

## Candidate Information

<b>Position:</b>	Structural Engineer/Materials Scientist – Tracey Concrete Ltd
<b>School/Department:</b>	KTP and Business Networks
<b>Reference:</b>	18/106959
<b>Closing Date:</b>	Thursday 6 December 2018
<b>Salary:</b>	£24,000 to £34,000 per annum    One of the key KTP benefits for graduates is access to a £11,100 training and travel budget over the 28 month project.
<b>Anticipated Interview Date:</b>	Tuesday 18 December 2018
<b>Duration:</b>	28 months

To develop an innovative solution to use what is widely considered a waste material in the pre-cast concrete industry. This project will deliver sustainable manufacturing practices that will positively impact the environment and the health and safety of workers in concrete manufacturing processes.

### Main Activities and Responsibilities

We wish to recruit a skilled graduate to work as a KTP Associate in Tracey Concrete Ltd in collaboration with Queen's University Belfast. Through this Knowledge Transfer partnership, we aim to develop an innovative solution to use what is widely considered a waste material in the pre-cast concrete industry. This project will deliver sustainable manufacturing practices that will positively impact the environment and the health and safety of workers in concrete manufacturing processes. The post-holder will be based in Tracey Concrete Ltd in Enniskillen, Co. Fermanagh, Northern Ireland.

The eight integrated project phases are:

1. Review of mix design and identification of new minerals.
2. Investigation of chemical and physical properties of existing and new construction materials.
3. Optimisation of mixes for innovative material with improved engineering performances to produce innovative pipes.
4. Evaluation and adjustment of the optimised material with improved engineering performances and the manufacturing process at the batching plant.
5. Assessment of the performances, cost-effective and carbon foot print of optimised mixes and new material with improved engineering performances.
6. Development of a new R&D Laboratory at the company.
7. Embedding of novel technology of new mixes.
8. Staff training and development of SOPs.

### Planning and Organising

- Manage and coordinate the items of work as laid out in the project plan (individual work plan will be provided by Supervisors).
- Plan day-to-day activity within the framework of the agreed work plan.
- Contribute to the planning and management of the project, approximately 3-6 months in advance.
- 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

- Plan and manage day-to-day resources to ensure the project runs to time and on budget.
- Coordinate and obtain approval for planned expenditure/allocation of resources with the Management Committee and Steering Group.
- Carry out supervision of placement students or other staff members as required.
- Monitor travel and development budgets and produce a Personal Development Plan which will ensure best use of financial resources.
- Attend training modules (mandatory and additional job-specific training). This may be local, national and international.

- 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**

- Present regular progress reports to members of the Steering and Management Groups and to external audiences.
- Liaise with company staff on a daily basis. Contribute to training of staff in the company and university as required.
- Build relationships with both company and university staff to ensure effective working practices are established.
- Attend and contribute to any appropriate meetings, both in the company and the university as required.
- 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.
- Act as an Ambassador for the Knowledge Transfer Partnership Scheme.

### **Additional Information**

- Knowledge Transfer Partnerships is a UK programme that enables businesses to work with universities to gain access to specialist knowledge and expertise and apply it within their organisation. Each Partnership recruits a Graduate to work in the company, implementing and embedding the latest research techniques. Guidance is provided by the academic and company supervisors to ensure that the objectives of the project are met. Although the scheme is aimed at recent graduates, any suitably qualified individual may apply.
- Each KTP is a fully salaried job that lasts between twelve and thirty six months, providing the graduate with an opportunity to fast track a career in industry. Each KTP Associate has a training and development budget and a travel budget. This funding provides opportunities for job-specific training, attending and presenting at conferences, visiting trade shows, customers and suppliers etc. Two, one week residential management training modules are also provided as part of the package.
- As members of University staff, KTP Associates can join the University pension scheme, gain access to University resources such as the Library and sports facilities.

More details are available at [www.ktpjobsni.com](http://www.ktpjobsni.com).

### **ESSENTIAL CRITERIA**

- At least a 2.1 Honours Degree (or equivalent) in Civil or Structural Engineering or Material Science or a closely related discipline. Applicants who hold a 2.2 in the above, will also be considered if they have either a relevant higher degree or have completed one years' relevant work experience.
  - Completion of a relevant research project, module or student placement. Applicants should indicate how their experience could be applied to this post.
  - 3 months' relevant work experience.
  - Understanding of concrete materials.\*
  - Understanding of cement chemistry.\*
  - Experience in Structural Testing.\*
- \*(may be demonstrated through the completion of a module, student project or placement).
- Good oral written and presentation skills.
  - High level of IT skills.
  - Ability to think logically, create solutions and make informed decisions.
  - A high level of numeracy and the ability to interpret data.
  - Self-motivated, capable of working independently, with a drive and ambition to succeed.
  - Ability to work effectively as a member of a group.
  - Enthusiasm for research/project area.
  - Well organised, attention to detail and ability to meet tight deadlines.
  - An interest in staying with the Company. (Associates are normally invited to apply for permanent positions).
  - Ability to take part in Associate management courses (requiring two one-week periods in England).
  - Willing/able to travel throughout the UK and Ireland and abroad, as necessary.

### **DESIRABLE CRITERIA**

- Hold a higher degree in a relevant discipline.
- 1 years relevant work experience
- Experience in Technical Report writing.

- Experience in mineral analysis techniques (e.g. SEM, XRD)\*
- Experience in Environmental Exposure Analysis\*  
\*may be demonstrated through the completion of a module, student project or placement.
- Ability to deliver training and follow-up support to operatives.
- Ability to influence people effectively.
- Tenacious and committed to achieving goals.
- Interested in the wider commercial aspects of working in a business