

Candidate Information

Position: Concrete Technologist - KTP Associate - Macrete
School/Department: KTP and Business Networks
Reference: 21/109491
Closing Date: Monday 14 February 2022
Salary: £26,000 - £32,000 per annum. One of the key KTP benefits for graduates is access to a £11,000 training and travel budget over the 36 month project.
Anticipated Interview Date: 1st stage: 22 February 2022 - 2nd stage: 1 March 2022
Duration: 36 months

Job Purpose:

To develop proprietary concrete mixes with high volume GGBS through thermal activation and optimised curing to reduce embodied carbon, offer comparable strength development and improve performance in service evidenced through durability testing and service life prediction.

Main Activities and Responsibilities:

Queen's University Belfast in partnership with Macrete have an exciting employment opportunity for a graduate to work on a KTP project. Macrete Ireland Ltd is one of the few truly independent pre-cast concrete manufacturers within the United Kingdom and Ireland, supplying a range of precast concrete systems to meet the needs of the civil engineering construction market. With over 40 years' experience in the design and manufacture of a wide range of reinforced and pre-stressed concrete products and systems, Macrete are established at the forefront of the precast concrete industry providing concrete solutions that are designed and supplied to the civil, rail, water, stadia, marine and agricultural markets.

This is a unique opportunity for a dynamic and motivated Civil/Materials Engineering graduate to work in to work in Macrete (Toomebridge, Co. Antrim) on a 36 month collaborative project with School of Natural & Built Environment at Queen's.

The KTP Associate will lead on the delivery of the following key project stages under the guidance of company and academic supervisors:

1. Thermal activation of high volume GGBS concretes with hot mixing water for optimum early strength.
2. Determination of the curing regime for achieving desired strength.
3. Development of proprietary concretes for various exposure environments and performance testing.
4. Service Life Design.
5. Carbon footprint and performance guidelines targeting different customer sectors.

Planning and Organising:

1. Manage and coordinate the items of work as laid out in the project plan (individual work plan will be provided by Supervisors).
2. Plan day-to-day activity within the framework of the agreed work plan.
3. Contribute to the planning and management of the project, approximately 3-6 months in advance.
4. Ensure that all training and development activity is scheduled to ensure that progress on the work plan objectives is not interrupted or delayed.

Resource Management and Responsibilities:

1. Plan and manage day-to-day resources to ensure the project runs to time and on budget.
2. Coordinate and obtain approval for planned expenditure/allocation of resources with the Management Committee and Steering Group.
3. Carry out supervision of placement students or other staff members as required.
4. Monitor travel and development budgets and produce a Personal Development Plan which will ensure best use of financial resources.

5. Attend training modules (mandatory and additional job-specific training). This may be local, national and international.
6. Perform any other additional duties as agreed by the Local Management Committee and Steering Groups to contribute to the development of the company, the university and the Associate.

Internal and External Relationships:

1. Present regular progress reports to members of the Steering and Management Groups and to external audiences.
2. Liaise with company staff on a daily basis. Contribute to training of staff in the company and university as required.
3. Build relationships with both company and university staff to ensure effective working practices are established.
4. Attend and contribute to any appropriate meetings, both in the company and the university as required.
5. Establish contacts with additional groups and organisations (other KTP Associates, other university departments, other industrial contacts, and Innovate UK) as required to develop knowledge and understanding and form relationships for future collaboration.
6. Act as an Ambassador for the Knowledge Transfer Partnership Scheme.

Additional Information:

- Knowledge Transfer Partnerships help forward thinking companies innovate for growth. They do this by connecting organisations who have an innovative idea with the knowledge and expertise to help deliver it. This dynamic three-way partnership formed between an inspired graduate, the university and the company means that the graduate, known as the KTP Associate, provides the link between an expert academic team and a dynamic organisation. This bridge gives the graduate unique and exceptional access to both world class academic support and experts from within the business.
- A KTP provides a fulfilling employment opportunity where you can apply your knowledge to turn a key strategic innovative idea into reality and although the KTP Programme is aimed at recent graduates, any suitable qualified graduate may apply. Each KTP Associate role is a fully salaried job and last between 12 months and three years with approximately 70% of Associates offered employment by the host business at the end of the project. Projects can be in any sector and for businesses of all sizes. Each KTP Associate will have a travel / training budget to provide funding for job-specific training and further professional development. Two, one week residential management training modules are also included as part of the package.
- For all KTP projects, the graduate is employed by the University but contracted to work in the business, under the business' basic terms and conditions including holidays and hours of work. As a member of University staff, KTP Associates can join the University pension scheme, gain access to University resources including the Library and sports facilities.
- KTP aims to help businesses improve their competitiveness and productivity through the better use of knowledge, technology and skills held within the UK knowledge base. KTPs are funded by UKRI through Innovate UK with the support of co-funders, including the Scottish Funding Council, Welsh Government, Invest Northern Ireland, Defra and BEIS. Innovate UK manages the KTP Programme and facilitates its delivery through a range of partners including the Knowledge Transfer Network (KTN), Knowledge Bases (in this case, Queen's University Belfast) and Businesses.

More details about are available at www.ktp-uk.org

Essential Criteria:

Please note that the Shortlisting Panel cannot make assumptions on your experience or qualifications; it is the responsibility of the applicant to evidence their suitability for the role. As such your Application Form, CV and/or Cover Letter must clearly demonstrate how your Qualifications and Experience meet the Essential Criteria and, where possible, Desirable Criteria as listed in the Candidate Information Booklet.

1. Hold, or be about to obtain in July 2022, at least a 2.2 Honours Degree (or equivalent) in Civil or Structural or Materials Engineering or a closely related discipline. Please state your degree classification clearly in your application.
 2. Completion of a relevant project or a student placement. Applicants should indicate how their experience could be applied to this post.
 3. Understanding of concrete technology. *
 4. Experience in Concrete Testing. *
 - 5 Experience in Mechanical Performance of Materials. *
- * = May be demonstrated through the completion of a module, student project or placement.
6. Good oral, written and presentation skills.
 7. High level of IT skills.
 8. Ability to think logically, create solutions and make informed decisions.
 9. A high level of numeracy and the ability to interpret data.
 10. Self-motivated, capable of working independently, with a drive and ambition to succeed.
 11. Ability to work effectively as a member of a group.

12. Enthusiasm for research/project area.
13. Ability to meet the mobility requirement of the role, which will involve travel from the company to the university on occasion.
14. Well organised, attention to detail and ability to meet tight deadlines.
15. An interest in staying with the Company. (Associates are normally invited to apply for permanent positions).
16. Ability to take part in Associate management courses (requiring two one-week periods in England).
17. Willing/able to travel throughout the UK and Ireland and abroad, as necessary.

Desirable Criteria:

1. Hold, or be about to obtain, a higher degree in a relevant discipline.
 2. Completion of a relevant placement in industry.
 3. Experience in Technical Report writing.
 4. Complete an undergraduate project in the area of concrete technology.
- * = May be demonstrated through the completion of a module, student project or placement.
5. Ability to deliver training and follow-up support to operatives.
 6. Ability to influence people effectively.
 7. Tenacious and committed to achieving goals.