

Job Description

Job title:	KTP Associate in Sustainable Construction Products
Department/School:	Department of Architecture and Civil Engineering
Salary:	£40,000 - £45,000 p/a depending on qualifications and experience, plus an additional £4,000 personal training and development budget
Location:	This role will be based at Wienerberger Ltd., Kingsbury Works, Rush Lane, Tamworth, B77 1LT
Job purpose	
<p>To develop a variety of strategies to enhance the chemical reactivity of low-purity clays resources, so that they can be used as Portland cement replacements and/or precursors for inorganic polymer materials production.</p> <p>This project will support decarbonisation of the UK masonry sector by developing novel cementitious materials formulations to producing, low-carbon concrete blocks, tiles and/or bricks using ultra-high levels of treated clays. These products will meet the stringent technical and regulatory requirements of the construction industry. These activities will be complemented by knowledge transfer from all participants.</p> <p>To lead and deliver an innovative project, embedding new knowledge in both the Business Partner and the University.</p> <p>This is a 21-month Knowledge Transfer Partnership (KTP) between Wienerberger Ltd, the Department of Architecture and Civil Engineering at the University of Bath.</p>	
Source and nature of management provided	
<p>The KTP project is delivered by the Associate and is managed through a Local Management Committee (LMC). This is chaired by the senior company executive and comprises the Company and Academic leaders/supervisors and a KT Adviser (Innovate UK representative) and meets every 4 months.</p> <p>Monthly progress meetings are held with the Company and Academic Supervisors.</p> <p>Day-to-day management will be organised by the Company's Supervisor and supported by the Academic supervisors.</p>	
Special conditions	
<p>The Associate must be able to travel as required, to attend 2 KTP residential schools and any meeting in the UK or overseas as is necessary for the successful completion of the project.</p> <p>The Associate must be able to relocate to where the Company is located and be able to meet all visa application costs, if applicable.</p>	
Main duties and responsibilities	
1	Undertaking a full literature review including standards, journal papers, patents, reports, internet and other publications to establish the state of current advances and/or applications of low-grade clay based cementitious materials (e.g. Portland blended, hybrid and

	alkali-activated)
2	Assessing the suitability of using low grade clays as potential precursors for producing Portland blended, hybrid and/or alkali-activated cements; Scaling up of production of selected cements for formulations for tiles, bricks or blocks production;
3	Identification of suitable activation (e.g. calcination/ milling/ chemical treatments) mechanism for low-grade clays;
4	Feasibility analysis of production of low-purity clay products by determining compliance according to existing standardised testing methods and regulations;
5	Developing of manufacturing protocols, including lessons learnt from the scaling up experiences;
6	Developing research objectives and contributing to setting the direction of the research activities in collaboration between Wienerberger Ltd and University of Bath
7	Conducting a market and regulatory analysis for masonry product production;
8	Teamwork and motivation. It will be necessary to work both independently and effectively as part of a team at the company and to liaise with the knowledge base at Bath.
9	Initiative and problem-solving. The main objectives of the project and the desired timeline are set but how they will be achieved will be dictated by the evolution of the research. The Associate must therefore be self-motivated to complete the tasks and manage the project accordingly.
10	Liaison and Networking. The project relies on a good dissemination of results but also the pro-active search for the right information, sometimes outside the applicant's direct skill set, and sometimes to show external customers the results of the project and how it matches their objectives. Timely and relevant exchanges of information are primordial.
11	Communication. The KTP Associate is expected communicate and present research results in an organised manner. The Associate is expected to prepare and write monthly progress reports, executive summaries and other reports for the Local Management Committee (LMC) meetings. Within the limits of commercial confidentiality, the Associate will have the opportunity to deliver papers at conferences and will be expected to co-author articles in peer-reviewed international publications. Excellent written and oral communication skills are therefore important.
12	Supervision. There is no direct management responsibility. However at specific times in the project, the Associate might be expected to supervise technical staff for completion of specific tasks, either in person or remotely, if justified by the project's operational requirements.
13	The Associate must be aware of and abide by all relevant University / Business Partner / KTP regulations and guidance relevant to their role and follow all the University and the Business Partner's policies and working practices and procedures at all times to ensure that no disclosure of confidential information results from their actions.
The Associate from time to time will be required to undertake other duties of a similar nature as reasonably required by the supervisors.	

Person Specification

Criteria	Essential	Desirable
Qualifications		
A doctoral degree (or close to completion) in Materials, Chemical or Civil Engineering, Chemistry, Geology, or a closely allied discipline; or equivalent significant relevant experience and professional qualification.	√	
Experience/Knowledge		
Experience in clay-based cementitious materials mix design, characterisation and testing or a closely allied discipline;	√	
Experience with the design, characterisation and testing of cementitious, ceramic and/or masonry products;	√	
Experience of working in the manufacturing of masonry products;		√
Experience of working in multi-disciplinary project teams to agreed project plans and specifications;		√
Project management experience or demonstrated self-motivation in industry and/or research settings;		√
Experience in market and commercialisation analysis.		√
Skills		
Good time management and planning skills, with the ability to meet tight deadlines and work effectively under pressure;	√	
Proven ability to manage competing demands effectively, responsibly and without close support;	√	
A proven ability to work well both individually and in a team;	√	
Ability to organise and prioritise own workload to meet required deadlines;	√	
Ability to write research reports and to effectively disseminate outcomes;	√	
Excellent written and verbal communication skills (proven experience of writing reports, presenting research outputs, interacting with customers or other third parties communicating complex technical information to stakeholders at all levels);	√	
Demonstrated high-level investigation, analysis and research skills;	√	
Ability to conceptualise and understand the commercial imperative for the project;	√	
Excellent problem solving skills.	√	
Attributes		

Self-motivated: ability to “take ownership” of the project and bring it to successful completion;	√	
Awareness of the principles of KTP and a willingness to embrace them;	√	
A strong commitment to your own continuous professional development;	√	
Be a team-player, supportive of colleagues and always operating in a collegiate manner;	√	