Sustainable engineering

This is a core research theme, led by **Professor Rogers (/staff/profiles/civil/rogers-christopher.aspx)** , which aims to research novel built-environment and buried infrastructure solutions to minimise water, energy and other resource usage commensurate with economic, social and environmental health. Examples of the success of this initiative include:

- The award of an EPSRC Sustainable Urban Environments (SUE) Programme consortium, led by Professor Rogers and with Dr Gaterell and Dr Jefferson as Co-Investigators amongst a multi-disciplinary team drawn from the University of Birmingham and Birmingham City University, for research into sustainable urban regeneration in **Birmingham Eastside. (http://www.esr.bham.ac.uk/)**
    - Phase 1 of the Eastside project (GR/S20482, £208k and supported by a parallel Advantage West Midlands grant of £59k) was ranked 'outstanding' overall and 'internationally-leading' for research quality.
    - Phase 2 of the Eastside project (EP/C513177, £413k) was similarly ranked 'outstanding' overall and 'internationally-leading' for research quality.
    - Phase 3 (EP/E021603, £512k) completed a study of this major urban redevelopment project that has been hailed as an exemplar of impact delivery (see **www.urbansustainabilityexchange.org.uk/ISSUESSuelMPACT.html (http://www.urbansustainabilityexchange.org.uk/ISSUESSuelMPACT.html)**).
- The award of an EPSRC grant to hold a SUE Research Fellows Conference in Eastside (GR/C51115, £31k, led by Professor Rogers and raked by peer review as 'outstanding'.
- The award of an EPSRC SUE 2 multi-disciplinary consortium (EP/F007426, £3.2million) to explore alternative sustainable futures, led by Professor Rogers, with Dr Gaterell and Dr Jefferson as two of 15 Co-Investigators drawn from the Universities of Birmingham, Exeter and Lancaster and Birmingham City University.
- Creation of a Sustainable Engineering Centre in the School of Civil Engineering, consisting of a fully-equipped base room with 10 workstations for Post-Doctoral Research Fellows, Research Students and visitors, a library, meeting space, and secretarial support.
- The award of an EPSRC grant (EP/I035129, £100k) to study lighting at night in our urban areas. Entitled Mapping Artificial Lightscapes: high resolution solutions to artificial light pollution in cities, this project is a joint award to Professor Rogers and a colleague in Geography, Earth and Environmental Sciences at the University of Birmingham. It seeks to explore how we might limit artificial light to maximise biodiversity and minimise energy usage.
- The award of an EPSRC grant (EP/I106163, £203k) to research novel approaches to the delivery of critical local transport and utility infrastructures. This multi-disciplinary project, funded under the Cross-Disciplinary Feasibility Account scheme, is led by Professor Rogers and includes Professor Baker, Dr Chapman, Dr Jefferson and Dr Quinn amongst the nine co-investigators across the campus at the University of Birmingham.
- EPSRC Mini-Waste Faraday core projects were awarded to Professor Rogers and Dr Boardman to research into the dewatering of liquid wastes (GR/T04847, £117k) and Dr Ghataora (GR/T05349, £75k) for recycling of gypsum waste.
- Grant awards for stabilisation/solidification of contaminated ground to Professor Rogers and Dr Boardman.
- The Resource Efficiency Knowledge Transfer Network, deriving from the Mini-Waste Faraday Partnership, was jointly brokered by Dr Boardman, yielding technology translators via a grant worth £342k. This complements an award for technology translators worth £385k from the National Industrial Symbiosis Programme. Both projects were supervised by Professor Rogers and Dr Boardman.
- EPSRC DTA support to investigate the implications of adopting sustainable construction practices in social housing, supervised by Dr Jefferson.
- Dorothy Hodgkin Award (£90k) to explore the development of sustainable construction practices for high value residential dwellings, supervised by Dr Jefferson.