School of Architecture, Building and Civil Engineering

Geosynthetics Ltd

Job Ref: REQ250358

Job title: Geotechnical Engineer (KTP Associate)

Period: 24 Months
Salary: £35,000 - £39,000 per annum (Starting salary to be confirmed on offer of appointment), plus £2,000 per annum training budget.
Application deadline: 11 May 2025.

Due to the nature of the funding, the employment must start no later than 06th December 2025.

Key words: Engineering; Civil Engineering; Geotechnical Engineering; Soil Mechanics; Infrastructure Engineering; Mechanics; Data Analysis; Civil Engineering Design; Geosynthetics; Road and Pavement Design

Project Title: New design practices for geogrid reinforced geotechnical systems.

This is a 24-month Knowledge Transfer Partnership (KTP) project between Loughborough University and Geosynthetics Ltd, funded by UKRI Innovate UK. There is potential to continue employment with Geosynthetics Ltd. beyond the KTP, subject to the candidate's performance and visa requirements.

This is an exciting opportunity for a forward-thinking and ambitious engineer to join a company that supplies geosynthetic materials and associated design services to the construction sector. You will be joining a company that is looking to develop and improve, through this KTP, its design services and offer more sustainable solutions, into the industry related to the design and understanding of the performance of geogrid soil reinforcement systems. You will have autonomy to lead and develop the project.

About the project

The Associate will work closely with and be supported by the company's technical team and experts at the knowledge base, Loughborough University, throughout the project. This KTP aims to develop new design practices for geogrid reinforced geotechnical systems using Geosynthetics Ltd. products, enabling lower cost and lower carbon infrastructure solutions. You will conduct laboratory and field testing, and design development and evaluation.

KTP Associate Role:

The KTP Associate will join this partnership between Geosynthetics Ltd and Loughborough University to develop innovative geotechnical solutions for geogrid reinforcement. As a KTP Associate, you will lead the project to enhance the performance and application of geogrids in civil engineering. Your work will focus on characterizing fill materials, assessing geogrid-soil interactions, and developing new design methodologies, mainly for roads, pavements and working platforms applications. This role offers a unique opportunity to bridge academic research and practical industry applications, contributing to sustainable infrastructure development.

Key Responsibilities:

- Conduct laboratory and field tests on geogrid-soil systems.
- Develop and validate new design methodologies.
- Collaborate with academic and industry experts.
- Communicate findings to stakeholders and clients.

The KTP Associate will be based primarily at the Geosynthetics Ltd. premises in Hinkley, Leicestershire, and will also spend some time at Loughborough University with the academic team. The Associate will be supervised by an academic team, led by Dr Matthew Frost and Dr Alister Smith, who are both Chartered Engineers and experts in Geotechnics with experience in Geogrid testing. They are based in the School of Architecture, Building and Civil Engineering at Loughborough University. The Associate will form an integral part of Geosynthetics Ltd's, design and product development team, working closely with the Geosynthetics Ltd's supervisory team and company partners. As a KTP Associate, the successful applicant will have access to a wide range of commercial, R&D and management training programmes, as well as technical training resources and facilities at Loughborough University.

Introduction to Geosynthetics Ltd

Geosynthetics Ltd is the UK's largest independent supplier of geosynthetic materials, specialising in products like geogrids and geotextiles for civil engineering projects. Their offerings include solutions for geotechnical reinforcement, drainage, tree root protection, and erosion control. Geosynthetics Ltd provides advisory support to enhance construction projects, working with major clients. The company recently expanded its operations with a new site in Hinckley, reflecting its growth and commitment to innovation.

Company Vision

Geosynthetics Ltd aims to lead the market in ground stabilisation and reinforcement by continuously expanding their product lines and providing innovative solutions that meet the evolving needs of their customers and comply with legislation. They are dedicated to sustainability, reducing environmental impact, and enhancing the lifecycle of infrastructure projects.

