

## Fully-funded 4-year PhD Project at Loughborough University – Ultra-low Energy Buildings

<b>Project Title</b>	Ultra-low energy buildings
<b>Supervisor(s)</b>	Prof. Kevin Lomas
<b>Project Description</b>	<p>For the UK to meet its target of being zero-carbon by 2050, there must be a step-change in the efficiency of new non-domestic buildings. Loughborough University is developing new offices for its Sports Park that will meet the Passivhaus standard. With a heat pump and full fresh air ventilation, the building has the potential to be post-covid healthy and near zero-carbon. But how readily is this potential realised in practice?</p> <p>This project will capitalise on this unique opportunity to study a landmark building. The design and construction will be observed and assessed, and the in-use performance evaluated. Extensive monitoring will enable the energy demands and internal environment to be quantified and optimized.</p> <p>The work will provide guidance on the required specification and design of new, UK non-domestic buildings to achieve near zero-carbon performance.</p> <p>The project will require a keen interest in monitoring and data analysis, and perhaps building energy modelling.</p>