

**Low-Carbon and Advanced  
Building Materials Researcher –  
KTP Associate**



**OPPORTUNITY**

Where change  
gets real.



**Reference:** 0220-26

**Salary:** £39,000-£40,000 per annum depending on experience, with up to £5,666 dedicated development and training budget

**Contract Type:** Fixed term (33 months)

**Basis:** Full Time

## Job description

This 33-month project takes the form of a [Knowledge Transfer Partnership](#) (KTP), which provides you with practical and formal training and the availability of support from experienced mentors from [Jesmonite](#), [Aston University](#) and [Innovate UK Business Connect](#).

### Job Purpose:

This KTP aims to position Jesmonite as a market leader in sustainable composite materials. The project's vision is to embed environmental responsibility at the core of Jesmonite's product innovation, enabling the company to expand from the creative industries sectors they currently operate within, into the rapidly growing architectural and construction sectors.

Jesmonite generates income through the development/sale of advanced water-based composite materials that are lightweight, durable, and environmentally safer than conventional options like concrete/resin. Its products can be provided in an array of colours/textures/finishes for a wide variety of decorative purposes. Jesmonite manufactures decorative concrete and plaster facades as well as providing its materials for arts & crafts projects (home use) and creative industries i.e. film studio sets.

### The key objectives are to:

- Reformulate Jesmonite's materials using bio-based alternatives such as biochar to replace current material constituents,
- Thereby reduce the carbon footprint of its products,
- Develop in-house capabilities in life-cycle assessment, environmental product declarations, and sustainable manufacturing processes.

This KTP is a great opportunity for someone who wishes to plan and deliver business change. You will work with senior University academics on a commercial project which puts theory and modelling into practice.

**Candidate Profile:** Minimum MSc degree in Civil Engineering or Material Science applied to construction materials with minimum two years of industry experience. A PhD would be desirable.

### Skills/Experience required include:

#### Essential

- ▶ Good working knowledge of low-carbon functional construction materials, with a particular interest in sustainable innovation and improving environmental performance.
- ▶ Proven experience in the design, fabrication, and testing of construction materials, particularly cementitious systems.
- ▶ A well-established track record of research excellence, evidenced by peer-reviewed publications and presentations at relevant academic/industry conferences.
- ▶ Sound understanding of industry operations and business structures, enabling effective transfer and integration of research knowledge into commercial practice.
- ▶ Ability to manage competing priorities and meet deadlines.
- ▶ Ability to present results and findings in a clear and concise way to various audiences.
- ▶ Ability to work as part of the team and independently.

## **Main Duties/Responsibilities**

- ▶ Investigate the potential for reducing cement content by incorporating environmentally sustainable alternatives for functional applications.
- ▶ Assess the suitability of various types of biochar, produced from different feedstocks and processing methods, as replacement materials.
- ▶ Evaluate the performance of the novel material formulations through testing conducted both within the company and at Aston University, ensuring compliance with relevant standards and specifications.
- ▶ Work collaboratively with academic and industrial partners to design and develop innovative manufacturing processes for sustainable material substitutes.
- ▶ Review and analyse biochar procurement options to identify the most cost-effective and environmentally responsible sourcing strategies.
- ▶ Engage with existing clients to understand their requirements and preferences regarding the novel products, including conducting real-world trials to validate the performance and acceptability of sustainable grout alternatives.

## **Additional responsibilities**

- ▶ Engage in continuous personal and professional development in line with the demands of the role, including undertaking relevant training and development activities.
- ▶ Ensure and promote the personal health, safety and wellbeing of staff and students.
- ▶ Carry out duties in a way which promotes fairness in all matters and which engenders trust.
- ▶ Promote equality of opportunity and support diversity and inclusion as well as working to support the University's environmental sustainability agenda and practices.

## Person specification

	Essential	Method of assessment
<b>Education and qualifications</b>	Minimum MSc degree in Civil Engineering or Material Science applied to construction materials with minimum two years of industry experience.	Application form
<b>Experience</b>	<p>Experience in the design, fabrication and testing of construction materials, particularly cementitious systems.</p> <p>Experience applying low-carbon or sustainable materials in research or industry contexts.</p> <p>Experience demonstrating research capability, demonstrated through peer-reviewed publications <b>or equivalent industry-based outputs</b> (e.g. technical reports, patents, applied research projects).</p> <p>Experience of working with or within industry/commercial environments.</p>	Application form and interview
<b>Aptitude and skills</b>	<p>Good working knowledge of low-carbon functional construction materials, with a particular interest in sustainable innovation and improving environmental performance.</p> <p>A well-established track record of research excellence, evidenced by peer-reviewed publications and presentations at relevant academic/industry conferences.</p> <p>Ability to contribute to the development of future research directions aligned with the project</p> <p>Sound understanding of industry operations and business structures, enabling effective transfer and integration of research knowledge into commercial practice.</p>	Application form and interview

	Desirable	Method of assessment
<b>Education and qualifications</b>	A PhD in Civil Engineering or Material Science applied to construction materials.	Application form

## University values

All staff are expected to demonstrate/promote the University's values and expectations, which are an integral part of our strategy and underpin the culture of the University. In addition, our leaders are expected to be accountable, help to execute strategic visions of the University and share and set clear expectations that inspire those around them.



## How to apply

You can apply for this role online via our website <https://www2.aston.ac.uk/staff-public/hr/jobs>.

