



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

**Research Fellow in Low-Carbon Concrete Construction,  
Faculty of Engineering and Physical Sciences**



**Salary: Grade 7 (£39,355 – £46,735 p.a.)**

**Reference: EPSCV1162**

**Location: Leeds Main Campus (with scope for hybrid working)**

**Closing date: Monday 12 May 2025**

**Fixed-term until 31 March 2026**

**We are open to discussing flexible working arrangements**

## **Research Fellow in Low-Carbon Concrete Construction, School of Civil Engineering.**

**Do you hold a PhD in the area of life cycle assessment of construction materials and/or processes? Are you looking to kick start your research career in one of the UK's leading research-intensive universities?**

The shift from conventional (solid/flat) reinforced concrete slab systems to waffle slabs promises a reduction of up to 40% in the concrete use in buildings. However, the implementation of this decarbonization strategy in the UK construction industry rests upon validating this assumption on the project level. Doubts exist that concrete-related carbon savings would be overshadowed by the embodied carbon of the complex waffle formwork as well as the embodied energy and cost associated with its potentially slower construction process.

The selected candidate will lead the primary data collection between the University of Leeds and industrial partners, aiming to measure the carbon, energy and cost of the construction of a waffle slab in a new UK building construction project. The data will be input in a comparative whole life cycle assessment of the building against a reference conventional project. The project is in collaboration with Laing O'Rourke and the UK concrete centre.

### **What does the role entail?**

As a Research Fellow, your main duties will include:

- Whole life cycle assessment modelling of reinforced concrete buildings;
- Primary data collection from construction sites;
- Generating and pursuing independent and original research ideas in the appropriate subject area;
- Developing research objectives and proposals and contributing to setting the direction of the research project and team including preparing proposals for funding in collaboration with colleagues;
- Evaluating methods and techniques used and results obtained by other researchers and to relate such evaluations appropriately to your own research;
- Making a significant contribution to the dissemination of research results by publication in leading peer-reviewed journals and by presentation at national and international meetings;





- Working independently and as part of a larger team of researchers, both internally and externally, to develop new research links and collaborations and engage in knowledge transfer activities where appropriate;
- Maintaining your own continuing professional development and acting as a mentor to less experienced colleagues as appropriate;
- Contributing to the training of both undergraduate and postgraduate students, including assisting with the supervision of projects in areas relevant to the project.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

## What will you bring to the role?

As a Research Fellow you will have:

- A PhD (or have submitted your thesis before taking up the role) in civil engineering or materials science or a closely allied discipline;
- A strong background in life cycle assessment, concrete technology and building construction;
- Good time management and planning skills, with the ability to meet tight deadlines and manage competing demands effectively without close support;
- A developing track record of peer-reviewed publications in international journals;
- Excellent communication skills both written and verbal, and the ability to communicate your research at national and international conferences;
- A proven ability to work well both independently and in a team;
- A strong commitment to your own continuous professional development.

You may also have:

- Experience of pursuing external funding to support research.



## How to apply

You can apply for this role online; more guidance can be found on our [How to Apply](#) information page. Applications should be submitted by **23:59** (UK time) on the advertised [closing date](#).

## Contact information

To explore the post further or for any queries you may have, please contact:

**[Dr. Hisham Hafez](#)**, Research Fellow

Email: [H.Hafez@leeds.ac.uk](mailto:H.Hafez@leeds.ac.uk)

## Additional information

### Faculty and School Information

Further information is available on the research and teaching activities of the [Faculty of Engineering & Physical Sciences](#), and the [School of Civil Engineering](#).

### Working at Leeds

We are a campus-based community and regular interaction with campus is an expectation of all roles in line with academic and service needs and the requirements of the role. We are also open to discussing flexible working arrangements. To find out more about the benefits of working at the University and what it is like to live and work in the Leeds area visit our [Working at Leeds](#) information page.

### A diverse workforce

As an international research-intensive university, we welcome students and staff from all walks of life and from across the world. We foster an inclusive environment where all can flourish and prosper, and we are proud of our strong commitment to student education. Within the Faculty of Engineering and Physical Sciences we are dedicated to diversifying our community and we welcome the unique contributions that individuals can bring, and particularly encourage applications from, but not limited to Black, Asian and ethnically diverse people; people who identify as LGBT+; and people with disabilities. Candidates will always be selected based on merit and ability.



The Faculty of Engineering and Physical Sciences are proud to have been awarded the Athena SWAN [Silver](#) Award from the Equality Challenge Unit, the national body that promotes equality in the higher education sector. Our [equality and inclusion webpage](#) provides more information.

### **Information for disabled candidates**

Information for disabled candidates, impairments or health conditions, including requesting alternative formats, can be found under the 'Accessibility' heading on our [How to Apply](#) information page or by getting in touch by emailing HR via [hr@leeds.ac.uk](mailto:hr@leeds.ac.uk).

### **Criminal Record Information**

#### **Rehabilitation of Offenders Act 1974**

A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information page.

### **Salary Requirements of the Skilled Worker Visa Route**

Please note that this post may be suitable for sponsorship under the Skilled Worker visa route but first-time applicants might need to qualify for salary concessions. For more information, please visit [the Government's Skilled Worker visa page](#).

For research and academic posts, we will consider eligibility under the Global Talent visa. For more information, please visit [the Government's page, Apply for the Global Talent visa](#).

