strong commitment to developing institutional leadership and supporting and encouraging staff development at all levels.

We offer a variety of roles including academic, research, professional, managerial and support roles. We also offer extensive benefits and excellent learning opportunities within a stimulating working environment.

The University's estate is undergoing the most significant transformation in its history. Cambridge has been able to create a science and technology campus to the west of the city centre, and is expanding further to the north west of Cambridge including investing in affordable homes for University key workers and community facilities. Even with our continued development, the University remains within walking or cycling distance across the campus. The University is a major partner on the Cambridge Biomedical Campus and we continue to redevelop our historic city centre sites demonstrating our determination to ensure that we can offer the best facilities and opportunities for our staff and students.



Equality & diversity

The University has built its excellence on the diversity of its staff and student community. We aim to be a leader in fostering equality and inclusion, and in promoting respect and a sense of belonging for all. We encourage applications from all sections of society. All appointments are made on the basis of merit. We have an Equal Opportunities Policy, along with a range of diversity groups, including the Women's Staff Network, Race Equality Network and LGBT+ Staff Network. More details are available here:

<http://www.equality.admin.cam.ac.uk/>

The University has a bronze Race Equality Charter award, with a framework for improving the representation, progression and success of minority ethnic staff and students within higher education. Furthermore, the University's silver Athena swan award recognises and celebrates good practice in recruiting, retaining and promoting gender equality.

Living in Cambridge

Cambridge is rich in cultural diversity. From beautiful University and College buildings, museums and art galleries, quaint gardens and punts on the River Cam, to a vibrant restaurant and café scene, our employees are surrounded by the wonderful features of this unique city.

You can find a wide-range of high street shops and 3 shopping centres, with independent alternatives at the historic market and nestled within the passageways in the city centre. You will find a cinema, bowling alley, a nightclub and various live performances at the Cambridge Leisure Park, with further entertainment options at the Corn Exchange, Arts Theatre and the ADC Theatre. Further information can be found on the Visit Cambridge website.

If you prefer the faster pace of life, London is a 45 minute train journey away. For those travelling from overseas, Stansted Airport is just 45 minutes away and Heathrow Airport under 2 hours away. The University is a short distance from a host of other attractions such as Ely Cathedral, Newmarket Races and various wildlife parks and stately homes. Cambridge is also within easy reach of the beautiful Broads and coastlines of Norfolk and Suffolk.

Relocation Support

The University recognises the importance of helping individuals to move and settle into a new area. We provide support and guidance to those relocating internationally or domestically to take up a post at the University of Cambridge, liaising with other University offices and selected partners to ensure comprehensive relocation support is available. This includes: accommodation, childcare, schools, banking, immigration and transport. If you would like further information, please visit <https://www.accommodation.cam.ac.uk/RelocationService/>. The Shared Equity Scheme and the Reimbursement of Relocation Expenses Scheme provide financial assistance to qualifying new members of staff with the costs of relocating to Cambridge.

Accommodation Service

The University Accommodation Service helps staff, students and visiting scholars who are affiliated to the University in their search for suitable accommodation in Cambridge. The dedicated accommodation team can provide access to a wide range of University-owned furnished and unfurnished properties, and has a database of private sector accommodation available for short and long-term lets. For further information and to register with this free service please visit <https://www.accommodation.cam.ac.uk/>



What Cambridge can offer

We offer a comprehensive reward package to attract, motivate and retain high performing staff at all levels and in all areas of work.

The University offers a wide range of competitive benefits, from family leave entitlement, to shopping and travel discount schemes. Our generous annual leave package contributes to the positive wellbeing of our University employees. Sabbatical leave enables academics to focus on research and scholarship, whilst still maintaining their full salary. The University also has a [career break scheme](#) for academic and academic-related staff, with additional flexible working policies for all other staff.

Pay and benefits

The University salary structure includes automatic service-related pay progression in many of its grades and an annual cost of living increase. In addition to this, employees are rewarded for outstanding contribution through a number of regular pay progression schemes. The University offers attractive pensions schemes for employees, with an additional benefit of a salary exchange arrangement providing tax and national insurance savings.



CAMbens employee benefits

The University offers employees a wide range of competitive benefits, known as CAMbens. CAMbens offers something for everyone across a range of categories, including:

- Financial Benefits, including shopping discounts (both local and national) and a Payroll Giving scheme;
- Relocation and Accommodation Benefits, including relocation assistance and interest-free Rental Deposit Loans;
- Travel Benefits, including Cycle to Work, discounts on train season tickets and interest-free Travel to Work loans;
- Family Friendly and Lifestyle Benefits, including support with childcare and family friendly policies;
- Health and Wellbeing Benefits, including a University Staff Counselling Service, discounts at the University Sports Centre, and other local gyms, and healthcare schemes.



What Cambridge can offer

Family-friendly policies

The University recognises the importance of supporting its staff. We have a range of family-friendly policies to aid employees' work-life balance including a generous maternity, adoption and shared parental leave entitlement of 18 weeks full pay, and paid emergency leave for parents and carers.

Other family-friendly support includes:

Our highly regarded workplace nurseries, a childcare salary exchange scheme and a high quality holiday Playscheme may be available to help support University employees with caring responsibilities (subject to demand and qualifying criteria). Further childcare information can be found here:

<https://www.childcare.admin.cam.ac.uk/>

The Newcomers and Visiting Scholars Group is an organisation within the University run by volunteers whose aim is to help newly arrived wives, husbands, partners and families of Visiting Scholars and members of the University to settle in Cambridge and give them an opportunity to meet local people. The Postdoc Academy supports the postdoctoral community within Cambridge. Further details are available here: <https://www.postdocacademy.cam.ac.uk/>

Your wellbeing

The University's Sport Centre, Counselling Services and Occupational Health are just some of the support services available to University employees to promote their physical and mental wellbeing. The University delivers The Festival of Wellbeing annually, which is a programme of stimulating talks and activities, which aim to promote wellbeing and good mental and physical health. The University also hosts the [Cambridge Festival](#), which is a great opportunity to get your first taste of public engagement, through volunteering, supporting hands-on activities or proposing a talk.

Development opportunities

We support new employees to settle in through various activities as well as supporting their professional and career development on an ongoing basis. Our Personal and Professional Development (PPD) team provide development opportunities for all University employees, including face-to-face sessions, online learning modules and webinars. All employees also have unlimited access to LinkedIn Learning to support their development. Both new and existing employees can undertake funded Apprenticeships, which lead to a range of vocational and professional qualifications. We offer reduced staff fees for University of Cambridge graduate courses and the opportunity to attend lectures and seminars held by University departments and institutions. A range of University training providers also offer specialist learning and development in their own areas e.g. teaching and learning, digital literacy, finance, health and wellbeing, safety.



How to apply

Applications should be submitted online via the University of Cambridge jobs page www.jobs.cam.ac.uk by clicking “Apply online” in the job advert. You will need an email address to register for our online system.

Conversations about flexible working are encouraged at the University of Cambridge. Please feel free to discuss flexibility prior to applying (using the contact information below) or at interview if your application is successful.

Informal enquiries are welcomed and should be directed to:
Erma Hermens – eh707@cam.ac.uk

If you have any queries regarding the application process please contact:
hr@fitzmuseum.cam.ac.uk

The closing date for applications: Sunday 2nd June 2024

The interview date for the role: Tuesday 11th June 2024