Information on Postgraduate Research Scholarship
Ref: FS-ES-04-2027-14

Faculty:	FES	**School:**	Engineering
Lead Supervisor:	Dr Sylvester L. Manege		
Project Title:	Digital Technologies for Whole Life Carbon Assessment in Developing Countries		
Project Description:	Developing countries face the challenge of delivering housing and infrastructure while reducing the environmental impacts of construction. Decisions made during the design, construction, operation and eventual demolition of buildings can have lasting consequences for carbon emissions. However, limited access to reliable carbon data, digital infrastructure, technical expertise and institutional support can make it difficult to assess these impacts and identify appropriate ways to reduce them. Whole Life Carbon Assessment (WLCA) provides a structured approach to understanding carbon emissions across the construction lifecycle. It can help construction professionals and clients evaluate design options, material choices and project strategies. Yet many existing assessment methods, databases and digital solutions have evolved within developed countries, where data availability, technical capabilities and regulatory arrangements may differ substantially from those in developing economies. Adapting these approaches to local conditions is therefore essential to supporting their wider adoption. Digital technologies offer opportunities to improve how carbon data is collected, managed, analysed and used in construction decisions. Integrating carbon data with digital project information could enable professionals to consider carbon implications alongside cost, value and other project objectives. Realising this potential requires a clear understanding of local construction practices, stakeholder needs and the barriers affecting implementation. This PhD project will investigate how digital technologies can support effective whole life carbon assessment in selected developing countries. The research will combine a systematic literature review with questionnaires and semi-structured interviews involving construction stakeholders. These findings will inform the development of a digital framework, which will be evaluated and refined through expert validation and application to representative construction projects. The research will develop a practical, context sensitive framework to support more informed decisions about low carbon construction. Its findings could also help policymakers, professional bodies and industry organisations strengthen carbon data resources, guidance and digital capabilities. The successful candidate will undertake the research within the School of Engineering at the University of Greenwich, supported by a supervisory team with complementary expertise in construction management, quantity surveying and sustainability. Project Aims and Objectives The project aims to investigate how digital technologies can support the effective implementation of whole life carbon assessment within the construction sector in developing countries.		

	The project objectives are: 1. To examine current practices and levels of adoption of whole life carbon assessment and digital technologies in selected developing countries. 2. To identify the data, technological, organisational and institutional barriers affecting their integration into construction practice. 3. To investigate how digital technologies can improve the collection, management, analysis and application of whole life carbon data. 4. To develop and validate a context-sensitive digital framework for integrating whole life carbon assessment into construction decision-making. **This scholarship is awarded competitively, and all applications are carefully reviewed. While we cannot guarantee an offer, we encourage strong candidates to apply.**
Duration:	3 years, full-time study 6 years, part-time study

Support available (subject to satisfactory performance):

For Home students

- A full tuition fee waiver at the Home student rate for the duration of the scholarship.

For International students

- 50% tuition fee waiver against the International student rate for the duration of the scholarship.

Important information

- Tuition fees are subject to annual review and may increase during the course of study.
- This scholarship covers tuition fees only and does not include funding for living, accommodation, or maintenance costs.

Person Specification of Essential (E) or Desirable (D) requirements:

Criteria:	**E or D**
Education and Training:	
• 1st Class or 2nd class, First Division (Upper Second Class) honours degree or a taught master's degree with a minimum average of 60% in all areas of assessment (UK or UK equivalent) in a relevant area to the proposed research project	**E**
• For those whose first language is not English and/or if from a country where English is not the majority spoken language (as recognised by the UKBA), a language proficiency score of at least IELTS 6.5 (in all elements of the test) or an equivalent UK VISA and Immigration secure English Language Test is required, if your programme falls within the faculty of Engineering and Science a language proficiency score of at least IELTS 6.5 overall with a minimum of 6.0 in all elements of the test or an equivalent UK VISA and Immigration secure English Language Test is required. Unless the degree	**E**

above was taught in English **and** obtained in a majority English speaking country, e.g. UK, USA, Australia, New Zealand, etc, as recognised by the UKBA.	
Experience & Skills:	
• Previous experience of undertaking research (e.g. undergraduate or taught master's dissertation)	**E**
• Knowledge of sustainability in construction, whole life carbon assessment, life cycle assessment or whole life costing.	**D**
• Experience or interest in digital construction technologies, carbon data management, quantitative or qualitative analysis, or construction practice in developing countries.	**D**
Personal Attributes:	
• Understands the fundamental differences between a taught degree and a research degree in terms of approach and personal discipline/motivation	**E**
• Able to, under guidance, complete independent work successfully	**E**
Other Requirements:	
• This scholarship may require Academic Technology Approval Scheme approval for the successful candidate if from outside of the EU/EEA	**E**
• The scholarship must commence before 5th April 2027	**E**

Closing date for applications:	**Midnight UTC on 30th November 2026**
For further information contact:	**Dr Sylvester L. Manege** **s.manege@greenwich.ac.uk**

Making an application:

Please read this information before making an application. Information on the application process is available at: https://www.gre.ac.uk/research/study/apply/application-process. Applications need to be made online via this link. **No other form of application will be considered**.

All applications **must include** the following information. **Applications not containing these documents will not be considered.**

- **Scholarship Reference Number (FS-ES-04-2027-14)**– included in the personal statement section together with your personal statement as to why you are applying
- **a CV including 2 referees** *
- **academic qualification certificates/transcripts and IELTs/English Language certificate if you are an international applicant, if English is not your first language or you are from a country where English is not the majority spoken language as defined by the UK Border Agency** *

**upload to the qualification section of the application form. Attachments must be a PDF format.*

Before submitting your application, you are encouraged to liaise with the Lead Supervisor on the details above.