Applications should be submitted by 23.59pm on the advertised closing date.

All applicants must complete an application form, along with your CV.

Any CV sent direct to the Recruitment Team and Recruiting Manager will not be accepted.

If you require a manual application form, then please contact the Recruitment Team via [recruitment@aston.ac.uk](mailto:recruitment@aston.ac.uk).

## Contact information

### Enquiries about the vacancy:

Name: Prof Mujib Rahman

Job Title: Head of Civil Engineering, School of Infrastructure and Built Environment, College of Engineering and Physical Sciences

Email: [m.rahman19@aston.ac.uk](mailto:m.rahman19@aston.ac.uk)

Name: Dr Daniel Nowakowski

Job Title: Lecturer in Chemical Engineering and Applied Chemistry, School of Engineering and Innovation, College of Engineering and Physical Sciences

Email: [d.j.nowakowski@aston.ac.uk](mailto:d.j.nowakowski@aston.ac.uk)

### Enquiries about the application process, shortlisting or interviews:

Recruitment Team via [recruitment@aston.ac.uk](mailto:recruitment@aston.ac.uk) or 0121 204 4500.

## Additional information

**Benefits:** [Benefits and Rewards | Aston University](#)

**Working in Birmingham:** <https://www2.aston.ac.uk/birmingham>

**Employment of Ex-Offenders:** Under the Rehabilitation of Offenders Act 1974, a person with a criminal record is not required to disclose any spent convictions unless the positions they applying for is listed an exception under the act.

**Eligibility to work in the UK:** You should ensure that you meet the eligibility requirements, including meeting the [English language standards](#). If you do not meet the eligibility criteria, any application for a work visa would be unsuccessful. Please see UKVI guidance for further information on eligibility, knowledge of English requirements and approved test centres <https://www.gov.uk/tier-2-general>

With the end of free movement for EU/EEA/Swiss nationals from 1 January 2021, the UK's new immigration system applies to all non-UK/Irish nationals who require a visa.

Where an individual is subject to UK immigration control, they will require a visa to work in the UK.

The following individuals do not need a visa for the UK, but do still have to prove their right to work before employment can commence:

- **British Citizens or Irish Nationals**
- **EU/EEA/Swiss nationals with Settled or Pre-settled status under the EU Settlement Scheme**
- **Non-EEA nationals with Indefinite Leave to Remain/Settlement in the UK**

The main routes available for those who need a visa to work in the UK are **Skilled Worker**, **Global Talent** and the **Graduate Route**.

You can find further information about each of these visa routes on our candidate immigration page.

If you will conduct research in your role, you may need to apply for and obtain ATAS clearance before Aston can issue a Certificate of Sponsorship for your visa application. Please see below for further details.

### **Academic Technology Approval Scheme (ATAS):**

If you will conduct research in your role and you apply for a Skilled Worker or Temporary Worker GAE visa, you may need to apply for and obtain ATAS clearance before Aston can issue a Certificate of Sponsorship for your visa application.

This process can take at least 6 weeks to process, and Aston will consider this when confirming your expected start date. Processing times will increase between April and September and can longer to complete.



There is no fast-track option available. ATAS certificates will be processed in order of receipt.

You can find more information about ATAS on our candidate immigration page.

## **Before you start and Right to Work**

### 90-day entry vignette

If you have applied for your visa outside of the UK, you will receive a vignette in your passport which is usually valid for 90 days. Please make sure to travel to the UK within the 'valid from' and 'valid to' dates on this visa. If you entered the UK before or after these dates, you would not 'activate' the visa and you would need to leave and re-enter the country.

You will also receive a decision letter confirming details about your immigration permission and where to collect your Biometric Residence Permit.

### Cost of Living - Estate and Letting Agents

There are numerous Estate and Letting Agents in and around Birmingham that can help you find suitable accommodation. The Midland Landlord Accreditation Scheme provides a list of professional agencies and landlords who have applied with them for accreditation. Whilst accreditation is not a guarantee of quality, it provides some reassurance about the standard of the service they provide.

You can also use property search websites such as Rightmove or Zoopla.

## **Equal Opportunities**

Aston University promotes equality and diversity in all aspects of its work. We aim to ensure, through our admissions policies for students, and our staff recruitment and selection processes that we encourage applications from all groups represented in the wider community at a local, national and international level.

The University will endeavour not to discriminate unfairly or illegally, directly or indirectly, against student or potential students, staff or potential staff. This commitment applies to all functions of the University and to any stage of an individual's career.

An Equal Opportunities Monitoring Form is included within the application form. Data you provide on the Equal Opportunities Monitoring Form will be included in a general database, for statistical monitoring purposes, enabling the University to monitor the effectiveness of its Policy, Codes of Practice and Guidelines on Equal Opportunities in Employment. Individuals will not be identified by name.

## **Data Protection**

Your personal data will be processed in compliance with the Data Protection Act 2018 and the General Data Protection Regulation ((EU) 2016/679) ("GDPR"). The University's Data Protection Policy and Privacy Notices, including the Job Applicant Privacy Notice can be found at <https://www2.aston.ac.uk/data-protection>. Your application will only be used to inform the selection process, unless you are successful, in which case it will form the basis

of your personal record with the University which will be stored in manual and/or electronic files. Information in statistical form on present and former employees is given to appropriate outside bodies.

Full details of our terms and conditions of service and associated policies and procedures are available online at <https://www2.aston.ac.uk/staff-public/hr/policies>

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