Loughborough University

Loughborough University is ranked in the top ten in the most recent Complete University Guide Guardian League Table and the Times Good University Guide. It has been awarded a record of seven Queen's Anniversary prizes for its research impact to society and UK industry and is somewhere anyone can realise their full potential.

School of Architecture, Building and Civil Engineering

With an international reputation for research excellence and track record in high quality training the School of Architecture, Building and Civil Engineering at Loughborough University is one of the largest centres for built environment education in the UK. The School brings together outstanding facilities, superb teaching and commercial industry links across a wide range of sectors. With experts across a range of disciplines including Architecture, Transport and Urban Planning, Construction Management, and Civil Engineering the School provides training, research, and consultancy to shape the world we live in, from the design of buildings resilient to climate change, through to the management of contractors during construction and the planning, operation, and maintenance of transport systems. On behalf of Loughborough University, the School is taking the lead on £1.3 million of investment by the UK Government in infrastructure delivery and maintenance, drawing on its intensive innovative and industry-relevant research and enabling numerous research opportunities around the themes of infrastructure resilience to environmental and usage change, and emissions reductions.

Job Description and Person Specification

Job Purpose

The Associate will lead a project at the interface between research and practice. They will lead the characterisation of virgin and marginal fill materials through advanced laboratory testing, developing a comprehensive database of their hydromechanical properties. They will conduct geogrid-soil interaction experiments using specialised equipment to advance understanding of geosynthetic behaviour under various stress regimes. Using these insights, the candidate will develop and validate new design methodologies to enhance geogrid-reinforced geotechnical systems, improving performance certainty, reducing construction costs, and lowering embodied carbon. They will collaborate on field trials, monitor performance data, and refine designs based on real-world results. Additionally, they will work closely with Geosynthetics' engineering team to embed knowledge, support training initiatives, and contribute to the commercial application of project outcomes.

Job Duties

- **Project Management and Delivery:** Execute the KTP project tasks according to the project workplan, ensuring timely delivery of key outcomes. Manage the project effectively, collaborating with stakeholders to facilitate commercialization.
- **Technical Research and Development:** Conduct experimental programs to evaluate the performance of geogrid-reinforced soil systems using laboratory testing and field monitoring. Develop an in-depth understanding of current design methodologies and develop new approaches based on project findings.
- **Knowledge Dissemination and Embedding:** Document research progress, results, and insights, ensuring knowledge transfer within Geosynthetics Ltd. Engage with internal stakeholders,

including senior leaders, technical teams, and commercial departments, to embed project outcomes into business practices.

- **Reporting and Communication:** Prepare and deliver presentations, reports, and project updates for internal meetings, supervision sessions, LMCs, advisory panels, and other relevant forums. Communicate findings effectively to both technical and non-technical audiences.
- **Publication and Intellectual Property Management:** Contribute to the academic community through the preparation of research papers for journals and conferences, ensuring alignment with commercial sensitivities. Support the identification and protection of intellectual property generated from the project.
- **Stakeholder Engagement:** Build and maintain relationships with clients, industry partners, and academic collaborators to promote the project outcomes. Develop networks to support the application and evaluation of project findings in real-world settings.
- **Training and Development:** Participate in KTP management training, personal development courses, and other relevant training opportunities. Apply learnings to enhance project delivery and career progression.
- **Additional Responsibilities:** Fulfil other duties as required, aligned with the role's nature and responsibilities, ensuring flexibility and contribution to the project's overall success.
- Work with stakeholders, including senior leaders, the company technical, commercial, sales, marketing teams across the business.

Points to Note

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed.

Applicants must have completed their last qualification (degree, masters, PhD), no more than five years before the closing date.

Special Conditions

All staff have a statutory responsibility to take reasonable care of themselves, others and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equality & Diversity policy and procedures at all times. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

Successful completion of probation will be dependent on attendance at the University's mandatory courses which include Respecting Diversity and, where appropriate, Recruitment and Selection.

