



JOB DESCRIPTION

Job Title: Sustainability Engineer – KTP Associate

Unit/School: Cardiff School of Art and Design

Location: Newtown & Cardiff

Hours: 37 hours per week

Tenure: Fixed Term Contract for 30 months

Grade: 5 A/B

Salary: £32,348 - £35,333 per annum

Accountable to: Academics and Company Supervisors

The Knowledge Transfer Partnership (KTP) is one of Europe's leading UK government funded collaborative programmes helping businesses to improve their competitiveness and productivity using expertise, skills and resources from a UK knowledge base. The KTP is being led by CSAD staff from the Sustainable and Resilient Build Environment (SuRBe) research group <https://surbe.org>.

The successful candidate will be responsible for managing and supporting a collaborative Knowledge Transfer Partnership (KTP) for a fixed term of 30 months between EvaBuild Ltd (company partner) and Cardiff Metropolitan University.

The Company

EvaBuild Ltd's expertise is in groundworks, civil engineering and general groundworks. EvaBuild has Silver Investors in People, and in 2022 generated a turnover of £14.7Million, double that of 2020. The company provides an efficient turnkey design and implementation service with ongoing intelligent solutions adapted to all stages and elements of work programmes where sustainability is integral to the business, from design to construction and project management.

EvaBuild's services include site investigations, reinforcement concrete shuttering, creation of concrete yards, foundations, deep drainage, confined spaces, street works, road construction, road surfacing and paving works and land remediation. EvaBuild are responsible for setting-out the site and installing all groundworks and infrastructure; and then near the end of a contract, they return to landscape and complete the project to the highest specification.

EvaBuild undertakes a variety of contracts, ranging from £10,000 to £2m and provides below ground solutions for many UK wide clients and developers constructing modular education, commercial, medical and sports buildings.

Background

From 2017, the UK Government made a commitment to Modern Methods of Construction (MMC) delivered through offsite manufacturing (OSM), to improve the performance and delivery of infrastructure assets over their life cycle. OSM of MMC includes two dimensional (2D) structural systems: prefabricated wall, floor and roof panels, and 3D primary structural systems: modular units of entire buildings. In 2022, there are many organisations across the UK providing OSM of 2D and 3D MMC systems for above ground construction, yet none for groundworks and below ground solutions.

Following COP26 in 2021, it is clear there is an urgent need for all of society to rapidly decrease their carbon emissions and increase the sequestration of the carbon in the atmosphere, to mitigate against catastrophic climate change. In response, the Welsh Government established its Net Zero Carbon Plan for carbon reduction targets in five-year budget cycles, to deliver net zero carbon by 2050: 37%: 2020 to 2025, 58%: 2026 to 2030, 63% by 2030, 89% by 2040, and 100% by 2050.

Role Summary:

The post holder (Associate) will be responsible for supporting and project managing a collaborative KTP project between EvaBuild Ltd (the Company partner), and Cardiff Metropolitan University.

The Associate will lead a step change programme to reduce EvaBuild's carbon footprint and embed a culture of change management across the company's operations, reflecting the company's ambition to place carbon neutrality at the forefront of its strategic business plan. The Associate will take a key role in supporting EvaBuild to respond to the UK and Welsh Government targets for OSM MMC 2D/3D groundwork solutions that are modular and aspire to be carbon neutral by 2030. This also includes the development of a new product range of a ground-coupled modular renewable energy system. This step change and new product range for EvaBuild aspires to sell an aspirational net-zero modular groundwork systems to their clients, that reduces both embodied and operational carbon emissions and so increasing both revenue and net profit.

The Associate will primarily be engaged as an embedded member of the EvaBuild team and will receive day to day support, supervision, and guidance from EvaBuild's Training Manager and, where appropriate, the Managing Director. In addition, the Associate will receive supervision from Cardiff Met's Academic Lead, and two other academic supervisors for a minimum of half a day per week. It is anticipated that the Associate will undertake most of the project based at the EvaBuild offices in Newton. Additional places of work include travel to Cardiff Metropolitan University in addition to site visits for EvaBuild's projects in Wales and across the UK.

Principal Duties and Responsibilities:

CSAD102

- To take overall responsibility for the delivery of the KTP project objectives.
- Review the current product ranges and their position in the marketplace.
- Through market research identify a preferred OSM partner to develop aspirational net zero carbon modular groundwork solutions
- Evaluate new materials and work with EvaBuild's preferred OSM partner to develop aspirational net zero carbon modular groundwork solutions and fill material designing out cement, with circular principles of recycling/repurposing materials for fill.
- Adapting the new modular pipework/ducting to develop EvaBuild's new earth-to-air heating and cooling pipes and thermal exchanger system, to capture renewable energy from the ground to significantly reduce operational carbon emissions and offer a new income stream.
- Evaluate and monitor the new solutions across design, manufacture, installation and in the operation of case studies with EvaBuild's key clients, to ensure optimum carbon, cost, energy, and waste reduction is delivered and refinements made before launch.
- From the monitoring stages, refine and launch the aspirational carbon neutral modular & recycled material groundwork and ground-coupled renewable energy solutions to EvaBuild's existing and new markets.
- Help to implement and embed new processes and procedures across the company including training of staff.
- Throughout the project the Associate will work with the academic and company supervisors to disseminate the project findings at seminars and workshops in Wales and the UK, in addition to co-authoring academic papers for UK and international conferences and journals.
- To provide a progress report for presentation at Local Management Committee (LMC) meetings.
- To manage the Associate Support budget associated with the KTP Project.
- Convene and lead monthly technical meetings to discuss progress, targets, and resources.
- Adhere to all confidentiality, IPR, IIP, health and safety procedures etc, established within the Company and Cardiff Metropolitan University.
- Complete a final report quantifying the benefits that have been achieved prior to the agreed end of the KTP programme.
- Any other duties that may be reasonably assigned by the Knowledge Base Supervisor/Industrial Supervisor.

Additional Information:

Standard Notification

These guidelines are provided to assist you in the performance of your role. The university is a dynamic organisation; therefore changes may be required from time to time. Any changes will be made in consultation with the post-holder. The Summary of Duties and Responsibilities is not intended to be an exhaustive list of tasks performed. Other associated tasks are likely to be performed as directed by the line manager.

The University is committed to the highest ethical and professional standards of conduct. Therefore, all employees are expected to have due regard for the impact of their personal behaviour and conduct on the University, students, colleagues, business stakeholders and our community. Each employee must demonstrate adherence to our Code of Professional Conduct. In addition, all employees should have particular regard for their responsibilities under Cardiff Metropolitan University's Equalities, Financial, Environmental and Sustainability, People Services and Health and Safety policies and procedures.



PERSON SPECIFICATION

Job Title:	KTP Associate	<u>*Key</u> A - Application form I - Interview T/P - Test/Presentation
School/Unit:	Cardiff School of Art & Design	

FACTORS	ESSENTIAL AND DESIRABLE CRITERIA	ASSESSED BY		
		A*	I*	T/P*
Education and Qualifications (Essential)	Good bachelor's degree, in Architecture, or Engineering, or Design related disciplines.	X		
Education and Qualifications (Desirable)	Masters or Doctorate in Architecture, or Engineering, or Design related disciplines.	X		
Knowledge (Essential)	Good understanding of engineering design or building design, or design engineering and construction site erection or fixing of components.	X	X	
Knowledge (Desirable)	Understanding of offsite manufacturing of modular modern methods of construction or modular product componentry.	X	X	X
	Understanding of design for manufacture and lean manufacturing.	X	X	
	Understanding of the circular economy.	X		
	Good understanding of the carbon cycle (operational and embodied) and methods for assessing and reducing carbon emissions.	X		X
	Understanding of 2D/3D building information modelling, or computer aided design.	X	X	
Skills and Abilities	Technical design skills for buildings above and below ground, or products.	X		X

(Essential)	<p>Ability to conduct market research, analyse and interpret technical data, report on findings and recommendations.</p> <p>The ability to communicate and present to a variety and levels of people, for example factory or construction site levels, to managers and directors, by face-to-face discussion, online, by email, or phone.</p> <p>Self-motivated, well organised with strong interpersonal skills, with the capability of working under own initiative, or as part of a team to meet deadlines.</p>	X	X	
Skills and Abilities (Desirable)	<p>The ability to use design for manufacture skills.</p> <p>The ability to develop administrative procedures, policies, and practice, and to develop ideas to improve these services, including for budgetary control.</p> <p>The skill and ability to assess the as-designed embodied and operational carbon performance of buildings or products in use, to determine options for carbon reduction.</p> <p>Ability to use online collaboration tools (for example Microsoft Teams and/or Zoom).</p> <p>Ability to manage data whilst adhering to ethical guidelines around collection and use of organisational and personally identifiable data (for example GDPR).</p>	X	X	
Experience Paid/Unpaid (Essential)	<p>Previous experience of working independently and in a team environment in Architecture, or Engineering, or Design related disciplines, or university research.</p>	X	X	
Experience Paid/Unpaid (Desirable)	<p>Experience of problem solving, and managing conflicting demands, and to prioritise tasks.</p>		X	
Other Requirements (Essential)	<p>Ability and willingness to travel independently to EvaBuild, the University and multiple off campus</p>	X		

	locations such as construction sites across Wales and the UK on a regular basis.			
	Commitment to equality and diversity and health and safety.	X		
Other Requirements (Desirable)	A commitment to continuing professional development.	X		
Welsh language skills	C1 - Fluent user Can communicate fluently in Welsh	X	X	
Listening (Desirable)				
Reading (Desirable)	C1 - Fluent user Can communicate fluently in Welsh	X	X	
Speaking (Desirable)	C1 - Fluent user Can communicate fluently in Welsh	X	X	
Writing (Desirable)	C1 - Fluent user Can communicate fluently in Welsh	X	X	