We actively encourage applicants from women, disabled and Black, Asian and Minority Ethnic candidates, who can bring their experiences and voices to the partnership.

Organisational Responsibility

Reports to the KTP Lead Academic: Dr Matthew Frost and Dr Alister Smith

Person Specification

Your application will be reviewed against the essential and desirable criteria listed below. Applicants are strongly advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application. Stages of assessment are as follows:
1 – Application
2 – Presentation
3 – Interview

Essential Criteria

Area	Criteria	Stage
Experience	Background in civil and geotechnical engineering.	1,3
	Experience of geotechnical engineering projects, including design and construction of infrastructure such as foundations, platforms, highways, railways, and retaining walls.	1,3
	Experience in laboratory and/or field testing, particularly in geotechnical engineering.	1,3
	Experience of producing technical reports and/or engineering designs.	1
Skills & abilities	Ability to undertake the duties and responsibilities of the post.	1,3
	Working knowledge of geotechnical systems and strong understanding of geotechnical design principles.	1,3
	Proficiency in geotechnical laboratory testing methods.	1,3
	Excellent written and oral communication skills.	1,3
	Self-motivated and ability to meet deadlines.	1,3
	Ability to work independently and as part of a team.	3
	Excellent interpersonal and organisational skills.	3
Training	Willingness to undertake appropriate further training and to adopt new procedures as and when required.	1
Qualifications	Master's degree in Geotechnical Engineering, Civil Engineering, or a closely related field (MEng or MSc).	1
Other	Willingness to travel.	3
	Willingness to undertake field work.	3
	Willingness to be based at Geosynthetics Ltd.’s office in Hinkley, Leicestershire.	3
	Commitment to maintaining confidentiality.	3

Desirable Criteria

Area	Criteria	Stage
Experience	Knowledge of geosynthetics and their applications in civil engineering projects.	1,3
	Experience in mentoring civil engineers in geotechnics.	1,3
	Familiarity with sustainability and environmental impact considerations in geotechnical engineering.	1,3
	Experience with numerical analysis in geotechnical engineering.	1,3
	Understanding of the performance characteristics of geogrids and their interaction with aggregate materials.	1,3
	Familiarity with sustainability and environmental impact considerations in geotechnical engineering.	1,3
	Authoring original work for academic journal papers, conference papers or technical reports.	1,3
	Experience delivering technical seminars/lectures.	1,3
Skills & abilities	Ability to use specialised modelling software packages like Abaqus.	1,3
	Strong analytical and problem-solving capabilities.	1,3
	Ability to program/code using e.g. Python.	1,3
	Ability to collaborate effectively with technical staff from various disciplines in a commercial environment.	1,3
Qualifications	A PhD or relevant work experience in geotechnical or infrastructure-related disciplines would be desirable.	1
Other	Valid license for driving in the UK.	1

Conditions of Service

The position is FULL TIME and FIXED TERM for 24 months. Salary will be between £35,000 - £39,000 per annum at a starting salary to be confirmed on offer of appointment. The successful applicants will also receive a £2,000 per annum training budget each.

The appointment will be subject to the University's normal Terms and Conditions of Employment for Academic and Related staff/Operational and Administrative staff, details of which can be found here.

We strive to create a culture that supports equality and celebrates diversity throughout the campus. The University holds a Bronze Athena SWAN award which recognises the importance of support for women at all stages of their academic career. For further information on Athena SWAN see http://www.lboro.ac.uk/services/hr/athena-swan/.

Applications

The closing date for receipt of applications: Sunday 11th May
First-stage interviews will take place w/c 19th or 26th May

Due to the nature of the funding, the employment aims to start no later than 6th December 2025. This job is applicable for applying for a Global Talent visa (if needed).

Informal Enquiries

Informal enquiries should be made to the Lead Academic, Dr Matthew Frost. M.w.frost@lboro.ac.uk or Dr Alister Smith a.smith10@lboro.ac.uk .